

## Cover Page

**Order ID :** P4595

**Project ID :** Pitkin Yard

**Client :** Tully Construction Co., Inc.

### Lab Sample Number

P4595-01  
P4595-02  
P4595-03  
P4595-04  
P4595-05

### Client Sample Number

PITKIN-COMP  
PITKIN-COMP  
PITKIN-THP2  
PITKIN-TPH3  
PITKIN-GRAB

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : \_\_\_\_\_

Date: 11/6/2024

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

## DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following “ Results Qualifiers” are used:

|           |                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>J</b>  | Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).                                                                                                                                                                                  |
| <b>U</b>  | Indicates the analyte was analyzed for, but not detected.                                                                                                                                                                                                                                                                                                                     |
| <b>ND</b> | Indicates the analyte was analyzed for, but not detected                                                                                                                                                                                                                                                                                                                      |
| <b>E</b>  | Indicates the reported value is estimated because of the presence of interference                                                                                                                                                                                                                                                                                             |
| <b>M</b>  | Indicates Duplicate injection precision not met.                                                                                                                                                                                                                                                                                                                              |
| <b>N</b>  | Indicates the spiked sample recovery is not within control limits.                                                                                                                                                                                                                                                                                                            |
| <b>S</b>  | Indicates the reported value was determined by the Method of Standard Addition (MSA).                                                                                                                                                                                                                                                                                         |
| <b>*</b>  | Indicates that the duplicate analysis is not within control limits.                                                                                                                                                                                                                                                                                                           |
| <b>+</b>  | Indicates the correlation coefficient for the MSA is less than 0.995.                                                                                                                                                                                                                                                                                                         |
| <b>D</b>  | Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.                                                                                                                                                                                                                                       |
| <b>M</b>  | Method qualifiers<br>“P” for ICP instrument<br>“PM” for ICP when Microwave Digestion is used<br>“CV” for Manual Cold Vapor AA<br>“AV” for automated Cold Vapor AA<br>“CA” for MIDI-Distillation Spectrophotometric<br>“AS” for Semi -Automated Spectrophotometric<br>“C” for Manual Spectrophotometric<br>“T” for Titrimetric<br>“NR” for analyte not required to be analyzed |
| <b>OR</b> | Indicates the analyte’s concentration exceeds the calibrated range of the instrument for that specific analysis.                                                                                                                                                                                                                                                              |
| <b>Q</b>  | Indicates the LCS did not meet the control limits requirements                                                                                                                                                                                                                                                                                                                |
| <b>H</b>  | Sample Analysis Out Of Hold Time                                                                                                                                                                                                                                                                                                                                              |

## APPENDIX A

### QA REVIEW GENERAL DOCUMENTATION

Project #: P4595

Completed

For thorough review, the report must have the following:

#### GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

#### COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

#### CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Custody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

#### ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: SHREENA PATEL

Date: 11/06/2024

## LAB CHRONICLE

|                 |                              |                   |                        |
|-----------------|------------------------------|-------------------|------------------------|
| <b>OrderID:</b> | P4595                        | <b>OrderDate:</b> | 10/28/2024 11:31:00 AM |
| <b>Client:</b>  | Tully Construction Co., Inc. | <b>Project:</b>   | Pitkin Yard            |
| <b>Contact:</b> | Dean Devoe                   | <b>Location:</b>  | K61,VOA Ref. #2 Soil   |

| LabID    | ClientID    | Matrix | Test             | Method | Sample Date       | Prep Date | Anal Date         | Received |
|----------|-------------|--------|------------------|--------|-------------------|-----------|-------------------|----------|
| P4595-02 | PITKIN-COMP | SOIL   |                  |        | 10/28/24<br>08:11 |           |                   | 10/28/24 |
|          |             |        | Corrosivity      | 9045D  |                   |           | 10/28/24<br>17:00 |          |
|          |             |        | Ignitability     | 1030   |                   |           | 10/30/24<br>11:52 |          |
|          |             |        | Reactive Cyanide | 9012B  |                   | 10/29/24  | 10/29/24<br>13:34 |          |
|          |             |        | Reactive Sulfide | 9034   |                   | 10/30/24  | 10/30/24<br>12:38 |          |



# SAMPLE DATA

## Report of Analysis

|                   |                              |                 |                |
|-------------------|------------------------------|-----------------|----------------|
| Client:           | Tully Construction Co., Inc. | Date Collected: | 10/28/24 08:11 |
| Project:          | Pitkin Yard                  | Date Received:  | 10/28/24       |
| Client Sample ID: | PITKIN-COMP                  | SDG No.:        | P4595          |
| Lab Sample ID:    | P4595-02                     | Matrix:         | SOIL           |
|                   |                              | % Solid:        | 100            |

| Parameter        | Conc.  | Qua. | DF | MDL    | LOQ / CRQL | Units | Prep Date      | Date Ana.      | Ana Met. |
|------------------|--------|------|----|--------|------------|-------|----------------|----------------|----------|
| Corrosivity      | 8.84   | H    | 1  | 0      | 0          | pH    |                | 10/28/24 17:00 | 9045D    |
| Ignitability     | NO     |      | 1  | 0      | 0          | oC    |                | 10/30/24 11:52 | 1030     |
| Reactive Cyanide | 0.0088 | U    | 1  | 0.0088 | 0.050      | mg/Kg | 10/29/24 09:00 | 10/29/24 13:34 | 9012B    |
| Reactive Sulfide | 3.19   | J    | 1  | 0.19   | 10.0       | mg/Kg | 10/30/24 08:45 | 10/30/24 12:38 | 9034     |

Comments: pH result reported at temperature 22.1 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N =Spiked sample recovery not within control limits



# QC RESULT SUMMARY



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,  
Fax : 908 789 8922

### Initial and Continuing Calibration Verification

**Client:** Tully Construction Co., Inc.

**SDG No.:** P4595

**Project:** Pitkin Yard

**RunNo.:** LB133178

| Analyte                   |      | Units | Result | True Value | %<br>Recovery | Acceptance<br>Window (%R) | Analysis<br>Date |
|---------------------------|------|-------|--------|------------|---------------|---------------------------|------------------|
| Sample ID:<br>Corrosivity | ICV  | pH    | 7.02   | 7          | 100           | 90-110                    | 10/28/2024       |
| Sample ID:<br>Corrosivity | CCV1 | pH    | 2.01   | 2.00       | 101           | 90-110                    | 10/28/2024       |
| Sample ID:<br>Corrosivity | CCV2 | pH    | 12.02  | 12.00      | 100           | 90-110                    | 10/28/2024       |
| Sample ID:<br>Corrosivity | CCV3 | pH    | 2.01   | 2.00       | 101           | 90-110                    | 10/28/2024       |

## Initial and Continuing Calibration Verification

**Client:** Tully Construction Co., Inc.

**SDG No.:** P4595

**Project:** Pitkin Yard

**RunNo.:** LB133190

| Analyte                                    | Units | Result | True Value | %<br>Recovery | Acceptance<br>Window (%R) | Analysis<br>Date |
|--------------------------------------------|-------|--------|------------|---------------|---------------------------|------------------|
| Sample ID: <b>ICV1</b><br>Reactive Cyanide | mg/L  | 0.099  | 0.099      | 100           | 85-115                    | 10/29/2024       |
| Sample ID: <b>CCV1</b><br>Reactive Cyanide | mg/L  | 0.25   | 0.25       | 100           | 90-110                    | 10/29/2024       |
| Sample ID: <b>CCV2</b><br>Reactive Cyanide | mg/L  | 0.25   | 0.25       | 100           | 90-110                    | 10/29/2024       |
| Sample ID: <b>CCV3</b><br>Reactive Cyanide | mg/L  | 0.26   | 0.25       | 104           | 90-110                    | 10/29/2024       |

### Initial and Continuing Calibration Blank Summary

**Client:** Tully Construction Co., Inc.

**SDG No.:** P4595

**Project:** Pitkin Yard

**RunNo.:** LB133190

| Analyte                                    | Units | Result   | Acceptance<br>Limits | Conc<br>Qual | MDL     | RDL   | Analysis<br>Date |
|--------------------------------------------|-------|----------|----------------------|--------------|---------|-------|------------------|
| Sample ID: <b>ICB1</b><br>Reactive Cyanide | mg/L  | < 0.0025 | 0.0025               | U            | 0.00099 | 0.005 | 10/29/2024       |
| Sample ID: <b>CCB1</b><br>Reactive Cyanide | mg/L  | < 0.0025 | 0.0025               | U            | 0.00099 | 0.005 | 10/29/2024       |
| Sample ID: <b>CCB2</b><br>Reactive Cyanide | mg/L  | < 0.0025 | 0.0025               | U            | 0.00099 | 0.005 | 10/29/2024       |
| Sample ID: <b>CCB3</b><br>Reactive Cyanide | mg/L  | < 0.0025 | 0.0025               | U            | 0.00099 | 0.005 | 10/29/2024       |

## Preparation Blank Summary

**Client:** Tully Construction Co., Inc.

**SDG No.:** P4595

**Project:** Pitkin Yard

| Analyte                      | Units | Result   | Acceptance<br>Limits | Conc<br>Qual | MDL    | RDL  | Analysis<br>Date |
|------------------------------|-------|----------|----------------------|--------------|--------|------|------------------|
| Sample ID: <b>PB164488BL</b> |       |          |                      |              |        |      |                  |
| Reactive Cyanide             | mg/Kg | < 0.0250 | 0.0250               | U            | 0.0088 | 0.05 | 10/29/2024       |
| Sample ID: <b>PB164492BL</b> |       |          |                      |              |        |      |                  |
| Reactive Sulfide             | mg/Kg | < 5.0000 | 5.0000               | U            | 0.186  | 10   | 10/30/2024       |

### Duplicate Sample Summary

|                   |                              |                                         |          |
|-------------------|------------------------------|-----------------------------------------|----------|
| <b>Client:</b>    | Tully Construction Co., Inc. | <b>SDG No.:</b>                         | P4595    |
| <b>Project:</b>   | Pitkin Yard                  | <b>Sample ID:</b>                       | P4594-01 |
| <b>Client ID:</b> | TP-4DUP                      | <b>Percent Solids for Spike Sample:</b> | 89.2     |

| Analyte      | Units | Acceptance<br>Limit | Sample<br>Result | Conc.<br>Qualifier | Duplicate<br>Result | Conc.<br>Qualifier | Dilution<br>Factor | RPD/<br>AD | Qual | Analysis<br>Date |
|--------------|-------|---------------------|------------------|--------------------|---------------------|--------------------|--------------------|------------|------|------------------|
| Ignitability | oC    | +/-20               | NO               |                    | NO                  |                    | 1                  | 0          |      | 10/30/2024       |

## Duplicate Sample Summary

|                                             |                                             |
|---------------------------------------------|---------------------------------------------|
| <b>Client:</b> Tully Construction Co., Inc. | <b>SDG No.:</b> P4595                       |
| <b>Project:</b> Pitkin Yard                 | <b>Sample ID:</b> P4594-04                  |
| <b>Client ID:</b> TP-4DUP                   | <b>Percent Solids for Spike Sample:</b> 100 |

| Analyte          | Units | Acceptance<br>Limit | Sample<br>Result | Conc.<br>Qualifier | Duplicate<br>Result | Conc.<br>Qualifier | Dilution<br>Factor | RPD/<br>AD | Qual | Analysis<br>Date |
|------------------|-------|---------------------|------------------|--------------------|---------------------|--------------------|--------------------|------------|------|------------------|
| Reactive Sulfide | mg/Kg | +/-20               | 1.59             | J                  | 1.59                | J                  | 1                  | 0          |      | 10/30/2024       |

## Duplicate Sample Summary

|                                             |                                             |
|---------------------------------------------|---------------------------------------------|
| <b>Client:</b> Tully Construction Co., Inc. | <b>SDG No.:</b> P4595                       |
| <b>Project:</b> Pitkin Yard                 | <b>Sample ID:</b> P4598-12                  |
| <b>Client ID:</b> TP-8DUP                   | <b>Percent Solids for Spike Sample:</b> 100 |

| Analyte          | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/AD | Qual | Analysis Date |
|------------------|-------|------------------|---------------|-----------------|------------------|-----------------|-----------------|--------|------|---------------|
| Corrosivity      | pH    | +/-20            | 8.40          |                 | 8.41             |                 | 1               | 0.12   |      | 10/28/2024    |
| Reactive Cyanide | mg/Kg | +/-20            | 0.0088        | U               | 0.0088           | U               | 1               | 0      |      | 10/29/2024    |
| Ignitability     | oC    | +/-20            | NO            |                 | NO               |                 | 1               | 0      |      | 10/30/2024    |



# RAW DATA

## Analytical Summary Report

Analysis Method: 9045D  
Parameter: Corrosivity  
Run Number: LB133178  
Balance ID: WC SC-4

Analyst By : jignesh  
Supervisor Review By : Iwona  
Slope : 98.5  
pH Meter ID : WC PH METER-1

| Calibration Standards           | Chemtech Log# |
|---------------------------------|---------------|
| PH 4 BUFFER SOLUTION            | W3107         |
| BUFFER PH 7.00 GREEN 1PINT PK6  | W3093         |
| PH 10.01 BUFFER, COLOR CD 475ML | W3094         |
| buffer solution pH 7 yellow     | W3071         |
| Buffer Solution, PH2 (500ml)    | W3005         |
| Buffer Solution, PH12 (500ml)   | W3072         |

True Value of ICV = 7.00 Control Limits[+/- 0.1].

True Value of CCV1 = 2.00 Control Limits[+/- 0.1].

True Value of CCV2 = 12.00 Control Limits[+/- 0.1].

True Value of CCV3 = 2.00 Control Limits[+/- 0.1].

| Seq | LabID       | DF | Matrix | Weight (gm) | Volume (ml) | Temperature (°C) | Result (pH) | Anal Date  | Anal Time |
|-----|-------------|----|--------|-------------|-------------|------------------|-------------|------------|-----------|
| 1   | CAL1        | 1  | Water  | NA          | NA          | 20.2             | 4.01        | 10/28/2024 | 16:15     |
| 2   | CAL2        | 1  | Water  | NA          | NA          | 20.2             | 7.01        | 10/28/2024 | 16:16     |
| 3   | CAL3        | 1  | Water  | NA          | NA          | 20.2             | 10.02       | 10/28/2024 | 16:20     |
| 4   | ICV         | 1  | Water  | NA          | NA          | 20.2             | 7.02        | 10/28/2024 | 16:22     |
| 5   | CCV1        | 1  | Water  | NA          | NA          | 20.2             | 2.01        | 10/28/2024 | 16:25     |
| 6   | P4594-04    | 1  | Solid  | 20.02       | 20          | 22.6             | 9.31        | 10/28/2024 | 16:37     |
| 7   | P4594-08    | 1  | Solid  | 20.03       | 20          | 22.7             | 8.82        | 10/28/2024 | 16:42     |
| 8   | P4594-12    | 1  | Solid  | 20.02       | 20          | 22.4             | 9.05        | 10/28/2024 | 16:45     |
| 9   | P4594-16    | 1  | Solid  | 20.03       | 20          | 22.6             | 8.60        | 10/28/2024 | 16:50     |
| 10  | P4594-20    | 1  | Solid  | 20.02       | 20          | 22.5             | 9.46        | 10/28/2024 | 16:55     |
| 11  | P4595-02    | 1  | Solid  | 20.04       | 20          | 22.1             | 8.84        | 10/28/2024 | 17:00     |
| 12  | P4597-03    | 1  | Solid  | 20.02       | 20          | 23.0             | 6.32        | 10/28/2024 | 17:05     |
| 13  | P4597-06    | 1  | Solid  | 20.03       | 20          | 23.2             | 5.97        | 10/28/2024 | 17:11     |
| 14  | P4597-09    | 1  | Solid  | 20.02       | 20          | 23.2             | 6.33        | 10/28/2024 | 17:15     |
| 15  | P4597-12    | 1  | Solid  | 20.03       | 20          | 22.9             | 6.31        | 10/28/2024 | 17:20     |
| 16  | CCV2        | 1  | Water  | NA          | NA          | 20.2             | 12.02       | 10/28/2024 | 17:25     |
| 17  | P4598-04    | 1  | Solid  | 20.02       | 20          | 23.7             | 8.16        | 10/28/2024 | 17:30     |
| 18  | P4598-08    | 1  | Solid  | 20.03       | 20          | 23.1             | 9.20        | 10/28/2024 | 17:35     |
| 19  | P4598-12    | 1  | Solid  | 20.02       | 20          | 23.3             | 8.40        | 10/28/2024 | 17:40     |
| 20  | P4598-12DUP | 1  | Solid  | 20.03       | 20          | 23.4             | 8.41        | 10/28/2024 | 17:41     |

| Seq | LabID | DF | Matrix | Weight<br>(gm) | Volume<br>(ml) | Temperature<br>(°C) | Result<br>(pH) | Anal Date  | An    |
|-----|-------|----|--------|----------------|----------------|---------------------|----------------|------------|-------|
| 21  | CCV3  | 1  | Water  | NA             | NA             | 20.2                | 2.01           | 10/28/2024 | 17:45 |

WORKLIST(Hardcopy Internal Chain)

UB 133178

WorkList Name : corrosivity p4595      WorkList ID : 184877      Department : Wet-Chemistry      Date : 10-28-2024 13:31:58

| Sample   | Customer Sample | Matrix | Test        | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|----------|-----------------|--------|-------------|--------------|----------|-----------------------------|--------------|--------|
| P4594-04 | TP-4            | Solid  | Corrosivity | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 9045D  |
| P4594-08 | BP-F17          | Solid  | Corrosivity | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 9045D  |
| P4594-12 | BP-F16          | Solid  | Corrosivity | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 9045D  |
| P4594-16 | TP-5            | Solid  | Corrosivity | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 9045D  |
| P4594-20 | BP-F15          | Solid  | Corrosivity | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 9045D  |
| P4595-02 | PITKIN-COMP     | Solid  | Corrosivity | Cool 4 deg C | TULL02   | K61                         | 10/28/2024   | 9045D  |
| P4597-03 | RED-1-1         | Solid  | Corrosivity | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 9045D  |
| P4597-06 | RED-1-2         | Solid  | Corrosivity | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 9045D  |
| P4597-09 | BLUE-2-1        | Solid  | Corrosivity | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 9045D  |
| P4597-12 | BLUE-2-2        | Solid  | Corrosivity | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 9045D  |
| P4598-04 | BP-F12          | Solid  | Corrosivity | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | 9045D  |
| P4598-08 | BP-F11          | Solid  | Corrosivity | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | 9045D  |
| P4598-12 | TP-8            | Solid  | Corrosivity | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | 9045D  |

Date/Time 10/28/24 16:00  
Raw Sample Received by: [Signature]  
Raw Sample Relinquished by: [Signature]

Date/Time 10/28/24 18:30  
Raw Sample Received by: [Signature]  
Raw Sample Relinquished by: [Signature]

