

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

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North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-28681-1

Client Project/Site: Satralloy - Creek Study

For:

Golder Associates Inc.

2600 Tiller Lane

Suite C

Columbus, Ohio 43231

Attn: Mr. Bob Ireson



Authorized for release by:

9/13/2013 8:42:32 PM

Kris Brooks, Project Manager II

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

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Definitions/Glossary

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Qualifiers

Metals

Qualifier	Qualifier Description
L	A negative instrument reading had an absolute value greater than the reporting limit

General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
F	MS/MSD Recovery and/or RPD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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
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: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

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Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Golder Associates Inc.

Project: Satralloy - Creek Study

Report Number: 240-28681-1

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.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

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.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 09/05/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 1.2 C.

DISSOLVED METALS (ICPMS)

Samples GC05D (240-28681-1), GC05P (240-28681-2) and GC05M (240-28681-3) were analyzed for dissolved metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 09/06/2013 and analyzed on 09/11/2013 and 09/12/2013.

No difficulties were encountered during the metals analysis. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples GC05D (240-28681-1), GC05P (240-28681-2) and GC05M (240-28681-3) were analyzed for total recoverable metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 09/06/2013 and analyzed on 09/11/2013 and 09/12/2013.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY (CVAA)

Samples GC05D (240-28681-1), GC05P (240-28681-2) and GC05M (240-28681-3) were analyzed for dissolved mercury (CVAA) in

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Laboratory: TestAmerica Canton (Continued)

accordance with EPA Method 245.1. The samples were prepared on 09/06/2013 and analyzed on 09/09/2013.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

MERCURY

Samples GC05D (240-28681-1), GC05P (240-28681-2) and GC05M (240-28681-3) were analyzed for mercury in accordance with EPA Method 245.1. The samples were prepared on 09/06/2013 and analyzed on 09/09/2013.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

HARDNESS

Samples GC05D (240-28681-1), GC05P (240-28681-2) and GC05M (240-28681-3) were analyzed for hardness in accordance with EPA Method 130.2. The samples were analyzed on 09/10/2013.

No difficulties were encountered during the hardness analysis. All quality control parameters were within the acceptance limits.

TOTAL DISSOLVED SOLIDS

Samples GC05D (240-28681-1), GC05P (240-28681-2) and GC05M (240-28681-3) were analyzed for total dissolved solids in accordance with SM 2540C. The samples were analyzed on 09/09/2013.

No difficulties were encountered during the TDS analysis. All quality control parameters were within the acceptance limits.

TOTAL SUSPENDED SOLIDS

Samples GC05D (240-28681-1), GC05P (240-28681-2) and GC05M (240-28681-3) were analyzed for total suspended solids in accordance with SM 2540D. The samples were analyzed on 09/09/2013.

No difficulties were encountered during the TSS analysis. All quality control parameters were within the acceptance limits.

ANIONS

Samples GC05D (240-28681-1), GC05P (240-28681-2) and GC05M (240-28681-3) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 09/05/2013.

No difficulties were encountered during the anions analysis. All quality control parameters were within the acceptance limits.

ANIONS

Samples GC05D (240-28681-1), GC05P (240-28681-2) and GC05M (240-28681-3) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 09/05/2013 and 09/10/2013.

Chloride and Sulfate failed the recovery criteria low for the MSD of sample GC05PMSD (240-28681-2) in batch 240-100861. Refer to the QC report for details.

Samples GC05D (240-28681-1)[5X], GC05P (240-28681-2)[5X] and GC05M (240-28681-3)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the anions analysis. All other quality control parameters were within the acceptance limits.

ALKALINITY

Samples GC05D (240-28681-1), GC05P (240-28681-2) and GC05M (240-28681-3) were analyzed for alkalinity in accordance with EPA Method 310.1. The samples were analyzed on 09/11/2013.

No difficulties were encountered during the alkalinity analysis. All quality control parameters were within the acceptance limits.

HEXAVALENT CHROMIUM

Samples GC05D (240-28681-1), GC05P (240-28681-2) and GC05M (240-28681-3) were analyzed for hexavalent chromium in accordance with SM 3500 CR D. The samples were analyzed on 09/05/2013.

Case Narrative

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Job ID: 240-28681-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

No difficulties were encountered during the hexavalent chromium analysis. All quality control parameters were within the acceptance limits.

TOTAL PHOSPHORUS

Samples GC05D (240-28681-1), GC05P (240-28681-2) and GC05M (240-28681-3) were analyzed for total phosphorus in accordance with EPA Method 365.1. The samples were prepared and analyzed on 09/09/2013.

No other difficulties were encountered during the total phosphorus analysis. All other quality control parameters were within the acceptance limits.

Method Summary

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	TAL CAN
200.8	ICPMS Metals by 200.8	EPA	TAL CAN
245.1	Mercury (CVAA)	EPA	TAL CAN
130.2	Hardness, Total (mg/l as CaCO ₃)	MCAWW	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
310.1	Alkalinity	MCAWW	TAL CAN
365.1	Phosphorus, Total	EPA	TAL CAN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CAN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CAN
SM 3500 CR D	Chromium, Hexavalent	SM	TAL CAN

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.

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

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-28681-1	GC05D	Water	09/05/13 11:30	09/05/13 15:03
240-28681-2	GC05P	Water	09/05/13 11:35	09/05/13 15:03
240-28681-3	GC05M	Water	09/05/13 11:40	09/05/13 15:03

