

ANALYTICAL REPORT

Eurofins TestAmerica, Canton
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North Canton, OH 44720
Tel: (330)497-9396

Laboratory Job ID: 240-161077-1

Client Project/Site: Former Satralloy Site - Industrial SWPPP

For:

Golder Associates Inc.
1335 Dublin Road
Suite 126-D
Columbus, Ohio 43215

Attn: Mr. Bob Ireson



Authorized for release by:
12/14/2021 7:30:25 PM

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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: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
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)
TNTC	Too Numerous To Count

Case Narrative

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

Job ID: 240-161077-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

Job Narrative
240-161077-1

Comments

No additional comments.

Receipt

The samples were received on 12/7/2021 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 5.0° C and 10.8° C.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method SM 3500 CR B: The following sample was received outside of holding time: FD-01 (240-161077-4).

Method SM 4500 H+ B: The pH for the following samples were outside the instrument calibration range of 2 to 12: SC-02 (240-161077-1) and (240-161077-B-1 DU).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Method Summary

Client: Golder Associates Inc.

Job ID: 240-161077-1

Project/Site: Former Satralloy Site - Industrial SWPPP

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	TAL CAN
3500-Cr B-2009	Chromium, Hexavalent	SM	TAL CAN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CAN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CAN
SM 4500 H+ B	pH	SM	TAL CAN
200.8	Preparation, Total Recoverable Metals	EPA	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

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

Sample Summary

Client: Golder Associates Inc.

Job ID: 240-161077-1

Project/Site: Former Satralloy Site - Industrial SWPPP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-161077-1	SC-02	Water	12/06/21 11:34	12/07/21 08:00
240-161077-2	US-01	Water	12/06/21 11:45	12/07/21 08:00
240-161077-3	DS-01	Water	12/06/21 12:55	12/07/21 08:00
240-161077-4	FD-01	Water	12/06/21 00:00	12/07/21 08:00
240-161077-5	GC-09	Water	12/06/21 12:04	12/07/21 08:00
240-161077-6	GC-06	Water	12/06/21 12:25	12/07/21 08:00
240-161077-7	GC-05	Water	12/06/21 12:37	12/07/21 08:00
240-161077-8	GC-04	Water	12/06/21 12:44	12/07/21 08:00

Detection Summary

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

Client Sample ID: SC-02

Lab Sample ID: 240-161077-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	32		5.0	2.5	ug/L	1		200.8	Total Recoverable
Cr (VI)	0.031		0.020	0.0070	mg/L	1		3500-Cr B-2009	Total/NA
Total Dissolved Solids	380		20	16	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	40		4.0	1.0	mg/L	1		SM 2540D	Total/NA
pH	12.2	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: US-01

Lab Sample ID: 240-161077-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	520		10	7.8	mg/L	1		SM 2540C	Total/NA
pH	8.3	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: DS-01

Lab Sample ID: 240-161077-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	4.9	J	5.0	2.5	ug/L	1		200.8	Total Recoverable
Total Dissolved Solids	870		10	7.8	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	9.0		4.0	1.0	mg/L	1		SM 2540D	Total/NA
pH	8.5	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: FD-01

Lab Sample ID: 240-161077-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	510		10	7.8	mg/L	1		SM 2540C	Total/NA
pH	8.4	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: GC-09

Lab Sample ID: 240-161077-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	980		5.0	2.5	ug/L	1		200.8	Total Recoverable
Cr (VI)	0.63		0.20	0.070	mg/L	10		3500-Cr B-2009	Total/NA
Total Dissolved Solids	280		10	7.8	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	890		4.0	1.0	mg/L	1		SM 2540D	Total/NA
pH	9.1	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: GC-06

Lab Sample ID: 240-161077-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	120		5.0	2.5	ug/L	1		200.8	Total Recoverable
Cr (VI)	0.22		0.20	0.070	mg/L	10		3500-Cr B-2009	Total/NA
Total Dissolved Solids	260		10	7.8	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	43		4.0	1.0	mg/L	1		SM 2540D	Total/NA
pH	8.2	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: GC-05