Test results

Aquakem 7.2AQ1

Page: 1

CHEMTECH CONSULTING GROUP INC  
284 Sheffield Street, Mountainside, NJ 07092

Reviewed by : NF Instrument ID : Konelab

10/29/2024 13:55

Test: Total CN

| Sample Id   | Result  | Dil. 1 + | Response | Errors |
|-------------|---------|----------|----------|--------|
| ICV1        | 98.681  | 0.0      | 0.074    |        |
| ICB1        | 0.051   | 0.0      | 0.002    |        |
| CCV1        | 249.305 | 0.0      | 0.185    |        |
| CCB1        | 0.430   | 0.0      | 0.002    |        |
| PB164488BL  | 0.136   | 0.0      | 0.002    |        |
| P4574-03    | 0.358   | 0.0      | 0.002    |        |
| P4574-06    | 0.159   | 0.0      | 0.002    |        |
| P4578-06    | 0.129   | 0.0      | 0.002    |        |
| P4578-08    | 0.176   | 0.0      | 0.002    |        |
| P4594-04    | 0.254   | 0.0      | 0.002    |        |
| P4594-08    | 0.281   | 0.0      | 0.002    |        |
| P4594-12    | 0.141   | 0.0      | 0.002    |        |
| P4594-16    | 0.136   | 0.0      | 0.002    |        |
| P4594-20    | 0.230   | 0.0      | 0.002    |        |
| CCV2        | 249.112 | 0.0      | 0.185    |        |
| CCB2        | 0.281   | 0.0      | 0.002    |        |
| P4595-02    | 0.078   | 0.0      | 0.002    |        |
| P4597-03    | 0.056   | 0.0      | 0.002    |        |
| P4597-06    | 0.002   | 0.0      | 0.002    |        |
| P4597-09    | 0.229   | 0.0      | 0.002    |        |
| P4597-12    | 0.169   | 0.0      | 0.002    |        |
| P4598-04    | 0.410   | 0.0      | 0.002    |        |
| P4598-08    | 0.542   | 0.0      | 0.002    |        |
| P4598-12    | 0.178   | 0.0      | 0.002    |        |
| P4598-12DUP | 0.228   | 0.0      | 0.002    |        |
| CCV3        | 257.755 | 0.0      | 0.191    |        |
| CCB3        | 0.711   | 0.0      | 0.002    |        |
| N           | 27      |          |          |        |
| Mean        | 31.860  |          |          |        |
| SD          | 81.5665 |          |          |        |
| CV%         | 256.02  |          |          |        |

Aquakem v. 7.2AQ1

Results from time period:

Tue Oct 29 12:52:15 2024

Tue Oct 29 13:45:08 2024

| Sample Id   | Sam/Ctr/c/ | Test short r | Test type | Result   | Result unit | Result date and time | Stat |
|-------------|------------|--------------|-----------|----------|-------------|----------------------|------|
| 0.0PPBCN    | A          | Total CN     | P         | 0.0674   | µg/l        | 10/29/2024 12:52:15  |      |
| 5.0PPBCN    | A          | Total CN     | P         | 4.7357   | µg/l        | 10/29/2024 12:52:16  |      |
| 10PPBCN     | A          | Total CN     | P         | 9.8459   | µg/l        | 10/29/2024 12:52:17  |      |
| 50PPBCN     | A          | Total CN     | P         | 48.5342  | µg/l        | 10/29/2024 12:52:18  |      |
| 100PPBCN    | A          | Total CN     | P         | 101.8676 | µg/l        | 10/29/2024 12:52:19  |      |
| 250PPBCN    | A          | Total CN     | P         | 250.3407 | µg/l        | 10/29/2024 12:52:20  |      |
| 500PPBCN    | A          | Total CN     | P         | 499.6084 | µg/l        | 10/29/2024 12:52:21  |      |
| ICV1        | S          | Total CN     | P         | 98.6812  | µg/l        | 10/29/2024 13:26:38  |      |
| ICB1        | S          | Total CN     | P         | 0.0511   | µg/l        | 10/29/2024 13:26:39  |      |
| CCV1        | S          | Total CN     | P         | 249.3046 | µg/l        | 10/29/2024 13:26:42  |      |
| CCB1        | S          | Total CN     | P         | 0.4297   | µg/l        | 10/29/2024 13:26:44  |      |
| PB164488BL  | S          | Total CN     | P         | 0.1361   | µg/l        | 10/29/2024 13:26:46  |      |
| P4574-03    | S          | Total CN     | P         | 0.3577   | µg/l        | 10/29/2024 13:26:47  |      |
| P4574-06    | S          | Total CN     | P         | 0.1594   | µg/l        | 10/29/2024 13:34:09  |      |
| P4578-06    | S          | Total CN     | P         | 0.1291   | µg/l        | 10/29/2024 13:34:10  |      |
| P4578-08    | S          | Total CN     | P         | 0.1757   | µg/l        | 10/29/2024 13:34:11  |      |
| P4594-04    | S          | Total CN     | P         | 0.2537   | µg/l        | 10/29/2024 13:34:12  |      |
| P4594-08    | S          | Total CN     | P         | 0.2812   | µg/l        | 10/29/2024 13:34:13  |      |
| P4594-12    | S          | Total CN     | P         | 0.1412   | µg/l        | 10/29/2024 13:34:14  |      |
| P4594-16    | S          | Total CN     | P         | 0.136    | µg/l        | 10/29/2024 13:34:15  |      |
| P4594-20    | S          | Total CN     | P         | 0.2302   | µg/l        | 10/29/2024 13:34:16  |      |
| CCV2        | S          | Total CN     | P         | 249.1117 | µg/l        | 10/29/2024 13:34:17  |      |
| CCB2        | S          | Total CN     | P         | 0.2806   | µg/l        | 10/29/2024 13:34:18  |      |
| P4595-02    | S          | Total CN     | P         | 0.0776   | µg/l        | 10/29/2024 13:34:19  |      |
| P4597-03    | S          | Total CN     | P         | 0.0564   | µg/l        | 10/29/2024 13:41:44  |      |
| P4597-06    | S          | Total CN     | P         | 0.0015   | µg/l        | 10/29/2024 13:41:45  |      |
| P4597-09    | S          | Total CN     | P         | 0.2295   | µg/l        | 10/29/2024 13:41:46  |      |
| P4597-12    | S          | Total CN     | P         | 0.169    | µg/l        | 10/29/2024 13:41:47  |      |
| P4598-04    | S          | Total CN     | P         | 0.4102   | µg/l        | 10/29/2024 13:41:48  |      |
| P4598-08    | S          | Total CN     | P         | 0.542    | µg/l        | 10/29/2024 13:41:52  |      |
| P4598-12    | S          | Total CN     | P         | 0.1781   | µg/l        | 10/29/2024 13:41:53  |      |
| P4598-12DUP | S          | Total CN     | P         | 0.2275   | µg/l        | 10/29/2024 13:41:54  |      |
| CCV3        | S          | Total CN     | P         | 257.7548 | µg/l        | 10/29/2024 13:45:07  |      |
| CCB3        | S          | Total CN     | P         | 0.7111   | µg/l        | 10/29/2024 13:45:08  |      |

=====

|                     |                |         |
|---------------------|----------------|---------|
| Calibration results | Aquakem 7.2AQ1 | Page: 1 |
|---------------------|----------------|---------|

CHEMTECH CONSULTING GROUP INC  
284 Sheffield Street, Mountainside, NJ 07092

10/29/2024 12:55

Reviewed by : NF Instrument ID : Konelab

-----

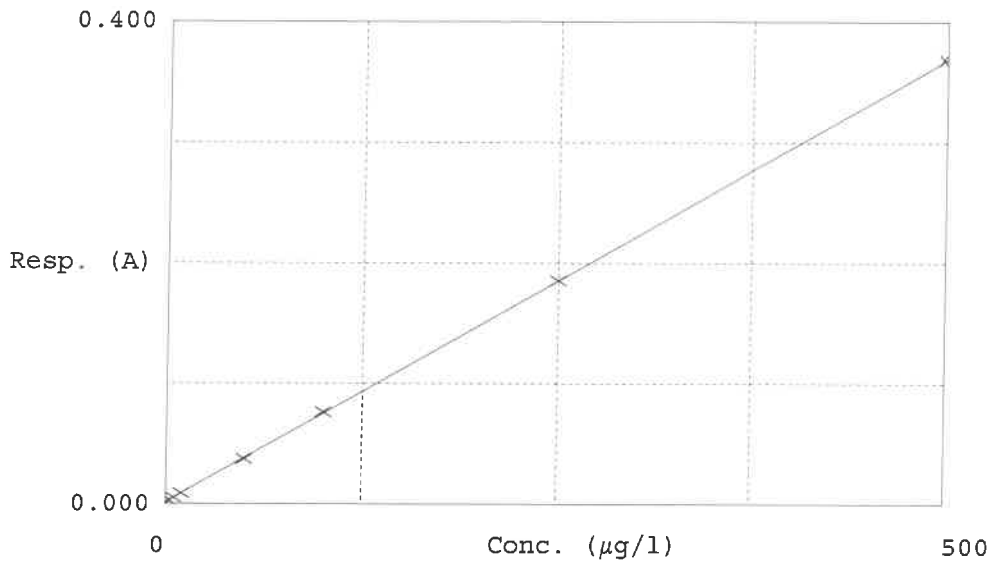
Test      Total CN

Accepted                      10/29/2024    12:55

Factor                      1362  
Bias                        0.002

Coeff. of det.              0.999971

Errors



|   | Calibrator | Response | Calc. con. | Conc.    | $R_e$<br>Errors |            |
|---|------------|----------|------------|----------|-----------------|------------|
| 1 | 0.0PPBCN   | 0.002    | 0.0674     | 0.0000   |                 |            |
| 2 | 5.0PPBCN   | 0.005    | 4.7357     | 5.0000   | -5.3            |            |
| 3 | 10PPBCN    | 0.009    | 9.8459     | 10.0000  | -1.5            |            |
| 4 | 50PPBCN    | 0.037    | 48.5342    | 50.0000  | -2.9            |            |
| 5 | 100PPBCN   | 0.076    | 101.8676   | 100.0000 | 1.9             | NF         |
| 6 | 250PPBCN   | 0.185    | 250.3407   | 250.0000 | 0.1             |            |
| 7 | 500PPBCN   | 0.369    | 499.6084   | 500.0000 | -0.1            | 10.29.2024 |

## Analytical Summary Report

Analysis Method: 1030  
Parameter: Ignitability  
Run Number: LB133207

Reviewed By: Iwona

Supervisor Review By: jignesh

| Seq | LabID       | ClientID    | DF | matrix | Result Status | Burning Rate | Anal Date  | Anal Time |
|-----|-------------|-------------|----|--------|---------------|--------------|------------|-----------|
| 1   | P4594-01    | TP-4        | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 10:20     |
| 2   | P4594-01DUP | TP-4DUP     | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 10:28     |
| 3   | P4594-04    | TP-4        | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 10:35     |
| 4   | P4594-05    | BP-F17      | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 10:42     |
| 5   | P4594-08    | BP-F17      | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 10:50     |
| 6   | P4594-09    | BP-F16      | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 10:58     |
| 7   | P4594-12    | BP-F16      | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 11:05     |
| 8   | P4594-13    | TP-5        | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 11:23     |
| 9   | P4594-16    | TP-5        | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 11:30     |
| 10  | P4594-17    | BP-F15      | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 11:38     |
| 11  | P4594-20    | BP-F15      | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 11:45     |
| 12  | P4595-02    | PITKIN-COMP | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 11:52     |
| 13  | P4597-01    | RED-1-1     | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 12:00     |
| 14  | P4597-03    | RED-1-1     | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 12:08     |
| 15  | P4597-04    | RED-1-2     | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 12:15     |
| 16  | P4597-06    | RED-1-2     | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 12:23     |
| 17  | P4597-07    | BLUE-2-1    | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 12:30     |
| 18  | P4597-09    | BLUE-2-1    | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 12:38     |
| 19  | P4597-10    | BLUE-2-2    | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 12:45     |
| 20  | P4597-12    | BLUE-2-2    | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 12:52     |
| 21  | P4598-01    | BP-F12      | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 13:00     |
| 22  | P4598-04    | BP-F12      | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 13:08     |
| 23  | P4598-05    | BP-F11      | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 13:15     |
| 24  | P4598-08    | BP-F11      | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 13:23     |
| 25  | P4598-09    | TP-8        | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 13:30     |
| 26  | P4598-12    | TP-8        | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 13:38     |
| 27  | P4598-12DUP | TP-8DUP     | 1  | Solid  | NO            | 0.00         | 10/30/2024 | 13:45     |

$$\text{Burning Rate} = \frac{\text{Length (mm)}}{\text{Total Time (sec)}}$$

# WORKLIST(Hardcopy Internal Chain)

6133207

WorkList Name : ign-1029

WorkList ID : 184900

Department : Wet-Chemistry

Date : 10-29-2024 09:56:50

| Sample   | Customer Sample | Matrix | Test         | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|----------|-----------------|--------|--------------|--------------|----------|-----------------------------|--------------|--------|
| P4594-01 | TP-4            | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 1030   |
| P4594-04 | TP-4            | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 1030   |
| P4594-05 | BP-F17          | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 1030   |
| P4594-08 | BP-F17          | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 1030   |
| P4594-09 | BP-F16          | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 1030   |
| P4594-12 | BP-F16          | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 1030   |
| P4594-13 | TP-5            | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 1030   |
| P4594-16 | TP-5            | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 1030   |
| P4594-17 | BP-F15          | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 1030   |
| P4594-20 | BP-F15          | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 1030   |
| P4595-02 | PITKIN-COMP     | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 1030   |
| P4597-01 | RED-1-1         | Solid  | Ignitability | Cool 4 deg C | TULL02   | K61                         | 10/28/2024   | 1030   |
| P4597-03 | RED-1-1         | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 1030   |
| P4597-04 | RED-1-2         | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 1030   |
| P4597-06 | RED-1-2         | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 1030   |
| P4597-07 | BLUE-2-1        | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 1030   |
| P4597-09 | BLUE-2-1        | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 1030   |
| P4597-10 | BLUE-2-2        | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 1030   |
| P4597-12 | BLUE-2-2        | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 1030   |
| P4598-01 | BP-F12          | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 1030   |
| P4598-04 | BP-F12          | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | 1030   |

Date/Time 10/30/24 10:00  
Raw Sample Received by: 12/201  
Raw Sample Relinquished by: 12/201

Date/Time 10/30/24 14:00  
Raw Sample Received by: 12/201  
Raw Sample Relinquished by: 12/201

WORKLIST(Hardcopy Internal Chain)

16133207

WorkList Name : ign-1029      WorkList ID : 184900      Department : Wet-Chemistry      Date : 10-29-2024 09:56:50

| Sample   | Customer Sample | Matrix | Test         | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|----------|-----------------|--------|--------------|--------------|----------|-----------------------------|--------------|--------|
| P4598-05 | BP-F11          | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | 1030   |
| P4598-08 | BP-F11          | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | 1030   |
| P4598-09 | TP-8            | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | 1030   |
| P4598-12 | TP-8            | Solid  | Ignitability | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | 1030   |

Date/Time 10/30/24 10:00  
Raw Sample Received by: R (WC)  
Raw Sample Relinquished by: JALCO

Date/Time 10/30/24 14:00  
Raw Sample Received by: JALCO  
Raw Sample Relinquished by: JALCO

Analysis Method: 9034

Parameter: Reactive Sulfide

Run Number: LB133208

ANALYST: rubina

SUPERVISOR REVIEW BY: Iwona

Constant: 16000

Normality1: 0.025

Normality2: 0.025

| Reagent/Standard                   | Lot/Log # |
|------------------------------------|-----------|
| SODIUM THIOSULFATE, 0.025N, 4LITRE | W3105     |
| IODINE SOLUTION .025N 1L           | W3114     |
| Starch Solution, 4L                | W3149     |

| Seq | Lab ID      | True Value (mg/l) | DF | Initial Weight (g) | Final Volume (ml) | T1 (ml) | T2 Initial | T2 Final | T2 Diff. (ml) | T1 - T2 Diff (mL) | Value Corrected With Blank | Result (ppm) | Anal Date  | Anal Time |
|-----|-------------|-------------------|----|--------------------|-------------------|---------|------------|----------|---------------|-------------------|----------------------------|--------------|------------|-----------|
| 1   | PB164492BL  |                   | 1  | 5.00               | 50                | 2.00    | 0.00       | 1.92     | 1.92          | 0.08              | 0.00                       | 0.00         | 10/30/2024 | 12:20     |
| 2   | P4594-04    |                   | 1  | 5.04               | 50                | 2.00    | 0.00       | 1.90     | 1.90          | 0.10              | 0.02                       | 1.59         | 10/30/2024 | 12:23     |
| 3   | P4594-04DUP |                   | 1  | 5.04               | 50                | 2.00    | 0.00       | 1.90     | 1.90          | 0.10              | 0.02                       | 1.59         | 10/30/2024 | 12:25     |
| 4   | P4594-08    |                   | 1  | 5.02               | 50                | 2.00    | 0.00       | 1.88     | 1.88          | 0.12              | 0.04                       | 3.19         | 10/30/2024 | 12:28     |
| 5   | P4594-12    |                   | 1  | 5.07               | 50                | 2.00    | 0.00       | 1.90     | 1.90          | 0.10              | 0.02                       | 1.58         | 10/30/2024 | 12:30     |
| 6   | P4594-16    |                   | 1  | 5.03               | 50                | 2.00    | 0.00       | 1.86     | 1.86          | 0.14              | 0.06                       | 4.77         | 10/30/2024 | 12:33     |
| 7   | P4594-20    |                   | 1  | 5.04               | 50                | 2.00    | 0.00       | 1.88     | 1.88          | 0.12              | 0.04                       | 3.17         | 10/30/2024 | 12:35     |
| 8   | P4595-02    |                   | 1  | 5.01               | 50                | 2.00    | 0.00       | 1.88     | 1.88          | 0.12              | 0.04                       | 3.19         | 10/30/2024 | 12:38     |
| 9   | P4597-03    |                   | 1  | 5.07               | 50                | 2.00    | 0.00       | 1.86     | 1.86          | 0.14              | 0.06                       | 4.73         | 10/30/2024 | 12:40     |
| 10  | P4597-06    |                   | 1  | 5.06               | 50                | 2.00    | 0.00       | 1.90     | 1.90          | 0.10              | 0.02                       | 1.58         | 10/30/2024 | 12:43     |
| 11  | P4597-09    |                   | 1  | 5.03               | 50                | 2.00    | 0.00       | 1.86     | 1.86          | 0.14              | 0.06                       | 4.77         | 10/30/2024 | 12:45     |
| 12  | P4597-12    |                   | 1  | 5.05               | 50                | 2.00    | 0.00       | 1.88     | 1.88          | 0.12              | 0.04                       | 3.17         | 10/30/2024 | 12:48     |

T1 = Titrant1

T2 = Titrant2

T2 Diff = T2 Final - T2 Initial

Value Corrected With Blank = ((T1 - T2 Diff) - Blank Correction(BL))

Result = ((T1 \* Normality1) - ((T1 - Value Corrected With Blank) \* Normality2)) \* Constant / Initial Volume

Analysis Method: 9034

Parameter: Reactive Sulfide

Run Number: LB133208

ANALYST: rubina

SUPERVISOR REVIEW BY: Iwona

Constant: 16000

Normality1: 0.025

Normality2: 0.025

| Reagent/Standard                   | Lot/Log # |
|------------------------------------|-----------|
| SODIUM THIOSULFATE, 0.025N, 4LITRE | W3105     |
| IODINE SOLUTION .025N 1L           | W3114     |
| Starch Solution, 4L                | W3149     |

| Seq | Lab ID   | True Value (mg/l) | DF | Initial Weight (g) | Final Volume (ml) | T1 (ml) | T2 Initial | T2 Final | T2 Diff. (ml) | T1 - T2 Diff (mL) | Value Corrected With Blank | Result (ppm) | Anal Date  | Anal Time |
|-----|----------|-------------------|----|--------------------|-------------------|---------|------------|----------|---------------|-------------------|----------------------------|--------------|------------|-----------|
| 13  | P4598-04 |                   | 1  | 5.02               | 50                | 2.00    | 0.00       | 1.86     | 1.86          | 0.14              | 0.06                       | 4.78         | 10/30/2024 | 12:50     |
| 14  | P4598-08 |                   | 1  | 5.04               | 50                | 2.00    | 0.00       | 1.90     | 1.90          | 0.10              | 0.02                       | 1.59         | 10/30/2024 | 12:52     |
| 15  | P4598-12 |                   | 1  | 5.01               | 50                | 2.00    | 0.00       | 1.86     | 1.86          | 0.14              | 0.06                       | 4.79         | 10/30/2024 | 12:55     |
| 16  | P4612-04 |                   | 1  | 5.01               | 50                | 2.00    | 0.00       | 1.90     | 1.90          | 0.10              | 0.02                       | 1.60         | 10/30/2024 | 12:58     |
| 17  | P4613-02 |                   | 1  | 5.05               | 50                | 2.00    | 0.00       | 1.86     | 1.86          | 0.14              | 0.06                       | 4.75         | 10/30/2024 | 13:00     |
| 18  | P4616-04 |                   | 1  | 5.06               | 50                | 2.00    | 0.00       | 1.86     | 1.86          | 0.14              | 0.06                       | 4.74         | 10/30/2024 | 13:02     |
| 19  | P4616-08 |                   | 1  | 5.02               | 50                | 2.00    | 0.00       | 1.88     | 1.88          | 0.12              | 0.04                       | 3.19         | 10/30/2024 | 13:05     |
| 20  | P4617-04 |                   | 1  | 5.04               | 50                | 2.00    | 0.00       | 1.90     | 1.90          | 0.10              | 0.02                       | 1.59         | 10/30/2024 | 13:08     |

