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: 500-115908-1
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:*
*8/29/2016 6:34:36 PM*

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*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.*

# Table of Contents

Cover Page . . . . . 1
Table of Contents . . . . . 2
Definitions/Glossary . . . . . 3
Case Narrative . . . . . 4
Client Sample Results . . . . . 5
Lab Chronicle . . . . . 7
Certification Summary . . . . . 8
Method Summary . . . . . 9
Sample Summary . . . . . 10
Chain of Custody . . . . . 11
Receipt Checklists . . . . . 12

# Definitions/Glossary

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

TestAmerica Job ID: 500-115908-1

## Qualifiers

### GC/MS VOA

| 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. |

### 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 |
|---|---|
| HF | Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. |
| F1 | MS and/or MSD Recovery is outside acceptance limits. |

## 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: 500-115908-1

## Job ID: 500-115908-1

**Laboratory: TestAmerica Chicago**

**Narrative**

**Job Narrative**
**500-115908-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/19/2016 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.1º C.

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

**Metals**
No analytical or quality issues were noted, other than those described 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: 500-115908-1

## Client Sample ID: P&T Effluent

Lab Sample ID: 500-115908-1
Date Collected: 08/18/16 11:20
Matrix: Ground Water
Date Received: 08/19/16 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 | | | 08/22/16 17:44 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/L | | | 08/22/16 17:44 | 1 |
| **Trichloroethene** | **0.26** | **J** | 0.50 | 0.16 | ug/L | | | 08/22/16 17:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *106* | | *71 - 127* | | *08/22/16 17:44* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *71 - 120* | | *08/22/16 17:44* | *1* |
| *Dibromofluoromethane* | *106* | | *70 - 120* | | *08/22/16 17:44* | *1* |
| *Toluene-d8 (Surr)* | *92* | | *75 - 120* | | *08/22/16 17:44* | *1* |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **8.1** | **HF** | 0.2 | 0.2 | SU | | | 08/19/16 15:56 | 1 |

## Client Sample ID: North Pond

Lab Sample ID: 500-115908-2
Date Collected: 08/18/16 11:00
Matrix: Ground Water
Date Received: 08/19/16 09:50

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Iron** | **110** | | 100 | 26 | ug/L | | 08/20/16 10:56 | 08/22/16 18:40 | 1 |
| **Lead** | **0.42** | **J** | 0.50 | 0.14 | ug/L | | 08/20/16 10:56 | 08/22/16 18:40 | 1 |
| **Manganese** | **13** | | 2.5 | 0.99 | ug/L | | 08/20/16 10:56 | 08/22/16 18:40 | 1 |
| **Nickel** | **17** | | 2.0 | 0.53 | ug/L | | 08/20/16 10:56 | 08/23/16 11:48 | 1 |
| Selenium | <0.83 | | 2.5 | 0.83 | ug/L | | 08/20/16 10:56 | 08/22/16 18:40 | 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 | | | 08/28/16 21:51 | 1 |
| **pH** | **7.7** | **HF** | 0.2 | 0.2 | SU | | | 08/19/16 15:59 | 1 |

## Client Sample ID: South Pond

Lab Sample ID: 500-115908-3
Date Collected: 08/18/16 11:05
Matrix: Ground Water
Date Received: 08/19/16 09:50

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Iron** | **170** | | 100 | 26 | ug/L | | 08/20/16 10:56 | 08/22/16 18:44 | 1 |
| **Lead** | **0.35** | **J** | 0.50 | 0.14 | ug/L | | 08/20/16 10:56 | 08/22/16 18:44 | 1 |
| **Manganese** | **6.5** | | 2.5 | 0.99 | ug/L | | 08/20/16 10:56 | 08/22/16 18:44 | 1 |
| **Nickel** | **19** | | 2.0 | 0.53 | ug/L | | 08/20/16 10:56 | 08/23/16 11:52 | 1 |
| Selenium | <0.83 | | 2.5 | 0.83 | ug/L | | 08/20/16 10:56 | 08/22/16 18:44 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Nitrogen, Nitrate Nitrite** | **0.45** | **F1** | 0.10 | 0.045 | mg/L | | | 08/28/16 21:53 | 1 |
| **pH** | **7.5** | **HF** | 0.2 | 0.2 | SU | | | 08/19/16 16:02 | 1 |

# Client Sample Results

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

TestAmerica Job ID: 500-115908-1

## Client Sample ID: Trip Blank

Lab Sample ID: 500-115908-4

Date Collected: 08/18/16 00:00
Date Received: 08/19/16 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 | | | 08/22/16 18:12 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/L | | | 08/22/16 18:12 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/L | | | 08/22/16 18:12 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *107* | | *71 - 127* | | *08/22/16 18:12* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *71 - 120* | | *08/22/16 18:12* | *1* |
| *Dibromofluoromethane* | *106* | | *70 - 120* | | *08/22/16 18:12* | *1* |
| *Toluene-d8 (Surr)* | *92* | | *75 - 120* | | *08/22/16 18:12* | *1* |

