

Form 0: Sequence Log

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

| <i>Filename</i> | <i>Run Time</i> | <i>Sample ID</i> | <i>Matrix</i> | <i>QC Type</i> |
|-----------------|------------------------|-------------------|---------------|----------------|
| 001 | 12:22:49 Fri 29-May-20 | Blank | Liquid | |
| 002 | 12:24:01 Fri 29-May-20 | Std-0.20 | Liquid | |
| 003 | 12:25:13 Fri 29-May-20 | Std-0.50 | Liquid | |
| 004 | 12:26:25 Fri 29-May-20 | Std-1.0 | Liquid | |
| 005 | 12:27:37 Fri 29-May-20 | Std-2.0 | Liquid | |
| 006 | 12:28:48 Fri 29-May-20 | Std-5.0 | Liquid | |
| 007 | 12:31:11 Fri 29-May-20 | CCV-2.0 | Liquid | CCV |
| 008 | 12:35:56 Fri 29-May-20 | ICV-2.0 | Liquid | ICV |
| 009 | 12:37:08 Fri 29-May-20 | ICB | Liquid | ICB |
| 010 | 12:38:20 Fri 29-May-20 | CCB | Liquid | CCB |
| 011 | 12:39:31 Fri 29-May-20 | BS-0.05 | Liquid | BS |
| 012 | 12:46:09 Fri 29-May-20 | 052820_3 LCS-1.0 | Liquid | LCS |
| 013 | 12:47:21 Fri 29-May-20 | 052820_3 LRB | Liquid | LRB |
| 014 | 12:48:32 Fri 29-May-20 | 14250.01s | Liquid | S |
| 015 | 12:57:01 Fri 29-May-20 | rinse | Liquid | |
| 016 | 12:58:13 Fri 29-May-20 | 14264.07s | Liquid | S |
| 017 | 13:05:07 Fri 29-May-20 | 14264.01s | Liquid | S |
| 018 | 13:08:03 Fri 29-May-20 | 14264.01 dil | Liquid | DIL |
| 019 | 13:09:14 Fri 29-May-20 | rinse | Liquid | |
| 020 | 13:10:25 Fri 29-May-20 | 14264.02s | Liquid | S |
| 021 | 13:11:37 Fri 29-May-20 | rinse | Liquid | |
| 022 | 13:12:48 Fri 29-May-20 | 14264.03s | Liquid | S |
| 023 | 13:14:00 Fri 29-May-20 | rinse | Liquid | |
| 024 | 13:15:11 Fri 29-May-20 | 14264.04s | Liquid | S |
| 025 | 13:16:22 Fri 29-May-20 | rinse | Liquid | |
| 026 | 13:17:34 Fri 29-May-20 | 14264.05s | Liquid | S |
| 027 | 13:18:46 Fri 29-May-20 | rinse | Liquid | |
| 028 | 13:19:57 Fri 29-May-20 | 14264.06s | Liquid | S |
| 029 | 13:21:09 Fri 29-May-20 | rinse | Liquid | |
| 030 | 13:22:20 Fri 29-May-20 | 14278.01s | Liquid | S |
| 031 | 13:23:31 Fri 29-May-20 | 14278.01 MS-2.0 | Liquid | MS |
| 032 | 13:24:42 Fri 29-May-20 | 14278.01 MSD | Liquid | MSD |
| 033 | 13:35:34 Fri 29-May-20 | CCV2-2.0 | Liquid | CCV |
| 034 | 13:36:46 Fri 29-May-20 | CCB2 | Liquid | CCB |
| 035 | 13:40:58 Fri 29-May-20 | 052920_2 LCS-1.0 | Liquid | LCS |
| 036 | 13:42:10 Fri 29-May-20 | 052920_2 LRB | Liquid | LRB |
| 037 | 13:44:19 Fri 29-May-20 | 14279.01 dil diss | Liquid | DIL |
| 038 | 13:45:29 Fri 29-May-20 | 14279.01s diss | Liquid | S |
| 039 | 13:46:41 Fri 29-May-20 | rinse | Liquid | |
| 040 | 13:47:53 Fri 29-May-20 | 14279.02s diss | Liquid | S |
| 041 | 13:49:04 Fri 29-May-20 | rinse | Liquid | |
| 042 | 13:50:16 Fri 29-May-20 | 14279.03s diss | Liquid | S |
| 043 | 13:51:27 Fri 29-May-20 | rinse | Liquid | |
| 044 | 13:52:39 Fri 29-May-20 | 14279.04s diss | Liquid | S |
| 045 | 13:53:50 Fri 29-May-20 | CCV3-2.0 | Liquid | CCV |
| 046 | 13:55:02 Fri 29-May-20 | CCB3 | Liquid | CCB |
| 047 | 14:18:53 Fri 29-May-20 | 14313.01s | Liquid | S |
| 048 | 14:20:04 Fri 29-May-20 | rinse | Liquid | |
| 049 | 14:21:15 Fri 29-May-20 | 14314.01s | Liquid | S |
| 050 | 14:22:27 Fri 29-May-20 | rinse | Liquid | |
| 051 | 14:23:38 Fri 29-May-20 | 14315.01s | Liquid | S |
| 052 | 14:24:50 Fri 29-May-20 | rinse | Liquid | |
| 053 | 14:26:00 Fri 29-May-20 | 14315.02s | Liquid | S |
| 054 | 14:27:12 Fri 29-May-20 | rinse | Liquid | |
| 055 | 14:28:23 Fri 29-May-20 | 14315.03s | Liquid | S |
| 056 | 14:29:35 Fri 29-May-20 | rinse | Liquid | |

Form 0: Sequence Log

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

| <i>Filename</i> | <i>Run Time</i> | <i>Sample ID</i> | <i>Matrix</i> | <i>QC Type</i> |
|-----------------|------------------------|------------------|---------------|----------------|
| 057 | 14:30:46 Fri 29-May-20 | 14315.04s | Liquid | S |
| 058 | 14:31:57 Fri 29-May-20 | rinse | Liquid | |
| 059 | 14:33:08 Fri 29-May-20 | 14315.05s | Liquid | S |
| 060 | 14:34:20 Fri 29-May-20 | rinse | Liquid | |
| 061 | 14:35:30 Fri 29-May-20 | 14315.06s | Liquid | S |
| 062 | 14:36:42 Fri 29-May-20 | rinse | Liquid | |
| 063 | 14:37:52 Fri 29-May-20 | 14316.02s | Liquid | S |
| 064 | 14:39:03 Fri 29-May-20 | 14316.02 MS-2.0 | Liquid | MS |
| 065 | 14:40:13 Fri 29-May-20 | 14316.02 MSD | Liquid | MSD |
| 066 | 14:44:11 Fri 29-May-20 | CCV3-2.0 | Liquid | CCV |
| 067 | 14:45:23 Fri 29-May-20 | CCB3 | Liquid | CCB |
| 068 | 14:46:43 Fri 29-May-20 | 14316.01s | Liquid | S |
| 069 | 14:47:55 Fri 29-May-20 | rinse | Liquid | |
| 070 | 14:49:05 Fri 29-May-20 | 14316.03s | Liquid | DIL |
| 071 | 14:50:16 Fri 29-May-20 | rinse | Liquid | |
| 072 | 14:51:51 Fri 29-May-20 | 14316.03s | Liquid | S |
| 073 | 14:53:03 Fri 29-May-20 | rinse | Liquid | |
| 074 | 14:54:14 Fri 29-May-20 | 14316.04s | Liquid | S |
| 075 | 14:55:26 Fri 29-May-20 | rinse | Liquid | |
| 076 | 14:56:37 Fri 29-May-20 | 14317.01s | Liquid | S |
| 077 | 14:57:49 Fri 29-May-20 | rinse | Liquid | |
| 078 | 14:58:59 Fri 29-May-20 | 14317.02s | Liquid | S |
| 079 | 15:00:11 Fri 29-May-20 | rinse | Liquid | |
| 080 | 15:01:22 Fri 29-May-20 | 14317.03s | Liquid | S |
| 081 | 15:02:33 Fri 29-May-20 | rinse | Liquid | |
| 082 | 15:03:44 Fri 29-May-20 | 14330.01s | Liquid | S |
| 083 | 15:04:54 Fri 29-May-20 | 14317.03 MS-2.0 | Liquid | MS |
| 084 | 15:06:05 Fri 29-May-20 | 14317.03 MSD | Liquid | MSD |
| 085 | 15:07:17 Fri 29-May-20 | CCV4-2.0 | Liquid | CCV |
| 086 | 15:09:12 Fri 29-May-20 | CCB4 | Liquid | CCB |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0528A

Instrument ID: PE NEXION 2

Analysis Date: 05/28/20

Analyst: JRH

Lab Sample ID: S14264.01

Sample Tag: L005063-01 MW-1

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-47-3 | Chromium | Not detected | 0.005 | 0.000750 | mg/L | 5 | 05/28/2020 | |
| 7440-42-8 | Boron | 0.27 | 0.04 | 0.00450 | mg/L | 5 | 05/28/2020 | |
| 7440-38-2 | Arsenic | 0.005 | 0.002 | 0.000650 | mg/L | 5 | 05/28/2020 | |
| 7782-49-2 | Selenium | Not detected | 0.005 | 0.00190 | mg/L | 5 | 05/28/2020 | |
| 7439-98-7 | Molybdenum | Not detected | 0.005 | 0.000350 | mg/L | 5 | 05/28/2020 | |
| 7440-43-9 | Cadmium | Not detected | 0.0005 | 0.000100 | mg/L | 5 | 05/28/2020 | |
| 7440-36-0 | Antimony | Not detected | 0.005 | 0.000300 | mg/L | 5 | 05/28/2020 | |
| 7440-39-3 | Barium | 0.150 | 0.005 | 0.000400 | mg/L | 5 | 05/28/2020 | |
| 7440-28-0 | Thallium | Not detected | 0.002 | 0.000100 | mg/L | 5 | 05/28/2020 | |
| 7439-92-1 | Lead | Not detected | 0.003 | 0.0000500 | mg/L | 5 | 05/28/2020 | |
| 7440-41-7 | Beryllium | Not detected | 0.001 | 0.000150 | mg/L | 5 | 05/28/2020 | |
| 7440-48-4 | Cobalt | Not detected | 0.005 | 0.000150 | mg/L | 5 | 05/28/2020 | |
| 7439-93-2 | Lithium | 0.023 | 0.005 | 0.00135 | mg/L | 5 | 05/28/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

Lab Sample ID: S14264.01

Sample Tag: L005063-01 MW-1

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-70-2 | Calcium | 180 | 2.5 | 0.433 | mg/L | 50 | 05/29/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0528A

Instrument ID: PE NEXION 2

Analysis Date: 05/28/20

Analyst: JRH

Lab Sample ID: S14264.02

Sample Tag: L005063-02 MW-2

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-47-3 | Chromium | Not detected | 0.005 | 0.000750 | mg/L | 5 | 05/28/2020 | |
| 7440-42-8 | Boron | 3.38 | 0.04 | 0.00450 | mg/L | 5 | 05/28/2020 | |
| 7440-38-2 | Arsenic | Not detected | 0.002 | 0.000650 | mg/L | 5 | 05/28/2020 | |
| 7782-49-2 | Selenium | Not detected | 0.005 | 0.00190 | mg/L | 5 | 05/28/2020 | |
| 7439-98-7 | Molybdenum | 0.008 | 0.005 | 0.000350 | mg/L | 5 | 05/28/2020 | |
| 7440-43-9 | Cadmium | Not detected | 0.0005 | 0.000100 | mg/L | 5 | 05/28/2020 | |
| 7440-36-0 | Antimony | Not detected | 0.005 | 0.000300 | mg/L | 5 | 05/28/2020 | |
| 7440-39-3 | Barium | 0.043 | 0.005 | 0.000400 | mg/L | 5 | 05/28/2020 | |
| 7440-28-0 | Thallium | Not detected | 0.002 | 0.000100 | mg/L | 5 | 05/28/2020 | |
| 7439-92-1 | Lead | Not detected | 0.003 | 0.0000500 | mg/L | 5 | 05/28/2020 | |
| 7440-41-7 | Beryllium | Not detected | 0.001 | 0.000150 | mg/L | 5 | 05/28/2020 | |
| 7440-48-4 | Cobalt | Not detected | 0.005 | 0.000150 | mg/L | 5 | 05/28/2020 | |
| 7439-93-2 | Lithium | 0.047 | 0.005 | 0.00135 | mg/L | 5 | 05/28/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

Lab Sample ID: S14264.02

Sample Tag: L005063-02 MW-2

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-70-2 | Calcium | 256 | 2.5 | 0.433 | mg/L | 50 | 05/29/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0528A

Instrument ID: PE NEXION 2

Analysis Date: 05/28/20

Analyst: JRH

Lab Sample ID: S14264.03

Sample Tag: L005063-03 MW-4

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-47-3 | Chromium | Not detected | 0.005 | 0.000750 | mg/L | 5 | 05/28/2020 | |
| 7440-42-8 | Boron | 0.06 | 0.04 | 0.00450 | mg/L | 5 | 05/28/2020 | |
| 7440-38-2 | Arsenic | 0.006 | 0.002 | 0.000650 | mg/L | 5 | 05/28/2020 | |
| 7782-49-2 | Selenium | Not detected | 0.005 | 0.00190 | mg/L | 5 | 05/28/2020 | |
| 7439-98-7 | Molybdenum | Not detected | 0.005 | 0.000350 | mg/L | 5 | 05/28/2020 | |
| 7440-43-9 | Cadmium | Not detected | 0.0005 | 0.000100 | mg/L | 5 | 05/28/2020 | |
| 7440-36-0 | Antimony | Not detected | 0.005 | 0.000300 | mg/L | 5 | 05/28/2020 | |
| 7440-39-3 | Barium | 0.165 | 0.005 | 0.000400 | mg/L | 5 | 05/28/2020 | |
| 7440-28-0 | Thallium | Not detected | 0.002 | 0.000100 | mg/L | 5 | 05/28/2020 | |
| 7439-92-1 | Lead | Not detected | 0.003 | 0.0000500 | mg/L | 5 | 05/28/2020 | |
| 7440-41-7 | Beryllium | Not detected | 0.001 | 0.000150 | mg/L | 5 | 05/28/2020 | |
| 7440-48-4 | Cobalt | Not detected | 0.005 | 0.000150 | mg/L | 5 | 05/28/2020 | |
| 7439-93-2 | Lithium | 0.009 | 0.005 | 0.00135 | mg/L | 5 | 05/28/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

Lab Sample ID: S14264.03

Sample Tag: L005063-03 MW-4

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-70-2 | Calcium | 115 | 2.5 | 0.433 | mg/L | 50 | 05/29/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0528A

Instrument ID: PE NEXION 2

Analysis Date: 05/28/20

Analyst: JRH

Lab Sample ID: S14264.04

Sample Tag: L005063-05 MW-5

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-47-3 | Chromium | Not detected | 0.005 | 0.000750 | mg/L | 5 | 05/28/2020 | |
| 7440-42-8 | Boron | 5.19 | 0.04 | 0.00450 | mg/L | 5 | 05/28/2020 | |
| 7440-38-2 | Arsenic | 0.002 | 0.002 | 0.000650 | mg/L | 5 | 05/28/2020 | |
| 7782-49-2 | Selenium | Not detected | 0.005 | 0.00190 | mg/L | 5 | 05/28/2020 | |
| 7439-98-7 | Molybdenum | 0.051 | 0.005 | 0.000350 | mg/L | 5 | 05/28/2020 | |
| 7440-43-9 | Cadmium | Not detected | 0.0005 | 0.000100 | mg/L | 5 | 05/28/2020 | |
| 7440-36-0 | Antimony | Not detected | 0.005 | 0.000300 | mg/L | 5 | 05/28/2020 | |
| 7440-39-3 | Barium | 0.056 | 0.005 | 0.000400 | mg/L | 5 | 05/28/2020 | |
| 7440-28-0 | Thallium | Not detected | 0.002 | 0.000100 | mg/L | 5 | 05/28/2020 | |
| 7439-92-1 | Lead | Not detected | 0.003 | 0.0000500 | mg/L | 5 | 05/28/2020 | |
| 7440-41-7 | Beryllium | Not detected | 0.001 | 0.000150 | mg/L | 5 | 05/28/2020 | |
| 7440-48-4 | Cobalt | Not detected | 0.005 | 0.000150 | mg/L | 5 | 05/28/2020 | |
| 7439-93-2 | Lithium | 0.051 | 0.005 | 0.00135 | mg/L | 5 | 05/28/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

Lab Sample ID: S14264.04

Sample Tag: L005063-05 MW-5

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-70-2 | Calcium | 320 | 2.5 | 0.433 | mg/L | 50 | 05/29/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0528A

Instrument ID: PE NEXION 2

Analysis Date: 05/28/20

Analyst: JRH

Lab Sample ID: S14264.05

Sample Tag: L005063-06 MW-6

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-47-3 | Chromium | Not detected | 0.005 | 0.000750 | mg/L | 5 | 05/28/2020 | |
| 7440-42-8 | Boron | 0.49 | 0.04 | 0.00450 | mg/L | 5 | 05/28/2020 | |
| 7440-38-2 | Arsenic | Not detected | 0.002 | 0.000650 | mg/L | 5 | 05/28/2020 | |
| 7782-49-2 | Selenium | Not detected | 0.005 | 0.00190 | mg/L | 5 | 05/28/2020 | |
| 7439-98-7 | Molybdenum | 0.021 | 0.005 | 0.000350 | mg/L | 5 | 05/28/2020 | |
| 7440-43-9 | Cadmium | Not detected | 0.0005 | 0.000100 | mg/L | 5 | 05/28/2020 | |
| 7440-36-0 | Antimony | Not detected | 0.005 | 0.000300 | mg/L | 5 | 05/28/2020 | |
| 7440-39-3 | Barium | 0.050 | 0.005 | 0.000400 | mg/L | 5 | 05/28/2020 | |
| 7440-28-0 | Thallium | Not detected | 0.002 | 0.000100 | mg/L | 5 | 05/28/2020 | |
| 7439-92-1 | Lead | Not detected | 0.003 | 0.0000500 | mg/L | 5 | 05/28/2020 | |
| 7440-41-7 | Beryllium | Not detected | 0.001 | 0.000150 | mg/L | 5 | 05/28/2020 | |
| 7440-48-4 | Cobalt | Not detected | 0.005 | 0.000150 | mg/L | 5 | 05/28/2020 | |
| 7439-93-2 | Lithium | 0.038 | 0.005 | 0.00135 | mg/L | 5 | 05/28/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

Lab Sample ID: S14264.05

Sample Tag: L005063-06 MW-6

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-70-2 | Calcium | 143 | 2.5 | 0.433 | mg/L | 50 | 05/29/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0528A

Instrument ID: PE NEXION 2

Analysis Date: 05/28/20

Analyst: JRH

Lab Sample ID: S14264.06

Sample Tag: L005063-06 MW-4 Duplicate

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-47-3 | Chromium | Not detected | 0.005 | 0.000750 | mg/L | 5 | 05/28/2020 | |
| 7440-42-8 | Boron | 0.06 | 0.04 | 0.00450 | mg/L | 5 | 05/28/2020 | |
| 7440-38-2 | Arsenic | 0.007 | 0.002 | 0.000650 | mg/L | 5 | 05/28/2020 | |
| 7782-49-2 | Selenium | Not detected | 0.005 | 0.00190 | mg/L | 5 | 05/28/2020 | |
| 7439-98-7 | Molybdenum | 0.005 | 0.005 | 0.000350 | mg/L | 5 | 05/28/2020 | |
| 7440-43-9 | Cadmium | Not detected | 0.0005 | 0.000100 | mg/L | 5 | 05/28/2020 | |
| 7440-36-0 | Antimony | Not detected | 0.005 | 0.000300 | mg/L | 5 | 05/28/2020 | |
| 7440-39-3 | Barium | 0.168 | 0.005 | 0.000400 | mg/L | 5 | 05/28/2020 | |
| 7440-28-0 | Thallium | Not detected | 0.002 | 0.000100 | mg/L | 5 | 05/28/2020 | |
| 7439-92-1 | Lead | Not detected | 0.003 | 0.0000500 | mg/L | 5 | 05/28/2020 | |
| 7440-41-7 | Beryllium | Not detected | 0.001 | 0.000150 | mg/L | 5 | 05/28/2020 | |
| 7440-48-4 | Cobalt | Not detected | 0.005 | 0.000150 | mg/L | 5 | 05/28/2020 | |
| 7439-93-2 | Lithium | 0.009 | 0.005 | 0.00135 | mg/L | 5 | 05/28/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

Lab Sample ID: S14264.06

Sample Tag: L005063-06 MW-4 Duplicate

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-70-2 | Calcium | 114 | 2.5 | 0.433 | mg/L | 50 | 05/29/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0528A

Instrument ID: PE NEXION 2

Analysis Date: 05/28/20

Analyst: JRH

Lab Sample ID: S14264.07

Sample Tag: L005063-07 Field Blank

Date Collected: 05/26/2020

Matrix: Water

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-47-3 | Chromium | Not detected | 0.005 | 0.000750 | mg/L | 5 | 05/28/2020 | |
| 7440-42-8 | Boron | Not detected | 0.04 | 0.00450 | mg/L | 5 | 05/28/2020 | |
| 7440-38-2 | Arsenic | Not detected | 0.002 | 0.000650 | mg/L | 5 | 05/28/2020 | |
| 7782-49-2 | Selenium | Not detected | 0.005 | 0.00190 | mg/L | 5 | 05/28/2020 | |
| 7439-98-7 | Molybdenum | Not detected | 0.005 | 0.000350 | mg/L | 5 | 05/28/2020 | |
| 7440-43-9 | Cadmium | Not detected | 0.0005 | 0.000100 | mg/L | 5 | 05/28/2020 | |
| 7440-36-0 | Antimony | Not detected | 0.005 | 0.000300 | mg/L | 5 | 05/28/2020 | |
| 7440-39-3 | Barium | Not detected | 0.005 | 0.000400 | mg/L | 5 | 05/28/2020 | |
| 7440-28-0 | Thallium | Not detected | 0.002 | 0.000100 | mg/L | 5 | 05/28/2020 | |
| 7439-92-1 | Lead | Not detected | 0.003 | 0.0000500 | mg/L | 5 | 05/28/2020 | |
| 7440-41-7 | Beryllium | Not detected | 0.001 | 0.000150 | mg/L | 5 | 05/28/2020 | |
| 7440-48-4 | Cobalt | Not detected | 0.005 | 0.000150 | mg/L | 5 | 05/28/2020 | |
| 7439-93-2 | Lithium | Not detected | 0.005 | 0.00135 | mg/L | 5 | 05/28/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

Lab Sample ID: S14264.07

Sample Tag: L005063-07 Field Blank

Date Collected: 05/26/2020

Matrix: Water

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-70-2 | Calcium | Not detected | 0.5 | 0.0433 | mg/L | 5 | 05/29/2020 | |

Form 1: Metals Analysis Data Sheet - Flag Description Key

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

Note/Qualifier Key

| | |
|---|---|
| b | Value detected less than reporting limit, but greater than MDL |
| e | Reported value estimated due to interference |
| j | Analyte also found in associated method blank |
| m | Duplicate injection precision not met |
| n | Spiked sample recovery outside control limits |
| s | Reported value determined by the MSA |
| u | Analyte not detected above reporting limit |
| A | TIC is a suspected aldol-condensation product |
| B | Compound also found in associated method blank |
| C | Analyte presence confirmed by GC/MS |
| D | Identified in an analysis at a secondary dilution factor |
| E | Concentration exceeds calibration range |
| J | Estimated value less than reporting limit, but greater than MDL |
| N | Presumptive evidence of TIC |
| P | Pesticide/Aroclor 2-column RPD exceeds limit |
| U | Analyte not detected above reporting limit |
| ! | Result is outside of stated limit criteria |
| F | Analysis run outside of holding time |
| G | Estimated result due to extraction run outside of holding time |
| H | Sample submitted and run outside of holding time |
| I | Matrix interference with internal standard |
| K | Elevated reporting limit due to low total solids |
| L | Elevated reporting limit due to low sample amount |
| M | Result reported to MDL not RDL |
| O | Analysis performed by outside laboratory. See attached report. |
| Q | Reported result represents most abundant aroclor |
| R | Preliminary result |
| S | Surrogate recovery outside of control limits |
| T | No correction for total solids |
| V | Accurate value not available due to presence of multiple aroclors |
| W | Surrogate result not applicable due to sample dilution |
| X | Elevated reporting limit due to matrix interference |
| Y | Elevated reporting limit due to high target concentration |
| Z | Estimated result due to matrix interference |
| a | ASTM prep method F963-11 |
| d | Duplicate analysis not within control limits |
| f | Filtered and preserved in lab |
| i | Incremental sampling |
| p | Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one |
| r | This analyte is being reported as the best result from multiple |
| v | VOCs analyzed outside of holding time based on the measurement of |
| x | Preserved from bulk sample |
| c | Filtered in lab |

Form 2A: Initial and Continuing Calibration Verification

Data Set ID: MT5-20-0528A

Instrument ID: PE NEXION 2

Analysis Date: 05/28/20

Analyst: JRH

| Sample Name | QC Type | Dilute | Element | Sample Conc | Actual Conc | %Rec | LCL/UCL | Units | Matrix |
|--------------|---------|--------|---------|-------------|-------------|------|---------|-------|--------|
| 010 ICV-0.1 | ICV | 1 | Cr | 0.0994 | 0.1 | 99 | 90/110 | mg/L | Liquid |
| | | | Co | 0.0984 | 0.1 | 98 | 90/110 | | |
| | | | As | 0.0999 | 0.1 | 100 | 90/110 | | |
| | | | Mo | 0.0980 | 0.1 | 98 | 90/110 | | |
| | | | Cd | 0.0992 | 0.1 | 99 | 90/110 | | |
| | | | Sb | 0.0949 | 0.1 | 95 | 90/110 | | |
| | | | Ba | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | Tl | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Pb | 0.0970 | 0.1 | 97 | 90/110 | | |
| | | | Li | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | Be | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | B | 0.0956 | 0.1 | 96 | 90/110 | | |
| | | | Se | 0.0974 | 0.1 | 97 | 90/110 | | |
| 011 CCV-0.1 | CCV | 1 | Cr | 0.100 | 0.1 | 100 | 90/110 | mg/L | Liquid |
| | | | Co | 0.0996 | 0.1 | 100 | 90/110 | | |
| | | | As | 0.0975 | 0.1 | 98 | 90/110 | | |
| | | | Mo | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Cd | 0.0973 | 0.1 | 97 | 90/110 | | |
| | | | Sb | 0.0985 | 0.1 | 99 | 90/110 | | |
| | | | Ba | 0.0998 | 0.1 | 100 | 90/110 | | |
| | | | Tl | 0.102 | 0.1 | 102 | 90/110 | | |
| | | | Pb | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | Li | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Be | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | B | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | Se | 0.0951 | 0.1 | 95 | 90/110 | | |
| 039 CCV2-0.1 | CCV | 1 | Cr | 0.101 | 0.1 | 101 | 90/110 | mg/L | Liquid |
| | | | Co | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | As | 0.104 | 0.1 | 104 | 90/110 | | |
| | | | Mo | 0.102 | 0.1 | 102 | 90/110 | | |
| | | | Cd | 0.105 | 0.1 | 105 | 90/110 | | |
| | | | Sb | 0.106 | 0.1 | 106 | 90/110 | | |
| | | | Ba | 0.104 | 0.1 | 104 | 90/110 | | |
| | | | Tl | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Pb | 0.0990 | 0.1 | 99 | 90/110 | | |
| | | | Li | 0.102 | 0.1 | 102 | 90/110 | | |
| | | | Be | 0.105 | 0.1 | 105 | 90/110 | | |
| | | | B | 0.103 | 0.1 | 103 | 90/110 | | |
| | | | Se | 0.102 | 0.1 | 102 | 90/110 | | |

Form 2A: Initial and Continuing Calibration Verification

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

| <i>Sample Name</i> | <i>QC Type</i> | <i>Dilute</i> | <i>Element</i> | <i>Sample Conc</i> | <i>Actual Conc</i> | <i>%Rec</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|--------------------|----------------|---------------|----------------|--------------------|--------------------|-------------|----------------|--------------|---------------|
| 007 CCV-2.0 | CCV | 1 | Na | 2.05 | 2.0 | 103 | 90/110 | mg/L | Liquid |
| | | | Mg | 2.00 | 2.0 | 100 | 90/110 | | |
| | | | K | 2.00 | 2.0 | 100 | 90/110 | | |
| | | | Ca | 2.00 | 2.0 | 100 | 90/110 | | |
| 008 ICV-2.0 | ICV | 1 | Na | 1.99 | 2.0 | 100 | 90/110 | mg/L | Liquid |
| | | | Mg | 2.02 | 2.0 | 101 | 90/110 | | |
| | | | K | 1.97 | 2.0 | 99 | 90/110 | | |
| | | | Ca | 1.98 | 2.0 | 99 | 90/110 | | |
| 033 CCV2-2.0 | CCV | 1 | Na | 2.06 | 2.0 | 103 | 90/110 | mg/L | Liquid |
| | | | Mg | 1.98 | 2.0 | 99 | 90/110 | | |
| | | | K | 2.01 | 2.0 | 101 | 90/110 | | |
| | | | Ca | 2.00 | 2.0 | 100 | 90/110 | | |
| 045 CCV3-2.0 | CCV | 1 | Na | 2.10 | 2.0 | 105 | 90/110 | mg/L | Liquid |
| | | | Mg | 2.10 | 2.0 | 105 | 90/110 | | |
| | | | K | 2.07 | 2.0 | 104 | 90/110 | | |
| | | | Ca | 2.04 | 2.0 | 102 | 90/110 | | |
| 066 CCV3-2.0 | CCV | 1 | Na | 2.06 | 2.0 | 103 | 90/110 | mg/L | Liquid |
| | | | Mg | 2.00 | 2.0 | 100 | 90/110 | | |
| | | | K | 2.01 | 2.0 | 101 | 90/110 | | |
| | | | Ca | 2.01 | 2.0 | 101 | 90/110 | | |
| 085 CCV4-2.0 | CCV | 1 | Na | 2.04 | 2.0 | 102 | 90/110 | mg/L | Liquid |
| | | | Mg | 1.99 | 2.0 | 100 | 90/110 | | |
| | | | K | 2.01 | 2.0 | 101 | 90/110 | | |
| | | | Ca | 1.99 | 2.0 | 100 | 90/110 | | |

Form 3: Blanks

Data Set ID: MT5-20-0528A

Instrument ID: PE NEXION 2

Analysis Date: 05/28/20

Analyst: JRH

| Sample Name | QC Type | Dilute | Element | Sample Conc | Raw Conc | Units | Matrix |
|------------------|---------|--------|---------|-------------|-----------|-------|--------|
| 013 CCB | CCB | 1 | Cr | <0.001 | 0.000004 | mg/L | Liquid |
| | | | Co | <0.001 | 0.000003 | | |
| | | | As | <0.0004 | 0.000105 | | |
| | | | Mo | <0.001 | 0.000470 | | |
| | | | Cd | <0.0001 | -0.000003 | | |
| | | | Sb | <0.001 | 0.000895 | | |
| | | | Ba | <0.001 | -0.000000 | | |
| | | | Tl | <0.0004 | 0.000025 | | |
| | | | Pb | <0.0006 | 0.000011 | | |
| | | | Li | <0.001 | 0.000129 | | |
| | | | Be | <0.0002 | 0.000107 | | |
| | | | B | <0.008 | 0.000242 | | |
| | | | Se | <0.001 | 0.000205 | | |
| 014 ICB | ICB | 1 | Cr | <0.001 | 0.000002 | mg/L | Liquid |
| | | | Co | <0.001 | 0.000001 | | |
| | | | As | <0.0004 | 0.000084 | | |
| | | | Mo | <0.001 | 0.000271 | | |
| | | | Cd | <0.0001 | -0.000004 | | |
| | | | Sb | <0.001 | 0.000568 | | |
| | | | Ba | <0.001 | -0.000001 | | |
| | | | Tl | <0.0004 | 0.000021 | | |
| | | | Pb | <0.0006 | 0.000007 | | |
| | | | Li | <0.001 | -0.000010 | | |
| | | | Be | <0.0002 | 0.000002 | | |
| | | | B | <0.008 | 0.000130 | | |
| | | | Se | <0.001 | -0.000067 | | |
| 021 052820_3 LRB | LRB | 1 | Cr | <0.001 | -0.000004 | mg/L | Liquid |
| | | | Co | <0.001 | -0.000002 | | |
| | | | As | <0.0004 | 0.000084 | | |
| | | | Mo | <0.001 | 0.000833 | | |
| | | | Cd | <0.0001 | 0.000002 | | |
| | | | Sb | <0.001 | 0.000529 | | |
| | | | Ba | <0.001 | 0.000001 | | |
| | | | Tl | <0.0004 | -0.000005 | | |
| | | | Pb | <0.0006 | 0.000004 | | |
| | | | Li | <0.001 | -0.000009 | | |
| | | | Be | <0.0002 | 0.000006 | | |
| | | | B | <0.008 | 0.000104 | | |
| | | | Se | <0.001 | 0.000108 | | |
| 041 CCB2 | CCB | 1 | Cr | <0.001 | 0.000000 | mg/L | Liquid |
| | | | Co | <0.001 | 0.000000 | | |
| | | | As | <0.0004 | 0.000106 | | |
| | | | Mo | <0.001 | 0.000452 | | |
| | | | Cd | <0.0001 | -0.000001 | | |
| | | | Sb | <0.001 | 0.000693 | | |
| | | | Ba | <0.001 | 0.000003 | | |
| | | | Tl | <0.0004 | -0.000002 | | |
| | | | Pb | <0.0006 | 0.000009 | | |
| | | | Li | <0.001 | -0.000001 | | |
| | | | Be | <0.0002 | 0.000000 | | |
| | | | B | <0.008 | 0.000366 | | |
| | | | Se | <0.001 | -0.000087 | | |

Form 3: Blanks

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

| <i>Sample Name</i> | <i>QC Type</i> | <i>Dilute</i> | <i>Element</i> | <i>Sample Conc</i> | <i>Raw Conc</i> | <i>Units</i> | <i>Matrix</i> |
|-------------------------|----------------|---------------|----------------|--------------------|-----------------|--------------|---------------|
| 009 ICB | ICB | 1 | Na | <0.05 | -0.000180 | mg/L | Liquid |
| | | | Mg | <0.05 | -0.000094 | | |
| | | | K | <0.05 | -0.001263 | | |
| | | | Ca | <0.05 | -0.006847 | | |
| 010 CCB | CCB | 1 | Na | <0.05 | -0.000263 | mg/L | Liquid |
| | | | Mg | <0.05 | -0.000097 | | |
| | | | K | <0.05 | -0.002573 | | |
| | | | Ca | <0.05 | -0.004919 | | |
| 013 052820_3 LRB | LRB | 1 | Na | <0.05 | -0.000197 | mg/L | Liquid |
| | | | Mg | <0.05 | -0.000057 | | |
| | | | K | <0.05 | -0.001478 | | |
| | | | Ca | <0.05 | -0.005164 | | |
| 034 CCB2 | CCB | 1 | Na | <0.05 | 0.015869 | mg/L | Liquid |
| | | | Mg | <0.05 | 0.001040 | | |
| | | | K | <0.05 | 0.005266 | | |
| | | | Ca | <0.05 | -0.001005 | | |
| 036 052920_2 LRB | LRB | 1 | Na | <0.05 | 0.005651 | mg/L | Liquid |
| | | | Mg | <0.05 | 0.002628 | | |
| | | | K | <0.05 | 0.005085 | | |
| | | | Ca | <0.05 | -0.000622 | | |
| 046 CCB3 | CCB | 1 | Na | <0.05 | 0.015976 | mg/L | Liquid |
| | | | Mg | <0.05 | 0.000376 | | |
| | | | K | <0.05 | 0.006687 | | |
| | | | Ca | <0.05 | -0.010878 | | |
| 067 CCB3 | CCB | 1 | Na | <0.05 | 0.015716 | mg/L | Liquid |
| | | | Mg | <0.05 | 0.000053 | | |
| | | | K | <0.05 | 0.004709 | | |
| | | | Ca | <0.05 | -0.009173 | | |
| 086 CCB4 | CCB | 1 | Na | <0.05 | 0.015840 | mg/L | Liquid |
| | | | Mg | <0.05 | 0.000268 | | |
| | | | K | <0.05 | 0.004726 | | |
| | | | Ca | <0.05 | -0.005521 | | |

Form 4B: ICP Interference Check Sample

Data Set ID: MT5-20-0528A

Instrument ID: PE NEXION 2

Analysis Date: 05/28/20

Analyst: JRH

| <i>Sample Name</i> | <i>QC Type</i> | <i>Dilute</i> | <i>Element</i> | <i>Sample Conc</i> | <i>Actual Conc</i> | <i>%Rec</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|--------------------|----------------|---------------|----------------|--------------------|--------------------|-------------|----------------|--------------|---------------|
| 017 Solu-AB | AB | 1 | Cr | 0.0223 | 0.02 | 112 | 65/135 | mg/L | Liquid |
| | | | Co | 0.0224 | 0.02 | 112 | 65/135 | | |
| | | | As | 0.0226 | 0.02 | 113 | 65/135 | | |
| | | | Mo | 0.217 | 0.20 | 109 | 65/135 | | |
| | | | Cd | 0.0216 | 0.02 | 108 | 65/135 | | |
| 018 Solu-AA | AA | 1 | Cr | <0.005 | 0.0 | N/A | N/A | mg/L | Liquid |
| | | | Co | <0.005 | 0.0 | N/A | N/A | | |
| | | | As | <0.002 | 0.0 | N/A | N/A | | |
| | | | Cd | <0.0005 | 0.0 | N/A | N/A | | |
| | | | Sb | <0.005 | 0.0 | N/A | N/A | | |
| | | | Ba | <0.005 | 0.0 | N/A | N/A | | |
| | | | Tl | <0.002 | 0.0 | N/A | N/A | | |
| | | | Pb | <0.003 | 0.0 | N/A | N/A | | |
| | | | Li | <0.010 | 0.0 | N/A | N/A | | |
| | | | Be | <0.001 | 0.0 | N/A | N/A | | |
| | | | B | <0.04 | 0.0 | N/A | N/A | | |
| | | | Se | <0.005 | 0.0 | N/A | N/A | | |

Form 5A: Matrix Spike Sample Recovery

Data Set ID: MT5-20-0528A

Instrument ID: PE NEXION 2

Analysis Date: 05/28/20

Analyst: JRH

| <i>Spike Name</i> | <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Spike Conc</i> | <i>Sample Conc</i> | <i>Spike Amount</i> | <i>%Rec</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|----------------------|----------------------|---------------|---------------------|-------------------|--------------------|---------------------|-------------|----------------|--------------|---------------|
| 015 BS-0.0001 | | 1 | Cr | 0.00011 | ND | 0.0001 | 110 | 70/130 | mg/L | Liquid |
| | | | Co | 0.00010 | ND | 0.0001 | 100 | 70/130 | | |
| | | | Cd | 0.00009 | ND | 0.0001 | 90 | 70/130 | | |
| | | | Ba | 0.00009 | ND | 0.0001 | 90 | 70/130 | | |
| | | | Tl | 0.00010 | ND | 0.0001 | 100 | 70/130 | | |
| | | | Pb | 0.00010 | ND | 0.0001 | 100 | 70/130 | | |
| | | | Li | 0.00011 | ND | 0.0001 | 110 | 70/130 | | |
| | | | Be | 0.00010 | ND | 0.0001 | 100 | 70/130 | | |
| | | | B | 0.00011 | ND | 0.0001 | 110 | 70/130 | | |
| | | | Se | 0.00011 | ND | 0.0001 | 110 | 70/130 | | |
| 016 BS-0.0005 | | 1 | Cr | 0.00054 | ND | 0.0005 | 108 | 70/130 | mg/L | Liquid |
| | | | Co | 0.00052 | ND | 0.0005 | 104 | 70/130 | | |
| | | | As | 0.00053 | ND | 0.0005 | 106 | 70/130 | | |
| | | | Mo | 0.00063 | ND | 0.0005 | 126 | 70/130 | | |
| | | | Cd | 0.00050 | ND | 0.0005 | 100 | 70/130 | | |
| | | | Ba | 0.00053 | ND | 0.0005 | 106 | 70/130 | | |
| | | | Tl | 0.00053 | ND | 0.0005 | 106 | 70/130 | | |
| | | | Pb | 0.00049 | ND | 0.0005 | 98 | 70/130 | | |
| | | | Li | 0.00054 | ND | 0.0005 | 108 | 70/130 | | |
| | | | Be | 0.00050 | ND | 0.0005 | 100 | 70/130 | | |
| | | | B | 0.00051 | ND | 0.0005 | 102 | 70/130 | | |
| | | | Se | 0.00052 | ND | 0.0005 | 104 | 70/130 | | |
| | | | 022 BS-0.001 | | 1 | Cr | 0.00105 | ND | | |
| Co | 0.00103 | ND | | | | 0.001 | 103 | 70/130 | | |
| As | 0.00106 | ND | | | | 0.001 | 106 | 70/130 | | |
| Mo | 0.00118 | ND | | | | 0.001 | 118 | 70/130 | | |
| Cd | 0.00100 | ND | | | | 0.001 | 100 | 70/130 | | |
| Sb | 0.00128 | ND | | | | 0.001 | 128 | 70/130 | | |
| Ba | 0.00098 | ND | | | | 0.001 | 98 | 70/130 | | |
| Tl | 0.00107 | ND | | | | 0.001 | 107 | 70/130 | | |
| Pb | 0.00102 | ND | | | | 0.001 | 102 | 70/130 | | |
| Li | 0.00104 | ND | | | | 0.001 | 104 | 70/130 | | |
| Be | 0.00100 | ND | | | | 0.001 | 100 | 70/130 | | |
| B | 0.00098 | ND | | | | 0.001 | 98 | 70/130 | | |
| Se | 0.00090 | ND | | | | 0.001 | 90 | 70/130 | | |
| 037 14264.07 | 036 14264.07s | 5 | Cr | 0.244 | <0.005 | 0.25 | 98 | 75/125 | mg/L | Liquid |
| | | | Co | 0.242 | <0.005 | 0.25 | 97 | 75/125 | | |
| | | | As | 0.245 | <0.002 | 0.25 | 98 | 75/125 | | |
| | | | Mo | 0.231 | <0.005 | 0.25 | 92 | 75/125 | | |
| | | | Cd | 0.250 | <0.0005 | 0.25 | 100 | 75/125 | | |
| | | | Sb | 0.237 | <0.005 | 0.25 | 95 | 75/125 | | |
| | | | Ba | 0.254 | <0.005 | 0.25 | 102 | 75/125 | | |
| | | | Tl | 0.252 | <0.002 | 0.25 | 101 | 75/125 | | |
| | | | Pb | 0.242 | <0.003 | 0.25 | 97 | 75/125 | | |
| | | | Li | 0.259 | <0.005 | 0.25 | 104 | 75/125 | | |
| | | | Be | 0.256 | <0.001 | 0.25 | 102 | 75/125 | | |
| | | | B | 0.256 | <0.04 | 0.25 | 102 | 75/125 | | |
| | | | Se | 0.243 | <0.005 | 0.25 | 97 | 75/125 | | |

Form 5A: Matrix Spike Sample Recovery

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

| <i>Spike Name</i> | <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Spike Conc</i> | <i>Sample Conc</i> | <i>Spike Amount</i> | <i>%Rec</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|--|--------------------|---------------|----------------|-------------------|--------------------|---------------------|-------------|----------------|--------------|---------------|
| 011 BS-0.05 | | 1 | Na | 0.0508 | ND | 0.05 | 102 | 70/130 | mg/L | Liquid |
| | | | Mg | 0.0494 | ND | 0.05 | 99 | 70/130 | | |
| | | | K | 0.0482 | ND | 0.05 | 96 | 70/130 | | |
| | | | Ca | 0.0414 | ND | 0.05 | 83 | 70/130 | | |
| 031 14278.01 MS-2.0 030 14278.01s | | 50 | Na | 147 | 48.1 | 100.0 | 99 | 75/125 | mg/L | Liquid |
| | | | Mg | 117 | 17.1 | 100.0 | 100 | 75/125 | | |
| | | | K | 110 | 10.5 | 100.0 | 100 | 75/125 | | |
| | | | Ca | 191 | 89.0 | 100.0 | 102 | 75/125 | | |
| 064 14316.02 MS-2.0 063 14316.02s | | 50 | Na | 262 | 177 | 100.0 | 85 | 75/125 | mg/L | Liquid |
| | | | Mg | 118 | 21.6 | 100.0 | 96 | 75/125 | | |
| | | | K | 104 | 6.73 | 100.0 | 97 | 75/125 | | |
| | | | Ca | 199 | 100 | 100.0 | 99 | 75/125 | | |
| 083 14317.03 MS-2.0 080 14317.03s | | 50 | Na | 112 | 13.0 | 100.0 | 99 | 75/125 | mg/L | Liquid |
| | | | Mg | 120 | 20.7 | 100.0 | 99 | 75/125 | | |
| | | | K | 107 | 7.17 | 100.0 | 100 | 75/125 | | |
| | | | Ca | 193 | 96.2 | 100.0 | 97 | 75/125 | | |

Form 5B: Matrix Spike Duplicate Evaluation

Data Set ID: MT5-20-0528A

Instrument ID: PE NEXION 2

Analysis Date: 05/28/20

Analyst: JRH

| <i>Duplicate Name</i> | <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Dup Conc</i> | <i>Samp Conc</i> | <i>%RPD</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|-----------------------|----------------------|---------------|----------------|-----------------|------------------|-------------|----------------|--------------|---------------|
| 038 14264.07 MSD | 037 14264.07 MS-0.05 | 5 | Cr | 0.249 | 0.244 | 2 | 0/20 | mg/L | Liquid |
| | | | Co | 0.250 | 0.242 | 3 | 0/20 | | |
| | | | As | 0.251 | 0.245 | 2 | 0/20 | | |
| | | | Mo | 0.249 | 0.231 | 8 | 0/20 | | |
| | | | Cd | 0.255 | 0.250 | 2 | 0/20 | | |
| | | | Sb | 0.247 | 0.237 | 4 | 0/20 | | |
| | | | Ba | 0.252 | 0.254 | 1 | 0/20 | | |
| | | | Tl | 0.261 | 0.252 | 4 | 0/20 | | |
| | | | Pb | 0.250 | 0.242 | 3 | 0/20 | | |
| | | | Li | 0.259 | 0.259 | 0 | 0/20 | | |
| | | | Be | 0.252 | 0.256 | 2 | 0/20 | | |
| | | | B | 0.255 | 0.256 | 0 | 0/20 | | |
| | | | Se | 0.243 | 0.243 | 0 | 0/20 | | |

Form 5B: Matrix Spike Duplicate Evaluation

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

| <i>Duplicate Name</i> | <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Dup Conc</i> | <i>Samp Conc</i> | <i>%RPD</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|-----------------------|---------------------|---------------|----------------|-----------------|------------------|-------------|----------------|--------------|---------------|
| 032 14278.01 MSD | 031 14278.01 MS-2.0 | 50 | Na | 149 | 147 | 1 | 0/20 | mg/L | Liquid |
| | | | Mg | 118 | 117 | 1 | 0/20 | | |
| | | | K | 110 | 110 | 0 | 0/20 | | |
| | | | Ca | 189 | 191 | 1 | 0/20 | | |
| 065 14316.02 MSD | 064 14316.02 MS-2.0 | 50 | Na | 270 | 262 | 3 | 0/20 | mg/L | Liquid |
| | | | Mg | 122 | 118 | 3 | 0/20 | | |
| | | | K | 109 | 104 | 5 | 0/20 | | |
| | | | Ca | 204 | 199 | 2 | 0/20 | | |
| 084 14317.03 MSD | 083 14317.03 MS-2.0 | 50 | Na | 116 | 112 | 4 | 0/20 | mg/L | Liquid |
| | | | Mg | 122 | 120 | 2 | 0/20 | | |
| | | | K | 107 | 107 | 0 | 0/20 | | |
| | | | Ca | 200 | 193 | 4 | 0/20 | | |

Form 7: Laboratory Control Sample

Data Set ID: MT5-20-0528A

Instrument ID: PE NEXION 2

Analysis Date: 05/28/20

Analyst: JRH

| <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Sample Conc</i> | <i>Actual Conc</i> | <i>%Rec</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|-----------------------|---------------|----------------|--------------------|--------------------|-------------|----------------|--------------|---------------|
| 019 052820_3 LCS-0.05 | 1 | Cr | 0.0500 | 0.05 | 100 | 85/115 | mg/L | Liquid |
| | | Co | 0.0506 | 0.05 | 101 | 85/115 | | |
| | | As | 0.0495 | 0.05 | 99 | 85/115 | | |
| | | Mo | 0.0489 | 0.05 | 98 | 85/115 | | |
| | | Cd | 0.0503 | 0.05 | 101 | 85/115 | | |
| | | Sb | 0.0458 | 0.05 | 92 | 85/115 | | |
| | | Ba | 0.0494 | 0.05 | 99 | 85/115 | | |
| | | Tl | 0.0502 | 0.05 | 100 | 85/115 | | |
| | | Pb | 0.0485 | 0.05 | 97 | 85/115 | | |
| | | Li | 0.0472 | 0.05 | 94 | 85/115 | | |
| | | Be | 0.0483 | 0.05 | 97 | 85/115 | | |
| | | B | 0.0478 | 0.05 | 96 | 85/115 | | |
| | | Se | 0.0483 | 0.05 | 97 | 85/115 | | |

Form 7: Laboratory Control Sample

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

| <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Sample Conc</i> | <i>Actual Conc</i> | <i>%Rec</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|----------------------|---------------|----------------|--------------------|--------------------|-------------|----------------|--------------|---------------|
| 012 052820_3 LCS-1.0 | 1 | Na | 1.01 | 1.0 | 101 | 85/115 | mg/L | Liquid |
| | | Mg | 1.00 | 1.0 | 100 | 85/115 | | |
| | | K | 0.994 | 1.0 | 99 | 85/115 | | |
| | | Ca | 1.02 | 1.0 | 102 | 85/115 | | |
| 035 052920_2 LCS-1.0 | 1 | Na | 1.04 | 1.0 | 104 | 85/115 | mg/L | Liquid |
| | | Mg | 1.00 | 1.0 | 100 | 85/115 | | |
| | | K | 1.00 | 1.0 | 100 | 85/115 | | |
| | | Ca | 1.04 | 1.0 | 104 | 85/115 | | |

Form 8: Serial Dilutions

Data Set ID: MT5-20-0528A

Instrument ID: PE NEXION 2

Analysis Date: 05/28/20

Analyst: JRH

| <i>Duplicate Name</i> | <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Dup Conc</i> | <i>Samp Conc</i> | <i>%D</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|-----------------------|--------------------|---------------|----------------|-----------------|------------------|-----------|----------------|--------------|---------------|
| 033 14264.04s | 032 14264.04s | 5 | Cr | <0.005 | <0.005 | NC | 0/10 | mg/L | Liquid |
| | | | Co | <0.005 | <0.005 | NC | 0/10 | | |
| | | | As | 0.002 | 0.002 | 0 | 0/10 | | |
| | | | Mo | 0.052 | 0.051 | 2 | 0/10 | | |
| | | | Cd | <0.0005 | <0.0005 | NC | 0/10 | | |
| | | | Sb | <0.005 | <0.005 | NC | 0/10 | | |
| | | | Ba | 0.055 | 0.056 | 2 | 0/10 | | |
| | | | Tl | <0.002 | <0.002 | NC | 0/10 | | |
| | | | Pb | <0.003 | <0.003 | NC | 0/10 | | |
| | | | Li | 0.049 | 0.051 | 4 | 0/10 | | |
| | | | Be | <0.001 | <0.001 | NC | 0/10 | | |
| | | | B | 5.31 | 5.19 | 2 | 0/10 | | |
| | | | Se | <0.005 | <0.005 | NC | 0/10 | | |

Form 8: Serial Dilutions

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

| <i>Duplicate Name</i> | <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Dup Conc</i> | <i>Samp Conc</i> | <i>%D</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|-----------------------|--------------------|---------------|----------------|-----------------|------------------|-----------|----------------|--------------|---------------|
| 018 14264.01 dil | 017 14264.01s | 5 | Na | 41.0 | 41.5 | 1 | 0/10 | mg/L | Liquid |
| | | | Mg | 51.1 | 51.0 | 0 | 0/10 | | |
| | | | K | 1.74 | <2.5 | NC | 0/10 | | |
| | | | Ca | 170 | 180 | 6 | 0/10 | | |
| 037 14279.01 dil | 038 14279.01s diss | 10 | Na | 8.95 | 8.92 | 0 | 0/10 | mg/L | Liquid |
| | | | Mg | 22.3 | 22.2 | 0 | 0/10 | | |
| | | | K | 2.64 | 2.49 | 6 | 0/10 | | |
| | | | Ca | 110 | 107 | 3 | 0/10 | | |
| 070 14316.03s | 072 14316.03s | 50 | Na | 238 | 230 | 3 | 0/10 | mg/L | Liquid |
| | | | Mg | 23.9 | 23.5 | 2 | 0/10 | | |
| | | | Ca | 123 | 125 | 2 | 0/10 | | |

Form 13: Analysis Run Log

Data Set ID: MT5-20-0528A

Instrument ID: PE NEXION 2

Analysis Date: 05/28/20

Analyst: JRH

| <i>Filename</i> | <i>Run Time</i> | <i>Matrix</i> | <i>Analytes</i> |
|-----------------------|-----------------|---------------|---|
| 001 Blank | 18:26:15 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 002 Std-0.0001 | 18:28:29 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 003 Std-0.0005 | 18:30:43 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 004 Std-0.001 | 18:32:57 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 005 Std-0.005 | 18:35:11 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 006 Std-0.02 | 18:37:26 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 007 Std-0.05 | 18:39:40 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 008 Std-0.2 | 18:41:54 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 009 rinse | 18:44:23 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 010 ICV-0.1 | 19:06:40 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 011 CCV-0.1 | 19:11:03 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 012 rinse | 19:13:54 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 013 CCB | 19:18:23 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 014 ICB | 19:21:13 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 015 BS-0.0001 | 19:23:28 Thu | Liquid | B, Ba, Be, Cd, Co, Cr, Li, Pb, Se, Tl |
| 016 BS-0.0005 | 19:25:42 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Se, Tl |
| 017 Solu-AB | 19:30:30 Thu | Liquid | As, Cd, Co, Cr, Mo |
| 018 Solu-AA | 19:32:45 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Pb, Sb, Se, Tl |
| 019 052820_3 LCS-0.05 | 19:37:35 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 020 Rinse | 19:39:49 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 021 052820_3 LRB | 19:42:04 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 022 BS-0.001 | 19:52:04 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 023 14291.01 dil | 19:55:15 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 024 14291.01s | 19:57:49 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 025 Rinse | 20:00:03 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 026 14291.02s | 20:02:45 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 027 14291.02s | 20:11:40 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 028 14291.03s | 20:13:54 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 029 14264.01s | 20:16:08 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 030 14264.02s | 20:18:22 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 031 14264.03s | 20:20:35 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 032 14264.04s | 20:22:49 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 033 14264.04s | 20:25:05 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 034 14264.05s | 20:27:19 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 035 14264.06s | 20:29:33 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 036 14264.07s | 20:31:47 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 037 14264.07 MS-0.05 | 20:34:01 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 038 14264.07 MSD | 20:36:15 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 039 CCV2-0.1 | 20:39:55 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 040 Rinse | 20:42:46 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |
| 041 CCB2 | 20:47:15 Thu | Liquid | As, B, Ba, Be, Cd, Co, Cr, Li, Mo, Pb, Sb, Se, Tl |

Form 13: Analysis Run Log

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

| <i>Filename</i> | <i>Run Time</i> | <i>Matrix</i> | <i>Analytes</i> |
|-----------------------|-----------------|---------------|-----------------|
| 001 Blank | 12:22:49 Fri | Liquid | Ca, K, Mg, Na |
| 002 Std-0.20 | 12:24:01 Fri | Liquid | Ca, K, Mg, Na |
| 003 Std-0.50 | 12:25:13 Fri | Liquid | Ca, K, Mg, Na |
| 004 Std-1.0 | 12:26:25 Fri | Liquid | Ca, K, Mg, Na |
| 005 Std-2.0 | 12:27:37 Fri | Liquid | Ca, K, Mg, Na |
| 006 Std-5.0 | 12:28:48 Fri | Liquid | Ca, K, Mg, Na |
| 007 CCV-2.0 | 12:31:11 Fri | Liquid | Ca, K, Mg, Na |
| 008 ICV-2.0 | 12:35:56 Fri | Liquid | Ca, K, Mg, Na |
| 009 ICB | 12:37:08 Fri | Liquid | Ca, K, Mg, Na |
| 010 CCB | 12:38:20 Fri | Liquid | Ca, K, Mg, Na |
| 011 BS-0.05 | 12:39:31 Fri | Liquid | Ca, K, Mg, Na |
| 012 052820_3 LCS-1.0 | 12:46:09 Fri | Liquid | Ca, K, Mg, Na |
| 013 052820_3 LRB | 12:47:21 Fri | Liquid | Ca, K, Mg, Na |
| 014 14250.01s | 12:48:32 Fri | Liquid | Ca, K, Mg, Na |
| 015 rinse | 12:57:01 Fri | Liquid | Ca, K, Mg, Na |
| 016 14264.07s | 12:58:13 Fri | Liquid | Ca, K, Mg, Na |
| 017 14264.01s | 13:05:07 Fri | Liquid | Ca, K, Mg, Na |
| 018 14264.01 dil | 13:08:03 Fri | Liquid | Ca, K, Mg, Na |
| 019 rinse | 13:09:14 Fri | Liquid | Ca, K, Mg, Na |
| 020 14264.02s | 13:10:25 Fri | Liquid | Ca, K, Mg, Na |
| 021 rinse | 13:11:37 Fri | Liquid | Ca, K, Mg, Na |
| 022 14264.03s | 13:12:48 Fri | Liquid | Ca, K, Mg, Na |
| 023 rinse | 13:14:00 Fri | Liquid | Ca, K, Mg, Na |
| 024 14264.04s | 13:15:11 Fri | Liquid | Ca, K, Mg, Na |
| 025 rinse | 13:16:22 Fri | Liquid | Ca, K, Mg, Na |
| 026 14264.05s | 13:17:34 Fri | Liquid | Ca, K, Mg, Na |
| 027 rinse | 13:18:46 Fri | Liquid | Ca, K, Mg, Na |
| 028 14264.06s | 13:19:57 Fri | Liquid | Ca, K, Mg, Na |
| 029 rinse | 13:21:09 Fri | Liquid | Ca, K, Mg, Na |
| 030 14278.01s | 13:22:20 Fri | Liquid | Ca, K, Mg, Na |
| 031 14278.01 MS-2.0 | 13:23:31 Fri | Liquid | Ca, K, Mg, Na |
| 032 14278.01 MSD | 13:24:42 Fri | Liquid | Ca, K, Mg, Na |
| 033 CCV2-2.0 | 13:35:34 Fri | Liquid | Ca, K, Mg, Na |
| 034 CCB2 | 13:36:46 Fri | Liquid | Ca, K, Mg, Na |
| 035 052920_2 LCS-1.0 | 13:40:58 Fri | Liquid | Ca, K, Mg, Na |
| 036 052920_2 LRB | 13:42:10 Fri | Liquid | Ca, K, Mg, Na |
| 037 14279.01 dil diss | 13:44:19 Fri | Liquid | Ca, K, Mg, Na |
| 038 14279.01s diss | 13:45:29 Fri | Liquid | Ca, K, Mg, Na |
| 039 rinse | 13:46:41 Fri | Liquid | Ca, K, Mg, Na |
| 040 14279.02s diss | 13:47:53 Fri | Liquid | Ca, K, Mg, Na |
| 041 rinse | 13:49:04 Fri | Liquid | Ca, K, Mg, Na |
| 042 14279.03s diss | 13:50:16 Fri | Liquid | Ca, K, Mg, Na |
| 043 rinse | 13:51:27 Fri | Liquid | Ca, K, Mg, Na |
| 044 14279.04s diss | 13:52:39 Fri | Liquid | Ca, K, Mg, Na |
| 045 CCV3-2.0 | 13:53:50 Fri | Liquid | Ca, K, Mg, Na |
| 046 CCB3 | 13:55:02 Fri | Liquid | Ca, K, Mg, Na |
| 047 14313.01s | 14:18:53 Fri | Liquid | Ca, K, Mg, Na |
| 048 rinse | 14:20:04 Fri | Liquid | Ca, K, Mg, Na |
| 049 14314.01s | 14:21:15 Fri | Liquid | Ca, K, Mg, Na |
| 050 rinse | 14:22:27 Fri | Liquid | Ca, K, Mg, Na |
| 051 14315.01s | 14:23:38 Fri | Liquid | Ca, K, Mg, Na |
| 052 rinse | 14:24:50 Fri | Liquid | Ca, K, Mg, Na |
| 053 14315.02s | 14:26:00 Fri | Liquid | Ca, K, Mg, Na |
| 054 rinse | 14:27:12 Fri | Liquid | Ca, K, Mg, Na |
| 055 14315.03s | 14:28:23 Fri | Liquid | Ca, K, Mg, Na |
| 056 rins | 14:29:35 Fri | Liquid | Ca, K, Mg, Na |

Form 13: Analysis Run Log

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

| <i>Filename</i> | <i>Run Time</i> | <i>Matrix</i> | <i>Analytes</i> |
|---------------------|-----------------|---------------|-----------------|
| 057 14315.04s | 14:30:46 Fri | Liquid | Ca,K,Mg,Na |
| 058 rinse | 14:31:57 Fri | Liquid | Ca,K,Mg,Na |
| 059 14315.05s | 14:33:08 Fri | Liquid | Ca,K,Mg,Na |
| 060 rinse | 14:34:20 Fri | Liquid | Ca,K,Mg,Na |
| 061 14315.06s | 14:35:30 Fri | Liquid | Ca,K,Mg,Na |
| 062 rinse | 14:36:42 Fri | Liquid | Ca,K,Mg,Na |
| 063 14316.02s | 14:37:52 Fri | Liquid | Ca,K,Mg,Na |
| 064 14316.02 MS-2.0 | 14:39:03 Fri | Liquid | Ca,K,Mg,Na |
| 065 14316.02 MSD | 14:40:13 Fri | Liquid | Ca,K,Mg,Na |
| 066 CCV3-2.0 | 14:44:11 Fri | Liquid | Ca,K,Mg,Na |
| 067 CCB3 | 14:45:23 Fri | Liquid | Ca,K,Mg,Na |
| 068 14316.01s | 14:46:43 Fri | Liquid | Ca,K,Mg,Na |
| 069 rinse | 14:47:55 Fri | Liquid | Ca,K,Mg,Na |
| 070 14316.03s | 14:49:05 Fri | Liquid | Ca,Mg,Na |
| 071 rinse | 14:50:16 Fri | Liquid | Ca,K,Mg,Na |
| 072 14316.03s | 14:51:51 Fri | Liquid | Ca,K,Mg,Na |
| 073 rinse | 14:53:03 Fri | Liquid | Ca,K,Mg,Na |
| 074 14316.04s | 14:54:14 Fri | Liquid | Ca,K,Mg,Na |
| 075 rinse | 14:55:26 Fri | Liquid | Ca,K,Mg,Na |
| 076 14317.01s | 14:56:37 Fri | Liquid | Ca,K,Mg,Na |
| 077 rinse | 14:57:49 Fri | Liquid | Ca,K,Mg,Na |
| 078 14317.02s | 14:58:59 Fri | Liquid | Ca,K,Mg,Na |
| 079 rinse | 15:00:11 Fri | Liquid | Ca,K,Mg,Na |
| 080 14317.03s | 15:01:22 Fri | Liquid | Ca,K,Mg,Na |
| 081 rinse | 15:02:33 Fri | Liquid | Ca,K,Mg,Na |
| 082 14330.01s | 15:03:44 Fri | Liquid | Ca,K,Mg,Na |
| 083 14317.03 MS-2.0 | 15:04:54 Fri | Liquid | Ca,K,Mg,Na |
| 084 14317.03 MSD | 15:06:05 Fri | Liquid | Ca,K,Mg,Na |
| 085 CCV4-2.0 | 15:07:17 Fri | Liquid | Ca,K,Mg,Na |
| 086 CCB4 | 15:09:12 Fri | Liquid | Ca,K,Mg,Na |

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\Tune 2018\daily Optimiza

Start Time: 5/28/2020 3:24:47 PM

End Time: 5/28/2020 3:34:45 PM

Torch Alignment - [Passed]

| | |
|-------------|-----------|
| Vertical: | 2.09 mm |
| Horizontal: | -0.28 mm |
| Intensity: | 154920.48 |

[STD/KED] Nebulizer Gas Flow - [Passed] Optimum value(s): 1.06

Obtained Intensity (In 115): 150779.53

Obtained Formula (CeO 156 / Ce 140): 0.0196 (=2425.21 / 123719.42)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A

Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.719)

Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.705)

Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.717)

Target/Obtained mass (207.977/208.025), Target/Obtained resolution (0.7/0.706)

Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.707)

[KED] QID - Optimum value(s): Correlation Coefficient = 0.995; Intercept = -14.93

[STD/DRC] QID - Optimum value(s): Correlation Coefficient = 0.997; Intercept = -17.97

[STD] Performance Check - [Passed] Optimum value(s): N/A

Obtained Intensity (Be 9): 14558.55

Obtained Intensity (In 115): 145251.32

Obtained Intensity (U 238): 198311.28

Obtained Intensity (Bkgd 220): 0.20

Obtained Formula (Ce++ 70 / Ce 140): 0.022 (=2486.02 / 115500.87)

Obtained Formula (CeO 156 / Ce 140): 0.020 (=2256.24 / 115500.87)

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\Tune 2018\daily Optimiza

Optimization Status

Start Time: 5/28/2020 3:24:47 PM

Torch Alignment

Optimization Settings:

Method: Torch Alignment.mth.
Intensity Criterion: In 115 Maximum

Optimization Results:

[Passed]

Vertical: 2.09 mm
Horizontal: -0.28 mm
Intensity: 154920.48

[STD/KED] Nebulizer Gas Flow

Optimization Settings:

Method: Optimize.mth.
Initial Try - Start/End/Step: 0.9/1.2/0.02.
Intensity Criterion: In 115 Maximum
Formula Criterion: CeO 156 / Ce 140 <= 0.025

Optimization Results:

Initial Try

Obtained Intensity (In 115): 150779.53
Obtained Formula (CeO 156 / Ce 140): 0.0196 (=2425.21 / 123719.42)

[Passed] Optimum value(s): 1.06

Mass Calibration and Resolution

Optimization Settings:

Method: Tuning.mth.
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\defaultNEW.tun
Iterations: 6
Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution
Peak height (%) for Res. Opt.: 10

Optimization Results:

Initial Try

Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.705)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.706)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.709)
Target/Obtained mass (207.977/207.925), Target/Obtained resolution (0.7/0.706) - <Target not ac
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.699)
[Failed]

Retry 1

Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.719)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.705)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.717)
Target/Obtained mass (207.977/208.025), Target/Obtained resolution (0.7/0.706)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.707)

[Passed] Optimum value(s): N/A

[KED] QID

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.995; Intercept = -14.93

| Analyte | Mass | Points | DAC | MaxIntensity |
|---------|------|--------|-------|--------------|
| Li | 7 | 41 | -15.5 | 47864 |
| Mg | 24 | 41 | -16.5 | 131668 |
| In | 115 | 41 | -13.5 | 206879 |
| Ce | 140 | 41 | -13 | 138189 |
| Pb | 208 | 41 | -11.5 | 62259.4 |
| U | 238 | 41 | -11 | 140544 |

[STD/DRC] QID

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.997; Intercept = -17.97

| Analyte | Mass | Points | DAC | MaxIntensity |
|---------|------|--------|-------|--------------|
| Li | 7 | 41 | -17 | 69376 |
| Mg | 24 | 41 | -15 | 105867 |
| In | 115 | 41 | -12.5 | 151754 |
| Ce | 140 | 41 | -11 | 117243 |
| Pb | 208 | 41 | -8 | 95063.2 |
| U | 238 | 41 | -7.5 | 205191 |

[STD] Performance Check

Optimization Settings:

Method: STD Performance Check.mth.

