



Element
Suite 100, 328 Ley Road
Fort Wayne, Indiana
46825, United States

T: +1 (260) 471-7000
F: +1 (260) 471-7777
E: Info.FortWayne@element.com
W: www.element.com

October 19, 2022

Ken Myers
East Chicago Sanitary District
5201 Indianapolis Blvd
East Chicago, IN 46312

RE: Downstream

Dear Ken Myers:

Lot Id: 127880

Element Materials Technology – Fort Wayne received 7 sample(s) on 10/6/2022 for the analyses presented in the following report.

In accordance with your instructions, a laboratory of Element Materials Technology Fort Wayne LLC either conducted or subcontracted these analyses. Subcontracted analyses will be identified in an accompanying case narrative and any associated report(s) will be attached in full. Unless otherwise noted in the case narrative, all analyses were conducted using approved methodologies. Reported results relate only to the items tested.

Estimated uncertainty is available upon request. This report shall not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

A handwritten signature in cursive script that reads "Nicole Breauchy".

Nicole Breauchy
Project Manager
Suite 100, 328 Ley Road,
Fort Wayne, IN 46825

Accreditation

TNI:2016 (Florida)
ISO 17025:2017 (A2LA)
Indiana
Michigan
South Dakota
Tennessee

Cert #

E871168
6190.02
M-02-05
9030
--
04911

Analytical Report

| | | |
|---|---|--|
| Bill To: East Chicago Sanitary District 5201 Indianapolis Blvd East Chicago, IN, United States 46312 | Project ID: Downstream Project Name: Project Location: LSD: P.O.: | Lot ID: 127880 Control Number: Date Received: Oct 6, 2022 Date Reported: Oct 19, 2022 Report Number: 228465 |
| Attn: Ken Myers Sampled By: HP Company: | Proj. Acct. code: | |

| | | | | | | |
|-------------------------------|---------------|----------------------|------------------|-------------------|---------------------------------|-------------------------|
| Reference Number | 127880-1 | Sample Date | 2022-10-06 09:58 | | | |
| Sample Description | Downstream | Sample Matrix | Wastewater | | | |
| Analyte | Result | Units | DF | Nominal DL | Analysis Start Date/Time | Analyst Initials |
| Subcontracted Services | | | | | | |
| Subcontractor Report ID | 180-145790-1 | | 1 | | Oct 08, 2022 07:28 | MK |
| Cyanide, Available | <0.002 | mg/L | 1 | 0.002 | Oct 13, 2022 11:11 | MK |

| | | | | | | |
|---------------------------------------|----------------------------|----------------------|------------------|-------------------|---------------------------------|-------------------------|
| Reference Number | 127880-2 | Sample Date | 2022-10-06 09:58 | | | |
| Sample Description | Downstream | Sample Matrix | Wastewater | | | |
| Analyte | Result | Units | DF | Nominal DL | Analysis Start Date/Time | Analyst Initials |
| Aggregate Organic Constituents | | | | | | |
| Oil & Grease, Total | <5 | mg/L | 1 | | Oct 11, 2022 17:23 | SK |
| Oil & Grease, Total | Calculated Reporting Limit | mg/L | 1 | | Oct 11, 2022 17:23 | SK |

| | | | | | | |
|---------------------------|---------------|----------------------|------------------|-------------------|---------------------------------|-------------------------|
| Reference Number | 127880-3 | Sample Date | 2022-10-06 09:58 | | | |
| Sample Description | Downstream | Sample Matrix | Wastewater | | | |
| Analyte | Result | Units | DF | Nominal DL | Analysis Start Date/Time | Analyst Initials |
| Microbiology | | | | | | |
| Escherichia coli | Multi Well | >2420 | MPN/100mL | 1 | 1 | Oct 06, 2022 17:11 CS |

| | | | | | | |
|-------------------------------|---------------|----------------------|------------------|-------------------|---------------------------------|-------------------------|
| Reference Number | 127880-4 | Sample Date | 2022-10-06 09:58 | | | |
| Sample Description | Downstream | Sample Matrix | Wastewater | | | |
| Analyte | Result | Units | DF | Nominal DL | Analysis Start Date/Time | Analyst Initials |
| Subcontracted Services | | | | | | |
| Subcontractor Report ID | 180 | | 1 | | Oct 08, 2022 07:28 | MK |