# Lab Chronicle

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

TestAmerica Job ID: 500-115908-1

## Client Sample ID: P&T Effluent

Lab Sample ID: 500-115908-1
Matrix: Ground Water

Date Collected: 08/18/16 11:20
Date Received: 08/19/16 09:50

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 348656 | 08/22/16 17:44 | PJH | TAL CHI |
| Total/NA | Analysis | SM 4500 H+ B | | 1 | 348682 | | SMO | TAL CHI |
| | | | | | (Start) | 08/19/16 15:56 | | |
| | | | | | (End) | 08/19/16 15:58 | | |

## Client Sample ID: North Pond

Lab Sample ID: 500-115908-2
Matrix: Ground Water

Date Collected: 08/18/16 11:00
Date Received: 08/19/16 09:50

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 348922 | 08/23/16 11:48 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 348822 | 08/22/16 18:40 | FXG | TAL CHI |
| Total/NA | Analysis | 353.2 | | 1 | 349692 | 08/28/16 21:51 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 H+ B | | 1 | 348682 | | SMO | TAL CHI |
| | | | | | (Start) | 08/19/16 15:59 | | |
| | | | | | (End) | 08/19/16 16:00 | | |

## Client Sample ID: South Pond

Lab Sample ID: 500-115908-3
Matrix: Ground Water

Date Collected: 08/18/16 11:05
Date Received: 08/19/16 09:50

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 348922 | 08/23/16 11:52 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 348822 | 08/22/16 18:44 | FXG | TAL CHI |
| Total/NA | Analysis | 353.2 | | 1 | 349692 | 08/28/16 21:53 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 H+ B | | 1 | 348682 | | SMO | TAL CHI |
| | | | | | (Start) | 08/19/16 16:02 | | |
| | | | | | (End) | 08/19/16 16:03 | | |

## Client Sample ID: Trip Blank

Lab Sample ID: 500-115908-4
Matrix: Water

Date Collected: 08/18/16 00:00
Date Received: 08/19/16 09:50

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 348656 | 08/22/16 18:12 | PJH | 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: 500-115908-1

## 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: 500-115908-1

| 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: 500-115908-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-115908-1 | P&T Effluent | Ground Water | 08/18/16 11:20 | 08/19/16 09:50 |
| 500-115908-2 | North Pond | Ground Water | 08/18/16 11:00 | 08/19/16 09:50 |
| 500-115908-3 | South Pond | Ground Water | 08/18/16 11:05 | 08/19/16 09:50 |
| 500-115908-4 | Trip Blank | Water | 08/18/16 00:00 | 08/19/16 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: 8/18/16 | COC No: 704143 |
|---|---|---|---|---|
| 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. 500-115908 |
| Union, IL 60180 | Calendar ( C ) or Work Days (W) | | | SDG No. |
| (815) 923-2131 Phone | TAT if different from Below | | | |
| (815) 923-2126 Fa | [x] 2 weeks | | | |
| 1st 2 mos. of qtr | [ ] 1 week | | | |
| Union Plant 500-115908 COC | [ ] 2 days | | | |
| P O # | [ ] 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: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| P&T Effluent | 8/18 | 1120 | G | GW | 3 | N | X | | | | |
| P&T pH | | 1120 | G | GW | 1 | N | | | | X | |
| North Pond | | 1100 | G | GW | 1 | N | | X | | | |
| North Pond | | 1100 | G | GW | 1 | N | | | X | | |
| North Pond | | 1100 | G | GW | 1 | N | | | | X | |
| South Pond | | 1105 | G | GW | 1 | N | | X | | | |
| South Pond | | 1105 | G | GW | 1 | N | | | X | | |
| South Pond | | 1105 | G | GW | 1 | N | | | | X | |
| Trip Blank | | | | | 2 | | | | | | 3/22/16 |

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**

0.1

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| Bob Johnson | CWI 8/18 | 1130 | [signature] | CWI | 8/18 11:30 |
| [signature] | CWI | 8/18 3:25 | [signature] | UPS | 8/18 3:25 |
| | | | [signature] | TA-CHI | 8/19/16 0950 |

# Login Sample Receipt Checklist

Client: Central Wire (Techalloy)

Job Number: 500-115908-1

**Login Number: 115908**
**List Number: 1**
**Creator: Scott, Sherri L**

**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 | 0.1 |
| 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 | |