Detection Summary

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Client Sample ID: GC05D

Lab Sample ID: 240-28681-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	39		5.0	5.0	ug/L	1		200.8	Total
									Recoverable
Chromium	130		2.0	2.0	ug/L	1		200.8	Total
									Recoverable
Manganese	26		5.0	5.0	ug/L	1		200.8	Total
									Recoverable
Calcium	140000		1000	1000	ug/L	1		200.8	Total
									Recoverable
Magnesium	31000		1000	1000	ug/L	1		200.8	Total
									Recoverable
Potassium	6500		1000	1000	ug/L	1		200.8	Total
									Recoverable
Sodium	23000		1000	1000	ug/L	1		200.8	Total
									Recoverable
Barium	39		5.0	5.0	ug/L	1		200.8	Dissolved
Chromium	130		2.0	2.0	ug/L	1		200.8	Dissolved
Manganese	26		5.0	5.0	ug/L	1		200.8	Dissolved
Calcium	140000		1000	1000	ug/L	1		200.8	Dissolved
Magnesium	31000		1000	1000	ug/L	1		200.8	Dissolved
Potassium	6400		1000	1000	ug/L	1		200.8	Dissolved
Sodium	23000		1000	1000	ug/L	1		200.8	Dissolved
Hardness as calcium carbonate	460		10	10	mg/L	1		130.2	Total/NA
Chloride	9.4		1.0	1.0	mg/L	1		300.0	Total/NA
Nitrate as N	0.20		0.10	0.10	mg/L	1		300.0	Total/NA
Sulfate	430		5.0	5.0	mg/L	5		300.0	Total/NA
Alkalinity	120		5.0	5.0	mg/L	1		310.1	Total/NA
Bicarbonate Alkalinity as CaCO3	120		5.0	5.0	mg/L	1		310.1	Total/NA
Total Dissolved Solids	680		10	10	mg/L	1		SM 2540C	Total/NA
Cr (VI)	0.14		0.010	0.0020	mg/L	1		SM 3500 CR D	Total/NA

Client Sample ID: GC05P

Lab Sample ID: 240-28681-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	1300		50	50	ug/L	1		200.8	Total
									Recoverable
Barium	63		5.0	5.0	ug/L	1		200.8	Total
									Recoverable
Cobalt	1.1		1.0	1.0	ug/L	1		200.8	Total
									Recoverable
Chromium	31		2.0	2.0	ug/L	1		200.8	Total
									Recoverable
Copper	4.0		2.0	2.0	ug/L	1		200.8	Total
									Recoverable
Iron	1500		100	100	ug/L	1		200.8	Total
									Recoverable
Manganese	250		5.0	5.0	ug/L	1		200.8	Total
									Recoverable
Nickel	3.6		2.0	2.0	ug/L	1		200.8	Total
									Recoverable
Lead	1.9		1.0	1.0	ug/L	1		200.8	Total
									Recoverable
Calcium	210000		1000	1000	ug/L	1		200.8	Total
									Recoverable
Magnesium	66000		1000	1000	ug/L	1		200.8	Total
									Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Client Sample ID: GC05P (Continued)

Lab Sample ID: 240-28681-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Potassium	5300		1000	1000	ug/L			1	200.8	Total Recoverable
Sodium	35000		1000	1000	ug/L			1	200.8	Total Recoverable
Barium	46		5.0	5.0	ug/L			1	200.8	Dissolved
Chromium	26		2.0	2.0	ug/L			1	200.8	Dissolved
Manganese	16		5.0	5.0	ug/L			1	200.8	Dissolved
Calcium	170000		1000	1000	ug/L			1	200.8	Dissolved
Magnesium	72000		1000	1000	ug/L			1	200.8	Dissolved
Potassium	5300		1000	1000	ug/L			1	200.8	Dissolved
Sodium	39000		1000	1000	ug/L			1	200.8	Dissolved
Hardness as calcium carbonate	780		10	10	mg/L			1	130.2	Total/NA
Chloride	27		1.0	1.0	mg/L			1	300.0	Total/NA
Nitrate as N	0.70		0.10	0.10	mg/L			1	300.0	Total/NA
Sulfate	640		5.0	5.0	mg/L			5	300.0	Total/NA
Alkalinity	170		5.0	5.0	mg/L			1	310.1	Total/NA
Bicarbonate Alkalinity as CaCO3	170		5.0	5.0	mg/L			1	310.1	Total/NA
Total Dissolved Solids	1100		10	10	mg/L			1	SM 2540C	Total/NA
Total Suspended Solids	180		4.0	4.0	mg/L			1	SM 2540D	Total/NA
Cr (VI)	0.033		0.010	0.0020	mg/L			1	SM 3500 CR D	Total/NA

Client Sample ID: GC05M

Lab Sample ID: 240-28681-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	56		50	50	ug/L			1	200.8	Total Recoverable
Barium	48		5.0	5.0	ug/L			1	200.8	Total Recoverable
Chromium	3.1		2.0	2.0	ug/L			1	200.8	Total Recoverable
Manganese	25		5.0	5.0	ug/L			1	200.8	Total Recoverable
Calcium	180000		1000	1000	ug/L			1	200.8	Total Recoverable
Magnesium	80000		1000	1000	ug/L			1	200.8	Total Recoverable
Potassium	5000		1000	1000	ug/L			1	200.8	Total Recoverable
Sodium	41000		1000	1000	ug/L			1	200.8	Total Recoverable
Barium	47		5.0	5.0	ug/L			1	200.8	Dissolved
Chromium	2.5		2.0	2.0	ug/L			1	200.8	Dissolved
Manganese	15		5.0	5.0	ug/L			1	200.8	Dissolved
Calcium	180000		1000	1000	ug/L			1	200.8	Dissolved
Magnesium	80000		1000	1000	ug/L			1	200.8	Dissolved
Potassium	5000		1000	1000	ug/L			1	200.8	Dissolved
Sodium	41000		1000	1000	ug/L			1	200.8	Dissolved
Hardness as calcium carbonate	780		10	10	mg/L			1	130.2	Total/NA
Chloride	32		1.0	1.0	mg/L			1	300.0	Total/NA
Nitrate as N	0.33		0.10	0.10	mg/L			1	300.0	Total/NA
Sulfate	680		5.0	5.0	mg/L			5	300.0	Total/NA
Alkalinity	160		5.0	5.0	mg/L			1	310.1	Total/NA
Bicarbonate Alkalinity as CaCO3	160		5.0	5.0	mg/L			1	310.1	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Client Sample ID: GC05M (Continued)

Lab Sample ID: 240-28681-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	1200		10	10	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	13		4.0	4.0	mg/L	1		SM 2540D	Total/NA
Cr (VI)	0.0029	J	0.010	0.0020	mg/L	1		SM 3500 CR D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample Results