T1 = Titrant1

T2 = Titrant2

T2 Diff = T2 Final - T2 Initial

Value Corrected With Blank = ((T1 - T2 Diff) - Blank Correction(BL))

Result = ((T1 \* Normality1) - ((T1 - Value Corrected With Blank) \* Normality2)) \* Constant / Initial Volume

SOP ID : M9012B-Total, Amenable and Reactive Cyanide-20

SDG No : N/A

Start Digest Date: 10/29/2024 Time : 09:00 Temp : N/A

Matrix : SOLID

End Digest Date: 10/29/2024 Time : 10:30 Temp : N/A

Pipette ID : N/A

Balance ID : WC SC-4

Hood ID : HOOD#1

Digestion tube ID : M5595

Block Thermometer ID : N/A

Block ID : MC-1,MC-2

Filter paper ID : N/A

Prep Technician Signature: NF

Weigh By : NF

pH Meter ID : N/A

Supervisor Signature: 12

| Standardized Name | MLS USED | STD REF. # FROM LOG |
|-------------------|----------|---------------------|
| PBS003            | 50.0ML   | W3112               |
| N/A               | N/A      | N/A                 |
| N/A               | N/A      | N/A                 |
| N/A               | N/A      | N/A                 |
| N/A               | N/A      | N/A                 |

| Chemical Used | ML/SAMPLE USED | Lot Number |
|---------------|----------------|------------|
| 0.25N NaOH    | 50.0ML         | WP108640   |
| N/A           | N/A            | N/A        |
| N/A           | N/A            | N/A        |
| N/A           | N/A            | N/A        |
| N/A           | N/A            | N/A        |
| N/A           | N/A            | N/A        |
| N/A           | N/A            | N/A        |
| N/A           | N/A            | N/A        |
| N/A           | N/A            | N/A        |
| N/A           | N/A            | N/A        |

| LAB SAMPLE ID | CLIENT SAMPLE ID | Comment |
|---------------|------------------|---------|
|               |                  |         |

## Extraction Conformance/Non-Conformance Comments:

N/A

| Date / Time       | Prepped Sample Relinquished By/Location | Received By/Location |
|-------------------|-----------------------------------------|----------------------|
| 10-29-2024, 10:45 | NF(WC)                                  | NF(WC)               |
|                   | Preparation Group                       | Analysis Group       |

| Lab Sample ID | Client Sample ID | Initial Weight (g) | Final Vol (ml) | pH  | Sulfide | Oxidizing | Nitrate/ Nitrite | Comment | Prep Pos |
|---------------|------------------|--------------------|----------------|-----|---------|-----------|------------------|---------|----------|
| P4574-03      | GRAVEL-1         | 5.05               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4574-06      | GRAVEL-2         | 5.03               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4578-06      | WB-305-BOT       | 5.02               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4578-08      | WB-305-BOT-1     | 5.04               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4594-04      | TP-4             | 5.01               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4594-08      | BP-F17           | 5.04               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4594-12      | BP-F16           | 5.03               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4594-16      | TP-5             | 5.04               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4594-20      | BP-F15           | 5.03               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4595-02      | PITKIN-COMP      | 5.01               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4597-03      | RED-1-1          | 5.02               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4597-06      | RED-1-2          | 5.02               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4597-09      | BLUE-2-1         | 5.04               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4597-12      | BLUE-2-2         | 5.02               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4598-04      | BP-F12           | 5.00               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4598-08      | BP-F11           | 5.02               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4598-12      | TP-8             | 5.01               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4598-12DUP   | TP-8DUP          | 5.01               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| PB164488BL    | PBS488           | 5.00               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |

# WORKLIST(Hardcopy Internal Chain)

WorkList Name : RCN S-10282024      WorkList ID : 184885      Department : Distillation      Date : 10-28-2024 16:23:04

| Sample   | Customer Sample | Matrix | Test             | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|----------|-----------------|--------|------------------|--------------|----------|-----------------------------|--------------|--------|
| P4574-03 | GRAVEL-1        | Solid  | Reactive Cyanide | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | 9012B  |
| P4574-06 | GRAVEL-2        | Solid  | Reactive Cyanide | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | 9012B  |
| P4578-06 | WB-305-BOT      | Solid  | Reactive Cyanide | Cool 4 deg C | PORT06   | K63                         | 10/25/2024   | 9012B  |
| P4578-08 | WB-305-BOT-1    | Solid  | Reactive Cyanide | Cool 4 deg C | PORT06   | K63                         | 10/25/2024   | 9012B  |
| P4594-04 | TP-4            | Solid  | Reactive Cyanide | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 9012B  |
| P4594-08 | BP-F17          | Solid  | Reactive Cyanide | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 9012B  |
| P4594-12 | BP-F16          | Solid  | Reactive Cyanide | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 9012B  |
| P4594-16 | TP-5            | Solid  | Reactive Cyanide | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 9012B  |
| P4594-20 | BP-F15          | Solid  | Reactive Cyanide | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 9012B  |
| P4595-02 | PITKIN-COMP     | Solid  | Reactive Cyanide | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 9012B  |
| P4597-03 | RED-1-1         | Solid  | Reactive Cyanide | Cool 4 deg C | TULL02   | K61                         | 10/28/2024   | 9012B  |
| P4597-06 | RED-1-2         | Solid  | Reactive Cyanide | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 9012B  |
| P4597-09 | BLUE-2-1        | Solid  | Reactive Cyanide | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 9012B  |
| P4597-12 | BLUE-2-2        | Solid  | Reactive Cyanide | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 9012B  |
| P4598-04 | BP-F12          | Solid  | Reactive Cyanide | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 9012B  |
| P4598-08 | BP-F11          | Solid  | Reactive Cyanide | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | 9012B  |
| P4598-12 | TP-8            | Solid  | Reactive Cyanide | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | 9012B  |

Date/Time 10-29-2024, 08:30  
Raw Sample Received by: NF(wc)  
Raw Sample Relinquished by: [Signature]

Date/Time 10-29-2024, 11:00  
Raw Sample Received by: [Signature]  
Raw Sample Relinquished by: NF(wc)

SOP ID : M9030B-Sulfide-12

SDG No : N/A

Start Digest Date: 10/30/2024 Time : 08:45 Temp : N/A

Matrix : SOIL

End Digest Date: 10/30/2024 Time : 10:15 Temp : N/A

Pipette ID : WC

Balance ID : WC SC-4

Hood ID : HOOD#1

Digestion tube ID : M5595

Block Thermometer ID : N/A

Block ID : MC-1,MC-2

Filter paper ID : N/A

Prep Technician Signature: RM

Weigh By : RM

pH Meter ID : N/A

Supervisor Signature: 12

| Standard Name | MLS USED | STD REF. # FROM LOG |
|---------------|----------|---------------------|
| PBS003        | 50.0ML   | W3112               |
| N/A           | N/A      | N/A                 |
| N/A           | N/A      | N/A                 |
| N/A           | N/A      | N/A                 |
| N/A           | N/A      | N/A                 |

| Chemical Used     | ML/SAMPLE USED | Lot Number |
|-------------------|----------------|------------|
| 0.5M ZINC ACETATE | 5.0ML          | WP108780   |
| FORMALDEHYDE      | 2.0ML          | W2725      |
| N/A               | N/A            | N/A        |
| N/A               | N/A            | N/A        |
| N/A               | N/A            | N/A        |
| N/A               | N/A            | N/A        |
| N/A               | N/A            | N/A        |
| N/A               | N/A            | N/A        |
| N/A               | N/A            | N/A        |
| N/A               | N/A            | N/A        |
| N/A               | N/A            | N/A        |

Extraction Conformance/Non-Conformance Comments:

10/30/2024 RM

N/A

| Date / Time | Prepped Sample Relinquished By/Location | Received By/Location |
|-------------|-----------------------------------------|----------------------|
|             |                                         |                      |
|             | Preparation Group                       | Analysis Group       |

| Lab Sample ID | Client Sample ID | Initial Weight (g) | Final Vol (ml) | pH  | Sulfide | Oxidizing | Nitrate/ Nitrite | Comment | Prep Pos |
|---------------|------------------|--------------------|----------------|-----|---------|-----------|------------------|---------|----------|
| P4594-04      | TP-4             | 5.04               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4594-04DUP   | TP-4DUP          | 5.04               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4594-08      | BP-F17           | 5.02               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4594-12      | BP-F16           | 5.07               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4594-16      | TP-5             | 5.03               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4594-20      | BP-F15           | 5.04               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4595-02      | PITKIN-COMP      | 5.01               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4597-03      | RED-1-1          | 5.07               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4597-06      | RED-1-2          | 5.06               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4597-09      | BLUE-2-1         | 5.03               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4597-12      | BLUE-2-2         | 5.05               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4598-04      | BP-F12           | 5.02               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4598-08      | BP-F11           | 5.04               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4598-12      | TP-8             | 5.01               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4612-04      | MOO-24-00335     | 5.01               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4613-02      | ARS20-0001       | 5.05               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4616-04      | BP-F10           | 5.06               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4616-08      | BP-F9-MOVED      | 5.02               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| P4617-04      | CONCRETE-PILE    | 5.04               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |
| PB164492BL    | PBS492           | 5.00               | 50             | N/A | N/A     | N/A       | N/A              | N/A     | N/A      |

# WORKLIST(Hardcopy Internal Chain)

WorkList Name : rsul-10-29      WorkList ID : 184892      Department : Distillation      Date : 10-29-2024 08:37:42

| Sample   | Customer Sample | Matrix | Test             | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|----------|-----------------|--------|------------------|--------------|----------|-----------------------------|--------------|--------|
| P4594-04 | TP-4            | Solid  | Reactive Sulfide | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 9034   |
| P4594-08 | BP-F17          | Solid  | Reactive Sulfide | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 9034   |
| P4594-12 | BP-F16          | Solid  | Reactive Sulfide | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 9034   |
| P4594-16 | TP-5            | Solid  | Reactive Sulfide | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 9034   |
| P4594-20 | BP-F15          | Solid  | Reactive Sulfide | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | 9034   |
| P4595-02 | PITKIN-COMP     | Solid  | Reactive Sulfide | Cool 4 deg C | TULL02   | K61                         | 10/28/2024   | 9034   |
| P4597-03 | RED-1-1         | Solid  | Reactive Sulfide | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 9034   |
| P4597-06 | RED-1-2         | Solid  | Reactive Sulfide | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 9034   |
| P4597-09 | BLUE-2-1        | Solid  | Reactive Sulfide | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 9034   |
| P4597-12 | BLUE-2-2        | Solid  | Reactive Sulfide | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | 9034   |
| P4598-04 | BP-F12          | Solid  | Reactive Sulfide | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | 9034   |
| P4598-08 | BP-F11          | Solid  | Reactive Sulfide | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | 9034   |
| P4598-12 | TP-8            | Solid  | Reactive Sulfide | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | 9034   |
| P4612-04 | MOO-24-00335    | Solid  | Reactive Sulfide | Cool 4 deg C | PSEG03   | K61                         | 10/29/2024   | 9034   |
| P4613-02 | ARS20-0001      | Solid  | Reactive Sulfide | Cool 4 deg C | PSEG03   | K62                         | 10/29/2024   | 9034   |
| P4616-04 | BP-F10          | Solid  | Reactive Sulfide | Cool 4 deg C | PSEG03   | K61                         | 10/29/2024   | 9034   |
| P4616-08 | BP-F9-MOVED     | Solid  | Reactive Sulfide | Cool 4 deg C | PSEG03   | K61                         | 10/29/2024   | 9034   |
| P4617-04 | CONCRETE-PILE   | Solid  | Reactive Sulfide | Cool 4 deg C | PSEG03   | K61                         | 10/29/2024   | 9034   |

Date/Time 10/30/2024 08:20  
Raw Sample Received by: RM CWG  
Raw Sample Relinquished by: RS/OCJ

Date/Time 10/30/2024 09:00  
Raw Sample Received by: JP/OCJ  
Raw Sample Relinquished by: RM CWG

**Instrument ID:** WC PH METER-1

**Daily Analysis Runlog For Sequence/QC Batch ID # LB133178**

|                  |                                     |              |                       |
|------------------|-------------------------------------|--------------|-----------------------|
| Review By        | jignesh                             | Review On    | 10/28/2024 5:35:25 PM |
| Supervise By     | Iwona                               | Supervise On | 10/29/2024 9:37:46 AM |
| SubDirectory     | LB133178                            | Test         | Corrosivity           |
| <b>STD. NAME</b> | <b>STD REF.#</b>                    |              |                       |
| ICAL Standard    | N/A                                 |              |                       |
| ICV Standard     | N/A                                 |              |                       |
| CCV Standard     | N/A                                 |              |                       |
| ICSA Standard    | N/A                                 |              |                       |
| CRI Standard     | N/A                                 |              |                       |
| LCS Standard     | N/A                                 |              |                       |
| Chk Standard     | W3107,W3093,W3094,W3071,W3005,W3072 |              |                       |

| Sr# | SampleId | ClientID    | QcType | Date           | Comment | Operator | Status |
|-----|----------|-------------|--------|----------------|---------|----------|--------|
| 1   | CAL1     | CAL1        | CAL    | 10/28/24 16:15 |         | Jignesh  | OK     |
| 2   | CAL2     | CAL2        | CAL    | 10/28/24 16:16 |         | Jignesh  | OK     |
| 3   | CAL3     | CAL3        | CAL    | 10/28/24 16:20 |         | Jignesh  | OK     |
| 4   | ICV      | ICV         | ICV    | 10/28/24 16:22 |         | Jignesh  | OK     |
| 5   | CCV1     | CCV1        | CCV    | 10/28/24 16:25 |         | Jignesh  | OK     |
| 6   | P4594-04 | TP-4        | SAM    | 10/28/24 16:37 |         | Jignesh  | OK     |
| 7   | P4594-08 | BP-F17      | SAM    | 10/28/24 16:42 |         | Jignesh  | OK     |
| 8   | P4594-12 | BP-F16      | SAM    | 10/28/24 16:45 |         | Jignesh  | OK     |
| 9   | P4594-16 | TP-5        | SAM    | 10/28/24 16:50 |         | Jignesh  | OK     |
| 10  | P4594-20 | BP-F15      | SAM    | 10/28/24 16:55 |         | Jignesh  | OK     |
| 11  | P4595-02 | PITKIN-COMP | SAM    | 10/28/24 17:00 |         | Jignesh  | OK     |
| 12  | P4597-03 | RED-1-1     | SAM    | 10/28/24 17:05 |         | Jignesh  | OK     |
| 13  | P4597-06 | RED-1-2     | SAM    | 10/28/24 17:11 |         | Jignesh  | OK     |
| 14  | P4597-09 | BLUE-2-1    | SAM    | 10/28/24 17:15 |         | Jignesh  | OK     |
| 15  | P4597-12 | BLUE-2-2    | SAM    | 10/28/24 17:20 |         | Jignesh  | OK     |
| 16  | CCV2     | CCV2        | CCV    | 10/28/24 17:25 |         | Jignesh  | OK     |
| 17  | P4598-04 | BP-F12      | SAM    | 10/28/24 17:30 |         | Jignesh  | OK     |
| 18  | P4598-08 | BP-F11      | SAM    | 10/28/24 17:35 |         | Jignesh  | OK     |

**Instrument ID:** WC PH METER-1

**Daily Analysis Runlog For Sequence/QC Batch ID # LB133178**

|                  |                                     |              |                       |
|------------------|-------------------------------------|--------------|-----------------------|
| Review By        | jignesh                             | Review On    | 10/28/2024 5:35:25 PM |
| Supervise By     | Iwona                               | Supervise On | 10/29/2024 9:37:46 AM |
| SubDirectory     | LB133178                            | Test         | Corrosivity           |
| <b>STD. NAME</b> | <b>STD REF.#</b>                    |              |                       |
| ICAL Standard    | N/A                                 |              |                       |
| ICV Standard     | N/A                                 |              |                       |
| CCV Standard     | N/A                                 |              |                       |
| ICSA Standard    | N/A                                 |              |                       |
| CRI Standard     | N/A                                 |              |                       |
| LCS Standard     | N/A                                 |              |                       |
| Chk Standard     | W3107,W3093,W3094,W3071,W3005,W3072 |              |                       |

|    |             |         |     |                |  |         |    |
|----|-------------|---------|-----|----------------|--|---------|----|
| 19 | P4598-12    | TP-8    | SAM | 10/28/24 17:40 |  | Jignesh | OK |
| 20 | P4598-12DUP | TP-8DUP | DUP | 10/28/24 17:41 |  | Jignesh | OK |
| 21 | CCV3        | CCV3    | CCV | 10/28/24 17:45 |  | Jignesh | OK |

**Instrument ID:** KONELAB

**Daily Analysis Runlog For Sequence/QC Batch ID # LB133190**

|                  |                                                                |              |                       |
|------------------|----------------------------------------------------------------|--------------|-----------------------|
| Review By        | Niha                                                           | Review On    | 10/30/2024 9:24:14 AM |
| Supervise By     | Iwona                                                          | Supervise On | 10/30/2024 1:27:50 PM |
| SubDirectory     | LB133190                                                       | Test         | Reactive Cyanide      |
| <b>STD. NAME</b> | <b>STD REF.#</b>                                               |              |                       |
| ICAL Standard    | WP110467,WP110468,WP110469,WP110470,WP110471,WP110472,WP110473 |              |                       |
| ICV Standard     | WP110475                                                       |              |                       |
| CCV Standard     | WP110468                                                       |              |                       |
| ICSA Standard    | N/A                                                            |              |                       |
| CRI Standard     | N/A                                                            |              |                       |
| LCS Standard     | N/A                                                            |              |                       |
| Chk Standard     | WP109068,WP110103,WP110474                                     |              |                       |

| Sr# | SampleID   | ClientID     | QcType | Date           | Comment | Operator | Status |
|-----|------------|--------------|--------|----------------|---------|----------|--------|
| 1   | 0.0PPBCN   | 0.0PPBCN     | CAL1   | 10/29/24 12:52 |         | Niha     | OK     |
| 2   | 5.0PPBCN   | 5.0PPBCN     | CAL2   | 10/29/24 12:52 |         | Niha     | OK     |
| 3   | 10PPBCN    | 10PPBCN      | CAL3   | 10/29/24 12:52 |         | Niha     | OK     |
| 4   | 50PPBCN    | 50PPBCN      | CAL4   | 10/29/24 12:52 |         | Niha     | OK     |
| 5   | 100PPBCN   | 100PPBCN     | CAL5   | 10/29/24 12:52 |         | Niha     | OK     |
| 6   | 250PPBCN   | 250PPBCN     | CAL6   | 10/29/24 12:52 |         | Niha     | OK     |
| 7   | 500PPBCN   | 500PPBCN     | CAL7   | 10/29/24 12:52 |         | Niha     | OK     |
| 8   | ICV1       | ICV1         | ICV    | 10/29/24 13:26 |         | Niha     | OK     |
| 9   | ICB1       | ICB1         | ICB    | 10/29/24 13:26 |         | Niha     | OK     |
| 10  | CCV1       | CCV1         | CCV    | 10/29/24 13:26 |         | Niha     | OK     |
| 11  | CCB1       | CCB1         | CCB    | 10/29/24 13:26 |         | Niha     | OK     |
| 12  | PB164488BL | PB164488BL   | MB     | 10/29/24 13:26 |         | Niha     | OK     |
| 13  | P4574-03   | GRAVEL-1     | SAM    | 10/29/24 13:26 |         | Niha     | OK     |
| 14  | P4574-06   | GRAVEL-2     | SAM    | 10/29/24 13:34 |         | Niha     | OK     |
| 15  | P4578-06   | WB-305-BOT   | SAM    | 10/29/24 13:34 |         | Niha     | OK     |
| 16  | P4578-08   | WB-305-BOT-1 | SAM    | 10/29/24 13:34 |         | Niha     | OK     |
| 17  | P4594-04   | TP-4         | SAM    | 10/29/24 13:34 |         | Niha     | OK     |
| 18  | P4594-08   | BP-F17       | SAM    | 10/29/24 13:34 |         | Niha     | OK     |