| | | | | | | |
|--|------------------------|----------------------|------------------|-------------------|---------------------------------|-------------------------|
| Reference Number | 127880-5 | Sample Date | 2022-10-06 09:58 | | | |
| Sample Description | Downstream | Sample Matrix | Wastewater | | | |
| Analyte | Result | Units | DF | Nominal DL | Analysis Start Date/Time | Analyst Initials |
| Aggregate Organic Constituents | | | | | | |
| Biochemical Oxygen Demand | BOD | <7 | mg/L | 1 | 2 | Oct 14, 2022 16:00 AS |
| Physical and Aggregate Properties | | | | | | |
| Total Suspended Solids | Non-Filterable Residue | 804 | mg/L | 1 | 2 | Oct 07, 2022 13:21 AS |
| Routine Water | | | | | | |
| Chloride | | 50 | mg/L | 5 | 2 | Oct 11, 2022 17:19 RB |
| Sulfate | | 53 | mg/L | 5 | 2 | Oct 11, 2022 17:19 RB |

Analytical Report


| | | |
|---|---|--|
| Bill To: East Chicago Sanitary District 5201 Indianapolis Blvd East Chicago, IN, United States 46312 | Project ID: Downstream Project Name: Project Location: LSD: P.O.: | Lot ID: 127880 Control Number: Date Received: Oct 6, 2022 Date Reported: Oct 19, 2022 Report Number: 228465 |
| Attn: Ken Myers Sampled By: HP Company: | Proj. Acct. code: | |

| | |
|--------------------------------------|-------------------------------------|
| Reference Number 127880-6 | Sample Date 2022-10-06 09:58 |
| Sample Description Downstream | Sample Matrix Wastewater |

| Analyte | Result | Units | DF | Nominal DL | Analysis Start Date/Time | Analyst Initials |
|--|--------|---------|------|------------|--------------------------|-----------------------|
| Metals - Total in Water by ICP-MS | | | | | | |
| Cadmium | Total | <0.0002 | mg/L | 1 | 0.0002 | Oct 07, 2022 06:11 FR |
| Chromium | Total | 0.0013 | mg/L | 1 | 0.0004 | Oct 07, 2022 06:11 FR |
| Copper | Total | 0.0477 | mg/L | 1 | 0.0002 | Oct 07, 2022 06:11 FR |
| Lead | Total | 0.0007 | mg/L | 1 | 0.0002 | Oct 07, 2022 06:11 FR |
| Nickel | Total | 0.003 | mg/L | 1 | 0.001 | Oct 07, 2022 06:11 FR |
| Zinc | Total | 0.0049 | mg/L | 1 | 0.0004 | Oct 07, 2022 06:11 FR |

| | |
|--------------------------------------|-------------------------------------|
| Reference Number 127880-7 | Sample Date 2022-10-06 09:58 |
| Sample Description Downstream | Sample Matrix Wastewater |

| Analyte | Result | Units | DF | Nominal DL | Analysis Start Date/Time | Analyst Initials |
|---|--------|-------|----|------------|--------------------------|------------------|
| Inorganic Nonmetallic Parameters | | | | | | |
| Nitrogen, Ammonia (As N) | 0.5 | mg/L | 1 | 0.1 | Oct 10, 2022 15:22 | RW |
| Nitrogen, Nitrate + Nitrite (As N) | 1.4 | mg/L | 1 | 0.1 | Oct 12, 2022 14:44 | RW |
| Total Phosphorus | 6.2 | mg/L | 1 | 0.1 | Oct 12, 2022 14:51 | AS |
| Total Kjeldahl Nitrogen | 13.9 | mg/L | 1 | 0.5 | Oct 11, 2022 22:59 | AS |
| Total Nitrogen | 15.3 | mg/L | 1 | 0.5 | Oct 11, 2022 22:59 | AS |

Approved by: 
Nicole Breauchy
Project Manager

Methodology and Notes

| | | |
|---|------------------------|-----------------------------|
| Bill To: East Chicago Sanitary District 5201 Indianapolis Blvd East Chicago, IN, United States 46312 | Project ID: Downstream | Lot ID: 127880 |
| Attn: Ken Myers | Project Name: | Control Number: |
| Sampled By: HP | Project Location: | Date Received: Oct 6, 2022 |
| Company: | LSD: | Date Reported: Oct 19, 2022 |
| | P.O.: | Report Number: 228465 |
| | Proj. Acct. code: | |