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Client Sample ID: GC05D

Lab Sample ID: 240-28681-1

Date Collected: 09/05/13 11:30

Matrix: Water

Date Received: 09/05/13 15:03

Method: 200.8 - ICPMS Metals by 200.8 - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 16:38	1
Aluminum	<50		50	50	ug/L		09/06/13 07:51	09/11/13 16:38	1
Arsenic	<5.0		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 16:38	1
Barium	39		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 16:38	1
Beryllium	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/12/13 11:32	1
Cadmium	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 16:38	1
Cobalt	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 16:38	1
Chromium	130		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 16:38	1
Copper	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 16:38	1
Iron	<100	L	100	100	ug/L		09/06/13 07:51	09/11/13 16:38	1
Manganese	26		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 16:38	1
Nickel	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 16:38	1
Lead	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 16:38	1
Antimony	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 16:38	1
Selenium	<5.0		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 16:38	1
Thallium	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 16:38	1
Zinc	<20		20	20	ug/L		09/06/13 07:51	09/11/13 16:38	1
Calcium	140000		1000	1000	ug/L		09/06/13 07:51	09/11/13 16:38	1
Magnesium	31000		1000	1000	ug/L		09/06/13 07:51	09/11/13 16:38	1
Potassium	6500		1000	1000	ug/L		09/06/13 07:51	09/11/13 16:38	1
Sodium	23000		1000	1000	ug/L		09/06/13 07:51	09/11/13 16:38	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 17:15	1
Aluminum	<50		50	50	ug/L		09/06/13 07:51	09/11/13 17:15	1
Arsenic	<5.0		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 17:15	1
Barium	39		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 17:15	1
Beryllium	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/12/13 11:54	1
Cadmium	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 17:15	1
Cobalt	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 17:15	1
Chromium	130		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 17:15	1
Copper	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 17:15	1
Iron	<100	L	100	100	ug/L		09/06/13 07:51	09/11/13 17:15	1
Manganese	26		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 17:15	1
Nickel	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 17:15	1
Lead	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 17:15	1
Antimony	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 17:15	1
Selenium	<5.0		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 17:15	1
Thallium	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 17:15	1
Zinc	<20		20	20	ug/L		09/06/13 07:51	09/11/13 17:15	1
Calcium	140000		1000	1000	ug/L		09/06/13 07:51	09/11/13 17:15	1
Magnesium	31000		1000	1000	ug/L		09/06/13 07:51	09/11/13 17:15	1
Potassium	6400		1000	1000	ug/L		09/06/13 07:51	09/11/13 17:15	1
Sodium	23000		1000	1000	ug/L		09/06/13 07:51	09/11/13 17:15	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		09/06/13 12:30	09/09/13 15:02	1

TestAmerica Canton

Client Sample Results

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Client Sample ID: GC05D

Lab Sample ID: 240-28681-1

Date Collected: 09/05/13 11:30

Matrix: Water

Date Received: 09/05/13 15:03

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		09/06/13 12:30	09/09/13 15:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	460		10	10	mg/L			09/10/13 09:06	1
Chloride	9.4		1.0	1.0	mg/L			09/05/13 22:26	1
Nitrate as N	0.20		0.10	0.10	mg/L			09/05/13 22:26	1
Sulfate	430		5.0	5.0	mg/L			09/10/13 14:06	5
Nitrite as N	<0.10		0.10	0.10	mg/L			09/05/13 22:26	1
Alkalinity	120		5.0	5.0	mg/L			09/11/13 20:53	1
Bicarbonate Alkalinity as CaCO3	120		5.0	5.0	mg/L			09/11/13 20:53	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	5.0	mg/L			09/11/13 20:53	1
Total Phosphorus as P	<0.10		0.10	0.10	mg/L		09/09/13 06:53	09/09/13 13:33	1
Total Dissolved Solids	680		10	10	mg/L			09/09/13 15:29	1
Total Suspended Solids	<4.0		4.0	4.0	mg/L			09/09/13 10:44	1
Cr (VI)	0.14		0.010	0.0020	mg/L			09/05/13 16:09	1

TestAmerica Canton

Client Sample Results

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Client Sample ID: GC05P

Lab Sample ID: 240-28681-2

Date Collected: 09/05/13 11:35

Matrix: Water

Date Received: 09/05/13 15:03

Method: 200.8 - ICPMS Metals by 200.8 - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 16:45	1
Aluminum	1300		50	50	ug/L		09/06/13 07:51	09/11/13 16:45	1
Arsenic	<5.0		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 16:45	1
Barium	63		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 16:45	1
Beryllium	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/12/13 11:39	1
Cadmium	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 16:45	1
Cobalt	1.1		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 16:45	1
Chromium	31		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 16:45	1
Copper	4.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 16:45	1
Iron	1500		100	100	ug/L		09/06/13 07:51	09/11/13 16:45	1
Manganese	250		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 16:45	1
Nickel	3.6		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 16:45	1
Lead	1.9		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 16:45	1
Antimony	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 16:45	1
Selenium	<5.0		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 16:45	1
Thallium	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 16:45	1
Zinc	<20		20	20	ug/L		09/06/13 07:51	09/11/13 16:45	1
Calcium	210000		1000	1000	ug/L		09/06/13 07:51	09/11/13 16:45	1
Magnesium	66000		1000	1000	ug/L		09/06/13 07:51	09/11/13 16:45	1
Potassium	5300		1000	1000	ug/L		09/06/13 07:51	09/11/13 16:45	1
Sodium	35000		1000	1000	ug/L		09/06/13 07:51	09/11/13 16:45	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 17:23	1
Aluminum	<50		50	50	ug/L		09/06/13 07:51	09/11/13 17:23	1
Arsenic	<5.0		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 17:23	1
Barium	46		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 17:23	1
Beryllium	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/12/13 12:01	1
Cadmium	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 17:23	1
Cobalt	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 17:23	1
Chromium	26		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 17:23	1
Copper	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 17:23	1
Iron	<100	L	100	100	ug/L		09/06/13 07:51	09/11/13 17:23	1
Manganese	16		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 17:23	1
Nickel	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 17:23	1
Lead	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 17:23	1
Antimony	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 17:23	1
Selenium	<5.0		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 17:23	1
Thallium	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 17:23	1
Zinc	<20		20	20	ug/L		09/06/13 07:51	09/11/13 17:23	1
Calcium	170000		1000	1000	ug/L		09/06/13 07:51	09/11/13 17:23	1
Magnesium	72000		1000	1000	ug/L		09/06/13 07:51	09/11/13 17:23	1
Potassium	5300		1000	1000	ug/L		09/06/13 07:51	09/11/13 17:23	1
Sodium	39000		1000	1000	ug/L		09/06/13 07:51	09/11/13 17:23	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		09/06/13 12:30	09/09/13 15:06	1