Instrument ID: KONELAB

**Daily Analysis Runlog For Sequence/QC Batch ID # LB133190**

|                  |                                                                |              |                       |
|------------------|----------------------------------------------------------------|--------------|-----------------------|
| Review By        | Niha                                                           | Review On    | 10/30/2024 9:24:14 AM |
| Supervise By     | Iwona                                                          | Supervise On | 10/30/2024 1:27:50 PM |
| SubDirectory     | LB133190                                                       | Test         | Reactive Cyanide      |
| <b>STD. NAME</b> | <b>STD REF.#</b>                                               |              |                       |
| ICAL Standard    | WP110467,WP110468,WP110469,WP110470,WP110471,WP110472,WP110473 |              |                       |
| ICV Standard     | WP110475                                                       |              |                       |
| CCV Standard     | WP110468                                                       |              |                       |
| ICSA Standard    | N/A                                                            |              |                       |
| CRI Standard     | N/A                                                            |              |                       |
| LCS Standard     | N/A                                                            |              |                       |
| Chk Standard     | WP109068,WP110103,WP110474                                     |              |                       |

|    |             |             |     |                |  |      |    |
|----|-------------|-------------|-----|----------------|--|------|----|
| 19 | P4594-12    | BP-F16      | SAM | 10/29/24 13:34 |  | Niha | OK |
| 20 | P4594-16    | TP-5        | SAM | 10/29/24 13:34 |  | Niha | OK |
| 21 | P4594-20    | BP-F15      | SAM | 10/29/24 13:34 |  | Niha | OK |
| 22 | CCV2        | CCV2        | CCV | 10/29/24 13:34 |  | Niha | OK |
| 23 | CCB2        | CCB2        | CCB | 10/29/24 13:34 |  | Niha | OK |
| 24 | P4595-02    | PITKIN-COMP | SAM | 10/29/24 13:34 |  | Niha | OK |
| 25 | P4597-03    | RED-1-1     | SAM | 10/29/24 13:41 |  | Niha | OK |
| 26 | P4597-06    | RED-1-2     | SAM | 10/29/24 13:41 |  | Niha | OK |
| 27 | P4597-09    | BLUE-2-1    | SAM | 10/29/24 13:41 |  | Niha | OK |
| 28 | P4597-12    | BLUE-2-2    | SAM | 10/29/24 13:41 |  | Niha | OK |
| 29 | P4598-04    | BP-F12      | SAM | 10/29/24 13:41 |  | Niha | OK |
| 30 | P4598-08    | BP-F11      | SAM | 10/29/24 13:41 |  | Niha | OK |
| 31 | P4598-12    | TP-8        | SAM | 10/29/24 13:41 |  | Niha | OK |
| 32 | P4598-12DUP | TP-8DUP     | DUP | 10/29/24 13:41 |  | Niha | OK |
| 33 | CCV3        | CCV3        | CCV | 10/29/24 13:45 |  | Niha | OK |
| 34 | CCB3        | CCB3        | CCB | 10/29/24 13:45 |  | Niha | OK |

**Instrument ID:** FLAME

**Daily Analysis Runlog For Sequence/QC Batch ID # LB133207**

|                  |                  |              |                       |
|------------------|------------------|--------------|-----------------------|
| Review By        | Iwona            | Review On    | 10/30/2024 2:14:45 PM |
| Supervise By     | jignesh          | Supervise On | 10/30/2024 2:15:23 PM |
| SubDirectory     | LB133207         | Test         | Ignitability          |
| <b>STD. NAME</b> | <b>STD REF.#</b> |              |                       |
| ICAL Standard    | N/A              |              |                       |
| ICV Standard     | N/A              |              |                       |
| CCV Standard     | N/A              |              |                       |
| ICSA Standard    | N/A              |              |                       |
| CRI Standard     | N/A              |              |                       |
| LCS Standard     | N/A              |              |                       |
| Chk Standard     | N/A              |              |                       |

| Sr# | SampleId    | ClientID    | QcType | Date           | Comment | Operator | Status |
|-----|-------------|-------------|--------|----------------|---------|----------|--------|
| 1   | P4594-01    | TP-4        | SAM    | 10/30/24 10:20 |         | Iwona    | OK     |
| 2   | P4594-01DUP | TP-4DUP     | DUP    | 10/30/24 10:28 |         | Iwona    | OK     |
| 3   | P4594-04    | TP-4        | SAM    | 10/30/24 10:35 |         | Iwona    | OK     |
| 4   | P4594-05    | BP-F17      | SAM    | 10/30/24 10:42 |         | Iwona    | OK     |
| 5   | P4594-08    | BP-F17      | SAM    | 10/30/24 10:50 |         | Iwona    | OK     |
| 6   | P4594-09    | BP-F16      | SAM    | 10/30/24 10:58 |         | Iwona    | OK     |
| 7   | P4594-12    | BP-F16      | SAM    | 10/30/24 11:05 |         | Iwona    | OK     |
| 8   | P4594-13    | TP-5        | SAM    | 10/30/24 11:23 |         | Iwona    | OK     |
| 9   | P4594-16    | TP-5        | SAM    | 10/30/24 11:30 |         | Iwona    | OK     |
| 10  | P4594-17    | BP-F15      | SAM    | 10/30/24 11:38 |         | Iwona    | OK     |
| 11  | P4594-20    | BP-F15      | SAM    | 10/30/24 11:45 |         | Iwona    | OK     |
| 12  | P4595-02    | PITKIN-COMP | SAM    | 10/30/24 11:52 |         | Iwona    | OK     |
| 13  | P4597-01    | RED-1-1     | SAM    | 10/30/24 12:00 |         | Iwona    | OK     |
| 14  | P4597-03    | RED-1-1     | SAM    | 10/30/24 12:08 |         | Iwona    | OK     |
| 15  | P4597-04    | RED-1-2     | SAM    | 10/30/24 12:15 |         | Iwona    | OK     |
| 16  | P4597-06    | RED-1-2     | SAM    | 10/30/24 12:23 |         | Iwona    | OK     |
| 17  | P4597-07    | BLUE-2-1    | SAM    | 10/30/24 12:30 |         | Iwona    | OK     |
| 18  | P4597-09    | BLUE-2-1    | SAM    | 10/30/24 12:38 |         | Iwona    | OK     |

Instrument ID: FLAME

**Daily Analysis Runlog For Sequence/QC Batch ID # LB133207**

|                  |                  |              |                       |
|------------------|------------------|--------------|-----------------------|
| Review By        | Iwona            | Review On    | 10/30/2024 2:14:45 PM |
| Supervise By     | jignesh          | Supervise On | 10/30/2024 2:15:23 PM |
| SubDirectory     | LB133207         | Test         | Ignitability          |
| <b>STD. NAME</b> | <b>STD REF.#</b> |              |                       |
| ICAL Standard    | N/A              |              |                       |
| ICV Standard     | N/A              |              |                       |
| CCV Standard     | N/A              |              |                       |
| ICSA Standard    | N/A              |              |                       |
| CRI Standard     | N/A              |              |                       |
| LCS Standard     | N/A              |              |                       |
| Chk Standard     | N/A              |              |                       |

|    |             |          |     |                |  |       |    |
|----|-------------|----------|-----|----------------|--|-------|----|
| 19 | P4597-10    | BLUE-2-2 | SAM | 10/30/24 12:45 |  | Iwona | OK |
| 20 | P4597-12    | BLUE-2-2 | SAM | 10/30/24 12:52 |  | Iwona | OK |
| 21 | P4598-01    | BP-F12   | SAM | 10/30/24 13:00 |  | Iwona | OK |
| 22 | P4598-04    | BP-F12   | SAM | 10/30/24 13:08 |  | Iwona | OK |
| 23 | P4598-05    | BP-F11   | SAM | 10/30/24 13:15 |  | Iwona | OK |
| 24 | P4598-08    | BP-F11   | SAM | 10/30/24 13:23 |  | Iwona | OK |
| 25 | P4598-09    | TP-8     | SAM | 10/30/24 13:30 |  | Iwona | OK |
| 26 | P4598-12    | TP-8     | SAM | 10/30/24 13:38 |  | Iwona | OK |
| 27 | P4598-12DUP | TP-8DUP  | DUP | 10/30/24 13:45 |  | Iwona | OK |

**Instrument ID:** TITRAMETRIC

**Daily Analysis Runlog For Sequence/QC Batch ID # LB133208**

|                  |                   |              |                       |
|------------------|-------------------|--------------|-----------------------|
| Review By        | rubina            | Review On    | 10/30/2024 1:44:34 PM |
| Supervise By     | Iwona             | Supervise On | 10/30/2024 1:44:45 PM |
| SubDirectory     | LB133208          | Test         | Reactive Sulfide      |
| <b>STD. NAME</b> | <b>STD REF.#</b>  |              |                       |
| ICAL Standard    | N/A               |              |                       |
| ICV Standard     | N/A               |              |                       |
| CCV Standard     | N/A               |              |                       |
| ICSA Standard    | N/A               |              |                       |
| CRI Standard     | N/A               |              |                       |
| LCS Standard     | N/A               |              |                       |
| Chk Standard     | W3105,W3114,W3149 |              |                       |

| Sr# | SampleId    | ClientID     | QcType | Date           | Comment | Operator | Status |
|-----|-------------|--------------|--------|----------------|---------|----------|--------|
| 1   | PB164492BL  | PB164492BL   | MB     | 10/30/24 12:20 |         | rubina   | OK     |
| 2   | P4594-04    | TP-4         | SAM    | 10/30/24 12:23 |         | rubina   | OK     |
| 3   | P4594-04DUP | TP-4DUP      | DUP    | 10/30/24 12:25 |         | rubina   | OK     |
| 4   | P4594-08    | BP-F17       | SAM    | 10/30/24 12:28 |         | rubina   | OK     |
| 5   | P4594-12    | BP-F16       | SAM    | 10/30/24 12:30 |         | rubina   | OK     |
| 6   | P4594-16    | TP-5         | SAM    | 10/30/24 12:33 |         | rubina   | OK     |
| 7   | P4594-20    | BP-F15       | SAM    | 10/30/24 12:35 |         | rubina   | OK     |
| 8   | P4595-02    | PITKIN-COMP  | SAM    | 10/30/24 12:38 |         | rubina   | OK     |
| 9   | P4597-03    | RED-1-1      | SAM    | 10/30/24 12:40 |         | rubina   | OK     |
| 10  | P4597-06    | RED-1-2      | SAM    | 10/30/24 12:43 |         | rubina   | OK     |
| 11  | P4597-09    | BLUE-2-1     | SAM    | 10/30/24 12:45 |         | rubina   | OK     |
| 12  | P4597-12    | BLUE-2-2     | SAM    | 10/30/24 12:48 |         | rubina   | OK     |
| 13  | P4598-04    | BP-F12       | SAM    | 10/30/24 12:50 |         | rubina   | OK     |
| 14  | P4598-08    | BP-F11       | SAM    | 10/30/24 12:52 |         | rubina   | OK     |
| 15  | P4598-12    | TP-8         | SAM    | 10/30/24 12:55 |         | rubina   | OK     |
| 16  | P4612-04    | MOO-24-00335 | SAM    | 10/30/24 12:58 |         | rubina   | OK     |
| 17  | P4613-02    | ARS20-0001   | SAM    | 10/30/24 13:00 |         | rubina   | OK     |
| 18  | P4616-04    | BP-F10       | SAM    | 10/30/24 13:02 |         | rubina   | OK     |

**Instrument ID:** TITRAMETRIC

**Daily Analysis Runlog For Sequence/QC Batch ID # LB133208**

|                  |                   |              |                       |
|------------------|-------------------|--------------|-----------------------|
| Review By        | rubina            | Review On    | 10/30/2024 1:44:34 PM |
| Supervise By     | Iwona             | Supervise On | 10/30/2024 1:44:45 PM |
| SubDirectory     | LB133208          | Test         | Reactive Sulfide      |
| <b>STD. NAME</b> | <b>STD REF.#</b>  |              |                       |
| ICAL Standard    | N/A               |              |                       |
| ICV Standard     | N/A               |              |                       |
| CCV Standard     | N/A               |              |                       |
| ICSA Standard    | N/A               |              |                       |
| CRI Standard     | N/A               |              |                       |
| LCS Standard     | N/A               |              |                       |
| Chk Standard     | W3105,W3114,W3149 |              |                       |

|    |          |               |     |                |  |        |    |
|----|----------|---------------|-----|----------------|--|--------|----|
| 19 | P4616-08 | BP-F9-MOVED   | SAM | 10/30/24 13:05 |  | rubina | OK |
| 20 | P4617-04 | CONCRETE-PILE | SAM | 10/30/24 13:08 |  | rubina | OK |

## Prep Standard - Chemical Standard Summary

**Order ID :** P4595

**Test :** Corrosivity, Ignitability, Percent Solids, Reactive Cyanide, Reactive Sulfide

**Prepbatch ID :** PB164488, PB164492,

**Sequence ID/Qc Batch ID:** LB133178, LB133190, LB133207, LB133208,

**Standard ID :**

WP108640, WP108780, WP109068, WP109549, WP110103, WP110466, WP110467, WP110468, WP110469, WP110470, WP110471, WP110472, WP110473, WP110474, WP110475,

**Chemical ID :**

E3657, M5929, W2668, W2725, W2882, W2926, W3005, W3019, W3071, W3072, W3093, W3094, W3105, W3107, W3112, W3114, W3138, W3139, W3142, W3149,



| <u>Recipe ID</u>   | <u>NAME</u>                                                            | <u>NO.</u>               | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u>                   | <u>PipetteID</u> | <u>Supervised By</u>           |
|--------------------|------------------------------------------------------------------------|--------------------------|------------------|------------------------|--------------------|----------------------------------|------------------|--------------------------------|
| 11                 | Sodium hydroxide absorbing solution 0.25 N                             | <a href="#">WP108640</a> | 07/05/2024       | 01/05/2025             | Rubina Mughal      | WETCHEM_S<br>CALE_4 (WC<br>SC-4) | None             | Iwona Zarych<br><br>07/08/2024 |
| <b><u>FROM</u></b> | 21.00000L of W3112 + 210.00000gram of E3657 = Final Quantity: 21.000 L |                          |                  |                        |                    |                                  |                  |                                |

| <u>Recipe ID</u>                                                                                          | <u>NAME</u>       | <u>NO.</u>               | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u>         | <u>PipetteID</u>       | <u>Supervised By</u>       |
|-----------------------------------------------------------------------------------------------------------|-------------------|--------------------------|------------------|------------------------|--------------------|------------------------|------------------------|----------------------------|
| 160                                                                                                       | 0.5M ZINC ACETATE | <a href="#">WP108780</a> | 07/22/2024       | 12/08/2024             | Rubina Mughal      | WETCHEM_SCALE_5 (WC-5) | WETCHEM_PIPETTE_3 (WC) | Iwona Zarych<br>07/23/2024 |
| <b>FROM</b> 0.88900L of W3112 + 1.00000ml of M5929 + 110.00000gram of W2926 = Final Quantity: 1000.000 ml |                   |                          |                  |                        |                    |                        |                        |                            |



| <u>Recipe ID</u>                                                                                                                         | <u>NAME</u>              | <u>NO.</u>               | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u>                   | <u>PipetteID</u> | <u>Supervised By</u>           |
|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|------------------|------------------------|--------------------|----------------------------------|------------------|--------------------------------|
| 607                                                                                                                                      | PYRIDINE-BARBITURIC ACID | <a href="#">WP109068</a> | 08/06/2024       | 12/08/2024             | Niha Farheen Shaik | WETCHEM_S<br>CALE_5 (WC<br>SC-5) | None             | Iwona Zarych<br><br>08/07/2024 |
| <b><u>FROM</u></b> 145.00000ml of W3112 + 15.00000gram of W2882 + 15.00000ml of M5929 + 75.00000ml of W3019 = Final Quantity: 250.000 ml |                          |                          |                  |                        |                    |                                  |                  |                                |

| <u>Recipe ID</u>                                                                             | <u>NAME</u>                      | <u>NO.</u>               | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u>          | <u>Supervised By</u>       |
|----------------------------------------------------------------------------------------------|----------------------------------|--------------------------|------------------|------------------------|--------------------|----------------|---------------------------|----------------------------|
| 3371                                                                                         | Cyanide LCS Spike Solution, 5PPM | <a href="#">WP109549</a> | 09/06/2024       | 01/05/2025             | Niha Farheen Shaik | None           | WETCHEM_PIPETTE_3<br>(WC) | Iwona Zarych<br>09/06/2024 |
| <b><u>FROM</u></b> 1.00000ml of W3138 + 199.00000ml of WP108640 = Final Quantity: 200.000 ml |                                  |                          |                  |                        |                    |                |                           |                            |



| <u>Recipe ID</u>                                                                               | <u>NAME</u> | <u>NO.</u>               | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u>                   | <u>PipetteID</u> | <u>Supervised By</u>           |
|------------------------------------------------------------------------------------------------|-------------|--------------------------|------------------|------------------------|--------------------|----------------------------------|------------------|--------------------------------|
| 539                                                                                            | CN BUFFER   | <a href="#">WP110103</a> | 10/08/2024       | 04/08/2025             | Rubina Mughal      | WETCHEM_S<br>CALE_5 (WC<br>SC-5) | None             | Iwona Zarych<br><br>10/08/2024 |
| <b><u>FROM</u></b> 138.00000gram of W2668 + 862.00000ml of W3112 = Final Quantity: 1000.000 ml |             |                          |                  |                        |                    |                                  |                  |                                |

| <u>Recipe ID</u>                                                                           | <u>NAME</u>                            | <u>NO.</u>               | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u>          | <u>Supervised By</u>       |
|--------------------------------------------------------------------------------------------|----------------------------------------|--------------------------|------------------|------------------------|--------------------|----------------|---------------------------|----------------------------|
| 3456                                                                                       | Cyanide Intermediate Working Std, 5PPM | <a href="#">WP110466</a> | 10/29/2024       | 10/30/2024             | Niha Farheen Shaik | None           | WETCHEM_PIPETTE_3<br>(WC) | Iwona Zarych<br>10/30/2024 |
| <b><u>FROM</u></b> 0.25000ml of W3142 + 49.75000ml of WP108640 = Final Quantity: 50.000 ml |                                        |                          |                  |                        |                    |                |                           |                            |