Lab Sample ID: 240-161077-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	1000		5.0	2.5	ug/L	1		200.8	Total Recoverable
Cr (VI)	0.47		0.20	0.070	mg/L	10		3500-Cr B-2009	Total/NA
Total Dissolved Solids	430		10	7.8	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

Client Sample ID: GC-05 (Continued)

Lab Sample ID: 240-161077-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	770		4.0	1.0	mg/L	1		SM 2540D	Total/NA
pH	8.6	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: GC-04

Lab Sample ID: 240-161077-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	270		5.0	2.5	ug/L	1		200.8	Total Recoverable
Cr (VI)	0.31		0.020	0.0070	mg/L	1		3500-Cr B-2009	Total/NA
Total Dissolved Solids	910		10	7.8	mg/L	1		SM 2540C	Total/NA
pH	10	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Canton

Client Sample Results

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

Client Sample ID: SC-02

Date Collected: 12/06/21 11:34

Date Received: 12/07/21 08:00

Lab Sample ID: 240-161077-1

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	32		5.0	2.5	ug/L		12/08/21 14:00	12/09/21 13:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.031		0.020	0.0070	mg/L			12/07/21 08:45	1
Total Dissolved Solids	380		20	16	mg/L			12/08/21 08:38	1
Total Suspended Solids	40		4.0	1.0	mg/L			12/07/21 09:59	1
pH	12.2	HF	0.1	0.1	SU			12/07/21 22:35	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

Client Sample ID: US-01

Date Collected: 12/06/21 11:45

Date Received: 12/07/21 08:00

Lab Sample ID: 240-161077-2

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	<2.5		5.0	2.5	ug/L		12/08/21 14:00	12/09/21 13:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	<0.0070		0.020	0.0070	mg/L			12/07/21 08:45	1
Total Dissolved Solids	520		10	7.8	mg/L			12/08/21 08:38	1
Total Suspended Solids	<1.0		4.0	1.0	mg/L			12/07/21 09:59	1
pH	8.3	HF	0.1	0.1	SU			12/07/21 22:37	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

Client Sample ID: DS-01

Date Collected: 12/06/21 12:55

Date Received: 12/07/21 08:00

Lab Sample ID: 240-161077-3

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	4.9	J	5.0	2.5	ug/L		12/08/21 14:00	12/09/21 13:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	<0.0070		0.020	0.0070	mg/L			12/07/21 08:45	1
Total Dissolved Solids	870		10	7.8	mg/L			12/09/21 08:32	1
Total Suspended Solids	9.0		4.0	1.0	mg/L			12/07/21 09:59	1
pH	8.5	HF	0.1	0.1	SU			12/07/21 22:38	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

Client Sample ID: FD-01

Date Collected: 12/06/21 00:00

Date Received: 12/07/21 08:00

Lab Sample ID: 240-161077-4

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	<2.5		5.0	2.5	ug/L		12/08/21 14:00	12/09/21 13:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	<0.0070	H	0.020	0.0070	mg/L			12/07/21 08:45	1
Total Dissolved Solids	510		10	7.8	mg/L			12/09/21 08:32	1
Total Suspended Solids	<1.0		4.0	1.0	mg/L			12/07/21 09:59	1
pH	8.4	HF	0.1	0.1	SU			12/07/21 22:40	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

Client Sample ID: GC-09

Lab Sample ID: 240-161077-5

Date Collected: 12/06/21 12:04

Matrix: Water

Date Received: 12/07/21 08:00

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	980		5.0	2.5	ug/L		12/08/21 14:00	12/09/21 13:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.63		0.20	0.070	mg/L			12/07/21 08:45	10
Total Dissolved Solids	280		10	7.8	mg/L			12/09/21 08:32	1
Total Suspended Solids	890		4.0	1.0	mg/L			12/07/21 09:59	1
pH	9.1	HF	0.1	0.1	SU			12/07/21 22:42	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