TestAmerica Canton

Client Sample Results

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Client Sample ID: GC05P

Lab Sample ID: 240-28681-2

Date Collected: 09/05/13 11:35

Matrix: Water

Date Received: 09/05/13 15:03

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		09/06/13 12:30	09/09/13 15:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	780		10	10	mg/L			09/10/13 09:10	1
Chloride	27		1.0	1.0	mg/L			09/05/13 22:43	1
Nitrate as N	0.70		0.10	0.10	mg/L			09/05/13 22:43	1
Sulfate	640		5.0	5.0	mg/L			09/10/13 14:23	5
Nitrite as N	<0.10		0.10	0.10	mg/L			09/05/13 22:43	1
Alkalinity	170		5.0	5.0	mg/L			09/11/13 21:03	1
Bicarbonate Alkalinity as CaCO3	170		5.0	5.0	mg/L			09/11/13 21:03	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	5.0	mg/L			09/11/13 21:03	1
Total Phosphorus as P	<0.10		0.10	0.10	mg/L		09/09/13 06:54	09/09/13 13:33	1
Total Dissolved Solids	1100		10	10	mg/L			09/09/13 15:29	1
Total Suspended Solids	180		4.0	4.0	mg/L			09/09/13 10:44	1
Cr (VI)	0.033		0.010	0.0020	mg/L			09/05/13 16:11	1

TestAmerica Canton

Client Sample Results

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Client Sample ID: GC05M

Lab Sample ID: 240-28681-3

Date Collected: 09/05/13 11:40

Matrix: Water

Date Received: 09/05/13 15:03

Method: 200.8 - ICPMS Metals by 200.8 - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 16:30	1
Aluminum	56		50	50	ug/L		09/06/13 07:51	09/11/13 16:30	1
Arsenic	<5.0		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 16:30	1
Barium	48		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 16:30	1
Beryllium	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/12/13 11:47	1
Cadmium	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 16:30	1
Cobalt	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 16:30	1
Chromium	3.1		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 16:30	1
Copper	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 16:30	1
Iron	<100		100	100	ug/L		09/06/13 07:51	09/11/13 16:30	1
Manganese	25		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 16:30	1
Nickel	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 16:30	1
Lead	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 16:30	1
Antimony	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 16:30	1
Selenium	<5.0		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 16:30	1
Thallium	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 16:30	1
Zinc	<20		20	20	ug/L		09/06/13 07:51	09/11/13 16:30	1
Calcium	180000		1000	1000	ug/L		09/06/13 07:51	09/11/13 16:30	1
Magnesium	80000		1000	1000	ug/L		09/06/13 07:51	09/11/13 16:30	1
Potassium	5000		1000	1000	ug/L		09/06/13 07:51	09/11/13 16:30	1
Sodium	41000		1000	1000	ug/L		09/06/13 07:51	09/11/13 16:30	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 17:30	1
Aluminum	<50		50	50	ug/L		09/06/13 07:51	09/11/13 17:30	1
Arsenic	<5.0		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 17:30	1
Barium	47		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 17:30	1
Beryllium	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/12/13 12:09	1
Cadmium	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 17:30	1
Cobalt	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 17:30	1
Chromium	2.5		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 17:30	1
Copper	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 17:30	1
Iron	<100	L	100	100	ug/L		09/06/13 07:51	09/11/13 17:30	1
Manganese	15		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 17:30	1
Nickel	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 17:30	1
Lead	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 17:30	1
Antimony	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 17:30	1
Selenium	<5.0		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 17:30	1
Thallium	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 17:30	1
Zinc	<20		20	20	ug/L		09/06/13 07:51	09/11/13 17:30	1
Calcium	180000		1000	1000	ug/L		09/06/13 07:51	09/11/13 17:30	1
Magnesium	80000		1000	1000	ug/L		09/06/13 07:51	09/11/13 17:30	1
Potassium	5000		1000	1000	ug/L		09/06/13 07:51	09/11/13 17:30	1
Sodium	41000		1000	1000	ug/L		09/06/13 07:51	09/11/13 17:30	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		09/06/13 12:30	09/09/13 15:08	1

TestAmerica Canton

Client Sample Results

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Client Sample ID: GC05M

Lab Sample ID: 240-28681-3

Date Collected: 09/05/13 11:40

Matrix: Water

Date Received: 09/05/13 15:03

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		09/06/13 12:30	09/09/13 15:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	780		10	10	mg/L			09/10/13 09:13	1
Chloride	32		1.0	1.0	mg/L			09/05/13 22:59	1
Nitrate as N	0.33		0.10	0.10	mg/L			09/05/13 22:59	1
Sulfate	680		5.0	5.0	mg/L			09/10/13 15:16	5
Nitrite as N	<0.10		0.10	0.10	mg/L			09/05/13 22:59	1
Alkalinity	160		5.0	5.0	mg/L			09/11/13 21:15	1
Bicarbonate Alkalinity as CaCO3	160		5.0	5.0	mg/L			09/11/13 21:15	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	5.0	mg/L			09/11/13 21:15	1
Total Phosphorus as P	<0.10		0.10	0.10	mg/L		09/09/13 06:55	09/09/13 13:33	1
Total Dissolved Solids	1200		10	10	mg/L			09/09/13 15:29	1
Total Suspended Solids	13		4.0	4.0	mg/L			09/09/13 10:44	1
Cr (VI)	0.0029 J		0.010	0.0020	mg/L			09/05/13 16:12	1

TestAmerica Canton

QC Sample Results

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Method: 200.8 - ICPMS Metals by 200.8