Intensity Criterion: Be 9 > 4000

Intensity Criterion: In 115 > 40000

Intensity Criterion: U 238 > 35000

Intensity Criterion: Bkgd 220 <= 1

Formula Criterion: Ce++ 70 / Ce 140 <= 0.05

Formula Criterion: CeO 156 / Ce 140 <= 0.025

Optimization Results:

Initial Try

Obtained Intensity (Be 9): 14558.55

Obtained Intensity (In 115): 145251.32

Obtained Intensity (U 238): 198311.28

Obtained Intensity (Bkgd 220): 0.20

Obtained Formula (Ce++ 70 / Ce 140): 0.022 (=2486.02 / 115500.87)

Obtained Formula (CeO 156 / Ce 140): 0.020 (=2256.24 / 115500.87)

[Passed] Optimum value(s): N/A

End Time: 5/28/2020 3:34:45 PM

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\wizard\SmartTune\Tune 2018\daily Optimiza

Start Time: 5/29/2020 11:55:14 AM

End Time: 5/29/2020 12:04:30 PM

Torch Alignment - [Passed]

| | |
|-------------|-----------|
| Vertical: | 1.96 mm |
| Horizontal: | -0.01 mm |
| Intensity: | 141662.93 |

[STD/KED] Nebulizer Gas Flow - [Passed] Optimum value(s): 1.06

Obtained Intensity (In 115): 143477.91

Obtained Formula (CeO 156 / Ce 140): 0.0183 (=2194.17 / 120018.04)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A

Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.721)

Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.693)

Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.706)

Target/Obtained mass (207.977/207.975), Target/Obtained resolution (0.7/0.699)

Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.700)

[KED] QID - Optimum value(s): Correlation Coefficient = 0.998; Intercept = -15.82

[STD/DRC] QID - Optimum value(s): Correlation Coefficient = 0.991; Intercept = -17.31

[STD] Performance Check - [Passed] Optimum value(s): N/A

Obtained Intensity (Be 9): 13996.45

Obtained Intensity (In 115): 144000.94

Obtained Intensity (U 238): 187311.67

Obtained Intensity (Bkgd 220): 0.23

Obtained Formula (Ce++ 70 / Ce 140): 0.023 (=2590.30 / 112795.08)

Obtained Formula (CeO 156 / Ce 140): 0.019 (=2104.76 / 112795.08)

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\wizard\SmartTune\Tune 2018\daily Optimiza

Optimization Status

Start Time: 5/29/2020 11:55:14 AM

Torch Alignment

Optimization Settings:

Method: Torch Alignment.mth.
Intensity Criterion: In 115 Maximum

Optimization Results:

[Passed]

Vertical: 1.96 mm
Horizontal: -0.01 mm
Intensity: 141662.93

[STD/KED] Nebulizer Gas Flow

Optimization Settings:

Method: Optimize.mth.
Initial Try - Start/End/Step: 0.9/1.2/0.02.
Intensity Criterion: In 115 Maximum
Formula Criterion: CeO 156 / Ce 140 <= 0.025

Optimization Results:

Initial Try

Obtained Intensity (In 115): 143477.91
Obtained Formula (CeO 156 / Ce 140): 0.0183 (=2194.17 / 120018.04)

[Passed] Optimum value(s): 1.06

Mass Calibration and Resolution

Optimization Settings:

Method: Tuning.mth.
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\defaultNEW.tun
Iterations: 6
Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution
Peak height (%) for Res. Opt.: 10

Optimization Results:

Initial Try

Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.721)
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.693)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.706)
Target/Obtained mass (207.977/207.975), Target/Obtained resolution (0.7/0.699)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.700)

[Passed] Optimum value(s): N/A

[KED] QID

Optimization Settings:

Method: QID Calibration.mth.
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.998; Intercept = -15.82

| Analyte | Mass | Points | DAC | MaxIntensity |
|---------|------|--------|-------|--------------|
| Li | 7 | 41 | -16 | 45251.6 |
| Mg | 24 | 41 | -16 | 142168 |
| In | 115 | 41 | -13.5 | 184366 |
| Ce | 140 | 41 | -12.5 | 127664 |
| Pb | 208 | 41 | -11.5 | 61990.2 |
| U | 238 | 41 | -11 | 133598 |

[STD/DRC] QID

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.991; Intercept = -17.31

| Analyte | Mass | Points | DAC | MaxIntensity |
|---------|------|--------|-------|--------------|
| Li | 7 | 41 | -16.5 | 65252.7 |
| Mg | 24 | 41 | -15.5 | 106524 |
| In | 115 | 41 | -11.5 | 146705 |
| Ce | 140 | 41 | -11.5 | 115473 |
| Pb | 208 | 41 | -8 | 91206.2 |
| U | 238 | 41 | -8 | 194057 |

[STD] Performance Check

Optimization Settings:

Method: STD Performance Check.mth.

Intensity Criterion: Be 9 > 4000

Intensity Criterion: In 115 > 40000

Intensity Criterion: U 238 > 35000

Intensity Criterion: Bkgd 220 <= 1

Formula Criterion: Ce++ 70 / Ce 140 <= 0.05

Formula Criterion: CeO 156 / Ce 140 <= 0.025

Optimization Results:

Initial Try

Obtained Intensity (Be 9): 13996.45

Obtained Intensity (In 115): 144000.94

Obtained Intensity (U 238): 187311.67

Obtained Intensity (Bkgd 220): 0.23

Obtained Formula (Ce++ 70 / Ce 140): 0.023 (=2590.30 / 112795.08)

Obtained Formula (CeO 156 / Ce 140): 0.019 (=2104.76 / 112795.08)

[Passed] Optimum value(s): N/A

End Time: 5/29/2020 12:04:30 PM

Form 15: Internal Standards Summary

IS Check Reference Sample: 001 Blank

Data Set ID: MT5-20-0528A

Instrument ID: PE NEXION 2

Analysis Date: 05/28/20

Analyst: JRH

| Element | Count | non-ICB/CCB/ICV/CCV | | ICB/CCB/ICV/CCV | | Flags |
|---------|--------|---------------------|----------------|-----------------|----------------|-------|
| | | LCL-UCL | Accept.Range | LCL-UCL | Accept.Range | |
| Rh | 308374 | 70-125 | 215862-385468 | 80-120 | 246699-370049 | 2 |
| Re | 212533 | 70-125 | 148773-265666 | 80-120 | 170026-255040 | 2 |
| Rh-1 | 948742 | 70-125 | 664119-1185928 | 80-120 | 758994-1138490 | 2 |

| Seq ID | QC Type | Rh | Re | Rh-1 |
|--------|----------------|-------|-------|-------|
| 001 | | 100 | 100 | 100 |
| 002 | | 103 | 104 | 101 |
| 003 | | 101 | 102 | 102 |
| 004 | | 100 | 102 | 100 |
| 005 | | 101 | 101 | 100 |
| 006 | | 100 | 102 | 101 |
| 007 | | 99 | 101 | 103 |
| 008 | | 99 | 99 | 99 |
| 009 | | 114 | 111 | 113 |
| 010 | ICV | 99 | 103 | 100 |
| 011 | CCV | 100 | 102 | 99 |
| 012 | | 99 | 102 | 101 |
| 013 | CCB | 98 | 100 | 98 |
| 014 | ICB | 98 | 99 | 100 |
| 015 | BS | 99 | 102 | 102 |
| 016 | BS | 99 | 102 | 99 |
| 017 | AB | 92 | 101 | 97 |
| 018 | AA | 93 | 102 | 99 |
| 019 | LCS | 99 | 103 | 103 |
| 020 | | 98 | 102 | 101 |
| 021 | LRB | 99 | 100 | 101 |
| 022 | BS | 101 | 102 | 100 |
| 023 | DIL | 81 | 91 | 83 |
| 024 | S | 54*** | 62*** | 55*** |
| 025 | | 100 | 102 | 101 |
| 026 | S | 55*** | 63*** | 56*** |
| 027 | S | 80 | 93 | 83 |
| 028 | S | 79 | 92 | 79 |
| 029 | S | 93 | 102 | 93 |
| 030 | S | 91 | 100 | 92 |
| 031 | S | 94 | 101 | 95 |
| 032 | S | 86 | 98 | 88 |
| 033 | S | 93 | 101 | 95 |
| 034 | S | 91 | 103 | 94 |
| 035 | S | 92 | 99 | 95 |
| 036 | S | 98 | 102 | 98 |
| 037 | MS | 97 | 104 | 97 |
| 038 | MSD | 96 | 101 | 98 |
| 039 | CCV | 93 | 101 | 95 |
| 040 | Page 76 of 264 | 101 | 101 | 95 |

Form 15: Internal Standards Summary

IS Check Reference Sample: 001 Blank

Data Set ID: MT5-20-0528A

Instrument ID: PE NEXION 2

Analysis Date: 05/28/20

Analyst: JRH

| Element | Count | non-ICB/CCB/ICV/CCV | | ICB/CCB/ICV/CCV | | Flags |
|---------|--------|---------------------|----------------|-----------------|----------------|-------|
| | | LCL-UCL | Accept.Range | LCL-UCL | Accept.Range | |
| Rh | 308374 | 70-125 | 215862-385468 | 80-120 | 246699-370049 | 2 |
| Re | 212533 | 70-125 | 148773-265666 | 80-120 | 170026-255040 | 2 |
| Rh-1 | 948742 | 70-125 | 664119-1185928 | 80-120 | 758994-1138490 | 2 |

| Seq ID | QC Type | Rh | Re | Rh-1 |
|--------|---------|----|-----|------|
| 041 | CCB | 99 | 101 | 99 |

Form 15: Internal Standards Summary

IS Check Reference Sample: 001 Blank

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

| Element | Count | non-ICB/CCB/ICV/CCV | | ICB/CCB/ICV/CCV | | Flags |
|---------|-------|---------------------|--------------|-----------------|--------------|-------|
| | | LCL-UCL | Accept.Range | LCL-UCL | Accept.Range | |
| Rh | 12908 | 70-125 | 9036-16135 | 80-120 | 10326-15490 | 0 |

| Seq ID | QC Type | Rh |
|--------|-----------------|-----|
| 001 | | 100 |
| 002 | | 103 |
| 003 | | 105 |
| 004 | | 102 |
| 005 | | 102 |
| 006 | | 103 |
| 007 | CCV | 104 |
| 008 | ICV | 102 |
| 009 | ICB | 101 |
| 010 | CCB | 104 |
| 011 | BS | 105 |
| 012 | LCS | 103 |
| 013 | LRB | 103 |
| 014 | S | 102 |
| 015 | | 104 |
| 016 | S | 104 |
| 017 | S | 101 |
| 018 | DIL | 104 |
| 019 | | 105 |
| 020 | S | 105 |
| 021 | | 102 |
| 022 | S | 104 |
| 023 | | 104 |
| 024 | S | 103 |
| 025 | | 102 |
| 026 | S | 105 |
| 027 | | 103 |
| 028 | S | 104 |
| 029 | | 102 |
| 030 | S | 101 |
| 031 | MS | 102 |
| 032 | MSD | 104 |
| 033 | CCV | 103 |
| 034 | CCB | 103 |
| 035 | LCS | 104 |
| 036 | LRB | 102 |
| 037 | DIL | 104 |
| 038 | S | 104 |
| 039 | | 104 |
| 040 | SPage 78 of 264 | |

Form 15: Internal Standards Summary

IS Check Reference Sample: 001 Blank

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

| Element | Count | non-ICB/CCB/ICV/CCV | | ICB/CCB/ICV/CCV | | Flags |
|---------|-------|---------------------|--------------|-----------------|--------------|-------|
| | | LCL-UCL | Accept.Range | LCL-UCL | Accept.Range | |
| Rh | 12908 | 70-125 | 9036-16135 | 80-120 | 10326-15490 | 0 |

| Seq ID | QC Type | Rh |
|--------|-----------------|-----|
| 041 | | 105 |
| 042 | S | 106 |
| 043 | | 106 |
| 044 | S | 103 |
| 045 | CCV | 103 |
| 046 | CCB | 103 |
| 047 | S | 105 |
| 048 | | 104 |
| 049 | S | 102 |
| 050 | | 105 |
| 051 | S | 106 |
| 052 | | 105 |
| 053 | S | 101 |
| 054 | | 104 |
| 055 | S | 106 |
| 056 | | 104 |
| 057 | S | 105 |
| 058 | | 103 |
| 059 | S | 105 |
| 060 | | 105 |
| 061 | S | 104 |
| 062 | | 105 |
| 063 | S | 104 |
| 064 | MS | 105 |
| 065 | MSD | 102 |
| 066 | CCV | 105 |
| 067 | CCB | 103 |
| 068 | S | 103 |
| 069 | | 105 |
| 070 | DIL | 106 |
| 071 | | 103 |
| 072 | S | 103 |
| 073 | | 106 |
| 074 | S | 103 |
| 075 | | 106 |
| 076 | S | 105 |
| 077 | | 104 |
| 078 | S | 100 |
| 079 | | 104 |
| 080 | SPage 79 of 264 | |

Form 15: Internal Standards Summary

IS Check Reference Sample: 001 Blank

Data Set ID: MT5-20-0529A

Instrument ID: PE NEXION 2

Analysis Date: 05/29/20

Analyst: JRH

| Element | Count | non-ICB/CCB/ICV/CCV | | ICB/CCB/ICV/CCV | | Flags |
|---------|-------|---------------------|--------------|-----------------|--------------|-------|
| | | LCL-UCL | Accept.Range | LCL-UCL | Accept.Range | |
| Rh | 12908 | 70-125 | 9036-16135 | 80-120 | 10326-15490 | 0 |

| Seq ID | QC Type | Rh |
|--------|---------|-----|
| 081 | | 103 |
| 082 | S | 103 |
| 083 | MS | 105 |
| 084 | MSD | 102 |
| 085 | CCV | 103 |
| 086 | CCB | 103 |

Form 9

Analysis Date varies
 Analytical Method 6020A/6020/200.8
 Digestion Date varies
 Spiked Value varies (ug/L)
 Estimated Limit varies (ug/L)

| Element/Mass | Date | Spike (ug/l) | MDL (ug/l) | Prep Batch |
|--------------|-----------|--------------|------------|--------------|
| Al-27 | 4/9/2012 | 0.50 | 0.189 | MTD-040212-1 |
| Sb-121 | 3/20/2012 | 1.00 | 0.105 | MTD-032012-3 |
| As-75 | 3/20/2012 | 0.05 | 0.032 | MTD-032012-2 |
| Ba-137 | 3/20/2012 | 0.50 | 0.202 | MTD-032012-2 |
| Be-9 | 4/10/2012 | 0.10 | 0.079 | MTD-041012-1 |
| B-10 | 3/20/2012 | 1.00 | 0.589 | MTD-032012-3 |
| B-11 | 3/20/2012 | 1.00 | 0.277 | MTD-032012-3 |
| Cd-111 | 3/20/2012 | 0.05 | 0.038 | MTD-032012-2 |
| Cd-114 | 3/20/2012 | 0.10 | 0.030 | MTD-032012-2 |
| Cr-52 | 3/20/2012 | 0.10 | 0.023 | MTD-032012-2 |
| Cr-53 | 3/20/2012 | 0.10 | 0.054 | MTD-032012-2 |
| Co-59 | 3/20/2012 | 0.10 | 0.035 | MTD-032012-2 |
| Cu-65 | 3/20/2012 | 0.50 | 0.068 | MTD-032012-2 |
| Fe-56 | 4/9/2012 | 2.00 | 0.470 | MTD-040912-1 |
| Fe-57 | 4/9/2012 | 2.00 | 0.824 | MTD-040912-1 |
| Pb-208 | 3/20/2012 | 0.10 | 0.052 | MTD-032012-2 |
| Li-7 | 3/20/2012 | 1.00 | 0.166 | MTD-032012-3 |
| Mn-55 | 3/20/2012 | 0.10 | 0.187 | MTD-032012-2 |
| Mo-95 | 4/9/2012 | 0.50 | 0.442 | MTD-040212-1 |
| Ni-60 | 4/13/2012 | 0.10 | 0.035 | MTD-041012-1 |
| Se-78 | 3/20/2012 | 0.10 | 0.058 | MTD-032012-2 |
| Se-82 | 3/20/2012 | 0.50 | 0.475 | MTD-032012-2 |
| Ag-107 | 3/20/2012 | 0.10 | 0.025 | MTD-032012-2 |
| Sr-88 | 3/20/2012 | 0.10 | 0.016 | MTD-032012-2 |
| Tl-205 | 4/9/2012 | 0.50 | 0.089 | MTD-040212-1 |
| Sn-118 | 3/20/2012 | 0.10 | 0.079 | MTD-032012-2 |
| Ti-47 | 3/20/2012 | 0.50 | 0.124 | MTD-032012-2 |
| V-51 | 3/20/2012 | 0.05 | 0.018 | MTD-032012-2 |
| Zn-66 | 4/9/2012 | 2.00 | 0.366 | MTD-040912-1 |

| Element/Mass | Date | Spike (mg/l) | MDL (mg/l) | Prep Batch |
|--------------|-----------|--------------|------------|--------------|
| Ca-43 | 4/16/2012 | 0.01 | 0.0101 | MTD-041012-4 |
| Ca-44 | 4/16/2012 | 0.01 | 0.0041 | MTD-041012-4 |
| Mg-24 | 4/16/2012 | 0.01 | 0.0006 | MTD-041012-4 |
| K-39 | 4/16/2012 | 0.01 | 0.0030 | MTD-041012-4 |
| Na-23 | 4/16/2012 | 0.10 | 0.0101 | MTD-041012-4 |

Linear Range June 2012

| | | Prep Batch | Run Batch |
|--------------|--------|-------------------|------------------|
| Aluminum | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Antimony | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Arsenic | 1.0ppm | MTD-061912-5 | MT3-12-0619C |
| Barium | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Boron-10 | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Boron-11 | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Beryllium | 2.0ppm | MTD-061912-5 | MT3-12-0619C |
| Cadmium-111 | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Cadmium-114 | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Chromium | 2.0ppm | MTD-061912-5 | MT3-12-0619C |
| Cobalt | 2.0ppm | MTD-061912-5 | MT3-12-0619C |
| Copper | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Iron-56 | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Iron-57 | 2.0ppm | MTD-061912-5 | MT3-12-0619C |
| Lead | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Lithium | 2.0ppm | MTD-061912-5 | MT3-12-0619C |
| Manganese | 1.0ppm | MTD-061912-5 | MT3-12-0619C |
| Molybdenum | 1.0ppm | MTD-061912-5 | MT3-12-0619C |
| Nickel | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Selenium-78 | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Selenium-82 | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Silver | 1.0ppm | MTD-061912-5 | MT3-12-0619C |
| Strontium-86 | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Thallium | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Tin | 1.0ppm | MTD-061912-5 | MT3-12-0619C |
| Titanium | 1.0ppm | MTD-061912-5 | MT3-12-0619C |
| Vanadium | 1.0ppm | MTD-061912-5 | MT3-12-0619C |
| Zinc | 2.0ppm | MTD-061912-5 | MT3-12-0619C |

| | | | |
|--------------|-------|--------------|--------------|
| Sodium-23 | 50ppm | MTD-061912-5 | MT3-12-0619B |
| Magnesium-24 | 50ppm | MTD-061912-5 | MT3-12-0619B |
| Potassium-39 | 50ppm | MTD-061912-5 | MT3-12-0619B |
| Calcium-43 | 50ppm | MTD-061912-5 | MT3-12-0619B |
| Calcium-44 | 50ppm | MTD-061912-5 | MT3-12-0619B |

Maximum spiking levels are instated to ensure the safety and longevity of the instrument. Any sample results above this level result in extended wash runs and sample dilution.

Metals Quantitation Summary Report

Sequence #: 001
Method: 15-BWL.mth
Acq Time: 18:26:15 Thu 28-May-20
Sample Name: Blank
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-------|-------|-----|
| Cr | 52 | 224.446 | 0 | mg/L | 3 |
| Co | 59 | 27.778 | 0 | mg/L | 3 |
| As | 75 | 5.667 | 0 | mg/L | 3 |
| Mo | 95 | 274.447 | 0 | mg/L | 3 |
| Cd | 111 | 10.000 | 0 | mg/L | 3 |
| Sb | 121 | 322.226 | 0 | mg/L | 3 |
| Ba | 137 | 16.667 | 0 | mg/L | 3 |
| Tl | 205 | 207.779 | 0 | mg/L | 3 |
| Pb | 208 | 418.112 | 0 | mg/L | 3 |
| Li | 7 | 3597.120 | 0 | mg/L | 3 |
| Be | 9 | 0.000 | 0 | mg/L | 3 |
| B | 11 | 342.004 | 0 | mg/L | 3 |
| Se | 78 | 3138.432 | 0 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 002
Method: 15-BWL.mth
Acq Time: 18:28:29 Thu 28-May-20
Sample Name: Std-0.0001
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|----------|---------------|-------|-------|-----|
| Cr | 52 | 665.571 | 0.000110 | mg/L | | 3 |
| Co | 59 | 852.248 | 0.000092 | mg/L | | 3 |
| As | 75 | 35.667 | 0.000091 | mg/L | | 3 |
| Mo | 95 | 456.674 | 0.000063 | mg/L | | 3 |
| Cd | 111 | 123.334 | 0.000083 | mg/L | | 3 |
| Sb | 121 | 603.346 | 0.000104 | mg/L | | 3 |
| Ba | 137 | 183.335 | 0.000102 | mg/L | | 3 |
| Tl | 205 | 1884.569 | 0.000096 | mg/L | | 3 |
| Pb | 208 | 2062.625 | 0.000087 | mg/L | | 3 |
| Li | 7 | 4295.092 | 0.000145 | mg/L | | 3 |
| Be | 9 | 128.667 | 0.000105 | mg/L | | 3 |
| B | 11 | 404.672 | 0.000050 | mg/L | | 3 |
| Se | 78 | 3203.529 | 0.000052 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 003
Method: 15-BWL.mth
Acq Time: 18:30:43 Thu 28-May-20
Sample Name: Std-0.0005
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 2237.953 | 0.000518 | mg/L | 3 |
| Co | 59 | 4535.165 | 0.000515 | mg/L | 3 |
| As | 75 | 159.334 | 0.000478 | mg/L | 3 |
| Mo | 95 | 1468.965 | 0.000437 | mg/L | 3 |
| Cd | 111 | 680.016 | 0.000501 | mg/L | 3 |
| Sb | 121 | 1780.111 | 0.000568 | mg/L | 3 |
| Ba | 137 | 798.911 | 0.000489 | mg/L | 3 |
| Tl | 205 | 9361.957 | 0.000536 | mg/L | 3 |
| Pb | 208 | 9390.919 | 0.000487 | mg/L | 3 |
| Li | 7 | 6095.745 | 0.000535 | mg/L | 3 |
| Be | 9 | 653.348 | 0.000529 | mg/L | 3 |
| B | 11 | 939.364 | 0.000507 | mg/L | 3 |
| Se | 78 | 3459.347 | 0.000475 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 004
Method: 15-BWL.mth
Acq Time: 18:32:57 Thu 28-May-20
Sample Name: Std-0.001
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 4272.862 | 0.001052 | mg/L | 3 |
| Co | 59 | 9371.962 | 0.001078 | mg/L | 3 |
| As | 75 | 324.004 | 0.000998 | mg/L | 3 |
| Mo | 95 | 2769.159 | 0.000923 | mg/L | 3 |
| Cd | 111 | 1334.507 | 0.000998 | mg/L | 3 |
| Sb | 121 | 3289.268 | 0.001168 | mg/L | 3 |
| Ba | 137 | 1833.451 | 0.001144 | mg/L | 3 |
| Tl | 205 | 18669.974 | 0.001083 | mg/L | 3 |
| Pb | 208 | 19119.679 | 0.001017 | mg/L | 3 |
| Li | 7 | 8453.613 | 0.001089 | mg/L | 3 |
| Be | 9 | 1283.391 | 0.001061 | mg/L | 3 |
| B | 11 | 1458.074 | 0.000977 | mg/L | 3 |
| Se | 78 | 3665.488 | 0.000979 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 005
Method: 15-BWL.mth
Acq Time: 18:35:11 Thu 28-May-20
Sample Name: Std-0.005
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|-----------|---------------|-------|-------|-----|
| Cr | 52 | 20371.181 | 0.005199 | mg/L | | 3 |
| Co | 59 | 44784.541 | 0.005127 | mg/L | | 3 |
| As | 75 | 1615.425 | 0.005015 | mg/L | | 3 |
| Mo | 95 | 12730.115 | 0.004578 | mg/L | | 3 |
| Cd | 111 | 6905.002 | 0.005162 | mg/L | | 3 |
| Sb | 121 | 15410.539 | 0.005898 | mg/L | | 3 |
| Ba | 137 | 8084.509 | 0.005047 | mg/L | | 3 |
| Tl | 205 | 90163.676 | 0.005337 | mg/L | | 3 |
| Pb | 208 | 92478.321 | 0.005062 | mg/L | | 3 |
| Li | 7 | 26835.182 | 0.005187 | mg/L | | 3 |
| Be | 9 | 6391.430 | 0.005260 | mg/L | | 3 |
| B | 11 | 6374.088 | 0.005259 | mg/L | | 3 |
| Se | 78 | 5868.842 | 0.005028 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 006
Method: 15-BWL.mth
Acq Time: 18:37:26 Thu 28-May-20
Sample Name: Std-0.02
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 77720.845 | 0.020131 | mg/L | 3 |
| Co | 59 | 175389.074 | 0.020219 | mg/L | 3 |
| As | 75 | 6191.008 | 0.019396 | mg/L | 3 |
| Mo | 95 | 51992.235 | 0.019134 | mg/L | 3 |
| Cd | 111 | 25627.419 | 0.019299 | mg/L | 3 |
| Sb | 121 | 48732.981 | 0.019047 | mg/L | 3 |
| Ba | 137 | 32483.566 | 0.020442 | mg/L | 3 |
| Tl | 205 | 345008.925 | 0.020253 | mg/L | 3 |
| Pb | 208 | 361097.244 | 0.019633 | mg/L | 3 |
| Li | 7 | 94285.845 | 0.020037 | mg/L | 3 |
| Be | 9 | 24482.301 | 0.019943 | mg/L | 3 |
| B | 11 | 23170.111 | 0.019704 | mg/L | 3 |
| Se | 78 | 13064.755 | 0.018094 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 007
Method: 15-BWL.mth
Acq Time: 18:39:40 Thu 28-May-20
Sample Name: Std-0.05
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 195746.968 | 0.051308 | mg/L | 3 |
| Co | 59 | 437138.866 | 0.050912 | mg/L | 3 |
| As | 75 | 15461.697 | 0.048974 | mg/L | 3 |
| Mo | 95 | 133434.747 | 0.049779 | mg/L | 3 |
| Cd | 111 | 63899.304 | 0.048636 | mg/L | 3 |
| Sb | 121 | 123790.713 | 0.049087 | mg/L | 3 |
| Ba | 137 | 80407.903 | 0.051138 | mg/L | 3 |
| Tl | 205 | 862992.983 | 0.051366 | mg/L | 3 |
| Pb | 208 | 901138.134 | 0.049712 | mg/L | 3 |
| Li | 7 | 237128.766 | 0.050769 | mg/L | 3 |
| Be | 9 | 61062.954 | 0.048944 | mg/L | 3 |
| B | 11 | 59000.936 | 0.049801 | mg/L | 3 |
| Se | 78 | 28836.929 | 0.046115 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 008
Method: 15-BWL.mth
Acq Time: 18:41:54 Thu 28-May-20
Sample Name: Std-0.2
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 763888.565 | 0.199655 | mg/L | 3 |
| Co | 59 | 1721244.709 | 0.199747 | mg/L | 3 |
| As | 75 | 63470.367 | 0.200317 | mg/L | 3 |
| Mo | 95 | 537793.646 | 0.200153 | mg/L | 3 |
| Cd | 111 | 264246.899 | 0.200407 | mg/L | 3 |
| Sb | 121 | 506127.558 | 0.200300 | mg/L | 3 |
| Ba | 137 | 315107.398 | 0.199669 | mg/L | 3 |
| Tl | 205 | 3289804.331 | 0.199625 | mg/L | 3 |
| Pb | 208 | 3558467.737 | 0.200107 | mg/L | 3 |
| Li | 7 | 889594.236 | 0.199799 | mg/L | 3 |
| Be | 9 | 241041.287 | 0.200263 | mg/L | 3 |
| B | 11 | 227614.553 | 0.200073 | mg/L | 3 |
| Se | 78 | 110826.790 | 0.201161 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 009
Method: 15-BWL.mth
Acq Time: 18:44:23 Thu 28-May-20
Sample Name: rinse
Sample Type: Sample
Matrix: Liquid
Comments: Spex-std made 05/27/
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Cr | 52 | 700.039 | 0.000106 | mg/L | 3 |
| Co | 59 | 1244.589 | 0.000127 | mg/L | 3 |
| As | 75 | 215.668 | 0.000581 | mg/L | 3 |
| Mo | 95 | 7580.929 | 0.002371 | mg/L | 3 |
| Cd | 111 | 154.446 | 0.000098 | mg/L | 3 |
| Sb | 121 | 5775.614 | 0.001877 | mg/L | 3 |
| Ba | 137 | 110.001 | 0.000052 | mg/L | 3 |
| Tl | 205 | 2480.352 | 0.000130 | mg/L | 3 |
| Pb | 208 | 3630.783 | 0.000171 | mg/L | 3 |
| Li | 7 | 4120.628 | 0.000055 | mg/L | 3 |
| Be | 9 | 6.667 | 0.000006 | mg/L | 3 |
| B | 11 | 347.338 | -0.000022 | mg/L | 3 |
| Se | 78 | 3276.684 | 0.000037 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 010
Method: 15-BWL.mth
Acq Time: 19:06:40 Thu 28-May-20
Sample Name: ICV-0.1
Sample Type: Sample
Matrix: Liquid
Comments: Spex-std made 05/27/
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 380007.387 | 0.099498 | mg/L | 3 |
| Co | 59 | 846561.228 | 0.098433 | mg/L | 3 |
| As | 75 | 31600.581 | 0.099932 | mg/L | 3 |
| Mo | 95 | 263154.121 | 0.098085 | mg/L | 3 |
| Cd | 111 | 130616.689 | 0.099265 | mg/L | 3 |
| Sb | 121 | 239665.301 | 0.094983 | mg/L | 3 |
| Ba | 137 | 158011.557 | 0.100326 | mg/L | 3 |
| Tl | 205 | 1737532.032 | 0.101763 | mg/L | 3 |
| Pb | 208 | 1787568.200 | 0.097024 | mg/L | 3 |
| Li | 7 | 451560.318 | 0.100470 | mg/L | 3 |
| Be | 9 | 121152.295 | 0.100115 | mg/L | 3 |
| B | 11 | 109596.331 | 0.095690 | mg/L | 3 |
| Se | 78 | 55567.895 | 0.097416 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 011
Method: 15-BWL.mth
Acq Time: 19:11:03 Thu 28-May-20
Sample Name: CCV-0.1
Sample Type: Sample
Matrix: Liquid
Comments: IV-std made 05/27/20
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 386693.351 | 0.100616 | mg/L | 3 |
| Co | 59 | 862012.650 | 0.099608 | mg/L | 3 |
| As | 75 | 31045.030 | 0.097547 | mg/L | 3 |
| Mo | 95 | 272981.545 | 0.101106 | mg/L | 3 |
| Cd | 111 | 128910.212 | 0.097335 | mg/L | 3 |
| Sb | 121 | 250318.646 | 0.098572 | mg/L | 3 |
| Ba | 137 | 158306.103 | 0.099876 | mg/L | 3 |
| Tl | 205 | 1745840.057 | 0.102838 | mg/L | 3 |
| Pb | 208 | 1832363.352 | 0.100010 | mg/L | 3 |
| Li | 7 | 451786.712 | 0.101563 | mg/L | 3 |
| Be | 9 | 120599.681 | 0.100686 | mg/L | 3 |
| B | 11 | 113593.552 | 0.100174 | mg/L | 3 |
| Se | 78 | 53798.647 | 0.095109 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 012
Method: 15-BWL.mth
Acq Time: 19:13:54 Thu 28-May-20
Sample Name: rinse
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 270.003 | 0.000013 | mg/L | 3 |
| Co | 59 | 62.222 | 0.000004 | mg/L | 3 |
| As | 75 | 110.000 | 0.000331 | mg/L | 3 |
| Mo | 95 | 4699.663 | 0.001655 | mg/L | 3 |
| Cd | 111 | 10.000 | 0.000000 | mg/L | 3 |
| Sb | 121 | 6388.097 | 0.002413 | mg/L | 3 |
| Ba | 137 | 22.222 | 0.000004 | mg/L | 3 |
| Tl | 205 | 1905.683 | 0.000100 | mg/L | 3 |
| Pb | 208 | 1040.348 | 0.000033 | mg/L | 3 |
| Li | 7 | 3629.352 | 0.000003 | mg/L | 3 |
| Be | 9 | 43.333 | 0.000036 | mg/L | 3 |
| B | 11 | 733.352 | 0.000339 | mg/L | 3 |
| Se | 78 | 3494.375 | 0.000621 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 013
Method: 15-BWL.mth
Acq Time: 19:18:23 Thu 28-May-20
Sample Name: CCB
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Cr | 52 | 233.335 | 0.000004 | mg/L | 3 |
| Co | 59 | 52.222 | 0.000003 | mg/L | 3 |
| As | 75 | 38.333 | 0.000105 | mg/L | 3 |
| Mo | 95 | 1510.080 | 0.000470 | mg/L | 3 |
| Cd | 111 | 6.667 | -0.000003 | mg/L | 3 |
| Sb | 121 | 2536.892 | 0.000895 | mg/L | 3 |
| Ba | 137 | 15.556 | -0.000000 | mg/L | 3 |
| Tl | 205 | 622.236 | 0.000025 | mg/L | 3 |
| Pb | 208 | 610.337 | 0.000011 | mg/L | 3 |
| Li | 7 | 4085.036 | 0.000129 | mg/L | 3 |
| Be | 9 | 126.668 | 0.000107 | mg/L | 3 |
| B | 11 | 604.013 | 0.000242 | mg/L | 3 |
| Se | 78 | 3179.281 | 0.000205 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 014
Method: 15-BWL.mth
Acq Time: 19:21:13 Thu 28-May-20
Sample Name: ICB
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Cr | 52 | 226.668 | 0.000002 | mg/L | 3 |
| Co | 59 | 35.556 | 0.000001 | mg/L | 3 |
| As | 75 | 32.000 | 0.000084 | mg/L | 3 |
| Mo | 95 | 992.257 | 0.000271 | mg/L | 3 |
| Cd | 111 | 4.444 | -0.000004 | mg/L | 3 |
| Sb | 121 | 1738.995 | 0.000568 | mg/L | 3 |
| Ba | 137 | 15.556 | -0.000001 | mg/L | 3 |
| Tl | 205 | 552.233 | 0.000021 | mg/L | 3 |
| Pb | 208 | 539.224 | 0.000007 | mg/L | 3 |
| Li | 7 | 3564.889 | -0.000010 | mg/L | 3 |
| Be | 9 | 2.667 | 0.000002 | mg/L | 3 |
| B | 11 | 492.675 | 0.000130 | mg/L | 3 |
| Se | 78 | 3114.944 | -0.000067 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 015
Method: 15-BWL.mth
Acq Time: 19:23:28 Thu 28-May-20
Sample Name: BS-0.0001
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|----------|---------------|-------|-------|-----|
| Cr | 52 | 647.793 | 0.000112 | mg/L | | 3 |
| Co | 59 | 915.585 | 0.000104 | mg/L | | 3 |
| Cd | 111 | 131.112 | 0.000093 | mg/L | | 3 |
| Ba | 137 | 150.001 | 0.000085 | mg/L | | 3 |
| Tl | 205 | 1942.355 | 0.000102 | mg/L | | 3 |
| Pb | 208 | 2279.309 | 0.000101 | mg/L | | 3 |
| Li | 7 | 4156.162 | 0.000110 | mg/L | | 3 |
| Be | 9 | 118.000 | 0.000096 | mg/L | | 3 |
| B | 11 | 475.341 | 0.000110 | mg/L | | 3 |
| Se | 78 | 3247.760 | 0.000107 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 016
Method: 15-BWL.mth
Acq Time: 19:25:42 Thu 28-May-20
Sample Name: BS-0.0005
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 2293.518 | 0.000541 | mg/L | 3 |
| Co | 59 | 4521.827 | 0.000521 | mg/L | 3 |
| As | 75 | 174.334 | 0.000532 | mg/L | 3 |
| Mo | 95 | 1966.802 | 0.000630 | mg/L | 3 |
| Cd | 111 | 674.460 | 0.000504 | mg/L | 3 |
| Ba | 137 | 855.581 | 0.000531 | mg/L | 3 |
| Tl | 205 | 9168.498 | 0.000527 | mg/L | 3 |
| Pb | 208 | 9472.051 | 0.000494 | mg/L | 3 |
| Li | 7 | 5961.245 | 0.000537 | mg/L | 3 |
| Be | 9 | 602.013 | 0.000500 | mg/L | 3 |
| B | 11 | 920.696 | 0.000511 | mg/L | 3 |
| Se | 78 | 3398.381 | 0.000518 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 017
Method: 15-BWL.mth
Acq Time: 19:30:30 Thu 28-May-20
Sample Name: Solu-AB
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 79421.306 | 0.022363 | mg/L | 3 |
| Co | 59 | 179028.221 | 0.022428 | mg/L | 3 |
| As | 75 | 6660.553 | 0.022680 | mg/L | 3 |
| Mo | 95 | 542196.460 | 0.217892 | mg/L | 3 |
| Cd | 111 | 26398.815 | 0.021610 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 018
Method: 15-BWL.mth
Acq Time: 19:32:45 Thu 28-May-20
Sample Name: Solu-AA
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 373.338 | 0.000046 | mg/L | 3 |
| Co | 59 | 288.892 | 0.000032 | mg/L | 3 |
| As | 75 | 40.333 | 0.000118 | mg/L | 3 |
| Cd | 111 | 201.113 | 0.000155 | mg/L | 3 |
| Sb | 121 | 761.131 | 0.000194 | mg/L | 3 |
| Ba | 137 | 344.449 | 0.000222 | mg/L | 3 |
| Tl | 205 | 403.339 | 0.000011 | mg/L | 3 |
| Pb | 208 | 740.339 | 0.000017 | mg/L | 3 |
| Li | 7 | 3776.055 | 0.000050 | mg/L | 3 |
| Be | 9 | 1.333 | 0.000001 | mg/L | 3 |
| B | 11 | 404.006 | 0.000058 | mg/L | 3 |
| Se | 78 | 3154.883 | 0.000097 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 019
Method: 15-BWL.mth
Acq Time: 19:37:35 Thu 28-May-20
Sample Name: 052820_3 LCS-0.05
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 191749.435 | 0.050055 | mg/L | 3 |
| Co | 59 | 437013.992 | 0.050690 | mg/L | 3 |
| As | 75 | 15709.301 | 0.049553 | mg/L | 3 |
| Mo | 95 | 131780.670 | 0.048949 | mg/L | 3 |
| Cd | 111 | 66414.056 | 0.050344 | mg/L | 3 |
| Sb | 121 | 116109.988 | 0.045839 | mg/L | 3 |
| Ba | 137 | 78071.766 | 0.049435 | mg/L | 3 |
| Tl | 205 | 861322.169 | 0.050297 | mg/L | 3 |
| Pb | 208 | 897616.158 | 0.048575 | mg/L | 3 |
| Li | 7 | 219939.225 | 0.047263 | mg/L | 3 |
| Be | 9 | 59977.662 | 0.048304 | mg/L | 3 |
| B | 11 | 56431.261 | 0.047848 | mg/L | 3 |
| Se | 78 | 29916.948 | 0.048315 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 020
Method: 15-BWL.mth
Acq Time: 19:39:49 Thu 28-May-20
Sample Name: Rinse
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 284.447 | 0.000017 | mg/L | 3 |
| Co | 59 | 124.445 | 0.000011 | mg/L | 3 |
| As | 75 | 66.667 | 0.000195 | mg/L | 3 |
| Mo | 95 | 5338.775 | 0.001906 | mg/L | 3 |
| Cd | 111 | 45.556 | 0.000027 | mg/L | 3 |
| Sb | 121 | 3228.143 | 0.001165 | mg/L | 3 |
| Ba | 137 | 53.333 | 0.000024 | mg/L | 3 |
| Tl | 205 | 613.351 | 0.000024 | mg/L | 3 |
| Pb | 208 | 1233.689 | 0.000044 | mg/L | 3 |
| Li | 7 | 3712.706 | 0.000020 | mg/L | 3 |
| Be | 9 | 7.333 | 0.000006 | mg/L | 3 |
| B | 11 | 581.345 | 0.000206 | mg/L | 3 |
| Se | 78 | 3425.086 | 0.000489 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 021
Method: 15-BWL.mth
Acq Time: 19:42:04 Thu 28-May-20
Sample Name: 052820_3 LRB
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Cr | 52 | 205.557 | -0.000004 | mg/L | 3 |
| Co | 59 | 13.333 | -0.000002 | mg/L | 3 |
| As | 75 | 32.000 | 0.000084 | mg/L | 3 |
| Mo | 95 | 2505.776 | 0.000833 | mg/L | 3 |
| Cd | 111 | 12.222 | 0.000002 | mg/L | 3 |
| Sb | 121 | 1651.207 | 0.000529 | mg/L | 3 |
| Ba | 137 | 18.889 | 0.000001 | mg/L | 3 |
| Tl | 205 | 128.889 | -0.000005 | mg/L | 3 |
| Pb | 208 | 494.779 | 0.000004 | mg/L | 3 |
| Li | 7 | 3591.563 | -0.000009 | mg/L | 3 |
| Be | 9 | 7.333 | 0.000006 | mg/L | 3 |
| B | 11 | 465.341 | 0.000104 | mg/L | 3 |
| Se | 78 | 3227.776 | 0.000108 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 022
Method: 15-BWL.mth
Acq Time: 19:52:04 Thu 28-May-20
Sample Name: BS-0.001
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 4302.870 | 0.001050 | mg/L | 3 |
| Co | 59 | 9065.098 | 0.001033 | mg/L | 3 |
| As | 75 | 347.338 | 0.001062 | mg/L | 3 |
| Mo | 95 | 3495.983 | 0.001181 | mg/L | 3 |
| Cd | 111 | 1345.619 | 0.000998 | mg/L | 3 |
| Sb | 121 | 3612.679 | 0.001283 | mg/L | 3 |
| Ba | 137 | 1587.866 | 0.000981 | mg/L | 3 |
| Tl | 205 | 18369.582 | 0.001071 | mg/L | 3 |
| Pb | 208 | 19119.698 | 0.001022 | mg/L | 3 |
| Li | 7 | 8280.179 | 0.001047 | mg/L | 3 |
| Be | 9 | 1214.719 | 0.001002 | mg/L | 3 |
| B | 11 | 1458.741 | 0.000975 | mg/L | 3 |
| Se | 78 | 3628.549 | 0.000899 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 029
Method: 15-BWL.mth
Acq Time: 20:16:08 Thu 28-May-20
Sample Name: 14264.01s
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Cr | 52 | 1255.611 | 0.001462 | mg/L | 3 |
| Co | 59 | 3348.170 | 0.002059 | mg/L | 3 |
| As | 75 | 275.669 | 0.004556 | mg/L | 3 |
| Mo | 95 | 1448.963 | 0.002373 | mg/L | 3 |
| Cd | 111 | 10.000 | 0.000003 | mg/L | 3 |
| Sb | 121 | 236.669 | -0.000133 | mg/L | 3 |
| Ba | 137 | 44415.621 | 0.150241 | mg/L | 3 |
| Tl | 205 | 64.445 | -0.000043 | mg/L | 3 |
| Pb | 208 | 2212.636 | 0.000487 | mg/L | 3 |
| Li | 7 | 22380.863 | 0.023066 | mg/L | 3 |
| Be | 9 | 8.000 | 0.000036 | mg/L | 3 |
| B | 11 | 57257.917 | 0.269186 | mg/L | 3 |
| Se | 78 | 3094.263 | 0.001901 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 030
Method: 15-BWL.mth
Acq Time: 20:18:22 Thu 28-May-20
Sample Name: 14264.02s
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Cr | 52 | 240.002 | 0.000052 | mg/L | 3 |
| Co | 59 | 6129.092 | 0.003877 | mg/L | 3 |
| As | 75 | 72.334 | 0.001161 | mg/L | 3 |
| Mo | 95 | 3947.212 | 0.007537 | mg/L | 3 |
| Cd | 111 | 18.889 | 0.000041 | mg/L | 3 |
| Sb | 121 | 218.891 | -0.000159 | mg/L | 3 |
| Ba | 137 | 12321.981 | 0.042678 | mg/L | 3 |
| Tl | 205 | 96.667 | -0.000033 | mg/L | 3 |
| Pb | 208 | 678.115 | 0.000072 | mg/L | 3 |
| Li | 7 | 41960.446 | 0.046834 | mg/L | 3 |
| Be | 9 | 2.667 | 0.000012 | mg/L | 3 |
| B | 11 | 716350.213 | 3.389231 | mg/L | 3 |
| Se | 78 | 3029.469 | 0.001281 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 031
Method: 15-BWL.mth
Acq Time: 20:20:35 Thu 28-May-20
Sample Name: 14264.03s
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Cr | 52 | 275.558 | 0.000090 | mg/L | 3 |
| Co | 59 | 534.454 | 0.000312 | mg/L | 3 |
| As | 75 | 383.338 | 0.006314 | mg/L | 3 |
| Mo | 95 | 2337.970 | 0.004101 | mg/L | 3 |
| Cd | 111 | 8.889 | -0.000002 | mg/L | 3 |
| Sb | 121 | 235.558 | -0.000139 | mg/L | 3 |
| Ba | 137 | 49397.485 | 0.165584 | mg/L | 3 |
| Tl | 205 | 38.889 | -0.000051 | mg/L | 3 |
| Pb | 208 | 333.667 | -0.000024 | mg/L | 3 |
| Li | 7 | 11300.024 | 0.009265 | mg/L | 3 |
| Be | 9 | 0.000 | 0.000000 | mg/L | 3 |
| B | 11 | 12318.644 | 0.055094 | mg/L | 3 |
| Se | 78 | 3044.403 | 0.000531 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 032
Method: 15-BWL.mth
Acq Time: 20:22:49 Thu 28-May-20
Sample Name: 14264.04s
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 1809.004 | 0.002425 | mg/L | 3 |
| Co | 59 | 2968.086 | 0.001962 | mg/L | 3 |
| As | 75 | 112.334 | 0.001948 | mg/L | 3 |
| Mo | 95 | 23859.910 | 0.050518 | mg/L | 3 |
| Cd | 111 | 38.889 | 0.000132 | mg/L | 3 |
| Sb | 121 | 301.114 | 0.000052 | mg/L | 3 |
| Ba | 137 | 15445.017 | 0.056163 | mg/L | 3 |
| Tl | 205 | 388.894 | 0.000057 | mg/L | 3 |
| Pb | 208 | 5623.127 | 0.001481 | mg/L | 3 |
| Li | 7 | 43577.490 | 0.051238 | mg/L | 3 |
| Be | 9 | 20.000 | 0.000094 | mg/L | 3 |
| B | 11 | 1049536.648 | 5.196095 | mg/L | 3 |
| Se | 78 | 2977.198 | 0.002149 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 033
Method: 15-BWL.mth
Acq Time: 20:25:05 Thu 28-May-20
Sample Name: 14264.04s
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Cr | 52 | 534.455 | 0.002263 | mg/L | 3 |
| Co | 59 | 680.016 | 0.002019 | mg/L | 3 |
| As | 75 | 26.333 | 0.001769 | mg/L | 3 |
| Mo | 95 | 5497.725 | 0.051908 | mg/L | 3 |
| Cd | 111 | 10.000 | 0.000014 | mg/L | 3 |
| Sb | 121 | 183.335 | -0.001237 | mg/L | 3 |
| Ba | 137 | 3253.704 | 0.054576 | mg/L | 3 |
| Tl | 205 | 88.889 | -0.000180 | mg/L | 3 |
| Pb | 208 | 1418.140 | 0.001371 | mg/L | 3 |
| Li | 7 | 11807.101 | 0.049470 | mg/L | 3 |
| Be | 9 | 6.667 | 0.000145 | mg/L | 3 |
| B | 11 | 231310.192 | 5.319760 | mg/L | 3 |
| Se | 78 | 2971.298 | -0.000524 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 034
Method: 15-BWL.mth
Acq Time: 20:27:19 Thu 28-May-20
Sample Name: 14264.05s
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Cr | 52 | 426.673 | 0.000316 | mg/L | 3 |
| Co | 59 | 832.247 | 0.000510 | mg/L | 3 |
| As | 75 | 30.333 | 0.000433 | mg/L | 3 |
| Mo | 95 | 10565.018 | 0.020917 | mg/L | 3 |
| Cd | 111 | 44.445 | 0.000146 | mg/L | 3 |
| Sb | 121 | 155.556 | -0.000298 | mg/L | 3 |
| Ba | 137 | 14585.220 | 0.050283 | mg/L | 3 |
| Tl | 205 | 48.889 | -0.000048 | mg/L | 3 |
| Pb | 208 | 1433.696 | 0.000272 | mg/L | 3 |
| Li | 7 | 35476.245 | 0.038367 | mg/L | 3 |
| Be | 9 | 7.333 | 0.000032 | mg/L | 3 |
| B | 11 | 106017.989 | 0.493304 | mg/L | 3 |
| Se | 78 | 3073.057 | 0.001283 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 035
Method: 15-BWL.mth
Acq Time: 20:29:33 Thu 28-May-20
Sample Name: 14264.06s
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Cr | 52 | 293.336 | 0.000123 | mg/L | 3 |
| Co | 59 | 508.898 | 0.000303 | mg/L | 3 |
| As | 75 | 414.673 | 0.006986 | mg/L | 3 |
| Mo | 95 | 2646.912 | 0.004817 | mg/L | 3 |
| Cd | 111 | 7.778 | -0.000006 | mg/L | 3 |
| Sb | 121 | 177.779 | -0.000252 | mg/L | 3 |
| Ba | 137 | 49272.641 | 0.168598 | mg/L | 3 |
| Tl | 205 | 24.444 | -0.000055 | mg/L | 3 |
| Pb | 208 | 369.223 | -0.000013 | mg/L | 3 |
| Li | 7 | 11404.553 | 0.009489 | mg/L | 3 |
| Be | 9 | 1.333 | 0.000006 | mg/L | 3 |
| B | 11 | 12302.640 | 0.055449 | mg/L | 3 |
| Se | 78 | 2971.035 | 0.000048 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 036
Method: 15-BWL.mth
Acq Time: 20:31:47 Thu 28-May-20
Sample Name: 14264.07s
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Cr | 52 | 193.335 | -0.000036 | mg/L | 3 |
| Co | 59 | 8.889 | -0.000011 | mg/L | 3 |
| As | 75 | 8.333 | 0.000044 | mg/L | 3 |
| Mo | 95 | 580.012 | 0.000585 | mg/L | 3 |
| Cd | 111 | 5.556 | -0.000016 | mg/L | 3 |
| Sb | 121 | 172.223 | -0.000288 | mg/L | 3 |
| Ba | 137 | 41.111 | 0.000079 | mg/L | 3 |
| Tl | 205 | 17.778 | -0.000057 | mg/L | 3 |
| Pb | 208 | 287.000 | -0.000038 | mg/L | 3 |
| Li | 7 | 3769.386 | 0.000280 | mg/L | 3 |
| Be | 9 | 0.667 | 0.000003 | mg/L | 3 |
| B | 11 | 1298.059 | 0.004302 | mg/L | 3 |
| Se | 78 | 2987.553 | -0.000823 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 037
Method: 15-BWL.mth
Acq Time: 20:34:01 Thu 28-May-20
Sample Name: 14264.07 MS-0.05
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 182691.299 | 0.244124 | mg/L | 3 |
| Co | 59 | 407972.849 | 0.242314 | mg/L | 3 |
| As | 75 | 15200.750 | 0.245453 | mg/L | 3 |
| Mo | 95 | 121799.310 | 0.231598 | mg/L | 3 |
| Cd | 111 | 64443.934 | 0.250074 | mg/L | 3 |
| Sb | 121 | 117575.189 | 0.237656 | mg/L | 3 |
| Ba | 137 | 78546.475 | 0.254691 | mg/L | 3 |
| Tl | 205 | 874836.774 | 0.252769 | mg/L | 3 |
| Pb | 208 | 906057.276 | 0.242608 | mg/L | 3 |
| Li | 7 | 228421.021 | 0.259391 | mg/L | 3 |
| Be | 9 | 60442.263 | 0.256796 | mg/L | 3 |
| B | 11 | 57207.665 | 0.256021 | mg/L | 3 |
| Se | 78 | 28558.993 | 0.243551 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 038
Method: 15-BWL.mth
Acq Time: 20:36:15 Thu 28-May-20
Sample Name: 14264.07 MSD
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 183917.586 | 0.249450 | mg/L | 3 |
| Co | 59 | 415973.869 | 0.250688 | mg/L | 3 |
| As | 75 | 15339.231 | 0.251385 | mg/L | 3 |
| Mo | 95 | 129365.420 | 0.249700 | mg/L | 3 |
| Cd | 111 | 64957.359 | 0.255868 | mg/L | 3 |
| Sb | 121 | 120463.559 | 0.247162 | mg/L | 3 |
| Ba | 137 | 76886.360 | 0.252993 | mg/L | 3 |
| Tl | 205 | 878995.336 | 0.261935 | mg/L | 3 |
| Pb | 208 | 905927.846 | 0.250158 | mg/L | 3 |
| Li | 7 | 229896.366 | 0.259577 | mg/L | 3 |
| Be | 9 | 59702.495 | 0.252263 | mg/L | 3 |
| B | 11 | 57462.684 | 0.255761 | mg/L | 3 |
| Se | 78 | 28702.344 | 0.243507 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 039
Method: 15-BWL.mth
Acq Time: 20:39:55 Thu 28-May-20
Sample Name: CCV2-0.1
Sample Type: Sample
Matrix: Liquid
Comments: IV-std made 05/27/20
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 367716.187 | 0.101998 | mg/L | 3 |
| Co | 59 | 821451.815 | 0.101203 | mg/L | 3 |
| As | 75 | 31253.484 | 0.104703 | mg/L | 3 |
| Mo | 95 | 260130.161 | 0.102728 | mg/L | 3 |
| Cd | 111 | 131588.852 | 0.105938 | mg/L | 3 |
| Sb | 121 | 252696.557 | 0.106103 | mg/L | 3 |
| Ba | 137 | 156058.900 | 0.104967 | mg/L | 3 |
| Tl | 205 | 1712002.621 | 0.101779 | mg/L | 3 |
| Pb | 208 | 1798331.775 | 0.099089 | mg/L | 3 |
| Li | 7 | 438644.740 | 0.102519 | mg/L | 3 |
| Be | 9 | 121677.342 | 0.105618 | mg/L | 3 |
| B | 11 | 112568.494 | 0.103217 | mg/L | 3 |
| Se | 78 | 55647.319 | 0.102746 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 040
Method: 15-BWL.mth
Acq Time: 20:42:46 Thu 28-May-20
Sample Name: Rinse
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Cr | 52 | 261.114 | 0.000012 | mg/L | 3 |
| Co | 59 | 47.778 | 0.000003 | mg/L | 3 |
| As | 75 | 87.000 | 0.000266 | mg/L | 3 |
| Mo | 95 | 4814.145 | 0.001750 | mg/L | 3 |
| Cd | 111 | 13.333 | 0.000003 | mg/L | 3 |
| Sb | 121 | 4454.029 | 0.001695 | mg/L | 3 |
| Ba | 137 | 28.889 | 0.000008 | mg/L | 3 |
| Tl | 205 | 617.791 | 0.000024 | mg/L | 3 |
| Pb | 208 | 1123.684 | 0.000038 | mg/L | 3 |
| Li | 7 | 3598.231 | 0.000043 | mg/L | 3 |
| Be | 9 | 23.333 | 0.000020 | mg/L | 3 |
| B | 11 | 868.693 | 0.000502 | mg/L | 3 |
| Se | 78 | 3387.654 | 0.000797 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 041
Method: 15-BWL.mth
Acq Time: 20:47:15 Thu 28-May-20
Sample Name: CCB2
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0528A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Cr | 52 | 223.335 | 0.000000 | mg/L | 3 |
| Co | 59 | 31.111 | 0.000000 | mg/L | 3 |
| As | 75 | 39.000 | 0.000106 | mg/L | 3 |
| Mo | 95 | 1477.854 | 0.000452 | mg/L | 3 |
| Cd | 111 | 8.889 | -0.000001 | mg/L | 3 |
| Sb | 121 | 2056.815 | 0.000693 | mg/L | 3 |
| Ba | 137 | 21.111 | 0.000003 | mg/L | 3 |
| Tl | 205 | 172.223 | -0.000002 | mg/L | 3 |
| Pb | 208 | 581.447 | 0.000009 | mg/L | 3 |
| Li | 7 | 3541.551 | -0.000001 | mg/L | 3 |
| Be | 9 | 0.000 | 0.000000 | mg/L | 3 |
| B | 11 | 750.020 | 0.000366 | mg/L | 3 |
| Se | 78 | 3048.558 | -0.000087 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 001
Method: 01-MINERALS.mth
Acq Time: 12:22:49 Fri 29-May-20
Sample Name: Blank
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-------|-------|-----|
| Na | 23 | 7826.667 | 0 | mg/L | 3 |
| Mg | 24 | 4266.667 | 0 | mg/L | 3 |
| K | 39 | 109816.667 | 0 | mg/L | 3 |
| Ca | 44 | 4796.667 | 0 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 002
Method: 01-MINERALS.mth
Acq Time: 12:24:01 Fri 29-May-20
Sample Name: Std-0.20
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|------------|---------------|-------|-------|-----|
| Na | 23 | 212683.333 | 0.196891 | mg/L | | 3 |
| Mg | 24 | 140331.667 | 0.195157 | mg/L | | 3 |
| K | 39 | 305043.333 | 0.191168 | mg/L | | 3 |
| Ca | 44 | 9388.333 | 0.196561 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 003
Method: 01-MINERALS.mth
Acq Time: 12:25:13 Fri 29-May-20
Sample Name: Std-0.50
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|------------|---------------|-------|-------|-----|
| Na | 23 | 550961.667 | 0.508616 | mg/L | | 3 |
| Mg | 24 | 358855.000 | 0.495516 | mg/L | | 3 |
| K | 39 | 624768.333 | 0.492680 | mg/L | | 3 |
| Ca | 44 | 16476.667 | 0.489635 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 004
Method: 01-MINERALS.mth
Acq Time: 12:26:25 Fri 29-May-20
Sample Name: Std-1.0
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Na | 23 | 1065660.000 | 1.025269 | mg/L | 3 |
| Mg | 24 | 706638.333 | 1.015799 | mg/L | 3 |
| K | 39 | 1120391.667 | 1.009299 | mg/L | 3 |
| Ca | 44 | 27683.333 | 1.010438 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 005
Method: 01-MINERALS.mth
Acq Time: 12:27:37 Fri 29-May-20
Sample Name: Std-2.0
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|-------------|---------------|-------|-------|-----|
| Na | 23 | 2087280.000 | 2.007541 | mg/L | | 3 |
| Mg | 24 | 1380386.667 | 1.981892 | mg/L | | 3 |
| K | 39 | 2064105.000 | 1.945629 | mg/L | | 3 |
| Ca | 44 | 48791.667 | 1.937121 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 006
Method: 01-MINERALS.mth
Acq Time: 12:28:48 Fri 29-May-20
Sample Name: Std-5.0
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|-------------|---------------|-------|-------|-----|
| Na | 23 | 5222510.000 | 4.991193 | mg/L | | 3 |
| Mg | 24 | 3508136.667 | 5.004725 | mg/L | | 3 |
| K | 39 | 5193370.000 | 5.020974 | mg/L | | 3 |
| Ca | 44 | 119736.667 | 5.024238 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 007
Method: 01-MINERALS.mth
Acq Time: 12:31:11 Fri 29-May-20
Sample Name: CCV-2.0
Sample Type: Sample
Matrix: Liquid
Comments: IV-std made 05/27/20
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|-------------|---------------|-------|-------|-----|
| Na | 23 | 2163455.000 | 2.054708 | mg/L | | 3 |
| Mg | 24 | 1410593.333 | 2.000246 | mg/L | | 3 |
| K | 39 | 2146858.333 | 2.000927 | mg/L | | 3 |
| Ca | 44 | 50906.667 | 2.001950 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 008
Method: 01-MINERALS.mth
Acq Time: 12:35:56 Fri 29-May-20
Sample Name: ICV-2.0
Sample Type: Sample
Matrix: Liquid
Comments: Spex-std made 05/27/
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|-------------|---------------|-------|-------|-----|
| Na | 23 | 2073156.667 | 1.990831 | mg/L | | 3 |
| Mg | 24 | 1411841.667 | 2.024486 | mg/L | | 3 |
| K | 39 | 2096406.667 | 1.974527 | mg/L | | 3 |
| Ca | 44 | 49870.000 | 1.981731 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 009
Method: 01-MINERALS.mth
Acq Time: 12:37:08 Fri 29-May-20
Sample Name: ICB
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Na | 23 | 7696.667 | -0.000180 | mg/L | 3 |
| Mg | 24 | 4231.667 | -0.000094 | mg/L | 3 |
| K | 39 | 109320.000 | -0.001263 | mg/L | 3 |
| Ca | 44 | 4676.667 | -0.006847 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 010
Method: 01-MINERALS.mth
Acq Time: 12:38:20 Fri 29-May-20
Sample Name: CCB
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Na | 23 | 7840.000 | -0.000263 | mg/L | 3 |
| Mg | 24 | 4356.667 | -0.000097 | mg/L | 3 |
| K | 39 | 111271.667 | -0.002573 | mg/L | 3 |
| Ca | 44 | 4861.667 | -0.004919 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 011
Method: 01-MINERALS.mth
Acq Time: 12:39:31 Fri 29-May-20
Sample Name: BS-0.05
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|------------|---------------|-------|-------|-----|
| Na | 23 | 62103.333 | 0.050808 | mg/L | | 3 |
| Mg | 24 | 39615.000 | 0.049429 | mg/L | | 3 |
| K | 39 | 164585.000 | 0.048293 | mg/L | | 3 |
| Ca | 44 | 5981.667 | 0.041408 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 012
Method: 01-MINERALS.mth
Acq Time: 12:46:09 Fri 29-May-20
Sample Name: 052820_3 LCS-1.0
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|-------------|---------------|-------|-------|-----|
| Na | 23 | 1065543.333 | 1.015509 | mg/L | | 3 |
| Mg | 24 | 705236.667 | 1.004083 | mg/L | | 3 |
| K | 39 | 1115733.333 | 0.994141 | mg/L | | 3 |
| Ca | 44 | 28326.667 | 1.026948 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 013
Method: 01-MINERALS.mth
Acq Time: 12:47:21 Fri 29-May-20
Sample Name: 052820_3 LRB
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Na | 23 | 7838.333 | -0.000197 | mg/L | 3 |
| Mg | 24 | 4345.000 | -0.000057 | mg/L | 3 |
| K | 39 | 111365.000 | -0.001478 | mg/L | 3 |
| Ca | 44 | 4811.667 | -0.005164 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 015
Method: 01-MINERALS.mth
Acq Time: 12:57:01 Fri 29-May-20
Sample Name: rinse
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|------------|---------------|-------|-------|-----|
| Na | 23 | 16973.333 | 0.008400 | mg/L | | 3 |
| Mg | 24 | 4596.667 | 0.000233 | mg/L | | 3 |
| K | 39 | 119521.667 | 0.005325 | mg/L | | 3 |
| Ca | 44 | 4901.667 | -0.003514 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 016
Method: 01-MINERALS.mth
Acq Time: 12:58:13 Fri 29-May-20
Sample Name: 14264.07s
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|------------|---------------|-------|-------|-----|
| Na | 23 | 8668.333 | 0.002589 | mg/L | | 3 |
| Mg | 24 | 5518.333 | 0.007726 | mg/L | | 3 |
| K | 39 | 115813.333 | 0.008949 | mg/L | | 3 |
| Ca | 44 | 6601.667 | 0.352645 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 017
Method: 01-MINERALS.mth
Acq Time: 13:05:07 Fri 29-May-20
Sample Name: 14264.01s
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|-------------|---------------|-------|-------|-----|
| Na | 23 | 8490846.667 | 41.525870 | mg/L | | 3 |
| Mg | 24 | 6989418.333 | 51.015214 | mg/L | | 3 |
| K | 39 | 420833.333 | 1.567615 | mg/L | | 3 |
| Ca | 44 | 810020.000 | 180.216186 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 018
Method: 01-MINERALS.mth
Acq Time: 13:08:03 Fri 29-May-20
Sample Name: 14264.01 dil
Sample Type: Sample
Matrix: Liquid
Comments: 50/1=50
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|------------|---------------|-------|-------|-----|
| Na | 23 | 871855.000 | 41.058341 | mg/L | | 3 |
| Mg | 24 | 725770.000 | 51.156655 | mg/L | | 3 |
| K | 39 | 149525.000 | 1.744080 | mg/L | | 3 |
| Ca | 44 | 83555.000 | 170.709602 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 020
Method: 01-MINERALS.mth
Acq Time: 13:10:25 Fri 29-May-20
Sample Name: 14264.02s
Sample Type: Sample
Matrix: Liquid
Comments: 50/1=50
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|------------|---------------|-------|-------|-----|
| Na | 23 | 955256.667 | 44.676983 | mg/L | | 3 |
| Mg | 24 | 957368.333 | 67.076440 | mg/L | | 3 |
| K | 39 | 134943.333 | 0.979378 | mg/L | | 3 |
| Ca | 44 | 123948.333 | 256.555664 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 022
Method: 01-MINERALS.mth
Acq Time: 13:12:48 Fri 29-May-20
Sample Name: 14264.03s
Sample Type: Sample
Matrix: Liquid
Comments: 50/1=50
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|------------|---------------|-------|-------|-----|
| Na | 23 | 598330.000 | 27.886210 | mg/L | | 3 |
| Mg | 24 | 569686.667 | 39.850424 | mg/L | | 3 |
| K | 39 | 146666.667 | 1.564070 | mg/L | | 3 |
| Ca | 44 | 58346.667 | 115.244582 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 024
Method: 01-MINERALS.mth
Acq Time: 13:15:11 Fri 29-May-20
Sample Name: 14264.04s
Sample Type: Sample
Matrix: Liquid
Comments: 50/1=50
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|-------------|---------------|-------|-------|-----|
| Na | 23 | 2264948.333 | 107.810337 | mg/L | | 3 |
| Mg | 24 | 1212926.667 | 86.158214 | mg/L | | 3 |
| K | 39 | 224655.000 | 5.486233 | mg/L | | 3 |
| Ca | 44 | 151630.000 | 320.341248 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 026
Method: 01-MINERALS.mth
Acq Time: 13:17:34 Fri 29-May-20
Sample Name: 14264.05s
Sample Type: Sample
Matrix: Liquid
Comments: 50/1=50
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|------------|---------------|-------|-------|-----|
| Na | 23 | 677821.667 | 31.419040 | mg/L | | 3 |
| Mg | 24 | 421290.000 | 29.182876 | mg/L | | 3 |
| K | 39 | 235115.000 | 5.798349 | mg/L | | 3 |
| Ca | 44 | 71993.333 | 143.638763 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 028
Method: 01-MINERALS.mth
Acq Time: 13:19:57 Fri 29-May-20
Sample Name: 14264.06s
Sample Type: Sample
Matrix: Liquid
Comments: 50/1=50
Dilution: 5

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|------------|---------------|-------|-------|-----|
| Na | 23 | 598131.667 | 27.994205 | mg/L | | 3 |
| Mg | 24 | 567035.000 | 39.827842 | mg/L | | 3 |
| K | 39 | 146491.667 | 1.583695 | mg/L | | 3 |
| Ca | 44 | 57841.667 | 114.649481 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 033
Method: 01-MINERALS.mth
Acq Time: 13:35:34 Fri 29-May-20
Sample Name: CCV2-2.0
Sample Type: Sample
Matrix: Liquid
Comments: IV-std made 05/27/20
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|-------------|---------------|-------|-------|-----|
| Na | 23 | 2166456.667 | 2.066592 | mg/L | | 3 |
| Mg | 24 | 1396878.333 | 1.989068 | mg/L | | 3 |
| K | 39 | 2155606.667 | 2.018465 | mg/L | | 3 |
| Ca | 44 | 50865.000 | 2.009384 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 034
Method: 01-MINERALS.mth
Acq Time: 13:36:46 Fri 29-May-20
Sample Name: CCB2
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052820-3
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|------------|---------------|-------|-------|-----|
| Na | 23 | 24525.000 | 0.015869 | mg/L | | 3 |
| Mg | 24 | 5091.667 | 0.001040 | mg/L | | 3 |
| K | 39 | 117993.333 | 0.005266 | mg/L | | 3 |
| Ca | 44 | 4900.000 | -0.001005 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 035
Method: 01-MINERALS.mth
Acq Time: 13:40:58 Fri 29-May-20
Sample Name: 052920_2 LCS-1.0
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052920-2
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|-------------|---------------|-------|-------|-----|
| Na | 23 | 1111920.000 | 1.046250 | mg/L | | 3 |
| Mg | 24 | 717036.667 | 1.007747 | mg/L | | 3 |
| K | 39 | 1136463.333 | 1.000457 | mg/L | | 3 |
| Ca | 44 | 29033.333 | 1.042035 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 036
Method: 01-MINERALS.mth
Acq Time: 13:42:10 Fri 29-May-20
Sample Name: 052920_2 LRB
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052920-2
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|------------|---------------|-------|-------|-----|
| Na | 23 | 13971.667 | 0.005651 | mg/L | | 3 |
| Mg | 24 | 6216.667 | 0.002628 | mg/L | | 3 |
| K | 39 | 117050.000 | 0.005085 | mg/L | | 3 |
| Ca | 44 | 4878.333 | -0.000622 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 045
Method: 01-MINERALS.mth
Acq Time: 13:53:50 Fri 29-May-20
Sample Name: CCV3-2.0
Sample Type: Sample
Matrix: Liquid
Comments: IV-std made 05/27/20
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052920-2
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|-------------|---------------|-------|-------|-----|
| Na | 23 | 2214940.000 | 2.105772 | mg/L | | 3 |
| Mg | 24 | 1481233.333 | 2.102344 | mg/L | | 3 |
| K | 39 | 2221915.000 | 2.077513 | mg/L | | 3 |
| Ca | 44 | 51905.000 | 2.048282 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 046
Method: 01-MINERALS.mth
Acq Time: 13:55:02 Fri 29-May-20
Sample Name: CCB3
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052920-2
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|------------|---------------|-------|-------|-----|
| Na | 23 | 24733.333 | 0.015976 | mg/L | | 3 |
| Mg | 24 | 4656.667 | 0.000376 | mg/L | | 3 |
| K | 39 | 119821.667 | 0.006687 | mg/L | | 3 |
| Ca | 44 | 4690.000 | -0.010878 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 066
Method: 01-MINERALS.mth
Acq Time: 14:44:11 Fri 29-May-20
Sample Name: CCV3-2.0
Sample Type: Sample
Matrix: Liquid
Comments: IV-std made 05/27/20
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052920-2
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|-------------|---------------|-------|-------|-----|
| Na | 23 | 2213676.667 | 2.062965 | mg/L | | 3 |
| Mg | 24 | 1444125.000 | 2.009481 | mg/L | | 3 |
| K | 39 | 2204076.667 | 2.017481 | mg/L | | 3 |
| Ca | 44 | 52146.667 | 2.014307 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 067
Method: 01-MINERALS.mth
Acq Time: 14:45:23 Fri 29-May-20
Sample Name: CCB3
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052920-2
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|------------|---------------|-------|-------|-----|
| Na | 23 | 24541.667 | 0.015716 | mg/L | | 3 |
| Mg | 24 | 4445.000 | 0.000053 | mg/L | | 3 |
| K | 39 | 118223.333 | 0.004709 | mg/L | | 3 |
| Ca | 44 | 4745.000 | -0.009173 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 085
Method: 01-MINERALS.mth
Acq Time: 15:07:17 Fri 29-May-20
Sample Name: CCV4-2.0
Sample Type: Sample
Matrix: Liquid
Comments: IV-std made 05/27/20
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052920-2
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|-------------|---------------|-------|-------|-----|
| Na | 23 | 2142948.333 | 2.048821 | mg/L | | 3 |
| Mg | 24 | 1399401.667 | 1.997646 | mg/L | | 3 |
| K | 39 | 2149366.667 | 2.017540 | mg/L | | 3 |
| Ca | 44 | 50408.333 | 1.994687 | mg/L | | 3 |