## Wet Chemistry STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                  | <u>NO.</u>               | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u>       |
|------------------|------------------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------------|
| 4                | Calibration standard 500 ppb | <a href="#">WP110467</a> | 10/29/2024       | 10/30/2024             | Niha Farheen Shaik | None           | None             | Iwona Zarych<br>10/30/2024 |

**FROM** 45.00000ml of WP108640 + 5.00000ml of WP110466 = Final Quantity: 50.000 ml

| <u>Recipe ID</u> | <u>NAME</u>                         | <u>NO.</u>               | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u>       |
|------------------|-------------------------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------------|
| 3761             | Calibration-CCV CN Standard 250 ppb | <a href="#">WP110468</a> | 10/29/2024       | 10/30/2024             | Niha Farheen Shaik | None           | None             | Iwona Zarych<br>10/30/2024 |

**FROM** 2.50000ml of WP110466 + 47.50000ml of WP108640 = Final Quantity: 50.000 ml

## Wet Chemistry STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                  | <u>NO.</u>               | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|------------------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 6                | Calibration Standard 100 ppb | <a href="#">WP110469</a> | 10/29/2024       | 10/30/2024             | Niha Farheen Shaik | None           | None             | Iwona Zarych         |
|                  |                              |                          |                  |                        |                    |                |                  | 10/30/2024           |

**FROM** 1.00000ml of WP110466 + 49.00000ml of WP108640 = Final Quantity: 50.000 ml

| <u>Recipe ID</u> | <u>NAME</u>                 | <u>NO.</u>               | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u>  | <u>Supervised By</u> |
|------------------|-----------------------------|--------------------------|------------------|------------------------|--------------------|----------------|-------------------|----------------------|
| 7                | Calibration Standard 50 ppb | <a href="#">WP110470</a> | 10/29/2024       | 10/30/2024             | Niha Farheen Shaik | None           | WETCHEM_FIPETTE_3 | Iwona Zarych         |
|                  |                             |                          |                  |                        |                    |                | (WC)              | 10/30/2024           |

**FROM** 0.50000ml of WP110466 + 49.50000ml of WP108640 = Final Quantity: 50.000 ml

[illegible]

| <u>Recipe ID</u>                                                                                      | <u>NAME</u>                | <u>NO.</u>               | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u>  | <u>Supervised By</u> |
|-------------------------------------------------------------------------------------------------------|----------------------------|--------------------------|------------------|------------------------|--------------------|----------------|-------------------|----------------------|
| 9                                                                                                     | Calibration Standard 5 ppb | <a href="#">WP110472</a> | 10/29/2024       | 10/30/2024             | Niha Farheen Shaik | None           | WETCHEM_PIPETTE_3 | Iwona Zarych         |
| <b>FROM</b> 0.50000ml of WP110467 + 49.50000ml of WP108640 = Final Quantity: 50.000 ml<br><div></div> |                            |                          |                  |                        |                    |                |                   |                      |

## Wet Chemistry STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>              | <u>NO.</u>               | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 167              | 0 ppb CN calibration std | <a href="#">WP110473</a> | 10/29/2024       | 10/30/2024             | Niha Farheen Shaik | None           | None             | Iwona Zarych         |
|                  |                          |                          |                  |                        |                    |                |                  | 10/30/2024           |

**FROM** 50.00000ml of WP108640 = Final Quantity: 50.000 ml

| <u>Recipe ID</u> | <u>NAME</u>                   | <u>NO.</u>               | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u>                   | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------------------------|--------------------------|------------------|------------------------|--------------------|----------------------------------|------------------|----------------------|
| 1582             | Chloramine T solution, 0.014M | <a href="#">WP110474</a> | 10/29/2024       | 10/30/2024             | Niha Farheen Shaik | WETCHEM_S<br>CALE_5 (WC<br>SC-5) | None             | Iwona Zarych         |
|                  |                               |                          |                  |                        |                    |                                  |                  | 10/30/2024           |

**FROM** 0.08000gram of W3139 + 20.00000ml of W3112 = Final Quantity: 20.000 ml

## Wet Chemistry STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>          | <u>NO.</u>               | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|----------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 2168             | RCN ICV STD, 100 PPB | <a href="#">WP110475</a> | 10/29/2024       | 10/30/2024             | Niha Farheen Shaik | None           | None             | Iwona Zarych         |
|                  |                      |                          |                  |                        |                    |                |                  | 10/30/2024           |

**FROM** 1.00000ml of WP109549 + 49.00000ml of WP108640 = Final Quantity: 50.000 ml

## CHEMICAL RECEIPT LOG BOOK

| Supplier                    | ItemCode / ItemName                                  | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|------------------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | PC19510-5 / Sodium Hydroxide Pellets 2.5 Kg, Pk of 4 | 23B1556310 | 12/31/2025      | 12/04/2023 / Rajesh     | 12/01/2023 / Rajesh         | E3657          |

| Supplier         | ItemCode / ItemName                                         | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|-------------------------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L) | 22G2862015 | 12/08/2024      | 06/24/2024 / Al-Terek   | 06/07/2024 / Al-Terek       | M5929          |

| Supplier                    | ItemCode / ItemName                                         | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|-------------------------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | J3818-5 / SODIUM PHOSPHATE, MONOBAS/HYD, CRYST, ACS, 2.5 KG | 0000225799 | 12/03/2025      | 04/05/2021 / Alexander  | 02/10/2020 / apatel         | W2668          |

| Supplier                    | ItemCode / ItemName                        | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--------------------------------------------|-------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | EMD-FX0410-5 / FORMALDEHYDE SOLUTION 450ML | 60045 | 06/22/2025      | 08/19/2024 / Iwona      | 06/22/2020 / apatel         | W2725          |

| Supplier                    | ItemCode / ItemName                    | Lot #        | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|----------------------------------------|--------------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | EM-BX0035-3 / Barbituric Acid, 100 gms | 1.00132.0100 | 04/30/2025      | 12/07/2021 /            | 11/30/2021 / apatel         | W2882          |

| Supplier                    | ItemCode / ItemName                             | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|-------------------------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | J4296-1 / ZINC ACETATE, DIHYD, CRYST, ACS, 500G | 383058 | 07/05/2027      | 07/05/2022 / ketankumar | 07/05/2022 / ketankumar     | W2926          |

## CHEMICAL RECEIPT LOG BOOK

| Supplier                    | ItemCode / ItemName                      | Lot #   | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|------------------------------------------|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | AL13850-1 / Buffer Solution, PH2 (500ml) | 4212E45 | 12/31/2024      | 01/31/2023 / Iwona      | 01/31/2023 / Iwona          | W3005          |

| Supplier      | ItemCode / ItemName     | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---------------|-------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| SIGMA ALDRICH | 270970-1L / Pyridine 1L | SHBQ2113 | 04/03/2028      | 04/03/2023 / Iwona      | 04/03/2023 / Iwona          | W3019          |

| Supplier                    | ItemCode / ItemName                     | Lot #   | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|-----------------------------------------|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | AL14455-3 / buffer solution pH 7 yellow | 4308H30 | 07/31/2025      | 01/02/2024 / JIGNESH    | 12/06/2023 / Iwona          | W3071          |

| Supplier                    | ItemCode / ItemName                       | Lot #   | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|-------------------------------------------|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | AL14940-1 / Buffer Solution, PH12 (500ml) | 2310P21 | 04/30/2025      | 01/02/2024 / JIGNESH    | 12/07/2023 / Iwona          | W3072          |

| Supplier                    | ItemCode / ItemName                     | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|-----------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | 566002 / BUFFER PH 7.00 GREEN 1PINT PK6 | 44001f99 | 12/31/2025      | 04/03/2024 / jignesh    | 04/02/2024 / jignesh        | W3093          |

| Supplier                    | ItemCode / ItemName                     | Lot #   | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|-----------------------------------------|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | 1601-1 / PH 10.01 BUFFER,COLOR CD 475ML | 4310g83 | 03/31/2025      | 04/03/2024 / jignesh    | 04/02/2024 / jignesh        | W3094          |

## CHEMICAL RECEIPT LOG BOOK

| Supplier                    | ItemCode / ItemName                          | Lot #   | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|----------------------------------------------|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | AL69870-8 / SODIUM THIOSULFATE,0.025N,4LITRE | 4403S13 | 09/30/2025      | 04/22/2024 / lwona      | 04/22/2024 / lwona          | W3105          |

| Supplier                    | ItemCode / ItemName              | Lot #     | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|----------------------------------|-----------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | AL14055-3 / PH 4 BUFFER SOLUTION | AL14055-3 | 02/27/2026      | 09/05/2024 / jignesh    | 05/13/2024 / jignesh        | W3107          |

| Supplier         | ItemCode / ItemName | Lot #               | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|---------------------|---------------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | DIW / DI Water      | Daily Lab-Certified | 07/03/2029      | 07/03/2024 / lwona      | 07/03/2024 / lwona          | W3112          |

| Supplier                    | ItemCode / ItemName                  | Lot #   | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--------------------------------------|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | AL35830-4 / IODINE SOLUTION .025N 1L | 2405D89 | 05/31/2025      | 07/10/2024 / lwona      | 07/10/2024 / lwona          | W3114          |

| Supplier                    | ItemCode / ItemName                                  | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|------------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | LC135457 / Cyanide Standard, 1000 PPM, Second Source | 44080060 | 01/30/2025      | 09/06/2024 / lwona      | 08/28/2024 / lwona          | W3138          |

| Supplier                    | ItemCode / ItemName                 | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|-------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | JTE494-6 / CHLORAMINE-T BAKER 250GM | 10239484 | 09/09/2029      | 09/09/2024 / lwona      | 09/09/2024 / lwona          | W3139          |

### CHEMICAL RECEIPT LOG BOOK

| Supplier                    | ItemCode / ItemName                | Lot #   | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|------------------------------------|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | RC2543-4 / CYANIDE STD 1000PPM 4OZ | 1405J81 | 11/30/2024      | 09/25/2024 / Iwona      | 09/25/2024 / Iwona          | W3142          |

| Supplier                    | ItemCode / ItemName             | Lot #   | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|---------------------------------|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | AL70850-8 / Starch Solution, 4L | 4408P62 | 08/31/2026      | 10/16/2024 / Iwona      | 10/16/2024 / Iwona          | W3149          |

W3071  
Rec 12/6/23

## Certificate of Analysis 12

Buffer, Reference Standard, pH 7.00 ± 0.01 at 25°C (Color Coded Yellow)

Lot Number: 4308H30

Product Number: 1551

Manufacture Date: AUG 09, 2023

Expiration Date: JUL 2025

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

|    |      |      |      |      |      |      |      |      |      |      |      |
|----|------|------|------|------|------|------|------|------|------|------|------|
| °C | 0    | 5    | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 45   | 50   |
| pH | 7.12 | 7.09 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 | 6.98 | 6.97 | 6.97 |

| Name                           | CAS#        | Grade           |
|--------------------------------|-------------|-----------------|
| Water                          | 7732-18-5   | ACS/ASTM/USP/EP |
| Sodium Phosphate Dibasic       | 7558-79-4   | ACS             |
| Potassium Dihydrogen Phosphate | 7778-77-0   | ACS             |
| Preservative                   | Proprietary |                 |
| Yellow Dye                     | Proprietary |                 |
| Sodium Hydroxide               | 1310-73-2   | Reagent         |

| Test       | Specification | Result |
|------------|---------------|--------|
| Appearance | Yellow liquid | Passed |

\*Not a certified value.

| Test                                  | Certified Value | Uncertainty | NIST SRM#               |
|---------------------------------------|-----------------|-------------|-------------------------|
| pH at 25°C (Method: SQCP027, SQCP033) | 7.002           | 0.02        | 186-I-g, 186-II-g, 191d |

| Specification               | Reference       |
|-----------------------------|-----------------|
| Commercial Buffer Solutions | ASTM (D 1293 B) |
| Buffer A                    | ASTM (D 5464)   |
| Buffer A                    | ASTM (D 5128)   |

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 1551-2.5    | 10 L Cubitainer®    | 24 months                       |
| 1551-5      | 20 L Cubitainer®    | 24 months                       |

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Paul Brandon (08/09/2023)

Production Manager

This document is designed to comply with ISO Guide 31 "Reference Materials --  
Contents of Certificates and Labels."

**This product was tested in an ISO 17025 Accredited Laboratory**

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

W3019  
Rec 4/3/23

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: [www.sigmaaldrich.com](http://www.sigmaaldrich.com)Email USA: [techserv@sial.com](mailto:techserv@sial.com)Outside USA: [eurtechserv@sial.com](mailto:eurtechserv@sial.com)

## Certificate of Analysis

Product Name:

Pyridine - anhydrous, 99.8%

Product Number:

270970

Batch Number:

SHBQ2113

Brand:

SIAL

CAS Number:

110-86-1

MDL Number:

MFCD00011732

Formula:

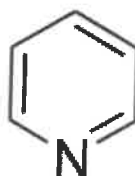
C<sub>5</sub>H<sub>5</sub>N

Formula Weight:

79.10 g/mol

Quality Release Date:

15 DEC 2022



| Test                    | Specification         | Result     |
|-------------------------|-----------------------|------------|
| Appearance (Color)      | Colorless             | Colorless  |
| Appearance (Form)       | Liquid                | Liquid     |
| Infrared Spectrum       | Conforms to Structure | Conforms   |
| Purity (GC)             | ≥ 99.75 %             | 99.99 %    |
| Water (by Karl Fischer) | ≤ 0.003 %             | 0.002 %    |
| Residue on Evaporation  | ≤ 0.0005 %            | < 0.0001 % |

  
Larry Coers, Director  
Quality Control  
Sheboygan Falls, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at [Sigma-Aldrich.com](http://Sigma-Aldrich.com). For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



**RICCA CHEMICAL COMPANY®**

1841 Broad Street  
Pocomoke City, MD 21851  
<http://www.riccachemical.com>  
1-888-GO-RICCA  
[customerservice@riccachemical.com](mailto:customerservice@riccachemical.com)

W 3072  
REC. 12/01/23  
12

# Certificate of Analysis

**Buffer, Reference Standard, pH 12.00 ± 0.01 at 25°C****Lot Number: 2310P21****Product Number: 1615****Manufacture Date: OCT 24, 2023****Expiration Date: APR 2025**

The certified value for this product is confirmed in independent testing by a second qualified chemist.

|    |       |       |       |       |       |       |
|----|-------|-------|-------|-------|-------|-------|
| °C | 15    | 20    | 25    | 30    | 35    | 40    |
| pH | 12.35 | 12.17 | 11.99 | 11.78 | 11.62 | 11.46 |

| Name               | CAS#      | Grade           |
|--------------------|-----------|-----------------|
| Water              | 7732-18-5 | ACS/ASTM/USP/EP |
| Potassium Chloride | 7447-40-7 | ACS             |
| Sodium Hydroxide   | 1310-73-2 | Reagent         |

| Test       | Specification    | Result |
|------------|------------------|--------|
| Appearance | Colorless liquid | Passed |

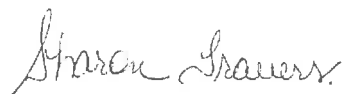
\*Not a certified value.

| Test                                  | Certified Value | Uncertainty | NIST SRM#               |
|---------------------------------------|-----------------|-------------|-------------------------|
| pH at 25°C (Method: SQCP027, SQCP033) | 12.005          | 0.02        | 186-I-g, 186-II-g, 191d |

pH measurements were performed in our Pocomoke City, MD laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.01) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 1615-1      | 4 L natural poly    | 18 months                       |
| 1615-16     | 500 mL clear PET-G  | 18 months                       |
| 1615-32     | 1 L natural poly    | 18 months                       |
| 1615-5      | 20 L Cubitainer®    | 18 months                       |

**Recommended Storage: 15°C - 30°C (59°F - 86°F)**



Sharon Travers (10/24/2023)

Operations Manager

This document is designed to comply with ISO Guide 31 "Reference Materials --  
Contents of Certificates and Labels."

**This product was tested in an ISO 17025 Accredited Laboratory**

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.



## Certificate of Analysis

Date of Release: 2/26/2020

Name: Formaldehyde Solution  
GR ACS  
Meets ACS Specifications

Item No: FX0410 all size codes

Lot / Batch No: 60045

Country of Origin: USA

| Characteristic             | Requirement |       | Results     | Units |
|----------------------------|-------------|-------|-------------|-------|
|                            | Min.        | Max.  |             |       |
| Assay                      | 36.5        | 38.0  | 36.71       | %     |
| Chloride (Cl)              |             | 5     | <5          | ppm   |
| Color (APHA)               |             | 10    | <10         |       |
| Form                       |             |       | Passes test |       |
| Heavy metals (as Pb)       |             | 5     | <5          | ppm   |
| Iron (Fe)                  |             | 5     | 0.6         | ppm   |
| Residue after ignition     |             | 0.005 | <0.0050     | %     |
| Sulfate (SO <sub>4</sub> ) |             | 0.002 | <0.0020     | %     |
| Titration acid             |             | 0.006 | <0.0060     | meq/g |

Heather Sinn,

-----  
Quality Control Manager

This document has been produced electronically and is valid without a signature.

EMD Millipore Corporation, an affiliate of Merck KGaA, Darmstadt, Germany  
290 Concord Road  
Billerica, MA 01821  
U.S.A

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the U.S. and Canada.



# Certificate of Analysis

## Sodium Hydroxide (Pellets)

**Material:** 0583  
**Grade:** ACS GRADE  
**Batch Number:** 23B1556310

Chemical Formula: NaOH  
Molecular Weight: 40  
CAS #: 1310-73-2  
Appearance:

Manufacture Date: 12/14/2022  
Expiration Date: 12/31/2025

Storage: Room Temperature

Pellets

| TEST               | SPECIFICATION          | ANALYSIS            | DISPOSITION |
|--------------------|------------------------|---------------------|-------------|
| Calcium            | $\leq 0.005 \%$        | $< 0.005 \%$        | PASS        |
| Chloride           | $\leq 0.005 \%$        | 0.002 %             | PASS        |
| Heavy Metals       | $\leq 0.002 \%$        | $< 0.002 \%$        | PASS        |
| Iron               | $\leq 0.001 \%$        | $< 0.001 \%$        | PASS        |
| Magnesium          | $\leq 0.002 \%$        | $< 0.002 \%$        | PASS        |
| Mercury            | $\leq 0.1 \text{ ppm}$ | $< 0.1 \text{ ppm}$ | PASS        |
| Nickel             | $\leq 0.001 \%$        | $< 0.001 \%$        | PASS        |
| Nitrogen Compounds | $\leq 0.001 \%$        | $< 0.001 \%$        | PASS        |
| Phosphate          | $\leq 0.001 \%$        | $< 0.001 \%$        | PASS        |
| Potassium          | $\leq 0.02 \%$         | $< 0.02 \%$         | PASS        |
| Purity             | $\geq 97.0 \%$         | 99.2 %              | PASS        |
| Sodium Carbonate   | $\leq 1.0 \%$          | 0.5 %               | PASS        |
| Sulfate            | $\leq 0.003 \%$        | $< 0.003 \%$        | PASS        |

Internal ID #: 710

### Signature

We certify that this batch conforms to the specifications listed.

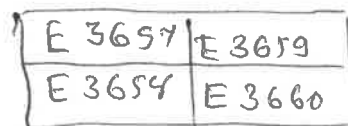
This document has been electronically produced and is valid without a signature.

Leona Edwardson, Quality Control Sr. Manager - Solon  
VWR Chemicals, LLC.  
28600 Fountain Parkway, Solon OH 44139 USA

### Additional Information

Analysis may have been rounded to significant digits in specification limits.