Lab Sample ID: MB 240-100366/1-A

Matrix: Water

Analysis Batch: 101104

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 100366

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 14:08	1
Aluminum	<50		50	50	ug/L		09/06/13 07:51	09/11/13 14:08	1
Arsenic	<5.0		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 14:08	1
Barium	<5.0		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 14:08	1
Cadmium	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 14:08	1
Cobalt	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 14:08	1
Chromium	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 14:08	1
Copper	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 14:08	1
Iron	<100		100	100	ug/L		09/06/13 07:51	09/11/13 14:08	1
Manganese	<5.0		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 14:08	1
Nickel	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 14:08	1
Lead	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/11/13 14:08	1
Antimony	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 14:08	1
Selenium	<5.0		5.0	5.0	ug/L		09/06/13 07:51	09/11/13 14:08	1
Thallium	<2.0		2.0	2.0	ug/L		09/06/13 07:51	09/11/13 14:08	1
Zinc	<20		20	20	ug/L		09/06/13 07:51	09/11/13 14:08	1
Calcium	<1000		1000	1000	ug/L		09/06/13 07:51	09/11/13 14:08	1
Magnesium	<1000		1000	1000	ug/L		09/06/13 07:51	09/11/13 14:08	1
Potassium	<1000		1000	1000	ug/L		09/06/13 07:51	09/11/13 14:08	1
Sodium	<1000		1000	1000	ug/L		09/06/13 07:51	09/11/13 14:08	1

Lab Sample ID: MB 240-100366/1-A

Matrix: Water

Analysis Batch: 101286

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 100366

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<1.0		1.0	1.0	ug/L		09/06/13 07:51	09/12/13 11:17	1

Lab Sample ID: LCS 240-100366/2-A

Matrix: Water

Analysis Batch: 101104

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 100366

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	100	94.6		ug/L		95	85 - 115
Aluminum	10000	8820		ug/L		88	85 - 115
Arsenic	1000	924		ug/L		92	85 - 115
Barium	1000	868		ug/L		87	85 - 115
Cadmium	1000	917		ug/L		92	85 - 115
Cobalt	1000	902		ug/L		90	85 - 115
Chromium	1000	892		ug/L		89	85 - 115
Copper	1000	951		ug/L		95	85 - 115
Iron	10000	8840		ug/L		88	85 - 115
Manganese	1000	893		ug/L		89	85 - 115
Nickel	1000	924		ug/L		92	85 - 115
Lead	1000	886		ug/L		89	85 - 115
Antimony	100	89.3		ug/L		89	85 - 115
Selenium	1000	935		ug/L		93	85 - 115
Thallium	250	221		ug/L		88	85 - 115

TestAmerica Canton

QC Sample Results

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Method: 200.8 - ICPMS Metals by 200.8 (Continued)

Lab Sample ID: LCS 240-100366/2-A

Matrix: Water

Analysis Batch: 101104

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 100366

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	1000	953		ug/L		95	85 - 115
Calcium	10000	10100		ug/L		101	85 - 115
Magnesium	10000	9210		ug/L		92	85 - 115
Potassium	10000	9170		ug/L		92	85 - 115
Sodium	10000	9370		ug/L		94	85 - 115

Lab Sample ID: LCS 240-100366/2-A

Matrix: Water

Analysis Batch: 101286

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 100366

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	1000	1030		ug/L		103	85 - 115

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-100370/1-A

Matrix: Water

Analysis Batch: 100725

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 100370

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		09/06/13 12:30	09/09/13 14:34	1

Lab Sample ID: LCS 240-100370/2-A

Matrix: Water

Analysis Batch: 100725

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 100370

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.00		ug/L		100	85 - 115

Method: 130.2 - Hardness, Total (mg/l as CaCO3)

Lab Sample ID: MB 240-100749/1

Matrix: Water

Analysis Batch: 100749

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	<5.0		5.0	5.0	mg/L			09/10/13 08:45	1

Lab Sample ID: LCS 240-100749/2

Matrix: Water

Analysis Batch: 100749

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hardness as calcium carbonate	312	297		mg/L		95	88 - 110

TestAmerica Canton

QC Sample Results

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-100317/3

Matrix: Water

Analysis Batch: 100317

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0	1.0	mg/L			09/05/13 15:03	1
Sulfate	<1.0		1.0	1.0	mg/L			09/05/13 15:03	1

Lab Sample ID: LCS 240-100317/4

Matrix: Water

Analysis Batch: 100317

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	52.1		mg/L		104	90 - 110
Sulfate	50.0	49.4		mg/L		99	90 - 110

Lab Sample ID: MB 240-100318/3

Matrix: Water

Analysis Batch: 100318

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.10		0.10	0.10	mg/L			09/05/13 15:03	1

Lab Sample ID: LCS 240-100318/4

Matrix: Water

Analysis Batch: 100318

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.50	2.71		mg/L		108	90 - 110

Lab Sample ID: MB 240-100861/3

Matrix: Water

Analysis Batch: 100861

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0	1.0	mg/L			09/10/13 11:18	1
Sulfate	<1.0		1.0	1.0	mg/L			09/10/13 11:18	1

Lab Sample ID: LCS 240-100861/4

Matrix: Water

Analysis Batch: 100861

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	46.8		mg/L		94	90 - 110
Sulfate	50.0	46.7		mg/L		93	90 - 110

Lab Sample ID: 240-28681-2 MS

Matrix: Water

Analysis Batch: 100861

Client Sample ID: GC05P

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	21		50.0	61.9		mg/L		82	80 - 120
Sulfate	640		50.0	685	4	mg/L		88	80 - 120

TestAmerica Canton

QC Sample Results

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 240-28681-2 MSD

Matrix: Water

Analysis Batch: 100861

Client Sample ID: GC05P

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	21		50.0	60.5	F	mg/L		79	80 - 120	2	20
Sulfate	640		50.0	670	4	mg/L		59	80 - 120	2	20

Method: 310.1 - Alkalinity

Lab Sample ID: MB 240-101119/5

Matrix: Water

Analysis Batch: 101119

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<5.0		5.0	5.0	mg/L			09/11/13 13:05	1
Bicarbonate Alkalinity as CaCO3	<5.0		5.0	5.0	mg/L			09/11/13 13:05	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	5.0	mg/L			09/11/13 13:05	1

Lab Sample ID: LCS 240-101119/4

Matrix: Water

Analysis Batch: 101119

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	79.5	84.9		mg/L		107	90 - 127