Method of Analysis

| Method Name | Reference | Method | Date Analysis Started | Location |
|-----------------------------------|------------|--|-----------------------|---------------------------|
| Ammonia-N by FIA | EPA | Determination of Ammonia Nitrogen by Semi-Automated Colorimetry, E350.1 | Oct 10, 2022 | Fort Wayne |
| Anions by IC in Water | EPA | Determination of Inorganic Anions by Ion Chromatography, E300.0 | Oct 11, 2022 | Fort Wayne |
| BOD and CBOD in water | SMEWW | BOD: 5-Day Test, 5210B | Oct 14, 2022 | Fort Wayne |
| Coliforms by Quantitray | SMEWW | Enzyme Substrate Test, 9223B | Oct 6, 2022 | Fort Wayne |
| External Sublet Data Entry | Ext. Lab | External Lab, Ext. Lab | Oct 13, 2022 | Fort Wayne |
| Metals ICP-MS Total in water | EPA | Trace Elements in Waters and Wastes by Inductively Coupled Plasma-Mass Spectrometry, E200.8 | Oct 7, 2022 | Fort Wayne |
| Nitrate Nitrite in Water by FIA | EPA | Determination of Nitrate-Nitrite Nitrogen by Automated Colorimetry, E353.2 | Oct 12, 2022 | Fort Wayne |
| Oil and Grease | EPA | n-Hexane Extractable Material (HEM; Oil and Grease) and Silica Gel Treated n-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, E1664 | Oct 11, 2022 | Fort Wayne |
| Phosphorus Total in Water by FIA | SMEWW | Phosphorus: Automated Ascorbic Acid Reduction Method, 4500-P F | Oct 12, 2022 | Fort Wayne |
| Solids - Suspended | SMEWW | Total Suspended Solids, 2540D | Oct 7, 2022 | Fort Wayne |
| Sublet to Purves Environmental | Ext. Lab | External Lab, Ext. Lab | Oct 8, 2022 | Purves Environmental Inc. |
| Sublet to Test America-Pittsburgh | Ext. Lab | External Lab, Ext. Lab | Oct 8, 2022 | Test America-Pittsburgh |
| TKN in Water by FIA | Calculated | Calculated Result, Calculated | Oct 11, 2022 | Fort Wayne |
| TKN in Water by FIA | EPA | Total Kjeldahl Nitrogen by Semi-Automated Colorimetry, E351.2 | Oct 11, 2022 | Fort Wayne |

References

| | |
|------------|--|
| Calculated | Calculated Result |
| EPA | United States Environmental Protection Agency |
| Ext. Lab | External Laboratory |
| SMEWW | Standard Methods for the Examination of Water and Wastewater |

Comments:

- Oct 10, 2022 - The low level mercury testing was subcontracted to Purves Environmental. Their report is attached in its entirety. (BRL = Below Reporting Limit).
- Oct 14, 2022 - The Available Cyanide testing was subcontracted to Eurofins/Test America Pittsburgh PA. Their report is attached in its entirety.
- Oct 19, 2022 - Sample 127880-5; 120759: The BOD result for sample 127880-5 is an estimate. Dilutions were used that would typically provide results within instrument range for this type of sample, however this sample had a higher concentration than is typical. A smaller sample volume (larger dilution) would have been necessary to produce a result within the instrument range, however the hold time for the BOD test is 48 hours and test results are not available until after the 5 day incubation period.
- Oct 19, 2022 - The dilution water blank for the BOD analysis was outside of acceptance limits. This data is accepted based on acceptable recoveries in additional associated QC.

Methodology and Notes

| | | | | | |
|-------------|---------------------------------|-------------------|------------|-----------------|---------------|
| Bill To: | East Chicago Sanitary District | Project ID: | Downstream | Lot ID: | 127880 |
| | 5201 Indianapolis Blvd | Project Name: | | Control Number: | |
| | East Chicago, IN, United States | Project Location: | | Date Received: | Oct 6, 2022 |
| | 46312 | LSD: | | Date Reported: | Oct 19, 2022 |
| Attn: | Ken Myers | P.O.: | | Report Number: | 228465 |
| Sampled By: | HP | Proj. Acct. code: | | | |
| Company: | | | | | |

Please direct any inquiries regarding this report to our Client Services group.