Client Sample ID: GC-06

Date Collected: 12/06/21 12:25

Date Received: 12/07/21 08:00

Lab Sample ID: 240-161077-6

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	120		5.0	2.5	ug/L		12/08/21 14:00	12/09/21 13:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.22		0.20	0.070	mg/L			12/07/21 08:45	10
Total Dissolved Solids	260		10	7.8	mg/L			12/09/21 08:32	1
Total Suspended Solids	43		4.0	1.0	mg/L			12/07/21 09:59	1
pH	8.2	HF	0.1	0.1	SU			12/07/21 22:44	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

Client Sample ID: GC-05

Lab Sample ID: 240-161077-7

Date Collected: 12/06/21 12:37

Matrix: Water

Date Received: 12/07/21 08:00

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	1000		5.0	2.5	ug/L		12/08/21 14:00	12/09/21 13:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.47		0.20	0.070	mg/L			12/07/21 08:45	10
Total Dissolved Solids	430		10	7.8	mg/L			12/09/21 08:32	1
Total Suspended Solids	770		4.0	1.0	mg/L			12/07/21 09:59	1
pH	8.6	HF	0.1	0.1	SU			12/07/21 22:46	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

Client Sample ID: GC-04

Lab Sample ID: 240-161077-8

Date Collected: 12/06/21 12:44

Matrix: Water

Date Received: 12/07/21 08:00

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	270		5.0	2.5	ug/L		12/08/21 14:00	12/09/21 13:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.31		0.020	0.0070	mg/L			12/07/21 08:47	1
Total Dissolved Solids	910		10	7.8	mg/L			12/09/21 08:32	1
Total Suspended Solids	<1.0		4.0	1.0	mg/L			12/07/21 09:59	1
pH	10	HF	0.1	0.1	SU			12/07/21 22:47	1

QC Sample Results

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 240-516070/1-A

Matrix: Water

Analysis Batch: 516264

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 516070

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	<2.5		5.0	2.5	ug/L		12/08/21 14:00	12/09/21 13:03	1

Lab Sample ID: LCS 240-516070/2-A

Matrix: Water

Analysis Batch: 516264

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 516070

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	500	498		ug/L		100	85 - 115

Method: 3500-Cr B-2009 - Chromium, Hexavalent

Lab Sample ID: MB 240-515824/3

Matrix: Water

Analysis Batch: 515824

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	<0.0070		0.020	0.0070	mg/L			12/07/21 08:45	1

Lab Sample ID: LCS 240-515824/4

Matrix: Water

Analysis Batch: 515824

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	0.255		mg/L		102	80 - 123

Lab Sample ID: 240-161077-1 MS

Matrix: Water

Analysis Batch: 515824

Client Sample ID: SC-02

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.031		0.250	0.289		mg/L		103	31 - 151

Lab Sample ID: 240-161077-1 MSD

Matrix: Water

Analysis Batch: 515824

Client Sample ID: SC-02

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	0.031		0.250	0.295		mg/L		105	31 - 151	2	20

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

Lab Sample ID: MB 240-516029/1

Matrix: Water

Analysis Batch: 516029

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	<7.8		10	7.8	mg/L			12/08/21 08:38	1

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QC Sample Results

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

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

Lab Sample ID: LCS 240-516029/2

Matrix: Water

Analysis Batch: 516029

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	150	150		mg/L		100	80 - 120

Lab Sample ID: MB 240-516192/1

Matrix: Water

Analysis Batch: 516192

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	<7.8		10	7.8	mg/L			12/09/21 08:32	1

Lab Sample ID: LCS 240-516192/2

Matrix: Water

Analysis Batch: 516192

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	150	132		mg/L		88	80 - 120

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

Lab Sample ID: MB 240-515875/1

Matrix: Water

Analysis Batch: 515875

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	<1.0		4.0	1.0	mg/L			12/07/21 09:59	1