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 240-100580/10-A

Matrix: Water

Analysis Batch: 100714

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 100580

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	<0.10		0.10	0.10	mg/L		09/09/13 06:33	09/09/13 13:21	1

Lab Sample ID: LCS 240-100580/11-A

Matrix: Water

Analysis Batch: 100714

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 100580

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	4.48	4.36		mg/L		97	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-100724/1

Matrix: Water

Analysis Batch: 100724

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			09/09/13 15:29	1

TestAmerica Canton

QC Sample Results

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 240-100724/2

Matrix: Water

Analysis Batch: 100724

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	470	490		mg/L		104	88 - 110

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 240-100650/1

Matrix: Water

Analysis Batch: 100650

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<4.0		4.0	4.0	mg/L			09/09/13 10:44	1

Lab Sample ID: LCS 240-100650/2

Matrix: Water

Analysis Batch: 100650

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	29.0	30.0		mg/L		103	73 - 113

Method: SM 3500 CR D - Chromium, Hexavalent

Lab Sample ID: MB 240-100269/3

Matrix: Water

Analysis Batch: 100269

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	<0.0020		0.010	0.0020	mg/L			09/05/13 11:56	1

Lab Sample ID: LCS 240-100269/4

Matrix: Water

Analysis Batch: 100269

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.250	0.235		mg/L		94	80 - 118

TestAmerica Canton

QC Association Summary

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Metals

Filtration Batch: 100360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-28681-1	GC05D	Dissolved	Water	FILTRATION	
240-28681-2	GC05P	Dissolved	Water	FILTRATION	
240-28681-3	GC05M	Dissolved	Water	FILTRATION	

Prep Batch: 100366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-28681-1	GC05D	Dissolved	Water	200.8	100360
240-28681-1	GC05D	Total Recoverable	Water	200.8	
240-28681-2	GC05P	Dissolved	Water	200.8	100360
240-28681-2	GC05P	Total Recoverable	Water	200.8	
240-28681-3	GC05M	Dissolved	Water	200.8	100360
240-28681-3	GC05M	Total Recoverable	Water	200.8	
LCS 240-100366/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
MB 240-100366/1-A	Method Blank	Total Recoverable	Water	200.8	

Prep Batch: 100370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-28681-1	GC05D	Dissolved	Water	245.1	100360
240-28681-1	GC05D	Total/NA	Water	245.1	
240-28681-2	GC05P	Dissolved	Water	245.1	100360
240-28681-2	GC05P	Total/NA	Water	245.1	
240-28681-3	GC05M	Dissolved	Water	245.1	100360
240-28681-3	GC05M	Total/NA	Water	245.1	
LCS 240-100370/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 240-100370/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 100725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-28681-1	GC05D	Dissolved	Water	245.1	100370
240-28681-1	GC05D	Total/NA	Water	245.1	100370
240-28681-2	GC05P	Dissolved	Water	245.1	100370
240-28681-2	GC05P	Total/NA	Water	245.1	100370
240-28681-3	GC05M	Dissolved	Water	245.1	100370
240-28681-3	GC05M	Total/NA	Water	245.1	100370
LCS 240-100370/2-A	Lab Control Sample	Total/NA	Water	245.1	100370
MB 240-100370/1-A	Method Blank	Total/NA	Water	245.1	100370

Analysis Batch: 101104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-28681-1	GC05D	Dissolved	Water	200.8	100366
240-28681-1	GC05D	Total Recoverable	Water	200.8	100366
240-28681-2	GC05P	Dissolved	Water	200.8	100366
240-28681-2	GC05P	Total Recoverable	Water	200.8	100366
240-28681-3	GC05M	Dissolved	Water	200.8	100366
240-28681-3	GC05M	Total Recoverable	Water	200.8	100366
LCS 240-100366/2-A	Lab Control Sample	Total Recoverable	Water	200.8	100366
MB 240-100366/1-A	Method Blank	Total Recoverable	Water	200.8	100366

Analysis Batch: 101286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-28681-1	GC05D	Dissolved	Water	200.8	100366

TestAmerica Canton

QC Association Summary

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Metals (Continued)

Analysis Batch: 101286 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-28681-1	GC05D	Total Recoverable	Water	200.8	100366
240-28681-2	GC05P	Dissolved	Water	200.8	100366
240-28681-2	GC05P	Total Recoverable	Water	200.8	100366
240-28681-3	GC05M	Dissolved	Water	200.8	100366
240-28681-3	GC05M	Total Recoverable	Water	200.8	100366
LCS 240-100366/2-A	Lab Control Sample	Total Recoverable	Water	200.8	100366
MB 240-100366/1-A	Method Blank	Total Recoverable	Water	200.8	100366

General Chemistry

Analysis Batch: 100269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-28681-1	GC05D	Total/NA	Water	SM 3500 CR D	
240-28681-2	GC05P	Total/NA	Water	SM 3500 CR D	
240-28681-3	GC05M	Total/NA	Water	SM 3500 CR D	
LCS 240-100269/4	Lab Control Sample	Total/NA	Water	SM 3500 CR D	
MB 240-100269/3	Method Blank	Total/NA	Water	SM 3500 CR D	

Analysis Batch: 100317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-28681-1	GC05D	Total/NA	Water	300.0	
240-28681-2	GC05P	Total/NA	Water	300.0	
240-28681-3	GC05M	Total/NA	Water	300.0	
LCS 240-100317/4	Lab Control Sample	Total/NA	Water	300.0	
MB 240-100317/3	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 100318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-28681-1	GC05D	Total/NA	Water	300.0	
240-28681-2	GC05P	Total/NA	Water	300.0	
240-28681-3	GC05M	Total/NA	Water	300.0	
LCS 240-100318/4	Lab Control Sample	Total/NA	Water	300.0	
MB 240-100318/3	Method Blank	Total/NA	Water	300.0	

Prep Batch: 100580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-28681-1	GC05D	Total/NA	Water	365.2/365.3/365	
240-28681-2	GC05P	Total/NA	Water	365.2/365.3/365	
240-28681-3	GC05M	Total/NA	Water	365.2/365.3/365	
LCS 240-100580/11-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	
MB 240-100580/10-A	Method Blank	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 100650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-28681-1	GC05D	Total/NA	Water	SM 2540D	
240-28681-2	GC05P	Total/NA	Water	SM 2540D	
240-28681-3	GC05M	Total/NA	Water	SM 2540D	
LCS 240-100650/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 240-100650/1	Method Blank	Total/NA	Water	SM 2540D	