Results relate only to samples as submitted.

The test report shall not be reproduced except in full, without the written approval of the laboratory.

Report Transmission Cover Page

| | | |
|---|---|--|
| Bill To: East Chicago Sanitary District 5201 Indianapolis Blvd East Chicago, IN, United States 46312 | Project ID: Downstream Project Name: Project Location: LSD: P.O.: | Lot ID: 127880 Control Number: Date Received: Oct 6, 2022 Date Reported: Oct 19, 2022 Report Number: 228465 |
| Attn: Ken Myers Sampled By: HP Company: | Proj. Acct. code: | |

| Contact | Company | Address |
|------------------|---------------------------------------|---|
| Ken Myers | East Chicago Sanitary District | 5201 Indianapolis Blvd East Chicago, IN 46312 Phone: (219) 391-8466 Fax: Email: kmyers@eastchicago.com |

| Delivery | Format | Deliverables |
|--------------------------------------|--------------|-------------------|
| Email - Merge Deliverables | PDF | COC / Test Report |
| Email - Multiple Deliverables By Lot | East Chicago | Test Report |

| Contact | Company | Address |
|------------------------|---------------------------------------|---|
| Megan Krauskopf | East Chicago Sanitary District | Fort Wayne, IN null Phone: (260) 471-7000 Fax: Email: megan.krauskopf@element.com |

| Delivery | Format | Deliverables |
|----------------------------|--------------|--------------|
| Email - Single Deliverable | East Chicago | Test Report |

| Contact | Company | Address |
|---------------------|---------------------------------------|---|
| San Operator | East Chicago Sanitary District | 5201 Indianapolis Blvd. East Chicago, IN 46312 Phone: (219) 391-8466 Fax: Email: sanoperator@eastchicago.com |

| Delivery | Format | Deliverables |
|--------------------------------------|--------------|-------------------|
| Email - Merge Deliverables | PDF | COC / Test Report |
| Email - Multiple Deliverables By Lot | East Chicago | Test Report |

Notes To Clients:

- Oct 10, 2022 - The low level mercury testing was subcontracted to Purves Environmental. Their report is attached in its entirety. (BRL = Below Reporting Limit).
- Oct 14, 2022 - The Available Cyanide testing was subcontracted to Eurofins/Test America Pittsburgh PA. Their report is attached in its entirety.
- Oct 19, 2022 - Sample 127880-5; 120759: The BOD result for sample 127880-5 is an estimate. Dilutions were used that would typically provide results within instrument range for this type of sample, however this sample had a higher concentration than is typical. A smaller sample volume (larger dilution) would have been necessary to produce a result within the instrument range, however the hold time for the BOD test is 48 hours and test results are not available until after the 5 day incubation period.
- Oct 19, 2022 - The dilution water blank for the BOD analysis was outside of acceptance limits. This data is accepted based on acceptable recoveries in additional associated QC.

The information contained on this and all other pages transmitted, is intended for the addressee only and is considered confidential. If the reader is not the intended recipient, you are hereby notified that any use, dissemination, distribution or copy of this transmission is strictly prohibited. If you receive this transmission by error, or if this transmission is not satisfactory, please notify us by telephone.



External Sublet Request

Purchase Order Number: PO# PFFW002529
 Printed Date: Oct 06, 2022
 Shipping Method: Ground

To:
 Attn: Melissa Kimbrough
 Purves Environmental Inc.
 77 Maple Drive
 Hudson, OH 44236
 Phone: (330) 687-3360
 Fax:
 Email: m-kimbrough1@hotmail.com

Results To:
 Fort Wayne
 Suite 100, 328 Ley Road
 Fort Wayne, IN 46825
 Phone: (260) 471-7000
 Fax: (260) 471-7777
 Email: Info.FortWayne@element.com

Bill To:
 Attn: Accounts Payable
 Element Materials Technology Canada Inc.
 3701 Port Union Road
 Fairfield OH 45014
 United States
 Phone: (513) 984-4112
 Fax: (513) 984-8258
 Email: accpayable.americas@element.com,
 wregpurch@element.com

Please contact the requisitioner named below with all questions related to this purchase order.