Lab Sample ID: LCS 240-515875/2

Matrix: Water

Analysis Batch: 515875

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	20.0		mg/L		69	64 - 120

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 240-515963/2

Matrix: Water

Analysis Batch: 515963

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	8.47	8.4		SU		100	97 - 103

Lab Sample ID: 240-161077-1 DU

Matrix: Water

Analysis Batch: 515963

Client Sample ID: SC-02

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	12.2	HF	12.2		SU		0.2	20

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QC Association Summary

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

Metals

Prep Batch: 516070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-161077-1	SC-02	Total Recoverable	Water	200.8	
240-161077-2	US-01	Total Recoverable	Water	200.8	
240-161077-3	DS-01	Total Recoverable	Water	200.8	
240-161077-4	FD-01	Total Recoverable	Water	200.8	
240-161077-5	GC-09	Total Recoverable	Water	200.8	
240-161077-6	GC-06	Total Recoverable	Water	200.8	
240-161077-7	GC-05	Total Recoverable	Water	200.8	
240-161077-8	GC-04	Total Recoverable	Water	200.8	
MB 240-516070/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 240-516070/2-A	Lab Control Sample	Total Recoverable	Water	200.8	

Analysis Batch: 516264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-161077-1	SC-02	Total Recoverable	Water	200.8	516070
240-161077-2	US-01	Total Recoverable	Water	200.8	516070
240-161077-3	DS-01	Total Recoverable	Water	200.8	516070
240-161077-4	FD-01	Total Recoverable	Water	200.8	516070
240-161077-5	GC-09	Total Recoverable	Water	200.8	516070
240-161077-6	GC-06	Total Recoverable	Water	200.8	516070
240-161077-7	GC-05	Total Recoverable	Water	200.8	516070
240-161077-8	GC-04	Total Recoverable	Water	200.8	516070
MB 240-516070/1-A	Method Blank	Total Recoverable	Water	200.8	516070
LCS 240-516070/2-A	Lab Control Sample	Total Recoverable	Water	200.8	516070

General Chemistry

Analysis Batch: 515824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-161077-1	SC-02	Total/NA	Water	3500-Cr B-2009	
240-161077-2	US-01	Total/NA	Water	3500-Cr B-2009	
240-161077-3	DS-01	Total/NA	Water	3500-Cr B-2009	
240-161077-4	FD-01	Total/NA	Water	3500-Cr B-2009	
240-161077-5	GC-09	Total/NA	Water	3500-Cr B-2009	
240-161077-6	GC-06	Total/NA	Water	3500-Cr B-2009	
240-161077-7	GC-05	Total/NA	Water	3500-Cr B-2009	
240-161077-8	GC-04	Total/NA	Water	3500-Cr B-2009	
MB 240-515824/3	Method Blank	Total/NA	Water	3500-Cr B-2009	
LCS 240-515824/4	Lab Control Sample	Total/NA	Water	3500-Cr B-2009	
240-161077-1 MS	SC-02	Total/NA	Water	3500-Cr B-2009	
240-161077-1 MSD	SC-02	Total/NA	Water	3500-Cr B-2009	

Analysis Batch: 515875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-161077-1	SC-02	Total/NA	Water	SM 2540D	
240-161077-2	US-01	Total/NA	Water	SM 2540D	
240-161077-3	DS-01	Total/NA	Water	SM 2540D	
240-161077-4	FD-01	Total/NA	Water	SM 2540D	
240-161077-5	GC-09	Total/NA	Water	SM 2540D	
240-161077-6	GC-06	Total/NA	Water	SM 2540D	
240-161077-7	GC-05	Total/NA	Water	SM 2540D	
240-161077-8	GC-04	Total/NA	Water	SM 2540D	

Eurofins TestAmerica, Canton

QC Association Summary

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

General Chemistry (Continued)

Analysis Batch: 515875 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-515875/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 240-515875/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 515963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-161077-1	SC-02	Total/NA	Water	SM 4500 H+ B	
240-161077-2	US-01	Total/NA	Water	SM 4500 H+ B	
240-161077-3	DS-01	Total/NA	Water	SM 4500 H+ B	
240-161077-4	FD-01	Total/NA	Water	SM 4500 H+ B	
240-161077-5	GC-09	Total/NA	Water	SM 4500 H+ B	
240-161077-6	GC-06	Total/NA	Water	SM 4500 H+ B	
240-161077-7	GC-05	Total/NA	Water	SM 4500 H+ B	
240-161077-8	GC-04	Total/NA	Water	SM 4500 H+ B	
LCS 240-515963/2	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
240-161077-1 DU	SC-02	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 516029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-161077-1	SC-02	Total/NA	Water	SM 2540C	
240-161077-2	US-01	Total/NA	Water	SM 2540C	
MB 240-516029/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-516029/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 516192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-161077-3	DS-01	Total/NA	Water	SM 2540C	
240-161077-4	FD-01	Total/NA	Water	SM 2540C	
240-161077-5	GC-09	Total/NA	Water	SM 2540C	
240-161077-6	GC-06	Total/NA	Water	SM 2540C	
240-161077-7	GC-05	Total/NA	Water	SM 2540C	
240-161077-8	GC-04	Total/NA	Water	SM 2540C	
MB 240-516192/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-516192/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