Product meets analytical specifications of the grades listed.





# Certificate of Analysis

1.00132.0000 Barbituric acid for analysis EMSURE®  
Batch N020065932

|                                                    | Spec. Values |     | Batch Values |     |
|----------------------------------------------------|--------------|-----|--------------|-----|
| Assay (acidimetric)                                | ≥ 99         | %   | 99.6         | %   |
| Identity (IR-spectrum)                             | passes test  |     | passes test  |     |
| Chloride (Cl)                                      | ≤ 40         | ppm | ≤ 40         | ppm |
| Heavy metals (as Pb)                               | ≤ 50         | ppm | ≤ 50         | ppm |
| Fe (Iron)                                          | ≤ 10         | ppm | ≤ 10         | ppm |
| Sulfated ash                                       | ≤ 0.1        | %   | ≤ 0.1        | %   |
| Loss on Drying (105 °C)                            | ≤ 0.1        | %   | ≤ 0.1        | %   |
| Suitability as reagent (for cyanide determination) | passes test  |     | passes test  |     |

Date of release (DD.MM.YYYY) 17.04.2020  
Minimum shelf life (DD.MM.YYYY) 30.04.2025

Ioannis Chartomatsidis  
Responsible laboratory manager quality control

This document has been produced electronically and is valid without a signature.

Sodium Phosphate, Monobasic, Monohydrate,  
Crystal  
BAKER ANALYZED® A.C.S. Reagent

(sodium dihydrogen phosphate, monohydrate)



Material No.: 3818-05  
Batch No.: 0000225799  
Manufactured Date: 2018/12/05  
Retest Date: 2025/12/03  
Revision No: 1

## Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

| Test                                                         | Specification  | Result    |
|--------------------------------------------------------------|----------------|-----------|
| Assay ( $\text{NaH}_2\text{PO}_4 \cdot \text{H}_2\text{O}$ ) | 98.0 – 102.0 % | 99.5      |
| pH of 5% Solution at 25°C                                    | 4.1 – 4.5      | 4.3       |
| Insoluble Matter                                             | $\leq 0.01$ %  | $< 0.01$  |
| Chloride (Cl)                                                | $\leq 5$ ppm   | $< 5$     |
| ACS – Sulfate ( $\text{SO}_4$ )                              | $\leq 0.003$ % | $< 0.003$ |
| Calcium (Ca)                                                 | $\leq 0.005$ % | $< 0.005$ |
| Potassium (K)                                                | $\leq 0.01$ %  | $< 0.01$  |
| Heavy Metals (as Pb)                                         | $\leq 0.001$ % | $< 0.001$ |
| Trace Impurities – Iron (Fe)                                 | $\leq 0.001$ % | $< 0.001$ |

For Laboratory, Research or Manufacturing Use  
Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: IN  
Packaging Site: Paris Mfg Ctr & DC

  
Jamie Ethier  
Vice President Global Quality

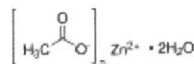
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700  
Avantor Performance Materials, LLC  
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

## Certificate of Analysis

Product Name:

Zinc acetate dihydrate - ACS reagent,  $\geq 98\%$ 

Product Number: 383058  
Batch Number: MKCQ9159  
Brand: SIGALD  
CAS Number: 5970-45-6  
MDL Number: MFCD00066961  
Formula:  $C_4H_6O_4Zn \cdot 2H_2O$   
Formula Weight: 219.51 g/mol  
Quality Release Date: 06 JAN 2022



W2926  
Open 7/5/22  
received  
on 7/5/22

| Test                       | Specification                 | Result             |
|----------------------------|-------------------------------|--------------------|
| Appearance (Color)         | White                         | White              |
| Appearance (Form)          | Powder or Crystal or Chunk(s) | Powder             |
| Infrared Spectrum          | Conforms to Structure         | Conforms           |
| Insoluble Matter           | $\leq 0.005 \%$               | 0.003 %            |
| Calcium (Ca)               | $\leq 0.005 \%$               | 0.003 %            |
| Chloride (Cl)              | $\leq 5 \text{ ppm}$          | $< 5 \text{ ppm}$  |
| Iron (Fe)                  | $\leq 5 \text{ ppm}$          | $< 5 \text{ ppm}$  |
| Potassium (K)              | $\leq 0.01 \%$                | 0.00 %             |
| Magnesium (Mg)             | $\leq 0.005 \%$               | 0.003 %            |
| Sodium (Na)                | $\leq 0.05 \%$                | 0.03 %             |
| Lead (Pb)                  | $\leq 0.002 \%$               | $< 0.001 \%$       |
| pH                         | 6.0 - 7.0                     | 6.1                |
| Sulfate (SO <sub>4</sub> ) | $\leq 0.005 \%$               | $< 0.005 \%$       |
| Complexometric EDTA        | 98.0 - 101.0 %                | 100.3 %            |
| Meets ACS Requirements     | Meets Requirements            | Meets Requirements |

  
Larry Coers, Director  
Quality Control  
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at [Sigma-Aldrich.com](http://Sigma-Aldrich.com). For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



**RICCA CHEMICAL COMPANY®**

W 3005

REC- 1/31/23

12

1490 Lammers Pike

Batesville, IN 47006

<http://www.riccachemical.com>

1-888-GO-RICCA

customerservice@riccachemical.com

# Certificate of Analysis

**Buffer, Reference Standard, pH 2.00 ± 0.01 at 25°C****Lot Number: 4212E45****Product Number: 1493****Manufacture Date: DEC 20, 2022****Expiration Date: DEC 2024**

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

|    |      |      |      |      |      |      |      |      |      |
|----|------|------|------|------|------|------|------|------|------|
| °C | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 45   | 50   |
| pH | 1.93 | 1.98 | 1.98 | 2.00 | 2.01 | 2.03 | 2.03 | 2.04 | 2.04 |

| Name               | CAS#      | Grade           |
|--------------------|-----------|-----------------|
| Water              | 7732-18-5 | ACS/ASTM/USP/EP |
| Potassium Chloride | 7447-40-7 | ACS             |
| Hydrochloric Acid  | 7647-01-0 | ACS             |

| Test       | Specification    | Result |
|------------|------------------|--------|
| Appearance | Colorless liquid | Passed |

\*Not a certified value.

| Test                                  | Certified Value | Uncertainty | NIST SRM#               |
|---------------------------------------|-----------------|-------------|-------------------------|
| pH at 25°C (Method: SQCP027, SQCP033) | 2.000           | 0.02        | 185i, 186-I-g, 186-II-g |

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 1493-1      | 4 L natural poly    | 24 months                       |
| 1493-16     | 500 mL natural poly | 24 months                       |
| 1493-32     | 1 L natural poly    | 24 months                       |
| 1493-5      | 20 L Cubitainer®    | 24 months                       |

**Recommended Storage: 15°C - 30°C (59°F - 86°F)**



Paul Brandon (12/20/2022)

Production Manager

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

**This product was tested in an ISO 17025 Accredited Laboratory**

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

**RICCA CHEMICAL COMPANY®**

1490 Lammers Pike

Batesville, IN 47006

<http://www.riccachemical.com>

1-888-GO-RICCA

customerservice@riccachemical.com

# Certificate of Analysis

W3093  
094121  
04/03/2024  
16

**Buffer, Reference Standard, pH 7.00 ± 0.01 at 25°C (Color Coded Yellow)****Lot Number:** 4401F99**Product Number:** 1551**Manufacture Date:** JAN 08, 2024**Expiration Date:** DEC 2025

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

|    |      |      |      |      |      |      |      |      |      |      |      |
|----|------|------|------|------|------|------|------|------|------|------|------|
| °C | 0    | 5    | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 45   | 50   |
| pH | 7.12 | 7.09 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 | 6.98 | 6.97 | 6.97 |

| Name                           | CAS#        | Grade           |
|--------------------------------|-------------|-----------------|
| Water                          | 7732-18-5   | ACS/ASTM/USP/EP |
| Sodium Phosphate Dibasic       | 7558-79-4   | ACS             |
| Potassium Dihydrogen Phosphate | 7778-77-0   | ACS             |
| Preservative                   | Proprietary |                 |
| Yellow Dye                     | Proprietary |                 |
| Sodium Hydroxide               | 1310-73-2   |                 |

| Test       | Specification | Result |
|------------|---------------|--------|
| Appearance | Yellow liquid | Passed |

\*Not a certified value.

| Test                                  | Certified Value | Uncertainty | NIST SRM#               |
|---------------------------------------|-----------------|-------------|-------------------------|
| pH at 25°C (Method: SQCP027, SQCP033) | 7.004           | 0.02        | 186-I-g, 186-II-g, 191d |

| Specification               | Reference       |
|-----------------------------|-----------------|
| Commercial Buffer Solutions | ASTM (D 1293 B) |
| Buffer A                    | ASTM (D 5464)   |
| Buffer A                    | ASTM (D 5128)   |

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 1551-1      | 4 L natural poly    | 24 months                       |
| 1551-1CT    | 4 L Cubitainer®     | 24 months                       |
| 1551-2.5    | 10 L Cubitainer®    | 24 months                       |
| 1551-5      | 20 L Cubitainer®    | 24 months                       |

**Recommended Storage:** 15°C - 30°C (59°F - 86°F)



Paul Brandon (01/08/2024)

Production Manager

This document is designed to comply with ISO Guide 31 "Reference Materials --  
Contents of Certificates and Labels."

**This product was tested in an ISO 17025 Accredited Laboratory**

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.



## Certificate of Analysis

Buffer, Reference Standard, pH 10.00 ± 0.01 at 25°C (Color Coded Blue)

Lot Number: 4310G83

Product Number: 1601

Manufacture Date: OCT 09, 2023

Expiration Date: MAR 2025

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

|    |       |       |       |       |       |       |      |      |      |      |
|----|-------|-------|-------|-------|-------|-------|------|------|------|------|
| °C | 0     | 5     | 10    | 15    | 20    | 25    | 30   | 35   | 40   | 50   |
| pH | 10.31 | 10.23 | 10.17 | 10.11 | 10.05 | 10.00 | 9.95 | 9.91 | 9.87 | 9.81 |

| Name               | CAS#        | Grade           |
|--------------------|-------------|-----------------|
| Water              | 7732-18-5   | ACS/ASTM/USP/EP |
| Sodium Carbonate   | 497-19-8    | ACS             |
| Sodium Bicarbonate | 144-55-8    | ACS             |
| Sodium Hydroxide   | 1310-73-2   | Reagent         |
| Preservative       | Proprietary |                 |
| Blue Dye           | Proprietary |                 |

| Test       | Specification | Result |
|------------|---------------|--------|
| Appearance | Blue liquid   | Passed |

\*Not a certified value.

| Test                                  | Certified Value | Uncertainty | NIST SRM#               |
|---------------------------------------|-----------------|-------------|-------------------------|
| pH at 25°C (Method: SQCP027, SQCP033) | 10.003          | 0.02        | 186-I-g, 186-II-g, 191d |

| Specification               | Reference       |
|-----------------------------|-----------------|
| Commercial Buffer Solutions | ASTM (D 1293 B) |
| Buffer C                    | ASTM (D 5464)   |
| Buffer C                    | ASTM (D 5128)   |

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 1601-16     | 500 mL natural poly | 18 months                       |
| 1601-5      | 20 L Cubitainer®    | 18 months                       |

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Paul Brandon (10/09/2023)

Production Manager

This document is designed to comply with ISO Guide 31 "Reference Materials --  
Contents of Certificates and Labels."

**This product was tested in an ISO 17025 Accredited Laboratory**

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

# Certificate of Analysis

## Sodium Thiosulfate, 0.0250 Normal (N/40)

**Lot Number:** 4403S13

**Product Number:** 7900

**Manufacture Date:** MAR 29, 2024

**Expiration Date:** SEP 2025

This product is specially formulated to increase its stability. A preservative is added to prevent bacterial contamination. However, all Sodium Thiosulfate solutions are subject to slow chemical deterioration and should be restandardized periodically.

| Name                            | CAS#        | Grade           |
|---------------------------------|-------------|-----------------|
| Water                           | 7732-18-5   | ACS/ASTM/USP/EP |
| Sodium Thiosulfate Pentahydrate | 10102-17-7  | ACS             |
| Organic Preservative            | Proprietary |                 |
| Sodium Carbonate                | 497-19-8    | ACS             |

| Test                                | Specification             | Result            | NIST SRM# |
|-------------------------------------|---------------------------|-------------------|-----------|
| Appearance                          | Colorless liquid          | Passed            |           |
| Assay (vs. Potassium Iodate/Starch) | 0.02499-0.02501 N at 20°C | 0.02501 N at 20°C | 136       |

| Specification                                  | Reference           |
|------------------------------------------------|---------------------|
| Standard Sodium Thiosulfate Solution, 0.0250 N | APHA (4500-S2- F)   |
| Standard Sodium Thiosulfate Titrant            | APHA (4500-O D)     |
| Standard Sodium Thiosulfate Titrant            | APHA (4500-O E)     |
| Standard Sodium Thiosulfate Titrant            | APHA (4500-O F)     |
| Standard Sodium Thiosulfate Titrant, 0.025 N   | APHA (4500-CI B)    |
| Standard Sodium Thiosulfate Titrant            | APHA (4500-O C)     |
| Standard Sodium Thiosulfate Titrant, 0.025 M   | APHA (5530 C)       |
| Standard Sodium Thiosulfate Solution (0.025 N) | EPA (SW-846) (9031) |
| Standard Sodium Thiosulfate solution (0.025 N) | EPA (SW-846) (9034) |

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 7900-1      | 4 L natural poly    | 18 months                       |
| 7900-16     | 500 mL natural poly | 18 months                       |
| 7900-1CT    | 4 L Cubitainer®     | 18 months                       |
| 7900-32     | 1 L natural poly    | 18 months                       |

**Recommended Storage:** 15°C - 30°C (59°F - 86°F)



Paul Brandon (03/29/2024)

Production Manager

This document is designed to comply with ISO Guide 31 "Reference Materials --  
Contents of Certificates and Labels."

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.



## Certificate of Analysis

Buffer, Reference Standard, pH 4.00 ± 0.01 at 25°C (Color Coded Red)

Lot Number: 4403F90

Product Number: 1501

Manufacture Date: MAR 09, 2024

Expiration Date: FEB 2026

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST Traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

|    |      |      |      |      |      |      |      |      |      |      |      |
|----|------|------|------|------|------|------|------|------|------|------|------|
| °C | 0    | 5    | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 45   | 50   |
| pH | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.02 | 4.03 | 4.04 | 4.06 |

| Name                     | CAS#        | Grade           |
|--------------------------|-------------|-----------------|
| Water                    | 7732-18-5   | ACS/ASTM/USP/EP |
| Potassium Acid Phthalate | 877-24-7    | Buffer          |
| Preservative             | Proprietary | Commercial      |
| Red Dye                  | Proprietary | Purified        |

| Test       | Specification | Result |
|------------|---------------|--------|
| Appearance | Red liquid    | Passed |

\*Not a certified value.

| Test                                  | Certified Value | Uncertainty | NIST SRM#               |
|---------------------------------------|-----------------|-------------|-------------------------|
| pH at 25°C (Method: SQCP027, SQCP033) | 4.000           | 0.02        | 185i, 186-I-g, 186-II-g |

| Specification               | Reference       |
|-----------------------------|-----------------|
| Commercial Buffer Solutions | ASTM (D 1293 B) |
| Buffer B                    | ASTM (D 5464)   |
| Buffer B                    | ASTM (D 5128)   |

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 1501-2.5    | 10 L Cubitainer®    | 24 months                       |
| 1501-32     | 1 L natural poly    | 24 months                       |
| 1501-5      | 20 L Cubitainer®    | 24 months                       |

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Paul Brandon (03/09/2024)

Production Manager

This document is designed to comply with ISO Guide 31 "Reference Materials --  
Contents of Certificates and Labels."

**This product was tested in an ISO 17025 Accredited Laboratory**

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

# Certificate of Analysis

**Iodine (Iodine-Iodide), 0.0250 Normal (N/40), 1 mL = 0.4008 mg S<sup>2-</sup>****Lot Number:** 2405D89**Product Number:** 3975**Manufacture Date:** MAY 10, 2024**Expiration Date:** MAY 2025

| Name             | CAS#      | Grade           |
|------------------|-----------|-----------------|
| Water            | 7732-18-5 | ACS/ASTM/USP/EP |
| Potassium Iodide | 7681-11-0 | ACS             |
| Iodine           | 7553-56-2 | ACS             |

| Test                                  | Specification             | Result            | NIST SRM# |
|---------------------------------------|---------------------------|-------------------|-----------|
| Appearance                            | Dark brown liquid         | Passed            |           |
| Assay (vs. Sodium Thiosulfate/Starch) | 0.02498-0.02502 N at 20°C | 0.02502 N at 20°C | 136       |

| Specification                           | Reference           |
|-----------------------------------------|---------------------|
| Standard Iodine Solution, 0.0250 N      | APHA (4500-S2- F)   |
| Iodine Solution (approximately 0.025 N) | EPA (SW-846) (9031) |
| Standard Iodine Solution, 0.0250 N      | EPA (376.1)         |
| Iodine Solution (approximately 0.025 N) | EPA (SW-846) (9034) |

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 3975-1      | 4 L amber glass     | 12 months                       |
| 3975-16     | 500 mL amber glass  | 12 months                       |
| 3975-32     | 1 L amber glass     | 12 months                       |

**Recommended Storage:** 15°C - 30°C (59°F - 86°F)

Jose Pena (05/10/2024)  
Operations Manager

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.



Part of TCP Analytical Group

Jackson's Pointe Commerce Park- Building 1000  
1010 Jackson's Pointe Court, Zelienople, PA 16063

## Certificate of Analysis

### Cyanide Standard 1000 ppm (1ml = 1mg CN)

Product Code: **LC13545**

Manufacture Date: August 01, 2024

Lot Number: **44080060**

Expiration Date: January 30, 2025

| Test                  | Specification      | Result         |
|-----------------------|--------------------|----------------|
| Appearance (clarity)  | clear solution     | clear solution |
| Appearance (color)    | colorless          | colorless      |
| Concentration (CN)    | 0.990 - 1.010mg/mL | 1.008mg/mL     |
| Concentration (CN)    | 990 - 1,010ppm     | 1,008ppm       |
| Traceable to NIST SRM | Report             | 999b           |

**Intended Use** - Product is intended for use in manufacturing procedures and laboratory procedures and protocols.

**Storage Information** - Unless noted on the product label, store the product under normal lab conditions in its tightly closed, original container. Do not pipet directly from the container or return unused portions to the container.

**Instructions for Handling and Use** - Please refer to the associated product label and Safety Data Sheet (SDS) for information regarding safety and handling of this product.

**Preparation** - All products are manufactured and tested according to established, documented procedures and methodology. Production documentation records manufacturing data, raw material traceability and testing history on a per lot basis. Balances, thermometers, and glassware are calibrated before first use and on a regular schedule with references traceable to NIST standards.