Metals Quantitation Summary Report

Sequence #: 086
Method: 01-MINERALS.mth
Acq Time: 15:09:12 Fri 29-May-20
Sample Name: CCB4
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0529A.cal
Cal Type: External Calibration
Last Calib: MTD-052920-2
Bkg File:
Int Correct:
Blank File: Blank.011

| Element | Mass | | Concentration | Units | RSD % | Rep |
|---------|------|------------|---------------|-------|-------|-----|
| Na | 23 | 24698.333 | 0.015840 | mg/L | | 3 |
| Mg | 24 | 4600.000 | 0.000268 | mg/L | | 3 |
| K | 39 | 118350.000 | 0.004726 | mg/L | | 3 |
| Ca | 44 | 4833.333 | -0.005521 | mg/L | | 3 |

Metals Digestion 3015A | 3050B

DATE 5/28/20

PREP BATCH MTD-052820-3

TIME START 1900

TIME FINISH 1930

ANALYST CEM

Pipet Calibration:

| Pipet # | Test # | Pipet Volume Setting mL | Wt. of water from pipet, g | Criteria | Pipet # | Test # | Pipet Volume Setting mL | Wt. of water from pipet, g | Criteria |
|---------|--------|-------------------------|----------------------------|---|---------|--------|-------------------------|----------------------------|---|
| 2 | 1 | | | Bias: Mean \pm 2% of nominal value Precision: RSD \leq 1% of nominal value | 3 | 1 | | | Bias: Mean \pm 2% of nominal value Precision: RSD \leq 1% of nominal value |
| | 2 | | | | | 2 | | | |
| | 3 | | | | | 3 | | | |

| SAMPLE# | BTL ID | SAMPLE AMOUNT GRAMS (g) | FINAL VOLUME (ml) | REMARKS | % TOTAL SOLIDS | DILUTION FACTOR |
|--------------|--------|-------------------------|-------------------|---------|----------------|-----------------|
| LCS-052820.3 | ---- | 50 | 50 | | — | 1 |
| LRB-052820.3 | ---- | 50 | 50 | | — | 1 |
| 14291.01 | | 10 | | | | 5 |
| 02 | | | | | | |
| 03 | | | | | | |
| 14264.01 | | | | | | |
| 02 | | | | | | |
| 03 | | | | | | |
| 04 | | | | | | |
| 05 | | | | | | |
| 06 | | | | | | |
| 07 | | | | | | |
| 07MS | | | | | | |
| 07MSD | | | | | | |
| 14250.01 | | 25 | | | | 2 |
| 14278.01 | | 1.0 | | | | 50 |
| 01MS | | | | cat | | |
| 01MS0 | | | | cat | | |

NOTES: 1) Spike values (unless otherwise stated):
 LCS = 0.05 ppm = 50 mls / 0.50 mls of 5ppm Spiking Solution
 Samples: Water = 0.05 ppm = 50 mls / 0.50 mls of 5ppm Spiking Solution
 Soil = 0.10 ppm = 50 mls / 1.0 mls of 5ppm Spiking Solution
 Spiking Solution - Date Prepared: 5/27/20

2) Spike values for minerals (Ca-Mg-K-Na)
 LCS = 1.0 ppm = 50 mls / 0.50 mls HM Stock Solution
 Samples (Water or Soil) = 2.0 ppm = 50 mls / 1.0 mls HM Stock Solution
 High Purity Stock Solution (HM) - Lot # 19127522-500

3) HNO₃ Lot # 0000245675

4) Centrifuge Tube Lot # 191210-060

5) Balance ID: M2

Reviewed by CEM On 5-29-20

Form 0: Sequence Log

Data Set ID: HG2-HG3-20-0601A

Instrument ID: HG QuickTrace

Analysis Date: 06/01/20

Analyst: JRH

| <i>Filename</i> | <i>Run Time</i> | <i>Sample ID</i> | <i>Matrix</i> | <i>QC Type</i> |
|-----------------|---------------------|-------------------|---------------|----------------|
| 001 | 6/1/2020 3:23:26 PM | Calibration Blank | Liquid | |
| 002 | 6/1/2020 3:25:18 PM | Standard #1 | Liquid | |
| 003 | 6/1/2020 3:27:10 PM | Standard #2 | Liquid | |
| 004 | 6/1/2020 3:29:01 PM | Standard #3 | Liquid | |
| 005 | 6/1/2020 3:30:53 PM | Standard #4 | Liquid | |
| 006 | 6/1/2020 3:32:45 PM | Standard #5 | Liquid | |
| 007 | 6/1/2020 3:34:36 PM | Standard #6 | Liquid | |
| 008 | 6/1/2020 3:37:17 PM | Standard #7 | Liquid | |
| 009 | 6/1/2020 3:40:04 PM | Standard #8 | Liquid | |
| 010 | 6/1/2020 3:42:53 PM | 6 | Liquid | |
| 011 | 6/1/2020 3:53:20 PM | ICV-5.0 ppb | Liquid | ICV |
| 012 | 6/1/2020 3:55:57 PM | ICB | Liquid | ICB |
| 013 | 6/1/2020 3:57:48 PM | CCV1-2.0 ppb | Liquid | CCV |
| 014 | 6/1/2020 3:59:40 PM | CCB1 | Liquid | CCB |
| 015 | 6/1/2020 4:01:32 PM | BS-0.10 | Liquid | BS |
| 016 | 6/1/2020 4:04:32 PM | 060120_1 LCS-2.0 | Liquid | LCS |
| 017 | 6/1/2020 4:06:23 PM | 060120_1 LRB | Liquid | LRB |
| 018 | 6/1/2020 4:08:11 PM | 14359.01s | Soil | S |
| 019 | 6/1/2020 4:10:01 PM | 14359.02s | Soil | S |
| 020 | 6/1/2020 4:11:48 PM | 14359.03s | Soil | S |
| 021 | 6/1/2020 4:13:35 PM | 14347.02s | Soil | S |
| 022 | 6/1/2020 4:15:22 PM | 14347.03s | Soil | S |
| 023 | 6/1/2020 4:17:10 PM | 14347.03 MS-2.0 | Soil | MS |
| 024 | 6/1/2020 4:18:58 PM | 14347.03 MSD | Soil | MSD |
| 025 | 6/1/2020 4:20:50 PM | CCV2-2.0 ppb | Liquid | |
| 026 | 6/1/2020 4:22:42 PM | CCV2-2.0 ppb | Liquid | CCV |
| 027 | 6/1/2020 4:26:10 PM | CCV2-2.0 ppb | Liquid | CCV |
| 028 | 6/1/2020 4:28:01 PM | CCB2 | Liquid | CCB |
| 029 | 6/1/2020 4:29:52 PM | 052920_1 LCS-2.0 | Liquid | LCS |
| 030 | 6/1/2020 4:31:43 PM | 052920_1 LRB | Liquid | LRB |
| 031 | 6/1/2020 4:33:29 PM | 14275.01s | Liquid | S |
| 032 | 6/1/2020 4:35:16 PM | 14275.02s | Liquid | S |
| 033 | 6/1/2020 4:37:04 PM | 14275.03s | Liquid | S |
| 034 | 6/1/2020 4:38:51 PM | 14264.01s | Liquid | S |
| 035 | 6/1/2020 4:40:40 PM | 14264.02s | Liquid | S |
| 036 | 6/1/2020 4:42:29 PM | 14264.03s | Liquid | S |
| 037 | 6/1/2020 4:44:18 PM | 14264.03 MS-2.0 | Liquid | MS |
| 038 | 6/1/2020 4:46:04 PM | 14264.03 MSD | Liquid | MSD |
| 039 | 6/1/2020 4:47:51 PM | 14264.04s | Liquid | S |
| 040 | 6/1/2020 4:49:39 PM | 14264.05s | Liquid | S |
| 041 | 6/1/2020 4:51:27 PM | 14264.06s | Liquid | S |
| 042 | 6/1/2020 4:53:15 PM | 14264.07s | Liquid | S |
| 043 | 6/1/2020 4:55:07 PM | CCV3-2.0 ppb | Liquid | CCV |
| 044 | 6/1/2020 4:56:58 PM | CCB3 | Liquid | CCB |

Form 1: Metals Analysis Data Sheet

Data Set ID: HG2-HG3-20-0601A

Instrument ID: HG QuickTrace

Analysis Date: 06/01/20

Analyst: JRH

Lab Sample ID: S14264.01

Sample Tag: L005063-01 MW-1

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7439-97-6 | Mercury | Not detected | 0.0002 | 0.000016 | mg/L | 1 | 06/01/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: HG2-HG3-20-0601A

Instrument ID: HG QuickTrace

Analysis Date: 06/01/20

Analyst: JRH

Lab Sample ID: S14264.02

Sample Tag: L005063-02 MW-2

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7439-97-6 | Mercury | Not detected | 0.0002 | 0.000016 | mg/L | 1 | 06/01/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: HG2-HG3-20-0601A

Instrument ID: HG QuickTrace

Analysis Date: 06/01/20

Analyst: JRH

Lab Sample ID: S14264.03

Sample Tag: L005063-03 MW-4

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7439-97-6 | Mercury | Not detected | 0.0002 | 0.000016 | mg/L | 1 | 06/01/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: HG2-HG3-20-0601A

Instrument ID: HG QuickTrace

Analysis Date: 06/01/20

Analyst: JRH

Lab Sample ID: S14264.04

Sample Tag: L005063-05 MW-5

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7439-97-6 | Mercury | Not detected | 0.0002 | 0.000016 | mg/L | 1 | 06/01/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: HG2-HG3-20-0601A

Instrument ID: HG QuickTrace

Analysis Date: 06/01/20

Analyst: JRH

Lab Sample ID: S14264.05

Sample Tag: L005063-06 MW-6

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7439-97-6 | Mercury | Not detected | 0.0002 | 0.000016 | mg/L | 1 | 06/01/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: HG2-HG3-20-0601A

Instrument ID: HG QuickTrace

Analysis Date: 06/01/20

Analyst: JRH

Lab Sample ID: S14264.06

Sample Tag: L005063-06 MW-4 Duplicate

Date Collected: 05/26/2020

Matrix: Wastewater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7439-97-6 | Mercury | Not detected | 0.0002 | 0.000016 | mg/L | 1 | 06/01/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: HG2-HG3-20-0601A

Instrument ID: HG QuickTrace

Analysis Date: 06/01/20

Analyst: JRH

Lab Sample ID: S14264.07

Sample Tag: L005063-07 Field Blank

Date Collected: 05/26/2020

Matrix: Water

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7439-97-6 | Mercury | Not detected | 0.0002 | 0.000016 | mg/L | 1 | 06/01/2020 | |

Form 1: Metals Analysis Data Sheet - Flag Description Key

Data Set ID: HG2-HG3-20-0601A

Instrument ID: HG QuickTrace

Analysis Date: 06/01/20

Analyst: JRH

Note/Qualifier Key

| | |
|---|---|
| b | Value detected less than reporting limit, but greater than MDL |
| e | Reported value estimated due to interference |
| j | Analyte also found in associated method blank |
| m | Duplicate injection precision not met |
| n | Spiked sample recovery outside control limits |
| s | Reported value determined by the MSA |
| u | Analyte not detected above reporting limit |
| A | TIC is a suspected aldol-condensation product |
| B | Compound also found in associated method blank |
| C | Analyte presence confirmed by GC/MS |
| D | Identified in an analysis at a secondary dilution factor |
| E | Concentration exceeds calibration range |
| J | Estimated value less than reporting limit, but greater than MDL |
| N | Presumptive evidence of TIC |
| P | Pesticide/Aroclor 2-column RPD exceeds limit |
| U | Analyte not detected above reporting limit |
| ! | Result is outside of stated limit criteria |
| F | Analysis run outside of holding time |
| G | Estimated result due to extraction run outside of holding time |
| H | Sample submitted and run outside of holding time |
| I | Matrix interference with internal standard |
| K | Elevated reporting limit due to low total solids |
| L | Elevated reporting limit due to low sample amount |
| M | Result reported to MDL not RDL |
| O | Analysis performed by outside laboratory. See attached report. |
| Q | Reported result represents most abundant aroclor |
| R | Preliminary result |
| S | Surrogate recovery outside of control limits |
| T | No correction for total solids |
| V | Accurate value not available due to presence of multiple aroclors |
| W | Surrogate result not applicable due to sample dilution |
| X | Elevated reporting limit due to matrix interference |
| Y | Elevated reporting limit due to high target concentration |
| Z | Estimated result due to matrix interference |
| a | ASTM prep method F963-11 |
| d | Duplicate analysis not within control limits |
| f | Filtered and preserved in lab |
| i | Incremental sampling |
| p | Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one |
| r | This analyte is being reported as the best result from multiple |
| v | VOCs analyzed outside of holding time based on the measurement of |
| x | Preserved from bulk sample |
| c | Filtered in lab |

Form 2A: Initial and Continuing Calibration Verification

Data Set ID: HG2-HG3-20-0601A

Instrument ID: HG QuickTrace

Analysis Date: 06/01/20

Analyst: JRH

| <i>Sample Name</i> | <i>QC Type</i> | <i>Dilute</i> | <i>Element</i> | <i>Sample Conc</i> | <i>Actual Conc</i> | <i>%Rec</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|--------------------|----------------|---------------|----------------|--------------------|--------------------|-------------|----------------|--------------|---------------|
| 011 ICV-5.0 ppb | ICV | 1.0 | Hg | 5.317 | 5.0 | 106 | 90/110 | ug/L | Liquid |
| 013 CCV1-2.0 ppb | CCV | 1.0 | Hg | 2.137 | 2.0 | 107 | 90/110 | ug/L | Liquid |
| 026 CCV2-2.0 ppb | CCV | 1.0 | Hg | 2.041 | 2.0 | 102 | 90/110 | ug/L | Liquid |
| 027 CCV2-2.0 ppb | CCV | 1.0 | Hg | 2.129 | 2.0 | 107 | 90/110 | ug/L | Liquid |
| 043 CCV3-2.0 ppb | CCV | 1.0 | Hg | 2.018 | 2.0 | 101 | 90/110 | ug/L | Liquid |

Form 3: Blanks

Data Set ID: HG2-HG3-20-0601A

Instrument ID: HG QuickTrace

Analysis Date: 06/01/20

Analyst: JRH

| <i>Sample Name</i> | <i>QC Type</i> | <i>Dilute</i> | <i>Element</i> | <i>Sample Conc</i> | <i>Raw Conc</i> | <i>Units</i> | <i>Matrix</i> |
|--------------------|----------------|---------------|----------------|--------------------|-----------------|--------------|---------------|
| 012 ICB | ICB | 1.0 | Hg | <0.03 | -0.0303 | ug/L | Liquid |
| 014 CCB1 | CCB | 1.0 | Hg | <0.03 | -0.0310 | ug/L | Liquid |
| 017 060120_1 LRB | LRB | 1.0 | Hg | <0.03 | -0.0322 | ug/L | Liquid |
| 028 CCB2 | CCB | 1.0 | Hg | <0.03 | -0.0311 | ug/L | Liquid |
| 030 052920_1 LRB | LRB | 1.0 | Hg | <0.03 | -0.0308 | ug/L | Liquid |
| 044 CCB3 | CCB | 1.0 | Hg | <0.03 | -0.0308 | ug/L | Liquid |

Form 5A: Matrix Spike Sample Recovery

Data Set ID: HG2-HG3-20-0601A

Instrument ID: HG QuickTrace

Analysis Date: 06/01/20

Analyst: JRH

| <i>Spike Name</i> | <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Spike Conc</i> | <i>Sample Conc</i> | <i>Spike Amount</i> | <i>%Rec</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|---------------------|--------------------|---------------|----------------|-------------------|--------------------|---------------------|-------------|----------------|--------------|---------------|
| 015 BS-0.10 | | 1.0 | Hg | 0.092 | ND | 0.10 | 92 | 70/130 | ug/L | Liquid |
| 023 14347.03 MS-2.0 | 022 14347.03s | 75.1 | Hg | 198.5 | 33.60 | 150.2 | 110 | 80/120 | ug/kg | Soil |
| 037 14264.03 MS-2.0 | 036 14264.03s | 1.0 | Hg | 1.874 | <0.2 | 2.0 | 94 | 80/120 | ug/L | Liquid |

Form 5B: Matrix Spike Duplicate Evaluation

Data Set ID: HG2-HG3-20-0601A

Instrument ID: HG QuickTrace

Analysis Date: 06/01/20

Analyst: JRH

| <i>Duplicate Name</i> | <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Dup Conc</i> | <i>Samp Conc</i> | <i>%RPD</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|-----------------------|---------------------|---------------|----------------|-----------------|------------------|-------------|----------------|--------------|---------------|
| 024 14347.03 MSD | 023 14347.03 MS-2.0 | 76.7 | Hg | 189.3 | 198.5 | 5 | 0/20 | ug/kg | Soil |
| 038 14264.03 MSD | 037 14264.03 MS-2.0 | 1.0 | Hg | 2.070 | 1.874 | 10 | 0/20 | ug/L | Liquid |

Form 7: Laboratory Control Sample

Data Set ID: HG2-HG3-20-0601A

Instrument ID: HG QuickTrace

Analysis Date: 06/01/20

Analyst: JRH

| <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Sample Conc</i> | <i>Actual Conc</i> | <i>%Rec</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|----------------------|---------------|----------------|--------------------|--------------------|-------------|----------------|--------------|---------------|
| 016 060120_1 LCS-2.0 | 1.0 | Hg | 1.996 | 2.0 | 100 | 85/115 | ug/L | Liquid |
| 029 052920_1 LCS-2.0 | 1.0 | Hg | 1.937 | 2.0 | 97 | 85/115 | ug/L | Liquid |

Form 13: Analysis Run Log

Data Set ID: HG2-HG3-20-0601A

Instrument ID: HG QuickTrace

Analysis Date: 06/01/20

Analyst: JRH

| <i>Filename</i> | <i>Run Time</i> | <i>Matrix</i> | <i>Analytes</i> |
|-----------------------|---------------------|---------------|-----------------|
| 001 Calibration Blank | 6/1/2020 3:23:26 PM | Liquid | Hg |
| 002 Standard #1 | 6/1/2020 3:25:18 PM | Liquid | Hg |
| 003 Standard #2 | 6/1/2020 3:27:10 PM | Liquid | Hg |
| 004 Standard #3 | 6/1/2020 3:29:01 PM | Liquid | Hg |
| 005 Standard #4 | 6/1/2020 3:30:53 PM | Liquid | Hg |
| 006 Standard #5 | 6/1/2020 3:32:45 PM | Liquid | Hg |
| 007 Standard #6 | 6/1/2020 3:34:36 PM | Liquid | Hg |
| 008 Standard #7 | 6/1/2020 3:37:17 PM | Liquid | Hg |
| 009 Standard #8 | 6/1/2020 3:40:04 PM | Liquid | Hg |
| 010 6 | 6/1/2020 3:42:53 PM | Liquid | Hg |
| 011 ICV-5.0 ppb | 6/1/2020 3:53:20 PM | Liquid | Hg |
| 012 ICB | 6/1/2020 3:55:57 PM | Liquid | Hg |
| 013 CCV1-2.0 ppb | 6/1/2020 3:57:48 PM | Liquid | Hg |
| 014 CCB1 | 6/1/2020 3:59:40 PM | Liquid | Hg |
| 015 BS-0.10 | 6/1/2020 4:01:32 PM | Liquid | Hg |
| 016 060120_1 LCS-2.0 | 6/1/2020 4:04:32 PM | Liquid | Hg |
| 017 060120_1 LRB | 6/1/2020 4:06:23 PM | Liquid | Hg |
| 018 14359.01s | 6/1/2020 4:08:11 PM | Soil | Hg |
| 019 14359.02s | 6/1/2020 4:10:01 PM | Soil | Hg |
| 020 14359.03s | 6/1/2020 4:11:48 PM | Soil | Hg |
| 021 14347.02s | 6/1/2020 4:13:35 PM | Soil | Hg |
| 022 14347.03s | 6/1/2020 4:15:22 PM | Soil | Hg |
| 023 14347.03 MS-2.0 | 6/1/2020 4:17:10 PM | Soil | Hg |
| 024 14347.03 MSD | 6/1/2020 4:18:58 PM | Soil | Hg |
| 025 CCV2-2.0 ppb | 6/1/2020 4:20:50 PM | Liquid | Hg |
| 026 CCV2-2.0 ppb | 6/1/2020 4:22:42 PM | Liquid | Hg |
| 027 CCV2-2.0 ppb | 6/1/2020 4:26:10 PM | Liquid | Hg |
| 028 CCB2 | 6/1/2020 4:28:01 PM | Liquid | Hg |
| 029 052920_1 LCS-2.0 | 6/1/2020 4:29:52 PM | Liquid | Hg |
| 030 052920_1 LRB | 6/1/2020 4:31:43 PM | Liquid | Hg |
| 031 14275.01s | 6/1/2020 4:33:29 PM | Liquid | Hg |
| 032 14275.02s | 6/1/2020 4:35:16 PM | Liquid | Hg |
| 033 14275.03s | 6/1/2020 4:37:04 PM | Liquid | Hg |
| 034 14264.01s | 6/1/2020 4:38:51 PM | Liquid | Hg |
| 035 14264.02s | 6/1/2020 4:40:40 PM | Liquid | Hg |
| 036 14264.03s | 6/1/2020 4:42:29 PM | Liquid | Hg |
| 037 14264.03 MS-2.0 | 6/1/2020 4:44:18 PM | Liquid | Hg |
| 038 14264.03 MSD | 6/1/2020 4:46:04 PM | Liquid | Hg |
| 039 14264.04s | 6/1/2020 4:47:51 PM | Liquid | Hg |
| 040 14264.05s | 6/1/2020 4:49:39 PM | Liquid | Hg |
| 041 14264.06s | 6/1/2020 4:51:27 PM | Liquid | Hg |
| 042 14264.07s | 6/1/2020 4:53:15 PM | Liquid | Hg |
| 043 CCV3-2.0 ppb | 6/1/2020 4:55:07 PM | Liquid | Hg |
| 044 CCB3 | 6/1/2020 4:56:58 PM | Liquid | Hg |

Mercury Summary Report

| Element | Seq # | Acquisition Time | Sample Name | Peak | Concentration | Units | Matrix | Dilution | Sample Wt. | Sample Vol. |
|---------|-------|---------------------|-------------------|-------------|---------------|-------|--------|----------|------------|-------------|
| Hg | 001 | 6/1/2020 3:23:26 PM | Calibration Blank | 46.7600 | 0.0000 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 002 | 6/1/2020 3:25:18 PM | Standard #1 | 1655.0000 | 0.1000 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 003 | 6/1/2020 3:27:10 PM | Standard #2 | 3084.0000 | 0.2000 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 004 | 6/1/2020 3:29:01 PM | Standard #3 | 7443.0000 | 0.5000 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 005 | 6/1/2020 3:30:53 PM | Standard #4 | 14360.0000 | 1.0000 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 006 | 6/1/2020 3:32:45 PM | Standard #5 | 27490.0000 | 2.0000 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 007 | 6/1/2020 3:34:36 PM | Standard #6 | 78460.0000 | 6.0000 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 008 | 6/1/2020 3:37:17 PM | Standard #7 | 114700.0000 | 8.0000 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 009 | 6/1/2020 3:40:04 PM | Standard #8 | 134200.0000 | 10.0000 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 010 | 6/1/2020 3:42:53 PM | 6 | 82280.0000 | 6.1580 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 011 | 6/1/2020 3:53:20 PM | ICV-5.0 ppb | 71120.0000 | 5.3170 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 012 | 6/1/2020 3:55:57 PM | ICB | 49.8600 | -0.0303 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 013 | 6/1/2020 3:57:48 PM | CCV1-2.0 ppb | 28850.0000 | 2.1370 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 014 | 6/1/2020 3:59:40 PM | CCB1 | 40.9900 | -0.0310 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 015 | 6/1/2020 4:01:32 PM | BS-0.10 | 1669.0000 | 0.0916 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 016 | 6/1/2020 4:04:32 PM | 060120_1 LCS-2.0 | 26980.0000 | 1.9960 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 017 | 6/1/2020 4:06:23 PM | 060120_1 LRB | 24.4200 | -0.0322 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 025 | 6/1/2020 4:20:50 PM | CCV2-2.0 ppb | 29830.0000 | 2.2110 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 026 | 6/1/2020 4:22:42 PM | CCV2-2.0 ppb | 27580.0000 | 2.0410 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 027 | 6/1/2020 4:26:10 PM | CCV2-2.0 ppb | 28750.0000 | 2.1290 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 028 | 6/1/2020 4:28:01 PM | CCB2 | 39.6300 | -0.0311 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 029 | 6/1/2020 4:29:52 PM | 052920_1 LCS-2.0 | 26190.0000 | 1.9370 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 030 | 6/1/2020 4:31:43 PM | 052920_1 LRB | 43.5900 | -0.0308 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 034 | 6/1/2020 4:38:51 PM | 14264.01s | 102.6000 | -0.0263 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 035 | 6/1/2020 4:40:40 PM | 14264.02s | 73.8400 | -0.0285 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 036 | 6/1/2020 4:42:29 PM | 14264.03s | 64.5500 | -0.0292 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 037 | 6/1/2020 4:44:18 PM | 14264.03 MS-2.0 | 25360.0000 | 1.8740 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 038 | 6/1/2020 4:46:04 PM | 14264.03 MSD | 27960.0000 | 2.0700 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 039 | 6/1/2020 4:47:51 PM | 14264.04s | 127.6000 | -0.0244 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 040 | 6/1/2020 4:49:39 PM | 14264.05s | 79.6000 | -0.0281 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 041 | 6/1/2020 4:51:27 PM | 14264.06s | 60.7700 | -0.0295 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 042 | 6/1/2020 4:53:15 PM | 14264.07s | 97.0700 | -0.0267 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 043 | 6/1/2020 4:55:07 PM | CCV3-2.0 ppb | 27280.0000 | 2.0180 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |
| Hg | 044 | 6/1/2020 4:56:58 PM | CCB3 | 43.6300 | -0.0308 | ug/L | Liquid | 1.0 | 1.0000 | 1.0000 |

Mercury Digestion

Method # 245.1, 7471B, 7470A (OHIO VAP)

TIME START: 1100
 TIME FINISH: 1300
 PREP BATCH: HGD-052920-1
 BALANCE ID: M2

Beginning End
 block #1 95 °C block #1 95 °C ID # P43479
 block #2 _____ °C block #2 _____ °C ID # _____
 block #3 _____ °C block #3 _____ °C ID # _____

DATE 5/29/20
 ANALYST CCM
 REVIEWED BY CCM
 REVIEW DATE 6-1-20

| SAMPLE# | BTL ID | SAMPLE AMOUNT GRAMS (g) | %TOT. SOLIDS | DRY SAMPLE WT. | DILUTION FACTOR | FINAL VOLUME | REMARKS |
|-------------|--------|-------------------------|--------------|----------------|-----------------|--------------|----------------|
| LCS052920-1 | ----- | 25 | ----- | ----- | 1 | 25g | |
| LRB052920-1 | ----- | 25 | ----- | ----- | 1 | 25g | |
| 14097.02 | | 25 | | | 1 | | |
| 14249.01 | | 12.5 | | | 2 | | tcp |
| 02 | | | | | | | |
| 03 | | | | | | | |
| 14264.01 | | 25 | | | 1 | | |
| 02 | | | | | | | |
| 03 | | | | | | | |
| 04 | | | | | | | |
| 05 | | | | | | | |
| 06 | | | | | | | |
| 07 | | | | | | | |
| 14268.01 | | 25 | | | | | Drinking water |
| 14275.01 | | | | | | | |
| 02 | | | | | | | |
| 03 | | | | | | | |
| 14289.01 | | | | | | | |
| 14296.01 | | 0.612 | | | 41 | | |
| 14310.02 | | 25 | | | 1 | | |
| 14331.01 | | | | | | | |
| 14343.02 | | | | | | | |
| 1409702dp | | 25 | | | | | |
| 14264.03MS | | | | | | | |
| 03MSD | | | | | | | |
| 14331.01MS | | | | | | | |
| 01MSD | | | | | | | |

NOTES: 1) Spike values (unless otherwise stated):
 2.0 ppb for LCS: 0.50 ml of HPS solution, 2.0 ppb for liquid samples: 0.50 ml of HPS solution & 0.002 ppm for solid samples: 0.50 ml of HPS solution
 Centrifuge Tube Lot # 191127-068 (Date Prepared: _____ Exp _____)
 HNO₃ Lot # 000024841
 H₂SO₄ Lot # 2019061317

Pipet Calibration:

| Test # | Pipet Volume Setting mL | Wt. of water from pipet, g | Notes |
|--------|-------------------------|----------------------------|-------|
| 1 | 0.500 | 0.504 | |
| 2 | | 0.504 | |
| 3 | | 0.501 | |

ICS-1100 A Dionex IC Meth 300.0

052820

| # | ECD_1 | Name | Type | Level | Positio | Instrument Method | Processing Method | Status | Inject Time | Weight |
|----|-------|----------------------|----------------------|-------|---------|-------------------|-------------------|----------|-------------------------|--------|
| 1 | | water blank | Unknown | | 1 | Norm Method | Anion | Finished | 3/16/2020 9:58:12 AM... | 1.0000 |
| 2 | | 1130Cal1 | Calibration Standard | 01 | 2 | Norm Method | Anion | Finished | 3/16/2020 10:10:29 A... | 1.0000 |
| 3 | | 1130Cal2 | Calibration Standard | 02 | 3 | Norm Method | Anion | Finished | 3/16/2020 10:23:17 A... | 1.0000 |
| 4 | | 1130Cal3 | Calibration Standard | 03 | 4 | Norm Method | Anion | Finished | 3/16/2020 10:36:06 A... | 1.0000 |
| 5 | | 1130Cal4 | Calibration Standard | 04 | 5 | Norm Method | Anion | Finished | 3/16/2020 10:48:55 A... | 1.0000 |
| 6 | | 1130Cal5 | Calibration Standard | 05 | 6 | Norm Method | Anion | Finished | 3/16/2020 11:01:43 A... | 1.0000 |
| 7 | | Blank | Unknown | | 1 | Norm Method | Anion | Finished | 5/28/2020 8:26:40 AM... | 1.0000 |
| 8 | | BSpike 11712BS1 | Check Standard | | 2 | Norm Method | Anion | Finished | 5/28/2020 8:38:56 AM... | 1.0000 |
| 9 | | LCS 11712LCS1 | Check Standard | | 3 | Norm Method | Anion | Finished | 5/28/2020 8:51:45 AM... | 1.0000 |
| 10 | | 14264.01 | Unknown | | 4 | Norm Method | Anion | Finished | 5/28/2020 9:04:34 AM... | 1.0000 |
| 11 | | 14264.02 | Unknown | | 5 | Norm Method | Anion | Finished | 5/28/2020 9:17:22 AM... | 1.0000 |
| 12 | | 14264.03 | Unknown | | 6 | Norm Method | Anion | Finished | 5/28/2020 9:30:10 AM... | 1.0000 |
| 13 | | 14264.04 | Unknown | | 7 | Norm Method | Anion | Finished | 5/28/2020 9:42:59 AM... | 1.0000 |
| 14 | | 14264.05 | Unknown | | 8 | Norm Method | Anion | Finished | 5/28/2020 9:55:47 AM... | 1.0000 |
| 15 | | 14264.06 | Unknown | | 9 | Norm Method | Anion | Finished | 5/28/2020 10:08:36 A... | 1.0000 |
| 16 | | 14264.07 | Unknown | | 10 | Norm Method | Anion | Finished | 5/28/2020 10:21:25 A... | 1.0000 |
| 17 | | 14278.01 | Unknown | | 11 | Norm Method | Anion | Finished | 5/28/2020 10:34:13 A... | 1.0000 |
| 18 | | 14279.01 | Unknown | | 12 | Norm Method | Anion | Finished | 5/28/2020 10:47:01 A... | 1.0000 |
| 19 | | 14279.02 | Unknown | | 13 | Norm Method | Anion | Finished | 5/28/2020 10:59:49 A... | 1.0000 |
| 20 | | 14264.01 dup | Unknown | | 14 | Norm Method | Anion | Finished | 5/28/2020 11:12:38 A... | 1.0000 |
| 21 | | 14264.01 MS 12988... | Unknown | | 15 | Norm Method | Anion | Finished | 5/28/2020 11:25:26 A... | 1.0000 |
| 22 | | 14264.01 MSD 1298... | Unknown | | 16 | Norm Method | Anion | Finished | 5/28/2020 11:38:15 A... | 1.0000 |
| 23 | | BSpike 11712BS1 | Check Standard | | 17 | Norm Method | Anion | Finished | 5/28/2020 11:51:03 A... | 1.0000 |
| 24 | | 14295.01 | Unknown | | 18 | Norm Method | Anion | Finished | 5/28/2020 12:03:51 P... | 1.0000 |

CALIB# ICSA 031620CAL

CL200528-WL-A NTRA200528-WL-A
SFT200528-WL-A NTRI200528-WL-A

052820

| # | ECD_1 | Dilution | IntStd | Replicate ID | Comment | Spike Grou |
|----|-------|----------|--------|--------------|-------------|------------|
| 1 | | 1.0000 | 1.0000 | | Jeff Phifer | |
| 2 | | 1.0000 | 1.0000 | | Jeff Phifer | |
| 3 | | 1.0000 | 1.0000 | | Jeff Phifer | |
| 4 | | 1.0000 | 1.0000 | | Jeff Phifer | |
| 5 | | 1.0000 | 1.0000 | | Jeff Phifer | |
| 6 | | 1.0000 | 1.0000 | | Jeff Phifer | |
| 7 | | 1.0000 | 1.0000 | | Jeff Phifer | |
| 8 | | 1.0000 | 1.0000 | | Jeff Phifer | |
| 9 | | 1.0000 | 1.0000 | | Jeff Phifer | |
| 10 | | 10.0000 | 1.0000 | | Jeff Phifer | |
| 11 | | 10.0000 | 1.0000 | | Jeff Phifer | |
| 12 | | 10.0000 | 1.0000 | | Jeff Phifer | |
| 13 | | 10.0000 | 1.0000 | | Jeff Phifer | |
| 14 | | 10.0000 | 1.0000 | | Jeff Phifer | |
| 15 | | 10.0000 | 1.0000 | | Jeff Phifer | |
| 16 | | 2.5000 | 1.0000 | | Jeff Phifer | |
| 17 | | 10.0000 | 1.0000 | | Jeff Phifer | |
| 18 | | 10.0000 | 1.0000 | | Jeff Phifer | |
| 19 | | 10.0000 | 1.0000 | | Jeff Phifer | |
| 20 | | 10.0000 | 1.0000 | | Jeff Phifer | |
| 21 | | 1.0000 | 1.0000 | | Jeff Phifer | |
| 22 | | 1.0000 | 1.0000 | | Jeff Phifer | |
| 23 | | 1.0000 | 1.0000 | | Jeff Phifer | |
| 24 | | 5.0000 | 1.0000 | | Jeff Phifer | |

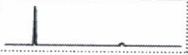
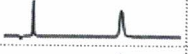



052820

| # | ECD_1 | Name | Type | Level | Positio | Instrument Method | Processing Method | Status | Inject Time | Weight |
|----|------------|-----------------|----------------|-------|---------|-------------------|-------------------|----------|-------------------------|--------|
| 25 | | 14295.01 | Unknown | | 19 | Norm Method | Anion | Finished | 5/28/2020 12:16:40 P... | 1.0000 |
| 26 | | 14279.03 | Unknown | | 20 | Norm Method | Anion | Finished | 5/28/2020 12:29:28 P... | 1.0000 |
| 27 | | 14279.04 | Unknown | | 21 | Norm Method | Anion | Finished | 5/28/2020 12:42:17 P... | 1.0000 |
| 28 | | 14264.02 | Unknown | | 22 | Norm Method | Anion | Finished | 5/28/2020 12:55:05 P... | 1.0000 |
| 29 | | 14264.04 | Unknown | | 23 | Norm Method | Anion | Finished | 5/28/2020 1:07:54 PM... | 1.0000 |
| 30 | Loading... | 14295.01 | Unknown | | 24 | Norm Method | Anion | Finished | 5/28/2020 1:20:42 PM... | 1.0000 |
| 31 | Loading... | BSpike 11712BS1 | Check Standard | | 25 | Norm Method | Anion | Finished | 5/28/2020 1:38:00 PM... | 1.0000 |
| 32 | Loading... | Blank | Unknown | | 26 | Norm Method | Anion | Finished | 5/28/2020 1:50:30 PM... | 1.0000 |

[Click here to add a new injection](#)

052820



| # | ECD_1 ▶ | Dilution | IntStd | Replicate ID | Comment | Spike Grou |
|---|---|----------|--------|--------------|-------------|------------|
| 25 |  | 10.0000 | 1.0000 | | Jeff Phifer | |
| 26 |  | 10.0000 | 1.0000 | | Jeff Phifer | |
| 27 |  | 10.0000 | 1.0000 | | Jeff Phifer | |
| 28 |  | 25.0000 | 1.0000 | | Jeff Phifer | |
| 29 |  | 100.0000 | 1.0000 | | Jeff Phifer | |
| 30 | Loading... | 50.0000 | 1.0000 | | Jeff Phifer | |
| 31 | Loading... | 1.0000 | 1.0000 | | Jeff Phifer | |
| 32 | Loading... | 1.0000 | 1.0000 | | Jeff Phifer | |
| Click here to add a new injection | | | | | | |

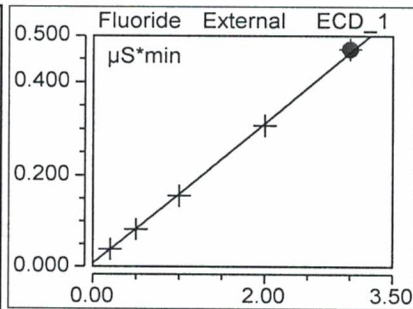
| | | | | |
|------------------|----------------|--|-------------------------------|---------|
| Norm Method | 03/08/11 13:39 | Jeff Phifer | Method 300.0 | |
| Stage | Time | Command | Value | Comment |
| Instrument Setup | min | | | |
| | initial | | | |
| | | Sampler.HomeNeedle | | |
| | | Sampler.ResetVials | 1, 50 | |
| | | Pump_ECD.Pressure.UpperLimit | 4500 [psi] | |
| | | Sampler.DelayVolume | 125 [µl] | |
| | | Pump_ECD.%A.Equate | "Carb - BiCarb" | |
| | | Pump_ECD.Pressure.LowerLimit | 100 [psi] | |
| | | Pump_ECD.CellTemperature.Nominal | 35.0 [°C] | |
| | | Pump_ECD.Data_Collection_Rate | 5.0 [Hz] | |
| | | Pump_ECD.Suppressor_Type | ASRS_4mm | |
| | | Pump_ECD.Suppressor_Carbonate | 1.8 [mM] | |
| | | Pump_ECD.Suppressor_Bicarbonate | 1.7 [mM] | |
| | | Pump_ECD.Suppressor_Hydroxide | 0.0 [mM] | |
| | | Pump_ECD.Suppressor_Tetraborate | 0.0 [mM] | |
| | | Pump_ECD.Suppressor_OtherEluent | 0.0 [mM] | |
| | | Pump_ECD.Suppressor_RecommendedCurrent | 27 [mA] | |
| | | Pump_ECD.Suppressor_Current | 27 [mA] | |
| | | Sampler.FlushFactor | 10 | |
| | | Sampler.DeliverSpeed | 4.0 [ml/min] | |
| | | Pump_ECD.Flow | 2.00 | |
| | | Sampler.LoadPosition | | |
| | | Sampler.DeliverSample | Full | |
| | | Sampler.EndSamplePrep | | |
| Inject | 0.000 | | | |
| | | Wait | Sampler.CycleTimeState, Hold, | |
| | | Sampler.Inject | | |
| Start Run | 0.000 | | | |
| | | Pump_ECD.Channel_Pressure.AcqOn | | |
| | | Pump_ECD.Autozero | | |
| | | Pump_ECD.ECD_1.AcqOn | | |
| | | Pump_ECD.ECD_Total.AcqOn | | |
| Run | | | Duration = 10.000 [min] | |
| | 0.000 | | | |
| | 0.500 | | | |
| | | Sampler.BeginOverlap | | |
| Stop Run | 10.000 | | | |
| | | Pump_ECD.Channel_Pressure.AcqOff | | |
| | | Pump_ECD.ECD_1.AcqOff | | |
| | | Pump_ECD.ECD_Total.AcqOff | | |
| End | | | | |

Calibration Batch Report
CAL ID# ICSA031620CAL

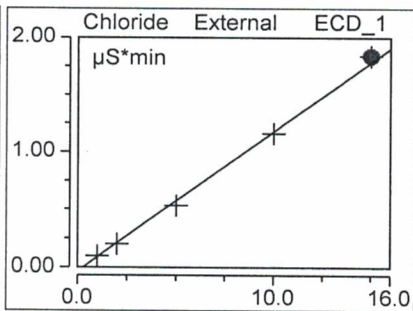
| | |
|---------------------------------------|--------------------------|
| Sequence: 052820 | Injection Volu: 2,500.00 |
| Instrument Method: Norm Method | Operator: Jeff Phifer |
| Inj. Date / Time: 16-Mar-2020 / 11:01 | Column: AS4A-SC 038777 |

| Calibration Summary | | | | | | | |
|---------------------|-----------|----------------------|---------------------|----------------|---------------|---------------|-------------|
| Peak Name | Eval.Type | Cal.Type | Window Width min | Offset (C0) | Slope (C1) | Curve (C2) | Corr.Coeff. |
| Fluoride | Area | Lin, WithOffset, 1/A | 0.01 | 0.007 | 0.152 | 0.000 | 0.9998 |
| Chloride | Area | Lin, WithOffset, 1/A | 0.02 | -0.033 | 0.121 | 0.000 | 0.9987 |
| Nitrite | Area | Lin, WithOffset, 1/A | 0.03 | -0.003 | 0.227 | 0.000 | 0.9997 |
| Bromide | Area | Lin, WithOffset, 1/A | 0.07 | -0.001 | 0.043 | 0.000 | 0.9999 |
| Nitrate | Area | Lin, WithOffset, 1/A | 0.09 | -0.001 | 0.260 | 0.000 | 0.9997 |
| Sulfate | Area | Lin, WithOffset, 1/A | 0.33 | -0.007 | 0.079 | 0.000 | 0.9996 |
| AVERAGE: | | | | -0.0064 | 0.1471 | 0.0000 | 0.9996 |

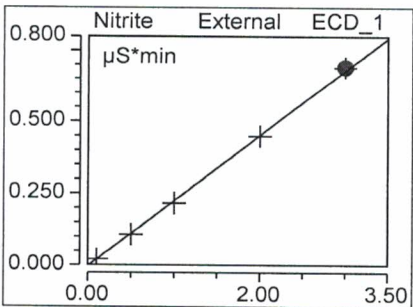
| Injection Name | Ret.Time min | Area µS*min | Height µS | Amount |
|-----------------------|-----------------|-----------------|----------------|----------------|
| Fluoride | Fluoride | Fluoride | Fluoride | Fluoride |
| 1130Cal1 | ECD_1 1.118 | ECD_1 0.0386 | ECD_1 0.506 | ECD_1 0.206 |
| 1130Cal2 | 1.118 | 0.0822 | 1.190 | 0.493 |
| 1130Cal3 | 1.118 | 0.1559 | 2.362 | 0.978 |
| 1130Cal4 | 1.118 | 0.3073 | 4.834 | 1.974 |
| 1130Cal5 | 1.118 | 0.4705 | 7.546 | 3.048 |
| Average | 1.118 | | | |
| Rel. Std. Dev. | 0.000 % | | | |



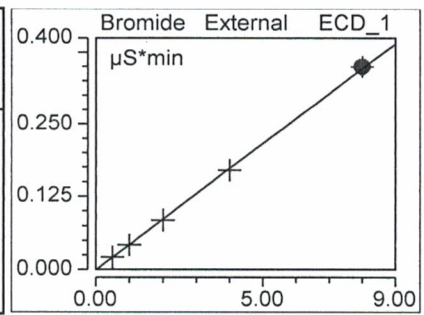
| Injection Name | Ret.Time min | Area µS*min | Height µS | Amount |
|-----------------------|-----------------|-----------------|----------------|----------------|
| Chloride | Chloride | Chloride | Chloride | Chloride |
| 1130Cal1 | ECD_1 1.651 | ECD_1 0.0980 | ECD_1 1.539 | ECD_1 1.086 |
| 1130Cal2 | 1.651 | 0.2000 | 3.158 | 1.929 |
| 1130Cal3 | 1.661 | 0.5307 | 8.559 | 4.662 |
| 1130Cal4 | 1.664 | 1.1594 | 18.897 | 9.858 |
| 1130Cal5 | 1.664 | 1.8377 | 29.851 | 15.464 |
| Average | 1.658 | | | |
| Rel. Std. Dev. | 0.412 % | | | |



| Injection Name | Ret.Time min | Area µS*min | Height µS | Amount |
|-----------------------|-----------------|-----------------|----------------|----------------|
| Nitrite | Nitrite | Nitrite | Nitrite | Nitrite |
| 1130Cal1 | ECD_1 1.944 | ECD_1 0.0206 | ECD_1 0.280 | ECD_1 0.105 |
| 1130Cal2 | 1.948 | 0.1071 | 1.441 | 0.486 |
| 1130Cal3 | 1.954 | 0.2163 | 2.949 | 0.967 |
| 1130Cal4 | 1.954 | 0.4487 | 6.229 | 1.989 |
| 1130Cal5 | 1.948 | 0.6905 | 9.755 | 3.054 |
| Average | 1.950 | | | |
| Rel. Std. Dev. | 0.229 % | | | |

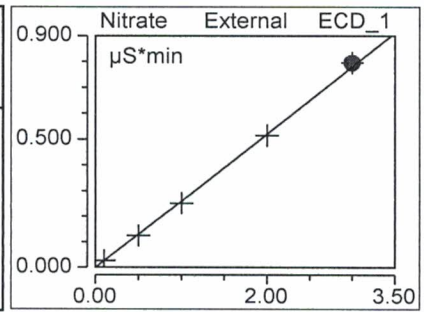


| Injection Name | Ret. Time min | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount |
|-----------------------|------------------|--------------------------------------|-------------------------|----------------|
| Bromide | Bromide | Bromide | Bromide | Bromide |
| 1130Ca1 | ECD_1 2.871 | ECD_1 0.0210 | ECD_1 0.228 | ECD_1 0.511 |
| 1130Ca2 | 2.868 | 0.0422 | 0.461 | 0.999 |
| 1130Ca3 | 2.884 | 0.0843 | 0.917 | 1.969 |
| 1130Ca4 | 2.874 | 0.1696 | 1.866 | 3.936 |
| 1130Ca5 | 2.848 | 0.3497 | 3.898 | 8.085 |
| Average | 2.869 | | | |
| Rel. Std. Dev. | 0.469 % | | | |

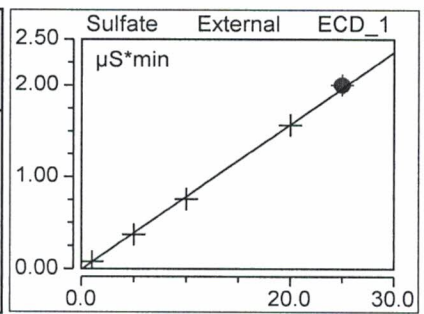


Handwritten signature

| Injection Name | Ret. Time min | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount |
|-----------------------|------------------|--------------------------------------|-------------------------|----------------|
| Nitrate | Nitrate | Nitrate | Nitrate | Nitrate |
| 1130Ca1 | ECD_1 3.244 | ECD_1 0.0266 | ECD_1 0.254 | ECD_1 0.105 |
| 1130Ca2 | 3.234 | 0.1249 | 1.182 | 0.483 |
| 1130Ca3 | 3.248 | 0.2515 | 2.359 | 0.970 |
| 1130Ca4 | 3.228 | 0.5145 | 4.808 | 1.982 |
| 1130Ca5 | 3.194 | 0.7947 | 7.457 | 3.060 |
| Average | 3.230 | | | |
| Rel. Std. Dev. | 0.659 % | | | |



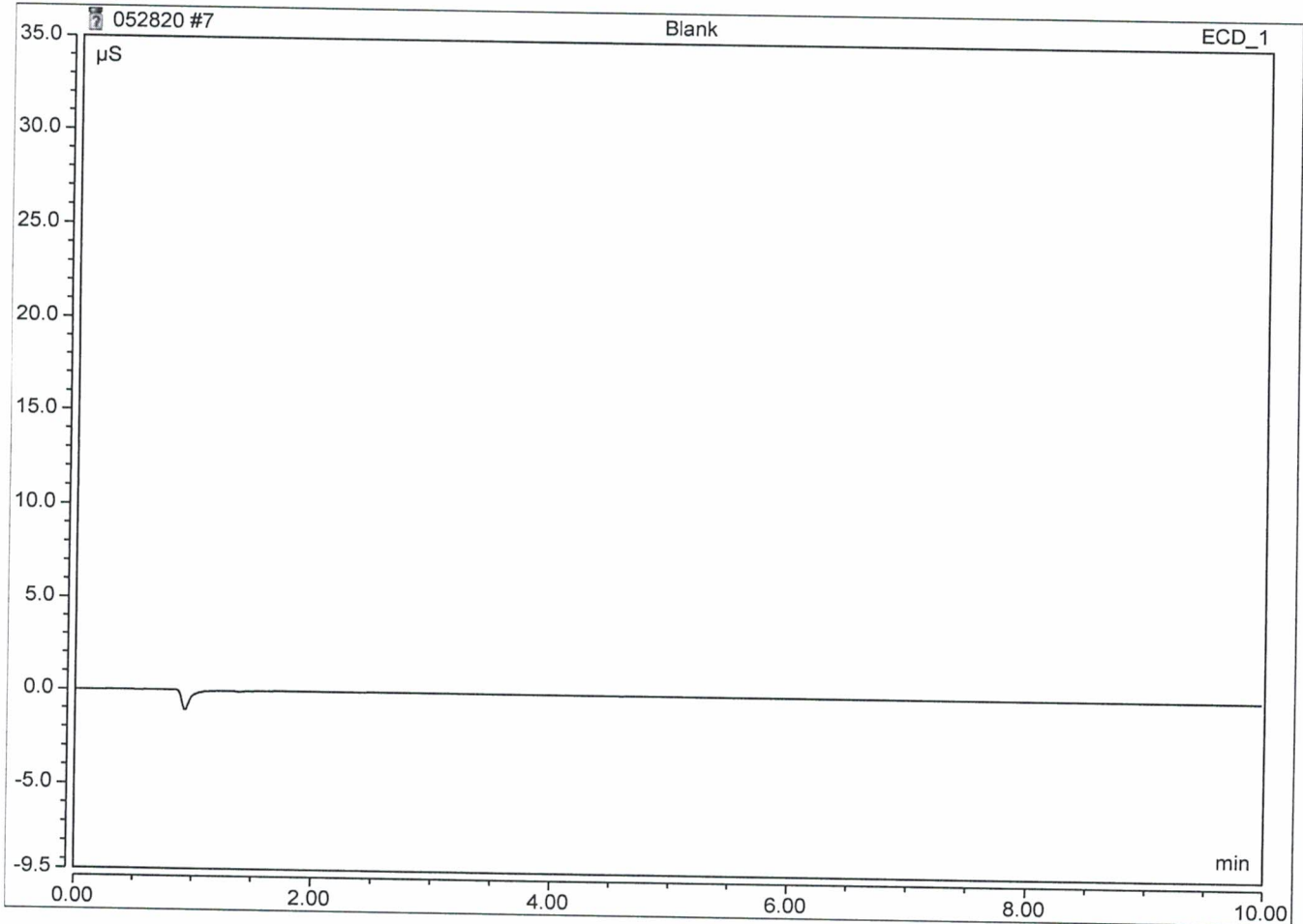
| Injection Name | Ret. Time min | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount |
|-----------------------|------------------|--------------------------------------|-------------------------|----------------|
| Sulfate | Sulfate | Sulfate | Sulfate | Sulfate |
| 1130Ca1 | ECD_1 6.768 | ECD_1 0.0763 | ECD_1 0.333 | ECD_1 1.054 |
| 1130Ca2 | 6.754 | 0.3712 | 1.645 | 4.800 |
| 1130Ca3 | 6.744 | 0.7553 | 3.326 | 9.676 |
| 1130Ca4 | 6.721 | 1.5656 | 6.872 | 19.966 |
| 1130Ca5 | 6.718 | 2.0017 | 8.764 | 25.504 |
| Average | 6.741 | | | |
| Rel. Std. Dev. | 0.319 % | | | |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | Blank | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 08:26 | Operator: | Jeff Phifer |

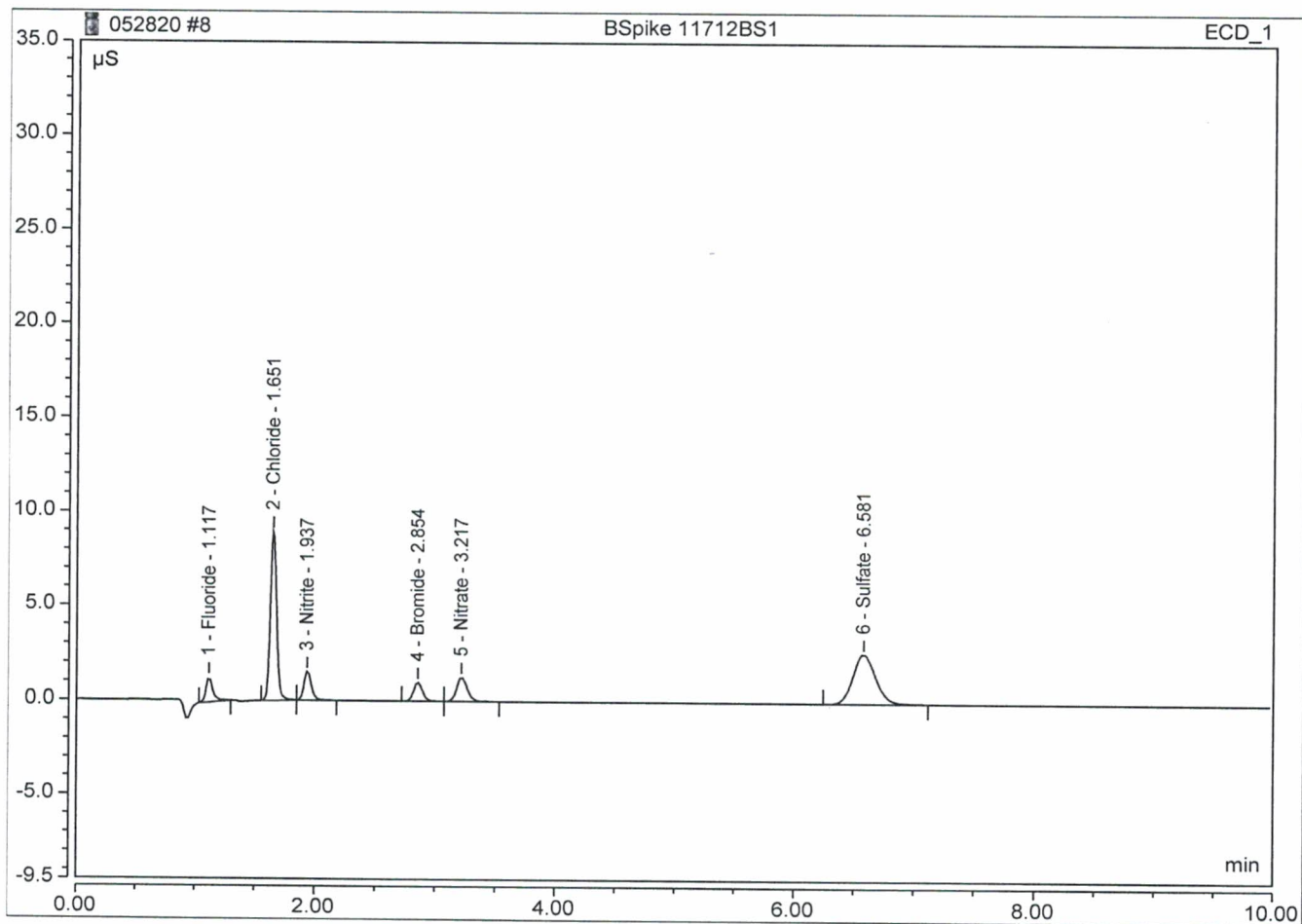
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| TOTAL: | | | | 0.00 | 0.00 | 0.00 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | BSpike 11712BS1 | Inj. Vol.: | 2500.00 |
| Injection Type: | Check Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 08:38 | Operator: | Jeff Phifer |

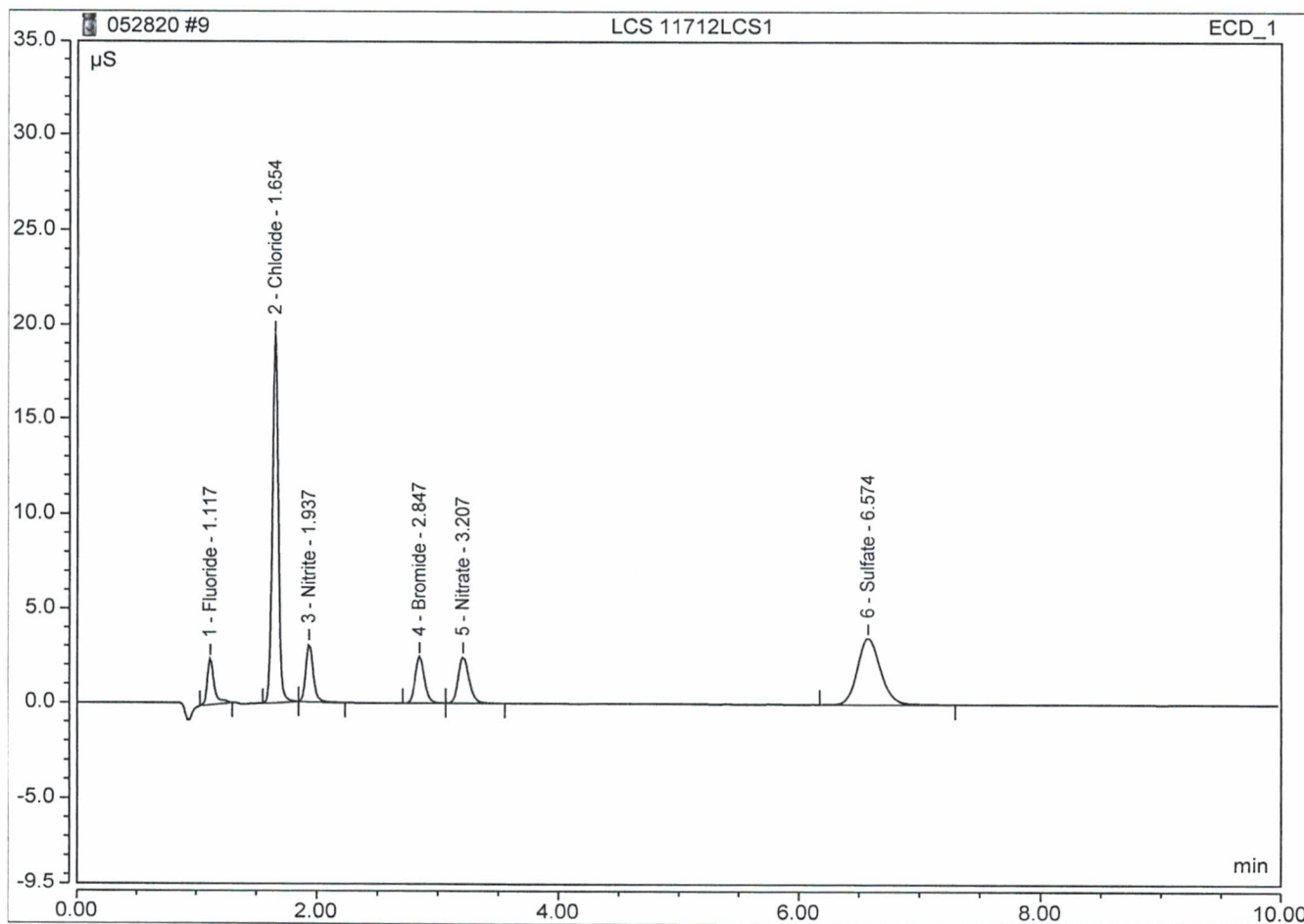
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}^*\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|--------------------------------|----------------------|----------------|
| 1 | 1.12 | Fluoride | BMB | 0.086 | 1.286 | 0.5158 |
| 2 | 1.65 | Chloride | BMB | 0.540 | 8.952 | 5 4.7431 94% |
| 3 | 1.94 | Nitrite | BMB | 0.105 | 1.482 | 0.5 0.4783 96% |
| 4 | 2.85 | Bromide | BMB | 0.087 | 0.972 | 2.0356 |
| 5 | 3.22 | Nitrate | BMB | 0.127 | 1.247 | 0.5 0.4930 98% |
| 6 | 6.58 | Sulfate | BMB | 0.571 | 2.596 | 7.5 7.3373 97% |
| TOTAL: | | | | 1.52 | 16.54 | 15.60 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | LCS 11712LCS1 | Inj. Vol.: | 2500.00 |
| Injection Type: | Check Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 08:51 | Operator: | Jeff Phifer |

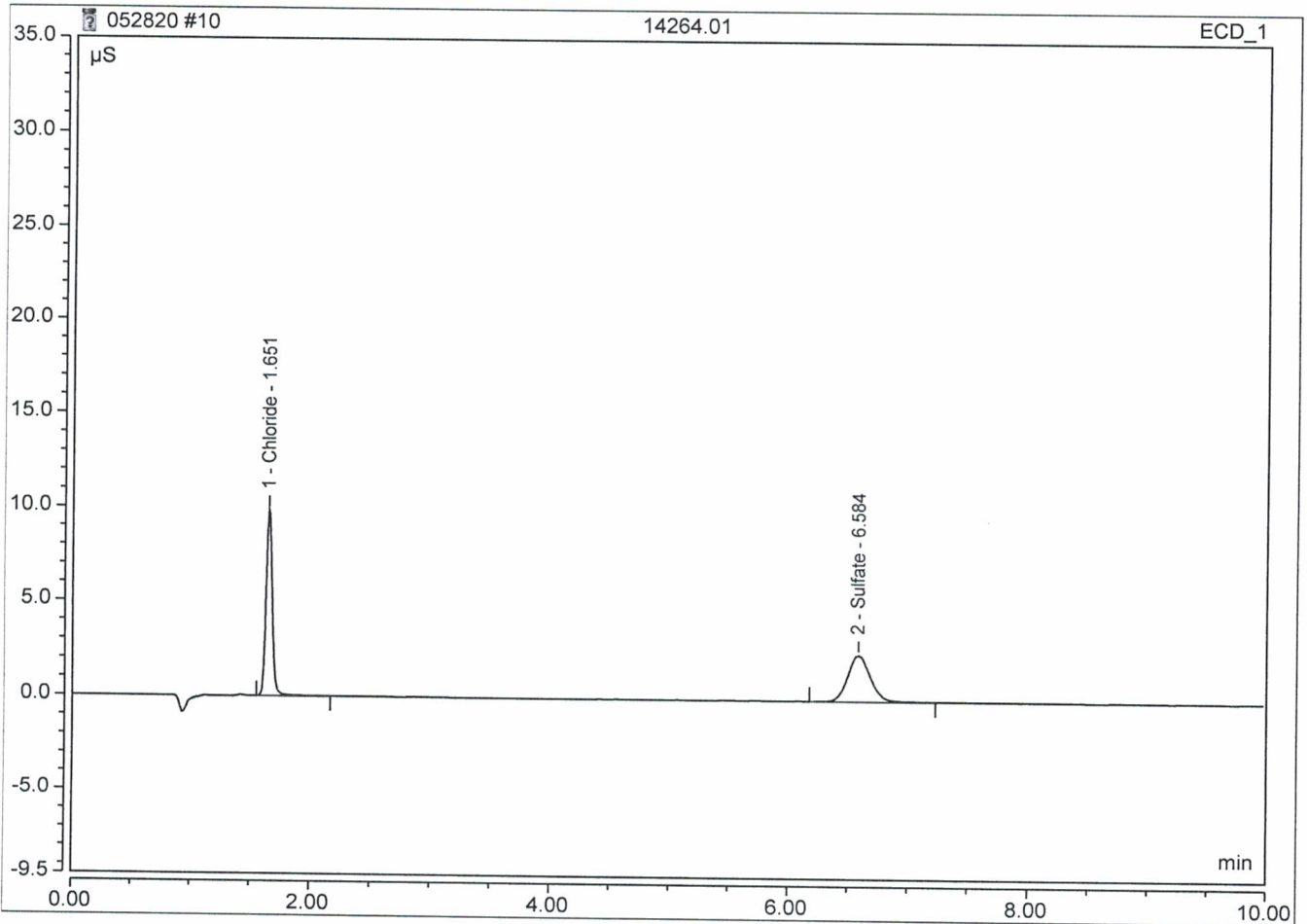
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S} \cdot \text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-------------------------------------|----------------------|---------------|
| 1 | 1.12 | Fluoride | BMB | 0.159 | 2.412 | 0.9957 |
| 2 | 1.65 | Chloride | BMB | 1.163 | 19.428 | 10 9.8868 99% |
| 3 | 1.94 | Nitrite | BMB | 0.217 | 3.071 | 1 0.9681 7% |
| 4 | 2.85 | Bromide | BMB | 0.217 | 2.443 | 5.0342 |
| 5 | 3.21 | Nitrate | BMB | 0.250 | 2.438 | 1 0.9642 9% |
| 6 | 6.57 | Sulfate | BMB | 0.767 | 3.488 | 10 9.8253 98% |
| TOTAL: | | | | 2.77 | 33.28 | 27.67 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.01 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 10.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 09:04 | Operator: | Jeff Phifer |

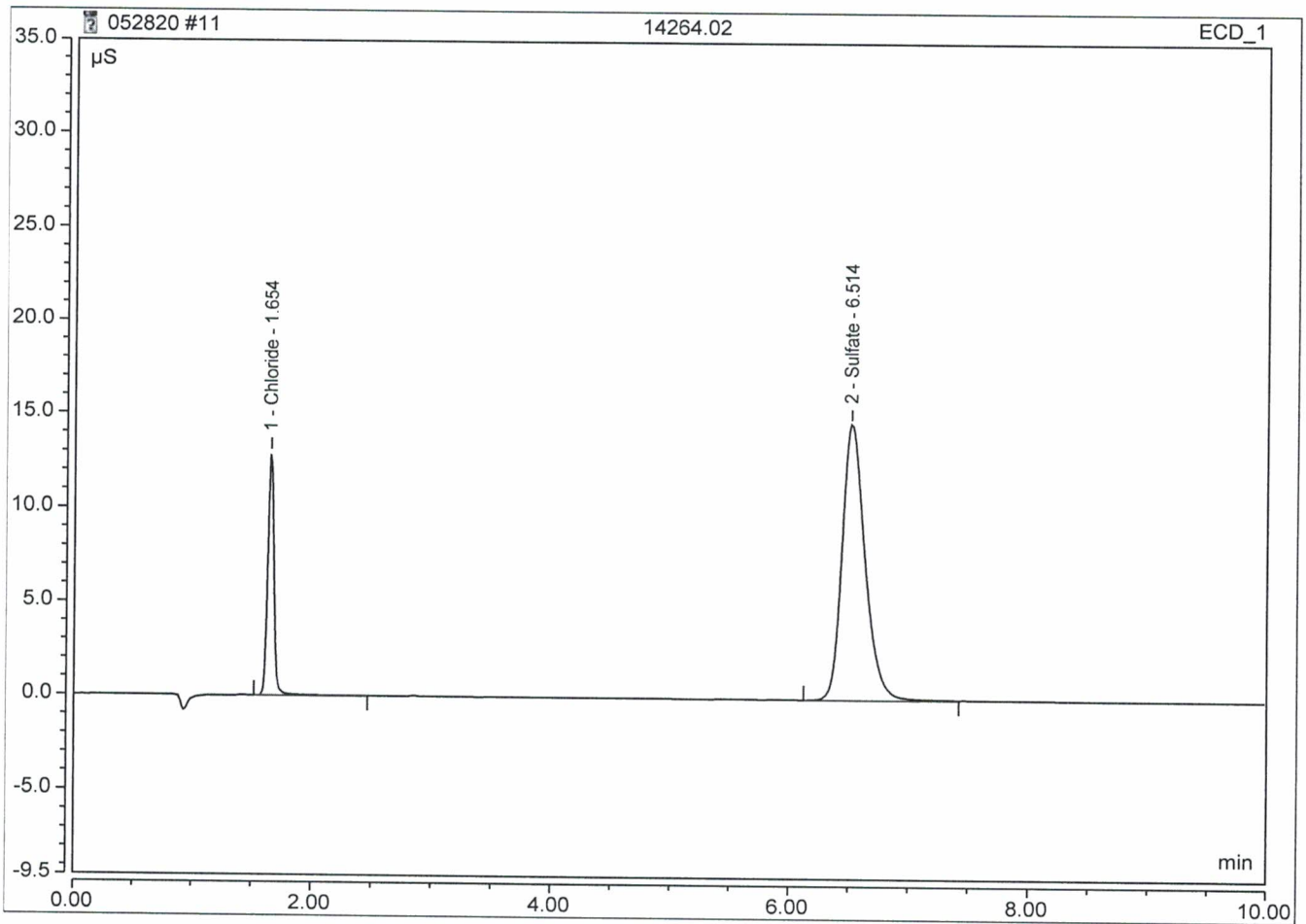
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| 1 | 1.65 | Chloride | BMB | 0.599 | 9.855 | 52.2976 |
| 2 | 6.58 | Sulfate | BMB | 0.536 | 2.435 | 68.9760 |
| TOTAL: | | | | 1.14 | 12.29 | 121.27 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.02 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 10.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 09:17 | Operator: | Jeff Phifer |