**** THE PURCHASE ORDER NUMBER MUST APPEAR ON ALL INVOICES. INVOICES MUST BE SENT TO BOTH BILL TO EMAIL ADDRESSES. ****

Due Date **Requisitioner** **Sample Id** **Sampled Date** **Element Service Code** **Vendor Service Code** **Service Name** **Sample Description**
 Oct 20, 2022 John Himelick 127880 - 4 Oct 06, 2022 09:58 HG LL HG LL Mercury, Low Level Downstream ~221007-1

| Relinquished By | Date/Time | Received By | Date/Time | Temp of Samples °C | Attempt to Cool? Y / N |
|-----------------------|--------------|---------------------|--------------|--------------------|------------------------|
| 1 <i>J. Kimbrough</i> | 10/6/22 1845 | <i>M. G. Hassel</i> | 10/7/22 1300 | | |
| 2 | | | | | |
| 3 | | | | | |

Comments: Ave Oct 13

RUSH!

The standard terms and conditions of purchase below are included in each purchase order (PO) of Element Materials Technology Canada Inc. and its subsidiaries (Element) as part of its contract with a supplier of goods and/or services (Vendor). Any Vendor terms and conditions of supply do not apply unless Element agrees in writing. Where terms and conditions exist under an existing written contract between Element and a Vendor, those terms and conditions do not apply.

NOTE: Element Materials Technology Canada Inc. is not an exempt entity and subject to GST, HST, QST and applicable provincial sales taxes.
<http://www.element.com/terms/conditions>

Purves Environmental, Inc.

Mercury Analysis

Analytical Report
EPA Method 1631E

Report #: 221008-02 Element FW

Page 1 of 1

Customer Name:

Element Materials Technology
328 Ley Rd.
Fort Wayne, Indiana 46825

10/8/22

Attention:

Project/PO#

emt01

| Lab /(Field ID) or (Customer ID) | Results ng/L | Results ng/L | Results ng/L | Results ng/L | Purves Env ID |
|--|--------------|--------------------------|--------------|--------------|-------------------|
| 127880-4 (Downstream) | 180 | | | | 221007-01 |
| | | | | | |
| | | | | | |
| Sample Type | Downstream | | | | |
| Date Sampled: | 10/06/22 | | | | |
| Date Received: | 10/7/22 | | | | |
| Date Prepared: | 10/7/22 | | | | |
| Date Analyzed: | 10/8/22 | | | | |
| Time Analyzed | 7:28:21 AM | | | | |
| Dilution Factor | 10 | | | | |
| High Cal Range Used 1-1000 ng/L | | | | | QCS/MS/MSD |
| Method Detection Limit | 0.2ng/L | | | | Acceptable Range |
| QCS (Quality Control Standard) | 92% | | | | 71-125% |
| Method Blank Result | <0.2 | Method Blank Requirement | | | <0.2 |

M= Modified: See Below for Explanation

Dilution Factors are calculated into the results.

Method Reporting Limit

0.5ng/L

RPD Acceptable Range <20%

Matrix Spike/ Matrix Spike Duplicate Recoveries

MS/MSD Acceptable Range

71-125%

Sample ID

MS %Recovery

MSD %Recovery

RPD

221007-08

97.9%

97.1%

0.9%

Normal Calibration range 0.5-100ng/L

The results are related only to the samples presented on this report.

The test results are certified to meet all requirements of the certifying authority

West Virginia Cert # 348

Other Codes

J* = Estimated result ,

* A value found between the Reporting Limit and the Method Detection Limit is considered estimated

or the sample was not received in proper condition as required by the method.

R* = Rejected, Sample may not have met Method or sampling requirements.

CLYM

William W. Purves



Rev 4 6/23/11

ANALYTICAL REPORT

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-145790-1

Client Project/Site: Available Cyanide 127880

For:

Element Materials Technology
328 Ley Rd
Suite100
Fort Wayne, Indiana 46825

Attn: Don Ellis



Authorized for release by:

10/14/2022 1:17:50 PM

Khadejha Brown, Project Management Assistant I

(412)963-7058

Khadejha.Brown@et.eurofinsus.com

LINKS

Review your project
results through



Have a Question?



Visit us at:

www.eurofinsus.com/Env

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.