\*The suffix of the product code may differ from what is on your product label. The suffix will designate the size and be associated with a numeric digit(s). Visit [LabChem.com](http://LabChem.com) for more information\*

| Suffix | 1          | 2         | 3/3S/36/36S                           | 4/4C | 5   | 6   | 7     | 8   | 9    | 20      | 44   | 200  | 246    | 486    |
|--------|------------|-----------|---------------------------------------|------|-----|-----|-------|-----|------|---------|------|------|--------|--------|
| Size   | 500mL or g | 1L or 1kg | 2.5L/2.5L Coated/6x2.5L/6x2.5L Coated | 4L   | 20L | 10L | 125mL | 25g | 100g | 20x20mL | 4x4L | 200L | 24x6mL | 48x6mL |

*Michael Monteleone*

Michael Monteleone  
Chemistry Supervisor - Quality Control

ISO9001:2015 Registration #0306-01

2024080113:32:16bsturges-0-0

W3139 Received on 9/9/24 by IZ

Product No.: A12044  
Product: Chloramine-T trihydrate, 98%  
Lot No.: 10239484

|                               |              |
|-------------------------------|--------------|
| Appearance:                   | White powder |
| Melting Point:                | 166°C(dec)   |
| Assay (Iodometric titration): | 100.5%       |
| Identification (FTIR):        | Conforms     |

Order our products online [thermofisher.com/chemicals](https://thermofisher.com/chemicals)

**This document has been electronically generated and does not require a signature.**

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

# Certificate of Analysis

**Cyanide Standard, 1000 ppm CN<sup>-</sup>**

**Lot Number:** 1405J81

**Product Number:** 2543

**Manufacture Date:** MAY 20, 2024

**Expiration Date:** NOV 2024

This standard is prepared using accurate volumetric techniques from material that has been assayed against Silver Nitrate solution certified traceable to NIST Standard Reference Material 999. The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is the combined uncertainty based on the stability of the assayed Potassium Cyanide, and the uncertainty in the mass and volume measurements.

Use 0.16% (w/v) (0.04 N) Sodium Hydroxide or 0.225 % (w/v) (0.04 N) Potassium Hydroxide to make dilutions of this standard. Restandardize weekly if extreme accuracy is required.

| Name              | CAS#      | Grade           |
|-------------------|-----------|-----------------|
| Water             | 7732-18-5 | ACS/ASTM/USP/EP |
| Potassium Cyanide | 151-50-8  | ACS             |
| Sodium Hydroxide  | 1310-73-2 | Reagent         |

| Test                       | Specification    | Result   |
|----------------------------|------------------|----------|
| Appearance                 | Colorless liquid | Passed   |
| Cyanide (CN <sup>-</sup> ) | 995-1005 ppm     | 1000 ppm |

| Specification                                                    | Reference              |
|------------------------------------------------------------------|------------------------|
| Stock Standard Cyanide Solution                                  | APHA (4500-CN- F)      |
| Stock Cyanide Solution                                           | APHA (4500-CN- E)      |
| Stock Cyanide Solution                                           | APHA (4500-CN- K)      |
| Stock Cyanide Solution                                           | APHA (4500-CN- H)      |
| Cyanide Reference Solution (1000 mg/L)                           | EPA (SW-846) (7.3.3.2) |
| Cyanide Calibration Stock Solution (1,000 mg/L CN <sup>-</sup> ) | EPA (SW-846) (9213)    |
| Stock Cyanide Solution                                           | EPA (335.3)            |
| Stock Cyanide Solution                                           | EPA (335.2)            |
| Cyanide Solution Stock                                           | ASTM (D 4282)          |
| Simple Cyanide Solution, Stock (1.0 g/L CN <sup>-</sup> )        | ASTM (D 4374)          |

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 2543-16     | 500 mL amber poly   | 6 months                        |
| 2543-4      | 120 mL amber poly   | 6 months                        |

**Recommended Storage:** 2°C - 8°C (36°F - 46°F)



Heidi J Green (05/20/2024)  
Operations Manager

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.



# Certificate of Analysis

## Starch Indicator, 0.5% (w/v), Mercury Free, for Iodometric Titrations

Lot Number: 4408P62

Product Number: 8000

Manufacture Date: AUG 28, 2024

Expiration Date: AUG 2026

This product is Mercury-free.

| Name            | CAS#      | Grade           |
|-----------------|-----------|-----------------|
| Water           | 7732-18-5 | ACS/ASTM/USP/EP |
| Starch, soluble | 9005-84-9 | ACS             |
| Salicylic Acid  | 69-72-7   | ACS             |

| Test                | Specification                                     | Result |
|---------------------|---------------------------------------------------|--------|
| Appearance          | White translucent liquid                          | Passed |
| Suitability for Use | Colorless (Iodine absent) - Blue (Iodine present) | Passed |

| Specification             | Reference           |
|---------------------------|---------------------|
| Starch Solution           | APHA (4500-S2- F)   |
| Starch Indicator Solution | APHA (4500-CI B)    |
| Starch Indicator          | APHA (4500-SO32- B) |
| Starch indicator solution | APHA (2350 B)       |
| Starch indicator solution | APHA (2350 E)       |
| Starch Solution           | APHA (510 B)        |
| Starch Solution           | APHA (5530 C)       |
| Starch Indicator          | APHA (4500-CI C)    |
| Starch Indicator          | EPA (345.1)         |

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 8000-1      | 4 L natural poly    | 24 months                       |
| 8000-16     | 500 mL natural poly | 24 months                       |
| 8000-32     | 1 L natural poly    | 24 months                       |

**Recommended Storage:** 15°C - 30°C (59°F - 86°F)

A handwritten signature in blue ink that reads "Paul Brandon". The signature is fluid and cursive, with the first name "Paul" and last name "Brandon" clearly distinguishable.

Paul Brandon (08/28/2024)  
Production Manager

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.



PERCENT SOLID

Supervisor: Iwona  
Analyst: jignesh  
Date: 10/29/2024

OVENTEMP IN Celsius(°C): 107  
Time IN: 17:00  
In Date: 10/28/2024  
Weight Check 1.0g: 1.00  
Weight Check 10g: 10.00  
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103  
Time OUT: 08:15  
Out Date: 10/29/2024  
Weight Check 1.0g: 1.00  
Weight Check 10g: 10.00  
BalanceID: M SC-4  
Thermometer ID: % SOLID- OVEN

QC:LB133172

| Lab ID   | Client SampleID | Dish # | Dish Wt(g) (A) | Sample Wt(g) | Dish + Sample Wt(g) (B) | Dish+Dry Sample Wt(g) (C) | % Solid | Comments                   |
|----------|-----------------|--------|----------------|--------------|-------------------------|---------------------------|---------|----------------------------|
| P4594-01 | TP-4            | 1      | 1.15           | 8.65         | 9.8                     | 8.87                      | 89.2    |                            |
| P4594-02 | TP-4-EPH        | 2      | 1.15           | 8.55         | 9.7                     | 8.83                      | 89.8    |                            |
| P4594-03 | TP-4-VOC        | 3      | 1.18           | 8.62         | 9.8                     | 8.85                      | 89.0    |                            |
| P4594-05 | BP-F17          | 4      | 1.14           | 8.85         | 9.99                    | 9.02                      | 89.0    |                            |
| P4594-06 | BP-F17-EPH      | 5      | 1.17           | 8.56         | 9.73                    | 8.77                      | 88.8    |                            |
| P4594-07 | BP-F17-VOC      | 6      | 1.19           | 8.73         | 9.92                    | 8.98                      | 89.2    |                            |
| P4594-09 | BP-F16          | 7      | 1.18           | 8.40         | 9.58                    | 8.3                       | 84.8    |                            |
| P4594-10 | BP-F16-EPH      | 8      | 1.12           | 8.70         | 9.82                    | 8.68                      | 86.9    |                            |
| P4594-11 | BP-F16-VOC      | 9      | 1.16           | 8.63         | 9.79                    | 8.34                      | 83.2    |                            |
| P4594-13 | TP-5            | 10     | 1.16           | 8.66         | 9.82                    | 8.87                      | 89.0    |                            |
| P4594-14 | TP-5-EPH        | 11     | 1.17           | 8.38         | 9.55                    | 8.63                      | 89.0    |                            |
| P4594-15 | TP-5-VOC        | 12     | 1.12           | 8.65         | 9.77                    | 8.86                      | 89.5    |                            |
| P4594-17 | BP-F15          | 13     | 1.19           | 8.58         | 9.77                    | 8.84                      | 89.2    |                            |
| P4594-18 | BP-F15-EPH      | 14     | 1.18           | 8.66         | 9.84                    | 8.78                      | 87.8    |                            |
| P4594-19 | BP-F15-VOC      | 15     | 1.12           | 8.77         | 9.89                    | 8.81                      | 87.7    |                            |
| P4595-01 | PITKIN-COMP     | 16     | 1.12           | 8.73         | 9.85                    | 9.28                      | 93.5    |                            |
| P4595-03 | PITKIN-THP2     | 17     | 1.15           | 8.69         | 9.84                    | 9.36                      | 94.5    |                            |
| P4595-04 | PITKIN-TPH3     | 18     | 1.17           | 8.80         | 9.97                    | 9.4                       | 93.5    |                            |
| P4595-05 | PITKIN-GRAB     | 19     | 1.15           | 8.37         | 9.52                    | 9.16                      | 95.7    |                            |
| P4597-01 | RED-1-1         | 20     | 1.15           | 8.44         | 9.59                    | 8.61                      | 88.4    |                            |
| P4597-02 | RED-1-1-E2      | 21     | 1.15           | 8.68         | 9.83                    | 9.00                      | 90.4    |                            |
| P4597-04 | RED-1-2         | 22     | 1.00           | 1.00         | 2.00                    | 2.00                      | 100.0   | stone sample, 100 % solids |
| P4597-05 | RED-1-2-E2      | 23     | 1.00           | 1.00         | 2.00                    | 2.00                      | 100.0   | stone sample, 100 % solids |
| P4597-07 | BLUE-2-1        | 24     | 1.16           | 8.69         | 9.85                    | 8.58                      | 85.4    |                            |
| P4597-08 | BLUE-2-1-E2     | 25     | 1.17           | 8.65         | 9.82                    | 8.37                      | 83.2    |                            |
| P4597-10 | BLUE-2-2        | 26     | 1.00           | 1.00         | 2.00                    | 2.00                      | 100.0   | stone sample, 100 % solids |
| P4597-11 | BLUE-2-2-E2     | 27     | 1.00           | 1.00         | 2.00                    | 2.00                      | 100.0   | stone sample, 100 % solids |
| P4598-01 | BP-F12          | 28     | 1.12           | 8.73         | 9.85                    | 8.81                      | 88.1    |                            |



PERCENT SOLID

Supervisor: Iwona  
Analyst: jignesh  
Date: 10/29/2024

OVENTEMP IN Celsius(°C): 107  
Time IN: 17:00  
In Date: 10/28/2024  
Weight Check 1.0g: 1.00  
Weight Check 10g: 10.00  
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103  
Time OUT: 08:15  
Out Date: 10/29/2024  
Weight Check 1.0g: 1.00  
Weight Check 10g: 10.00  
BalanceID: M SC-4  
Thermometer ID: % SOLID- OVEN

QC:LB133172

| Lab ID   | Client SampleID | Dish # | Dish Wt (g) (A) | Sample Wt (g) | Dish + Sample Wt (g) (B) | Dish+Dry Sample Wt (g) (C) | % Solid | Comments |
|----------|-----------------|--------|-----------------|---------------|--------------------------|----------------------------|---------|----------|
| P4598-02 | BP-F12-EPH      | 29     | 1.19            | 8.65          | 9.84                     | 8.72                       | 87.1    |          |
| P4598-03 | BP-F12-VOC      | 30     | 1.15            | 8.82          | 9.97                     | 8.63                       | 84.8    |          |
| P4598-05 | BP-F11          | 31     | 1.17            | 8.50          | 9.67                     | 8.8                        | 89.8    |          |
| P4598-06 | BP-F11-EPH      | 32     | 1.15            | 8.81          | 9.96                     | 9.16                       | 90.9    |          |
| P4598-07 | BP-F11-VOC      | 33     | 1.17            | 8.49          | 9.66                     | 8.73                       | 89.0    |          |
| P4598-09 | TP-8            | 34     | 1.18            | 8.60          | 9.78                     | 9.02                       | 91.2    |          |
| P4598-10 | TP-8-EPH        | 35     | 1.17            | 8.68          | 9.85                     | 8.97                       | 89.9    |          |
| P4598-11 | TP-8-VOC        | 36     | 1.12            | 8.55          | 9.67                     | 9.05                       | 92.7    |          |

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

# WORKLIST(Hardcopy Internal Chain)

133142

WorkList Name : %1-102824      WorkList ID : 184850      Department : Wet-Chemistry      Date : 10-28-2024 08:24:16

| Sample   | Customer Sample | Matrix | Test           | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method       |
|----------|-----------------|--------|----------------|--------------|----------|-----------------------------|--------------|--------------|
| P4594-01 | TP-4            | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | Chemtech -SO |
| P4594-02 | TP-4-EPH        | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | Chemtech -SO |
| P4594-03 | TP-4-VOC        | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | Chemtech -SO |
| P4594-05 | BP-F17          | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | Chemtech -SO |
| P4594-06 | BP-F17-EPH      | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | Chemtech -SO |
| P4594-07 | BP-F17-VOC      | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | Chemtech -SO |
| P4594-09 | BP-F16          | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | Chemtech -SO |
| P4594-10 | BP-F16-EPH      | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | Chemtech -SO |
| P4594-11 | BP-F16-VOC      | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | Chemtech -SO |
| P4594-13 | TP-5            | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | Chemtech -SO |
| P4594-14 | TP-5-EPH        | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | Chemtech -SO |
| P4594-15 | TP-5-VOC        | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | Chemtech -SO |
| P4594-17 | BP-F15          | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | Chemtech -SO |
| P4594-18 | BP-F15-EPH      | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | Chemtech -SO |
| P4594-19 | BP-F15-VOC      | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/26/2024   | Chemtech -SO |
| P4595-01 | PITKIN-COMP     | Solid  | Percent Solids | Cool 4 deg C | TULL02   | K61                         | 10/28/2024   | Chemtech -SO |
| P4595-03 | PITKIN-THP2     | Solid  | Percent Solids | Cool 4 deg C | TULL02   | K61                         | 10/28/2024   | Chemtech -SO |
| P4595-04 | PITKIN-TPH3     | Solid  | Percent Solids | Cool 4 deg C | TULL02   | K61                         | 10/28/2024   | Chemtech -SO |
| P4595-05 | PITKIN-GRAB     | Solid  | Percent Solids | Cool 4 deg C | TULL02   | K61                         | 10/28/2024   | Chemtech -SO |
| P4597-01 | RED-1-1         | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | Chemtech -SO |
| P4597-02 | RED-1-1-E2      | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | Chemtech -SO |

Date/Time 10/26/24 15:35  
 Raw Sample Received by: [Signature]  
 Raw Sample Relinquished by: [Signature]

# WORKLIST(Hardcopy Internal Chain)

133172

WorkList Name : %1-102824      WorkList ID : 184850      Department : Wet-Chemistry      Date : 10-28-2024 08:24:16

| Sample   | Customer Sample | Matrix | Test           | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method       |
|----------|-----------------|--------|----------------|--------------|----------|-----------------------------|--------------|--------------|
| P4597-04 | RED-1-2         | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | Chemtech -SO |
| P4597-05 | RED-1-2-E2      | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | Chemtech -SO |
| P4597-07 | BLUE-2-1        | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | Chemtech -SO |
| P4597-08 | BLUE-2-1-E2     | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | Chemtech -SO |
| P4597-10 | BLUE-2-2        | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | Chemtech -SO |
| P4597-11 | BLUE-2-2-E2     | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/28/2024   | Chemtech -SO |
| P4598-01 | BP-F12          | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | Chemtech -SO |
| P4598-02 | BP-F12-EPH      | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | Chemtech -SO |
| P4598-03 | BP-F12-VOC      | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | Chemtech -SO |
| P4598-05 | BP-F11          | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | Chemtech -SO |
| P4598-06 | BP-F11-EPH      | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | Chemtech -SO |
| P4598-07 | BP-F11-VOC      | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | Chemtech -SO |
| P4598-09 | TP-8            | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | Chemtech -SO |
| P4598-10 | TP-8-EPH        | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | Chemtech -SO |
| P4598-11 | TP-8-VOC        | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | K63                         | 10/25/2024   | Chemtech -SO |

Date/Time 10/26/24 15435  
 Raw Sample Received by: [Signature]  
 Raw Sample Relinquished by: [Signature]

Date/Time 10/26/24 17120  
 Raw Sample Received by: [Signature]  
 Raw Sample Relinquished by: [Signature]



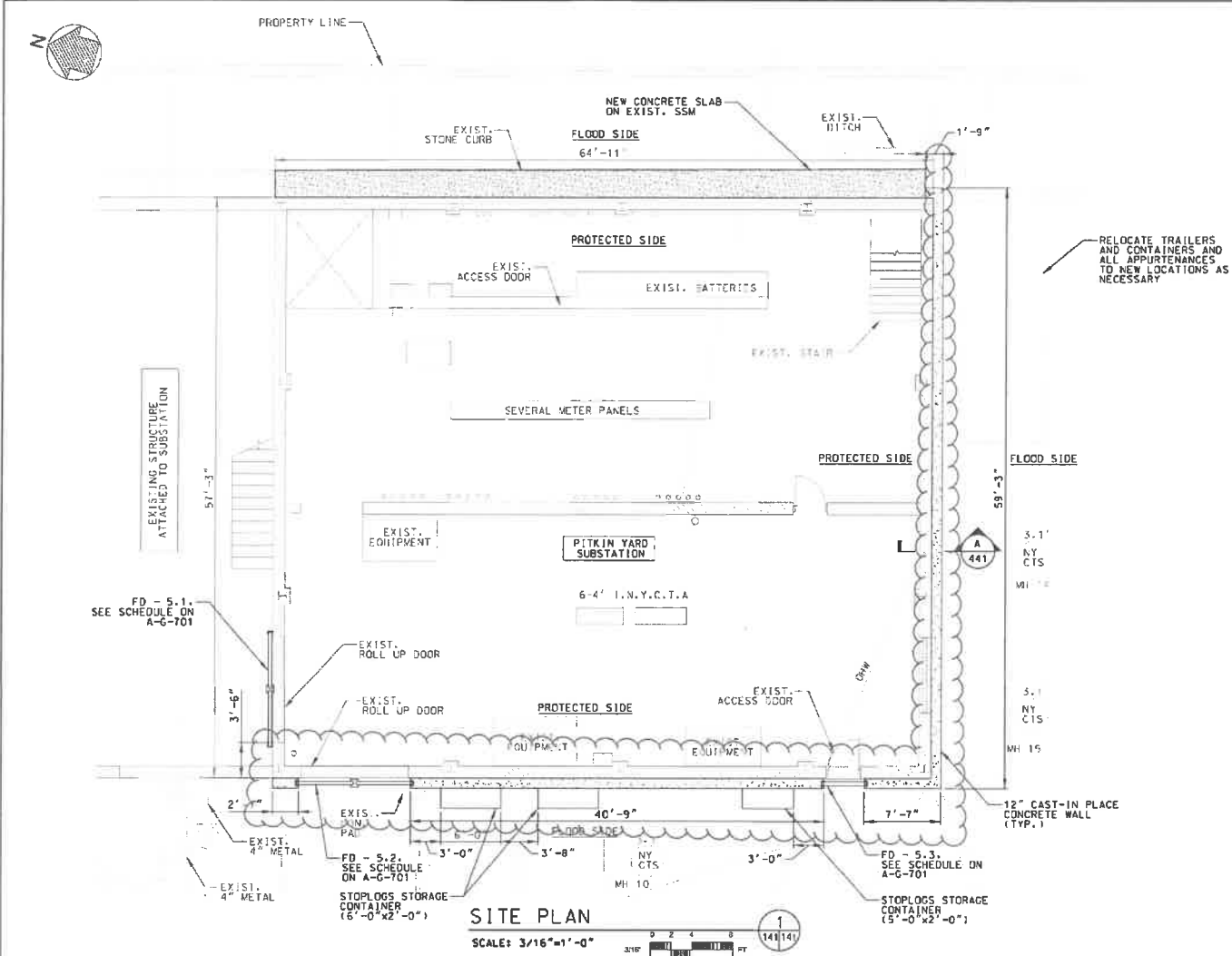
# SHIPPING DOCUMENTS

CHEMTECH  
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092  
(908) 789-8900 • Fax (908) 789-8922  
www.chemtech.net