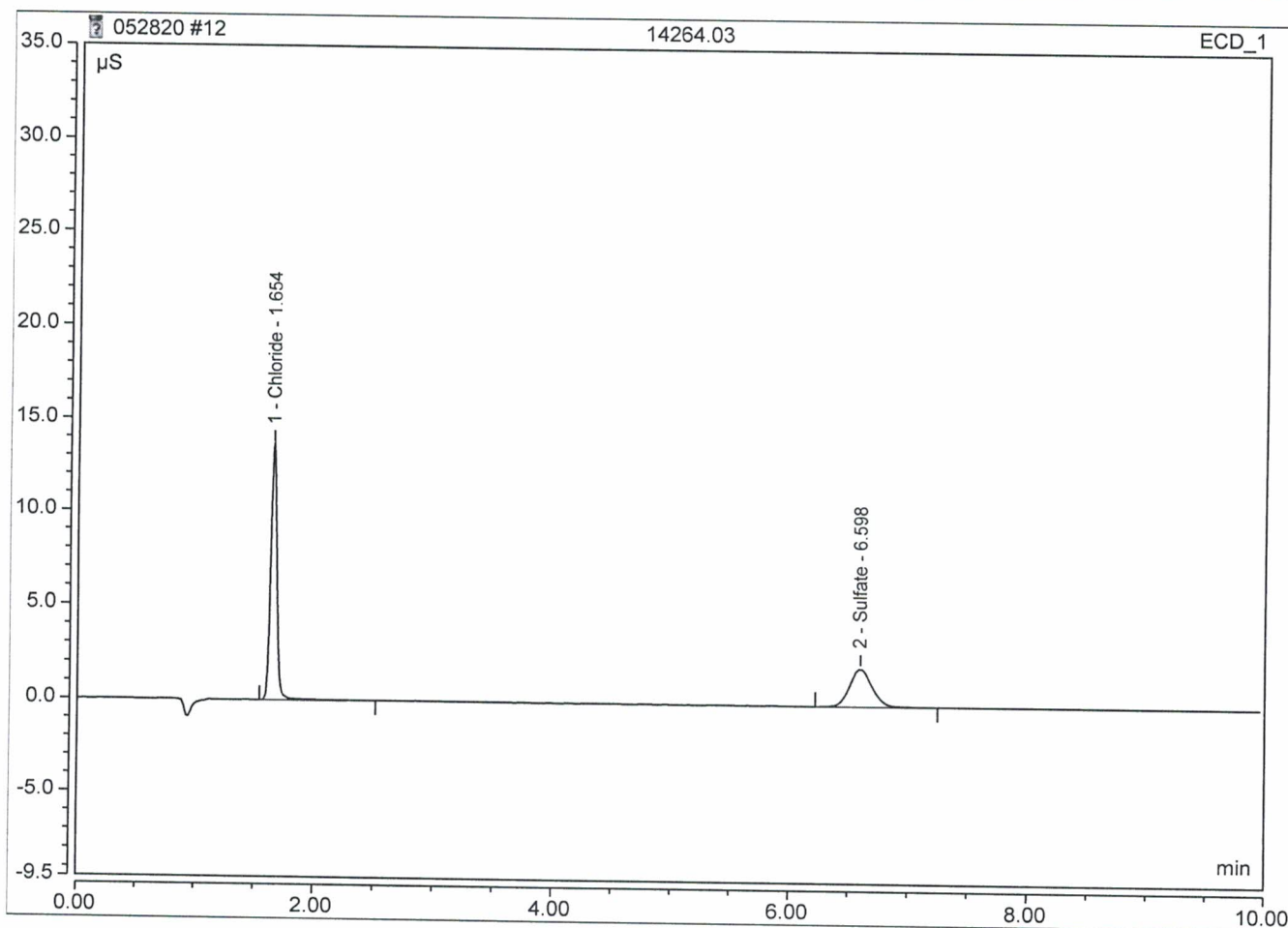
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S} \cdot \text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-------------------------------------|----------------------|-------------|
| 1 | 1.65 | Chloride | BMB | 0.789 | 12.932 | 67.9495 |
| 2 | 6.51 | Sulfate | BMB | 3.272 | 14.673 | 416.4015 |
| TOTAL: | | | | 4.06 | 27.60 | 484.35 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.03 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 10.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 09:30 | Operator: | Jeff Phifer |

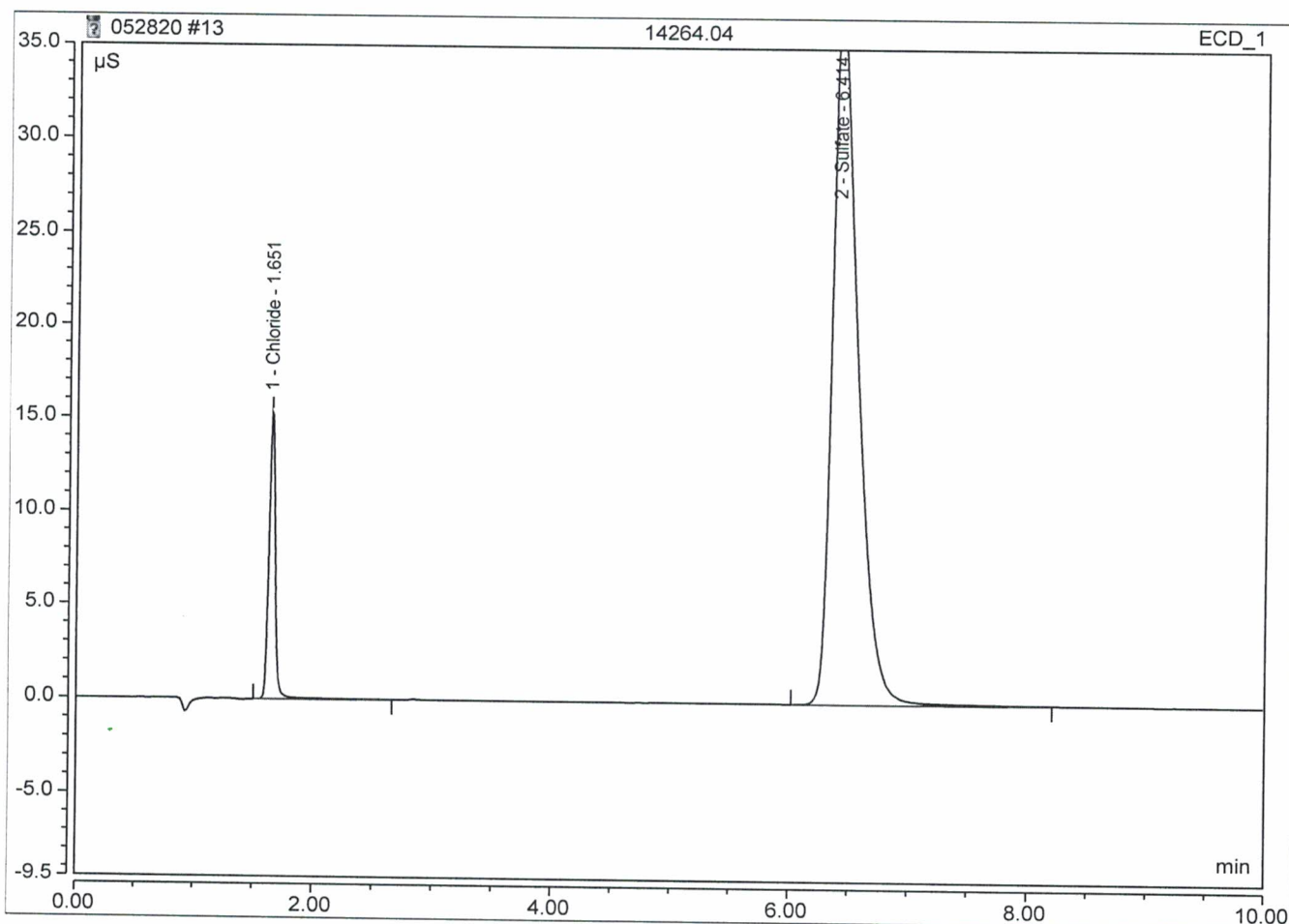
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| 1 | 1.65 | Chloride | BMB | 0.832 | 13.641 | 71.5495 |
| 2 | 6.60 | Sulfate | BMB | 0.444 | 2.006 | 57.1920 |
| TOTAL: | | | | 1.28 | 15.65 | 128.74 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.04 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 10.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 09:42 | Operator: | Jeff Phifer |

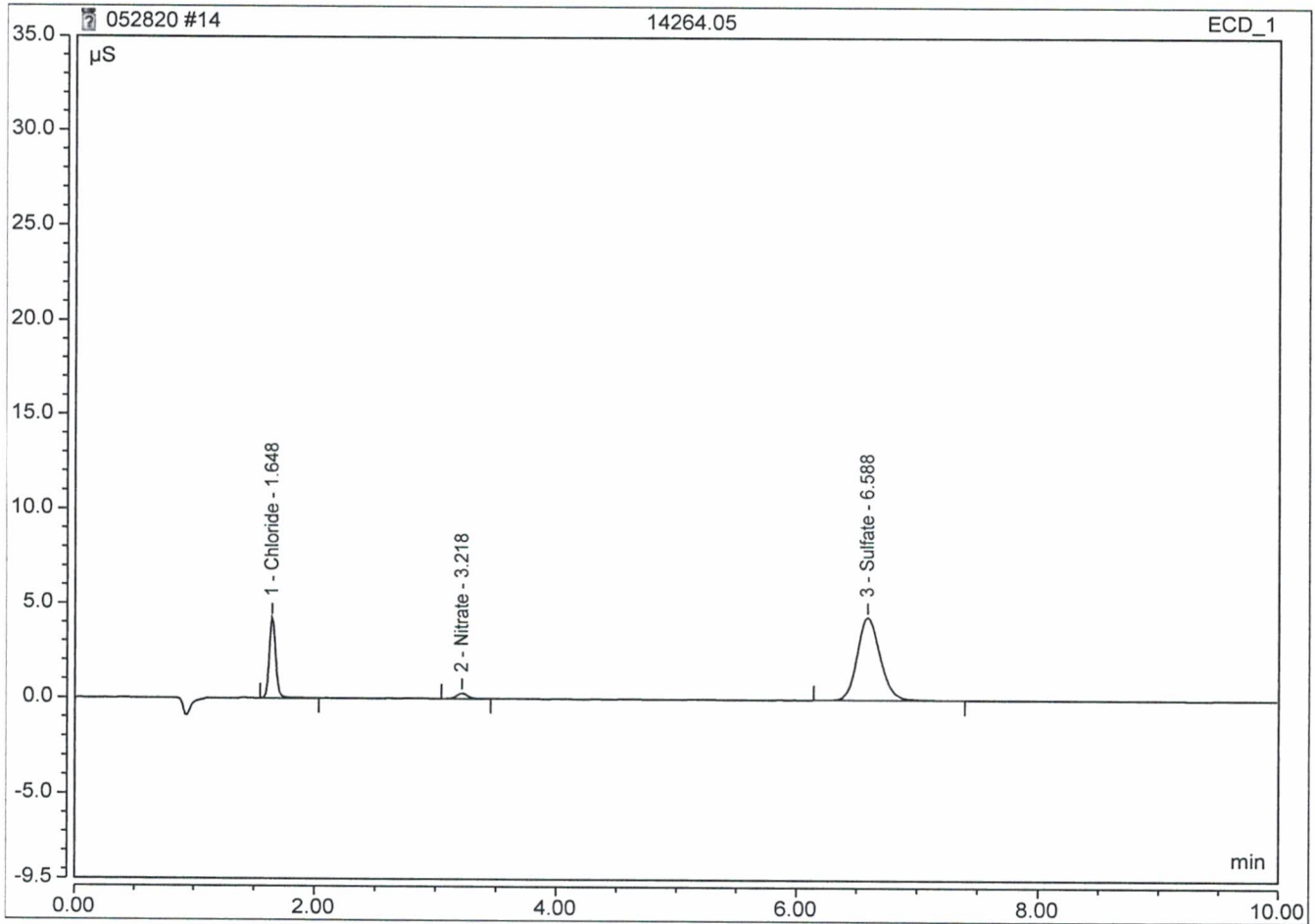
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| 1 | 1.65 | Chloride | BMB | 0.954 | 15.353 | 81.5865 |
| 2 | 6.41 | Sulfate | BMB | 9.198 | 37.518 | 1168.8590 |
| TOTAL: | | | | 10.15 | 52.87 | 1250.45 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.05 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 10.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 09:55 | Operator: | Jeff Phifer |

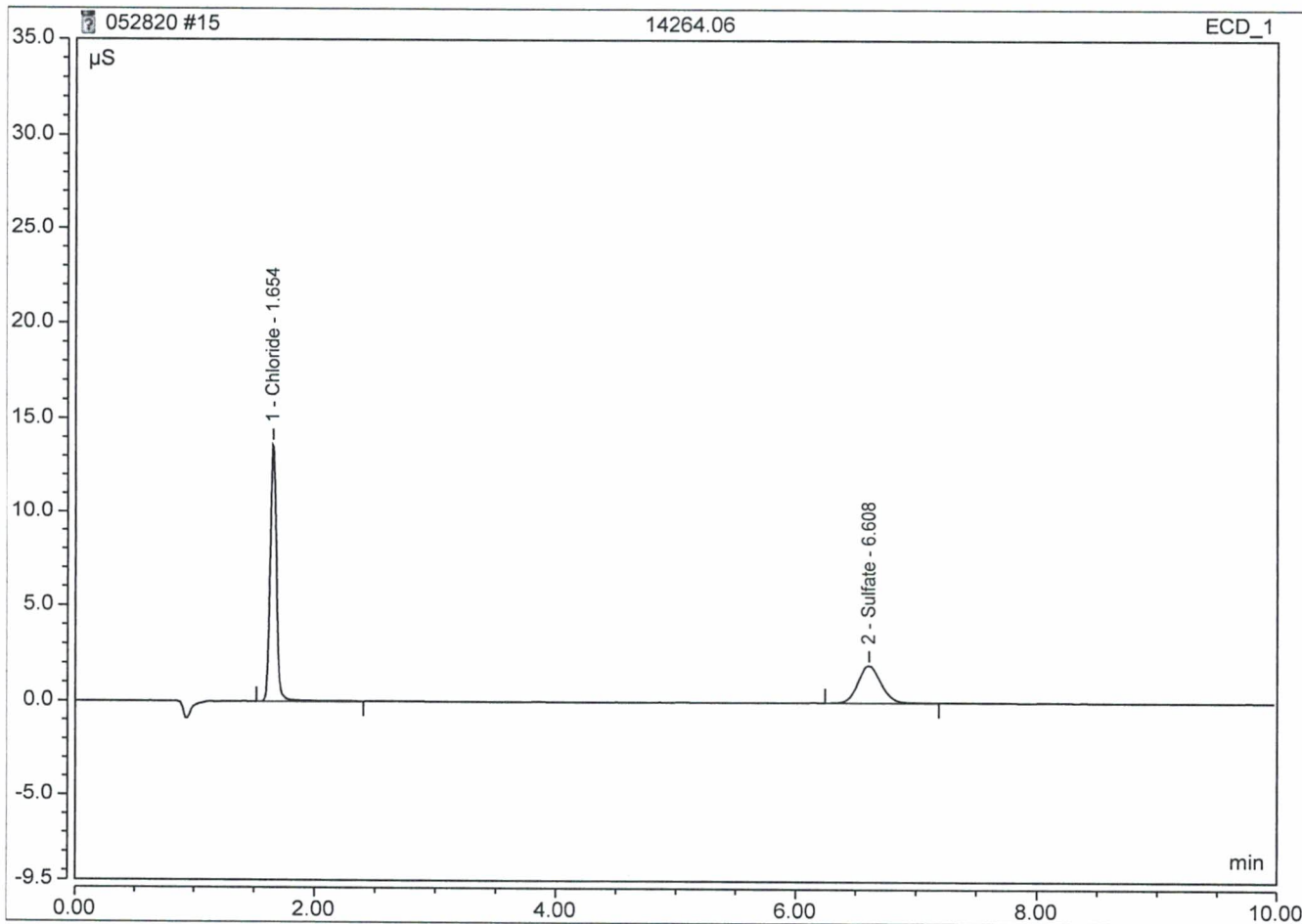
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| 1 | 1.65 | Chloride | BMB | 0.263 | 4.264 | 24.5000 |
| 2 | 3.22 | Nitrate | BMB | 0.030 | 0.290 | 1.1723 |
| 3 | 6.59 | Sulfate | BMB | 0.960 | 4.365 | 122.7905 |
| TOTAL: | | | | 1.25 | 8.92 | 148.46 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.06 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 10.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 10:08 | Operator: | Jeff Phifer |

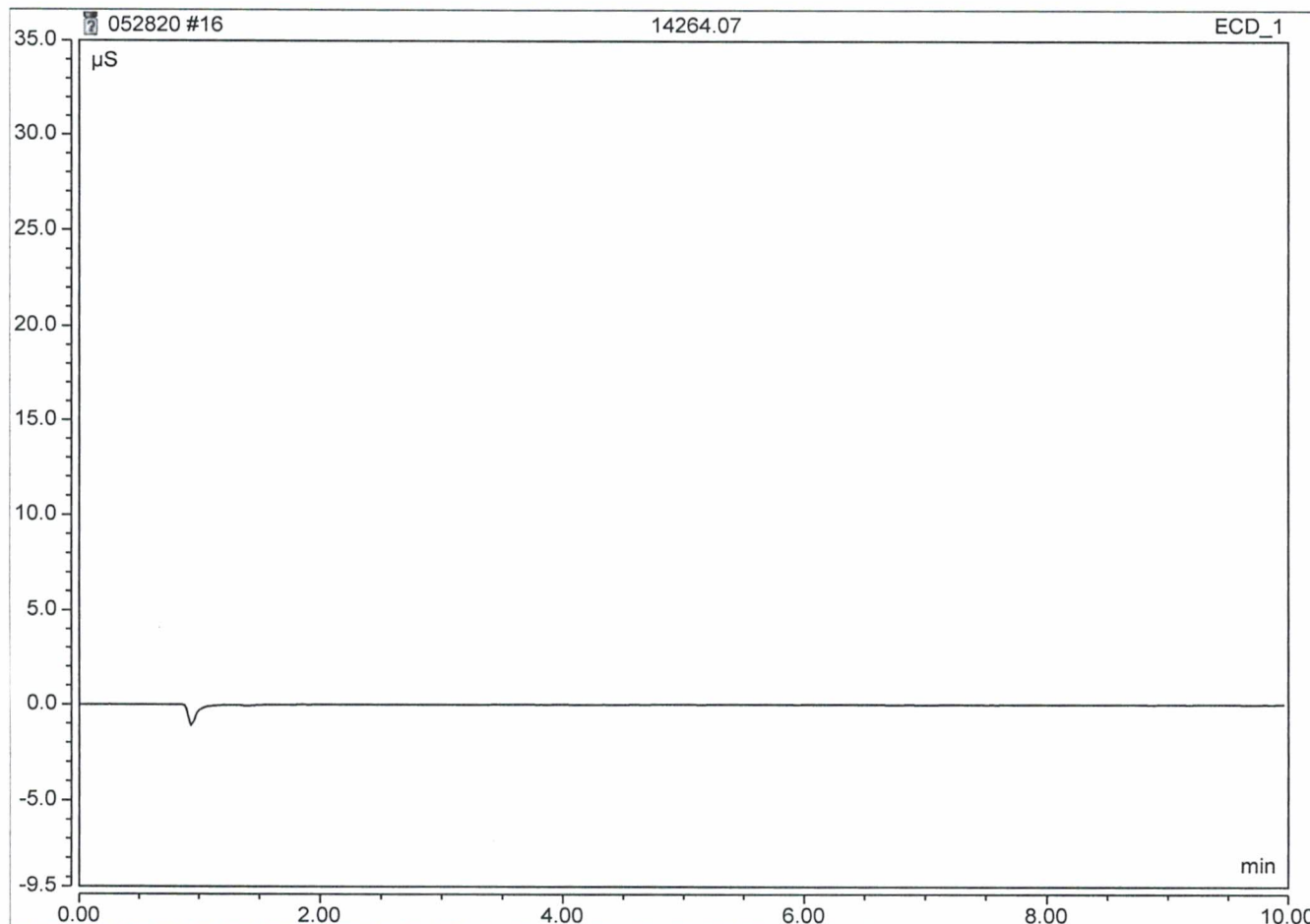
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| 1 | 1.65 | Chloride | BMB | 0.835 | 13.697 | 71.7984 |
| 2 | 6.61 | Sulfate | BMB | 0.438 | 1.989 | 56.4698 |
| TOTAL: | | | | 1.27 | 15.69 | 128.27 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.07 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 2.5000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 10:21 | Operator: | Jeff Phifer |

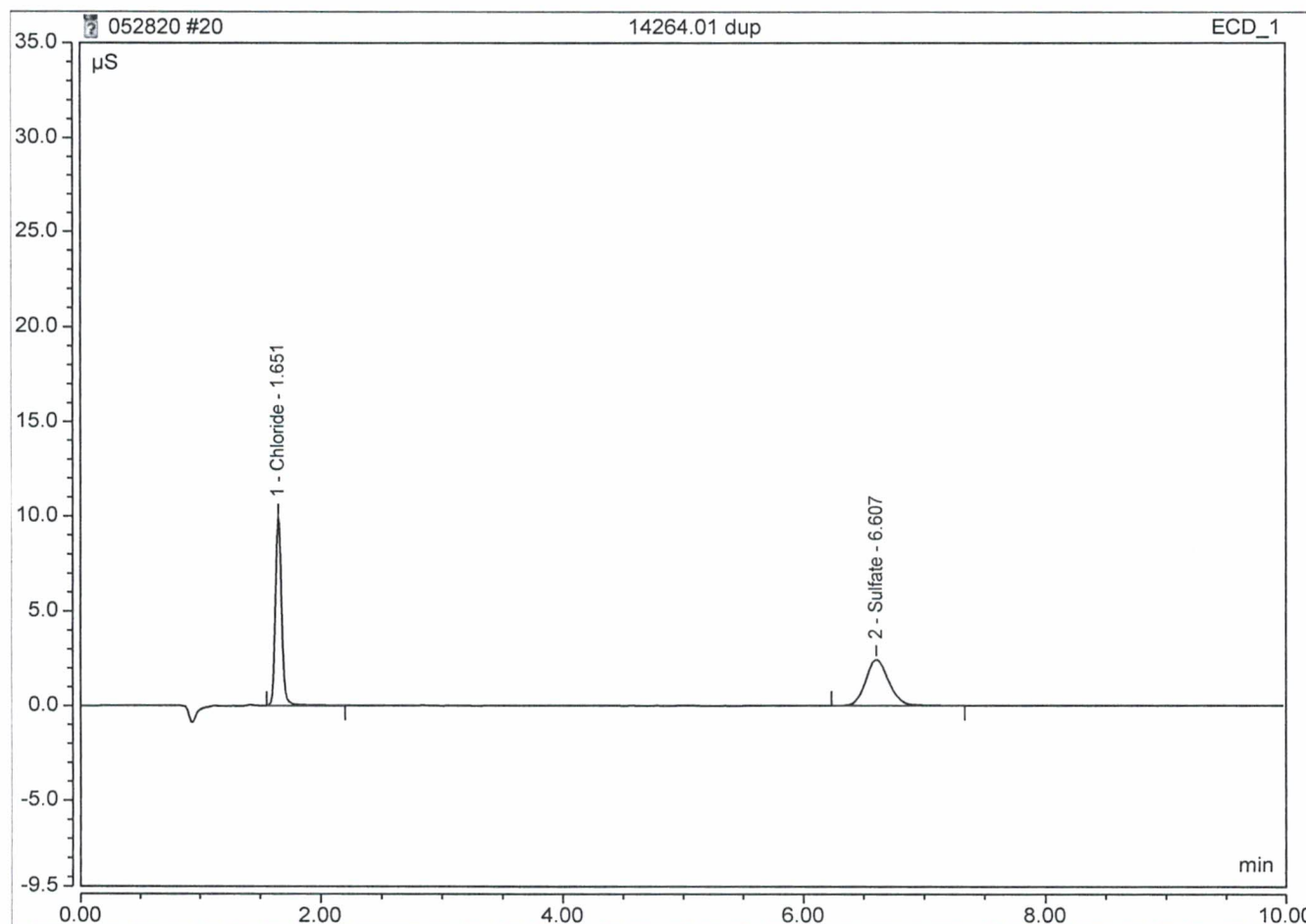
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| TOTAL: | | | | 0.00 | 0.00 | 0.00 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.01 dup | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 10.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 11:12 | Operator: | Jeff Phifer |

| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S} \cdot \text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-------------------------------------|----------------------|-------------|
| 1 | 1.65 | Chloride | BMB | 0.600 | 9.874 | 52.3678 |
| 2 | 6.61 | Sulfate | BMB | 0.539 | 2.436 | 69.3125 |
| TOTAL: | | | | 1.14 | 12.31 | 121.68 |

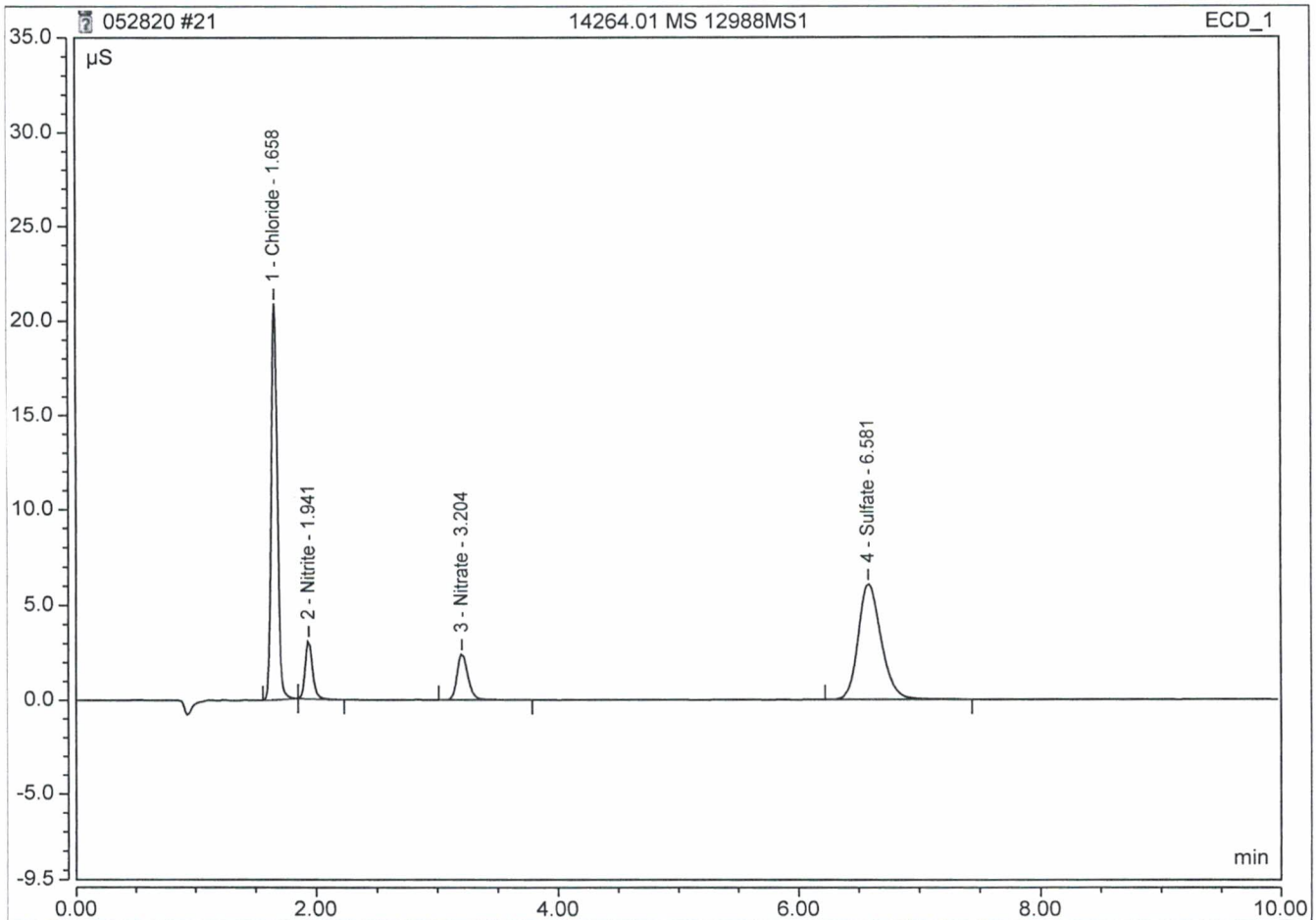


Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 14264.01 MS 12988MS1 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 11:25 | Operator: | Jeff Phifer |

| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|--------------------|
| 1 | 1.66 | Chloride | BMB | 1.246 | 20.922 | 5 10.5773 - 5.2 ~ |
| 2 | 1.94 | Nitrite | BMB | 0.216 | 3.088 | 1 0.9659 - No ~ |
| 3 | 3.20 | Nitrate | BMB | 0.257 | 2.466 | 1 0.9895 - No ~ |
| 4 | 6.58 | Sulfate | BMB | 1.344 | 6.104 | 10 17.1527 - 6.9 = |
| TOTAL: | | | | 3.06 | 32.58 | 29.69 |

1086
 965
 995
 1035

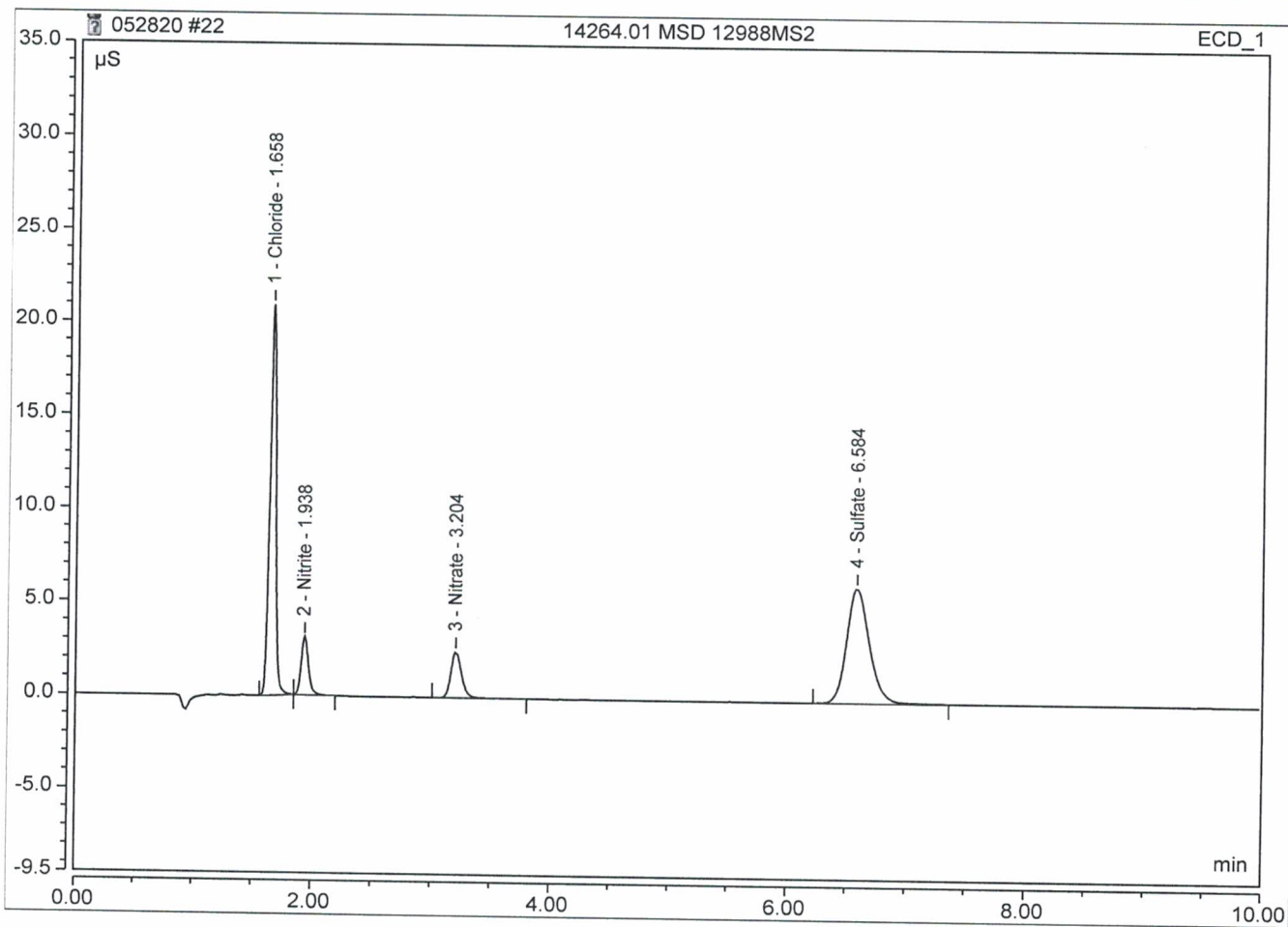


Peak Integration Report

| | | | |
|-------------------|-----------------------|------------------|----------------|
| Sample Name: | 14264.01 MSD 12988MS2 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 11:38 | Operator: | Jeff Phifer |

| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| 1 | 1.66 | Chloride | BMB | 1.246 | 20.955 | 5 |
| 2 | 1.94 | Nitrite | BMB | 0.216 | 3.092 | 1 |
| 3 | 3.20 | Nitrate | BMB | 0.256 | 2.465 | 1 |
| 4 | 6.58 | Sulfate | BMB | 1.343 | 6.105 | 10 |
| TOTAL: | | | | 3.06 | 32.62 | 29.67 |

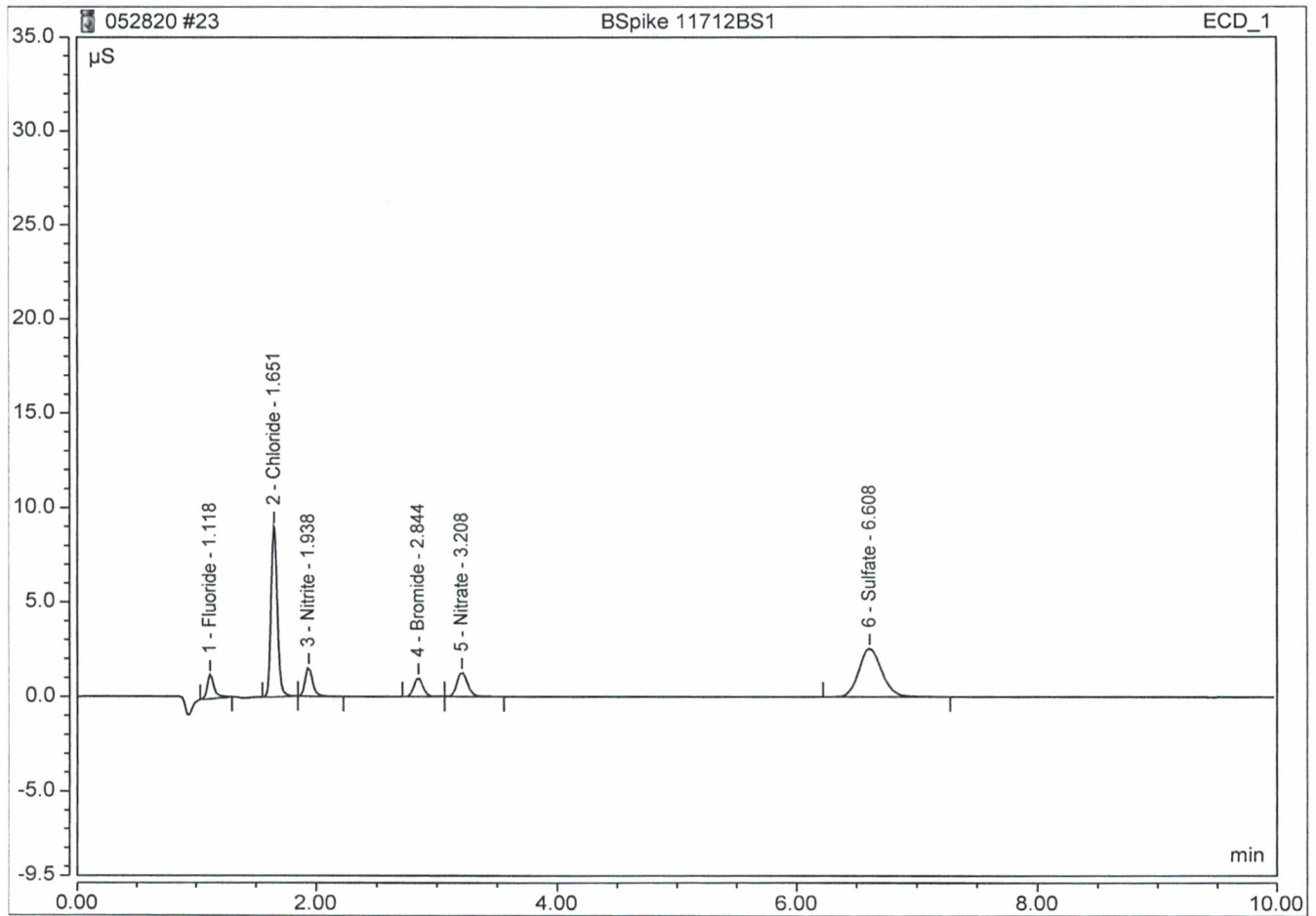
1086
 970
 295
 1025



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | BSpike 11712BS1 | Inj. Vol.: | 2500.00 |
| Injection Type: | Check Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 11:51 | Operator: | Jeff Phifer |

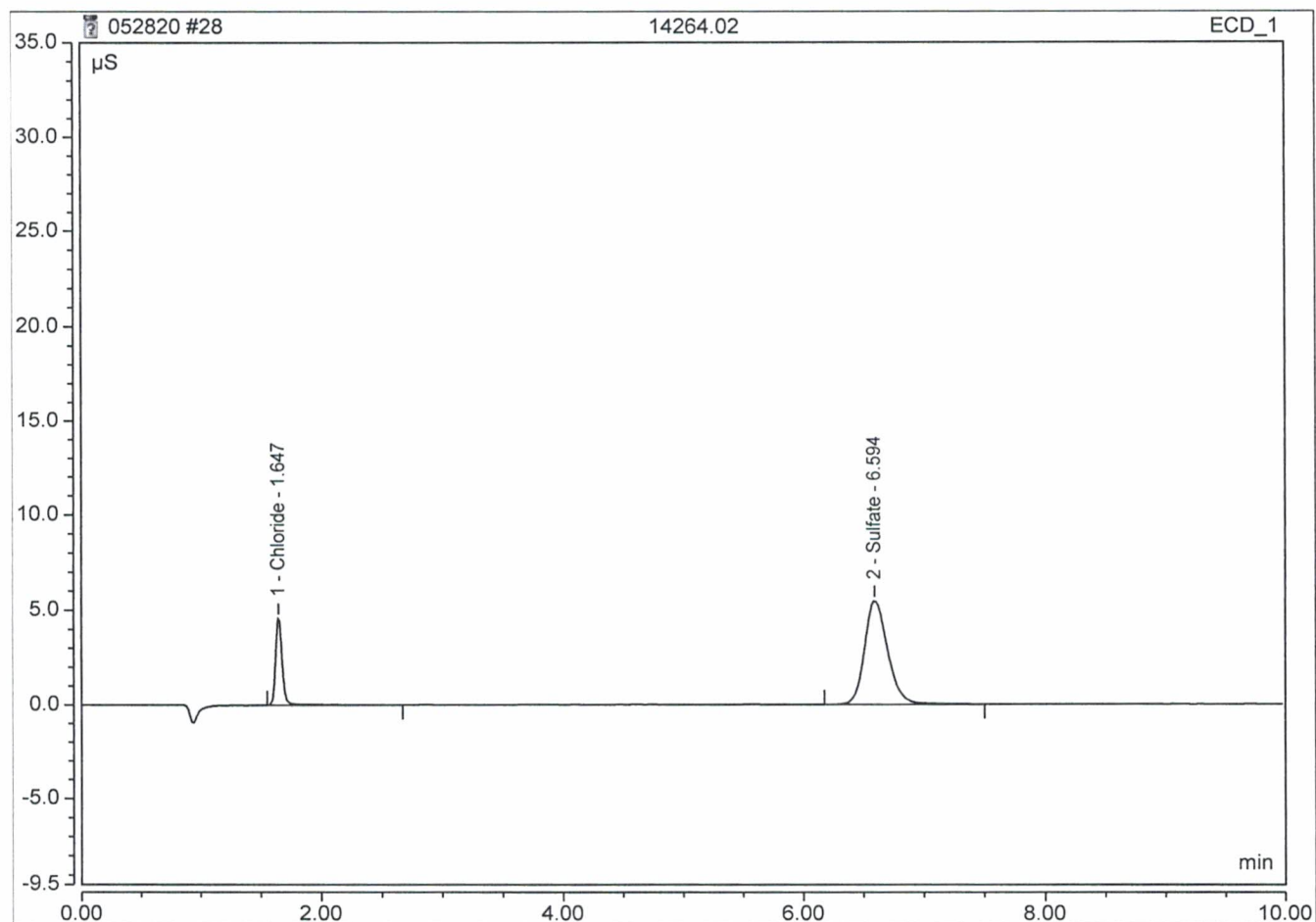
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-----------------|
| 1 | 1.12 | Fluoride | BMB | 0.083 | 1.256 | 0.5012 |
| 2 | 1.65 | Chloride | BMB | 0.547 | 9.014 | 5 4.7954 960 |
| 3 | 1.94 | Nitrite | BMB | 0.107 | 1.493 | 0.5 0.4866 986 |
| 4 | 2.84 | Bromide | BMB | 0.087 | 0.979 | 2.0329 |
| 5 | 3.21 | Nitrate | BMB | 0.130 | 1.263 | 0.5 0.5010 1005 |
| 6 | 6.61 | Sulfate | BMB | 0.565 | 2.560 | 7.5 7.2564 965 |
| TOTAL: | | | | 1.52 | 16.57 | 15.57 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.02 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 25.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 12:55 | Operator: | Jeff Phifer |

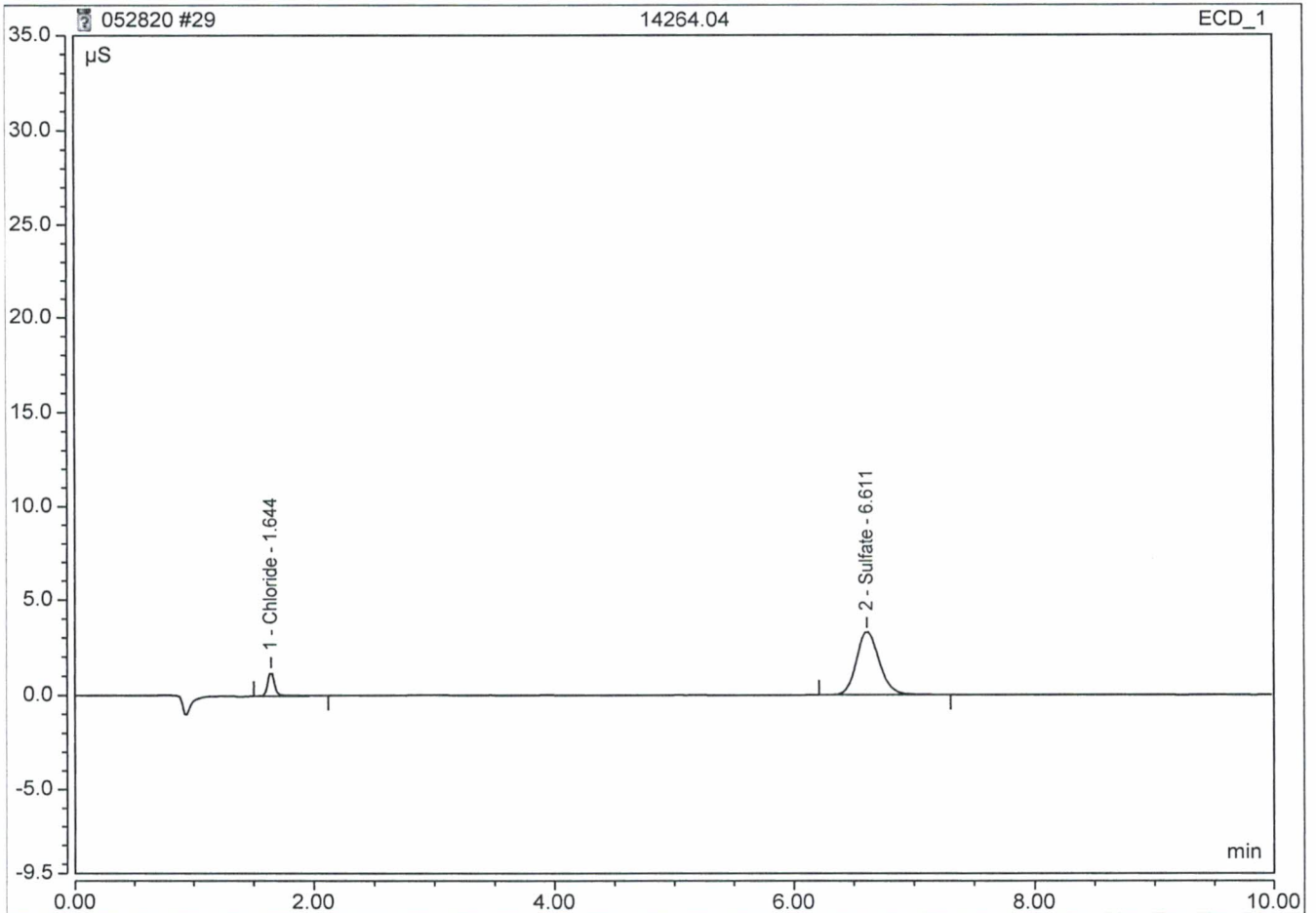
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| 1 | 1.65 | Chloride | BMB | 0.296 | 4.618 | 68.0512 |
| 2 | 6.59 | Sulfate | BMB | 1.209 | 5.488 | 385.9827 |
| TOTAL: | | | | 1.51 | 10.11 | 454.03 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.04 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 100.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 13:07 | Operator: | Jeff Phifer |

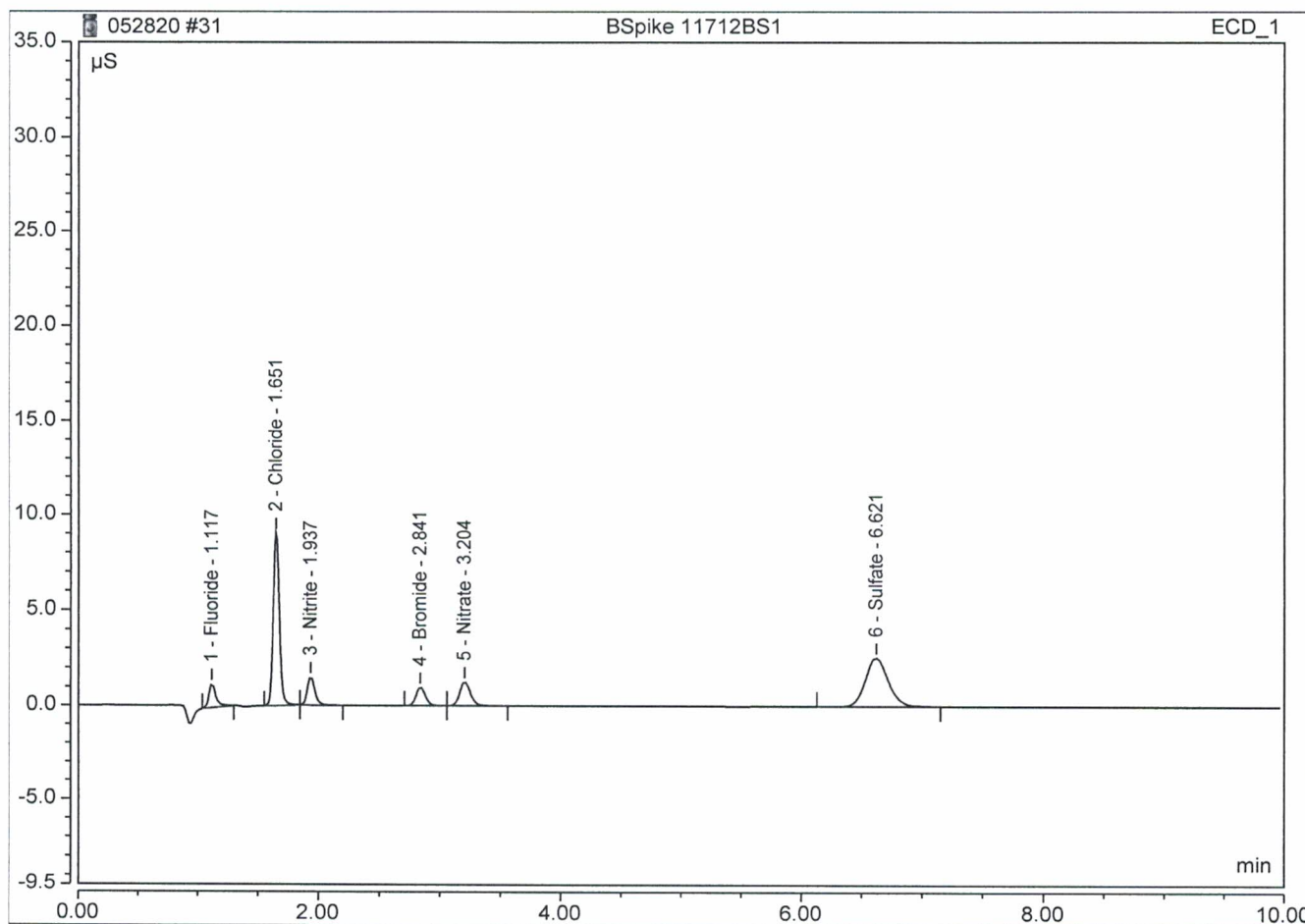
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| 1 | 1.64 | Chloride | BMB | 0.083 | 1.262 | 95.8539 |
| 2 | 6.61 | Sulfate | BMB | 0.726 | 3.299 | 929.9005 |
| TOTAL: | | | | 0.81 | 4.56 | 1025.75 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | BSpike 11712BS1 | Inj. Vol.: | 2500.00 |
| Injection Type: | Check Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 13:38 | Operator: | Jeff Phifer |

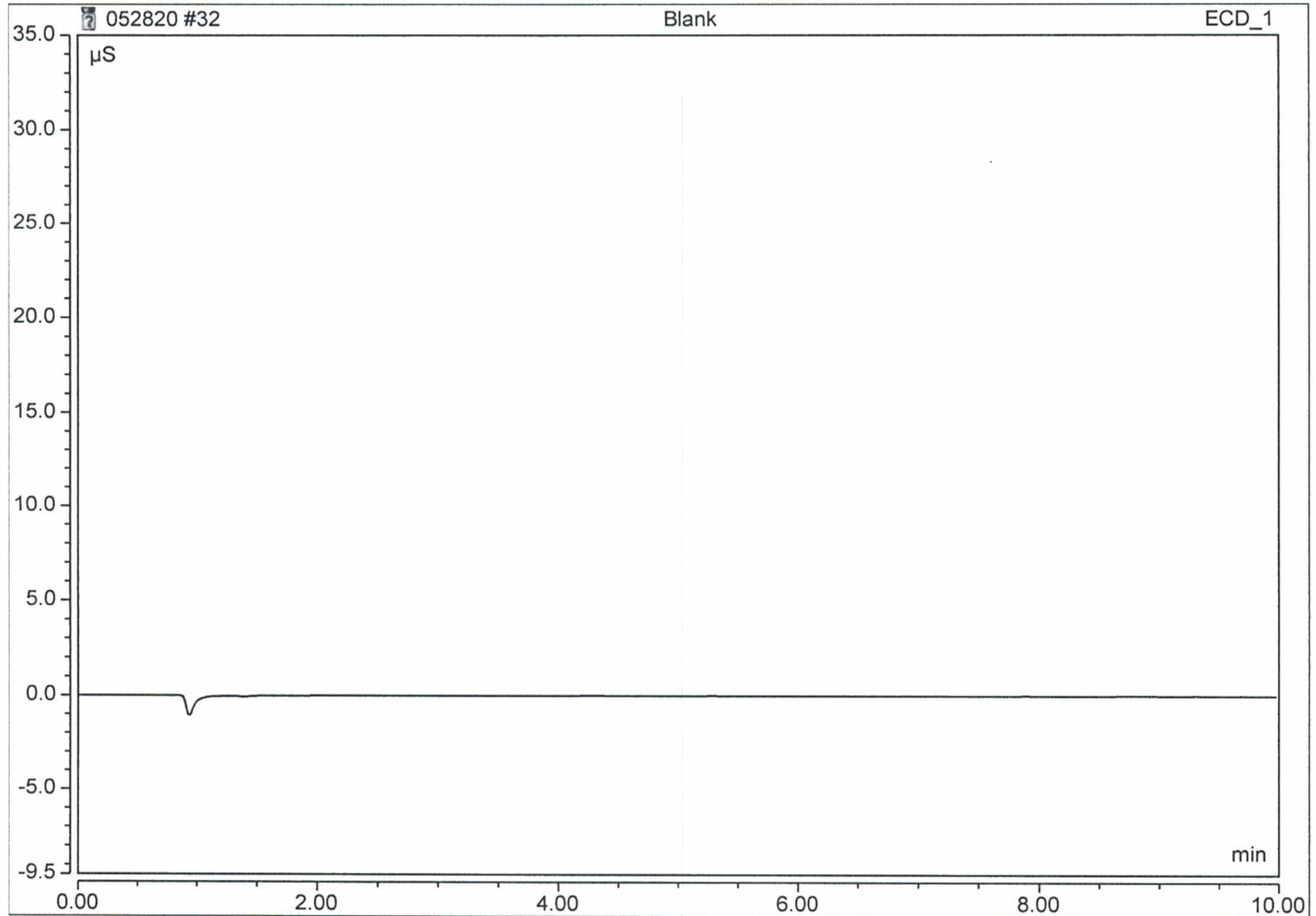
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| 1 | 1.12 | Fluoride | BMB | 0.083 | 1.258 | 0.4988 |
| 2 | 1.65 | Chloride | BMB | 0.548 | 9.052 | 4.8066 |
| 3 | 1.94 | Nitrite | BMB | 0.107 | 1.499 | 0.4872 |
| 4 | 2.84 | Bromide | BMB | 0.088 | 0.986 | 2.0520 |
| 5 | 3.20 | Nitrate | BMB | 0.130 | 1.269 | 0.5012 |
| 6 | 6.62 | Sulfate | BMB | 0.564 | 2.563 | 7.2412 |
| TOTAL: | | | | 1.52 | 16.63 | 15.59 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | Blank | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 28-May-2020 / 13:50 | Operator: | Jeff Phifer |


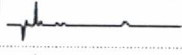




| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| TOTAL: | | | | 0.00 | 0.00 | 0.00 |



Ics-1100 A Dionex IC/Meth 300.0

031620

(New cal.)
all ions (new guard col) JH







| # | ECD_1 | Name | Type | Level | Positio | Instrument Method | Processing Method | Status | Inject Time | Weight |
|---|---|-------------|----------------------|-------|---------|-------------------|-------------------|----------|-------------------------|--------|
| 1 |  | water blank | Unknown | | 1 | Norm Method | Anion | Finished | 3/16/2020 9:58:12 AM... | 1.0000 |
| 2 |  | 1130Cal1 | Calibration Standard | 01 | 2 | Norm Method | Anion | Finished | 3/16/2020 10:10:29 A... | 1.0000 |
| 3 |  | 1130Cal2 | Calibration Standard | 02 | 3 | Norm Method | Anion | Finished | 3/16/2020 10:23:17 A... | 1.0000 |
| 4 |  | 1130Cal3 | Calibration Standard | 03 | 4 | Norm Method | Anion | Finished | 3/16/2020 10:36:06 A... | 1.0000 |
| 5 |  | 1130Cal4 | Calibration Standard | 04 | 5 | Norm Method | Anion | Finished | 3/16/2020 10:48:55 A... | 1.0000 |
| 6 |  | 1130Cal5 | Calibration Standard | 05 | 6 | Norm Method | Anion | Finished | 3/16/2020 11:01:43 A... | 1.0000 |

[Click here to add a new injection](#)

CALID# IC5A031620 CAL

031620



| # | ECD_1 ▶ | Dilution | IntStd | Replicate ID | Comment | Spike Grou |
|---|---|----------|--------|--------------|-------------|------------|
| 1 |  | 1.0000 | 1.0000 | | Jeff Phifer | |
| 2 |  | 1.0000 | 1.0000 | | Jeff Phifer | |
| 3 |  | 1.0000 | 1.0000 | | Jeff Phifer | |
| 4 |  | 1.0000 | 1.0000 | | Jeff Phifer | |
| 5 |  | 1.0000 | 1.0000 | | Jeff Phifer | |
| 6 |  | 1.0000 | 1.0000 | | Jeff Phifer | |
| Click here to add a new injection | | | | | | |

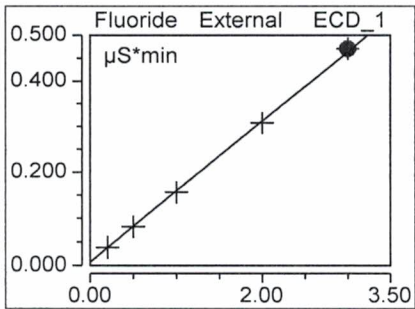
| Norm Method | 03/08/11 13:39 | Jeff Phifer | Method 300.0 | |
|------------------|----------------|--|-------------------------------|---------|
| Stage | Time | Command | Value | Comment |
| Instrument Setup | min | | | |
| | initial | | | |
| | | Sampler.HomeNeedle | | |
| | | Sampler.ResetVials | 1, 50 | |
| | | Pump_ECD.Pressure.UpperLimit | 4500 [psi] | |
| | | Sampler.DelayVolume | 125 [µl] | |
| | | Pump_ECD.%A.Equate | "Carb - BiCarb" | |
| | | Pump_ECD.Pressure.LowerLimit | 100 [psi] | |
| | | Pump_ECD.CellTemperature.Nominal | 35.0 [°C] | |
| | | Pump_ECD.Data_Collection_Rate | 5.0 [Hz] | |
| | | Pump_ECD.Suppressor_Type | ASRS_4mm | |
| | | Pump_ECD.Suppressor_Carbonate | 1.8 [mM] | |
| | | Pump_ECD.Suppressor_Bicarbonate | 1.7 [mM] | |
| | | Pump_ECD.Suppressor_Hydroxide | 0.0 [mM] | |
| | | Pump_ECD.Suppressor_Tetraborate | 0.0 [mM] | |
| | | Pump_ECD.Suppressor_OtherEluent | 0.0 [mN] | |
| | | Pump_ECD.Suppressor_RecommendedCurrent | 27 [mA] | |
| | | Pump_ECD.Suppressor_Current | 27 [mA] | |
| | | Sampler.FlushFactor | 10 | |
| | | Sampler.DeliverSpeed | 4.0 [ml/min] | |
| | | Pump_ECD.Flow | 2.00 | |
| | | Sampler.LoadPosition | | |
| | | Sampler.DeliverSample | Full | |
| | | Sampler.EndSamplePrep | | |
| Inject | 0.000 | | | |
| | | Wait | Sampler.CycleTimeState, Hold, | |
| | | Sampler.Inject | | |
| Start Run | 0.000 | | | |
| | | Pump_ECD.Channel_Pressure.AcqOn | | |
| | | Pump_ECD.Autozero | | |
| | | Pump_ECD.ECD_1.AcqOn | | |
| | | Pump_ECD.ECD_Total.AcqOn | | |
| Run | 0.000 | | Duration = 10.000 [min] | |
| | 0.500 | | | |
| | | Sampler.BeginOverlap | | |
| Stop Run | 10.000 | | | |
| | | Pump_ECD.Channel_Pressure.AcqOff | | |
| | | Pump_ECD.ECD_1.AcqOff | | |
| | | Pump_ECD.ECD_Total.AcqOff | | |
| End | | | | |

Calibration Batch Report
CAL ID# ICSA031620CAL

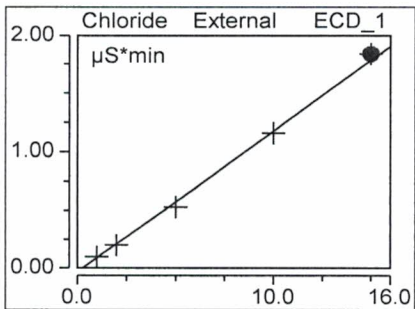
| | | | |
|--------------------|---------------------|-----------------|----------------|
| Sequence: | 031620 | Injection Volu: | 2,500.00 |
| Instrument Method: | Norm Method | Operator: | Jeff Phifer |
| Inj. Date / Time: | 16-Mar-2020 / 11:01 | Column: | AS4A-SC 038777 |

| Calibration Summary | | | | | | | |
|---------------------|-----------|----------------------|---------------------|----------------|---------------|---------------|-------------|
| Peak Name | Eval.Type | Cal.Type | Window Width min | Offset (C0) | Slope (C1) | Curve (C2) | Corr.Coeff. |
| Fluoride | Area | Lin, WithOffset, 1/A | 0.02 | 0.007 | 0.152 | 0.000 | 0.9998 |
| Chloride | Area | Lin, WithOffset, 1/A | 0.04 | -0.033 | 0.121 | 0.000 | 0.9987 |
| Nitrite | Area | Lin, WithOffset, 1/A | 0.07 | -0.003 | 0.227 | 0.000 | 0.9997 |
| Bromide | Area | Lin, WithOffset, 1/A | 0.15 | -0.001 | 0.043 | 0.000 | 0.9999 |
| Nitrate | Area | Lin, WithOffset, 1/A | 0.17 | -0.001 | 0.260 | 0.000 | 0.9997 |
| Sulfate | Area | Lin, WithOffset, 1/A | 0.46 | -0.007 | 0.079 | 0.000 | 0.9996 |
| AVERAGE: | | | | -0.0064 | 0.1471 | 0.0000 | 0.9996 |

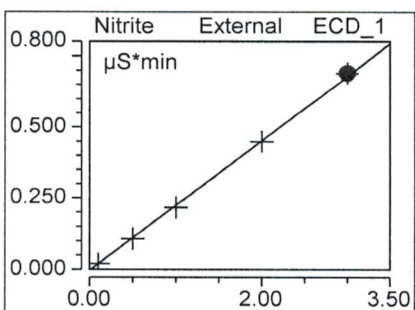
| Injection Name | Ret.Time min | Area µS*min | Height µS | Amount |
|-----------------------|-----------------|-----------------|----------------|----------------|
| Fluoride | Fluoride | Fluoride | Fluoride | Fluoride |
| 1130Cal1 | ECD_1 1.118 | ECD_1 0.0386 | ECD_1 0.506 | ECD_1 0.206 |
| 1130Cal2 | 1.118 | 0.0822 | 1.190 | 0.493 |
| 1130Cal3 | 1.118 | 0.1559 | 2.362 | 0.978 |
| 1130Cal4 | 1.118 | 0.3073 | 4.834 | 1.974 |
| 1130Cal5 | 1.118 | 0.4705 | 7.546 | 3.048 |
| Average | 1.118 | | | |
| Rel. Std. Dev. | 0.000 % | | | |



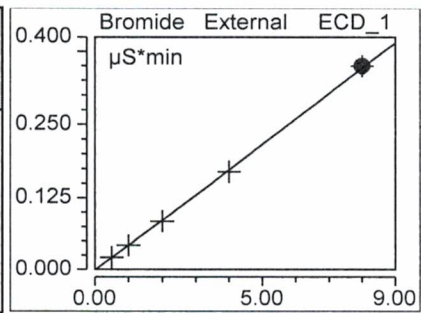
| Injection Name | Ret.Time min | Area µS*min | Height µS | Amount |
|-----------------------|-----------------|-----------------|----------------|----------------|
| Chloride | Chloride | Chloride | Chloride | Chloride |
| 1130Cal1 | ECD_1 1.651 | ECD_1 0.0980 | ECD_1 1.539 | ECD_1 1.086 |
| 1130Cal2 | 1.651 | 0.2000 | 3.158 | 1.929 |
| 1130Cal3 | 1.661 | 0.5307 | 8.559 | 4.662 |
| 1130Cal4 | 1.664 | 1.1594 | 18.897 | 9.858 |
| 1130Cal5 | 1.664 | 1.8377 | 29.851 | 15.464 |
| Average | 1.658 | | | |
| Rel. Std. Dev. | 0.412 % | | | |



| Injection Name | Ret.Time min | Area µS*min | Height µS | Amount |
|-----------------------|-----------------|-----------------|----------------|----------------|
| Nitrite | Nitrite | Nitrite | Nitrite | Nitrite |
| 1130Cal1 | ECD_1 1.944 | ECD_1 0.0206 | ECD_1 0.280 | ECD_1 0.105 |
| 1130Cal2 | 1.948 | 0.1071 | 1.441 | 0.486 |
| 1130Cal3 | 1.954 | 0.2163 | 2.949 | 0.967 |
| 1130Cal4 | 1.954 | 0.4487 | 6.229 | 1.989 |
| 1130Cal5 | 1.948 | 0.6905 | 9.755 | 3.054 |
| Average | 1.950 | | | |
| Rel. Std. Dev. | 0.229 % | | | |

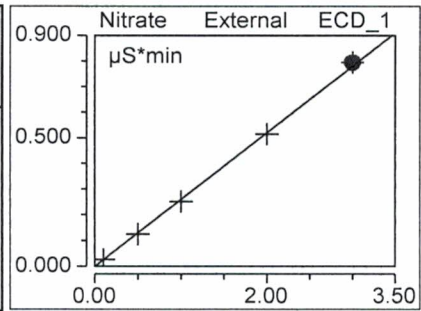


| Injection Name | Ret. Time min | Area μS*min | Height μS | Amount |
|-----------------------|------------------|----------------|--------------|---------|
| Bromide | Bromide | Bromide | Bromide | Bromide |
| ECD_1 | ECD_1 | ECD_1 | ECD_1 | ECD_1 |
| 1130Cal1 | 2.871 | 0.0210 | 0.228 | 0.511 |
| 1130Cal2 | 2.868 | 0.0422 | 0.461 | 0.999 |
| 1130Cal3 | 2.884 | 0.0843 | 0.917 | 1.969 |
| 1130Cal4 | 2.874 | 0.1696 | 1.866 | 3.936 |
| 1130Cal5 | 2.848 | 0.3497 | 3.898 | 8.085 |
| Average | 2.869 | | | |
| Rel. Std. Dev. | 0.469 % | | | |

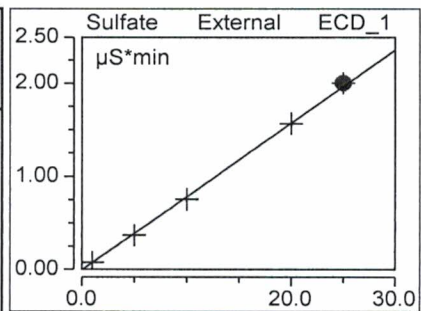


Handwritten signature

| Injection Name | Ret. Time min | Area μS*min | Height μS | Amount |
|-----------------------|------------------|----------------|--------------|---------|
| Nitrate | Nitrate | Nitrate | Nitrate | Nitrate |
| ECD_1 | ECD_1 | ECD_1 | ECD_1 | ECD_1 |
| 1130Cal1 | 3.244 | 0.0266 | 0.254 | 0.105 |
| 1130Cal2 | 3.234 | 0.1249 | 1.182 | 0.483 |
| 1130Cal3 | 3.248 | 0.2515 | 2.359 | 0.970 |
| 1130Cal4 | 3.228 | 0.5145 | 4.808 | 1.982 |
| 1130Cal5 | 3.194 | 0.7947 | 7.457 | 3.060 |
| Average | 3.230 | | | |
| Rel. Std. Dev. | 0.659 % | | | |



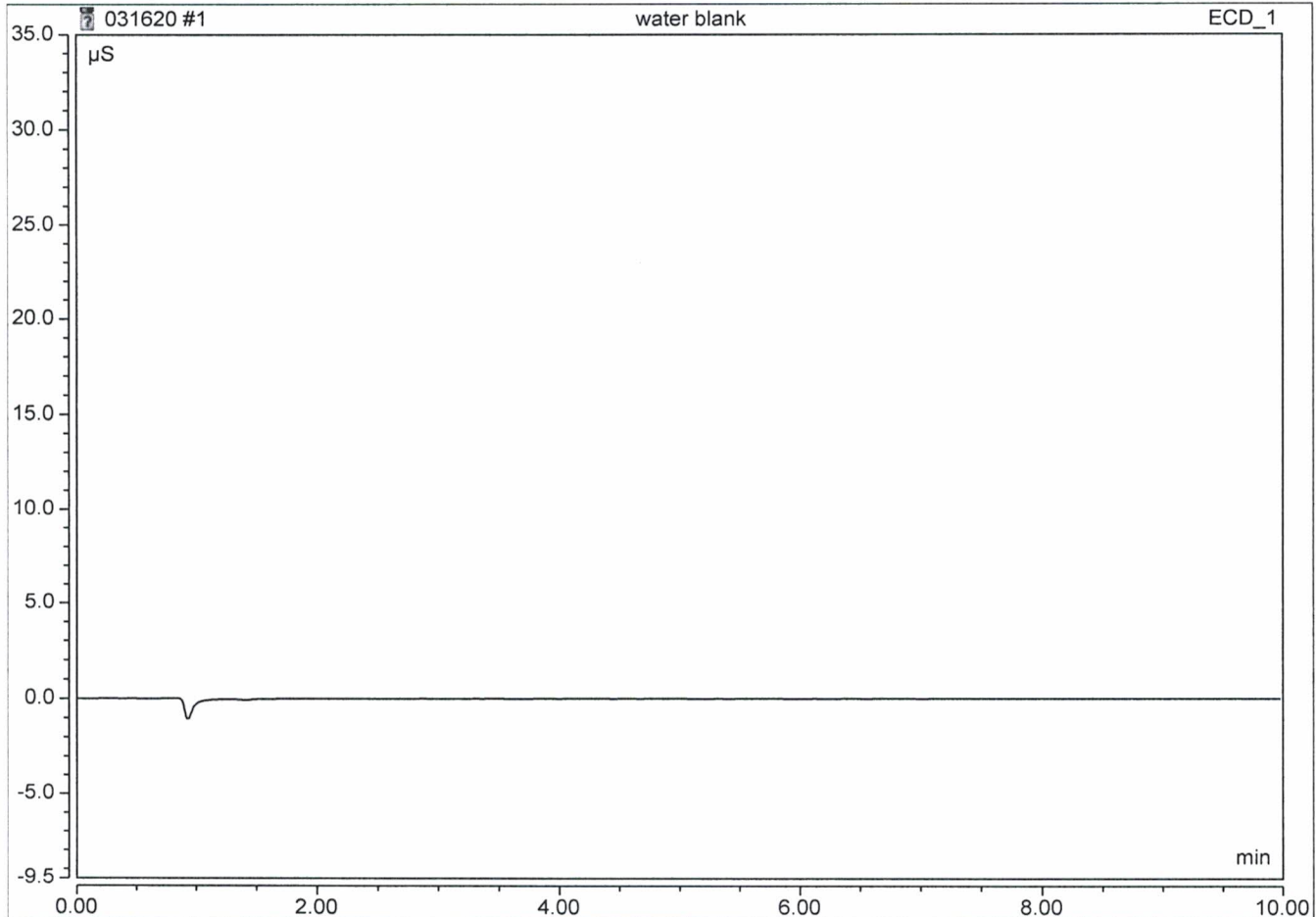
| Injection Name | Ret. Time min | Area μS*min | Height μS | Amount |
|-----------------------|------------------|----------------|--------------|---------|
| Sulfate | Sulfate | Sulfate | Sulfate | Sulfate |
| ECD_1 | ECD_1 | ECD_1 | ECD_1 | ECD_1 |
| 1130Cal1 | 6.768 | 0.0763 | 0.333 | 1.054 |
| 1130Cal2 | 6.754 | 0.3712 | 1.645 | 4.800 |
| 1130Cal3 | 6.744 | 0.7553 | 3.326 | 9.676 |
| 1130Cal4 | 6.721 | 1.5656 | 6.872 | 19.966 |
| 1130Cal5 | 6.718 | 2.0017 | 8.764 | 25.504 |
| Average | 6.741 | | | |
| Rel. Std. Dev. | 0.319 % | | | |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | water blank | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 16-Mar-2020 / 09:58 | Operator: | Jeff Phifer |