TestAmerica Canton

QC Association Summary

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

General Chemistry (Continued)

Analysis Batch: 100714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-28681-1	GC05D	Total/NA	Water	365.1	100580
240-28681-2	GC05P	Total/NA	Water	365.1	100580
240-28681-3	GC05M	Total/NA	Water	365.1	100580
LCS 240-100580/11-A	Lab Control Sample	Total/NA	Water	365.1	100580
MB 240-100580/10-A	Method Blank	Total/NA	Water	365.1	100580

Analysis Batch: 100724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-28681-1	GC05D	Total/NA	Water	SM 2540C	
240-28681-2	GC05P	Total/NA	Water	SM 2540C	
240-28681-3	GC05M	Total/NA	Water	SM 2540C	
LCS 240-100724/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 240-100724/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 100749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-28681-1	GC05D	Total/NA	Water	130.2	
240-28681-2	GC05P	Total/NA	Water	130.2	
240-28681-3	GC05M	Total/NA	Water	130.2	
LCS 240-100749/2	Lab Control Sample	Total/NA	Water	130.2	
MB 240-100749/1	Method Blank	Total/NA	Water	130.2	

Analysis Batch: 100861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-28681-1	GC05D	Total/NA	Water	300.0	
240-28681-2	GC05P	Total/NA	Water	300.0	
240-28681-2 MS	GC05P	Total/NA	Water	300.0	
240-28681-2 MSD	GC05P	Total/NA	Water	300.0	
240-28681-3	GC05M	Total/NA	Water	300.0	
LCS 240-100861/4	Lab Control Sample	Total/NA	Water	300.0	
MB 240-100861/3	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 101119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-28681-1	GC05D	Total/NA	Water	310.1	
240-28681-2	GC05P	Total/NA	Water	310.1	
240-28681-3	GC05M	Total/NA	Water	310.1	
LCS 240-101119/4	Lab Control Sample	Total/NA	Water	310.1	
MB 240-101119/5	Method Blank	Total/NA	Water	310.1	

TestAmerica Canton

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Client Sample ID: GC05D

Date Collected: 09/05/13 11:30

Date Received: 09/05/13 15:03

Lab Sample ID: 240-28681-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	245.1			100370	09/06/13 12:30	LPM	TAL CAN
Total/NA	Analysis	245.1		1	100725	09/09/13 15:02	AMM2	TAL CAN
Dissolved	Filtration	FILTRATION			100360	09/06/13 07:02	LPM	TAL CAN
Dissolved	Prep	245.1			100370	09/06/13 12:30	LPM	TAL CAN
Dissolved	Analysis	245.1		1	100725	09/09/13 15:10	AMM2	TAL CAN
Total Recoverable	Analysis	200.8		1	101104	09/11/13 16:38	NJT	TAL CAN
Dissolved	Filtration	FILTRATION			100360	09/06/13 07:02	LPM	TAL CAN
Dissolved	Prep	200.8			100366	09/06/13 07:51	LPM	TAL CAN
Dissolved	Analysis	200.8		1	101104	09/11/13 17:15	NJT	TAL CAN
Total Recoverable	Prep	200.8			100366	09/06/13 07:51	LPM	TAL CAN
Total Recoverable	Analysis	200.8		1	101286	09/12/13 11:32	NJT	TAL CAN
Dissolved	Analysis	200.8		1	101286	09/12/13 11:54	NJT	TAL CAN
Total/NA	Analysis	SM 3500 CR D		1	100269	09/05/13 16:09	BLW	TAL CAN
Total/NA	Analysis	300.0		1	100317	09/05/13 22:26	JMB	TAL CAN
Total/NA	Analysis	300.0		1	100318	09/05/13 22:26	JMB	TAL CAN
Total/NA	Analysis	SM 2540D		1	100650	09/09/13 10:44	KMG	TAL CAN
Total/NA	Prep	365.2/365.3/365			100580	09/09/13 06:53	TPH	TAL CAN
Total/NA	Analysis	365.1		1	100714	09/09/13 13:33	TPH	TAL CAN
Total/NA	Analysis	SM 2540C		1	100724	09/09/13 15:29	KMG	TAL CAN
Total/NA	Analysis	130.2		1	100749	09/10/13 09:06	TPH	TAL CAN
Total/NA	Analysis	300.0		5	100861	09/10/13 14:06	JMB	TAL CAN
Total/NA	Analysis	310.1		1	101119	09/11/13 20:53	LKG	TAL CAN

Client Sample ID: GC05P

Date Collected: 09/05/13 11:35

Date Received: 09/05/13 15:03

Lab Sample ID: 240-28681-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	245.1			100370	09/06/13 12:30	LPM	TAL CAN
Total/NA	Analysis	245.1		1	100725	09/09/13 15:06	AMM2	TAL CAN
Dissolved	Filtration	FILTRATION			100360	09/06/13 07:02	LPM	TAL CAN
Dissolved	Prep	245.1			100370	09/06/13 12:30	LPM	TAL CAN
Dissolved	Analysis	245.1		1	100725	09/09/13 15:11	AMM2	TAL CAN
Total Recoverable	Analysis	200.8		1	101104	09/11/13 16:45	NJT	TAL CAN
Dissolved	Prep	200.8			100366	09/06/13 07:51	LPM	TAL CAN
Dissolved	Analysis	200.8		1	101104	09/11/13 17:23	NJT	TAL CAN
Total Recoverable	Prep	200.8			100366	09/06/13 07:51	LPM	TAL CAN
Total Recoverable	Analysis	200.8		1	101286	09/12/13 11:39	NJT	TAL CAN
Dissolved	Filtration	FILTRATION			100360	09/06/13 07:02	LPM	TAL CAN
Dissolved	Analysis	200.8		1	101286	09/12/13 12:01	NJT	TAL CAN
Total/NA	Analysis	SM 3500 CR D		1	100269	09/05/13 16:11	BLW	TAL CAN
Total/NA	Analysis	300.0		1	100317	09/05/13 22:43	JMB	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Client Sample ID: GC05P