Client Sample ID: SC-02

Date Collected: 12/06/21 11:34

Date Received: 12/07/21 08:00

Lab Sample ID: 240-161077-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			516070	12/08/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	200.8		1	516264	12/09/21 13:32	DSH	TAL CAN
Total/NA	Analysis	3500-Cr B-2009		1	515824	12/07/21 08:45	JMR	TAL CAN
Total/NA	Analysis	SM 2540C		1	516029	12/08/21 08:38	KMS	TAL CAN
Total/NA	Analysis	SM 2540D		1	515875	12/07/21 09:59	KMS	TAL CAN
Total/NA	Analysis	SM 4500 H+ B		1	515963	12/07/21 22:35	AGC	TAL CAN

Client Sample ID: US-01

Date Collected: 12/06/21 11:45

Date Received: 12/07/21 08:00

Lab Sample ID: 240-161077-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			516070	12/08/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	200.8		1	516264	12/09/21 13:34	DSH	TAL CAN
Total/NA	Analysis	3500-Cr B-2009		1	515824	12/07/21 08:45	JMR	TAL CAN
Total/NA	Analysis	SM 2540C		1	516029	12/08/21 08:38	KMS	TAL CAN
Total/NA	Analysis	SM 2540D		1	515875	12/07/21 09:59	KMS	TAL CAN
Total/NA	Analysis	SM 4500 H+ B		1	515963	12/07/21 22:37	AGC	TAL CAN

Client Sample ID: DS-01

Date Collected: 12/06/21 12:55

Date Received: 12/07/21 08:00

Lab Sample ID: 240-161077-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			516070	12/08/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	200.8		1	516264	12/09/21 13:37	DSH	TAL CAN
Total/NA	Analysis	3500-Cr B-2009		1	515824	12/07/21 08:45	JMR	TAL CAN
Total/NA	Analysis	SM 2540C		1	516192	12/09/21 08:32	KMS	TAL CAN
Total/NA	Analysis	SM 2540D		1	515875	12/07/21 09:59	KMS	TAL CAN
Total/NA	Analysis	SM 4500 H+ B		1	515963	12/07/21 22:38	AGC	TAL CAN

Client Sample ID: FD-01

Date Collected: 12/06/21 00:00

Date Received: 12/07/21 08:00

Lab Sample ID: 240-161077-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			516070	12/08/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	200.8		1	516264	12/09/21 13:39	DSH	TAL CAN
Total/NA	Analysis	3500-Cr B-2009		1	515824	12/07/21 08:45	JMR	TAL CAN
Total/NA	Analysis	SM 2540C		1	516192	12/09/21 08:32	KMS	TAL CAN
Total/NA	Analysis	SM 2540D		1	515875	12/07/21 09:59	KMS	TAL CAN
Total/NA	Analysis	SM 4500 H+ B		1	515963	12/07/21 22:40	AGC	TAL CAN

Eurofins TestAmerica, Canton

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

Client Sample ID: GC-09

Date Collected: 12/06/21 12:04

Date Received: 12/07/21 08:00

Lab Sample ID: 240-161077-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			516070	12/08/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	200.8		1	516264	12/09/21 13:42	DSH	TAL CAN
Total/NA	Analysis	3500-Cr B-2009		10	515824	12/07/21 08:45	JMR	TAL CAN
Total/NA	Analysis	SM 2540C		1	516192	12/09/21 08:32	KMS	TAL CAN
Total/NA	Analysis	SM 2540D		1	515875	12/07/21 09:59	KMS	TAL CAN
Total/NA	Analysis	SM 4500 H+ B		1	515963	12/07/21 22:42	AGC	TAL CAN