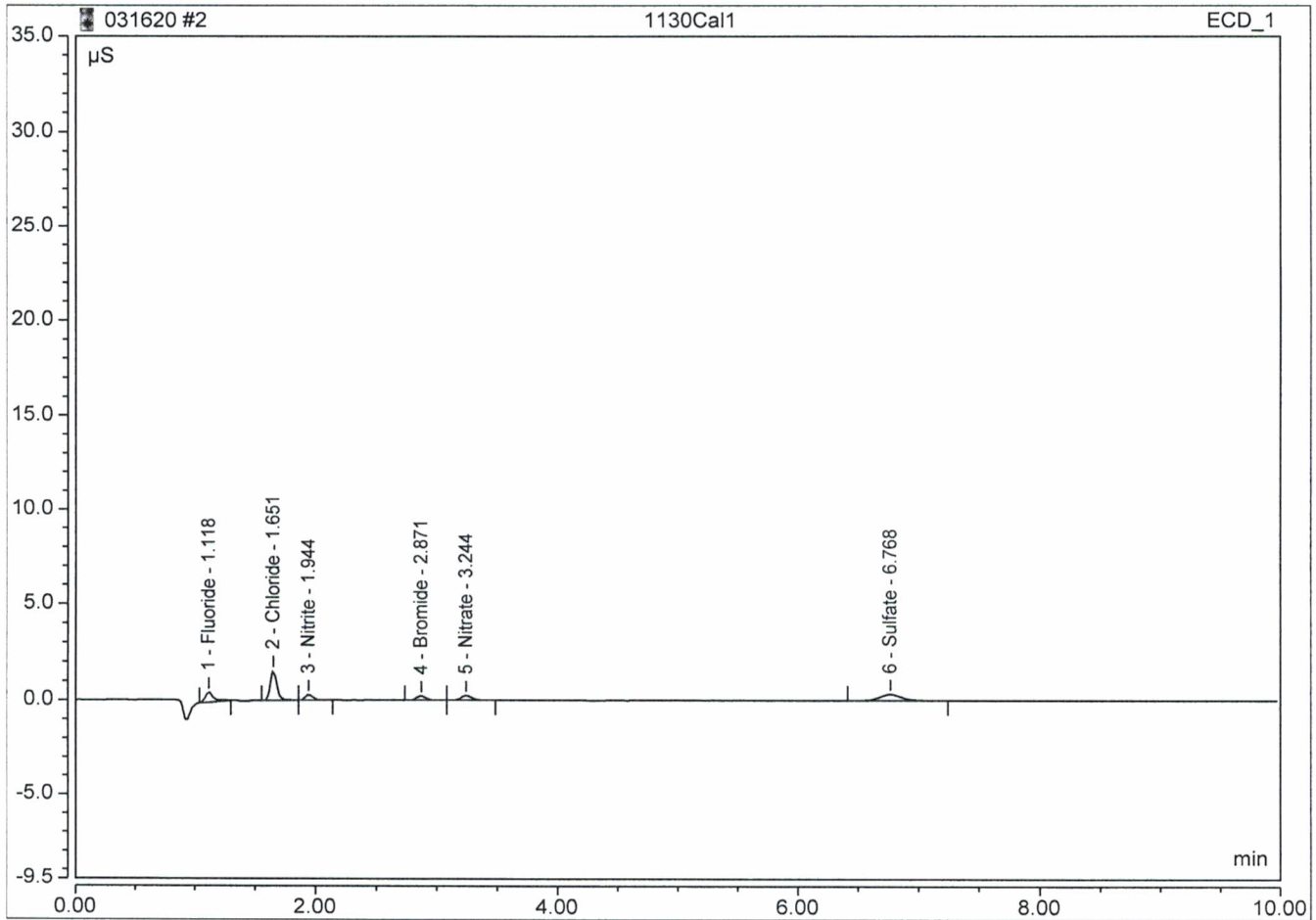
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| TOTAL: | | | | 0.00 | 0.00 | 0.00 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130Cal1 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 16-Mar-2020 / 10:10 | Operator: | Jeff Phifer |

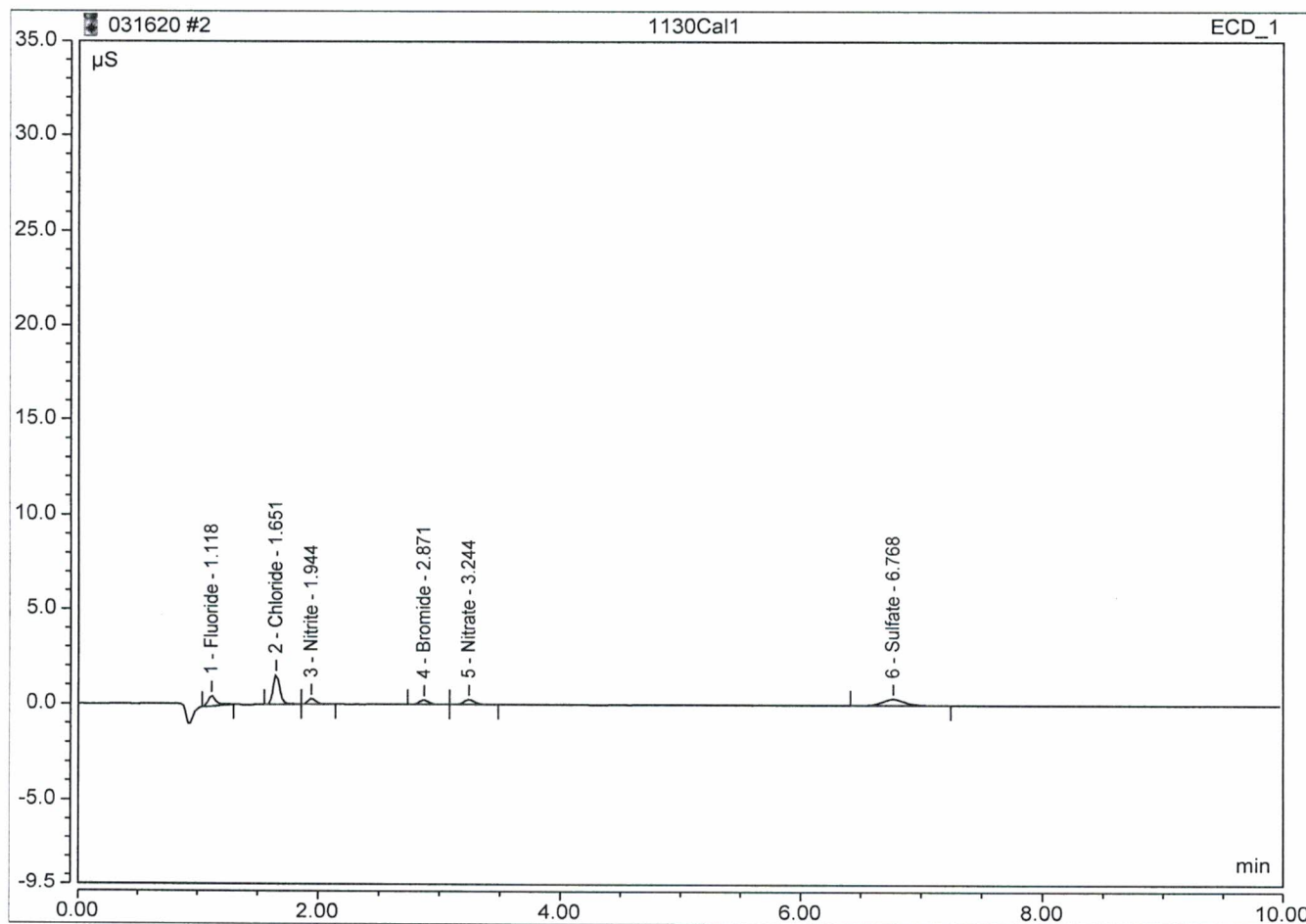
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| 1 | 1.12 | Fluoride | BMB | 0.039 | 0.506 | 0.2064 |
| 2 | 1.65 | Chloride | BMB | 0.098 | 1.539 | 1.0862 |
| 3 | 1.94 | Nitrite | BMB | 0.021 | 0.280 | 0.1050 |
| 4 | 2.87 | Bromide | BMB | 0.021 | 0.228 | 0.5111 |
| 5 | 3.24 | Nitrate | BMB | 0.027 | 0.254 | 0.1053 |
| 6 | 6.77 | Sulfate | BMB | 0.076 | 0.333 | 1.0540 |
| TOTAL: | | | | 0.28 | 3.14 | 3.07 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130Cal1 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 16-Mar-2020 / 10:10 | Operator: | Jeff Phifer |

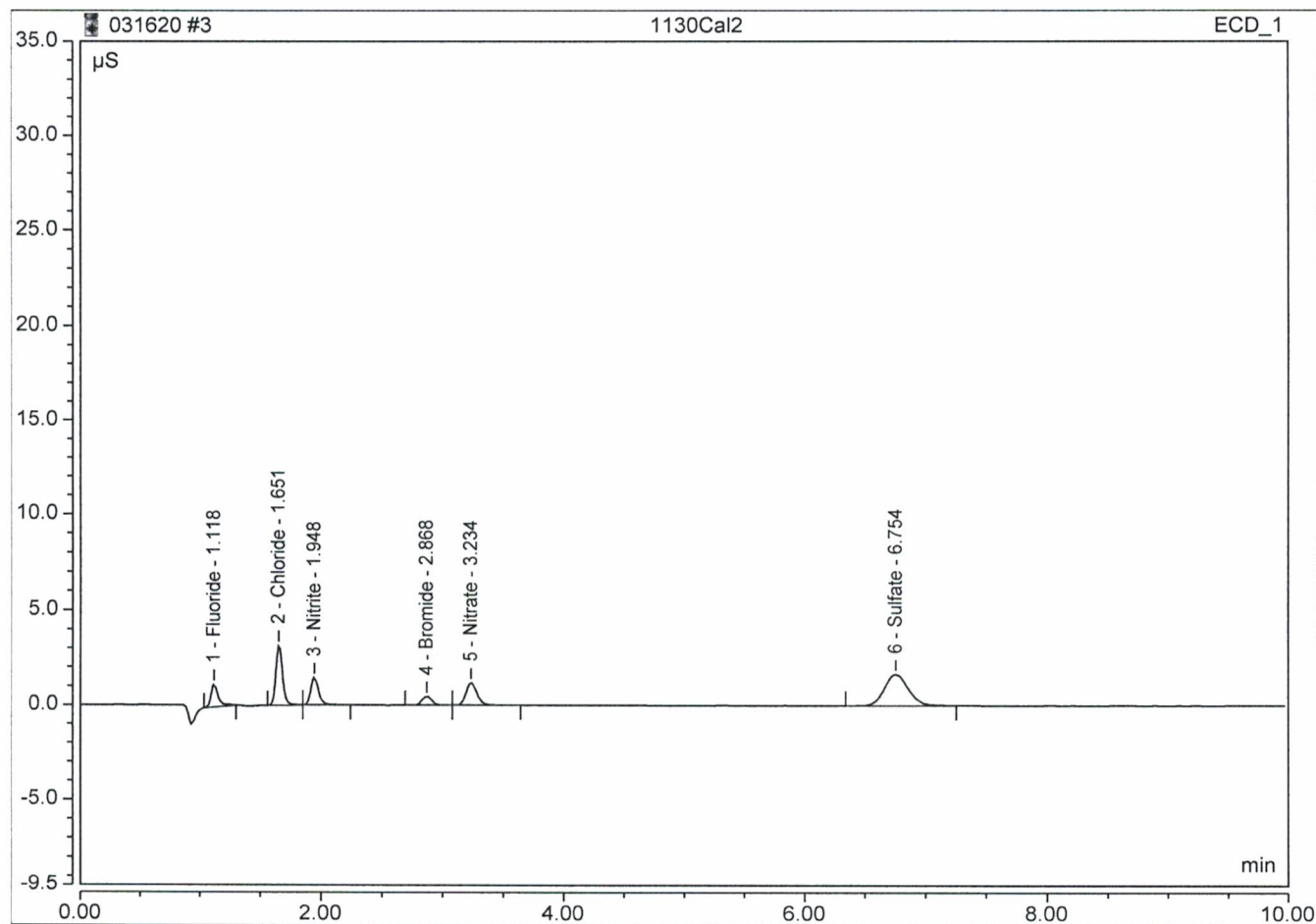
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S} \cdot \text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-------------------------------------|----------------------|-------------|
| 1 | 1.12 | Fluoride | BMB | 0.039 | 0.506 | n.a. |
| 2 | 1.65 | Chloride | BMB | 0.098 | 1.539 | n.a. |
| 3 | 1.94 | Nitrite | BMB | 0.021 | 0.280 | n.a. |
| 4 | 2.87 | Bromide | BMB | 0.021 | 0.228 | n.a. |
| 5 | 3.24 | Nitrate | BMB | 0.027 | 0.254 | n.a. |
| 6 | 6.77 | Sulfate | BMB | 0.076 | 0.333 | n.a. |
| TOTAL: | | | | 0.28 | 3.14 | 0.00 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130Cal2 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 16-Mar-2020 / 10:23 | Operator: | Jeff Phifer |

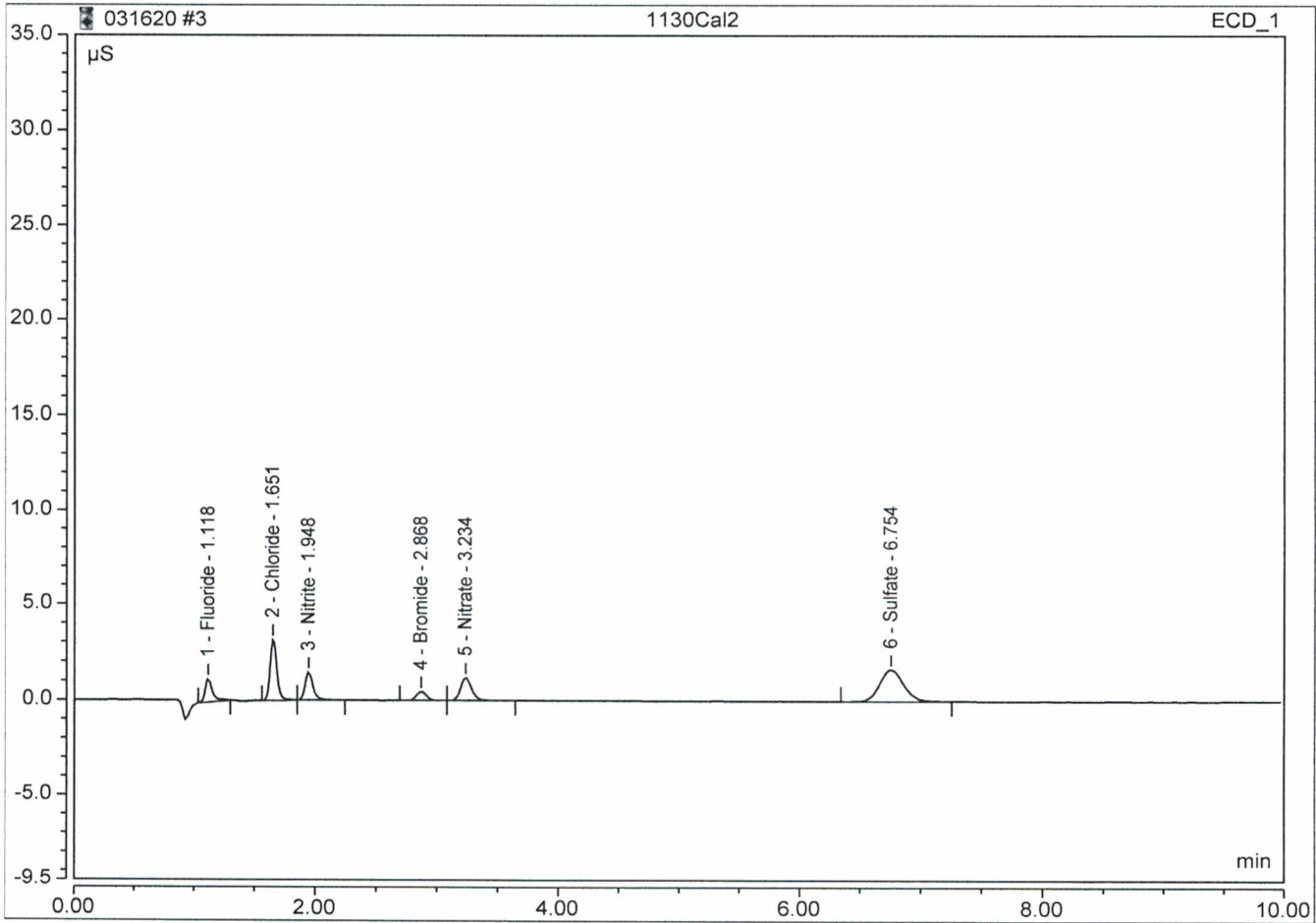
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| 1 | 1.12 | Fluoride | BMB | 0.082 | 1.190 | 0.5 0.4934 |
| 2 | 1.65 | Chloride | BMB | 0.200 | 3.158 | 2 1.9291 |
| 3 | 1.95 | Nitrite | BMB | 0.107 | 1.441 | 0.5 0.4857 |
| 4 | 2.87 | Bromide | BMB | 0.042 | 0.461 | 1 0.9986 |
| 5 | 3.23 | Nitrate | BMB | 0.125 | 1.182 | 0.5 0.4831 |
| 6 | 6.75 | Sulfate | BMB | 0.371 | 1.645 | 5 4.7996 |
| TOTAL: | | | | 0.93 | 9.08 | 9.19 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130Cal2 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 16-Mar-2020 / 10:23 | Operator: | Jeff Phifer |

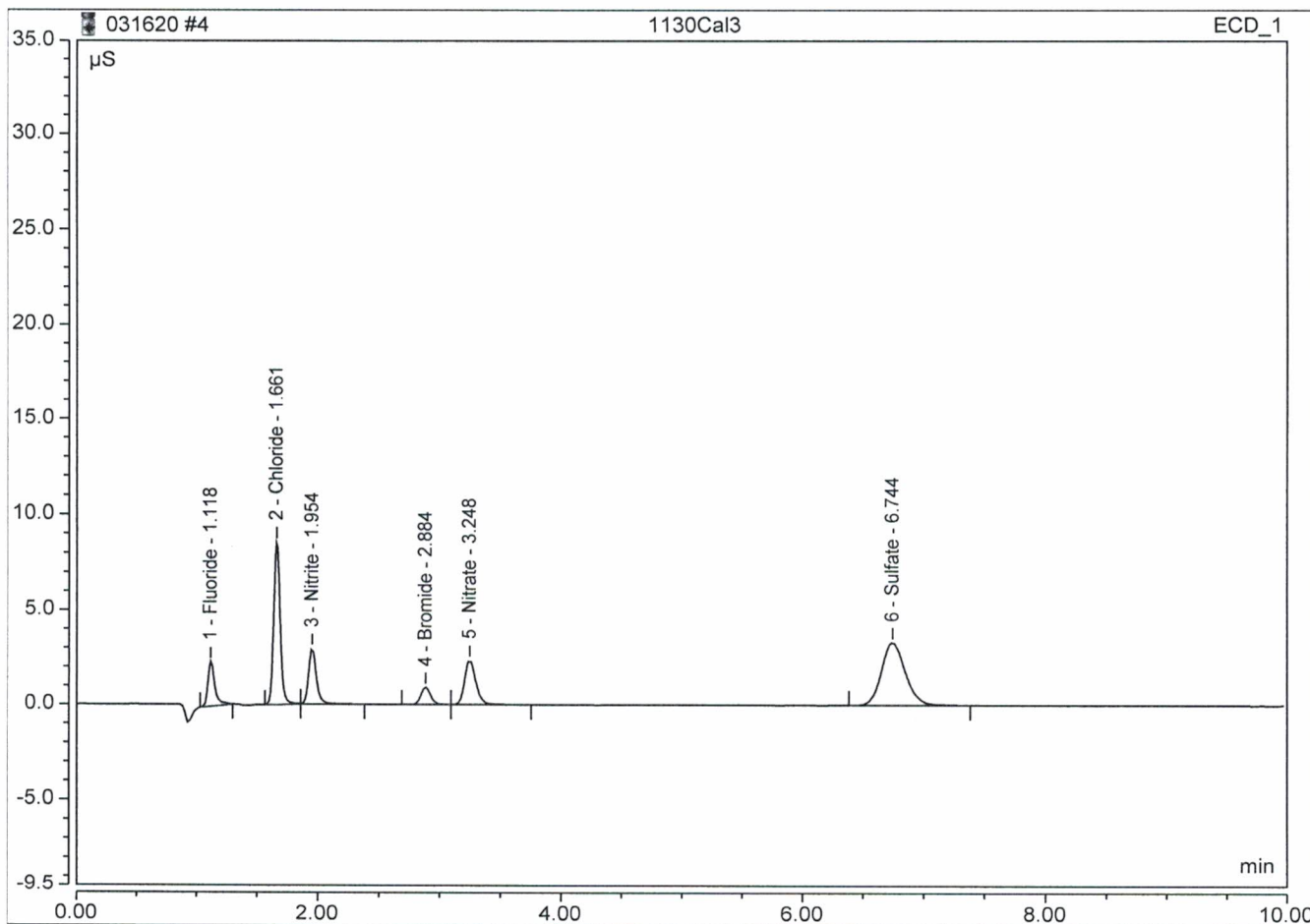
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| 1 | 1.12 | Fluoride | BMB | 0.082 | 1.190 | 0.5000 |
| 2 | 1.65 | Chloride | BMB | 0.200 | 3.158 | 2.0000 |
| 3 | 1.95 | Nitrite | BMB | 0.107 | 1.441 | 0.5000 |
| 4 | 2.87 | Bromide | BMB | 0.042 | 0.461 | 1.0000 |
| 5 | 3.23 | Nitrate | BMB | 0.125 | 1.182 | 0.5000 |
| 6 | 6.75 | Sulfate | BMB | 0.371 | 1.645 | 5.0000 |
| TOTAL: | | | | 0.93 | 9.08 | 9.50 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130Cal3 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 16-Mar-2020 / 10:36 | Operator: | Jeff Phifer |

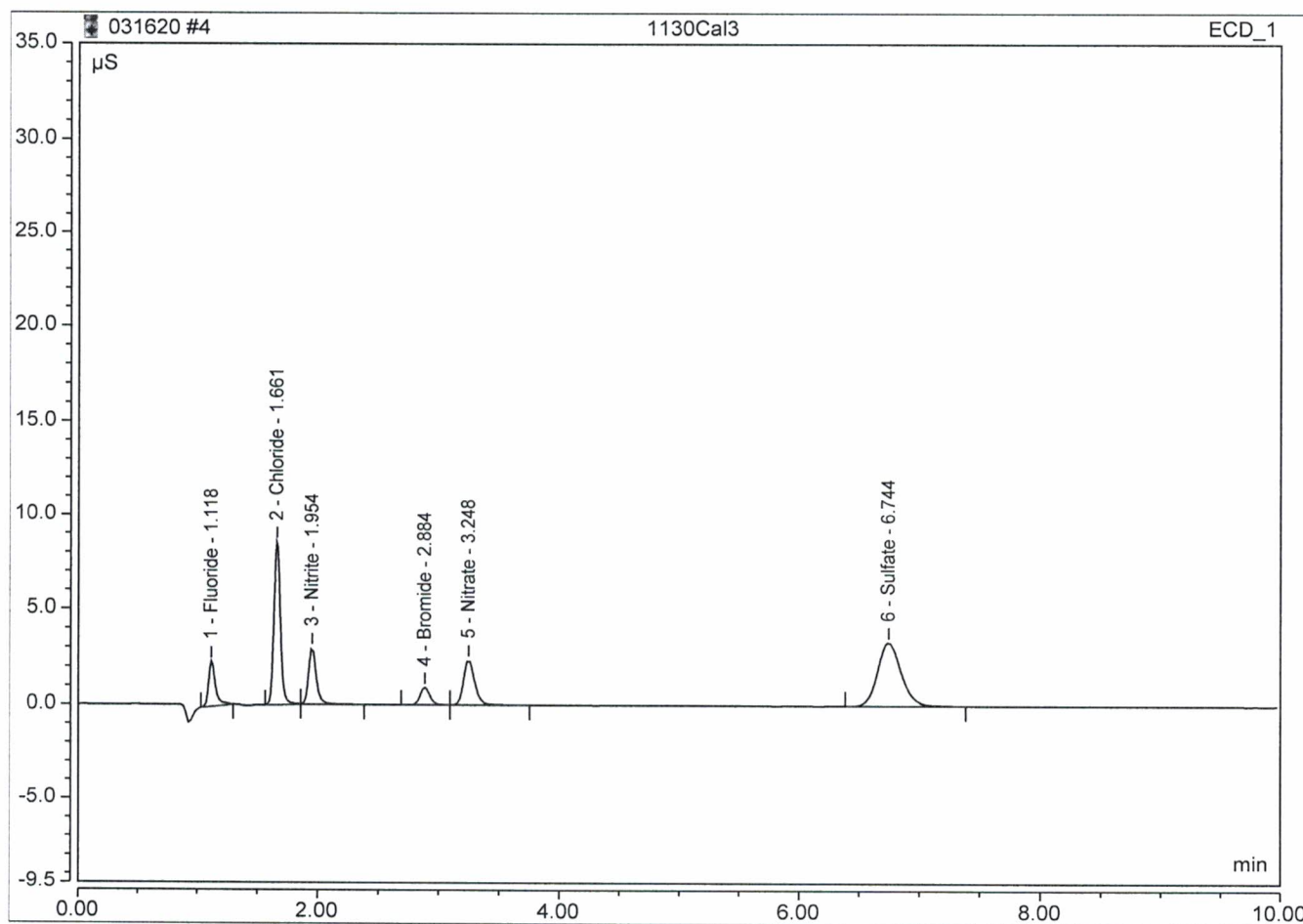
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| 1 | 1.12 | Fluoride | BMB | 0.156 | 2.362 | 1 0.9783 |
| 2 | 1.66 | Chloride | BMB | 0.531 | 8.559 | 5 4.6623 |
| 3 | 1.95 | Nitrite | BMB | 0.216 | 2.949 | 1 0.9666 |
| 4 | 2.88 | Bromide | BMB | 0.084 | 0.917 | 2 1.9694 |
| 5 | 3.25 | Nitrate | BMB | 0.252 | 2.359 | 1 0.9702 |
| 6 | 6.74 | Sulfate | BMB | 0.755 | 3.326 | 10 9.6764 |
| TOTAL: | | | | 1.99 | 20.47 | 19.22 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130CaI3 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 16-Mar-2020 / 10:36 | Operator: | Jeff Phifer |

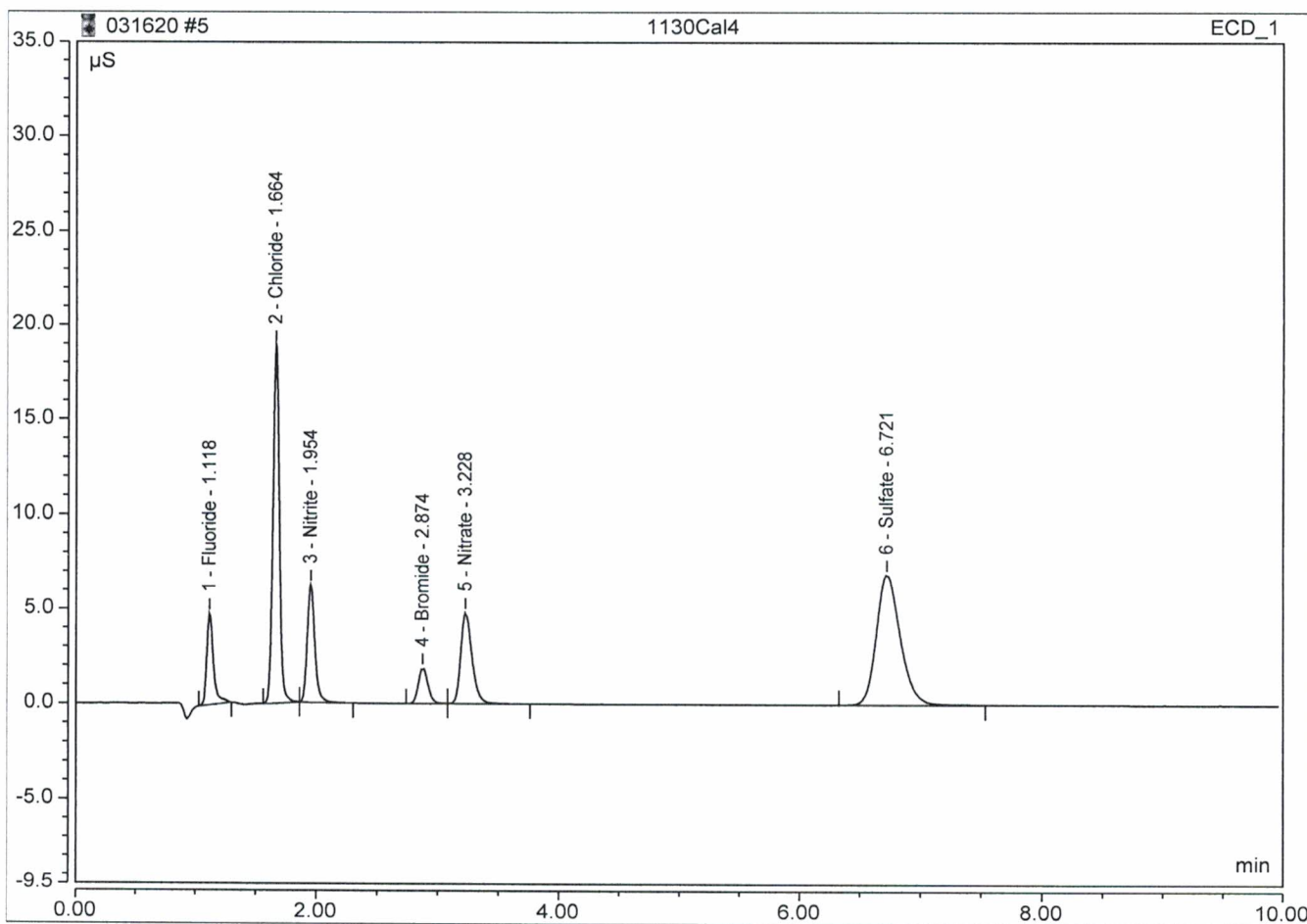
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S} \cdot \text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-------------------------------------|----------------------|-------------|
| 1 | 1.12 | Fluoride | BMB | 0.156 | 2.362 | 1.0013 |
| 2 | 1.66 | Chloride | BMB | 0.531 | 8.559 | 5.0249 |
| 3 | 1.95 | Nitrite | BMB | 0.216 | 2.949 | 1.0014 |
| 4 | 2.88 | Bromide | BMB | 0.084 | 0.917 | 1.9993 |
| 5 | 3.25 | Nitrate | BMB | 0.252 | 2.359 | 1.0042 |
| 6 | 6.74 | Sulfate | BMB | 0.755 | 3.326 | 10.0555 |
| TOTAL: | | | | 1.99 | 20.47 | 20.09 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130Cal4 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 16-Mar-2020 / 10:48 | Operator: | Jeff Phifer |

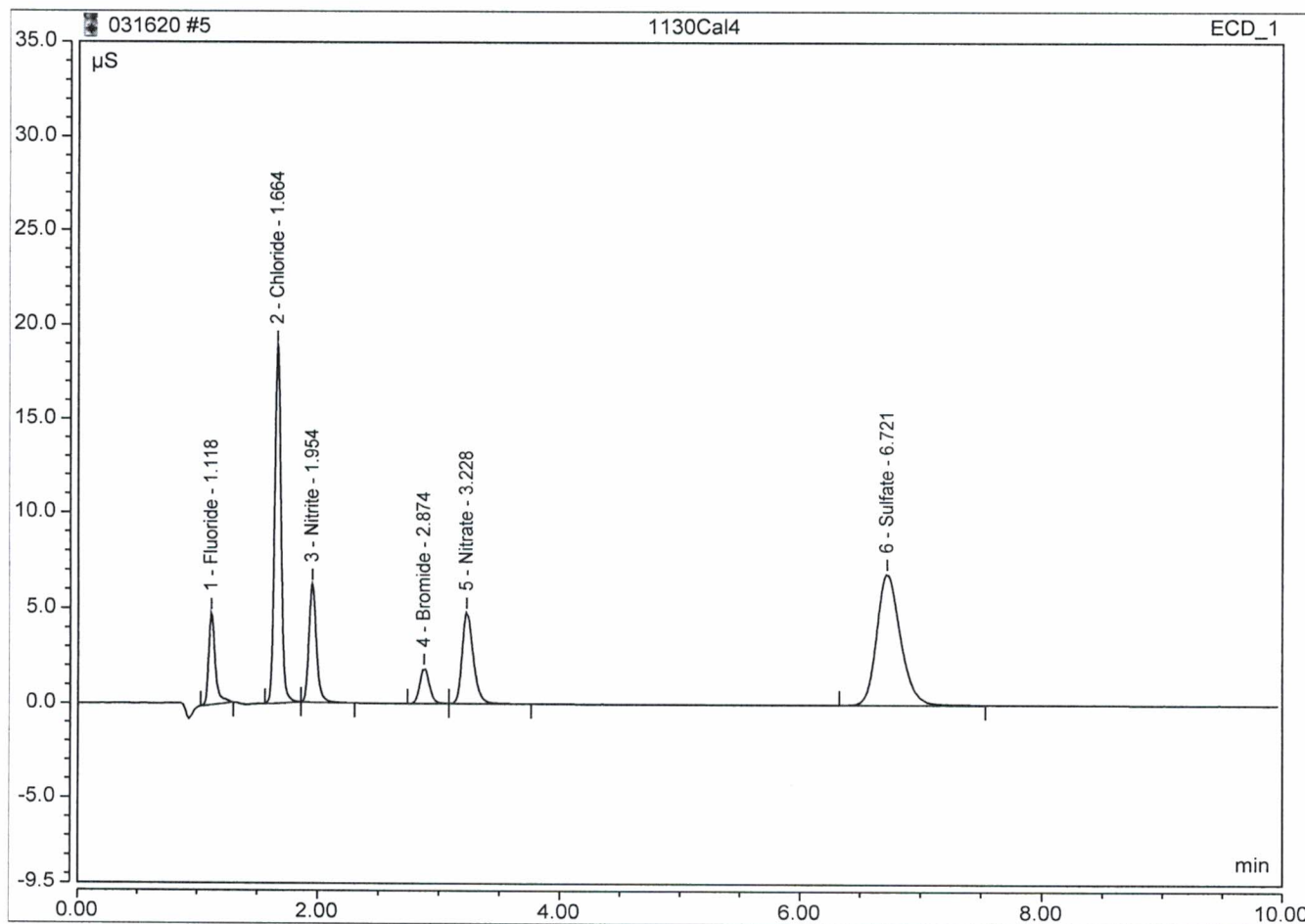
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| 1 | 1.12 | Fluoride | BMB | 0.307 | 4.834 | 2 1.9744 |
| 2 | 1.66 | Chloride | BMB | 1.159 | 18.897 | 10 9.8582 |
| 3 | 1.95 | Nitrite | BMB | 0.449 | 6.229 | 2 1.9892 |
| 4 | 2.87 | Bromide | BMB | 0.170 | 1.866 | 4 3.9361 |
| 5 | 3.23 | Nitrate | BMB | 0.515 | 4.808 | 2 1.9818 |
| 6 | 6.72 | Sulfate | BMB | 1.566 | 6.872 | 20 19.9659 |
| TOTAL: | | | | 4.17 | 43.50 | 39.71 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130Cal4 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 16-Mar-2020 / 10:48 | Operator: | Jeff Phifer |

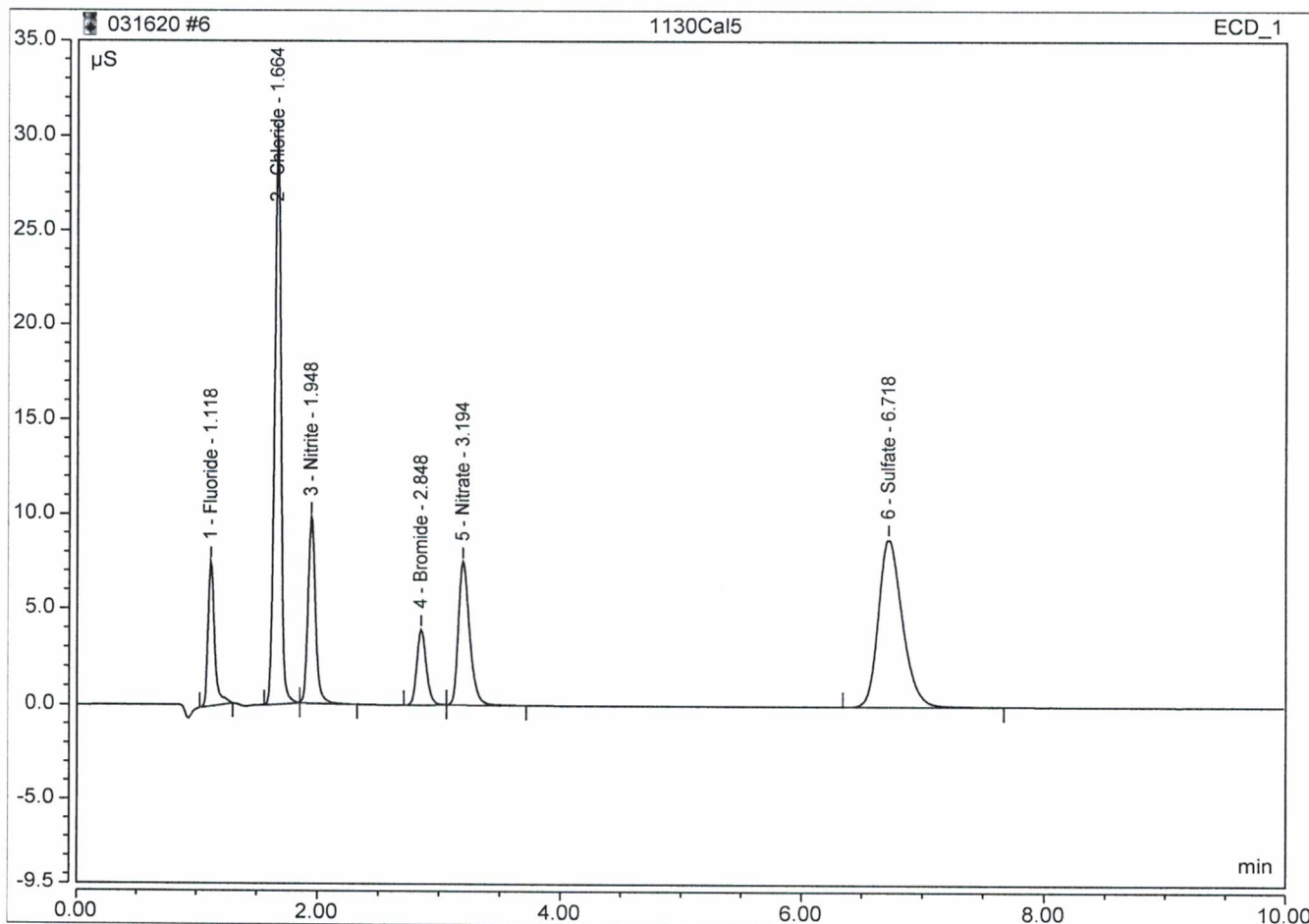
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| 1 | 1.12 | Fluoride | BMB | 0.307 | 4.834 | 2.0102 |
| 2 | 1.66 | Chloride | BMB | 1.159 | 18.897 | 10.2226 |
| 3 | 1.95 | Nitrite | BMB | 0.449 | 6.229 | 2.0251 |
| 4 | 2.87 | Bromide | BMB | 0.170 | 1.866 | 4.0058 |
| 5 | 3.23 | Nitrate | BMB | 0.515 | 4.808 | 2.0216 |
| 6 | 6.72 | Sulfate | BMB | 1.566 | 6.872 | 20.2999 |
| TOTAL: | | | | 4.17 | 43.50 | 40.59 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130Cal5 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 038777 |
| Inj. Date / Time: | 16-Mar-2020 / 11:01 | Operator: | Jeff Phifer |

| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount mg/L |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| 1 | 1.12 | Fluoride | BMB | 0.470 | 7.546 | 3 3.0476 |
| 2 | 1.66 | Chloride | BMB | 1.838 | 29.851 | 15 15.4642 |
| 3 | 1.95 | Nitrite | BMB | 0.690 | 9.755 | 3 3.0536 |
| 4 | 2.85 | Bromide | BMB | 0.350 | 3.898 | 8 8.0849 |
| 5 | 3.19 | Nitrate | BMB | 0.795 | 7.457 | 3 3.0595 |
| 6 | 6.72 | Sulfate | BMB | 2.002 | 8.764 | 25 25.5041 |
| TOTAL: | | | | 6.14 | 67.27 | 58.21 |



ICS-1100 B Dionex IC/Meth 300.0

| ECD_1 | Name | Type | Level | Position | Instrument Method | Processing Method | Status | Inject Time |
|-------|---------------------|----------------------|-------|----------|-------------------|-------------------|----------|-------------------------|
| | water blank | Unknown | | 1 | Norm Method | Anion | Finished | 3/16/2020 9:57:49 AM -C |
| | 1130Cal1 | Calibration Standard | 01 | 2 | Norm Method | Anion | Finished | 3/16/2020 10:10:09 AM . |
| | 1130Cal2 | Calibration Standard | 02 | 3 | Norm Method | Anion | Finished | 3/16/2020 10:23:01 AM . |
| | 1130Cal3 | Calibration Standard | 03 | 4 | Norm Method | Anion | Finished | 3/16/2020 10:35:53 AM . |
| | 1130Cal4 | Calibration Standard | 04 | 5 | Norm Method | Anion | Finished | 3/16/2020 10:48:45 AM . |
| | 1130Cal5 | Calibration Standard | 05 | 6 | Norm Method | Anion | Finished | 3/16/2020 11:01:35 AM . |
| | Blank | Unknown | | 1 | Norm Method | Anion | Finished | 5/28/2020 8:23:46 AM -C |
| | BSpoke 11712BS1 | Check Standard | | 2 | Norm Method | Anion | Finished | 5/28/2020 8:36:06 AM -C |
| | LCS 11712LCS1 | Check Standard | | 3 | Norm Method | Anion | Finished | 5/28/2020 8:48:58 AM -C |
| | 14168.01 30/2.91g | Unknown | | 4 | Norm Method | Anion | Finished | 5/28/2020 9:01:50 AM -C |
| | 14168.02 30/4.02g | Unknown | | 5 | Norm Method | Anion | Finished | 5/28/2020 9:14:41 AM -C |
| | 14168.01 50/0.3560g | Unknown | | 6 | Norm Method | Anion | Finished | 5/28/2020 9:27:34 AM -C |
| | 14168.02 50/0.5910g | Unknown | | 7 | Norm Method | Anion | Finished | 5/28/2020 9:40:25 AM -C |
| | 14264.01 | Unknown | | 8 | Norm Method | Anion | Finished | 5/28/2020 9:53:17 AM -C |
| | 14264.02 | Unknown | | 9 | Norm Method | Anion | Finished | 5/28/2020 10:06:09 AM . |
| | 14264.03 | Unknown | | 10 | Norm Method | Anion | Finished | 5/28/2020 10:19:01 AM . |
| | 14264.04 | Unknown | | 11 | Norm Method | Anion | Finished | 5/28/2020 10:31:53 AM . |
| | 14264.05 | Unknown | | 12 | Norm Method | Anion | Finished | 5/28/2020 10:44:44 AM . |
| | 14264.06 | Unknown | | 13 | Norm Method | Anion | Finished | 5/28/2020 10:57:36 AM . |
| | 14264.07 | Unknown | | 14 | Norm Method | Anion | Finished | 5/28/2020 11:10:28 AM . |
| | 14264.01 dup | Unknown | | 15 | Norm Method | Anion | Finished | 5/28/2020 11:23:19 AM . |
| | 14264.01 MS 12989MS | Unknown | | 16 | Norm Method | Anion | Finished | 5/28/2020 11:36:11 AM . |
| | 14264.01 MSD 12989M | Unknown | | 17 | Norm Method | Anion | Finished | 5/28/2020 11:49:02 AM . |
| | BSpoke 11712BS1 | Check Standard | | 18 | Norm Method | Anion | Finished | 5/28/2020 12:01:54 PM . |

FL200528-WI-B
 SET 200528-WI-B

CAL INT ICS B 03 16 20 CAL

Sequence: 052820
Last Update Operator: pcuser

| | | | | | | | |
|--|-------|---------|----|-------------|-------|----------|-----------------------|
| | Blank | Unknown | 19 | Norm Method | Anion | Finished | 5/28/2020 12:14:45 PM |
|--|-------|---------|----|-------------|-------|----------|-----------------------|



| Weight | Dilution | IntStd | Replicate ID | Comment | Spike Group |
|--------|----------|--------|--------------|-------------|-------------|
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 5.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 5.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 10.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 10.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 5.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 5.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 5.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 5.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 5.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 5.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 2.5000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 5.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |

Sequence: 052820
Last Update Operator: pcuser

| | | | | | |
|--------|--------|--------|--|-------------|--|
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |
|--------|--------|--------|--|-------------|--|



| Norm Method | 16/06/15 12:18 | Jeff Phifer | METHOD 300.0 | |
|------------------|----------------|--|-------------------------------|---------|
| Stage | Time | Command | Value | Comment |
| Instrument Setup | min | | | |
| | initial | | | |
| | | Sampler.HomeNeedle | | |
| | | Sampler.ResetVials | 1, 50 | |
| | | Pump_ECD.Pressure.UpperLimit | 4500 [psi] | |
| | | Sampler.DelayVolume | 125 [µl] | |
| | | Pump_ECD.%A.Equate | "Carb - BiCarb" | |
| | | Pump_ECD.Pressure.LowerLimit | 100 [psi] | |
| | | Pump_ECD.CellTemperature.Nominal | 35.0 [°C] | |
| | | Pump_ECD.Data_Collection_Rate | 5.0 [Hz] | |
| | | Pump_ECD.Suppressor_Type | ASRS_4mm | |
| | | Pump_ECD.Suppressor_Carbonate | 1.8 [mM] | |
| | | Pump_ECD.Suppressor_Bicarbonate | 1.7 [mM] | |
| | | Pump_ECD.Suppressor_Hydroxide | 0.0 [mM] | |
| | | Pump_ECD.Suppressor_Tetraborate | 0.0 [mM] | |
| | | Pump_ECD.Suppressor_OtherEluent | 0.0 [mM] | |
| | | Pump_ECD.Suppressor_RecommendedCurrent | 27 [mA] | |
| | | Pump_ECD.Suppressor_Current | 27 [mA] | |
| | | Sampler.FlushFactor | 10 | |
| | | Sampler.DeliverSpeed | 4.0 [ml/min] | |
| | | Pump_ECD.Flow | 2.00 | |
| | | Sampler.LoadPosition | | |
| | | Sampler.DeliverSample | Full | |
| | | Sampler.EndSamplePrep | | |
| Inject | 0.000 | | | |
| | | Wait | Sampler.CycleTimeState, Hold, | |
| | | Sampler.Inject | | |
| Start Run | 0.000 | | | |
| | | Pump_ECD.Channel_Pressure.AcqOn | | |
| | | Pump_ECD.Autozero | | |
| | | Pump_ECD.ECD_1.AcqOn | | |
| | | Pump_ECD.ECD_Total.AcqOn | | |
| Run | | | Duration = 10.000 [min] | |
| | 0.000 | | | |
| | 0.500 | | | |
| | | Sampler.BeginOverlap | | |
| Stop Run | 10.000 | | | |
| | | Pump_ECD.Channel_Pressure.AcqOff | | |
| | | Pump_ECD.ECD_1.AcqOff | | |
| | | Pump_ECD.ECD_Total.AcqOff | | |
| End | | | | |

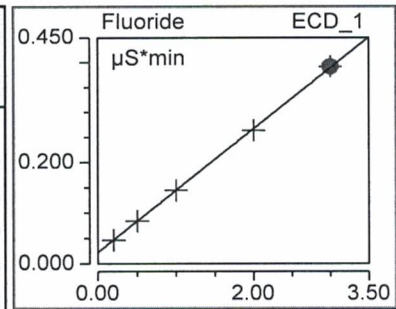
Calibration Batch Report
CAL ID# ICSB031620CAL

| | | | |
|--------------------|---------------------|----------------|----------------|
| Sequence: | 052820 | Injection Vol. | 2,500.00 |
| Instrument Method: | Norm Method | Operator: | Jeff Phifer |
| Inj. Date / Time: | 16-Mar-2020 / 11:01 | Column: | AS4A-SC 040144 |

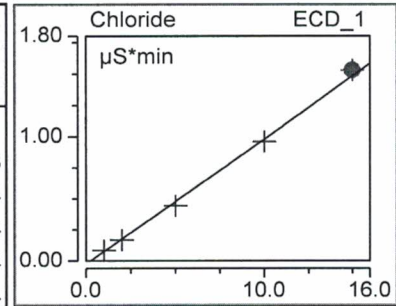
Calibration Summary

| Peak Name | Eval.Type | Cal.Type | Window Width min | Offset (C0) | Slope (C1) | Curve (C2) | Corr.Coeff. |
|-----------------|-----------|----------------------|---------------------|----------------|---------------|---------------|-------------|
| Fluoride | Area | Lin, WithOffset, 1/A | 0.02 | 0.023 | 0.122 | 0.000 | 0.9999 |
| Chloride | Area | Lin, WithOffset, 1/A | 0.05 | -0.025 | 0.100 | 0.000 | 0.9988 |
| Nitrite | Area | Lin, WithOffset, 1/A | 0.07 | -0.002 | 0.193 | 0.000 | 0.9996 |
| Bromide | Area | Lin, WithOffset, 1/A | 0.16 | -0.001 | 0.036 | 0.000 | 0.9999 |
| Nitrate | Area | Lin, WithOffset, 1/A | 0.18 | -0.001 | 0.214 | 0.000 | 0.9997 |
| Sulfate | Area | Lin, WithOffset, 1/A | 0.51 | -0.004 | 0.064 | 0.000 | 0.9997 |
| AVERAGE: | | | | -0.0017 | 0.1217 | 0.0000 | 0.9996 |

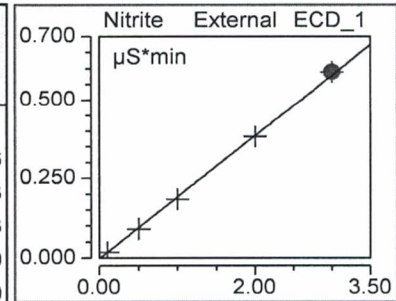
| Injection Name | Ret.Time min ECD 1 | Area µS*min ECD 1 | Height µS ECD 1 | Amount ECD 1 |
|-----------------------|--------------------------|-------------------------|-----------------------|-------------------|
| 1130Cal1 | Fluoride 1.087 | Fluoride 0.0469 | Fluoride 0.474 | Fluoride 0.199 |
| 1130Cal2 | 1.088 | 0.0842 | 1.010 | 0.505 |
| 1130Cal3 | 1.088 | 0.1447 | 1.902 | 0.999 |
| 1130Cal4 | 1.088 | 0.2638 | 3.720 | 1.974 |
| 1130Cal5 | 1.088 | 0.3918 | 5.690 | 3.022 |
| Average | 1.087 | | | |
| Rel. Std. Dev. | 0.007 % | | | |



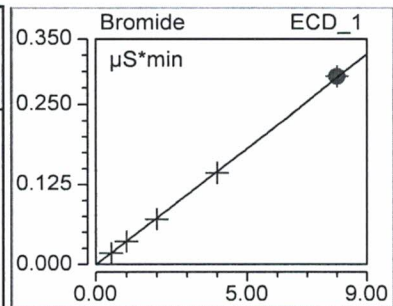
| Injection Name | Ret.Time min ECD 1 | Area µS*min ECD 1 | Height µS ECD 1 | Amount ECD 1 |
|-----------------------|--------------------------|-------------------------|-----------------------|-------------------|
| 1130Cal1 | Chloride 1.647 | Chloride 0.0837 | Chloride 1.369 | Chloride 1.083 |
| 1130Cal2 | 1.648 | 0.1692 | 2.803 | 1.934 |
| 1130Cal3 | 1.654 | 0.4442 | 7.527 | 4.674 |
| 1130Cal4 | 1.658 | 0.9621 | 16.388 | 9.834 |
| 1130Cal5 | 1.661 | 1.5282 | 25.842 | 15.474 |
| Average | 1.653 | | | |
| Rel. Std. Dev. | 0.363 % | | | |



| Injection Name | Ret.Time min ECD 1 | Area µS*min ECD 1 | Height µS ECD 1 | Amount ECD 1 |
|-----------------------|--------------------------|-------------------------|-----------------------|------------------|
| 1130Cal1 | Nitrite 1.964 | Nitrite 0.0180 | Nitrite 0.249 | Nitrite 0.106 |
| 1130Cal2 | 1.964 | 0.0909 | 1.255 | 0.483 |
| 1130Cal3 | 1.968 | 0.1837 | 2.564 | 0.963 |
| 1130Cal4 | 1.971 | 0.3820 | 5.338 | 1.989 |
| 1130Cal5 | 1.968 | 0.5890 | 8.308 | 3.060 |
| Average | 1.967 | | | |
| Rel. Std. Dev. | 0.144 % | | | |

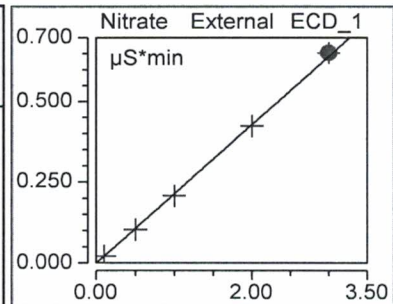


| Injection Name | Ret. Time min ECD_1 | Area $\mu\text{S} \cdot \text{min}$ ECD_1 | Height μS ECD_1 | Amount ECD_1 |
|-----------------------|---------------------------|---|----------------------------------|-----------------|
| 1130Cal1 | 2.957 | 0.0176 | 0.183 | 0.507 |
| 1130Cal2 | 2.954 | 0.0358 | 0.371 | 1.006 |
| 1130Cal3 | 2.958 | 0.0707 | 0.738 | 1.967 |
| 1130Cal4 | 2.961 | 0.1430 | 1.493 | 3.955 |
| 1130Cal5 | 2.938 | 0.2925 | 3.112 | 8.064 |
| Average | 2.953 | | | |
| Rel. Std. Dev. | 0.313 % | | | |

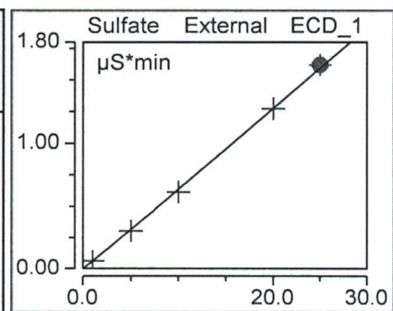


[Handwritten signature]

| Injection Name | Ret. Time min ECD_1 | Area $\mu\text{S} \cdot \text{min}$ ECD_1 | Height μS ECD_1 | Amount ECD_1 |
|-----------------------|---------------------------|---|----------------------------------|-----------------|
| 1130Cal1 | 3.351 | 0.0215 | 0.195 | 0.105 |
| 1130Cal2 | 3.341 | 0.1029 | 0.922 | 0.486 |
| 1130Cal3 | 3.341 | 0.2071 | 1.848 | 0.972 |
| 1130Cal4 | 3.334 | 0.4230 | 3.741 | 1.982 |
| 1130Cal5 | 3.301 | 0.6525 | 5.776 | 3.055 |
| Average | 3.333 | | | |
| Rel. Std. Dev. | 0.575 % | | | |



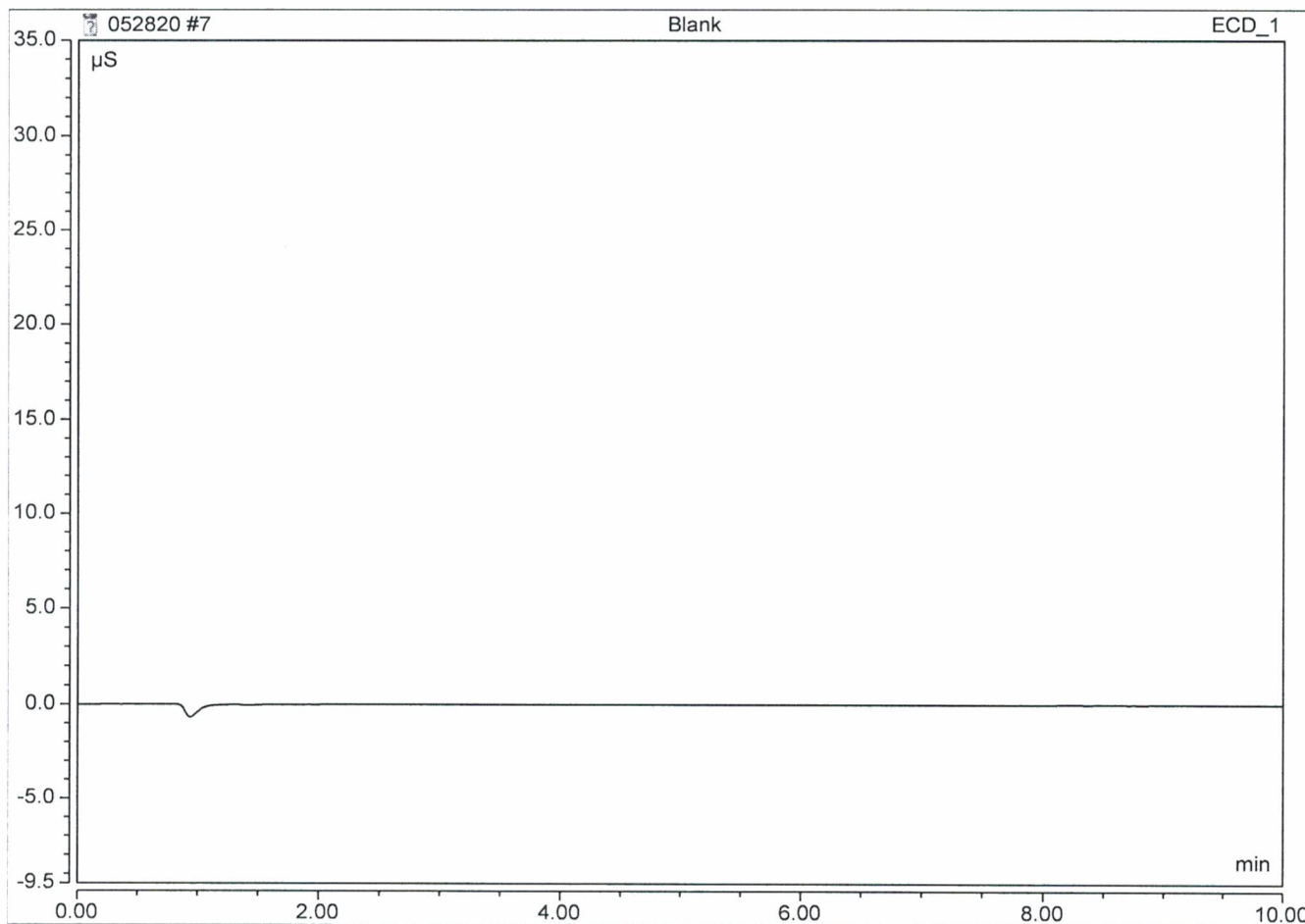
| Injection Name | Ret. Time min ECD_1 | Area $\mu\text{S} \cdot \text{min}$ ECD_1 | Height μS ECD_1 | Amount ECD_1 |
|-----------------------|---------------------------|---|----------------------------------|-----------------|
| 1130Cal1 | 7.057 | 0.0628 | 0.254 | 1.044 |
| 1130Cal2 | 7.048 | 0.3053 | 1.246 | 4.843 |
| 1130Cal3 | 7.028 | 0.6158 | 2.526 | 9.709 |
| 1130Cal4 | 7.018 | 1.2715 | 5.210 | 19.984 |
| 1130Cal5 | 7.011 | 1.6185 | 6.632 | 25.419 |
| Average | 7.032 | | | |
| Rel. Std. Dev. | 0.281 % | | | |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | Blank | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 28-May-2020 / 08:23 | Operator: | Jeff Phifer |

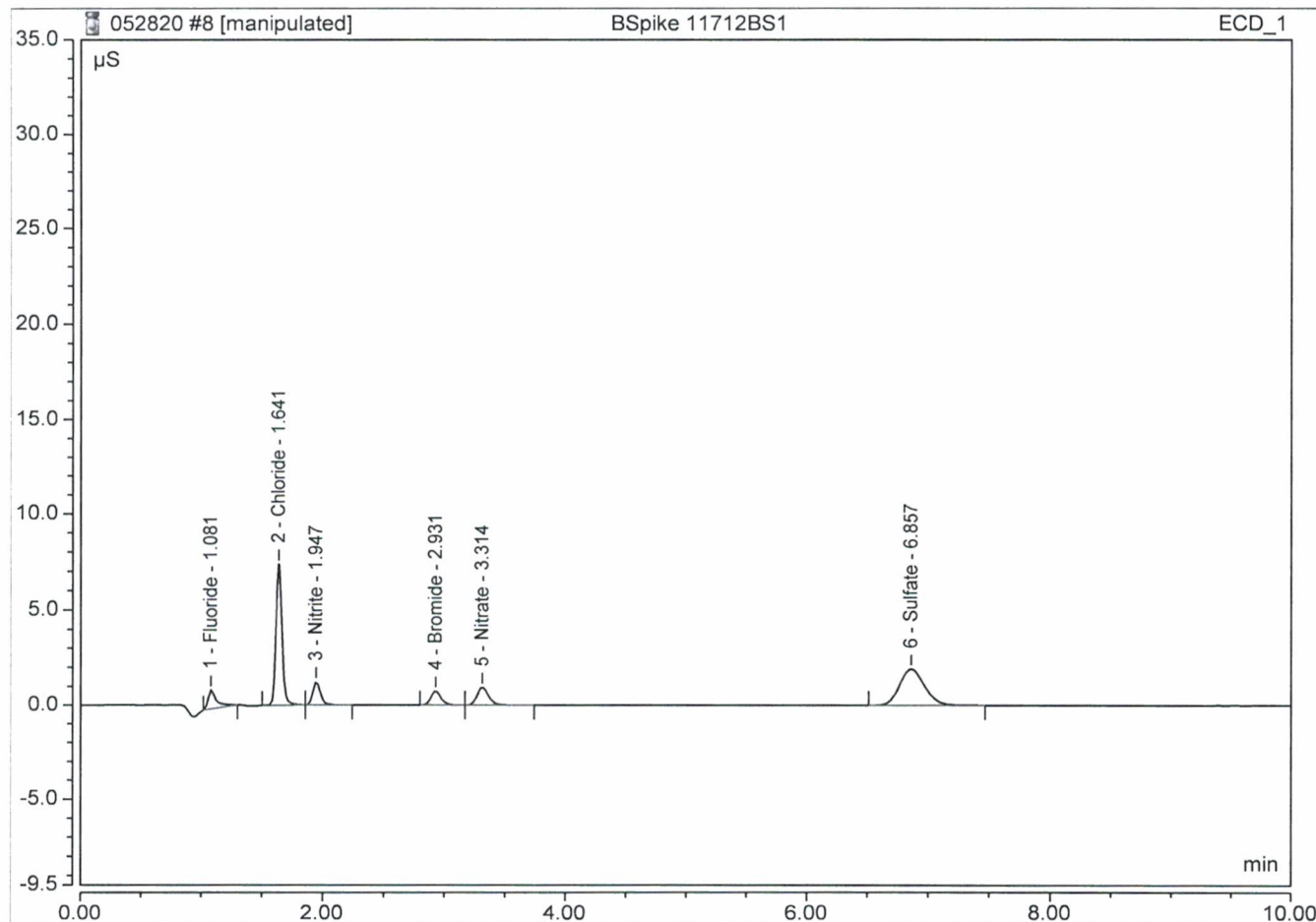
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount n.a. |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| TOTAL: | | | | 0.00 | 0.00 | 0.00 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | BSpike 11712BS1 | Inj. Vol.: | 2500.00 |
| Injection Type: | Check Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 28-May-2020 / 08:36 | Operator: | Jeff Phifer |

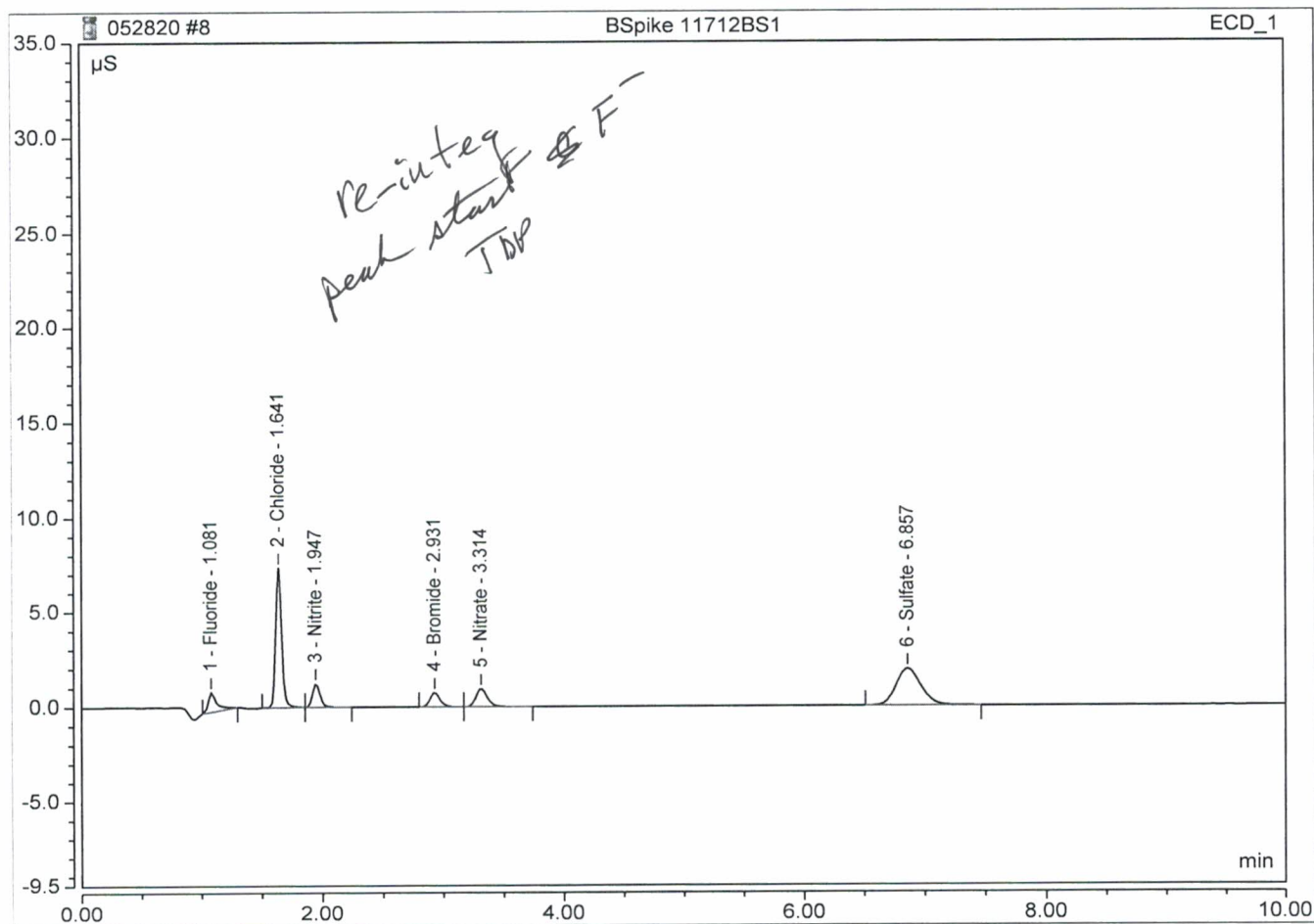
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S} \cdot \text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-------------------------------------|----------------------|----------------|
| 1 | 1.08 | Fluoride | BMB* | 0.082 | 1.006 | 0.5 0.4835 964 |
| 2 | 1.64 | Chloride | BMB | 0.438 | 7.371 | 4.6084 |
| 3 | 1.95 | Nitrite | BMB | 0.089 | 1.236 | 0.4719 |
| 4 | 2.93 | Bromide | BMB | 0.071 | 0.748 | 1.9768 |
| 5 | 3.31 | Nitrate | BMB | 0.104 | 0.942 | 0.4896 |
| 6 | 6.86 | Sulfate | BMB | 0.453 | 1.925 | 7.5 7.1644 963 |
| TOTAL: | | | | 1.24 | 13.23 | 15.19 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | BSpike 11712BS1 | Inj. Vol.: | 2500.00 |
| Injection Type: | Check Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 28-May-2020 / 08:36 | Operator: | Jeff Phifer |

