TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-111561-1
Client Project/Site: Ponds and Process Tanks

For:
Central Wire (Techalloy)
6509 Olson Road
Union, Illinois 60180

Attn: Robert Johnson

Sandie Fredrick

Authorized for release by:
5/25/2016 12:43:35 PM

Sandie Fredrick, Project Manager II
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LINKS

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

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

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

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Definitions/Glossary

Client: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-111561-1

Qualifiers

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
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
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
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: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-111561-1

Job ID: 500-111561-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-111561-1

Comments
No additional comments.

Receipt
The samples were received on 5/13/2016 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.4º C.

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

Metals
Method(s) 6020A: The ICSAB for batch 500-336866 was outside the acceptance limits for element: Selenium. The associated samples 500-111561-3 and 4 were all below the RL and therefore reported.

Method(s) 6020A: The continuing calibration verification (CCV) associated with batch 500-336866 recovered above the upper control limit for Selenium. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: North Pond (500-111561-3) and South Pond (500-111561-4).

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

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

Client Sample Results

Client: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-111561-1

Client Sample ID: P&T Effluent

Lab Sample ID: 500-111561-1
Date Collected: 05/12/16 12:00
Matrix: Ground Water
Date Received: 05/13/16 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			05/20/16 13:09	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			05/20/16 13:09	1
Trichloroethene	<0.16		0.50	0.16	ug/L			05/20/16 13:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*71 - 127*		*05/20/16 13:09*	*1*
4-Bromofluorobenzene (Surr)	*88*		*71 - 120*		*05/20/16 13:09*	*1*
Dibromofluoromethane	*93*		*70 - 120*		*05/20/16 13:09*	*1*
Toluene-d8 (Surr)	*93*		*75 - 120*		*05/20/16 13:09*	*1*

Client Sample ID: P&T pH

Lab Sample ID: 500-111561-2
Date Collected: 05/12/16 12:00
Matrix: Ground Water
Date Received: 05/13/16 09:50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.96**	**HF**	0.200	0.200	SU			05/13/16 16:21	1

Client Sample ID: North Pond

Lab Sample ID: 500-111561-3
Date Collected: 05/12/16 11:45
Matrix: Ground Water
Date Received: 05/13/16 09:50

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**160**		100	26	ug/L		05/13/16 13:14	05/24/16 21:22	1
Lead	**1.3**		0.50	0.14	ug/L		05/13/16 13:14	05/23/16 17:51	1
Manganese	**15**		2.5	0.99	ug/L		05/13/16 13:14	05/24/16 21:22	1
Nickel	**15**		2.0	0.53	ug/L		05/13/16 13:14	05/23/16 17:51	1
Selenium	<0.83	^	2.5	0.83	ug/L		05/13/16 13:14	05/23/16 17:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrate Nitrite	<0.045		0.10	0.045	mg/L			05/20/16 12:07	1
pH	**8.00**	**HF**	0.200	0.200	SU			05/13/16 16:30	1

Client Sample ID: South Pond

Lab Sample ID: 500-111561-4
Date Collected: 05/12/16 11:50
Matrix: Ground Water
Date Received: 05/13/16 09:50

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**32**	**J**	100	26	ug/L		05/13/16 13:14	05/24/16 21:26	1
Lead	<0.14		0.50	0.14	ug/L		05/13/16 13:14	05/23/16 17:58	1
Manganese	**4.0**		2.5	0.99	ug/L		05/13/16 13:14	05/24/16 21:26	1
Nickel	**9.3**		2.0	0.53	ug/L		05/13/16 13:14	05/23/16 17:58	1
Selenium	<0.83	^	2.5	0.83	ug/L		05/13/16 13:14	05/23/16 17:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrate Nitrite	<0.045		0.10	0.045	mg/L			05/20/16 12:09	1
pH	**7.67**	**HF**	0.200	0.200	SU			05/13/16 16:30	1

Client Sample Results

Client: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-111561-1

Client Sample ID: Trip Blank

Lab Sample ID: 500-111561-5

Date Collected: 05/12/16 00:00
Date Received: 05/13/16 09:50

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			05/20/16 13:37	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			05/20/16 13:37	1
Trichloroethene	<0.16		0.50	0.16	ug/L			05/20/16 13:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*71 - 127*		*05/20/16 13:37*	*1*
4-Bromofluorobenzene (Surr)	*87*		*71 - 120*		*05/20/16 13:37*	*1*
Dibromofluoromethane	*92*		*70 - 120*		*05/20/16 13:37*	*1*
Toluene-d8 (Surr)	*92*		*75 - 120*		*05/20/16 13:37*	*1*

Lab Chronicle

Client: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-111561-1

Client Sample ID: P&T Effluent — Lab Sample ID: 500-111561-1

Date Collected: 05/12/16 12:00
Date Received: 05/13/16 09:50
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	336307	05/20/16 13:09	TCT	TAL CHI

Client Sample ID: P&T pH — Lab Sample ID: 500-111561-2

Date Collected: 05/12/16 12:00
Date Received: 05/13/16 09:50
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 H+ B		1	335388		SMO	TAL CHI
					(Start)	05/13/16 16:21		
					(End)	05/13/16 16:25		