PA Lab ID: 02-00416

Table of Contents

| | |
|----------------------------------|----|
| Cover Page | 1 |
| Table of Contents | 2 |
| Case Narrative | 3 |
| Definitions/Glossary | 4 |
| Certification Summary | 5 |
| Sample Summary | 6 |
| Method Summary | 7 |
| Lab Chronicle | 8 |
| Client Sample Results | 9 |
| QC Sample Results | 10 |
| QC Association Summary | 11 |
| Chain of Custody | 12 |
| Receipt Checklists | 13 |



Case Narrative

Client: Element Materials Technology
Project/Site: Available Cyanide 127880

Job ID: 180-145790-1

Job ID: 180-145790-1

Laboratory: Eurofins Pittsburgh

Narrative

Job Narrative
180-145790-1

Receipt

The sample was received on 10/7/2022 7:40 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.1°C

General Chemistry

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

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

Definitions/Glossary

Client: Element Materials Technology
Project/Site: Available Cyanide 127880

Job ID: 180-145790-1

Qualifiers

General Chemistry

| 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. |

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 |
| 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 |

Accreditation/Certification Summary

Client: Element Materials Technology
 Project/Site: Available Cyanide 127880

Job ID: 180-145790-1

Laboratory: Eurofins Pittsburgh

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

| Authority | Program | Identification Number | Expiration Date |
|------------------------|---------------------|-----------------------|-----------------|
| Arkansas DEQ | State | 19-033-0 | 06-27-22 * |
| California | State | 2891 | 04-30-23 |
| Connecticut | State | PH-0688 | 09-30-22 * |
| Florida | NELAP | E871008 | 06-30-23 |
| Georgia | State | PA 02-00416 | 04-30-23 |
| Illinois | NELAP | 004375 | 06-30-23 |
| Kansas | NELAP | E-10350 | 03-31-23 |
| Kentucky (UST) | State | 162013 | 04-30-23 |
| Kentucky (WW) | State | KY98043 | 12-31-22 |
| Louisiana | NELAP | 04041 | 06-30-22 * |
| Louisiana (All) | NELAP | 04041 | 06-30-23 |
| Maine | State | PA00164 | 03-06-24 |
| Minnesota | NELAP | 042-999-482 | 12-31-22 |
| New Hampshire | NELAP | 2030 | 04-04-23 |
| New Jersey | NELAP | PA005 | 06-30-23 |
| New York | NELAP | 11182 | 04-01-23 |
| North Carolina (WW/SW) | State | 434 | 12-31-22 |
| North Dakota | State | R-227 | 04-30-23 |
| Oregon | NELAP | PA-2151 | 02-07-23 |
| Pennsylvania | NELAP | 02-00416 | 04-30-23 |
| Rhode Island | State | LAO00362 | 12-31-22 |
| South Carolina | State | 89014 | 04-20-23 |
| Texas | NELAP | T104704528 | 03-31-23 |
| USDA | US Federal Programs | P330-16-00211 | 06-21-24 |
| Utah | NELAP | PA001462019-8 | 05-31-23 |
| Virginia | NELAP | 10043 | 09-14-23 |
| West Virginia DEP | State | 142 | 01-31-23 |
| Wisconsin | State | 998027800 | 08-31-23 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.



Sample Summary

Client: Element Materials Technology
Project/Site: Available Cyanide 127880

Job ID: 180-145790-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---------------|------------------|--------|----------------|----------------|
| 180-145790-1 | 127880-1 | Water | 10/06/22 09:58 | 10/07/22 07:40 |

1

2

3

4

5

6

7

8

9

10

11

12

13

Method Summary

Client: Element Materials Technology
Project/Site: Available Cyanide 127880

Job ID: 180-145790-1

| Method | Method Description | Protocol | Laboratory |
|------------|--|----------|------------|
| OIA - 1677 | Available Cyanide by Flow Injection, Lig | EPA | EET PIT |

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

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

Lab Chronicle

Client: Element Materials Technology
Project/Site: Available Cyanide 127880

Job ID: 180-145790-1

Client Sample ID: 127880-1

Lab Sample ID: 180-145790-1

Date Collected: 10/06/22 09:58

Matrix: Water

Date Received: 10/07/22 07:40

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | OIA - 1677 | | 1 | | | 415039 | 10/13/22 11:11 | CMR | EET PIT |