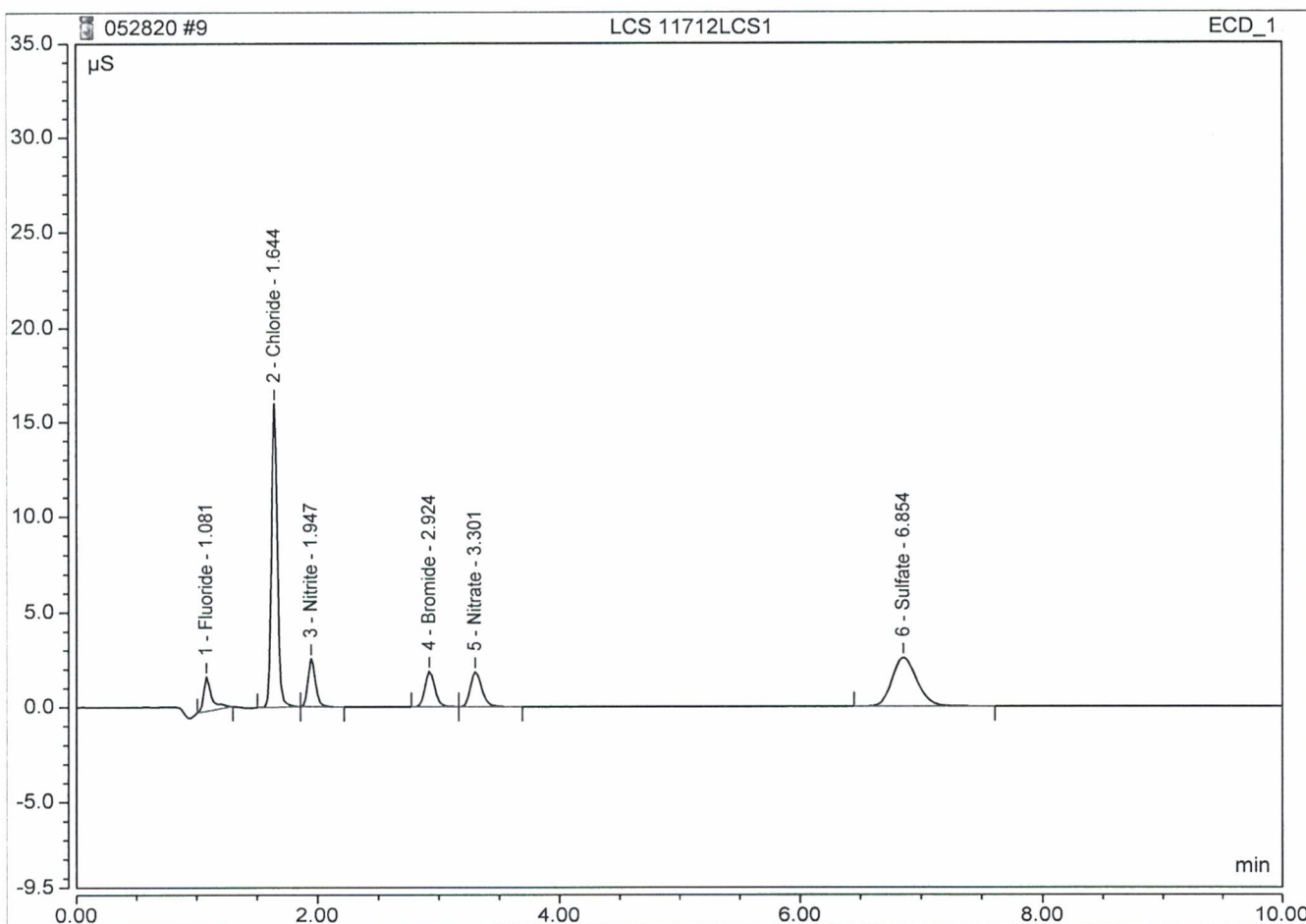
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S} \cdot \text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-------------------------------------|----------------------|--------|
| 1 | 1.08 | Fluoride | BMB | 0.087 | 1.034 | 0.5269 |
| 2 | 1.64 | Chloride | BMB | 0.438 | 7.371 | 4.6084 |
| 3 | 1.95 | Nitrite | BMB | 0.089 | 1.236 | 0.4719 |
| 4 | 2.93 | Bromide | BMB | 0.071 | 0.748 | 1.9768 |
| 5 | 3.31 | Nitrate | BMB | 0.104 | 0.942 | 0.4896 |
| 6 | 6.86 | Sulfate | BMB | 0.453 | 1.925 | 7.1644 |
| TOTAL: | | | | 1.24 | 13.26 | 15.24 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | LCS 11712LCS1 | Inj. Vol.: | 2500.00 |
| Injection Type: | Check Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 28-May-2020 / 08:48 | Operator: | Jeff Phifer |

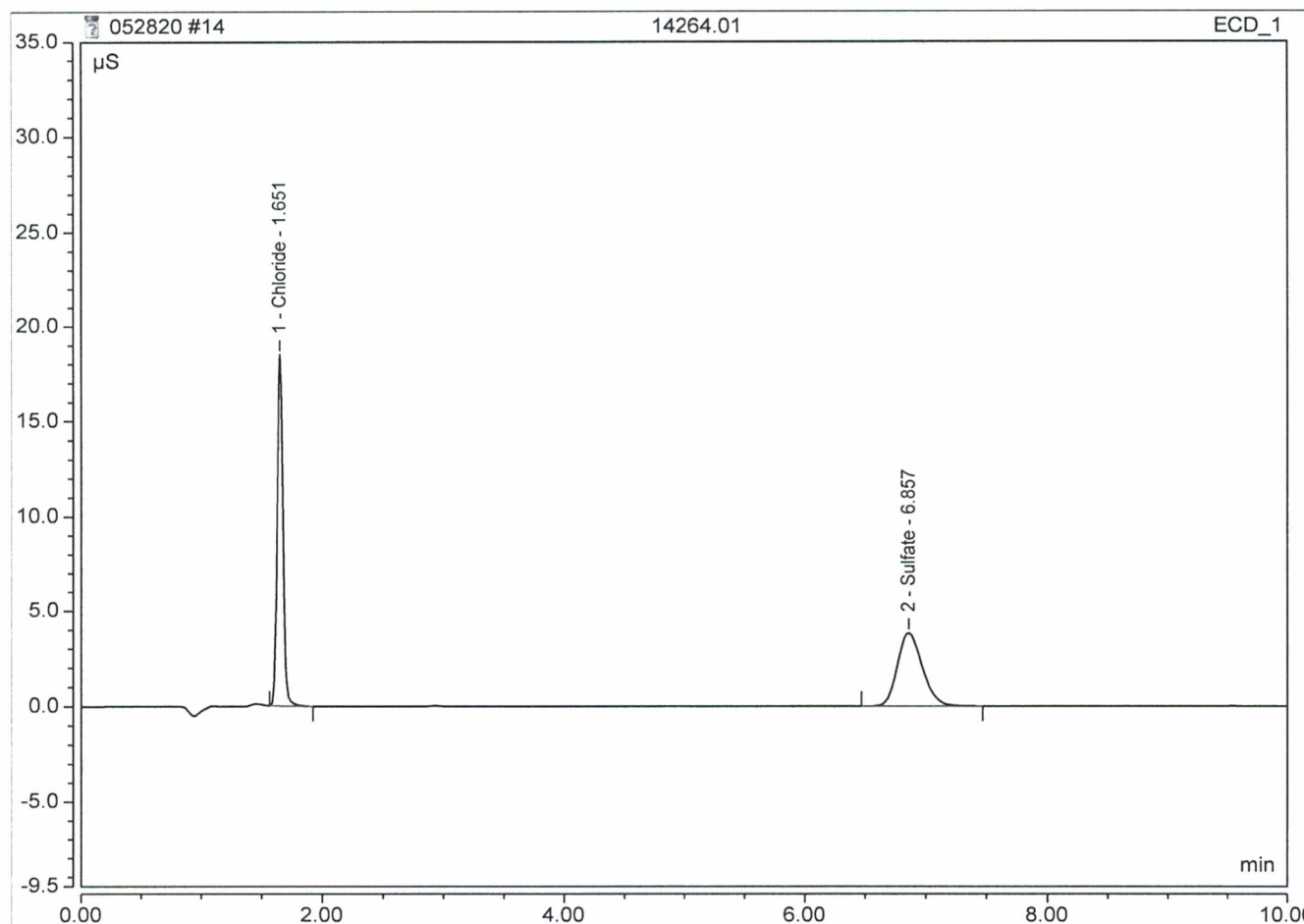
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}^*\text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|--------------------------------|----------------------|--------|
| 1 | 1.08 | Fluoride | BMB | 0.144 | 1.828 | 0.9912 |
| 2 | 1.64 | Chloride | BMB | 0.937 | 16.000 | 9.5891 |
| 3 | 1.95 | Nitrite | BMB | 0.181 | 2.541 | 0.9502 |
| 4 | 2.92 | Bromide | BMB | 0.178 | 1.879 | 4.9054 |
| 5 | 3.30 | Nitrate | BMB | 0.202 | 1.839 | 0.9484 |
| 6 | 6.85 | Sulfate | BMB | 0.609 | 2.581 | 9.5946 |
| TOTAL: | | | | 2.25 | 26.67 | 26.98 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.01 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 5.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 28-May-2020 / 09:53 | Operator: | Jeff Phifer |

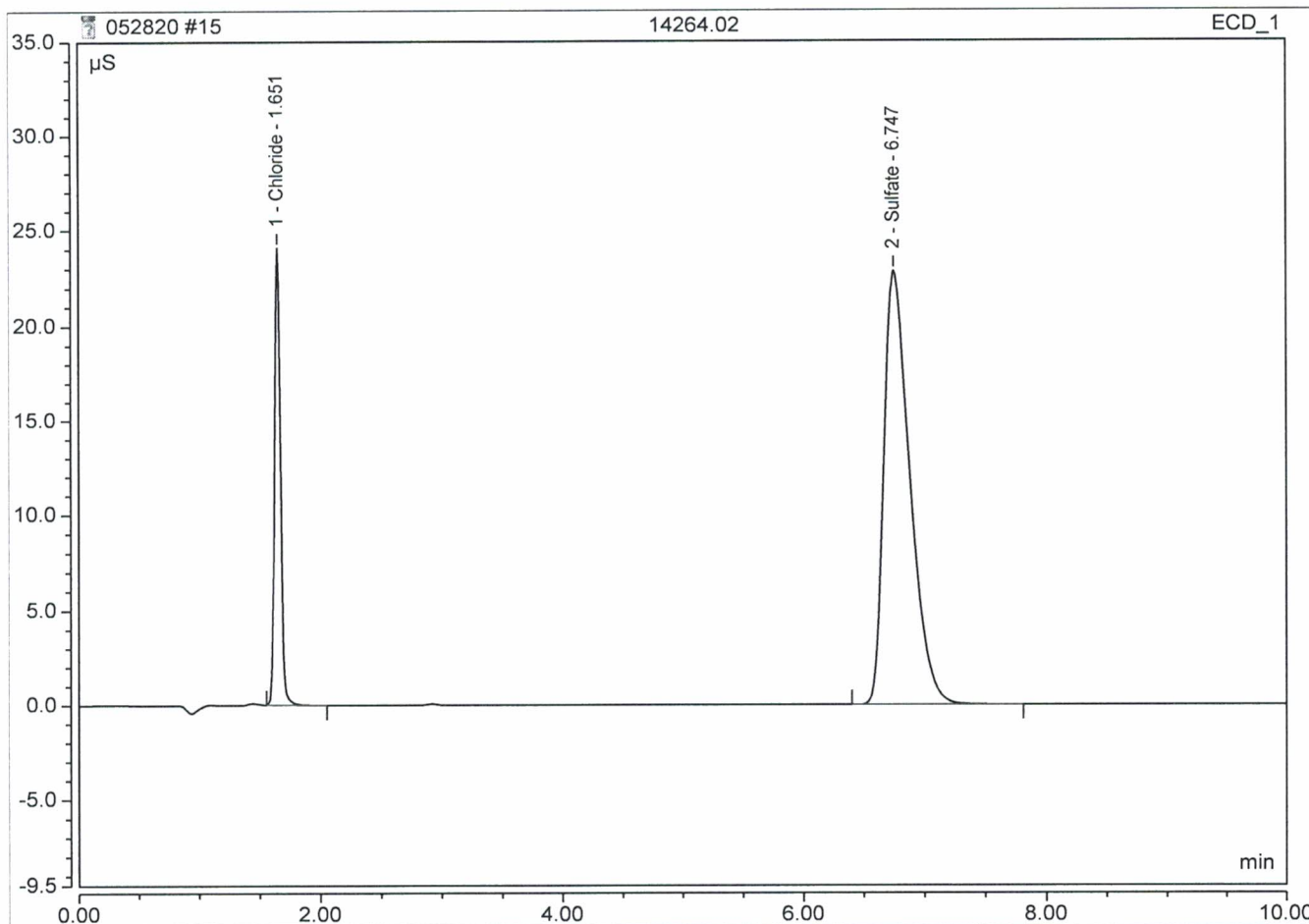
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S} \cdot \text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-------------------------------------|----------------------|---------|
| 1 | 1.65 | Chloride | BMB | 1.057 | 18.479 | 53.8806 |
| 2 | 6.86 | Sulfate | BMB | 0.901 | 3.824 | 70.8729 |
| TOTAL: | | | | 1.96 | 22.30 | 124.75 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.02 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 5.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 28-May-2020 / 10:06 | Operator: | Jeff Phifer |

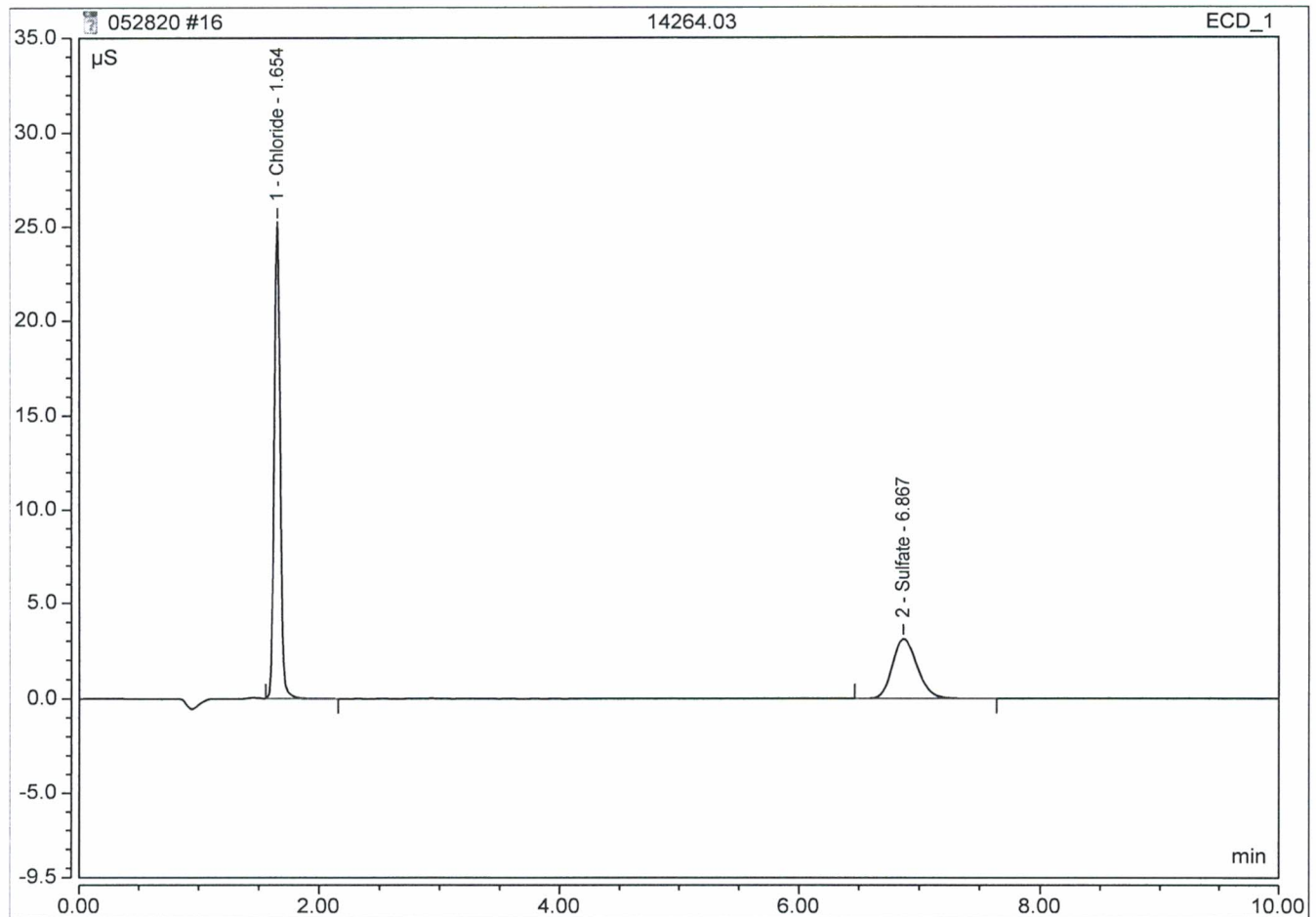
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S} \cdot \text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-------------------------------------|----------------------|----------|
| 1 | 1.65 | Chloride | BMB | 1.392 | 24.070 | 70.6105 |
| 2 | 6.75 | Sulfate | BMB | 5.658 | 22.845 | 443.5908 |
| TOTAL: | | | | 7.05 | 46.91 | 514.20 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.03 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 5.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 28-May-2020 / 10:19 | Operator: | Jeff Phifer |

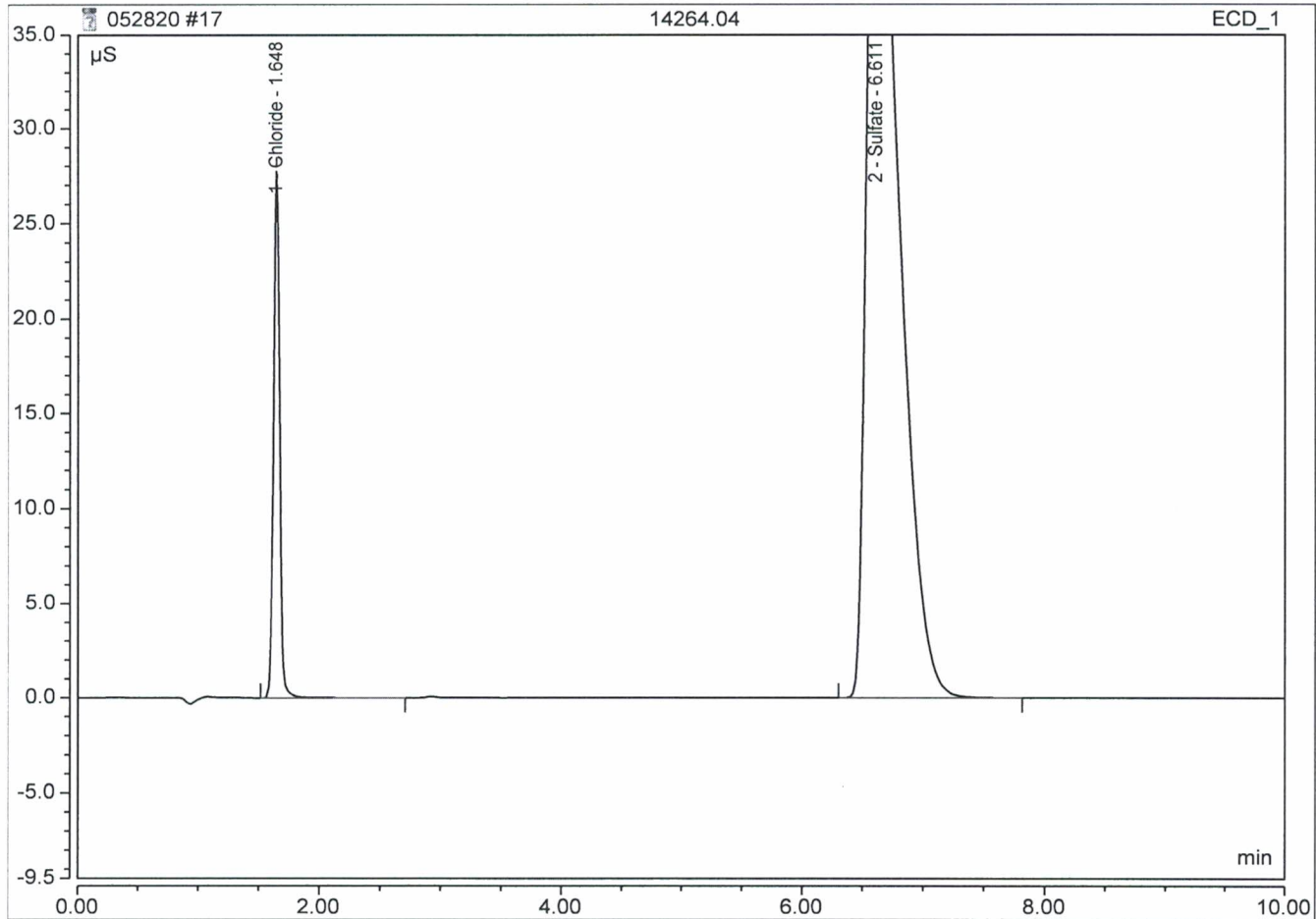
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|---------|
| 1 | 1.65 | Chloride | BMB | 1.466 | 25.266 | 74.2601 |
| 2 | 6.87 | Sulfate | BMB | 0.737 | 3.120 | 58.0208 |
| TOTAL: | | | | 2.20 | 28.39 | 132.28 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.04 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 5.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 28-May-2020 / 10:31 | Operator: | Jeff Phifer |

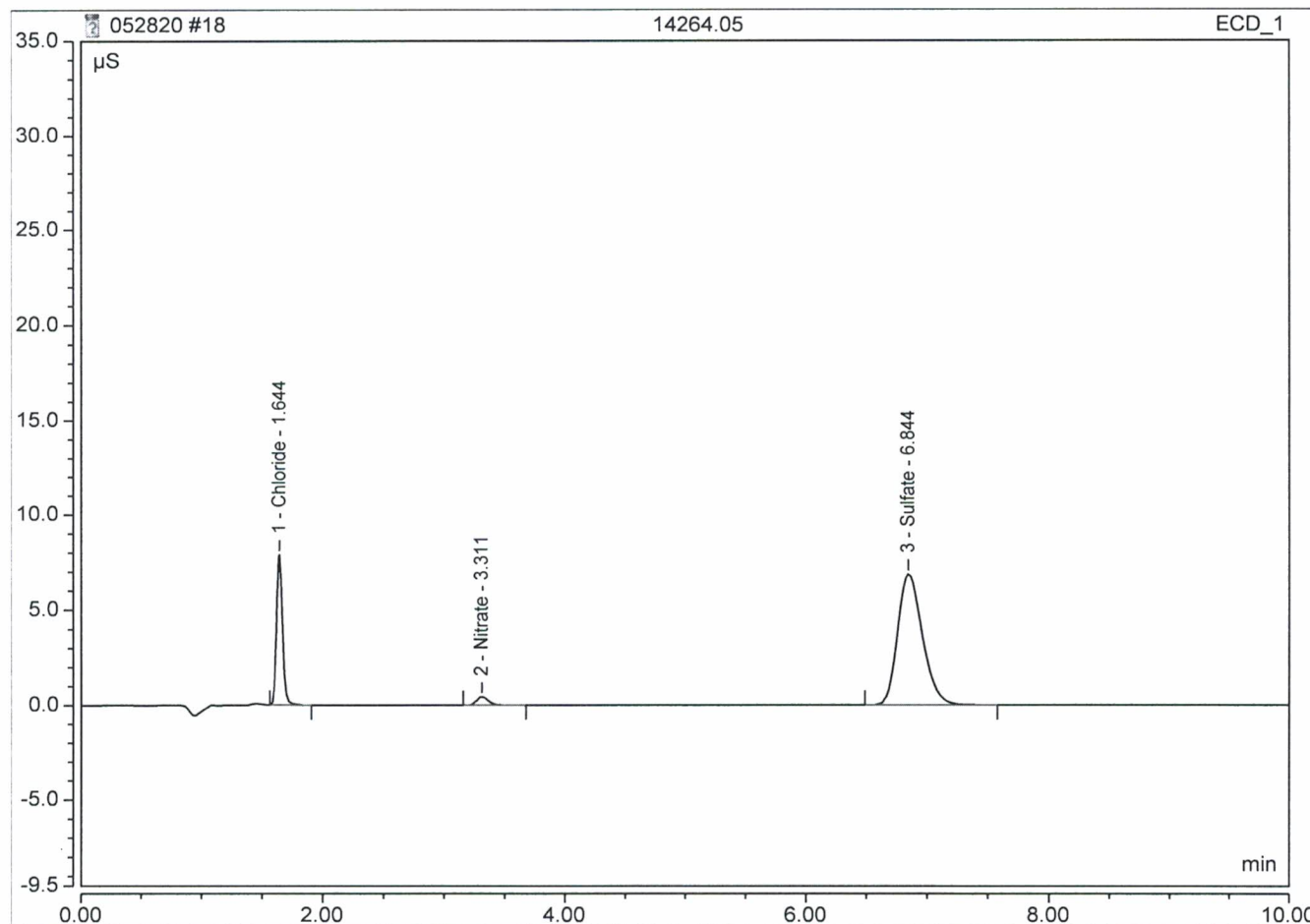
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-----------|
| 1 | 1.65 | Chloride | BMB | 1.650 | 27.747 | 83.4491 |
| 2 | 6.61 | Sulfate | BMB | 15.428 | 53.244 | 1209.0264 |
| TOTAL: | | | | 17.08 | 80.99 | 1292.48 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.05 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 5.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 28-May-2020 / 10:44 | Operator: | Jeff Phifer |

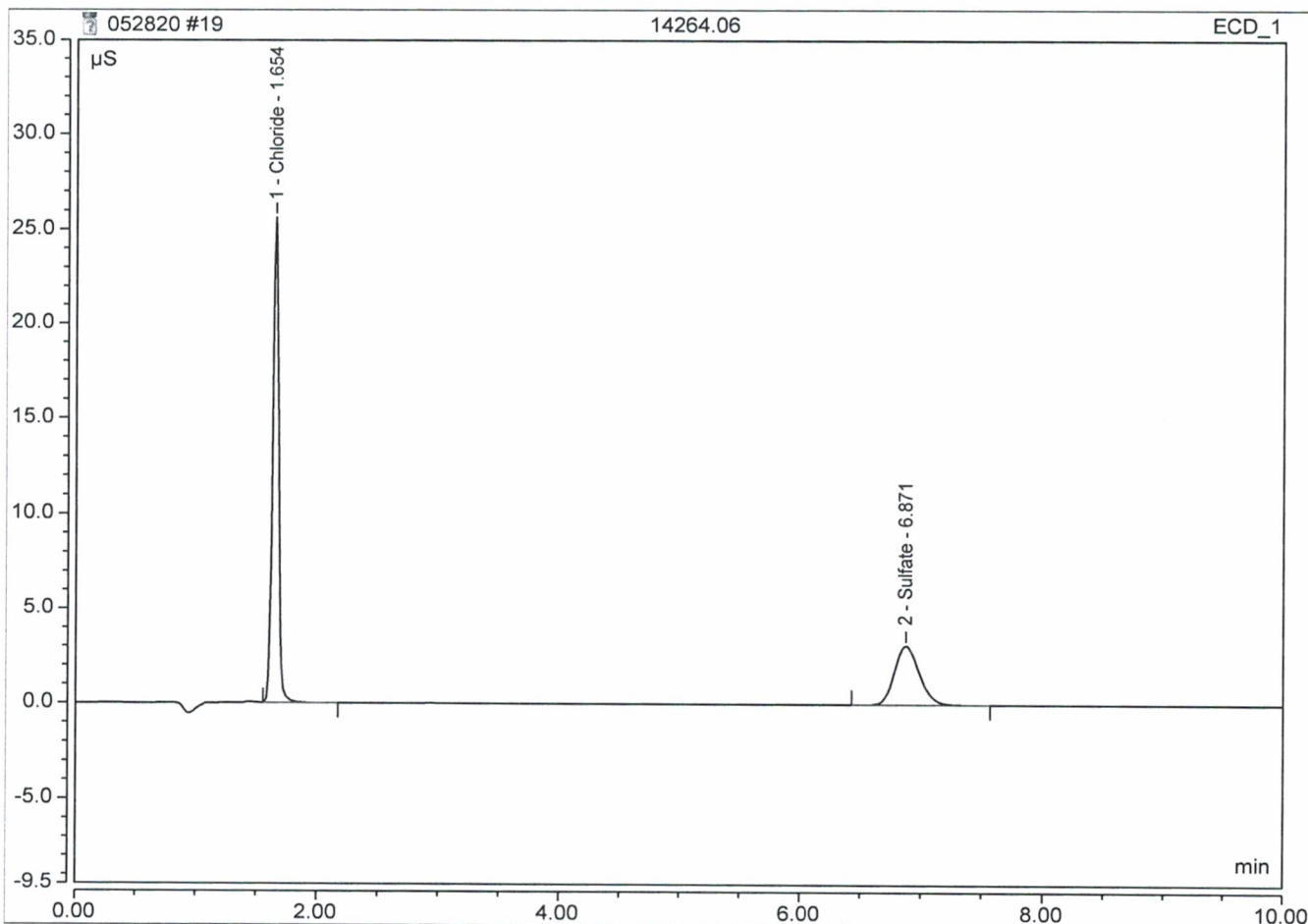
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|----------|
| 1 | 1.64 | Chloride | BMB | 0.455 | 7.888 | 23.9144 |
| 2 | 3.31 | Nitrate | BMB | 0.050 | 0.450 | 1.1791 |
| 3 | 6.84 | Sulfate | BMB | 1.624 | 6.883 | 127.5380 |
| TOTAL: | | | | 2.13 | 15.22 | 152.63 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.06 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 5.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 28-May-2020 / 10:57 | Operator: | Jeff Phifer |

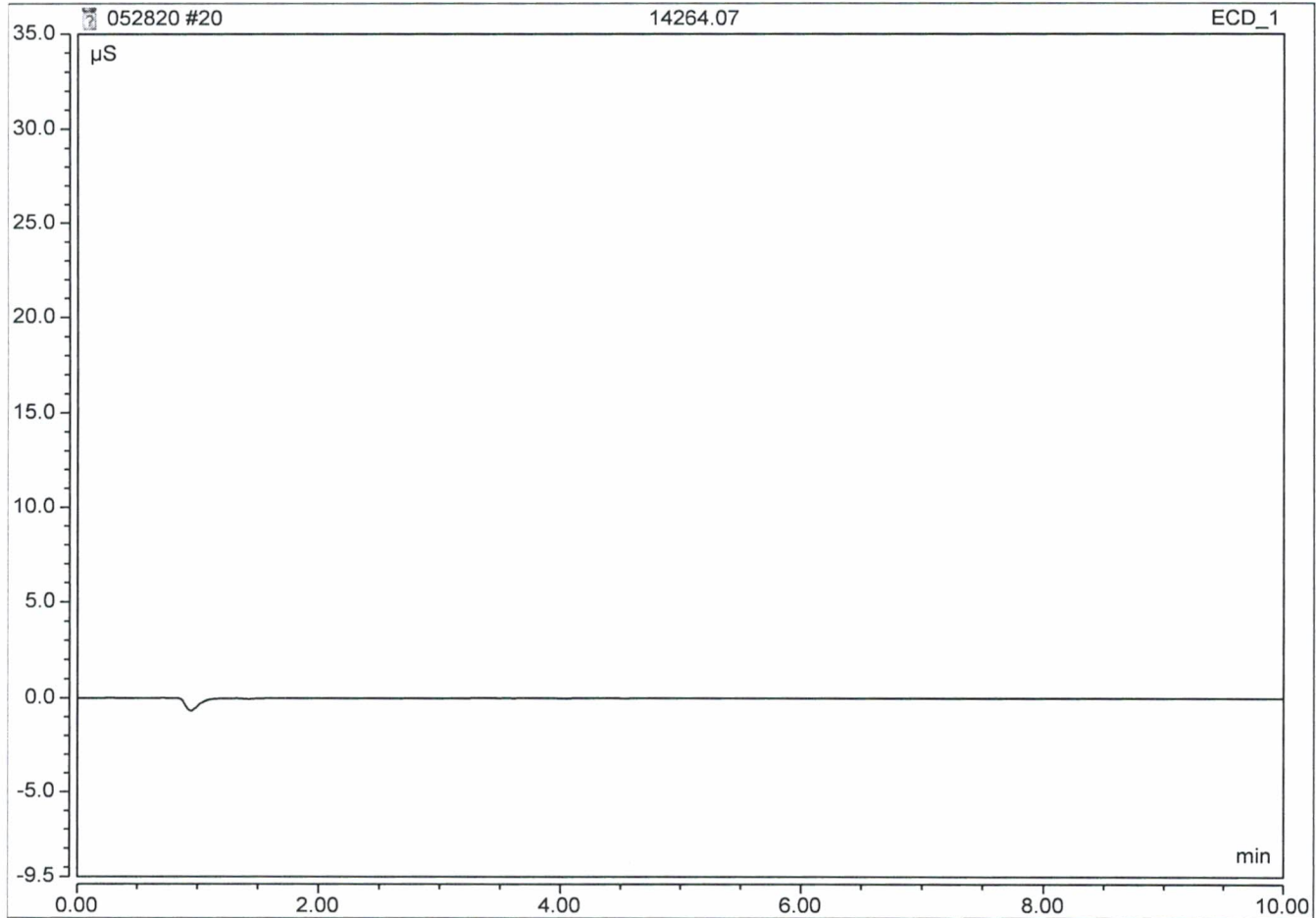
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|---------|
| 1 | 1.65 | Chloride | BMB | 1.490 | 25.625 | 75.4733 |
| 2 | 6.87 | Sulfate | BMB | 0.738 | 3.124 | 58.0867 |
| TOTAL: | | | | 2.23 | 28.75 | 133.56 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.07 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 2.5000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 28-May-2020 / 11:10 | Operator: | Jeff Phifer |

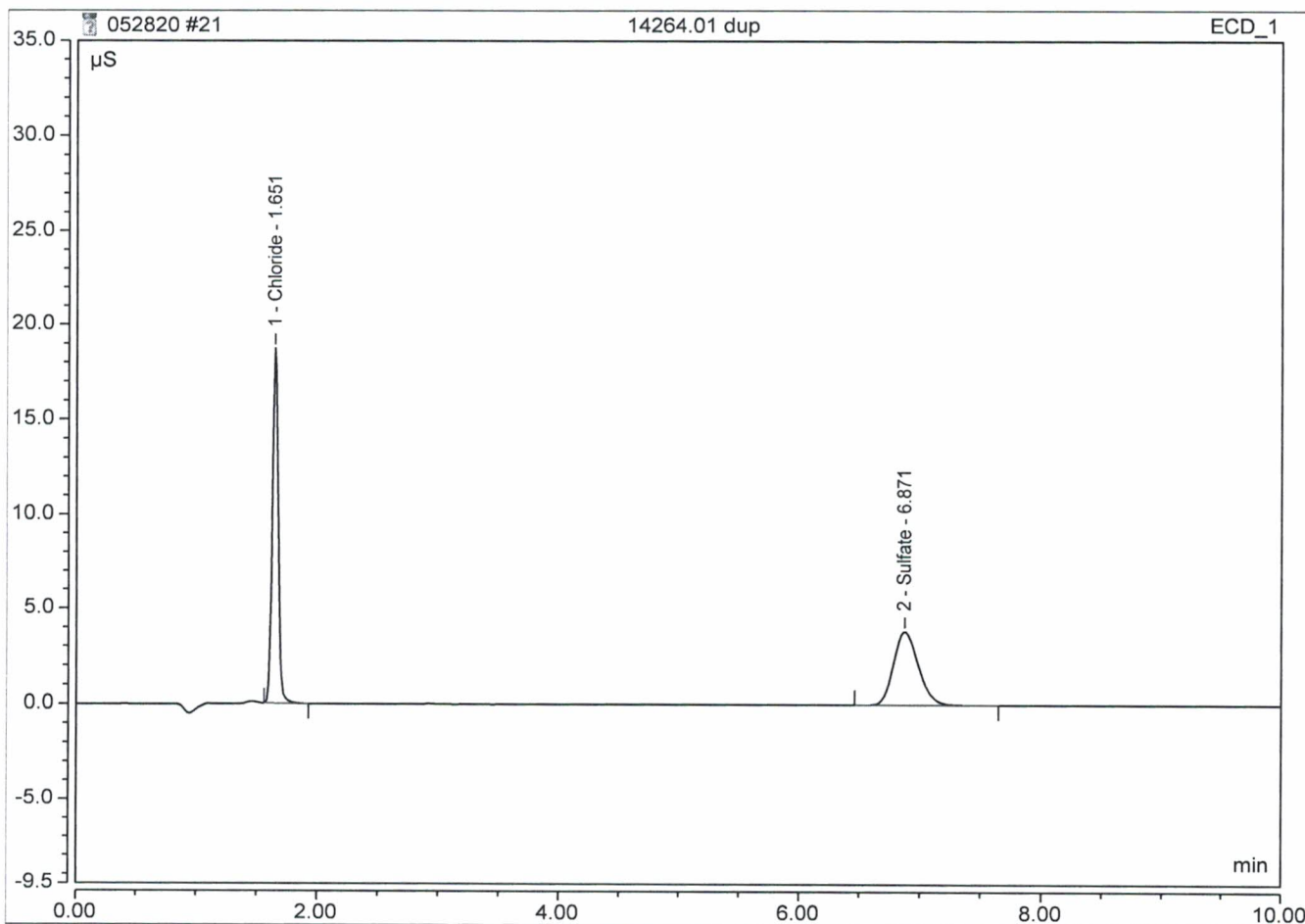
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount n.a. |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| TOTAL: | | | | 0.00 | 0.00 | 0.00 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | 14264.01 dup | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 5.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 28-May-2020 / 11:23 | Operator: | Jeff Phifer |

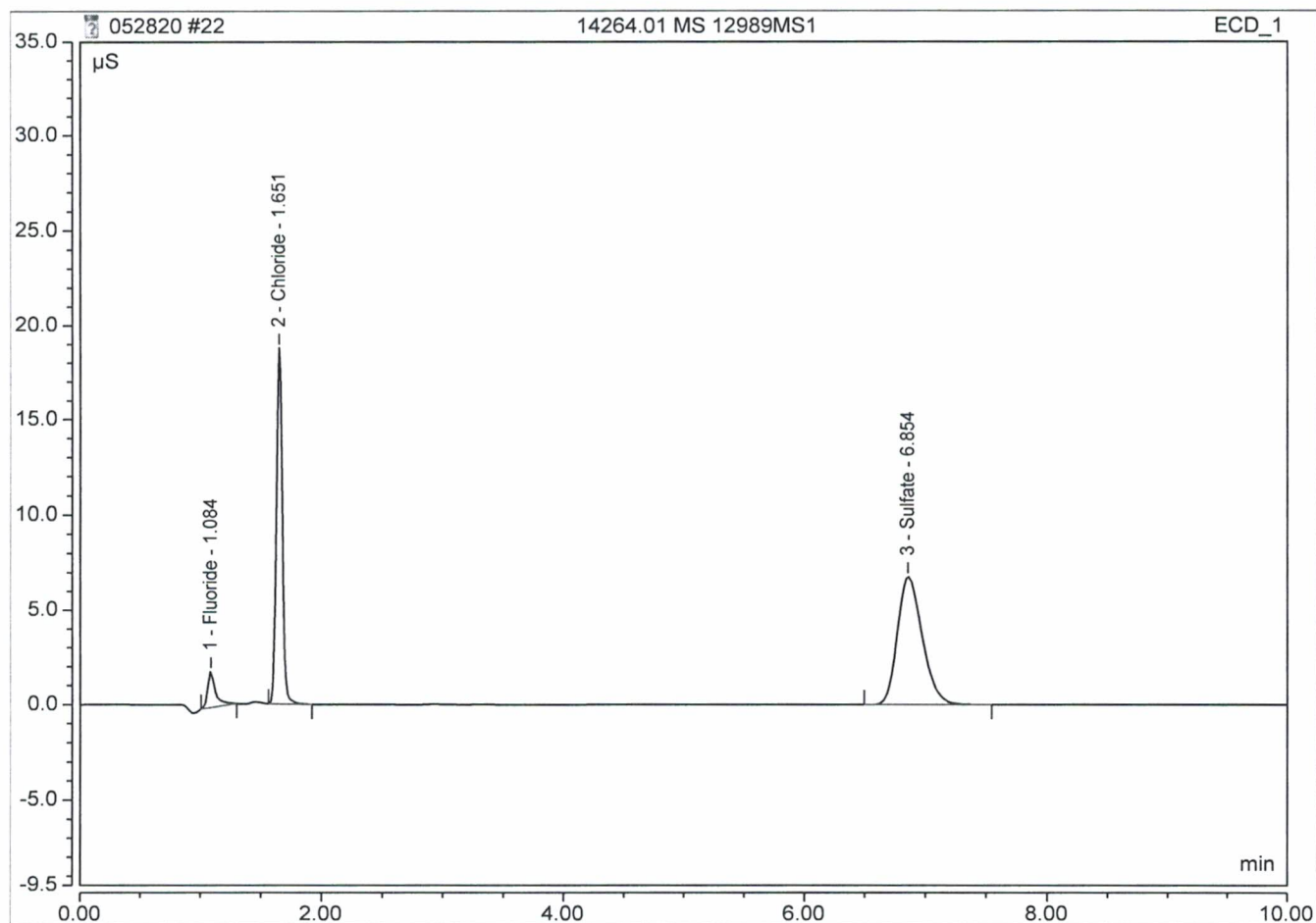
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|---------|
| 1 | 1.65 | Chloride | BMB | 1.072 | 18.720 | 54.6453 |
| 2 | 6.87 | Sulfate | BMB | 0.908 | 3.844 | 71.4532 |
| TOTAL: | | | | 1.98 | 22.56 | 126.10 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 14264.01 MS 12989MS1 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 28-May-2020 / 11:36 | Operator: | Jeff Phifer |

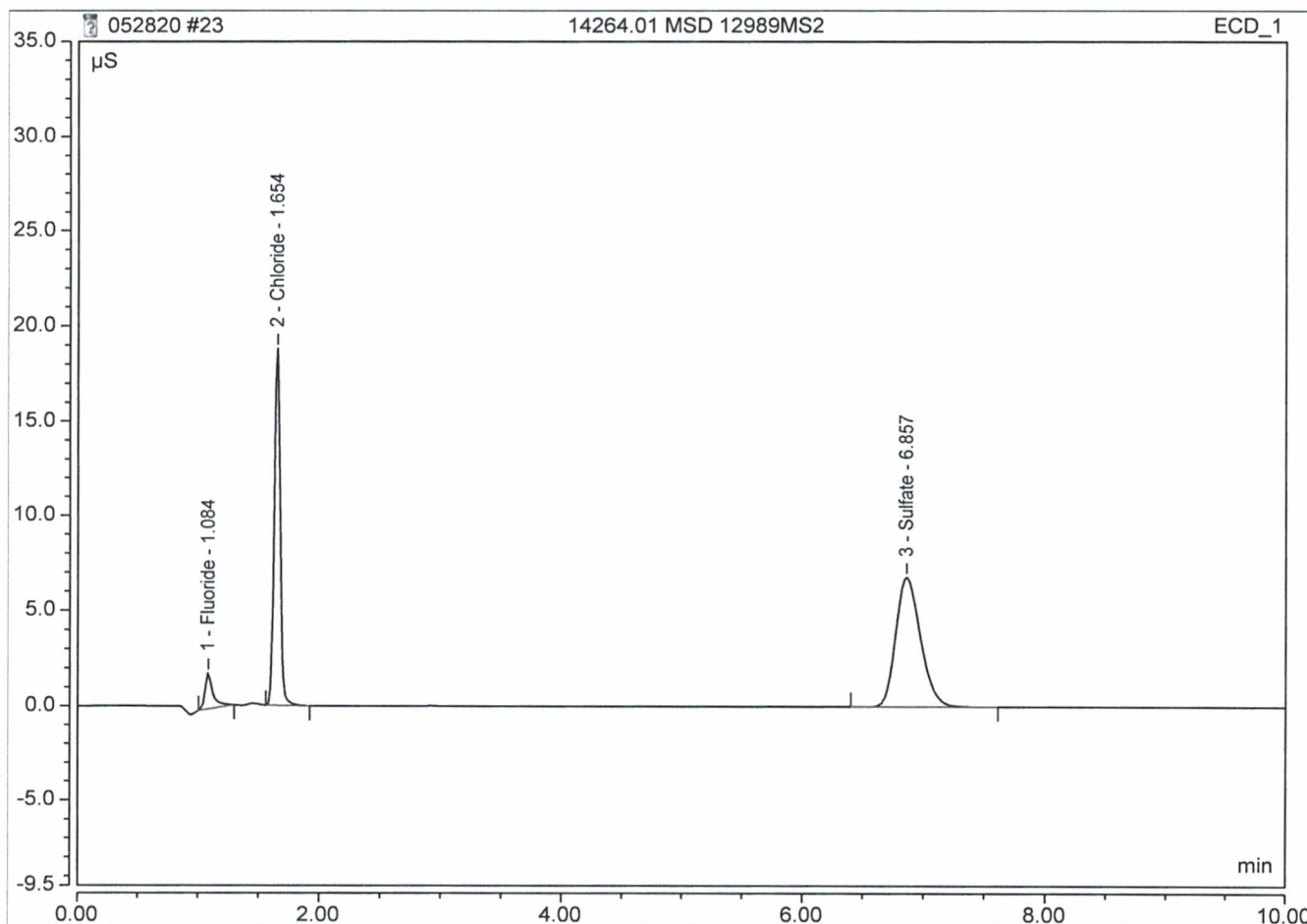
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|---------------------------|
| 1 | 1.08 | Fluoride | BMB | 0.144 | 1.895 | 0.9920 ~ 10 = 99.5 |
| 2 | 1.65 | Chloride | BMB | 1.076 | 18.771 | 10.9688 |
| 3 | 6.85 | Sulfate | BMB | 1.598 | 6.769 | 10 25.1017 - 14.2 = 109.5 |
| TOTAL: | | | | 2.82 | 27.43 | 37.06 |



Peak Integration Report

| | | | |
|-------------------|-----------------------|------------------|----------------|
| Sample Name: | 14264.01 MSD 12989MS2 | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 28-May-2020 / 11:49 | Operator: | Jeff Phifer |

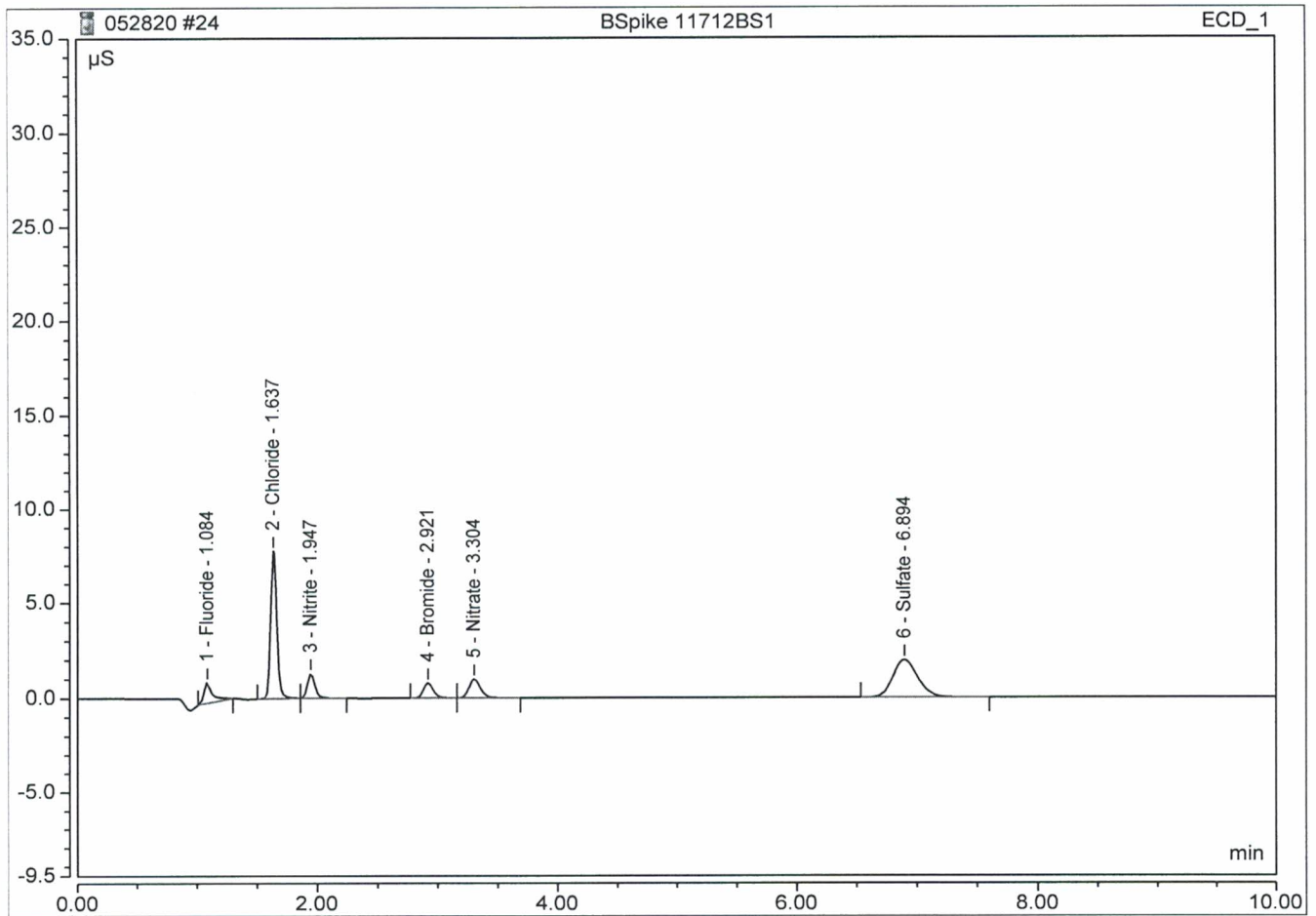
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|--------------------------|
| 1 | 1.08 | Fluoride | BMB | 0.143 | 1.885 | 1 0.9891 - m = 996 |
| 2 | 1.65 | Chloride | BMB | 1.078 | 18.792 | 10.9902 |
| 3 | 6.86 | Sulfate | BMB | 1.601 | 6.773 | 10 25.1406 - 14.2 = 1096 |
| TOTAL: | | | | 2.82 | 27.45 | 37.12 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | BSpike 11712BS1 | Inj. Vol.: | 2500.00 |
| Injection Type: | Check Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 28-May-2020 / 12:01 | Operator: | Jeff Phifer |

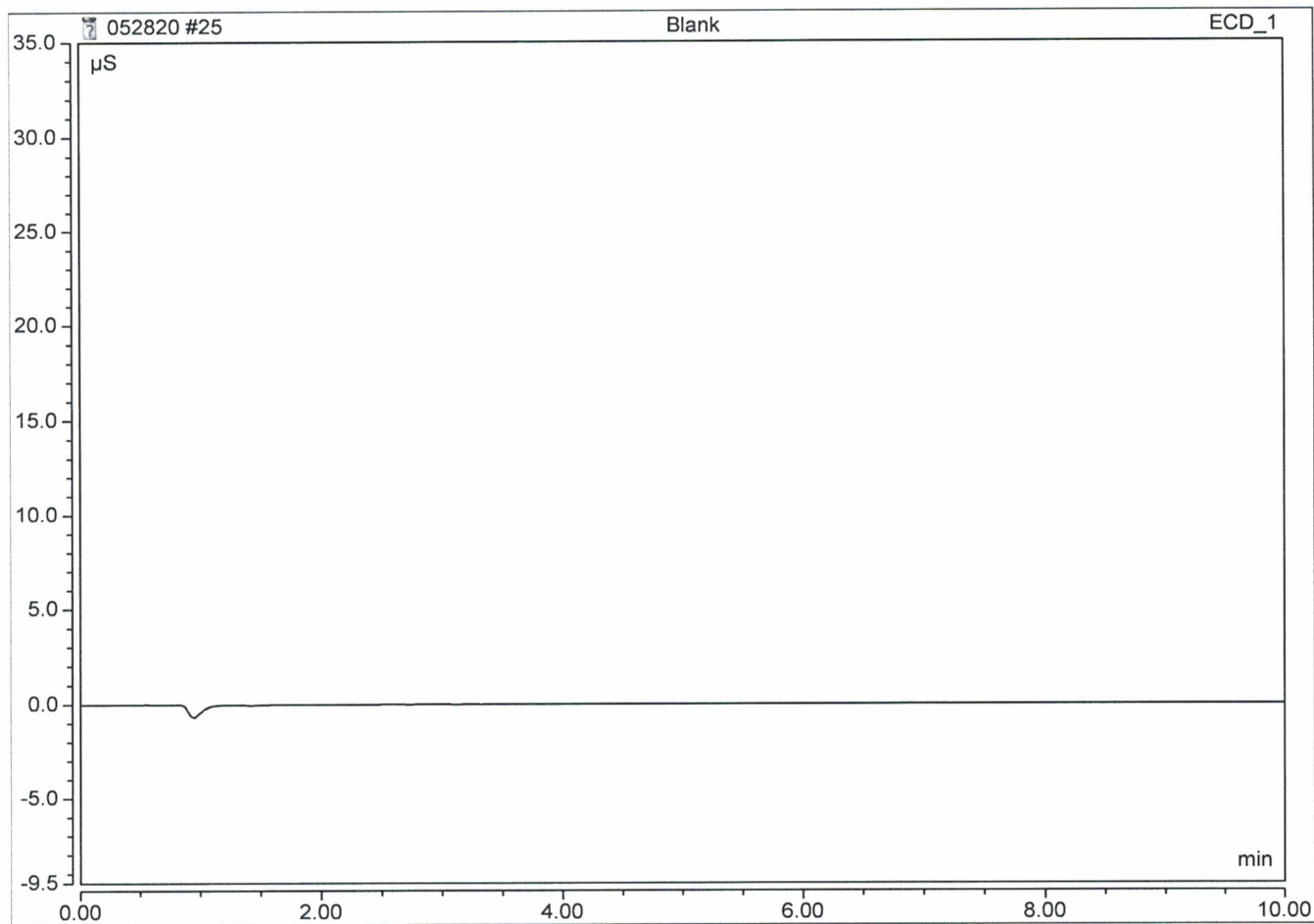
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|--------|
| 1 | 1.08 | Fluoride | BMB | 0.090 | 1.065 | 0.5542 |
| 2 | 1.64 | Chloride | BMB | 0.459 | 7.767 | 4.8228 |
| 3 | 1.95 | Nitrite | BMB | 0.093 | 1.292 | 0.4922 |
| 4 | 2.92 | Bromide | BMB | 0.074 | 0.785 | 2.0635 |
| 5 | 3.30 | Nitrate | BMB | 0.109 | 0.990 | 0.5116 |
| 6 | 6.89 | Sulfate | BMB | 0.468 | 1.976 | 7.3922 |
| TOTAL: | | | | 1.29 | 13.87 | 15.84 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | Blank | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 28-May-2020 / 12:14 | Operator: | Jeff Phifer |

| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount n.a. |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| TOTAL: | | | | 0.00 | 0.00 | 0.00 |








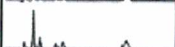
(new Calib)

JP

ICS-1100B

ICSB Dionex IC / Meth 300.0

all ions

| ECD_1 | Name | Type | Level | Position | Instrument Method | Processing Method | Status | Inject Time |
|---|-------------|----------------------|-------|----------|-------------------|-------------------|----------|-------------------------|
|  | water blank | Unknown | | 1 | Norm Method | Anion | Finished | 3/16/2020 9:57:49 AM -C |
|  | 1130Cal1 | Calibration Standard | 01 | 2 | Norm Method | Anion | Finished | 3/16/2020 10:10:09 AM . |
|  | 1130Cal2 | Calibration Standard | 02 | 3 | Norm Method | Anion | Finished | 3/16/2020 10:23:01 AM . |
|  | 1130Cal3 | Calibration Standard | 03 | 4 | Norm Method | Anion | Finished | 3/16/2020 10:35:53 AM . |
|  | 1130Cal4 | Calibration Standard | 04 | 5 | Norm Method | Anion | Finished | 3/16/2020 10:48:45 AM . |
|  | 1130Cal5 | Calibration Standard | 05 | 6 | Norm Method | Anion | Finished | 3/16/2020 11:01:35 AM . |

CALIB ICSB 031620 CAL



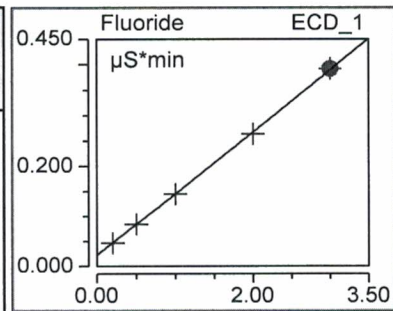
| Weight | Dilution | IntStd | Replicate ID | Comment | Spike Group |
|--------|----------|--------|--------------|-------------|-------------|
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |
| 1.0000 | 1.0000 | 1.0000 | | Jeff Phifer | |

Calibration Batch Report
CAL ID# ICSB031620CAL

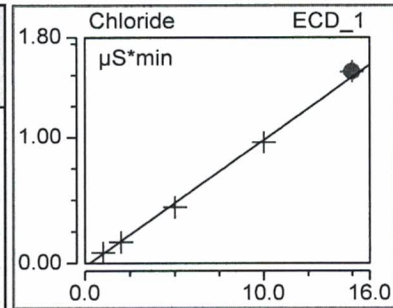
| | | | |
|--------------------|---------------------|----------------|----------------|
| Sequence: | 031620 | Injection Vol. | 2,500.00 |
| Instrument Method: | Norm Method | Operator: | Jeff Phifer |
| Inj. Date / Time: | 16-Mar-2020 / 11:01 | Column: | AS4A-SC 040144 |

| Calibration Summary | | | | | | | |
|---------------------|-----------|----------------------|---------------------|----------------|---------------|---------------|-------------|
| Peak Name | Eval.Type | Cal.Type | Window Width min | Offset (C0) | Slope (C1) | Curve (C2) | Corr.Coeff. |
| Fluoride | Area | Lin, WithOffset, 1/A | 0.02 | 0.023 | 0.122 | 0.000 | 0.9999 |
| Chloride | Area | Lin, WithOffset, 1/A | 0.05 | -0.025 | 0.100 | 0.000 | 0.9988 |
| Nitrite | Area | Lin, WithOffset, 1/A | 0.07 | -0.002 | 0.193 | 0.000 | 0.9996 |
| Bromide | Area | Lin, WithOffset, 1/A | 0.16 | -0.001 | 0.036 | 0.000 | 0.9999 |
| Nitrate | Area | Lin, WithOffset, 1/A | 0.18 | -0.001 | 0.214 | 0.000 | 0.9997 |
| Sulfate | Area | Lin, WithOffset, 1/A | 0.51 | -0.004 | 0.064 | 0.000 | 0.9997 |
| AVERAGE: | | | | -0.0017 | 0.1217 | 0.0000 | 0.9996 |

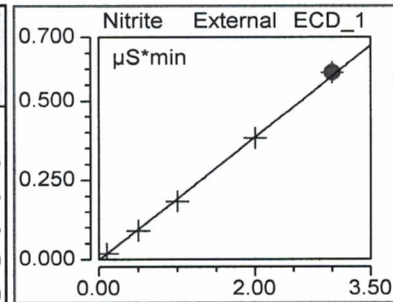
| Injection Name | Ret.Time min ECD 1 | Area μS*min ECD 1 | Height μS ECD 1 | Amount ECD 1 |
|-----------------------|--------------------------|-------------------------|-----------------------|-----------------|
| 1130Cal1 | 1.087 | 0.0469 | 0.474 | 0.199 |
| 1130Cal2 | 1.088 | 0.0842 | 1.010 | 0.505 |
| 1130Cal3 | 1.088 | 0.1447 | 1.902 | 0.999 |
| 1130Cal4 | 1.088 | 0.2638 | 3.720 | 1.974 |
| 1130Cal5 | 1.088 | 0.3918 | 5.690 | 3.022 |
| Average | 1.087 | | | |
| Rel. Std. Dev. | 0.007 % | | | |



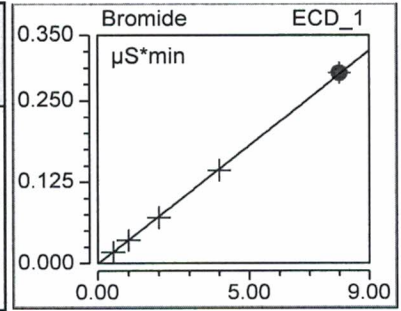
| Injection Name | Ret.Time min ECD 1 | Area μS*min ECD 1 | Height μS ECD 1 | Amount ECD 1 |
|-----------------------|--------------------------|-------------------------|-----------------------|-----------------|
| 1130Cal1 | 1.647 | 0.0837 | 1.369 | 1.083 |
| 1130Cal2 | 1.648 | 0.1692 | 2.803 | 1.934 |
| 1130Cal3 | 1.654 | 0.4442 | 7.527 | 4.674 |
| 1130Cal4 | 1.658 | 0.9621 | 16.388 | 9.834 |
| 1130Cal5 | 1.661 | 1.5282 | 25.842 | 15.474 |
| Average | 1.653 | | | |
| Rel. Std. Dev. | 0.363 % | | | |



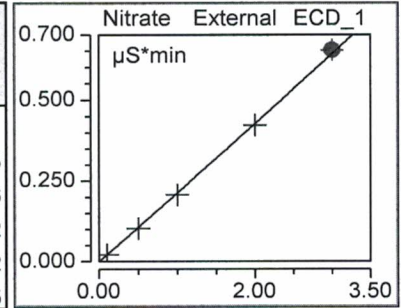
| Injection Name | Ret.Time min ECD 1 | Area μS*min ECD 1 | Height μS ECD 1 | Amount ECD 1 |
|-----------------------|--------------------------|-------------------------|-----------------------|-----------------|
| 1130Cal1 | 1.964 | 0.0180 | 0.249 | 0.106 |
| 1130Cal2 | 1.964 | 0.0909 | 1.255 | 0.483 |
| 1130Cal3 | 1.968 | 0.1837 | 2.564 | 0.963 |
| 1130Cal4 | 1.971 | 0.3820 | 5.338 | 1.989 |
| 1130Cal5 | 1.968 | 0.5890 | 8.308 | 3.060 |
| Average | 1.967 | | | |
| Rel. Std. Dev. | 0.144 % | | | |



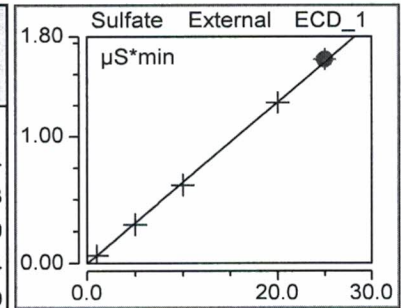
| Injection Name | Ret. Time min ECD 1 | Area $\mu\text{S}\cdot\text{min}$ ECD 1 | Height μS ECD 1 | Amount ECD 1 |
|-----------------------|---------------------------|---|----------------------------------|-----------------|
| 1130Cal1 | 2.957 | 0.0176 | 0.183 | 0.507 |
| 1130Cal2 | 2.954 | 0.0358 | 0.371 | 1.006 |
| 1130Cal3 | 2.958 | 0.0707 | 0.738 | 1.967 |
| 1130Cal4 | 2.961 | 0.1430 | 1.493 | 3.955 |
| 1130Cal5 | 2.938 | 0.2925 | 3.112 | 8.064 |
| Average | 2.953 | | | |
| Rel. Std. Dev. | 0.313 % | | | |



| Injection Name | Ret. Time min ECD 1 | Area $\mu\text{S}\cdot\text{min}$ ECD 1 | Height μS ECD 1 | Amount ECD 1 |
|-----------------------|---------------------------|---|----------------------------------|-----------------|
| 1130Cal1 | 3.351 | 0.0215 | 0.195 | 0.105 |
| 1130Cal2 | 3.341 | 0.1029 | 0.922 | 0.486 |
| 1130Cal3 | 3.341 | 0.2071 | 1.848 | 0.972 |
| 1130Cal4 | 3.334 | 0.4230 | 3.741 | 1.982 |
| 1130Cal5 | 3.301 | 0.6525 | 5.776 | 3.055 |
| Average | 3.333 | | | |
| Rel. Std. Dev. | 0.575 % | | | |



| Injection Name | Ret. Time min ECD 1 | Area $\mu\text{S}\cdot\text{min}$ ECD 1 | Height μS ECD 1 | Amount ECD 1 |
|-----------------------|---------------------------|---|----------------------------------|-----------------|
| 1130Cal1 | 7.057 | 0.0628 | 0.254 | 1.044 |
| 1130Cal2 | 7.048 | 0.3053 | 1.246 | 4.843 |
| 1130Cal3 | 7.028 | 0.6158 | 2.526 | 9.709 |
| 1130Cal4 | 7.018 | 1.2715 | 5.210 | 19.984 |
| 1130Cal5 | 7.011 | 1.6185 | 6.632 | 25.419 |
| Average | 7.032 | | | |
| Rel. Std. Dev. | 0.281 % | | | |



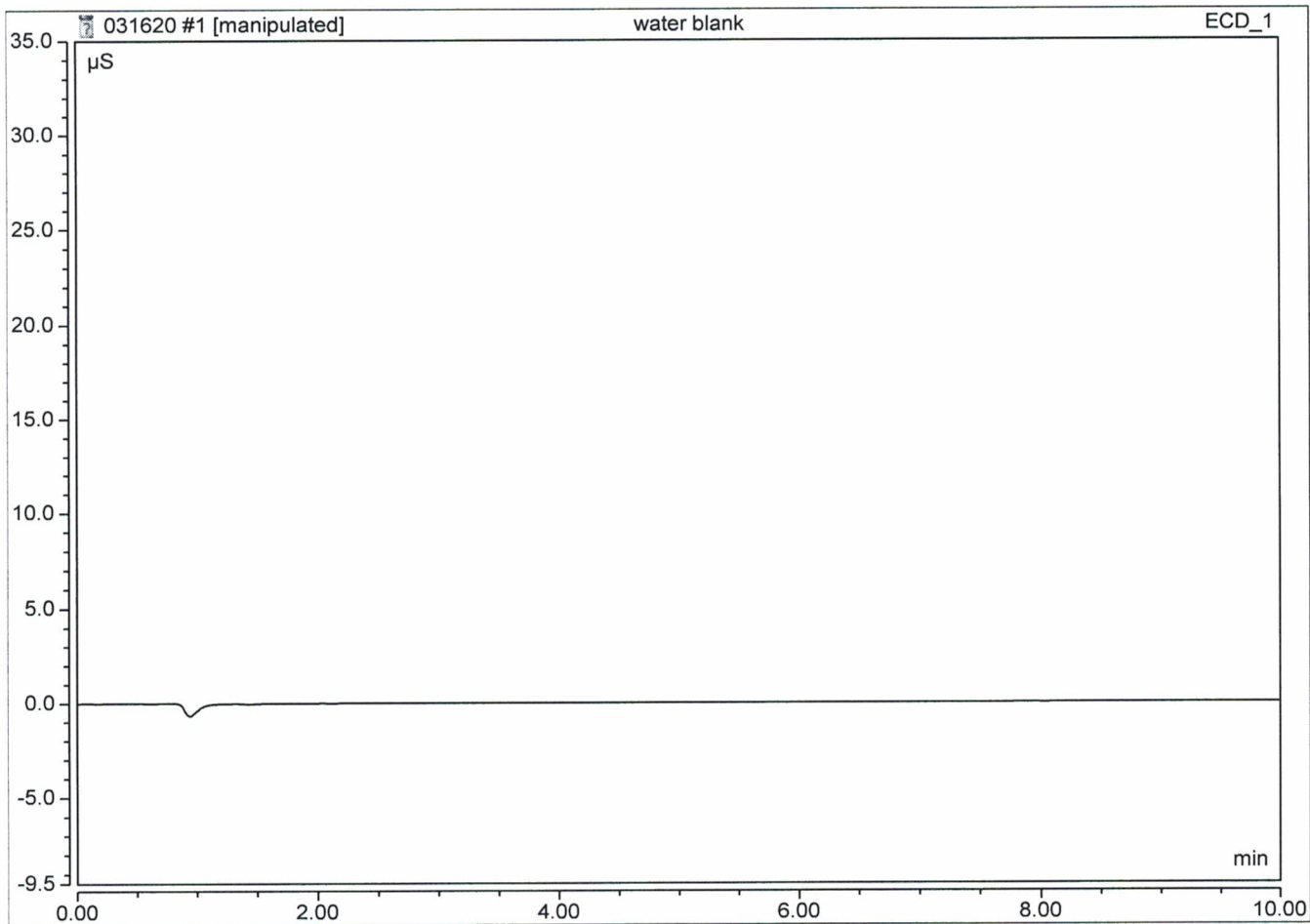
| | | | | |
|------------------|----------------|--|-------------------------------|---------|
| Norm Method | 16/06/15 12:18 | Jeff Phifer | METHOD 300.0 | |
| Stage | Time min | Command | Value | Comment |
| Instrument Setup | initial | | | |
| | | Sampler.HomeNeedle | | |
| | | Sampler.ResetVials | 1, 50 | |
| | | Pump_ECD.Pressure.UpperLimit | 4500 [psi] | |
| | | Sampler.DelayVolume | 125 [µl] | |
| | | Pump_ECD.%A.Equate | "Carb - BiCarb" | |
| | | Pump_ECD.Pressure.LowerLimit | 100 [psi] | |
| | | Pump_ECD.CellTemperature.Nominal | 35.0 [°C] | |
| | | Pump_ECD.Data_Collection_Rate | 5.0 [Hz] | |
| | | Pump_ECD.Suppressor_Type | ASRS_4mm | |
| | | Pump_ECD.Suppressor_Carbonate | 1.8 [mM] | |
| | | Pump_ECD.Suppressor_Bicarbonate | 1.7 [mM] | |
| | | Pump_ECD.Suppressor_Hydroxide | 0.0 [mM] | |
| | | Pump_ECD.Suppressor_Tetraborate | 0.0 [mM] | |
| | | Pump_ECD.Suppressor_OtherEluent | 0.0 [mM] | |
| | | Pump_ECD.Suppressor_RecommendedCurrent | 27 [mA] | |
| | | Pump_ECD.Suppressor_Current | 27 [mA] | |
| | | Sampler.FlushFactor | 10 | |
| | | Sampler.DeliverSpeed | 4.0 [ml/min] | |
| | | Pump_ECD.Flow | 2.00 | |
| | | Sampler.LoadPosition | | |
| | | Sampler.DeliverSample | Full | |
| | | Sampler.EndSamplePrep | | |
| Inject | 0.000 | | | |
| | | Wait | Sampler.CycleTimeState, Hold, | |
| | | Sampler.Inject | | |
| Start Run | 0.000 | | | |
| | | Pump_ECD.Channel_Pressure.AcqOn | | |
| | | Pump_ECD.Autozero | | |
| | | Pump_ECD.ECD_1.AcqOn | | |
| | | Pump_ECD.ECD_Total.AcqOn | | |
| Run | | | Duration = 10.000 [min] | |
| | 0.000 | | | |
| | 0.500 | | | |
| | | Sampler.BeginOverlap | | |
| Stop Run | 10.000 | | | |
| | | Pump_ECD.Channel_Pressure.AcqOff | | |
| | | Pump_ECD.ECD_1.AcqOff | | |
| | | Pump_ECD.ECD_Total.AcqOff | | |
| End | | | | |