Client Sample ID: GC-06

Date Collected: 12/06/21 12:25

Date Received: 12/07/21 08:00

Lab Sample ID: 240-161077-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			516070	12/08/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	200.8		1	516264	12/09/21 13:44	DSH	TAL CAN
Total/NA	Analysis	3500-Cr B-2009		10	515824	12/07/21 08:45	JMR	TAL CAN
Total/NA	Analysis	SM 2540C		1	516192	12/09/21 08:32	KMS	TAL CAN
Total/NA	Analysis	SM 2540D		1	515875	12/07/21 09:59	KMS	TAL CAN
Total/NA	Analysis	SM 4500 H+ B		1	515963	12/07/21 22:44	AGC	TAL CAN

Client Sample ID: GC-05

Date Collected: 12/06/21 12:37

Date Received: 12/07/21 08:00

Lab Sample ID: 240-161077-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			516070	12/08/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	200.8		1	516264	12/09/21 13:47	DSH	TAL CAN
Total/NA	Analysis	3500-Cr B-2009		10	515824	12/07/21 08:45	JMR	TAL CAN
Total/NA	Analysis	SM 2540C		1	516192	12/09/21 08:32	KMS	TAL CAN
Total/NA	Analysis	SM 2540D		1	515875	12/07/21 09:59	KMS	TAL CAN
Total/NA	Analysis	SM 4500 H+ B		1	515963	12/07/21 22:46	AGC	TAL CAN

Client Sample ID: GC-04

Date Collected: 12/06/21 12:44

Date Received: 12/07/21 08:00

Lab Sample ID: 240-161077-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			516070	12/08/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	200.8		1	516264	12/09/21 13:49	DSH	TAL CAN
Total/NA	Analysis	3500-Cr B-2009		1	515824	12/07/21 08:47	JMR	TAL CAN
Total/NA	Analysis	SM 2540C		1	516192	12/09/21 08:32	KMS	TAL CAN
Total/NA	Analysis	SM 2540D		1	515875	12/07/21 09:59	KMS	TAL CAN
Total/NA	Analysis	SM 4500 H+ B		1	515963	12/07/21 22:47	AGC	TAL CAN

Eurofins TestAmerica, Canton

Lab Chronicle

Client: Golder Associates Inc.
Project/Site: Former Satralloy Site - Industrial SWPPP

Job ID: 240-161077-1

Laboratory References:

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

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Accreditation/Certification Summary

Client: Golder Associates Inc.

Job ID: 240-161077-1

Project/Site: Former Satralloy Site - Industrial SWPPP

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-22
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-22
Georgia	State	4062	02-23-22
Illinois	NELAP	200004	07-31-22
Iowa	State	421	06-01-23
Kansas	NELAP	E-10336	04-30-22
Kentucky (UST)	State	112225	02-23-22
Kentucky (WW)	State	KY98016	12-31-21
Minnesota	NELAP	OH00048	12-31-21
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-22
New York	NELAP	10975	03-31-22
Ohio VAP	State	CL0024	12-21-23
Oregon	NELAP	4062	02-23-22
Pennsylvania	NELAP	68-00340	08-31-22
Texas	NELAP	T104704517-18-10	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-22
West Virginia DEP	State	210	12-31-21

Rigdon, Jessica M.

From: Brammer, Dakota <Dakota_Brammer@golder.com>
Sent: Monday, December 6, 2021 8:21 PM
To: Brooks, Kris
Subject: Fwd: Samples received today for Satralloy

EXTERNAL EMAIL*

NOTE: This email chain appears to contain email from outside Golder

From: Brammer, Dakota <Dakota_Brammer@golder.com>
Sent: Monday, December 6, 2021, 20:20
To: Brammer, Dakota
Subject: Re: Samples received today for Satralloy

NOTE: This email chain appears to contain email from outside Golder

There should be a total of 5 in the smaller cooler:

FD-01
US-01
DS-01
SW-11
SW-12

161078

they should each have the CSWP label on them. I'm thinking there might have been an ISWPPP label that accidentally got placed in the wrong cooler.