Instrument ID: ALPKEM3

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: EET PIT

Batch Type: Analysis

CMR = Carl Reagle



Client Sample Results

Client: Element Materials Technology
Project/Site: Available Cyanide 127880

Job ID: 180-145790-1

Client Sample ID: 127880-1

Lab Sample ID: 180-145790-1

Date Collected: 10/06/22 09:58

Matrix: Water

Date Received: 10/07/22 07:40

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------------|--------|-----------|--------|--------|------|---|----------|----------------|---------|
| Cyanide, Available (EPA OIA - 1677) | 0.0018 | J | 0.0020 | 0.0016 | mg/L | | | 10/13/22 11:11 | 1 |

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

QC Sample Results

Client: Element Materials Technology
 Project/Site: Available Cyanide 127880

Job ID: 180-145790-1

Method: OIA - 1677 - Available Cyanide by Flow Injection, Lig

Lab Sample ID: MB 180-415039/80
Matrix: Water
Analysis Batch: 415039

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|--------------|-----------------|--------|--------|------|---|----------|----------------|---------|
| Cyanide, Available | ND | | 0.0020 | 0.0016 | mg/L | - | | 10/13/22 10:48 | 1 |

Lab Sample ID: LCS 180-415039/81
Matrix: Water
Analysis Batch: 415039

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|--------------------|----------------|---------------|------------------|------|---|------|----------------|
| Cyanide, Available | 0.0501 | 0.0481 | | mg/L | - | 96 | 82 - 132 |



QC Association Summary

Client: Element Materials Technology
Project/Site: Available Cyanide 127880

Job ID: 180-145790-1

General Chemistry

Analysis Batch: 415039

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|--------------------|-----------|--------|------------|------------|
| 180-145790-1 | 127880-1 | Total/NA | Water | OIA - 1677 | |
| MB 180-415039/80 | Method Blank | Total/NA | Water | OIA - 1677 | |
| LCS 180-415039/81 | Lab Control Sample | Total/NA | Water | OIA - 1677 | |

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



External Sublet Request

Purchase Order Number: PO# *PIFW002528*
Printed Date: Oct 06, 2022
Shipping Method: Ground

To:
Attn: Sample Receiving
Test America-Pittsburgh
301 Alpha Dr
Pittsburgh, PA 15238
Phone: (111) 111-1111
Fax:
Email:

Results To:
Fort Wayne
Suite 100, 328 Ley Road
Fort Wayne, IN 46825
Phone: (260) 471-7000
Fax: (260) 471-7777
Email: Info.FortWayne@element.com

Bill To:
Attn: Accounts Payable
Element Materials Technology Canada Inc.
3701 Port Union Road
Fairfield OH 45014
United States
Phone: (513) 984-4112
Fax: (513) 984-8258
Email: accpayable.americas@element.com,
wregpurch@element.com

Please contact the requisitioner named below with all questions related to this purchase order.

**** THE PURCHASE ORDER NUMBER MUST APPEAR ON ALL INVOICES. INVOICES MUST BE SENT TO BOTH BILL TO EMAIL ADDRESSES. ****

| Due Date | Requisitioner | Sample Id | Sampled Date | Element Service Code | Vendor Service Code | Service Name | Sample Description |
|--------------|---------------|---------------------|--------------------|----------------------|---------------------|---|------------------------|
| Oct 13, 2022 | John Himelick | 127880 - 1 | Oct 06, 2022 09:58 | CYAN 1677 | CYAN 1677 | Cyanide, Available by Downstream Ligand Exchange | |
| | | | | | | Temp of Samples _____ °C | Attempt to Cool? Y / N |
| 1 | <i>AS KL</i> | <i>10/6/22 1855</i> | <i>3 22</i> | | <i>10-7-22 0740</i> | Comments: | |
| 2 | | | | | | | |
| 3 | | | | | | | |



180-145790 Chain of Custody

RUSH!

The standard terms and conditions of purchase below are included in each purchase order (PO) of Element Materials Technology Canada Inc. and its subsidiaries (Element) as part of its contract with a supplier of goods and/or services (Vendor). Any Vendor terms and conditions of supply do not apply unless Element agrees in writing. Where terms and conditions exist under an existing written contract between Element and a Vendor, these terms and conditions do not apply.

NOTE: Element Materials Technology Canada Inc. is not an exempt entity and subject to GST, HST, QST and applicable provincial sales taxes.