JP 3.16.20

Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | water blank | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 16-Mar-2020 / 09:57 | Operator: | Jeff Phifer |

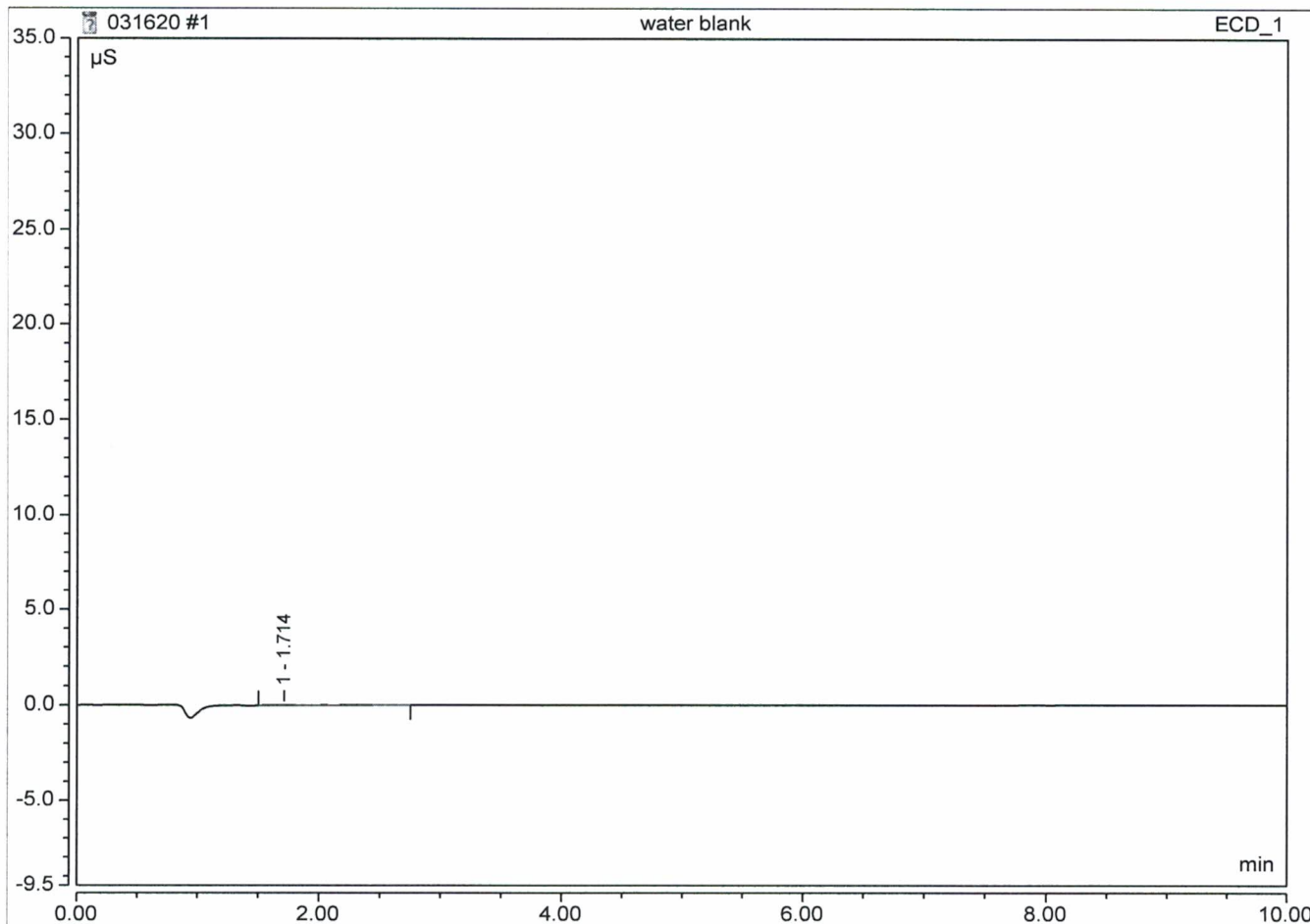
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount n.a. |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| TOTAL: | | | | 0.00 | 0.00 | 0.00 |



Peak Integration Report

| | | | |
|-------------------|---------------------|------------------|----------------|
| Sample Name: | water blank | Inj. Vol.: | 2500.00 |
| Injection Type: | Unknown | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 16-Mar-2020 / 09:57 | Operator: | Jeff Phifer |

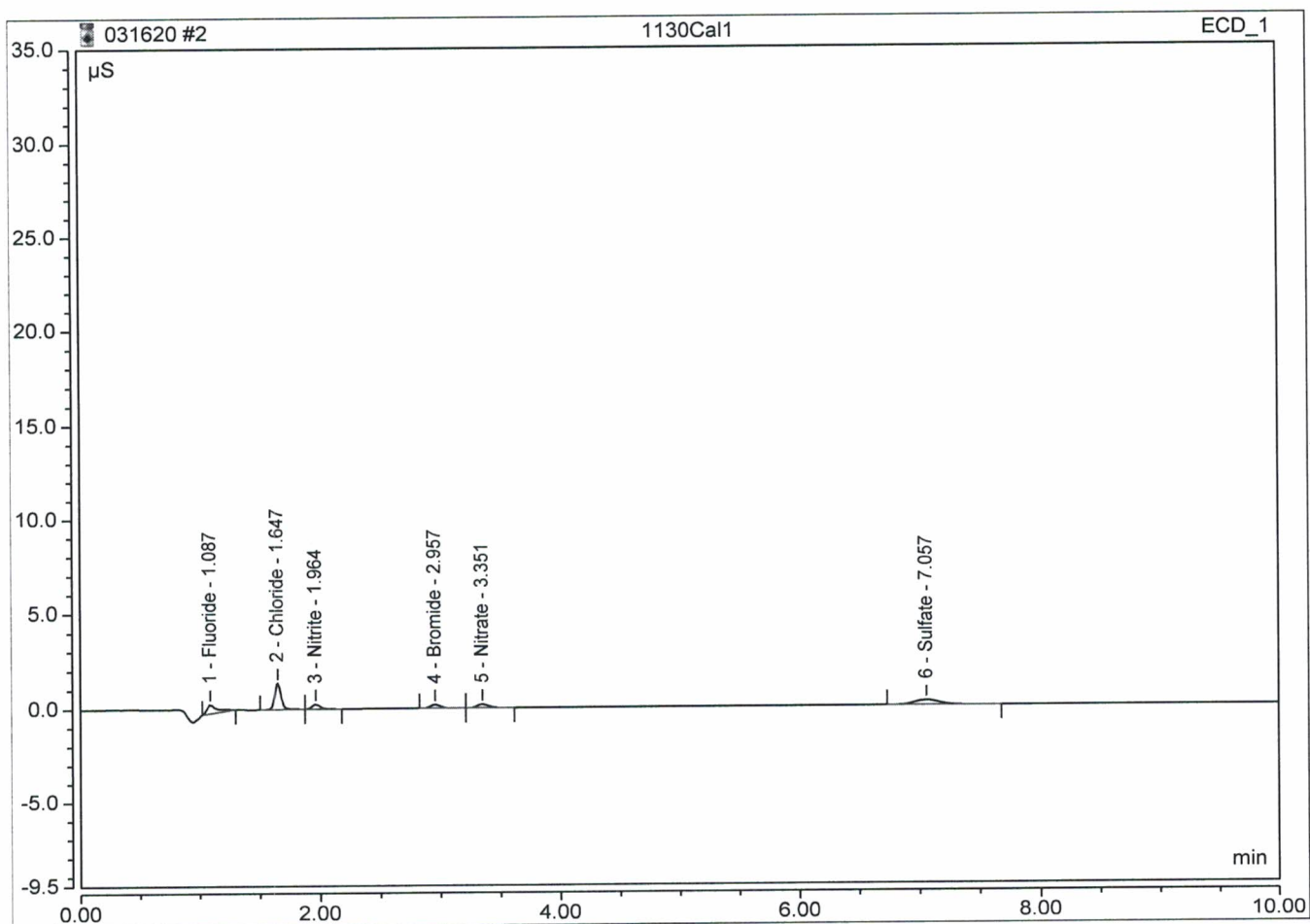
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount n.a. |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|-------------|
| TOTAL: | | | | 0.00 | 0.00 | 0.00 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130Cal1 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 16-Mar-2020 / 10:10 | Operator: | Jeff Phifer |

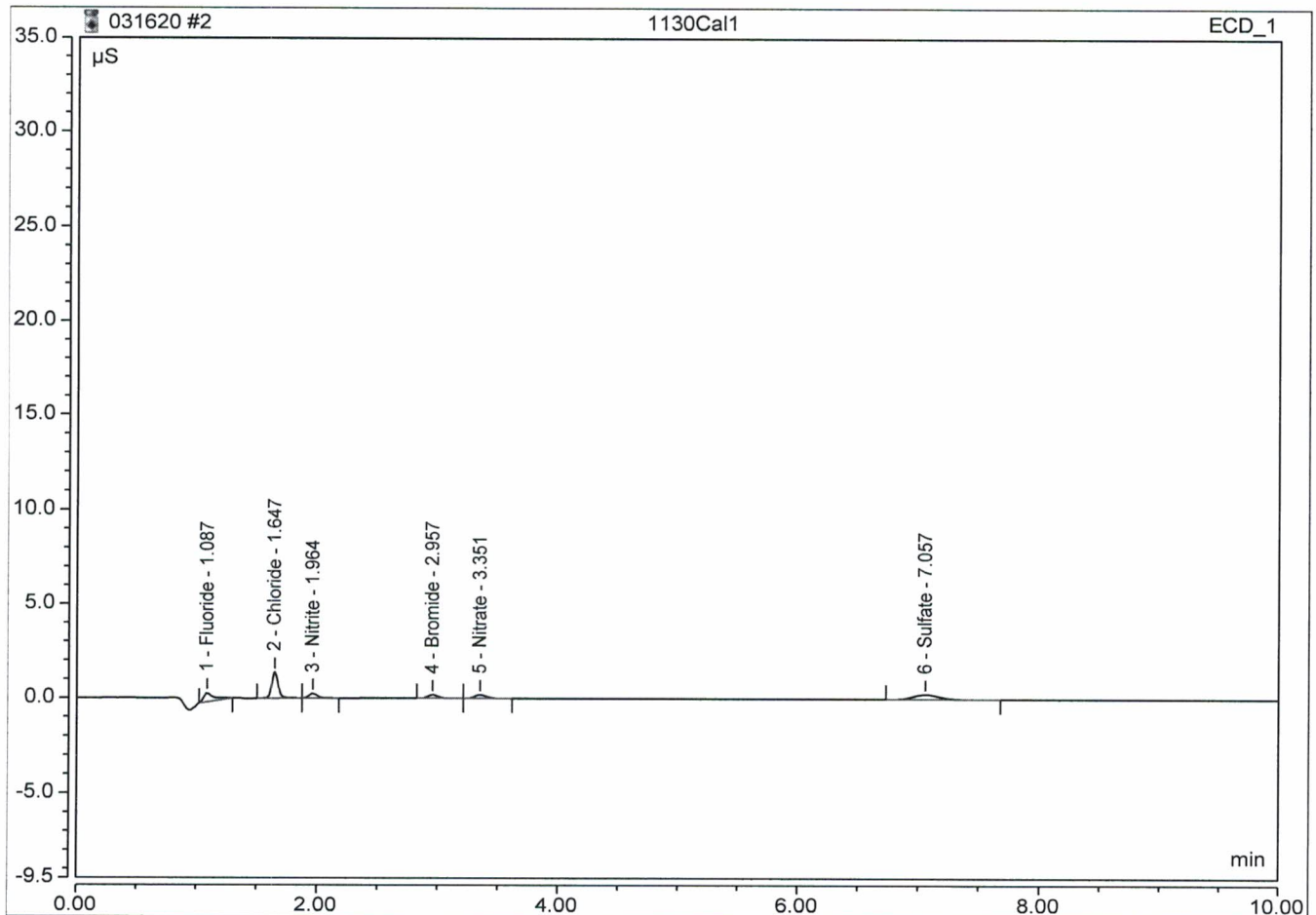
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|------------|
| 1 | 1.09 | Fluoride | BMB | 0.047 | 0.474 | 0.2 0.1992 |
| 2 | 1.65 | Chloride | BMB | 0.084 | 1.369 | 1 1.0830 |
| 3 | 1.96 | Nitrite | BMB | 0.018 | 0.249 | 0.1 0.1057 |
| 4 | 2.96 | Bromide | BMB | 0.018 | 0.183 | 0.5 0.5067 |
| 5 | 3.35 | Nitrate | BMB | 0.022 | 0.195 | 0.1 0.1047 |
| 6 | 7.06 | Sulfate | BMB | 0.063 | 0.254 | 1 1.0444 |
| TOTAL: | | | | 0.25 | 2.72 | 3.04 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130Cal1 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 16-Mar-2020 / 10:10 | Operator: | Jeff Phifer |

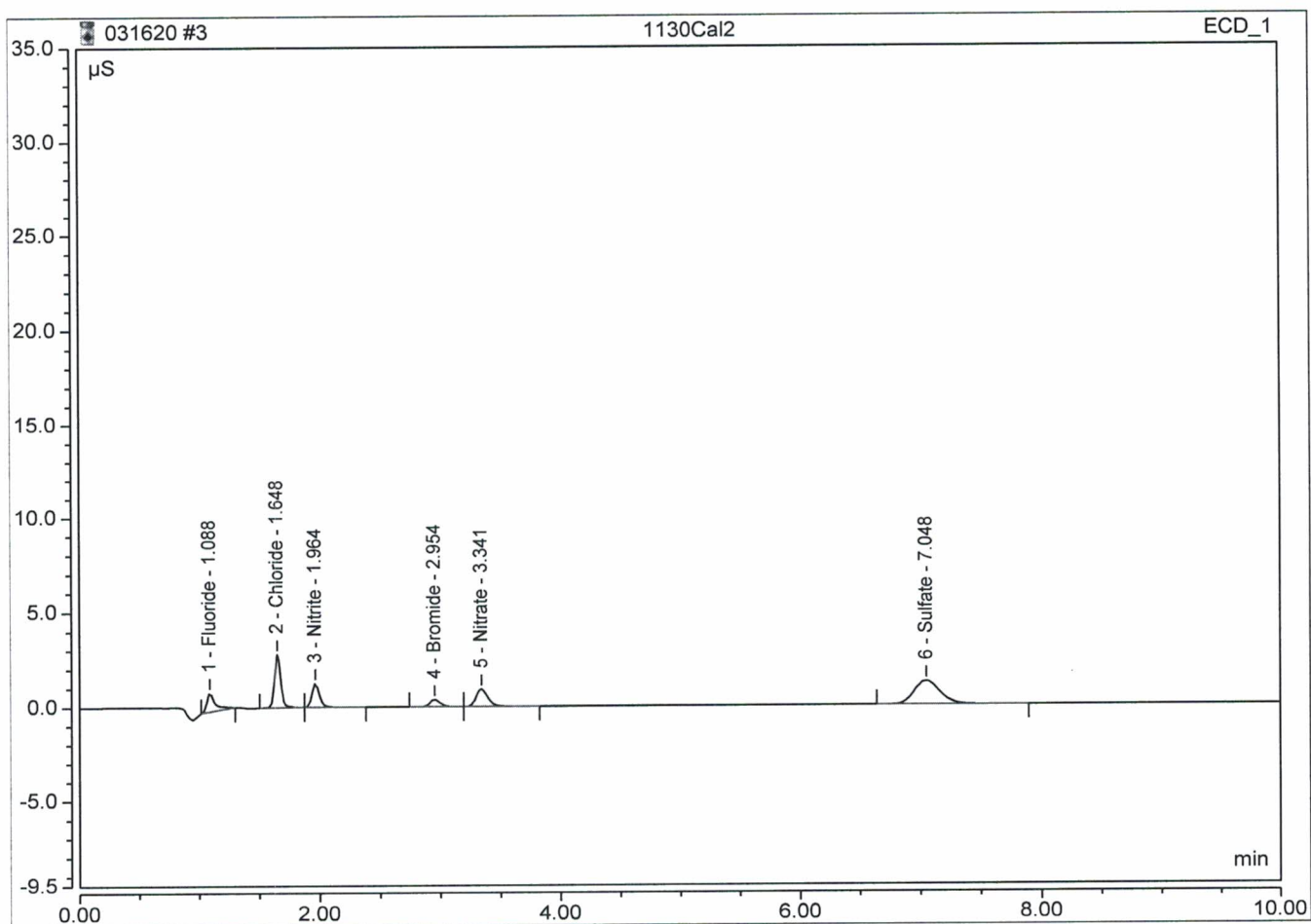
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S} \cdot \text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-------------------------------------|----------------------|--------|
| 1 | 1.09 | Fluoride | BMB | 0.047 | 0.474 | n.a. |
| 2 | 1.65 | Chloride | BMB | 0.084 | 1.369 | n.a. |
| 3 | 1.96 | Nitrite | BMB | 0.018 | 0.249 | n.a. |
| 4 | 2.96 | Bromide | BMB | 0.018 | 0.183 | n.a. |
| 5 | 3.35 | Nitrate | BMB | 0.022 | 0.195 | n.a. |
| 6 | 7.06 | Sulfate | BMB | 0.063 | 0.254 | n.a. |
| TOTAL: | | | | 0.25 | 2.72 | 0.00 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130Cal2 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 16-Mar-2020 / 10:23 | Operator: | Jeff Phifer |

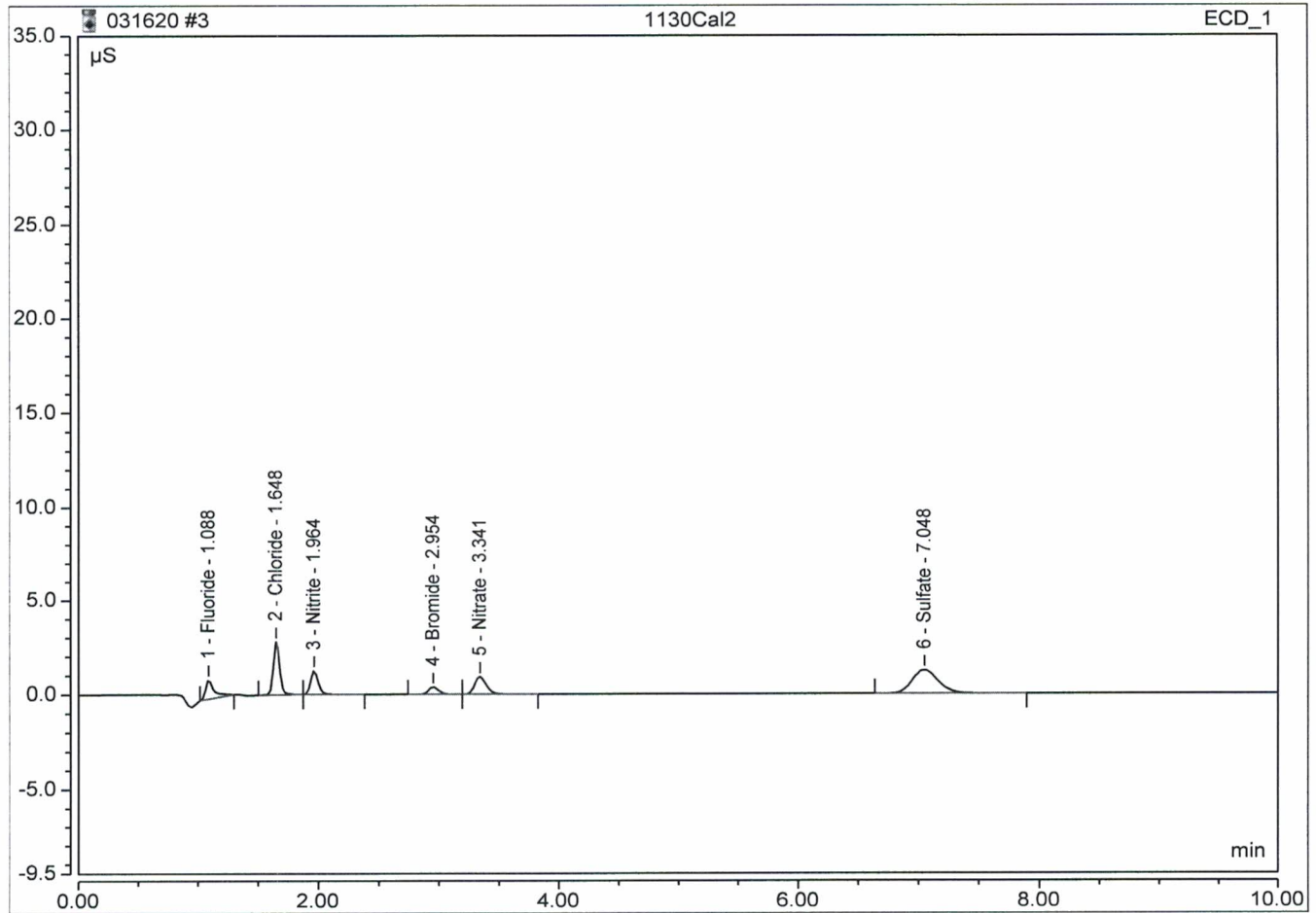
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S} \cdot \text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-------------------------------------|----------------------|------------|
| 1 | 1.09 | Fluoride | BMB | 0.084 | 1.010 | 0.5 0.5050 |
| 2 | 1.65 | Chloride | BMB | 0.169 | 2.803 | 2 1.9341 |
| 3 | 1.96 | Nitrite | BMB | 0.091 | 1.255 | 0.5 0.4828 |
| 4 | 2.95 | Bromide | BMB | 0.036 | 0.371 | 1 1.0060 |
| 5 | 3.34 | Nitrate | BMB | 0.103 | 0.922 | 0.5 0.4855 |
| 6 | 7.05 | Sulfate | BMB | 0.305 | 1.246 | 5 4.8434 |
| TOTAL: | | | | 0.79 | 7.61 | 9.26 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130Cal2 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 16-Mar-2020 / 10:23 | Operator: | Jeff Phifer |

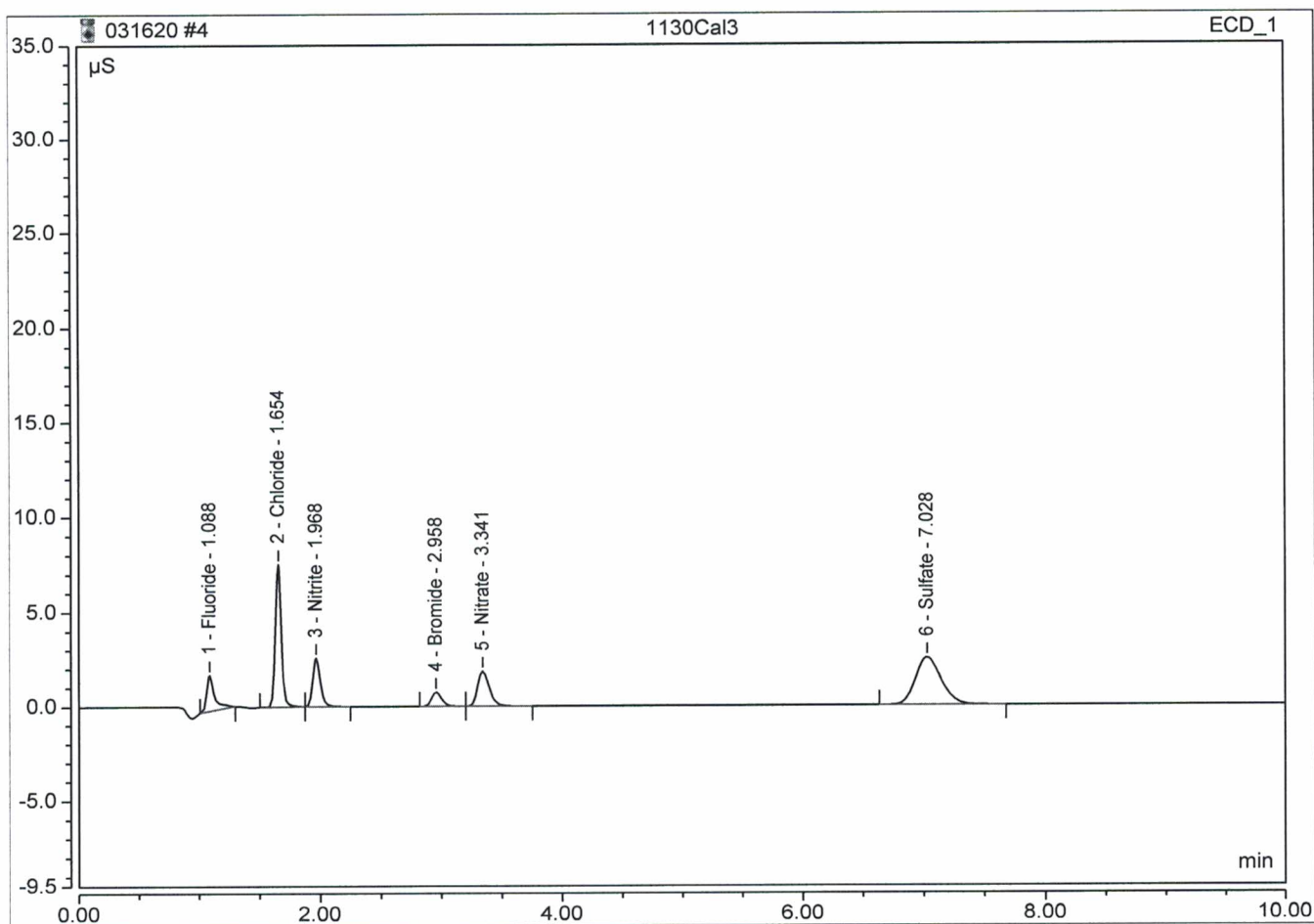
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|--------|
| 1 | 1.09 | Fluoride | BMB | 0.084 | 1.010 | 0.5000 |
| 2 | 1.65 | Chloride | BMB | 0.169 | 2.803 | 2.0000 |
| 3 | 1.96 | Nitrite | BMB | 0.091 | 1.255 | 0.5000 |
| 4 | 2.95 | Bromide | BMB | 0.036 | 0.371 | 1.0000 |
| 5 | 3.34 | Nitrate | BMB | 0.103 | 0.922 | 0.5000 |
| 6 | 7.05 | Sulfate | BMB | 0.305 | 1.246 | 5.0000 |
| TOTAL: | | | | 0.79 | 7.61 | 9.50 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130Cal3 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 16-Mar-2020 / 10:35 | Operator: | Jeff Phifer |

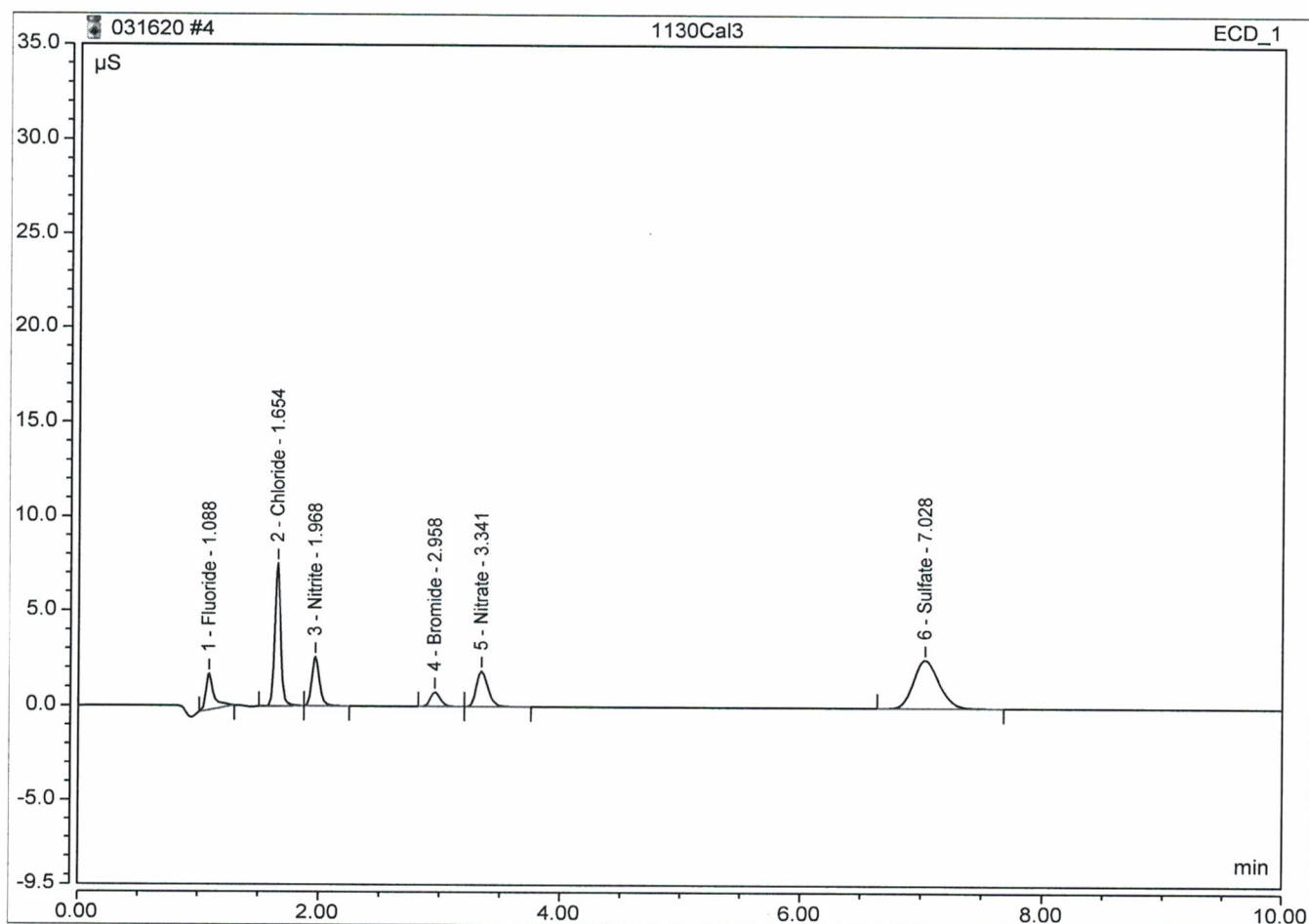
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-----------------------------------|----------------------|--------|
| 1 | 1.09 | Fluoride | BMB | 0.145 | 1.902 | 0.9994 |
| 2 | 1.65 | Chloride | BMB | 0.444 | 7.527 | 4.6743 |
| 3 | 1.97 | Nitrite | BMB | 0.184 | 2.564 | 0.9629 |
| 4 | 2.96 | Bromide | BMB | 0.071 | 0.738 | 1.9674 |
| 5 | 3.34 | Nitrate | BMB | 0.207 | 1.848 | 0.9723 |
| 6 | 7.03 | Sulfate | BMB | 0.616 | 2.526 | 9.7093 |
| TOTAL: | | | | 1.67 | 17.10 | 19.29 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130Cal3 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 16-Mar-2020 / 10:35 | Operator: | Jeff Phifer |

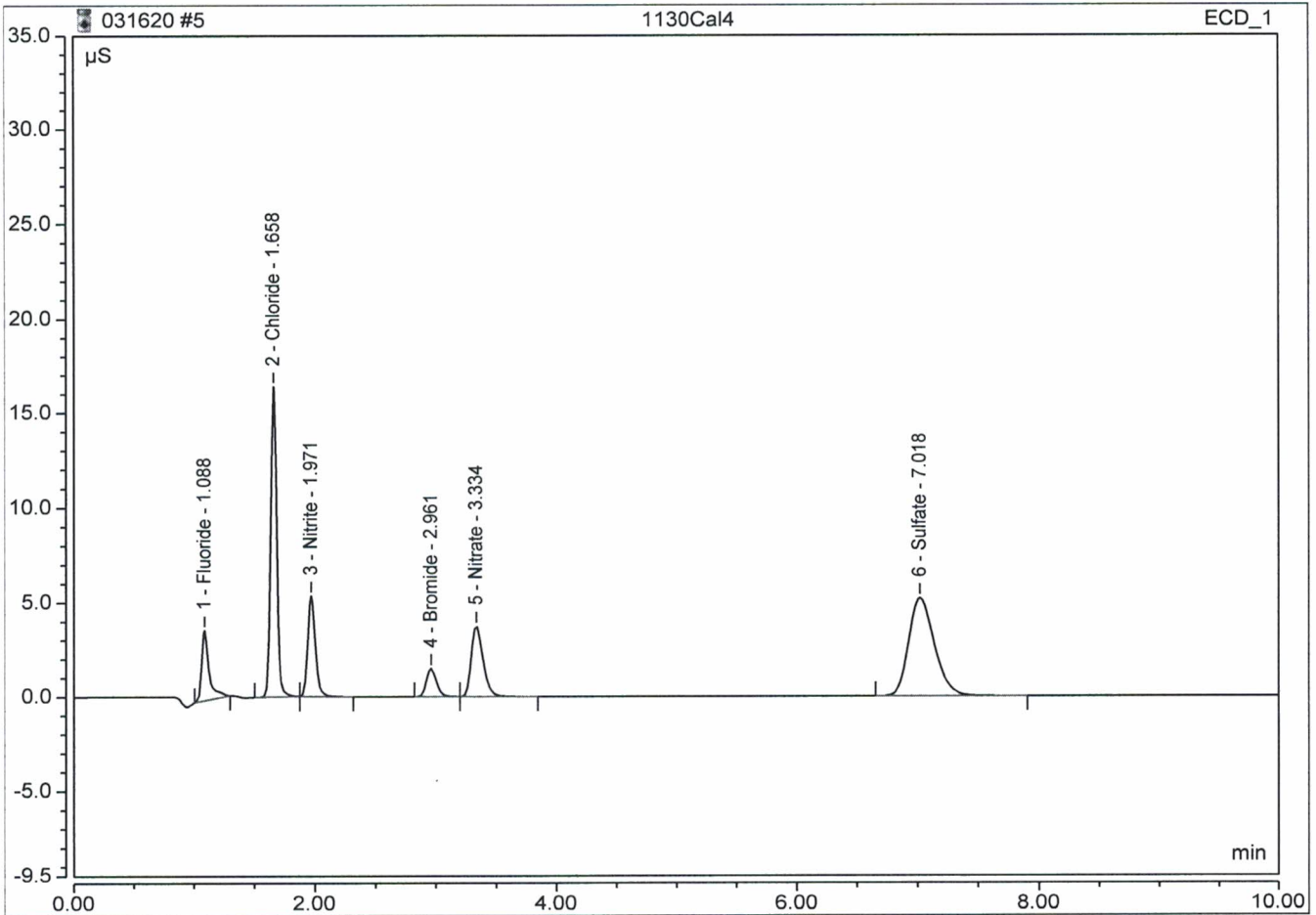
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount |
|---------------|----------|-----------|-----------|-----------------------------------|----------------------|---------|
| 1 | 1.09 | Fluoride | BMB | 0.145 | 1.902 | 0.9971 |
| 2 | 1.65 | Chloride | BMB | 0.444 | 7.527 | 5.0227 |
| 3 | 1.97 | Nitrite | BMB | 0.184 | 2.564 | 1.0025 |
| 4 | 2.96 | Bromide | BMB | 0.071 | 0.738 | 1.9941 |
| 5 | 3.34 | Nitrate | BMB | 0.207 | 1.848 | 1.0030 |
| 6 | 7.03 | Sulfate | BMB | 0.616 | 2.526 | 10.0331 |
| TOTAL: | | | | 1.67 | 17.10 | 20.05 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130Cal4 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 16-Mar-2020 / 10:48 | Operator: | Jeff Phifer |

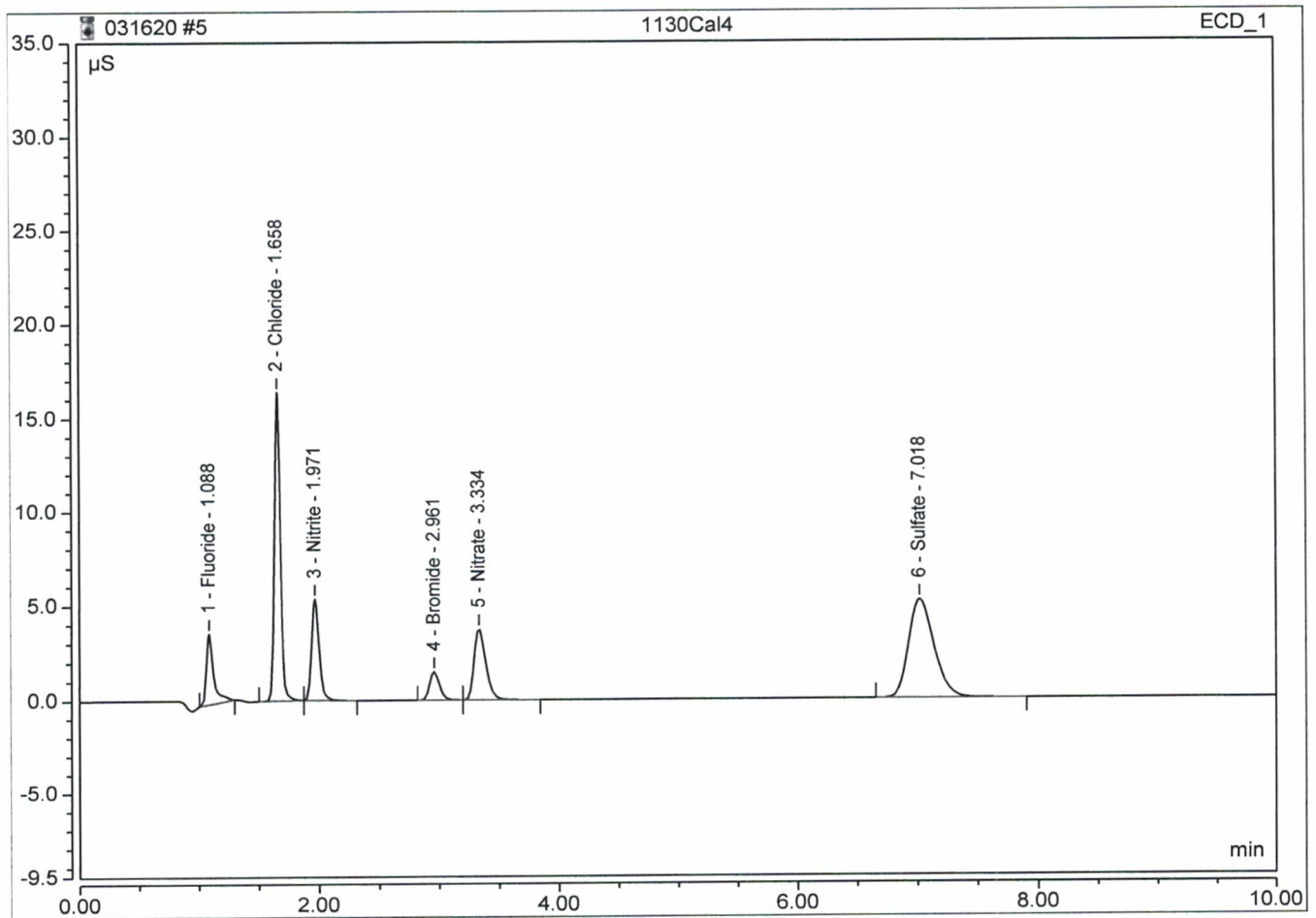
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S} \cdot \text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-------------------------------------|----------------------|------------|
| 1 | 1.09 | Fluoride | BMB | 0.264 | 3.720 | 2 1.9744 |
| 2 | 1.66 | Chloride | BMB | 0.962 | 16.388 | 10 9.8345 |
| 3 | 1.97 | Nitrite | BMB | 0.382 | 5.338 | 2 1.9887 |
| 4 | 2.96 | Bromide | BMB | 0.143 | 1.493 | 4 3.9554 |
| 5 | 3.33 | Nitrate | BMB | 0.423 | 3.741 | 2 1.9822 |
| 6 | 7.02 | Sulfate | BMB | 1.272 | 5.210 | 20 19.9837 |
| TOTAL: | | | | 3.45 | 35.89 | 39.72 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130Cal4 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 16-Mar-2020 / 10:48 | Operator: | Jeff Phifer |

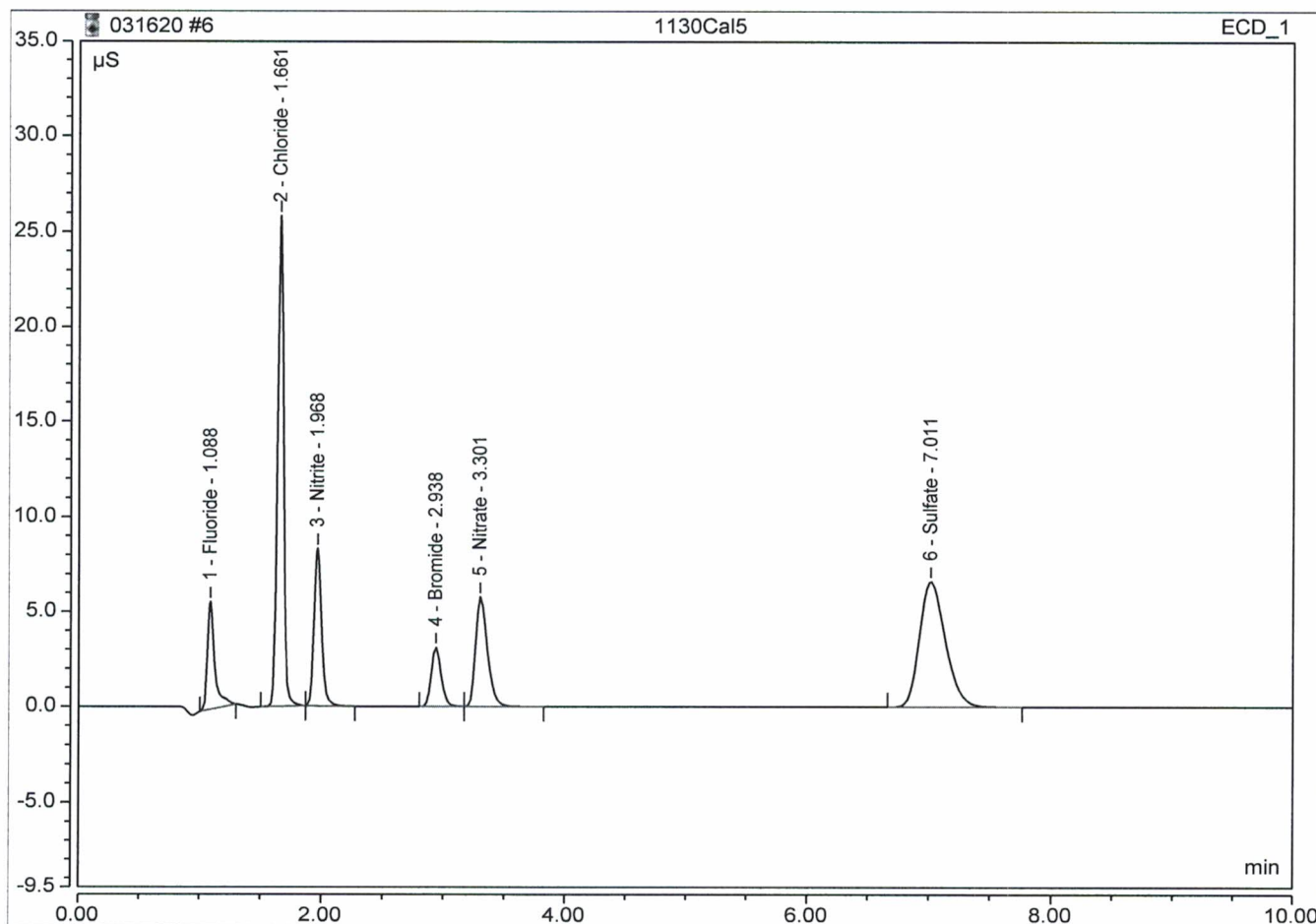
| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S}\cdot\text{min}$ | Height μS | Amount |
|---------------|----------|-----------|-----------|-----------------------------------|----------------------|--------------|
| 1 | 1.09 | Fluoride | BMB | 0.264 | 3.720 | 1.9908 |
| 2 | 1.66 | Chloride | BMB | 0.962 | 16.388 | 10.2059 |
| 3 | 1.97 | Nitrite | BMB | 0.382 | 5.338 | 2.0289 |
| 4 | 2.96 | Bromide | BMB | 0.143 | 1.493 | 4.0085 |
| 5 | 3.33 | Nitrate | BMB | 0.423 | 3.741 | 2.0191 |
| 6 | 7.02 | Sulfate | BMB | 1.272 | 5.210 | 20.2608 |
| TOTAL: | | | | 3.45 | 35.89 | 40.51 |



Peak Integration Report

| | | | |
|-------------------|----------------------|------------------|----------------|
| Sample Name: | 1130Cal5 | Inj. Vol.: | 2500.00 |
| Injection Type: | Calibration Standard | Dilution Factor: | 1.0000 |
| Program: | Norm Method | Column: | AS4A-SC 040144 |
| Inj. Date / Time: | 16-Mar-2020 / 11:01 | Operator: | Jeff Phifer |

| No. | Time min | Peak Name | Peak Type | Area $\mu\text{S} \cdot \text{min}$ | Height μS | Amount |
|--------|----------|-----------|-----------|-------------------------------------|----------------------|------------|
| 1 | 1.09 | Fluoride | BMB | 0.392 | 5.690 | 3 3.0220 |
| 2 | 1.66 | Chloride | BMB | 1.528 | 25.842 | 15 15.4741 |
| 3 | 1.97 | Nitrite | BMB | 0.589 | 8.308 | 3 3.0599 |
| 4 | 2.94 | Bromide | BMB | 0.292 | 3.112 | 8 8.0645 |
| 5 | 3.30 | Nitrate | BMB | 0.653 | 5.776 | 3 3.0552 |
| 6 | 7.01 | Sulfate | BMB | 1.618 | 6.632 | 25 25.4192 |
| TOTAL: | | | | 5.07 | 55.36 | 58.09 |



E/B

Total Suspended Solids

TSS: VLIMS Code: 4630; EPA Method: 2540D

Date Started: 27 MAY 20
 Time Started: 18 15
 Analyst: AS
 Batch ID: TSS 200527B
 Temperature: 102°C
 Time in Oven: 22:45

Date Finished: 28 MAY 20
 Time Finished: 1700
 Reviewed by: BB
 Review Date: 6/12/2020
 Balance ID: II
 Oven ID/Thermometer ID: OV5/AC10848

| Merit # | Tin # | MLs sample | g. Filter | g. dry solids + filter 103°C | g. reweigh 15 min. 103°C | TSS mg/L | DF | TVSS Y/N | TVSS Tin # |
|-----------------|------------------------|--------------------------|---------------|------------------------------|--------------------------|-------------------|-------------|----------|------------|
| Blank | <u>P6FAX</u> | <u>1000</u> | <u>0.1154</u> | <u>0.1152</u> | | <u>-0.20 / ND</u> | <u>1.00</u> | <u>N</u> | |
| LCS Lot | | | | | | | | | |
| <u>8208-09B</u> | <u>AY</u> | <u>100</u> | <u>0.1201</u> | <u>0.1286</u> | | <u>85</u> | <u>10.0</u> | | |
| <u>14119.01</u> | <u>BP</u> <u>AZ</u> | <u>100</u> <u>150</u> | <u>0.1153</u> | <u>0.1192</u> | | <u>39</u> | <u>10.0</u> | | |
| Dup | | | | | | | | | |
| <u>14119.01</u> | <u>BE</u> <u>BD</u> | <u>100</u> <u>150</u> | <u>0.1146</u> | <u>0.1185</u> | | <u>39</u> | <u>10.0</u> | | |
| <u>14252.01</u> | <u>B1</u> | <u>750</u> | <u>0.1199</u> | <u>0.1253</u> | | <u>7.20 / 7</u> | <u>1.33</u> | | |
| <u>14257.01</u> | <u>B2</u> | <u>750</u> | <u>0.1151</u> | <u>0.1186</u> | | <u>4.67 / 5</u> | <u>1.33</u> | | |
| <u>14263.01</u> | <u>B3</u> | <u>500</u> | <u>0.1205</u> | <u>0.1306</u> | | <u>20.20 / 20</u> | <u>2.00</u> | | |
| <u>14264.01</u> | <u>B4</u> | <u>360</u> | <u>0.1204</u> | <u>0.1366</u> | | <u>45</u> | <u>2.78</u> | | |
| <u>.02</u> | <u>B5</u> | <u>1000</u> | <u>0.1198</u> | <u>0.1212</u> | | <u>1.40 / ND</u> | <u>1.00</u> | | |
| <u>.03</u> | <u>B6</u> | <u>1000</u> | <u>0.1197</u> | <u>0.1209</u> | | <u>1.20 / ND</u> | <u>1.00</u> | | |
| <u>.04</u> | <u>B7</u> | <u>900</u> | <u>0.1158</u> | <u>0.1351</u> | | <u>21.44 / 21</u> | <u>1.11</u> | | |
| <u>.05</u> | <u>B8</u> | <u>1000</u> | <u>0.1199</u> | <u>0.1256</u> | | <u>5.70 / 6</u> | <u>1.00</u> | | |
| <u>.06</u> | <u>B9</u> | <u>1000</u> | <u>0.1202</u> | <u>0.1215</u> | | <u>1.30 / ND</u> | <u>1.00</u> | | |

LCS value = 84.7 mg/L
 % Rec = 100.4%
 % RPD = 0.0%

Acceptance Criteria (mg/L): 69.4 - 94.1 mg/L
 Acceptance Criteria (%): 81.9 - 111%
 Acceptance Criteria: ± 5% of average

Total Suspended Solids

TSS: VLIMS Code: 4630; EPA Method: 2540D

Date Started: 29 MAY 20
 Time Started: 1227
 Analyst: AB
 Batch ID: TSS 200529
 Temperature: 103°C
 Time in Oven: 4:45

Date Finished: 29 MAY 20
 Time Finished: 1712
 Reviewed by: BB
 Review Date: 6/12/2020
 Balance ID: I1
 Oven ID/Thermometer ID: 025/AC10878

| Merit # | Tin # | MLs sample | g. Filter | g. dry solids + filter 103°C | g. reweigh 15 min. 103°C | TSS mg/L | DF | TVSS Y/N | TVSS Tin # |
|---------------------|-----------------------------------|----------------------------------|-------------------|------------------------------|--------------------------|------------------------|-----------------|----------|------------|
| Blank | fg FBG | 1000 | 0.1197 | 0.1195 | | 0.20 ND | 1.00 | N | |
| LCS Lot | | | | | | | | | |
| 8208-09B | BH | 100 | 0.1155 | 0.1239 | | 84 | 10.0 | | |
| 14330.01 | BI | 300 | 0.1210 | 0.1250 | | 13.33 13 | 3.33 | | |
| Dup | | | | | | | | | |
| .01 | BJ | 300 | 0.1193 | 0.1235 | | 14 | 3.33 | | |
| 14264.07 | BK | 1000 | 0.1200 | 0.1199 | | 0.10 ND | 1.00 | | J-Flag |
| 14268.01 | AP BL | 250 500 | 0.1195 | 0.1262 | | 26.80 27 | 4.00 | | |
| 14276.01 | AP f6FBM | 1000 | 0.1157 | 0.1178 | | 2.10 ND | 1.00 | | |
| 14289.01 | BN | 360 | 0.1198 | 0.1220 | | 6.11 | 2.78 | | |
| 14304.02 | AQ AP BT | 160 500 | 0.1199 | 0.1210 | | 6.87 7 | 6.25 | | -J-Flag |
| 14310.02 | BQ | 700 | 0.1205 | 0.1524 | | 45.57 46 | 1.43 | | |
| 14331.01 | BR | 250 | 0.1142 | 0.1159 | | 6.80 7 | 4.00 | | |
| 14343.02 | BU BS | 250 | 0.1212 | 0.1237 | | 10 | 4.00 | | |
| 14344.01 | BT | 900 | 0.1200 | 0.1233 | | 3.67 4 | 1.11 | | |

LCS value = 84.7
 % Rec = 99.2%
 % RPD = 4.9%

Acceptance Criteria (mg/L): 69.4 - 94.13/2
 Acceptance Criteria (%): 81.9 - 111%
 Acceptance Criteria: ± 5% of average

Total Dissolved Solids

TDS: VLIMS Code: 4615; EPA Method: 2540C

Date Started: 015 Jun 20 Date Finished: 05 Jun 20
 Time Started: 1710 Time Finished: 1245
 Analyst: Heb Reviewed by: BB
 Batch ID: TDS200601A Review Date: 6/12/2020
 Temperature: 180°C Balance ID: I1
 Time in Oven: 91:35 Oven ID/Thermometer ID: 02/AC10365

| Merit # | Tin # | sample (mls) | Tin (grams) | dry solids + tin 180°C (grams) | reweigh 15 min. 180°C (grams) | Cond. | TDS (mg/L) |
|----------|----------|--------------|-------------|--------------------------------|-------------------------------|-------|--------------------------|
| Blank | A0570350 | 50 | 3.7514 | 3.7514 | | | 0/ND |
| LCS Lot | | | | | | | |
| 8208-09B | 849 | 25 | 3.8485 | 3.8626 | | | 564 |
| 14264.01 | 848 | 50 | 3.7217 | 3.7614 | | | 794 |
| Dup | | | | | | | |
| .01 | 847 | 50 | 3.8001 | 3.8395 | | | 788 |
| .02 | 846 | 50 | 3.6960 | 3.7552 | | | 1180* 1184 |
| .03 | 845 | 50 | 3.7547 | 3.7830 | | | 566 |
| .04 | 844 | 50 | 3.7471 | 3.8357 | | | 1770* 1772 |
| .05 | 843 | 50 | 3.7937 | 3.7639 | 3.7938 | | 598 |
| .06 | 842 | 50 | 3.6934 | 3.7215 | | | 562 |
| .07 | 841 | 50 | 3.8428 | 3.8427 | | | -2/ND |
| 14279.01 | 840 | 50 | 3.7592 | 3.7792 | | | 400 |
| .02 | 839 | 50 | 3.7920 | 3.8290 | | | 740 |
| .03 | 838 | 50 | 3.8487 | 3.8749 | | | 524 |

LCS value = 567 y/l
 % Rec = 99.5%
 % RPD = 0.8%

Acceptance Criteria (mg/L): 510-624 y/l
 Acceptance Criteria (%): 89.9-110%
 Acceptance Criteria: ± 5% of average



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # _____ OF _____

124126

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Jennifer Caporale
 COMPANY BWL
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ FAX NO. _____ P.O. NO. _____
 E-MAIL ADDRESS environmental_laboratory@lbwl.com
 QUOTE NO. _____

CONTACT NAME Kelly Gleason SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS kelly.gleason@lbwl.com

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME Enidson GWP 5/26/20 GMP SAMPLER(S) - PLEASE PRINT/SIGN NAME Marc Wahner
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV CDD OTHER _____

Containers & Preservatives
 NONE HCl HNO₃ H₂SO₄ NaOH MeOH OTHER
As, Cr, B, Pb, Se, Mo, Cd, Sb, Ba, Tl, Pl, Bi, Co, Li, Hg (total)
TSS
TDS, Cl⁻, SO₄⁻
Radium 226
Radium 228
 Certifications
 OHIO VAP Drinking Water
 DoD NPDES
 Project Locations
 Detroit New York
 Other _____
 Special Instructions _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

| MERIT LAB NO. FOR LAB USE ONLY | YEAR | | SAMPLE TAG IDENTIFICATION-DESCRIPTION | MATRIX | # OF BOTTLES | NONE | HCl | HNO ₃ | H ₂ SO ₄ | NaOH | MeOH | OTHER | ANALYSIS | ANALYSIS | ANALYSIS | ANALYSIS | ANALYSIS | ANALYSIS | |
|-----------------------------------|---------|------|---------------------------------------|--------|--------------|------|-----|------------------|--------------------------------|------|------|-------|----------|----------|----------|----------|----------|----------|--|
| | DATE | TIME | | | | | | | | | | | | | | | | | |
| 14264.01 | 5/26/20 | 1256 | L005063-01 MW-1 | WW | 5 | 2 | 3 | | | | | | X | X | X | X | X | | |
| .02 | | 1627 | 02 MW-2 | | | | | | | | | | | | | | | | |
| .03 | | 1046 | 03 MW-4 | | | | | | | | | | | | | | | | |
| .04 | | 1705 | 04 MW-5 | | | | | | | | | | | | | | | | |
| .05 | | 1451 | 05 MW-6 | | | | | | | | | | | | | | | | |
| .06 | | 1046 | 06 MW-4 Duplicate | | | | | | | | | | | | | | | | |
| .07 | | 0805 | 07 Field Blank | | | | | | | | | | | | | | | | |

RELINQUISHED BY: [Signature] DATE 5-27-20 TIME 1118
 RECEIVED BY: [Signature] DATE 5/27/20 TIME 1118
 RELINQUISHED BY: _____ DATE _____ TIME _____
 RECEIVED BY: _____ DATE _____ TIME _____

RELINQUISHED BY: _____ DATE _____ TIME _____
 RECEIVED BY: _____ DATE _____ TIME _____
 SEAL NO. SEAL INTACT INITIALS NOTES: TEMP. ON ARRIVAL _____
 YES NO
 SEAL NO. SEAL INTACT INITIALS
 YES NO

Merit Laboratories Login Checklist

Lab Set ID:S14264

Client:BWL01 (Board of Water & Light)

Project: Erickson GMP

Submitted:05/27/2020 11:18 Login User: SRS

Attention: Jennifer Caporale

Address: Board of Water & Light

P.O. Box 13007

Lansing, MI 48901

Phone: 517-702-6372

FAX:517-702-6373

Email: Environmental_Laboratory@LBWL.com

| Selection | Description | Note |
|--------------------------|--|--|
| Sample Receiving | | |
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 2.2 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |
| Chain of Custody | | |
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: GEL |
| Preservation | | |
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |
| Bottle Conditions | | |
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

Merit Laboratories Bottle Preservation Check

Lab Set ID: S14264 Submitted: 05/27/2020 11:18

Attention: Jennifer Caporale
Address: Board of Water & Light
P.O. Box 13007
Lansing, MI 48901

Client: BWL01 (Board of Water & Light)

Project: Erickson GMP

Initial Preservation Check: 05/27/2020 12:18 SRS

Phone: 517-702-6372 FAX: 517-702-6373

Preservation Recheck (E200.8): N/A

Email: Environmental_Laboratory@LBWL.com

| Lab ID | 125 ml Plastic HNO ₃ | 250 ml Plastic HNO ₃ | 1 L Plastic HNO ₃ | 250 ml Plastic H ₂ SO ₄ | 125 ml Amber H ₂ SO ₄ | 32 oz Glass HCl | 125 ml Plastic NaOH | 125 ml Amber PbCO ₃ NaOH | pH | | | | | Notes | |
|-----------|---------------------------------------|---------------------------------------|------------------------------------|---|---|-----------------------|---------------------------|--|----|-----|-------|-----------|-----------|-------|--|
| | | | | | | | | | <2 | >12 | other | ml add | new pH | | |
| S14264.01 | X | | | | | | | | X | | | | | | |
| S14264.01 | | | X | | | | | | X | | | | | | |
| S14264.01 | | | X | | | | | | X | | | | | | |
| S14264.02 | X | | | | | | | | X | | | | | | |
| S14264.02 | | | X | | | | | | X | | | | | | |
| S14264.02 | | | X | | | | | | X | | | | | | |
| S14264.03 | X | | | | | | | | X | | | | | | |
| S14264.03 | | | X | | | | | | X | | | | | | |
| S14264.03 | | | X | | | | | | X | | | | | | |
| S14264.04 | X | | | | | | | | X | | | | | | |
| S14264.04 | | | X | | | | | | X | | | | | | |
| S14264.04 | | | X | | | | | | X | | | | | | |
| S14264.05 | X | | | | | | | | X | | | | | | |
| S14264.05 | | | X | | | | | | X | | | | | | |
| S14264.05 | | | X | | | | | | X | | | | | | |
| S14264.06 | X | | | | | | | | X | | | | | | |
| S14264.06 | | | X | | | | | | X | | | | | | |
| S14264.06 | | | X | | | | | | X | | | | | | |
| S14264.07 | X | | | | | | | | X | | | | | | |
| S14264.07 | | | X | | | | | | X | | | | | | |
| S14264.07 | | | X | | | | | | X | | | | | | |

Sample Set Receipt

Report to
 Attention: Jennifer Caporale
 Address: Board of Water & Light
 P.O. Box 13007
 Lansing, MI 48901

Invoice to
 Attention: Kelly Gleason
 Address: Board of Water & Light
 PO Box 13007
 Lansing, MI 48901

Phone: 517-702-6372 FAX: 517-702-6373
 Email: Environmental_Laboratory@LBWL.com

Phone: 517-702-6372 FAX: 517-702-6373
 Email: kelly.gleason@lbwl.com

Contacts:

Set ID: S14264 Location: BWL01 (Board of Water & Light) PO #: Login by: SRS
 Project: Erickson GMP Backlog Note:
 Submitted: 05/27/2020 11:18 Due Date: 06/10/2020 Rush: No Collected by: Marc Wahrer QC Level: 3 Custom Limits Present: No
 Approved by: Site: Work Order#: Bill to Acct: Bill to Dept:

| Sample ID | Sample Tag | Matrix | Date/Time Collected | COC Ref |
|-----------|---------------------------|------------|---------------------|---------|
| S14264.01 | L005063-01 MW-1 | Wastewater | 05/26/2020 12:56 | 124126 |
| S14264.02 | L005063-02 MW-2 | Wastewater | 05/26/2020 16:27 | 124126 |
| S14264.03 | L005063-03 MW-4 | Wastewater | 05/26/2020 10:46 | 124126 |
| S14264.04 | L005063-05 MW-5 | Wastewater | 05/26/2020 17:05 | 124126 |
| S14264.05 | L005063-06 MW-6 | Wastewater | 05/26/2020 14:51 | 124126 |
| S14264.06 | L005063-06 MW-4 Duplicate | Wastewater | 05/26/2020 10:46 | 124126 |
| S14264.07 | L005063-07 Field Blank | Water | 05/26/2020 08:05 | 124126 |

Samples: S14264.01-07

| Analysis Code | Analysis Title | Method | Units | Holding Date |
|---------------|------------------------|---------|-------|--------------|
| 2140WMS | Calcium | E200.8 | mg/L | 11/22/2020 |
| 2145WMS | Chromium | E200.8 | mg/L | 11/22/2020 |
| 2130WMS | Boron | E200.8 | mg/L | 11/22/2020 |
| 2115WMS | Arsenic | E200.8 | mg/L | 11/22/2020 |
| 2205WMS | Selenium | E200.8 | mg/L | 11/22/2020 |
| 2190WMS | Molybdenum | E200.8 | mg/L | 11/22/2020 |
| 2135WMS | Cadmium | E200.8 | mg/L | 11/22/2020 |
| 2110WMS | Antimony | E200.8 | mg/L | 11/22/2020 |
| 2120WMS | Barium | E200.8 | mg/L | 11/22/2020 |
| 2225WMS | Thallium | E200.8 | mg/L | 11/22/2020 |
| 2165WMS | Lead | E200.8 | mg/L | 11/22/2020 |
| 2125WMS | Beryllium | E200.8 | mg/L | 11/22/2020 |
| 2150WMS | Cobalt | E200.8 | mg/L | 11/22/2020 |
| 2170WMS | Lithium | E200.8 | mg/L | 11/22/2020 |
| 2185W | Mercury | E245.1 | mg/L | 06/23/2020 |
| 4630 | Total Suspended Solids | SM2540D | mg/L | 06/02/2020 |
| 4615 | Total Dissolved Solids | SM2540C | mg/L | 06/02/2020 |
| 4425W | Chloride | E300.0 | mg/L | 06/23/2020 |
| 4530W | Sulfate | E300.0 | mg/L | 06/23/2020 |
| 4455W | Fluoride (Undistilled) | E300.0 | mg/L | 06/23/2020 |
| MISCSUB | Misc. Special Project | | | 02/19/2023 |
| 1605W | Metal Digestion | SW3015A | | 11/22/2020 |
| 1605HGW | Mercury Digestion | E245.1 | | 06/23/2020 |
| SUBCONT | Subcontracting | | | 02/19/2023 |



June 25, 2020

John Laverty
Merit Laboratories Inc.
2680 East Lansing Drive
East Lansing, Michigan 48823

Re: Routine Analysis
Work Order: 512274
SDG: S14264

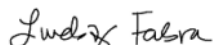
Dear John Laverty:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on May 29, 2020. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. This package is revised to include additional run logs and instrument data.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4707.

Sincerely,


Lindsay Fabra for
Katelyn Gray
Project Manager

Purchase Order: GELP19-0247
Enclosures

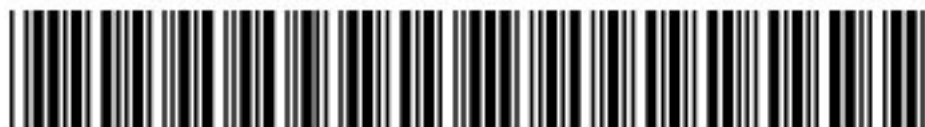


Table of Contents

| | |
|---|-----------|
| Case Narrative..... | 3 |
| Chain of Custody and Supporting Documentation..... | 6 |
| Laboratory Certifications..... | 9 |
| Radiological Analysis..... | 11 |
| Case Narrative..... | 12 |
| Sample Data Summary..... | 17 |
| Quality Control Summary..... | 25 |
| Gas Flow Raw Data..... | 28 |
| Continuing Calibration Data..... | 37 |
| Runlogs..... | 40 |
| Lucas Cell Raw Data..... | 42 |
| Continuing Calibration Data..... | 48 |
| Runlogs..... | 50 |

Case Narrative

Client NCR

**Receipt Narrative
for
Merit Laboratories, Inc.
SDG: S14264
Work Order: 512274**

June 24, 2020

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary:

Sample receipt: The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on May 29, 2020 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

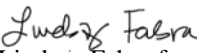
Sample Identification: The laboratory received the following samples:

| <u>Laboratory ID</u> | <u>Client ID</u> |
|-----------------------------|-------------------------|
| 512274001 | S14264.01 |
| 512274002 | S14264.02 |
| 512274003 | S14264.03 |
| 512274004 | S14264.04 |
| 512274005 | S14264.05 |
| 512274006 | S14264.06 |
| 512274007 | S14264.07 (Field Blank) |

Case Narrative:

Sample analyses were conducted using methodology as outlined in GEL's Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Radiochemistry.