CHEMTECH PROJECT NO. **P4595**  
QUOTE NO.  
COC Number **2041038**

| CLIENT INFORMATION                                                                                     |  |                               |  | CLIENT PROJECT INFORMATION                                                                                              |             |                                                                                                                                                                                      |          | CLIENT BILLING INFORMATION                                                                                                                                                                                                                                |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
|--------------------------------------------------------------------------------------------------------|--|-------------------------------|--|-------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------|---|----------|---|-------------------|---|---|---|----------------------------------------------------------------------------|
| COMPANY: <del>PSEG</del> <b>TULLY</b>                                                                  |  |                               |  | PROJECT NAME: <b>Tully - Pitkin</b>                                                                                     |             |                                                                                                                                                                                      |          | BILL TO: PO#:                                                                                                                                                                                                                                             |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| ADDRESS: <b>Eldert Ln &amp; Blake Ave</b>                                                              |  |                               |  | PROJECT NO.: LOCATION:                                                                                                  |             |                                                                                                                                                                                      |          | ADDRESS:                                                                                                                                                                                                                                                  |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| CITY <b>BROOKLYN</b> STATE: <b>NJ</b> ZIP:                                                             |  |                               |  | PROJECT MANAGER:                                                                                                        |             |                                                                                                                                                                                      |          | CITY STATE: ZIP:                                                                                                                                                                                                                                          |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| ATTENTION:                                                                                             |  |                               |  | e-mail:                                                                                                                 |             |                                                                                                                                                                                      |          | ATTENTION: PHONE:                                                                                                                                                                                                                                         |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| PHONE:                                                                                                 |  | FAX:                          |  | PHONE:                                                                                                                  |             | FAX:                                                                                                                                                                                 |          | ANALYSIS                                                                                                                                                                                                                                                  |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| DATA TURNAROUND INFORMATION                                                                            |  |                               |  | DATA DELIVERABLE INFORMATION                                                                                            |             |                                                                                                                                                                                      |          |                                                                                                                                                                                                                                                           |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| FAX (RUSH) _____ DAYS*                                                                                 |  |                               |  | <input type="checkbox"/> Level 1 (Results Only) <input type="checkbox"/> Level 4 (QC + Full Raw Data)                   |             |                                                                                                                                                                                      |          | <div>1 SVOC - PAH</div> <div>2 TCLP Extraction</div> <div>3 TCLP ICP Metals</div> <div>4 TCLP Mercury</div> <div>5 Corrosivity / Ammonia</div> <div>6 Relative Cu / Sulfide</div> <div>7 TAL Metals + Mercury</div> <div>8 TPH</div> <div>9 TCL VOC</div> |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| HARDCOPY (DATA PACKAGE): _____ DAYS*                                                                   |  |                               |  | <input type="checkbox"/> Level 2 (Results + QC) <input type="checkbox"/> NJ Reduced <input type="checkbox"/> US EPA CLP |             |                                                                                                                                                                                      |          |                                                                                                                                                                                                                                                           |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| EDD: _____ DAYS*                                                                                       |  |                               |  | <input type="checkbox"/> Level 3 (Results + QC) <input type="checkbox"/> NYS ASP A <input type="checkbox"/> NYS ASP B   |             |                                                                                                                                                                                      |          |                                                                                                                                                                                                                                                           |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| *TO BE APPROVED BY CHEMTECH                                                                            |  |                               |  | + Raw Data) <input type="checkbox"/> Other _____                                                                        |             |                                                                                                                                                                                      |          |                                                                                                                                                                                                                                                           |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS                                                  |  |                               |  | <input type="checkbox"/> EDD FORMAT _____                                                                               |             |                                                                                                                                                                                      |          |                                                                                                                                                                                                                                                           |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| CHEMTECH SAMPLE ID                                                                                     |  | PROJECT SAMPLE IDENTIFICATION |  | SAMPLE MATRIX                                                                                                           | SAMPLE TYPE | SAMPLE COLLECTION                                                                                                                                                                    |          | PRESERVATIVES                                                                                                                                                                                                                                             |              |                                                                                      |   | COMMENTS |   |                   |   |   |   |                                                                            |
|                                                                                                        |  |                               |  |                                                                                                                         | COMP        | GRAB                                                                                                                                                                                 | DATE     | TIME                                                                                                                                                                                                                                                      | # OF BOTTLES | E                                                                                    | E | E        | E | E                 | E | E | E | ← Specify Preservatives<br>A-HCl D-NaOH<br>B-HNO3 E-ICE<br>C-H2SO4 F-OTHER |
| 1.                                                                                                     |  | Pitkin - COMP                 |  | Soil                                                                                                                    | X           |                                                                                                                                                                                      | 10-28-24 | 811                                                                                                                                                                                                                                                       | 7            | X                                                                                    | X | X        | X | X                 | X | X | X | 30.1 PP-7                                                                  |
| 2.                                                                                                     |  | Pitkin - TPH2                 |  |                                                                                                                         | X           |                                                                                                                                                                                      |          | 816                                                                                                                                                                                                                                                       | 1            |                                                                                      |   |          |   |                   |   |   | X |                                                                            |
| 3.                                                                                                     |  | Pitkin - TPH3                 |  |                                                                                                                         | X           |                                                                                                                                                                                      |          | 822                                                                                                                                                                                                                                                       | 1            |                                                                                      |   |          |   |                   |   |   | X |                                                                            |
| 4.                                                                                                     |  | Pitkin - Grab                 |  |                                                                                                                         |             | X                                                                                                                                                                                    |          | 829                                                                                                                                                                                                                                                       | 4            |                                                                                      |   |          |   |                   |   |   | X |                                                                            |
| 5.                                                                                                     |  |                               |  |                                                                                                                         |             |                                                                                                                                                                                      |          |                                                                                                                                                                                                                                                           |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| 6.                                                                                                     |  |                               |  |                                                                                                                         |             |                                                                                                                                                                                      |          |                                                                                                                                                                                                                                                           |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| 7.                                                                                                     |  |                               |  |                                                                                                                         |             |                                                                                                                                                                                      |          |                                                                                                                                                                                                                                                           |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| 8.                                                                                                     |  |                               |  |                                                                                                                         |             |                                                                                                                                                                                      |          |                                                                                                                                                                                                                                                           |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| 9.                                                                                                     |  |                               |  |                                                                                                                         |             |                                                                                                                                                                                      |          |                                                                                                                                                                                                                                                           |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| 10.                                                                                                    |  |                               |  |                                                                                                                         |             |                                                                                                                                                                                      |          |                                                                                                                                                                                                                                                           |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY |  |                               |  |                                                                                                                         |             |                                                                                                                                                                                      |          |                                                                                                                                                                                                                                                           |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| RELINQUISHED BY SAMPLER:                                                                               |  | DATE/TIME: <b>845</b>         |  | RECEIVED BY:                                                                                                            |             | Conditions of bottles or coolers at receipt: <input checked="" type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP <b>2.5</b> °C |          |                                                                                                                                                                                                                                                           |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| 1. <b>JT</b>                                                                                           |  | <b>10-28-24</b>               |  |                                                                                                                         |             | Comments:                                                                                                                                                                            |          |                                                                                                                                                                                                                                                           |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| RELINQUISHED BY SAMPLER:                                                                               |  | DATE/TIME:                    |  | RECEIVED BY:                                                                                                            |             |                                                                                                                                                                                      |          |                                                                                                                                                                                                                                                           |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| 2.                                                                                                     |  |                               |  |                                                                                                                         |             |                                                                                                                                                                                      |          |                                                                                                                                                                                                                                                           |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| RELINQUISHED BY SAMPLER:                                                                               |  | DATE/TIME: <b>1200</b>        |  | RECEIVED BY:                                                                                                            |             | PID calibrated 10-28-24                                                                                                                                                              |          |                                                                                                                                                                                                                                                           |              |                                                                                      |   |          |   |                   |   |   |   |                                                                            |
| 3. <b>JT</b>                                                                                           |  | <b>10-28-24</b>               |  | 3.                                                                                                                      |             | Page ____ of ____                                                                                                                                                                    |          |                                                                                                                                                                                                                                                           |              | CLIENT: <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Other _____ |   |          |   | Shipment Complete |   |   |   |                                                                            |
|                                                                                                        |  |                               |  |                                                                                                                         |             | CHEMTECH: <input type="checkbox"/> Picked Up <input type="checkbox"/> Field Sampling                                                                                                 |          |                                                                                                                                                                                                                                                           |              | <input type="checkbox"/> YES <input type="checkbox"/> NO                             |   |          |   |                   |   |   |   |                                                                            |



- GENERAL NOTES:
1. PROVIDE ARCHITECTURAL CONCRETE AND FINISH TREATMENTS FOR PERIMETER FLOOD WALL AS SHOWN ON THE PRELIMINARY DRAWINGS. CONCRETE SHALL HAVE VERTICAL REVEAL JOINTS AT 4 FEET ON CENTER.
  2. RESTORE SITE HARDSCAPING MATERIALS, FENCING AND PLANTINGS ADJACENT TO THE BUILDING AT AREAS FOR THE FLOOD WALL INSTALLATION.
  3. FLOOD DEVICE DETAILS SHOWN HERE ARE FOR REFERENCE ONLY. FLOOD DEVICE SHOP DRAWINGS AND DESIGN CALCULATIONS SHALL BE PROVIDED BY THE MANUFACTURER IN ACCORDANCE WITH DESIGN DOCUMENTS FOR ENGINEER'S REVIEW.
  4. REFER TO P36343-A-G-701 FOR FLOOD DEVICE OPENING SCHEDULE.
  5. PREFORMED EXPANSION JOINT FILLER COMPLYING WITH ASTM D1752, TYPE-I (SPONGE RUBBER)
- BUILDING CODE NOTES:
1. ALL WORK HAS BE IN ACCORDANCE WITH NEW YORK STATE BUILDING CODE AND REFERENCED CODE, STANDARDS AND REGULATIONS.
  2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF NEW YORK STATE, OSHA 1926, AND OSHA 1910.3
  3. EXISTING BUILDING CODE CLASSIFICATIONS:  
3.1 OCCUPANCY: "U" UTILITY STRUCTURE  
3.2 CONSTRUCTION: I/A  
3.3 UNOCCUPIED
  4. BUILDING IS AN ELECTRICAL SUBSTATION AND IS UNOCCUPIED.
  5. ACCESSIBILITY - BUILDING IS EXEMPT FROM ACCESSIBILITY REQUIREMENT OF THE NYS BUILDING CODE PER SECTION BC 1103.2.4 UTILITY BUILDINGS AND BC 1103.2.9 EQUIPMENT SPACES.
  6. PROJECT WORK SCOPE - FLOOD MITIGATION ONLY.  
6.1 NO CHANGE IN OCCUPANCY OR USE OF BUILDING.  
6.2 NO CHANGE IN CONSTRUCTION TYPE.  
6.3 NO CHANGE IN MEANS OF EGRESS FROM BUILDING.
  7. 2020 EXISTING BUILDING CODE OF NEW YORK STATE SHALL GOVERN WORK. METHOD OF COMPLIANCE SHALL BE CLASSIFICATION OF WORK:  
7.1 ALTERATION LEVEL 1 - REPLACEMENT OF CONDUIT SEALANTS.  
7.2 ALTERATION LEVEL 2 - CONCRETE FLOOD WALL AND FLOOD BARRIER DEVICES.

IT IS A VIOLATION OF THE PROFESSIONAL LICENSE LAW FOR ANY PERSON TO ALTER THIS DRAWING IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER/REGISTERED ARCHITECT. THE ALTERING ENGINEER/ARCHITECT SHALL DETAIL TO THE DRAWING HIS/HER SEAL AND THE MODIFICATION ALTERED BY FOLLOWED BY HIS/HER COUNTY, RE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

| REVISION | DESCRIPTION | DATE | APPROVED |
|----------|-------------|------|----------|
|          |             |      |          |
|          |             |      |          |
|          |             |      |          |



CONTRACT P-36343  
FLOOD MITIGATION AT TWENTY-SIX (26) SUBSTATIONS  
IN THE BOROUGH OF BROOKLYN, MANHATTAN AND QUEENS

**PITKIN YARD SUBSTATION  
SITE PLAN**



|             |                |                       |              |                  |
|-------------|----------------|-----------------------|--------------|------------------|
| DRAWN BY    | NA. DARBHA     | <i>Darbha</i>         | DATE:        | 12/08/2023       |
| DESIGNED BY | E. DAWKINS, RA | <i>Evel Dawkins</i>   | DISCIPLINE:  | ARCHITECTURAL    |
| CHECKED BY  | L. ASH-HABIB   | <i>Liliana Ashhab</i> | PROJECT NO.: | P36343-PIT-A-141 |
| APPROVED BY | E. DAWKINS, RA | <i>Evel Dawkins</i>   | REVISION     |                  |

**Environmental Laboratory**  
www.chemtech.net | EMAIL: [PM@chemtech.net](mailto:PM@chemtech.net)

**WWW: [chemtech.net](http://www.chemtech.net) | EMAIL: [PM@chemtech.net](mailto:PM@chemtech.net)**

Chemtech Order ID: \_\_\_\_\_

Sampler Name: JT

**Client Project Coordinator & Phone:**

---

Page #: 1 of 1

Arrive time: 800

Depart Time: 845

General use that apply: Water / Solid / NAPL / Concrete / Wipe

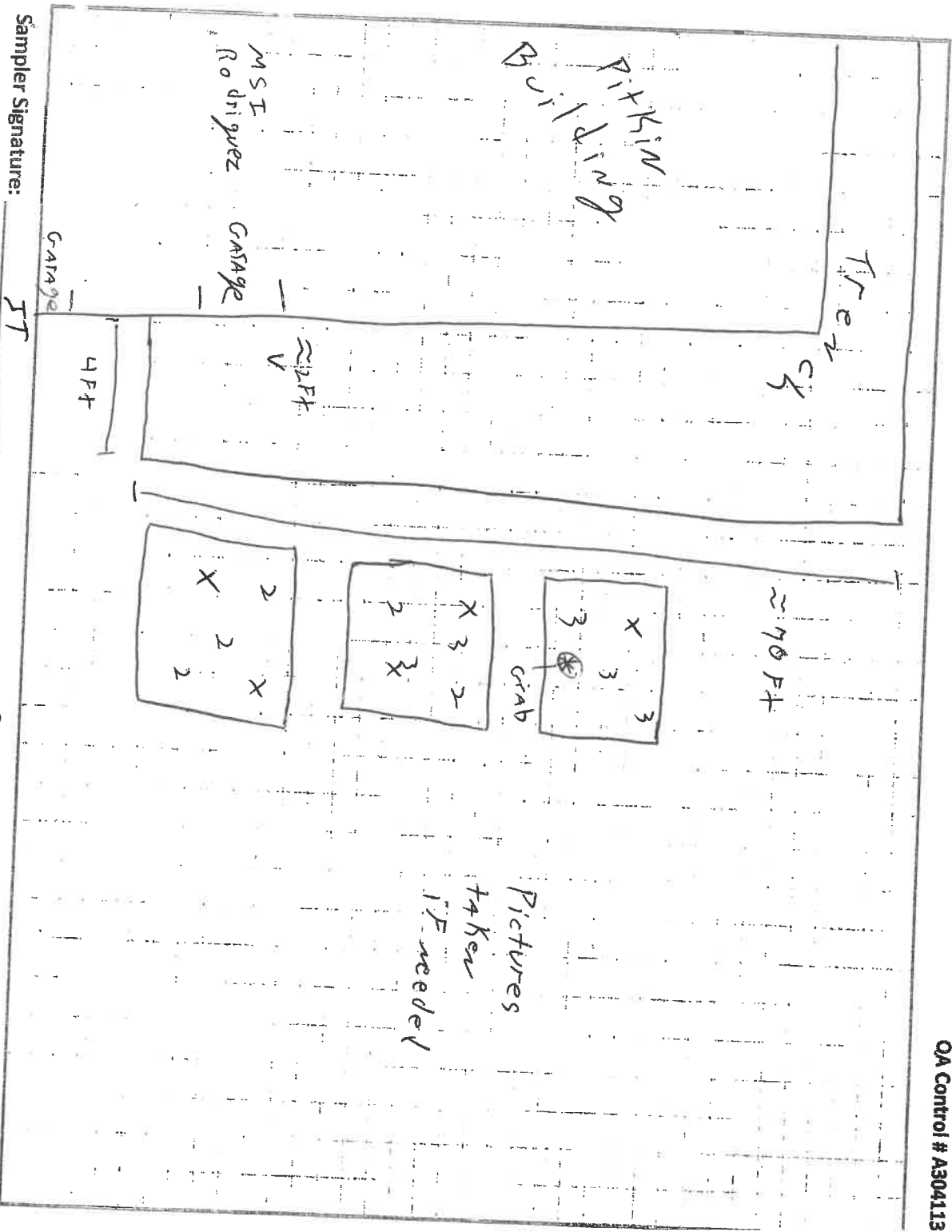
Collection Depths: NA

Temp (range): \_\_\_\_\_ °C PID Readings (range): 30.1 ppm

Sample Description: Brown soil 1.74 to 1.77 m

Field Observations: Sample taken from storage bags next to excavation

**QA Control # A304113**





284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

### Laboratory Certification

| Certified By         | License No.      |
|----------------------|------------------|
|                      |                  |
| CAS EPA CLP Contract | 68HERH20D0011    |
|                      |                  |
| Connecticut          | PH-0830          |
|                      |                  |
| DOD ELAP (ANAB)      | L2219            |
|                      |                  |
| Maine                | 2024021          |
|                      |                  |
| Maryland             | 296              |
|                      |                  |
| New Hampshire        | 255424 Rev 1     |
|                      |                  |
| New Jersey           | 20012            |
|                      |                  |
| New York             | 11376            |
|                      |                  |
| Pennsylvania         | 68-00548         |
|                      |                  |
| Soil Permit          | 525-24-234-08441 |
|                      |                  |
| Texas                | T104704488       |



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,  
Fax : 908 789 8922

## LOGIN REPORT/SAMPLE TRANSFER

|                                                    |        |                                                                         |                                |
|----------------------------------------------------|--------|-------------------------------------------------------------------------|--------------------------------|
| <b>Order ID :</b> P4595                            | TULL02 | <b>Order Date :</b> 10/28/2024 11:31:00 AM                              | <b>Project Mgr :</b>           |
| <b>Client Name :</b> Tully Construction Co., Inc.  |        | <b>Project Name :</b> <del>Liberty Ave &amp; 76th St</del> Pitkin Yard. | <b>Report Type :</b> Level 1   |
| <b>Client Contact :</b> Dean Devoe                 |        | <b>Receive DateTime :</b> 10/28/2024 12:00:00 AM                        | <b>EDD Type :</b> Excel NY 375 |
| <b>Invoice Name :</b> Tully Construction Co., Inc. |        | <b>Purchase Order :</b>                                                 | <b>Hard Copy Date :</b>        |
| <b>Invoice Contact :</b> Dean Devoe                |        |                                                                         | <b>Date Signoff :</b>          |

| LAB ID   | CLIENT ID   | MATRIX | SAMPLE<br>DATE | SAMPLE<br>TIME | TEST          | TEST GROUP | METHOD | FAX DATE | DUE<br>DATES |
|----------|-------------|--------|----------------|----------------|---------------|------------|--------|----------|--------------|
| P4595-05 | PITKIN-GRAB | Solid  | 10/28/2024     | 08:29          | VOC-TCLVOA-10 |            | 8260D  |          | 5 Bus. Days  |

Relinquished By : JT

Date / Time : 10-28-24 12:15

Received By : [Signature]

Date / Time : 10-28-24 12:15

Storage Area : VOA Refridgerator Room