Lab Sample ID: 240-28681-2

Date Collected: 09/05/13 11:35

Matrix: Water

Date Received: 09/05/13 15:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	100318	09/05/13 22:43	JMB	TAL CAN
Total/NA	Analysis	SM 2540D		1	100650	09/09/13 10:44	KMG	TAL CAN
Total/NA	Prep	365.2/365.3/365			100580	09/09/13 06:54	TPH	TAL CAN
Total/NA	Analysis	365.1		1	100714	09/09/13 13:33	TPH	TAL CAN
Total/NA	Analysis	SM 2540C		1	100724	09/09/13 15:29	KMG	TAL CAN
Total/NA	Analysis	130.2		1	100749	09/10/13 09:10	TPH	TAL CAN
Total/NA	Analysis	300.0		5	100861	09/10/13 14:23	JMB	TAL CAN
Total/NA	Analysis	310.1		1	101119	09/11/13 21:03	LKG	TAL CAN

Client Sample ID: GC05M

Lab Sample ID: 240-28681-3

Date Collected: 09/05/13 11:40

Matrix: Water

Date Received: 09/05/13 15:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	245.1			100370	09/06/13 12:30	LPM	TAL CAN
Total/NA	Analysis	245.1		1	100725	09/09/13 15:08	AMM2	TAL CAN
Dissolved	Filtration	FILTRATION			100360	09/06/13 07:02	LPM	TAL CAN
Dissolved	Prep	245.1			100370	09/06/13 12:30	LPM	TAL CAN
Dissolved	Analysis	245.1		1	100725	09/09/13 15:12	AMM2	TAL CAN
Total Recoverable	Prep	200.8			100366	09/06/13 07:51	LPM	TAL CAN
Total Recoverable	Analysis	200.8		1	101104	09/11/13 16:30	NJT	TAL CAN
Dissolved	Prep	200.8			100366	09/06/13 07:51	LPM	TAL CAN
Dissolved	Analysis	200.8		1	101104	09/11/13 17:30	NJT	TAL CAN
Total Recoverable	Analysis	200.8		1	101286	09/12/13 11:47	NJT	TAL CAN
Dissolved	Filtration	FILTRATION			100360	09/06/13 07:02	LPM	TAL CAN
Dissolved	Analysis	200.8		1	101286	09/12/13 12:09	NJT	TAL CAN
Total/NA	Analysis	SM 3500 CR D		1	100269	09/05/13 16:12	BLW	TAL CAN
Total/NA	Analysis	300.0		1	100317	09/05/13 22:59	JMB	TAL CAN
Total/NA	Analysis	300.0		1	100318	09/05/13 22:59	JMB	TAL CAN
Total/NA	Analysis	SM 2540D		1	100650	09/09/13 10:44	KMG	TAL CAN
Total/NA	Prep	365.2/365.3/365			100580	09/09/13 06:55	TPH	TAL CAN
Total/NA	Analysis	365.1		1	100714	09/09/13 13:33	TPH	TAL CAN
Total/NA	Analysis	SM 2540C		1	100724	09/09/13 15:29	KMG	TAL CAN
Total/NA	Analysis	130.2		1	100749	09/10/13 09:13	TPH	TAL CAN
Total/NA	Analysis	300.0		5	100861	09/10/13 15:16	JMB	TAL CAN
Total/NA	Analysis	310.1		1	101119	09/11/13 21:15	LKG	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TestAmerica Canton

Certification Summary

Client: Golder Associates Inc.
Project/Site: Satralloy - Creek Study

TestAmerica Job ID: 240-28681-1

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14
Connecticut	State Program	1	PH-0590	12-31-13
Florida	NELAP	4	E87225	06-30-14
Georgia	State Program	4	N/A	06-30-14
Illinois	NELAP	5	200004	07-31-13 *
Kansas	NELAP	7	E-10336	01-31-14
Kentucky	State Program	4	58	06-30-14
L-A-B	DoD ELAP		L2315	07-18-16
Nevada	State Program	9	OH-000482008A	07-31-14
New Jersey	NELAP	2	OH001	06-30-14
New York	NELAP	2	10975	04-01-14
Ohio VAP	State Program	5	CL0024	01-19-14
Pennsylvania	NELAP	3	68-00340	08-31-14 *
Texas	NELAP	6		08-31-14 *
USDA	Federal		P330-11-00328	08-26-14
Virginia	NELAP	3	460175	09-14-13
Washington	State Program	10	C971	01-12-14
Wisconsin	State Program	5	999518190	08-31-14

* Expired certification is currently pending renewal and is considered valid.

TestAmerica Canton

[illegible]

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 28681

Client Golder Site Name Satralloy Cooler unpacked by: Derry Burns
Cooler Received on 9/5/13 Opened on 9/5/13
FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____
TestAmerica Cooler # A922 Foam Box Client Cooler Box Other _____
Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt
IR GUN# A (CF -1 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN# 4 (CF 0 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN# 5 (CF +1 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN# 8 (CF -0 °C) Observed Cooler Temp. 1.2 °C Corrected Cooler Temp. 1.2 °C ☐ See Multiple Cooler Form
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes No
-Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
-Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? Yes No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC376062
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other
Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

Derry Burns

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u> <u>pH</u>	<u>Preservative</u> <u>Added (mls)</u>	<u>Lot #</u>
GC05D	240-28681-B-1	Plastic 250ml - with Sulfuric Acid	<2		
GC05D	240-28681-C-1	Plastic 250ml - with Nitric Acid	<2		
GC05D	240-28681-E-1	Plastic 500ml - with Nitric Acid	<2		
GC05P	240-28681-B-2	Plastic 250ml - with Sulfuric Acid	<2		
GC05P	240-28681-C-2	Plastic 250ml - with Nitric Acid	<2		
GC05P	240-28681-E-2	Plastic 500ml - with Nitric Acid	<2		
GC05M	240-28681-B-3	Plastic 250ml - with Sulfuric Acid	<2		
GC05M	240-28681-C-3	Plastic 250ml - with Nitric Acid	<2		
GC05M	240-28681-E-3	Plastic 500ml - with Nitric Acid	<2		