Client Sample ID: North Pond — Lab Sample ID: 500-111561-3

Date Collected: 05/12/16 11:45
Date Received: 05/13/16 09:50
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			335378	05/13/16 13:14	JNH	TAL CHI
Total Recoverable	Analysis	6020A		1	336866	05/23/16 17:51	PFK	TAL CHI
Total Recoverable	Prep	3005A			335378	05/13/16 13:14	JNH	TAL CHI
Total Recoverable	Analysis	6020A		1	337050	05/24/16 21:22	FXG	TAL CHI
Total/NA	Analysis	353.2		1	336431	05/20/16 12:07	CCK	TAL CHI
Total/NA	Analysis	SM 4500 H+ B		1	335388		SMO	TAL CHI
					(Start)	05/13/16 16:30		
					(End)	05/13/16 16:30		

Client Sample ID: South Pond — Lab Sample ID: 500-111561-4

Date Collected: 05/12/16 11:50
Date Received: 05/13/16 09:50
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			335378	05/13/16 13:14	JNH	TAL CHI
Total Recoverable	Analysis	6020A		1	336866	05/23/16 17:58	PFK	TAL CHI
Total Recoverable	Prep	3005A			335378	05/13/16 13:14	JNH	TAL CHI
Total Recoverable	Analysis	6020A		1	337050	05/24/16 21:26	FXG	TAL CHI
Total/NA	Analysis	353.2		1	336431	05/20/16 12:09	CCK	TAL CHI
Total/NA	Analysis	SM 4500 H+ B		1	335388		SMO	TAL CHI
					(Start)	05/13/16 16:30		
					(End)	05/13/16 16:30		

Lab Chronicle

Client: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-111561-1

Client Sample ID: Trip Blank

Lab Sample ID: 500-111561-5

Date Collected: 05/12/16 00:00
Date Received: 05/13/16 09:50

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	336307	05/20/16 13:37	TCT	TAL CHI

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Certification Summary

Client: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-111561-1

Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-17

Method Summary

Client: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-111561-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
6020A	Metals (ICP/MS)	SW846	TAL CHI
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL CHI
SM 4500 H+ B	pH	SM	TAL CHI

Protocol References:

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",

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

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-111561-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-111561-1	P&T Effluent	Ground Water	05/12/16 12:00	05/13/16 09:50
500-111561-2	P&T pH	Ground Water	05/12/16 12:00	05/13/16 09:50
500-111561-3	North Pond	Ground Water	05/12/16 11:45	05/13/16 09:50
500-111561-4	South Pond	Ground Water	05/12/16 11:50	05/13/16 09:50
500-111561-5	Trip Blank	Water	05/12/16 00:00	05/13/16 09:50

Chicago
2417 Bond Street

University Park, IL 60466
phone 708.534.5200 fax 708.534.5363

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody Record, 1st & 2nd Month of Quarter

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Robert Johnson	Site Contact: Robert Johnson	Date: 5/12/16	COC No: 268707
Central Wire Union Plant	Tel/Fax: 815.923.4919; 815.923.2126	Lab Contact:	Carrier: UPS	1 of 1 COCs
6509 Olson Rd.	Analysis Turnaround Time			Job No. 500-111561
Union, IL 60180	Calendar (C) or Work Days (W)			
(815) 923-2131 Phone	TAT if different from Below			
(815) 923-2126 Fax	[x] 2 weeks			SDG No.
1st 2 mos. of qtr	[ ] 1 week			
Union Plant	[ ] 2 days			
PO#	[ ] 1 day			

	Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs (vials) 1, 2	Metals* (250 ml jars) 1, 4	N + N (500 ml vials) 1, 3	pH 1, 6	Sample Specific Notes:
1	P&T Effluent	5/12	1200	G	GW	3	N	X				
2	P&T pH		1200	G	GW	1	N				X	
3	North Pond		1145	G	GW	1	N		X			
	North Pond		1145	G	GW	1	N			X		
	North Pond		1145	G	GW	1	N				X	
4	South Pond		1150	G	GW	1	N		X			
	South Pond		1150	G	GW	1	N			X		
	South Pond		1150	G	GW	1	N				X	
5	Trip Blank					1						

500-111561 COC

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
[ ] Non-Hazard [ ] Flammable [ ] Skin Irritant Poison B [ ] Unknown [ ]

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
[ ] Return To Client [x] Disposal By Lab [ ] Archive For _____ Months

Special Instructions/QC Requirements & Comments:
North Pond Metals: Iron (Fe), Lead (Pb), Manganese (Mn), Nickel (Ni) & Selenium (Se)
South Pond Metals: Iron (Fe), Lead (Pb), Manganese (Mn), Nickel (Ni) & Selenium (Se)
Rec Center Metals: EPA Method 6020A & pH - no preservative

0.4 UPS Ground

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	CWF 5/12	1220	[signature]	CWD	5/12 12:21
[signature]	CWJ 5/12	15:28	[signature]	UPS	5/12 15:20
			[signature]	TA-HTI	05/13/16 09:50

Login Sample Receipt Checklist

Client: Central Wire (Techalloy)

Job Number: 500-111561-1

Login Number: 111561
List Number: 1
Creator: Sanchez, Ariel M

List Source: TestAmerica Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	