Terms and Conditions <http://www.element.com/terms/terms-and-conditions>



Login Sample Receipt Checklist

Client: Element Materials Technology

Job Number: 180-145790-1

Login Number: 145790

List Number: 1

Creator: Abernathy, Eric L

List Source: Eurofins Pittsburgh

| Question | Answer | Comment |
|---|--------|---------|
| Radioactivity wasn't checked or is \leq background as measured by a survey meter. | N/A | |
| 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 | |
| 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 <math><6\text{mm}</math> (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |





element

Chain of Custody

Laboratory Number: 127880

| | | | | | | | |
|---|--------------------------------|--|-----------------------------|-----------------------------|--|--|---|
| Company Name: Contact Name: Address: City, State Zip: Phone Number: Fax Number: E-mail Address: | Client Information: | | Billing Information: | | PO Number: | Project Name/Number: Downstream | Page 1 of 1 |
| | East Chicago Sanitary District | | Same | | | | Sampler's Signature <i>[Signature]</i> |
| | Henry Padilla | | | | Quote Number: | DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid | |
| | 5201 Indianapolis Blvd | | | | Required QC Level | | |
| | East Chicago IN 46401 | | | | Bill Monthly | | |
| | 219-391-8466 Ext. 240 | | Ext: | | <input type="checkbox"/> Yes | Shipping Method: | |
| hpadilla@eastchicago.com | | | | <input type="checkbox"/> No | UPS / FedEx / Airborne DHL / <u>Element</u> / Hand / Mail | | |

| Which Regulations Apply: <input type="checkbox"/> RCRA <input type="checkbox"/> Drinking Water <input type="checkbox"/> POTW <input type="checkbox"/> Distribution <input type="checkbox"/> NPDES <input type="checkbox"/> Special <input type="checkbox"/> USDA/FDA <input type="checkbox"/> State <input type="checkbox"/> RECAP/RISC <input type="checkbox"/> Other | Turn Time 5 TAT | (Rush turn times will incur a surcharge and must be pre-approved by lab.) | | Container | | Pres. | Requested Tests | | | | | | | Comments | |
|---|--------------------|---|------|-----------|------------------------------------|--|-----------------|--------------|---------|-----------------------------|---------|------------------------------------|----------|--------------|---|
| | | | | Quantity | Type P=Plastic, G=Glass, V=Vial | HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃ | CYANIDE 1677 | Oil & Grease | E. coli | 300: Chlor, SO ₄ | *Metals | NH ₃ , T. Phos, Total N | TSS, BOD | | Low level Hg |
| Sample ID/Description | | Collection Information | | Matrix | Quantity | Type | Pres. | Oil & Grease | E. coli | 300: Chlor, SO ₄ | *Metals | NH ₃ , T. Phos, Total N | TSS, BOD | Low level Hg | Comments |
| Date | Time | Grab / Composite | | | | | | | | | | | | | |
| Downstream | | 10-6-22 | 9:58 | | 1 | P | NAOH | X | | | | | | | Samples Meet Acceptance Policy <u>Yes</u> No *Cd, Cr, Cu, Pb, Ni Zn Low level Hg is once a week F596 PPP |
| | | | | | 1 | G | H2SO4 | | X | | | | | | |
| | | | | | 1 | G | Na2S2O3 | | X | | | | | | |
| | | | | | 1 | G | BrCl | | | | | | X | | |
| | | | | | 2 | P | NONE | | | X | | | X | | |
| | | | | | 1 | P | HNO3 | | | | X | | | | |
| | | | | | 1 | P | H2SO4 | | | | | X | | | |

| | Relinquished by | Date/Time | Received by | Date/Time | Composite Sampler: Start Date/Time: 10-6-22 9:58 End Date/Time: _____ |
|---|--------------------|------------------|--------------------|----------------|--|
| 1 | <i>[Signature]</i> | 10-6-22/11:45 AM | <i>[Signature]</i> | 10-6-22-11:45A | Received at lab on ice? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp: 2.8°C |
| 2 | <i>[Signature]</i> | 10-6-22-1705 | <i>[Signature]</i> | 10/6/22 17:05 | |
| 3 | | | | | |

All samples submitted to Element Materials Technology for analysis are accepted on a custodial basis only. Ownership of the material remains with the client submitting the samples. Element Materials Technology reserves the right to return unused sample pc

8800 North US 31
Columbus, IN
47201 USA

328 Ley Road, Suite 100
Fort Wayne, IN
46825 USA

909 Executive Dr.
Warsaw, IN
46580 USA

33

Lot: 127880 COC