The larger cooler should have 8 samples with ISWPPP labels:

SC-02
US-01
DS-01
FD-01
GC-09
GC-06
GC-05
GC-04

161077

Eurofins TestAmerica Canton Sample Receipt Form/Narrative				Login # : <u>161077</u>	
Canton Facility					
Client <u>Golden</u>		Site Name <u>Suttrall</u>		Cooler unpacked by: <u>KMB</u>	
Cooler Received on <u>12-6-21</u>		Opened on <u>12-6-21</u>			
FedEx: 1 st Grd Exp		UPS FAS Clipper		Client Drop Off TestAmerica Courier Other <u>private courier</u>	
Receipt After-hours: Drop-off Date/Time <u>12-6-21 5:15</u>				Storage Location <u>walkin cool</u>	
TestAmerica Cooler # <u>NA</u>		Foam Box		Client Cooler Box Other	
Packing material used: Bubble Wrap		Foam		<u>Plastic Bag</u> None Other	
COOLANT: <u>Wet Ice</u>		Blue Ice		Dry Ice Water None	
1. Cooler temperature upon receipt		☒ See Multiple Cooler Form			
IR GUN# IR-14 (CF +0.1 °C)		Observed Cooler Temp. _____ °C		Corrected Cooler Temp. _____ °C	
IR GUN #IR-15 (CF +0.2 °C)		Observed Cooler Temp. _____ °C		Corrected Cooler Temp. _____ °C	
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____		Yes <u>No</u>		Tests that are not checked for pH by Receiving: VOAs Oil and Grease TOC	
-Were the seals on the outside of the cooler(s) signed & dated?		Yes <u>No</u> <u>NA</u>			
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?		Yes <u>No</u>			
-Were tamper/custody seals intact and uncompromised?		Yes <u>No</u> <u>NA</u>			
3. Shippers' packing slip attached to the cooler(s)?		Yes <u>No</u>			
4. Did custody papers accompany the sample(s)?		Yes <u>No</u>			
5. Were the custody papers relinquished & signed in the appropriate place?		Yes <u>No</u>			
6. Was/were the person(s) who collected the samples clearly identified on the COC?		Yes <u>No</u>			
7. Did all bottles arrive in good condition (Unbroken)?		<u>Yes</u> No			
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?		Yes <u>No</u>			
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		<u>NA</u>			
10. Were correct bottle(s) used for the test(s) indicated?		<u>Yes</u> No			
11. Sufficient quantity received to perform indicated analyses?		<u>Yes</u> No			
12. Are these work share samples and all listed on the COC?		Yes <u>No</u>			
If yes, Questions 13-17 have been checked at the originating laboratory.					
13. Were all preserved sample(s) at the correct pH upon receipt?		Yes No NA		pH Strip Lot# <u>HC157842</u>	
14. Were VOAs on the COC?		Yes <u>No</u>			
15. Were air bubbles >6 mm in any VOA vials? Larger than this.		Yes No <u>NA</u>			
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____		Yes <u>No</u>			
17. Was a LL Hg or Me Hg trip blank present? _____		Yes <u>No</u>			
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____					
Concerning _____					

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page		Samples processed by: _____
<u>Bottle labels do not match but have the same time & were received bagged together DS-01 vs DS-01 12/6/21 @ 1255</u> <u>Sample IDs logged per client email</u> <u>Sample dates/times logged per the containers 12-7-21</u>		
19. 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)		
20. SAMPLE PRESERVATION		
Sample(s) _____ were further preserved in the laboratory.		
Time preserved: _____ Preservative(s) added/Lot number(s): _____		
VOA Sample Preservation - Date/Time VOAs Frozen: _____		

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[illegible]

WJ-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>		<u>Preservative</u>	
			<u>pH</u>	<u>Temp</u>	<u>Added (mls)</u>	<u>Lot #</u>
SC-02	240-161077-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
US-01	240-161077-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
DS-01	240-161077-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
FD-01	240-161077-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
GC-09	240-161077-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
GC-06	240-161077-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
GC-05	240-161077-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
GC-04	240-161077-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____