Lindsay Fabra for
Katelyn Gray
Project Manager

Chain of Custody and Supporting Documentation

512 274



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # 1 OF 1

| REPORT TO | | CHAIN OF CUSTODY RECORD | | INVOICE TO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---|-------------------|---|---------------------|----------------|-----------------------------------|---|-----------|------------------------------|--------------------------------|-------------------|----------------------------------|-----------------------------------|-------|--------------------------|----|----------------------|---------------|--------------|---|------------------------|----|--|--|--|---|---------------------|----|--|------------------------|--|---|------------------|----|--|----------------------|--|---|---|----|--|--|--|---|---|----|--|--|--|---|---|----|--|--|
| CONTACT NAME John Laverty | | CONTACT NAME Julie Teague | | COMPANY Merit Laboratories | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COMPANY Merit Laboratories | | ADDRESS 2680 East Lansing Drive | | ADDRESS 2680 East Lansing Drive | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CITY East Lansing | | CITY East Lansing | | CITY East Lansing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PHONE NO. 517-332-0167 | | PHONE NO. 517-332-0167 | | PHONE NO. 517-332-0167 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E-MAIL ADDRESS johnlaverty@meritlabs.com | | E-MAIL ADDRESS juliet@meritlabs.com | | E-MAIL ADDRESS juliet@meritlabs.com | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STATE MI | | STATE MI | | STATE MI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZIP CODE 48823 | | ZIP CODE 48823 | | ZIP CODE 48823 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PROJECT NO./NAME S14264 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SAMPLER(S) - PLEASE PRINT/SIGN NAME | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TURNAROUND TIME REQUIRED <input type="checkbox"/> 1 DAY <input type="checkbox"/> 2 DAYS <input type="checkbox"/> 3 DAYS <input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DELIVERABLES REQUIRED <input type="checkbox"/> STD <input type="checkbox"/> LEVEL II <input type="checkbox"/> LEVEL III <input checked="" type="checkbox"/> LEVEL IV <input type="checkbox"/> EDD <input type="checkbox"/> OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MATRIX CODE | GW=GROUNDWATER SL=SLUDGE | WW=WASTEWATER DW=DRINKING WATER | S=SOIL WP=WIPE | L=LIQUID A=AIR | SD=SOLID W=WASTE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MERIT LAB NO. | YEAR | DATE | TIME | IDENTIFICATION-DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5/26/20 | 1256 | S14264.01 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5/26/20 | 1627 | S14264.02 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5/26/20 | 1046 | S14264.03 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5/26/20 | 1705 | S14264.04 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5/26/20 | 1451 | S14264.05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5/26/20 | 1046 | S14264.06 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5/26/20 | 0805 | S14264.07 (Field Blank) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th rowspan="2">MATERIALS</th> <th colspan="2"># Containers & Preservatives</th> <th rowspan="2">MATERIALS</th> <th rowspan="2">DATE</th> <th rowspan="2">TIME</th> </tr> <tr> <th>OTHER</th> <th>MOH</th> </tr> </thead> <tbody> <tr> <td>Radium 226*</td> <td>2</td> <td>2</td> <td>NO</td> <td></td> <td></td> </tr> <tr> <td>Radium 228**</td> <td>2</td> <td>2</td> <td>NO</td> <td></td> <td></td> </tr> <tr> <td></td> <td>2</td> <td>2</td> <td>NO</td> <td></td> <td></td> </tr> <tr> <td></td> <td>2</td> <td>2</td> <td>NO</td> <td></td> <td></td> </tr> <tr> <td></td> <td>2</td> <td>2</td> <td>NO</td> <td></td> <td></td> </tr> <tr> <td></td> <td>2</td> <td>2</td> <td>NO</td> <td></td> <td></td> </tr> <tr> <td></td> <td>2</td> <td>2</td> <td>NO</td> <td></td> <td></td> </tr> </tbody> </table> | | | | | | MATERIALS | # Containers & Preservatives | | MATERIALS | DATE | TIME | OTHER | MOH | Radium 226* | 2 | 2 | NO | | | Radium 228** | 2 | 2 | NO | | | | 2 | 2 | NO | | | | 2 | 2 | NO | | | | 2 | 2 | NO | | | | 2 | 2 | NO | | | | 2 | 2 | NO | | |
| MATERIALS | # Containers & Preservatives | | MATERIALS | DATE | TIME | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | OTHER | MOH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Radium 226* | 2 | 2 | NO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Radium 228** | 2 | 2 | NO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | 2 | NO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | 2 | NO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | 2 | NO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | 2 | NO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | 2 | NO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td>Certifications</td> <td><input type="checkbox"/> OHIO VAP</td> <td><input type="checkbox"/> Drinking Water</td> </tr> <tr> <td></td> <td><input type="checkbox"/> DoD</td> <td><input type="checkbox"/> NPDES</td> </tr> <tr> <td>Project Locations</td> <td><input type="checkbox"/> Detroit</td> <td><input type="checkbox"/> New York</td> </tr> <tr> <td>Other</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Special Instructions</td> <td colspan="2">* E903.1 Mod.</td> </tr> <tr> <td></td> <td colspan="2">** E904.0/SW 9320 Mod.</td> </tr> <tr> <td></td> <td colspan="2">Please use calculation product & provide Radium 226/228 combined results on the report</td> </tr> <tr> <td></td> <td colspan="2">** Subcontracted to</td> </tr> <tr> <td></td> <td colspan="2">GEL Laboratories, Inc.</td> </tr> <tr> <td></td> <td colspan="2">2040 Savage Road</td> </tr> <tr> <td></td> <td colspan="2">Charleston, SC 29407</td> </tr> </table> | | | | | | Certifications | <input type="checkbox"/> OHIO VAP | <input type="checkbox"/> Drinking Water | | <input type="checkbox"/> DoD | <input type="checkbox"/> NPDES | Project Locations | <input type="checkbox"/> Detroit | <input type="checkbox"/> New York | Other | <input type="checkbox"/> | | Special Instructions | * E903.1 Mod. | | | ** E904.0/SW 9320 Mod. | | | Please use calculation product & provide Radium 226/228 combined results on the report | | | ** Subcontracted to | | | GEL Laboratories, Inc. | | | 2040 Savage Road | | | Charleston, SC 29407 | | | | | | | | | | | | | | | | | | |
| Certifications | <input type="checkbox"/> OHIO VAP | <input type="checkbox"/> Drinking Water | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <input type="checkbox"/> DoD | <input type="checkbox"/> NPDES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Locations | <input type="checkbox"/> Detroit | <input type="checkbox"/> New York | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Special Instructions | * E903.1 Mod. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ** E904.0/SW 9320 Mod. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please use calculation product & provide Radium 226/228 combined results on the report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ** Subcontracted to | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | GEL Laboratories, Inc. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2040 Savage Road | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Charleston, SC 29407 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RELINQUISHED BY: SIGNATURE/Organization <i>Smygith</i> | | RELINQUISHED BY: SIGNATURE/Organization <i>GEL</i> | | RELINQUISHED BY: SIGNATURE/Organization | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RECEIVED BY: SIGNATURE/Organization <i>UPS</i> | | RECEIVED BY: SIGNATURE/Organization | | RECEIVED BY: SIGNATURE/Organization | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DATE 5/27/20 | | DATE 5/27/20 | | DATE 5/27/20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TIME 1040 | | TIME 1040 | | TIME 11:00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SEAL NO. S14264 | | SEAL NO. S14264 | | SEAL NO. S14264 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SEAL INTACT YES <input checked="" type="checkbox"/> | | SEAL INTACT YES <input checked="" type="checkbox"/> | | SEAL INTACT YES <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INITIALS | | INITIALS | | INITIALS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEMP. ON ARRIVAL | | TEMP. ON ARRIVAL | | TEMP. ON ARRIVAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

SAMPLE RECEIPT & REVIEW FORM

| Client: <u>MERI</u> | | SDG/AR/COC/Work Order: <u>512274</u> | | | | |
|--|--|---|----|-------------------------------------|--|--|
| Received By: <u>ZKW</u> | | Date Received: <u>5/29/20</u> | | | | |
| Carrier and Tracking Number | | Circle Applicable: FedEx Express FedEx Ground <input checked="" type="radio"/> UPS Field Services Courier Other <u>12 4666 477 03 6197 6711</u> | | | | |
| Suspected Hazard Information | | Yes | No | | | |
| *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation. | | | | | | |
| A) Shipped as a DOT Hazardous? | | Hazard Class Shipped: _____ UN#: _____ <input checked="" type="checkbox"/> If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___ | | | | |
| B) Did the client designate the samples are to be received as radioactive? | | <input checked="" type="checkbox"/> COC notation or radioactive stickers on containers equal client designation. | | | | |
| C) Did the RSO classify the samples as radioactive? | | <input checked="" type="checkbox"/> Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM/mR/Hr Classified as: Rad 1 Rad 2 Rad 3 | | | | |
| D) Did the client designate samples are hazardous? | | <input checked="" type="checkbox"/> COC notation or hazard labels on containers equal client designation. | | | | |
| E) Did the RSO identify possible hazards? | | <input checked="" type="checkbox"/> If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: _____ | | | | |
| Sample Receipt Criteria | | Yes | NA | No | Comments/Qualifiers (Required for Non-Conforming Items) | |
| 1 | Shipping containers received intact and sealed? | <input checked="" type="checkbox"/> | | | Circle Applicable: Seals broken Damaged container Leaking container Other (describe) | |
| 2 | Chain of custody documents included with shipment? | <input checked="" type="checkbox"/> | | | Circle Applicable: Client contacted and provided COC COC created upon receipt | |
| 3 | Samples requiring cold preservation within (0 ≤ 6 deg. C)?* | | | <input checked="" type="checkbox"/> | Preservation Method: Wet Ice Ice Packs Dry ice <input checked="" type="checkbox"/> None Other: _____ *all temperatures are recorded in Celsius TEMP: <u>21c</u> | |
| 4 | Daily check performed and passed on IR temperature gun? | <input checked="" type="checkbox"/> | | | Temperature Device Serial #: <u>IR3-18</u> Secondary Temperature Device Serial # (If Applicable): _____ | |
| 5 | Sample containers intact and sealed? | <input checked="" type="checkbox"/> | | | Circle Applicable: Seals broken Damaged container Leaking container Other (describe) | |
| 6 | Samples requiring chemical preservation at proper pH? | <input checked="" type="checkbox"/> | | | Sample ID's and Containers Affected: _____ | |
| 7 | Do any samples require Volatile Analysis? | <input checked="" type="checkbox"/> | | | If Preservation added, Lot#: _____ | |
| | | | | | If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer) | |
| | | | | | Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No) | |
| | | | | | <input checked="" type="checkbox"/> Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected: _____ | |
| 8 | Samples received within holding time? | <input checked="" type="checkbox"/> | | | ID's and tests affected: _____ | |
| 9 | Sample ID's on COC match ID's on bottles? | <input checked="" type="checkbox"/> | | | ID's and containers affected: _____ | |
| 10 | Date & time on COC match date & time on bottles? | <input checked="" type="checkbox"/> | | | Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) | |
| 11 | Number of containers received match number indicated on COC? | <input checked="" type="checkbox"/> | | | Circle Applicable: No container count on COC Other (describe) | |
| 12 | Are sample containers identifiable as GEL provided? | | | <input checked="" type="checkbox"/> | | |
| 13 | COC form is properly signed in relinquished/received sections? | <input checked="" type="checkbox"/> | | | Circle Applicable: Not relinquished Other (describe) | |
| Comments (Use Continuation Form if needed): | | | | | | |

Laboratory Certifications

List of current GEL Certifications as of 24 June 2020

| State | Certification |
|---------------------------|------------------------------|
| Alabama | 42200 |
| Alaska | 17-018 |
| Alaska Drinking Water | SC00012 |
| Arkansas | 88-0651 |
| CLIA | 42D0904046 |
| California | 2940 |
| Colorado | SC00012 |
| Connecticut | PH-0169 |
| DoD ELAP/ ISO17025 A2LA | 2567.01 |
| Florida NELAP | E87156 |
| Foreign Soils Permit | P330-15-00283, P330-15-00253 |
| Georgia | SC00012 |
| Georgia SDWA | 967 |
| Hawaii | SC00012 |
| Idaho | SC00012 |
| Illinois NELAP | 200029 |
| Indiana | C-SC-01 |
| Kansas NELAP | E-10332 |
| Kentucky SDWA | 90129 |
| Kentucky Wastewater | 90129 |
| Louisiana Drinking Water | LA024 |
| Louisiana NELAP | 03046 (AI33904) |
| Maine | 2019020 |
| Maryland | 270 |
| Massachusetts | M-SC012 |
| Massachusetts PFAS Approv | Letter |
| Michigan | 9976 |
| Mississippi | SC00012 |
| Nebraska | NE-OS-26-13 |
| Nevada | SC000122020-1 |
| New Hampshire NELAP | 2054 |
| New Jersey NELAP | SC002 |
| New Mexico | SC00012 |
| New York NELAP | 11501 |
| North Carolina | 233 |
| North Carolina SDWA | 45709 |
| North Dakota | R-158 |
| Oklahoma | 2019-165 |
| Pennsylvania NELAP | 68-00485 |
| Puerto Rico | SC00012 |
| S. Carolina Radiochem | 10120002 |
| Sanitation Districts of L | 9255651 |
| South Carolina Chemistry | 10120001 |
| Tennessee | TN 02934 |
| Texas NELAP | T104704235-20-17 |
| Utah NELAP | SC000122020-32 |
| Vermont | VT87156 |
| Virginia NELAP | 460202 |
| Washington | C780 |

Radiological Analysis

Case Narrative

**Radiochemistry
Technical Case Narrative
Merit Laboratories, Inc.
SDG #: S14264
Work Order #: 512274**

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

Analytical Procedure: GL-RAD-D-003 REV# 44

Analytical Batch: 2006577

The following samples were analyzed using the above methods and analytical procedure(s).

| <u>GEL Sample ID#</u> | <u>Client Sample Identification</u> |
|------------------------------|--|
| 512274001 | S14264.01 |
| 512274002 | S14264.02 |
| 512274003 | S14264.03 |
| 512274004 | S14264.04 |
| 512274005 | S14264.05 |
| 512274006 | S14264.06 |
| 512274007 | S14264.07 (Field Blank) |

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: GFPC Ra228, Liquid

Analytical Method: EPA 904.0/SW846 9320 Modified

Analytical Procedure: GL-RAD-A-009 REV# 17

Analytical Batch: 2006408

The following samples were analyzed using the above methods and analytical procedure(s).

| <u>GEL Sample ID#</u> | <u>Client Sample Identification</u> |
|------------------------------|---|
| 512274001 | S14264.01 |
| 512274002 | S14264.02 |
| 512274003 | S14264.03 |
| 512274004 | S14264.04 |
| 512274005 | S14264.05 |
| 512274006 | S14264.06 |
| 512274007 | S14264.07 (Field Blank) |
| 1204570219 | Method Blank (MB) |
| 1204570220 | 512274001(S14264.01) Sample Duplicate (DUP) |
| 1204570221 | Laboratory Control Sample (LCS) |

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Duplication Criteria between QC Sample and Duplicate Sample

The Sample and the Duplicate, (See Below), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with the value listed below.

| Sample | Analyte | Value |
|---------------------------|------------|--------------------------------------|
| 1204570220 (S14264.01DUP) | Radium-228 | RPD 119* (0.0%-100.0%) RER 1.8 (0-3) |

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

Analytical Procedure: GL-RAD-A-008 REV# 15

Analytical Batch: 2006332

The following samples were analyzed using the above methods and analytical procedure(s).

| <u>GEL Sample ID#</u> | <u>Client Sample Identification</u> |
|------------------------------|---|
| 512274001 | S14264.01 |
| 512274002 | S14264.02 |
| 512274003 | S14264.03 |
| 512274004 | S14264.04 |
| 512274005 | S14264.05 |
| 512274006 | S14264.06 |
| 512274007 | S14264.07 (Field Blank) |
| 1204570026 | Method Blank (MB) |
| 1204570027 | 512274001(S14264.01) Sample Duplicate (DUP) |
| 1204570028 | 512274001(S14264.01) Matrix Spike (MS) |
| 1204570029 | Laboratory Control Sample (LCS) |

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report for

MERI001 Merit Laboratories, Inc.

Client SDG: S14264 GEL Work Order: 512274

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: 

Name: Kate Gellatly

Date: 22 JUN 2020

Title: Analyst I

Sample Data Summary

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: June 25, 2020

Company : Merit Laboratories Inc.
 Address : 2680 East Lansing Drive
 East Lansing, Michigan 48823
 Contact: John Laverty
 Project: Routine Analysis

| | |
|-------------------------------|--------------------|
| Client Sample ID: S14264.01 | Project: MERI00120 |
| Sample ID: 512274001 | Client ID: MERI001 |
| Matrix: Waste Water | |
| Collect Date: 26-MAY-20 12:56 | |
| Receive Date: 29-MAY-20 | |
| Collector: Client | |

| Parameter | Qualifier | Result | Uncertainty | MDC | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|-----------|--------|-------------|-------|------|-------|----|----|---------|----------|------|---------|--------|
| Rad Gas Flow Proportional Counting | | | | | | | | | | | | | |
| GFPC Ra228, Liquid "As Received" | | | | | | | | | | | | | |
| Radium-228 | U | 0.457 | +/-0.843 | 1.48 | 3.00 | pCi/L | | | JXK3 | 06/16/20 | 1121 | 2006408 | 1 |
| Radium-226+Radium-228 Calculation "See Parent Products" | | | | | | | | | | | | | |
| Radium-226+228 Sum | | 0.796 | +/-0.936 | | | pCi/L | | 1 | AEA | 06/22/20 | 0422 | 2006577 | 2 |
| Rad Radium-226 | | | | | | | | | | | | | |
| Lucas Cell, Ra226, Liquid "As Received" | | | | | | | | | | | | | |
| Radium-226 | U | 0.340 | +/-0.408 | 0.686 | 1.00 | pCi/L | | | MXH8 | 06/19/20 | 0926 | 2006332 | 3 |

The following Analytical Methods were performed:

| Method | Description | Analyst Comments |
|--------|-------------------------------|------------------|
| 1 | EPA 904.0/SW846 9320 Modified | |
| 2 | Calculation | |
| 3 | EPA 903.1 Modified | |

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---------------------------|----------------------------------|--------|---------|-----------|-------------------|
| Barium-133 Tracer | GFPC Ra228, Liquid "As Received" | | | 83.7 | (15%-125%) |

Notes:
 Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

| | |
|---------------------------------------|--------------------------------|
| DF: Dilution Factor | Lc/LC: Critical Level |
| DL: Detection Limit | PF: Prep Factor |
| MDA: Minimum Detectable Activity | RL: Reporting Limit |
| MDC: Minimum Detectable Concentration | SQL: Sample Quantitation Limit |

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: June 25, 2020

Company : Merit Laboratories Inc.
 Address : 2680 East Lansing Drive
 East Lansing, Michigan 48823
 Contact: John Laverty
 Project: Routine Analysis

| | |
|-------------------------------|--------------------|
| Client Sample ID: S14264.02 | Project: MERI00120 |
| Sample ID: 512274002 | Client ID: MERI001 |
| Matrix: Waste Water | |
| Collect Date: 26-MAY-20 16:27 | |
| Receive Date: 29-MAY-20 | |
| Collector: Client | |

| Parameter | Qualifier | Result | Uncertainty | MDC | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|-----------|--------|-------------|-------|------|-------|----|----|---------|----------|------|---------|--------|
| Rad Gas Flow Proportional Counting | | | | | | | | | | | | | |
| GFPC Ra228, Liquid "As Received" | | | | | | | | | | | | | |
| Radium-228 | U | 0.0833 | +/-0.633 | 1.22 | 3.00 | pCi/L | | | JXK3 | 06/16/20 | 1121 | 2006408 | 1 |
| Radium-226+Radium-228 Calculation "See Parent Products" | | | | | | | | | | | | | |
| Radium-226+228 Sum | | 0.138 | +/-0.678 | | | pCi/L | | 1 | AEA | 06/22/20 | 0422 | 2006577 | 2 |
| Rad Radium-226 | | | | | | | | | | | | | |
| Lucas Cell, Ra226, Liquid "As Received" | | | | | | | | | | | | | |
| Radium-226 | U | 0.0551 | +/-0.241 | 0.528 | 1.00 | pCi/L | | | MXH8 | 06/19/20 | 0926 | 2006332 | 3 |

The following Analytical Methods were performed:

| Method | Description | Analyst Comments |
|--------|-------------------------------|------------------|
| 1 | EPA 904.0/SW846 9320 Modified | |
| 2 | Calculation | |
| 3 | EPA 903.1 Modified | |

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---------------------------|----------------------------------|--------|---------|-----------|-------------------|
| Barium-133 Tracer | GFPC Ra228, Liquid "As Received" | | | 81.4 | (15%-125%) |

Notes:
 Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

| | |
|---------------------------------------|--------------------------------|
| DF: Dilution Factor | Lc/LC: Critical Level |
| DL: Detection Limit | PF: Prep Factor |
| MDA: Minimum Detectable Activity | RL: Reporting Limit |
| MDC: Minimum Detectable Concentration | SQL: Sample Quantitation Limit |

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Certificate of Analysis

Report Date: June 25, 2020

Company : Merit Laboratories Inc.
 Address : 2680 East Lansing Drive
 East Lansing, Michigan 48823
 Contact: John Laverty
 Project: Routine Analysis

| | |
|-------------------------------|--------------------|
| Client Sample ID: S14264.03 | Project: MERI00120 |
| Sample ID: 512274003 | Client ID: MERI001 |
| Matrix: Waste Water | |
| Collect Date: 26-MAY-20 10:46 | |
| Receive Date: 29-MAY-20 | |
| Collector: Client | |

| Parameter | Qualifier | Result | Uncertainty | MDC | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|-----------|---------|-------------|-------|------|-------|----|----|---------|----------|------|---------|--------|
| Rad Gas Flow Proportional Counting | | | | | | | | | | | | | |
| GFPC Ra228, Liquid "As Received" | | | | | | | | | | | | | |
| Radium-228 | U | -0.0930 | +/-0.742 | 1.45 | 3.00 | pCi/L | | | JXK3 | 06/16/20 | 1121 | 2006408 | 1 |
| Radium-226+Radium-228 Calculation "See Parent Products" | | | | | | | | | | | | | |
| Radium-226+228 Sum | | 0.599 | +/-0.827 | | | pCi/L | | 1 | AEA | 06/22/20 | 0422 | 2006577 | 2 |
| Rad Radium-226 | | | | | | | | | | | | | |
| Lucas Cell, Ra226, Liquid "As Received" | | | | | | | | | | | | | |
| Radium-226 | | 0.599 | +/-0.366 | 0.382 | 1.00 | pCi/L | | | MXH8 | 06/19/20 | 0959 | 2006332 | 3 |

The following Analytical Methods were performed:

| Method | Description | Analyst Comments |
|--------|-------------------------------|------------------|
| 1 | EPA 904.0/SW846 9320 Modified | |
| 2 | Calculation | |
| 3 | EPA 903.1 Modified | |

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---------------------------|----------------------------------|--------|---------|-----------|-------------------|
| Barium-133 Tracer | GFPC Ra228, Liquid "As Received" | | | 81.5 | (15%-125%) |

Notes:
 Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

| | |
|---------------------------------------|--------------------------------|
| DF: Dilution Factor | Lc/LC: Critical Level |
| DL: Detection Limit | PF: Prep Factor |
| MDA: Minimum Detectable Activity | RL: Reporting Limit |
| MDC: Minimum Detectable Concentration | SQL: Sample Quantitation Limit |

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Certificate of Analysis

Report Date: June 25, 2020

Company : Merit Laboratories Inc.
Address : 2680 East Lansing Drive
East Lansing, Michigan 48823
Contact: John Laverty
Project: Routine Analysis

Client Sample ID: S14264.04 Project: MERI00120
Sample ID: 512274004 Client ID: MERI001
Matrix: Waste Water
Collect Date: 26-MAY-20 17:05
Receive Date: 29-MAY-20
Collector: Client

| Parameter | Qualifier | Result | Uncertainty | MDC | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|-----------|--------|-------------|-------|------|-------|----|----|---------|----------|------|---------|--------|
| Rad Gas Flow Proportional Counting | | | | | | | | | | | | | |
| GFPC Ra228, Liquid "As Received" | | | | | | | | | | | | | |
| Radium-228 | U | 0.280 | +/-0.786 | 1.43 | 3.00 | pCi/L | | | JXK3 | 06/16/20 | 1121 | 2006408 | 1 |
| Radium-226+Radium-228 Calculation "See Parent Products" | | | | | | | | | | | | | |
| Radium-226+228 Sum | | 1.36 | +/-0.934 | | | pCi/L | | 1 | AEA | 06/22/20 | 0422 | 2006577 | 2 |
| Rad Radium-226 | | | | | | | | | | | | | |
| Lucas Cell, Ra226, Liquid "As Received" | | | | | | | | | | | | | |
| Radium-226 | | 1.08 | +/-0.504 | 0.615 | 1.00 | pCi/L | | | MXH8 | 06/19/20 | 0959 | 2006332 | 3 |

The following Analytical Methods were performed:

| Method | Description | Analyst Comments |
|--------|-------------------------------|------------------|
| 1 | EPA 904.0/SW846 9320 Modified | |
| 2 | Calculation | |
| 3 | EPA 903.1 Modified | |

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---------------------------|----------------------------------|--------|---------|-----------|-------------------|
| Barium-133 Tracer | GFPC Ra228, Liquid "As Received" | | | 80.9 | (15%-125%) |

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: June 25, 2020

Company : Merit Laboratories Inc.
 Address : 2680 East Lansing Drive
 East Lansing, Michigan 48823
 Contact: John Laverty
 Project: Routine Analysis

| | |
|-------------------------------|--------------------|
| Client Sample ID: S14264.05 | Project: MERI00120 |
| Sample ID: 512274005 | Client ID: MERI001 |
| Matrix: Waste Water | |
| Collect Date: 26-MAY-20 14:51 | |
| Receive Date: 29-MAY-20 | |
| Collector: Client | |

| Parameter | Qualifier | Result | Uncertainty | MDC | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|-----------|---------|-------------|-------|------|-------|----|----|---------|----------|------|---------|--------|
| Rad Gas Flow Proportional Counting | | | | | | | | | | | | | |
| GFPC Ra228, Liquid "As Received" | | | | | | | | | | | | | |
| Radium-228 | U | -0.481 | +/-0.804 | 1.63 | 3.00 | pCi/L | | | JXK3 | 06/16/20 | 1121 | 2006408 | 1 |
| Radium-226+Radium-228 Calculation "See Parent Products" | | | | | | | | | | | | | |
| Radium-226+228 Sum | | 0.000 | +/-0.841 | | | pCi/L | | 1 | AEA | 06/22/20 | 0422 | 2006577 | 2 |
| Rad Radium-226 | | | | | | | | | | | | | |
| Lucas Cell, Ra226, Liquid "As Received" | | | | | | | | | | | | | |
| Radium-226 | U | -0.0419 | +/-0.246 | 0.561 | 1.00 | pCi/L | | | MXH8 | 06/19/20 | 0959 | 2006332 | 3 |

The following Analytical Methods were performed:

| Method | Description | Analyst Comments |
|--------|-------------------------------|------------------|
| 1 | EPA 904.0/SW846 9320 Modified | |
| 2 | Calculation | |
| 3 | EPA 903.1 Modified | |

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---------------------------|----------------------------------|--------|---------|-----------|-------------------|
| Barium-133 Tracer | GFPC Ra228, Liquid "As Received" | | | 87.4 | (15%-125%) |

Notes:
 Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

| | |
|---------------------------------------|--------------------------------|
| DF: Dilution Factor | Lc/LC: Critical Level |
| DL: Detection Limit | PF: Prep Factor |
| MDA: Minimum Detectable Activity | RL: Reporting Limit |
| MDC: Minimum Detectable Concentration | SQL: Sample Quantitation Limit |

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: June 25, 2020

Company : Merit Laboratories Inc.
 Address : 2680 East Lansing Drive
 East Lansing, Michigan 48823
 Contact: John Laverty
 Project: Routine Analysis

| | |
|-------------------------------|--------------------|
| Client Sample ID: S14264.06 | Project: MERI00120 |
| Sample ID: 512274006 | Client ID: MERI001 |
| Matrix: Waste Water | |
| Collect Date: 26-MAY-20 10:46 | |
| Receive Date: 29-MAY-20 | |
| Collector: Client | |

| Parameter | Qualifier | Result | Uncertainty | MDC | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|-----------|--------|-------------|-------|------|-------|----|----|---------|----------|------|---------|--------|
| Rad Gas Flow Proportional Counting | | | | | | | | | | | | | |
| GFPC Ra228, Liquid "As Received" | | | | | | | | | | | | | |
| Radium-228 | U | 0.357 | +/-0.831 | 1.48 | 3.00 | pCi/L | | | JXK3 | 06/16/20 | 1121 | 2006408 | 1 |
| Radium-226+Radium-228 Calculation "See Parent Products" | | | | | | | | | | | | | |
| Radium-226+228 Sum | | 0.622 | +/-0.875 | | | pCi/L | | 1 | AEA | 06/22/20 | 0422 | 2006577 | 2 |
| Rad Radium-226 | | | | | | | | | | | | | |
| Lucas Cell, Ra226, Liquid "As Received" | | | | | | | | | | | | | |
| Radium-226 | U | 0.265 | +/-0.273 | 0.423 | 1.00 | pCi/L | | | MXH8 | 06/19/20 | 0959 | 2006332 | 3 |

The following Analytical Methods were performed:

| Method | Description | Analyst Comments |
|--------|-------------------------------|------------------|
| 1 | EPA 904.0/SW846 9320 Modified | |
| 2 | Calculation | |
| 3 | EPA 903.1 Modified | |

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---------------------------|----------------------------------|--------|---------|-----------|-------------------|
| Barium-133 Tracer | GFPC Ra228, Liquid "As Received" | | | 90.1 | (15%-125%) |

Notes:
 Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

| | |
|---------------------------------------|--------------------------------|
| DF: Dilution Factor | Lc/LC: Critical Level |
| DL: Detection Limit | PF: Prep Factor |
| MDA: Minimum Detectable Activity | RL: Reporting Limit |
| MDC: Minimum Detectable Concentration | SQL: Sample Quantitation Limit |

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: June 25, 2020

Company : Merit Laboratories Inc.
Address : 2680 East Lansing Drive

East Lansing, Michigan 48823
Contact: John Laverty
Project: Routine Analysis

Client Sample ID: S14264.07 (Field Blank) Project: MERI00120
Sample ID: 512274007 Client ID: MERI001
Matrix: Waste Water
Collect Date: 26-MAY-20 08:05
Receive Date: 29-MAY-20
Collector: Client

| Parameter | Qualifier | Result | Uncertainty | MDC | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|-----------|--------|-------------|-------|------|-------|----|----|---------|----------|------|---------|--------|
| Rad Gas Flow Proportional Counting | | | | | | | | | | | | | |
| GFPC Ra228, Liquid "As Received" | | | | | | | | | | | | | |
| Radium-228 | U | -0.578 | +/-0.870 | 1.77 | 3.00 | pCi/L | | | JXK3 | 06/16/20 | 1121 | 2006408 | 1 |
| Radium-226+Radium-228 Calculation "See Parent Products" | | | | | | | | | | | | | |
| Radium-226+228 Sum | | 0.159 | +/-0.891 | | | pCi/L | | 1 | AEA | 06/22/20 | 0422 | 2006577 | 2 |
| Rad Radium-226 | | | | | | | | | | | | | |
| Lucas Cell, Ra226, Liquid "As Received" | | | | | | | | | | | | | |
| Radium-226 | U | 0.159 | +/-0.190 | 0.303 | 1.00 | pCi/L | | | MXH8 | 06/19/20 | 0959 | 2006332 | 3 |

The following Analytical Methods were performed:

| Method | Description | Analyst Comments |
|--------|-------------------------------|------------------|
| 1 | EPA 904.0/SW846 9320 Modified | |
| 2 | Calculation | |
| 3 | EPA 903.1 Modified | |

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---------------------------|----------------------------------|--------|---------|-----------|-------------------|
| Barium-133 Tracer | GFPC Ra228, Liquid "As Received" | | | 80.5 | (15%-125%) |

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: June 22, 2020

Page 1 of 2

Merit Laboratories Inc.
2680 East Lansing Drive
East Lansing, Michigan

Contact: John Laverty

Workorder: 512274

| Parmname | NOM | Sample | Qual | QC | Units | RPD% | REC% | Range | Anlst | Date | Time |
|---------------------|-------------|----------|------|----------|-------|------|------|-------------|---------|----------|-------|
| Rad Gas Flow | | | | | | | | | | | |
| Batch | 2006408 | | | | | | | | | | |
| QC1204570220 | 512274001 | DUP | | | | | | | | | |
| Radium-228 | U | 0.457 | | 1.79 | pCi/L | 119* | | (0% - 100%) | JXK3 | 06/16/20 | 11:21 |
| | Uncertainty | +/-0.843 | | +/-1.09 | | | | | | | |
| QC1204570221 | LCS | | | | | | | | | | |
| Radium-228 | 56.2 | | | 55.0 | pCi/L | | 97.8 | (75%-125%) | | 06/16/20 | 11:21 |
| | Uncertainty | | | +/-3.53 | | | | | | | |
| QC1204570219 | MB | | | | | | | | | | |
| Radium-228 | | | U | 0.0398 | pCi/L | | | | | 06/16/20 | 11:21 |
| | Uncertainty | | | +/-0.846 | | | | | | | |
| Rad Ra-226 | | | | | | | | | | | |
| Batch | 2006332 | | | | | | | | | | |
| QC1204570027 | 512274001 | DUP | | | | | | | | | |
| Radium-226 | U | 0.340 | U | 0.315 | pCi/L | N/A | | | N/AMXH8 | 06/19/20 | 09:58 |
| | Uncertainty | +/-0.408 | | +/-0.437 | | | | | | | |
| QC1204570029 | LCS | | | | | | | | | | |
| Radium-226 | 27.1 | | | 29.0 | pCi/L | | 107 | (75%-125%) | | 06/19/20 | 10:38 |
| | Uncertainty | | | +/-2.12 | | | | | | | |
| QC1204570026 | MB | | | | | | | | | | |
| Radium-226 | | | U | 0.215 | pCi/L | | | | | 06/19/20 | 09:58 |
| | Uncertainty | | | +/-0.223 | | | | | | | |
| QC1204570028 | 512274001 | MS | | | | | | | | | |
| Radium-226 | 27.1 | U | | 0.340 | pCi/L | | 109 | (75%-125%) | | 06/19/20 | 10:38 |
| | Uncertainty | | | +/-0.408 | | | | | | | |

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded

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QC Summary

Workorder: 512274

Page 2 of 2

| Parname | NOM | Sample | Qual | QC | Units | RPD% | REC% | Range | Anlst | Date | Time |
|---------|-----|--------|------|----|-------|------|------|-------|-------|------|------|
| J | | | | | | | | | | | |
| J | | | | | | | | | | | |
| K | | | | | | | | | | | |
| L | | | | | | | | | | | |
| M | | | | | | | | | | | |
| M | | | | | | | | | | | |
| N/A | | | | | | | | | | | |
| NI | | | | | | | | | | | |
| ND | | | | | | | | | | | |
| NJ | | | | | | | | | | | |
| Q | | | | | | | | | | | |
| R | | | | | | | | | | | |
| U | | | | | | | | | | | |
| UI | | | | | | | | | | | |
| UJ | | | | | | | | | | | |
| UL | | | | | | | | | | | |
| X | | | | | | | | | | | |
| Y | | | | | | | | | | | |
| ^ | | | | | | | | | | | |
| h | | | | | | | | | | | |

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Gas Flow Raw Data

Batch 2006408 Check-list

This check-list was completed on 16-JUN-20 by Nat Long

This batch was reviewed by Kenshalla Oston on 16-JUN-20 and Nat Long on 16-JUN-20.

Batch ID:
2006408

Product:
GFC28RAL

Description: Gas Flow Radium 228
GL-RAD-A-009

| # | Criteria | Yes | No | Comments |
|---|---|-----|----|----------|
| Preparation Information | | | | |
| 1 | Were all of the samples homogenous? Include sample description if not homogenous | Yes | | |
| 2 | Was the preservation correct for this analysis? | Yes | | |
| Internal Checklist Information | | | | |
| 3 | Are instrument source checks within limits? | Yes | | |
| 4 | Has an Aliquot Correction been completed for this batch? | | No | |
| 5 | Have sample historical results been reviewed for this batch? | Yes | | |
| Technical Information | | | | |
| 6 | Were all the samples prepared/analyzed within the required holding time period? | Yes | | |
| 7 | Are any sample results more negative than 3xTPU? | | No | |
| Quality Control (QC) Information | | | | |
| 8 | Was the method blank (MB) within the acceptance criteria? | Yes | | |
| 9 | Were the laboratory control sample (LCS/LCSD) recoveries within the acceptance limits? | Yes | | |
| 10 | Were the relative percent differences and/or error (RPD/RER) between the sample and its duplicate within acceptable limits? | | No | |
| 11 | Has the method required detection limit been met? | Yes | | |
| Miscellaneous Information | | | | |
| 12 | Are sample-specific MDA/MDC calculated and reported? | Yes | | |

Prep Logbook

Radium-228 in Liquid

Batch ID: 2006408

Analyst: Jennie Kill-Bowden (JXK3)

Method: EPA 904.0/SW846 9320 Modified

Lab SOP: GL-RAD-A-009 REV# 17

Instrument: GFC-51204863

Due Dates for Lab: 22-JUN-2020

Package: 24-JUN-2020

SDG: 26-JUN-2020

| Type | Sample Id | Description | Serial Number | Spike Amount | Spike Units |
|------|------------|------------------|---------------|--------------|-------------|
| LCS | 1204570221 | Radium-228 SPIKE | 1919-A | .2 | mL |

| # | Sample ID | Prep Date | Min RDL (pCi/L) | Aliquot (mL) | Ac-228 Ingrow (date) | Ac-228 Separation (date) |
|----|----------------------------|-------------|-----------------|--------------|----------------------|--------------------------|
| 1 | 512274001 | 09-JUN-2020 | 3 | 300 | 06/10/20 13:15 | 06/16/20 09:49 |
| 2 | 512274002 | 09-JUN-2020 | 3 | 300 | 06/10/20 13:15 | 06/16/20 09:49 |
| 3 | 512274003 | 09-JUN-2020 | 3 | 300 | 06/10/20 13:15 | 06/16/20 09:49 |
| 4 | 512274004 | 09-JUN-2020 | 3 | 300 | 06/10/20 13:15 | 06/16/20 09:49 |
| 5 | 512274005 | 09-JUN-2020 | 3 | 300 | 06/10/20 13:15 | 06/16/20 09:49 |
| 6 | 512274006 | 09-JUN-2020 | 3 | 300 | 06/10/20 13:15 | 06/16/20 09:49 |
| 7 | 512274007 | 09-JUN-2020 | 3 | 300 | 06/10/20 13:15 | 06/16/20 09:49 |
| 8 | 1204570219 MB | 09-JUN-2020 | 3 | 300 | 06/10/20 13:15 | 06/16/20 09:49 |
| 9 | 1204570220 DUP (512274001) | 09-JUN-2020 | 3 | 300 | 06/10/20 13:15 | 06/16/20 09:49 |
| 10 | 1204570221 LCS | 09-JUN-2020 | 3 | 300 | 06/10/20 13:15 | 06/16/20 09:49 |

| Reagent/Solvent Lot ID | Description | Amount | Comments: |
|------------------------|--|--------|-------------------------------------|
| WORK 0487-G | Barium-133 TRACER | .1 mL | |
| REGNT 2947553 | RGF-Neodymium 500mg/L | .2 mL | Pipet Id: RAD-GFC-1795419 |
| REGNT 3064966 | RGF-50% Potassium Carbonate | 2 mL | Data Entry Date2: 09-JUN-2020 00:00 |
| REGNT 3068506.2 | RGF-Hydrofluoric Acid | 4 mL | |
| REGNT 3069850 | Barium Carrier Ra228 REG | 1 mL | |
| REGNT 3071153 | RGF-Neodymium Subtrate | 5 mL | |
| REGNT 3075541.9 | Acetic Acid Glacial ACS Poly Coated Bottle | 10 mL | |
| REGNT 3077077 | 7M Nitric Acid | 25 mL | |
| REGNT 3080464 | Lot #DGA0013 | 2 g | |
| REGNT 3083439.4 | HNO3 | 5 mL | |
| REGNT 3084226 | RGF-2M Hydrochloric Acid | 20 mL | |
| REGNT 3085936 | RGF-1.5M Ammonium Sulfate | 10 mL | |
| REGNT 3085946 | 1M Citric Acid | 5 mL | |

Radium-228 Liquid

Filename : RA228.XLS
 File type : Excel
 Version # : 1.4.2

Tracer S/N : 0487-G
 Tracer Exp Date : 2/27/2021
 Tracer Volume Added: 0.10

Batch : 2006408
 Analyst : JEN02186
 Prep Date : 6/9/2020
 Ra-228 Method Uncertainty : 0.1268

Procedure Code : GFC28RAL
 Parmname : Radium-228
 Required MDA : 3 pCi/L
 Ra-228 Abundance : 1.00
 Halflife of Ra-228 : 5.75 years
 Halflife of Ac-228 : 6.15 hours

Geometry: 25mm Filter

| Sample Characteristics | | | | | Tracer Calculations | | Tracer Samp. | | Tracer | |
|------------------------|--------------|------------------|-------------------------|------------------|----------------------------|-----------------------------------|-----------------------------|------------------------------------|---------------------|----------------------------|
| Pos. | Sample ID | Sample Aliquot L | Sample Aliquot StDev. L | Sample Date/Time | Tracer Ref. Activity (CPM) | Tracer Ref. Count Uncertainty (%) | Tracer Samp. Activity (CPM) | Tracer Samp. Count Uncertainty (%) | Tracer Aliquot (mL) | Tracer Aliquot StDev. (mL) |
| 1 | 512274001.1 | 0.3000 | 1.8459E-05 | 5/26/2020 12:56 | 292.0 | 3.38% | 244.3 | 3.69% | 0.1 | 0.000200 |
| 2 | 512274002.1 | 0.3000 | 1.8459E-05 | 5/26/2020 16:27 | 292.0 | 3.38% | 237.6 | 3.75% | 0.1 | 0.000200 |
| 3 | 512274003.1 | 0.3000 | 1.8459E-05 | 5/26/2020 10:46 | 292.0 | 3.38% | 238.0 | 3.74% | 0.1 | 0.000200 |
| 4 | 512274004.1 | 0.3000 | 1.8459E-05 | 5/26/2020 17:05 | 292.0 | 3.38% | 236.3 | 3.76% | 0.1 | 0.000200 |
| 5 | 512274005.1 | 0.3000 | 1.8459E-05 | 5/26/2020 14:51 | 292.0 | 3.38% | 255.3 | 3.61% | 0.1 | 0.000200 |
| 6 | 512274006.1 | 0.3000 | 1.8459E-05 | 5/26/2020 10:46 | 292.0 | 3.38% | 263.1 | 3.56% | 0.1 | 0.000200 |
| 7 | 512274007.1 | 0.3000 | 1.8459E-05 | 5/26/2020 8:05 | 292.0 | 3.38% | 235.1 | 3.76% | 0.1 | 0.000200 |
| 8 | 1204570219.1 | 0.3000 | 1.8459E-05 | 6/9/2020 0:00 | 292.0 | 3.38% | 240.5 | 3.72% | 0.1 | 0.000200 |
| 9 | 1204570220.1 | 0.3000 | 1.8459E-05 | 5/26/2020 12:56 | 292.0 | 3.38% | 243.6 | 3.70% | 0.1 | 0.000200 |
| 10 | 1204570221.1 | 0.3000 | 1.8459E-05 | 6/9/2020 0:00 | 292.0 | 3.38% | 255.8 | 3.61% | 0.1 | 0.000200 |

Pipet, 0.1 ml Stdev : +/- 0.000200 ml
 Pipet, 0.5 ml Stdev : +/- 0.001000 ml
 Pipet, 1 ml Stdev : +/- 0.002000 ml

Analytical SOP: GL-RAD-A-009
 Instrument SOP: GL-RAD-I-016

| Count raw Data | | | | | | | | | | | | | | Calculated | Sample |
|----------------|-------------|----------------------|--------------|------|----------|-----------------------|---------------------------|------------------------|--------------|--------------|-----------------|-------------------------|------------|------------------|--------|
| Pos. | Detector ID | Counting Time (min.) | Gross Counts | | Beta cpm | Count Start Date/Time | Ac-228 Ingrowth Date/Time | Ac-228 Decay Date/Time | Ra-228 Decay | Ac-228 Decay | Ac-228 Ingrowth | Ac-228 Count Correction | Recovery % | Recovery Error % | |
| | | | Alpha | Beta | | | | | | | | | | | |
| 1 | 7A | 60 | 5 | 47 | 0.783 | 6/16/2020 11:21 | 6/10/2020 13:15 | 6/16/2020 9:49 | 0.993 | 0.840 | 1.000 | 1.057 | 83.7% | 2.52% | |
| 2 | 7B | 60 | 5 | 25 | 0.417 | 6/16/2020 11:21 | 6/10/2020 13:15 | 6/16/2020 9:49 | 0.993 | 0.840 | 1.000 | 1.057 | 81.4% | 2.54% | |
| 3 | 7C | 60 | 10 | 34 | 0.567 | 6/16/2020 11:21 | 6/10/2020 13:15 | 6/16/2020 9:49 | 0.993 | 0.840 | 1.000 | 1.057 | 81.5% | 2.54% | |
| 4 | 7D | 60 | 15 | 38 | 0.633 | 6/16/2020 11:21 | 6/10/2020 13:15 | 6/16/2020 9:49 | 0.993 | 0.840 | 1.000 | 1.057 | 80.9% | 2.54% | |
| 5 | 8A | 60 | 5 | 45 | 0.750 | 6/16/2020 11:21 | 6/10/2020 13:15 | 6/16/2020 9:49 | 0.993 | 0.840 | 1.000 | 1.057 | 87.4% | 2.49% | |
| 6 | 8B | 60 | 12 | 53 | 0.883 | 6/16/2020 11:21 | 6/10/2020 13:15 | 6/16/2020 9:49 | 0.993 | 0.840 | 1.000 | 1.057 | 90.1% | 2.47% | |
| 7 | 8C | 60 | 12 | 46 | 0.767 | 6/16/2020 11:21 | 6/10/2020 13:15 | 6/16/2020 9:49 | 0.993 | 0.840 | 1.000 | 1.057 | 80.5% | 2.54% | |
| 8 | 8D | 60 | 4 | 43 | 0.717 | 6/16/2020 11:21 | 6/10/2020 13:15 | 6/16/2020 9:49 | 0.998 | 0.841 | 1.000 | 1.057 | 82.4% | 2.53% | |
| 9 | 9A | 60 | 8 | 78 | 1.300 | 6/16/2020 11:21 | 6/10/2020 13:15 | 6/16/2020 9:49 | 0.993 | 0.841 | 1.000 | 1.057 | 83.4% | 2.52% | |
| 10 | 9B | 60 | 10 | 1011 | 16.850 | 6/16/2020 11:21 | 6/10/2020 13:15 | 6/16/2020 9:49 | 0.998 | 0.840 | 1.000 | 1.057 | 87.6% | 2.49% | |

| Calibration Data | | | | | | | | |
|------------------|------------|------------------|----------------------|-------------------------------|-------------------------------------|---------|----------------------------------|-----------------------|
| Pos. | Counted on | Calibration Date | Calibration Due Date | Detector Efficiency (cpm/dpm) | Detector Efficiency Error (cpm/dpm) | Bkg cpm | Weekly Bkg Count Start Date/Time | Bkg Count Time (min.) |
| 1 | PIC | 6/1/2020 | 5/31/2021 | 0.6340 | 0.00594 | 0.656 | 6/12/2020 17:39 | 500 |
| 2 | PIC | 6/1/2020 | 5/31/2021 | 0.6359 | 0.00627 | 0.394 | 6/12/2020 17:39 | 500 |
| 3 | PIC | 6/1/2020 | 5/31/2021 | 0.6361 | 0.00790 | 0.592 | 6/12/2020 17:40 | 500 |
| 4 | PIC | 6/1/2020 | 5/31/2021 | 0.6337 | 0.01113 | 0.558 | 6/12/2020 17:40 | 500 |
| 5 | PIC | 6/1/2020 | 5/31/2021 | 0.6340 | 0.01579 | 0.890 | 6/12/2020 17:40 | 500 |
| 6 | PIC | 6/1/2020 | 5/31/2021 | 0.6352 | 0.02148 | 0.776 | 6/12/2020 17:40 | 500 |
| 7 | PIC | 6/1/2020 | 5/31/2021 | 0.6437 | 0.01955 | 0.924 | 6/12/2020 17:40 | 500 |
| 8 | PIC | 6/1/2020 | 5/31/2021 | 0.6158 | 0.00609 | 0.706 | 6/12/2020 17:45 | 500 |
| 9 | PIC | 6/1/2020 | 5/31/2021 | 0.6275 | 0.00758 | 0.806 | 6/12/2020 17:40 | 500 |
| 10 | PIC | 6/1/2020 | 5/31/2021 | 0.6367 | 0.00754 | 0.652 | 6/12/2020 17:40 | 500 |

Notes:

- 1 - Results are decay corrected to Sample Date/Time
- 2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
- 3 - Spike Nominals are decay corrected to Sample Date/Time

Spike S/N : N/A
Spike Exp Date : N/A
Spike Activity (dpm/ml): N/A
Spike Volume Added: N/A

LCS S/N : 1919-A
LCS Exp Date : 4/7/2021
LCS Activity (dpm/ml): 187.13
LCS Volume Added: 0.20

| Results Pos. | Decision | Critical | Required | Sample Act. | | Sample Act. | Net Count | Net Count | 2 SIGMA | 2 SIGMA | Sample | Sample | RPD | RER | Nominal | Recovery |
|-----------------|----------|----------|----------|-------------|----------------|-------------|-----------|------------|----------|-------------|-------------|--------|--------|--------|---------|----------|
| | Level | Level | MDA | MDA | Conc. | Error | Rate | Rate Error | Counting | Total Prop. | | | | | | |
| 1 | 0.9246 | 0.6528 | 3 | 1.4849 | 0.4566 | 94.17% | 0.1273 | 0.1199 | 0.8425 | 0.8504 | | SAMPLE | | | | |
| 2 | 0.7345 | 0.5185 | 3 | 1.2208 | 0.0833 | 387.95% | 0.0227 | 0.0879 | 0.6335 | 0.6338 | | SAMPLE | | | | |
| 3 | 0.8989 | 0.6346 | 3 | 1.4527 | -0.0930 | 406.96% | -0.0253 | 0.1031 | 0.7415 | 0.7417 | | SAMPLE | | | | |
| 4 | 0.8823 | 0.6229 | 3 | 1.4314 | 0.2795 | 143.44% | 0.0753 | 0.1080 | 0.7857 | 0.7889 | | SAMPLE | | | | |
| 5 | 1.0309 | 0.7278 | 3 | 1.6272 | -0.4806 | 85.41% | -0.1400 | 0.1195 | 0.8040 | 0.8041 | | SAMPLE | | | | |
| 6 | 0.9324 | 0.6583 | 3 | 1.4828 | 0.3569 | 118.90% | 0.1073 | 0.1276 | 0.8313 | 0.8364 | | SAMPLE | | | | |
| 7 | 1.1237 | 0.7934 | 3 | 1.7703 | -0.5778 | 76.93% | -0.1573 | 0.1209 | 0.8705 | 0.8706 | | SAMPLE | | | | |
| 8 | 0.9986 | 0.7050 | 3 | 1.5967 | 0.0398 | 1083.47% | 0.0107 | 0.1156 | 0.8457 | 0.8458 | | MB | | | | |
| 9 | 1.0382 | 0.7330 | 3 | 1.6475 | 1.7945 | 31.00% | 0.4940 | 0.1526 | 1.0863 | 1.1779 | 512274001.1 | DUP | 118.9% | 1.8049 | | |
| 10 | 0.8726 | 0.6161 | 3 | 1.4018 | 54.9863 | 4.19% | 16.1980 | 0.5312 | 3.5341 | 14.3907 | | LCS | | | 56.1956 | 97.8% |

| SampleID | Instr | Time (min.) | Alpha Counts | Beta Counts | Count Start Time | Count End Time | Machine | Batch ID |
|------------|-------|-------------|--------------|-------------|------------------|-----------------|---------|----------|
| 512274001 | 7A | 60 | 5 | 47 | 6/16/2020 11:21 | 6/16/2020 12:21 | PIC | 2006408 |
| 512274002 | 7B | 60 | 5 | 25 | 6/16/2020 11:21 | 6/16/2020 12:21 | PIC | 2006408 |
| 512274003 | 7C | 60 | 10 | 34 | 6/16/2020 11:21 | 6/16/2020 12:21 | PIC | 2006408 |
| 512274004 | 7D | 60 | 15 | 38 | 6/16/2020 11:21 | 6/16/2020 12:21 | PIC | 2006408 |
| 512274005 | 8A | 60 | 5 | 45 | 6/16/2020 11:21 | 6/16/2020 12:21 | PIC | 2006408 |
| 512274006 | 8B | 60 | 12 | 53 | 6/16/2020 11:21 | 6/16/2020 12:21 | PIC | 2006408 |
| 512274007 | 8C | 60 | 12 | 46 | 6/16/2020 11:21 | 6/16/2020 12:21 | PIC | 2006408 |
| 1204570219 | 8D | 60 | 4 | 43 | 6/16/2020 11:21 | 6/16/2020 12:21 | PIC | 2006408 |
| 1204570220 | 9A | 60 | 8 | 78 | 6/16/2020 11:21 | 6/16/2020 12:21 | PIC | 2006408 |
| 1204570221 | 9B | 60 | 10 | 1011 | 6/16/2020 11:21 | 6/16/2020 12:21 | PIC | 2006408 |

ASSAY 16-Jun-20 10:18:02

Protocol id 8 Ba-133
Time limit
Count limit
Isotope Ba-133
Protocol date 6/16/2020
Run id. 1354

| Samp_ID | POS | RACK | BATCH | TIME | COUNTS | CPM | ERROR | % RECOVERY | COUNT TIME |
|------------|-----|------|-------|------|--------|--------|-------|------------|------------|
| REF | 1 | 93 | 1 | 180 | 876 | 291.95 | 3.38 | | 10:18:02 |
| 512274001 | 2 | 93 | 2 | 180 | 733 | 244.28 | 3.69 | 83.67 | 10:21:16 |
| 512274002 | 3 | 93 | 3 | 180 | 713 | 237.62 | 3.75 | 81.39 | 10:24:30 |
| 512274003 | 4 | 93 | 4 | 180 | 714 | 237.95 | 3.74 | 81.50 | 10:27:44 |
| 512274004 | 5 | 93 | 5 | 180 | 709 | 236.27 | 3.76 | 80.93 | 10:30:58 |
| 512274005 | 1 | 18 | 1 | 180 | 766 | 255.29 | 3.61 | 87.44 | 10:34:34 |
| 512274006 | 2 | 18 | 2 | 180 | 789.5 | 263.1 | 3.56 | 90.12 | 10:37:48 |
| 512274007 | 3 | 18 | 3 | 180 | 705.5 | 235.1 | 3.76 | 80.53 | 10:41:02 |
| 1204570219 | 4 | 18 | 4 | 180 | 721.5 | 240.46 | 3.72 | 82.36 | 10:44:15 |
| 1204570220 | 5 | 18 | 5 | 180 | 731 | 243.62 | 3.7 | 83.45 | 10:47:30 |
| 1204570221 | 1 | 15 | 1 | 180 | 767.5 | 255.79 | 3.61 | 87.61 | 10:51:06 |

END OF ASSAY

Continuing Calibration Data

Gas Flow Proportional Counter Checks for 16-Jun-2020

Detectors LB4100 A1 through J4 and PIC 1A through 14D and G5400W 1W through 1Z

| Short Name | Status | Parmname | Run Time | Count Time | CPM or dec | Low Limit | High Limit | Stdev |
|------------|----------|-------------|--------------|------------|------------|-----------|------------|-----------|
| LB4100A1 | Above | Beta bkg | 16-Jun 06:27 | 60 | 8.867 | 0.628 | 1.888 | +36.22 |
| LB4100C1 | Above | Beta bkg | 16-Jun 06:02 | 60 | 2.250 | 0.534 | 3.326 | +0.69 |
| LB4100C4 | Above | Alpha XTalk | 16-Jun 05:29 | 5 | 0.675 | 0.171 | 0.572 | +4.55 |
| LB4100C4 | Above | Beta bkg | 16-Jun 03:59 | 60 | 1860 | 0.452 | 2.039 | +7,024.34 |
| LB4100C4 | Above | Beta eff | 16-Jun 05:20 | 5 | 20683 | 18000 | 20220 | +4.25 |
| LB4100E1 | Above | Alpha bkg | 16-Jun 03:56 | 60 | 0.517 | -5.45E-2 | 0.290 | +6.96 |
| LB4100E2 | Above | Beta bkg | 16-Jun 03:56 | 60 | 2.317 | 0.950 | 2.756 | +1.54 |
| LB4100E3 | Above | Alpha bkg | 16-Jun 03:56 | 60 | 2.150 | -4.47E-2 | 0.174 | +57.13 |
| LB4100E3 | Above | Beta bkg | 16-Jun 03:56 | 60 | 3.000 | -1.31E+0 | 6.766 | +0.20 |
| LB4100E3 | Above | Beta XTalk | 16-Jun 05:07 | 5 | 4.66E-4 | 8.54E-5 | 4.65E-4 | +3.02 |
| LB4100E4 | need 2nd | Beta bkg | 16-Jun 03:56 | 60 | 1.900 | 0.326 | 2.646 | +1.07 |
| LB4100F1 | Above | Beta bkg | 16-Jun 03:56 | 60 | 2.150 | 0.531 | 1.960 | +3.80 |
| LB4100F3 | need 2nd | Alpha bkg | 16-Jun 03:56 | 60 | 0.233 | -7.68E-2 | 0.332 | +1.55 |
| LB4100G3 | Above | Beta bkg | 16-Jun 03:56 | 60 | 5.567 | 0.810 | 1.674 | +30.03 |
| LB4100H1 | Below | Alpha eff | 16-Jun 05:07 | 5 | 3697 | 7658 | 10570 | -11.16 |
| LB4100H1 | Above | Alpha XTalk | 16-Jun 05:07 | 5 | 0.947 | 0.233 | 0.355 | +32.08 |
| LB4100H1 | Above | Beta bkg | 16-Jun 03:56 | 60 | 2.067 | 0.507 | 1.512 | +6.31 |
| LB4100H1 | Below | Beta eff | 16-Jun 05:14 | 5 | 28264 | 34000 | 45760 | -5.93 |
| LB4100H2 | Below | Alpha eff | 16-Jun 05:07 | 5 | 5284 | 6514 | 8609 | -6.52 |
| LB4100H2 | Above | Alpha XTalk | 16-Jun 05:07 | 5 | 0.528 | 0.276 | 0.380 | +11.50 |
| LB4100H2 | Above | Beta bkg | 16-Jun 03:56 | 60 | 138 | 0.215 | 2.346 | +385.90 |
| LB4100H2 | Below | Beta eff | 16-Jun 05:13 | 5 | 14866 | 15130 | 17230 | -3.75 |
| LB4100H3 | Above | Alpha XTalk | 16-Jun 05:07 | 5 | 0.326 | 0.263 | 0.323 | +3.29 |
| LB4100H3 | Above | Beta bkg | 16-Jun 03:56 | 60 | 4.250 | 0.545 | 2.286 | +9.77 |
| LB4100H4 | Below | Alpha XTalk | 16-Jun 05:07 | 5 | 0.286 | 0.295 | 0.389 | -3.57 |
| LB4100H4 | Above | Beta bkg | 16-Jun 03:56 | 60 | 3.867 | 0.362 | 1.711 | +12.59 |
| LB4100H4 | Below | Beta eff | 16-Jun 05:14 | 5 | 29636 | 30260 | 34150 | -3.96 |
| LB4100I2 | Above | Beta bkg | 16-Jun 03:56 | 60 | 5.317 | 0.425 | 2.438 | +11.58 |
| LB4100I3 | Above | Beta bkg | 16-Jun 03:56 | 60 | 2.300 | -3.39E-1 | 3.842 | +0.79 |

| | | | | | | | | |
|----------|-------|-----------|--------------|----|-------|----------|-------|-------|
| LB4100I4 | Above | Beta bkg | 16-Jun 03:56 | 60 | 2.200 | -1.74E-2 | 2.470 | +2.35 |
| PIC3C | Below | Alpha bkg | 16-Jun 05:11 | 60 | 0.050 | 0.063 | 0.394 | -3.23 |
| PIC3C | Below | Alpha eff | 16-Jun 06:26 | 5 | 9085 | 9133 | 9635 | -3.57 |
| PIC4B | Above | Alpha bkg | 16-Jun 05:11 | 60 | 0.317 | -5.36E-2 | 0.301 | +3.26 |
| PIC12A | Above | Beta bkg | 16-Jun 05:56 | 60 | 2.433 | 0.074 | 1.397 | +7.70 |
| PIC14D | Above | Alpha bkg | 16-Jun 05:57 | 60 | 0.317 | -8.26E-2 | 0.242 | +4.38 |

INSTRUMENTS NOT LISTED HAVE PASSED ALL QUALITY ASSURANCE PARAMETERS

The following detectors may not have properly transferred to the LIMS system

| | |
|----------|---|
| LB4100B1 | Alpha bkg, Alpha eff, Alpha XTalk, Beta bkg, Beta eff, Beta XTalk |
| LB4100B2 | Alpha bkg, Alpha eff, Alpha XTalk, Beta bkg, Beta eff, Beta XTalk |
| LB4100B3 | Alpha bkg, Alpha eff, Alpha XTalk, Beta bkg, Beta eff, Beta XTalk |
| LB4100B4 | Alpha bkg, Alpha eff, Alpha XTalk, Beta bkg, Beta eff, Beta XTalk |
| LB4100D1 | Alpha bkg, Alpha eff, Alpha XTalk, Beta bkg, Beta eff, Beta XTalk |
| LB4100D2 | Alpha bkg, Alpha eff, Alpha XTalk, Beta bkg, Beta eff, Beta XTalk |
| LB4100D3 | Alpha bkg, Alpha eff, Alpha XTalk, Beta bkg, Beta eff, Beta XTalk |
| LB4100D4 | Alpha bkg, Alpha eff, Alpha XTalk, Beta bkg, Beta eff, Beta XTalk |
| LB4100J1 | Alpha bkg, Alpha eff, Alpha XTalk, Beta bkg, Beta eff, Beta XTalk |
| LB4100J2 | Alpha bkg, Alpha eff, Alpha XTalk, Beta bkg, Beta eff, Beta XTalk |
| LB4100J3 | Alpha bkg, Alpha eff, Alpha XTalk, Beta bkg, Beta eff, Beta XTalk |
| LB4100J4 | Alpha bkg, Alpha eff, Alpha XTalk, Beta bkg, Beta eff, Beta XTalk |
| PIC3A | Alpha bkg, Alpha eff, Alpha XTalk, Beta bkg, Beta eff, Beta XTalk |
| PIC6D | Alpha bkg, Alpha eff, Alpha XTalk, Beta bkg, Beta eff, Beta XTalk |
| PIC13C | Alpha bkg, Alpha eff, Alpha XTalk, Beta bkg, Beta eff, Beta XTalk |

Reviewed by *R. Seil - pluman*

Date 6-17-20

GEL Laboratories LLC

Runlogs

Instrument Run Log

Instrument Type: GFPC

Batch ID: 2006408

| Sample ID | Sample Type | Analyst | Instrument | Run Date | Status | Geometry | Calibration Date |
|------------|-------------|---------|------------|--------------------|--------|-------------|------------------|
| 1204570219 | MB | JXK3 | PIC8D | JUN-16-20 11:21:25 | DONE | 25mm Filter | 01-JUN-20 00:00 |
| 1204570220 | DUP | JXK3 | PIC9A | JUN-16-20 11:21:28 | DONE | 25mm Filter | 01-JUN-20 00:00 |
| 1204570221 | LCS | JXK3 | PIC9B | JUN-16-20 11:21:32 | DONE | 25mm Filter | 01-JUN-20 00:00 |
| 512274001 | SAMPLE | JXK3 | PIC7A | JUN-16-20 11:21:36 | DONE | 25mm Filter | 01-JUN-20 00:00 |
| 512274002 | SAMPLE | JXK3 | PIC7B | JUN-16-20 11:21:36 | DONE | 25mm Filter | 01-JUN-20 00:00 |
| 512274003 | SAMPLE | JXK3 | PIC7C | JUN-16-20 11:21:39 | DONE | 25mm Filter | 01-JUN-20 00:00 |
| 512274004 | SAMPLE | JXK3 | PIC7D | JUN-16-20 11:21:43 | DONE | 25mm Filter | 01-JUN-20 00:00 |
| 512274005 | SAMPLE | JXK3 | PIC8A | JUN-16-20 11:21:45 | DONE | 25mm Filter | 01-JUN-20 00:00 |
| 512274006 | SAMPLE | JXK3 | PIC8B | JUN-16-20 11:21:49 | DONE | 25mm Filter | 01-JUN-20 00:00 |
| 512274007 | SAMPLE | JXK3 | PIC8C | JUN-16-20 11:21:53 | DONE | 25mm Filter | 01-JUN-20 00:00 |

Lucas Cell Raw Data

Batch 2006332 Check-list

This check-list was completed on 19-JUN-20 by Elizabeth Krouse

This batch was reviewed by Elizabeth Krouse on 19-JUN-20 and Lyndsey Pace on 21-JUN-20.

Batch ID:
2006332

Product:
LUC26RAL

Description: Lucas Cell Radium 226
GL-RAD-A-008

| # | Criteria | Yes | No | Comments |
|---|---|-----|----|----------|
| Preparation Information | | | | |
| 1 | Were all of the samples homogenous? Include sample description if not homogenous | Yes | | |
| 2 | Was the preservation correct for this analysis? | Yes | | |
| Internal Checklist Information | | | | |
| 3 | Are instrument source checks within limits? | Yes | | |
| 4 | Has an Aliquot Correction been completed for this batch? | | No | |
| 5 | Have sample historical results been reviewed for this batch? | Yes | | |
| Technical Information | | | | |
| 6 | Were all the samples prepared/analyzed within the required holding time period? | Yes | | |
| 7 | Are any sample results more negative than 3xTPU? | | No | |
| Quality Control (QC) Information | | | | |
| 8 | Was the method blank (MB) within the acceptance criteria? | Yes | | |
| 9 | Were the laboratory control sample (LCS/LCSD) recoveries within the acceptance limits? | Yes | | |
| 10 | Were the matrix spike (MS/MSD) recoveries within the acceptance limits? | Yes | | |
| 11 | Were the relative percent differences and/or error (RPD/RER) between the sample and its duplicate within acceptable limits? | Yes | | |
| 12 | Has the method required detection limit been met? | Yes | | |
| Miscellaneous Information | | | | |
| 13 | Are sample-specific MDA/MDC calculated and reported? | Yes | | |

Prep Logbook

Radium-226 in Liquid

Batch ID: 2006332
Analyst: Michael Hance (MXH8)
Method: EPA 903.1 Modified
Lab SOP: GL-RAD-A-008 REV# 15
Instrument: GFC-18150253

| Due Dates for Lab: 23-JUN-2020 | | | Package: 24-JUN-2020 | SDG: 26-JUN-2020 | | |
|--------------------------------|------------|------------------|----------------------|------------------|-------------|--|
| Type | Sample Id | Description | Serial Number | Spike Amount | Spike Units | |
| LCS | 1204570029 | Radium-226 SPIKE | 1715-E | .1 | mL | |
| MS | 1204570028 | Radium-226 SPIKE | 1715-E | .1 | mL | |

| # | Sample ID | Prep Date | Min RDL (pCi/L) | Aliquot (mL) | End Degas (date) | CELL # | End Transfer (date) | Start Count Time (date) | Background Counts | Total Counts |
|----|-------------------------------|-------------|--------------------|-----------------|---------------------|--------|------------------------|-------------------------------|----------------------|--------------|
| 1 | 512274001 | 16-JUN-2020 | 1 | 500 | 06/16/20 11:30 | 706 | 06/19/20 06:15 | 06/19/20 09:26 | 8 | 16 |
| 2 | 512274002 | 16-JUN-2020 | 1 | 500 | 06/16/20 11:30 | 808 | 06/19/20 06:15 | 06/19/20 09:26 | 2 | 3 |
| 3 | 512274003 | 16-JUN-2020 | 1 | 500 | 06/16/20 11:30 | 107 | 06/19/20 07:00 | 06/19/20 09:59 | 1 | 13 |
| 4 | 512274004 | 16-JUN-2020 | 1 | 500 | 06/16/20 11:30 | 208 | 06/19/20 07:00 | 06/19/20 09:59 | 7 | 34 |
| 5 | 512274005 | 16-JUN-2020 | 1 | 500 | 06/16/20 11:30 | 306 | 06/19/20 07:00 | 06/19/20 09:59 | 5 | 4 |
| 6 | 512274006 | 16-JUN-2020 | 1 | 500 | 06/16/20 11:30 | 403 | 06/19/20 07:00 | 06/19/20 09:59 | 2 | 8 |
| 7 | 512274007 | 16-JUN-2020 | 1 | 500 | 06/16/20 11:30 | 502 | 06/19/20 07:00 | 06/19/20 09:59 | 1 | 5 |
| 8 | 1204570026 MB | 16-JUN-2020 | 1 | 500 | 06/16/20 11:30 | 708 | 06/19/20 07:00 | 06/19/20 09:58 | 1 | 6 |
| 9 | 1204570027 DUP (512274001) | 16-JUN-2020 | 1 | 500 | 06/16/20 11:30 | 805 | 06/19/20 07:00 | 06/19/20 09:58 | 6 | 12 |
| 10 | 1204570028 MS (512274001) | 16-JUN-2020 | 1 | 500 | 06/16/20 11:30 | 105 | 06/19/20 07:38 | 06/19/20 10:38 | 2 | 779 |
| 11 | 1204570029 LCS | 16-JUN-2020 | 1 | 500 | 06/16/20 11:30 | 202 | 06/19/20 07:38 | 06/19/20 10:38 | 1 | 722 |

| Reagent/Solvent Lot ID | Description | Amount | Comments: |
|------------------------|-------------|--------|---|
| | | | Spike Pipet ID: RAD-RA226-2766953 Bkg Count Time: 30 Minutes Sample Count Time: 30 Minutes Data Entry Date2: 16-JUN-2020 00:00 |

RA2006332

Radium-226 Liquid

Filename : RA226.XLS
 File type : Excel
 Version # : 1.3.2

Batch : 2006332
 Analyst : MIC02086
 Prep Date : 6/16/2020

Ra-226 Method Uncertainty : 0.073648

Procedure Code : LUC26RAL
 Parmname : Radium-226
 Required MDA : 1 pCi/L
 Halflife of Ra-226 : 1600 years
 Ra-226 Abundance : 1.00
 Halflife of Rn-222 : 3.8235 days

Batch counted on : LUCAS CELL DETECTOR
 BKG Count time : 30 min

| Sample Characteristics | | | | | Count Raw Data | | | | | | Background | |
|------------------------|--------------|------------------|-------------------------|------------------|----------------|----------------------|--------------|-----------|-------------------|----------------|-------------------|---------------------------|
| Pos. | Sample ID | Sample Aliquot L | Sample Aliquot StDev. L | Sample Date/Time | Cell Number | Counting Time (min.) | Gross Counts | Gross CPM | Background Counts | Background CPM | Count Time (min.) | Cell Efficiency (cpm/dpm) |
| 1 | 512274001.1 | 0.5000 | 2.0256E-05 | 5/26/2020 12:56 | 706 | 30 | 16 | 0.533 | 8 | 0.267 | 30 | 1.8320 |
| 2 | 512274002.1 | 0.5000 | 2.0256E-05 | 5/26/2020 16:27 | 808 | 30 | 3 | 0.100 | 2 | 0.067 | 30 | 1.4130 |
| 3 | 512274003.1 | 0.5000 | 2.0256E-05 | 5/26/2020 10:46 | 107 | 30 | 13 | 0.433 | 1 | 0.033 | 30 | 1.5441 |
| 4 | 512274004.1 | 0.5000 | 2.0256E-05 | 5/26/2020 17:05 | 208 | 30 | 34 | 1.133 | 7 | 0.233 | 30 | 1.9180 |
| 5 | 512274005.1 | 0.5000 | 2.0256E-05 | 5/26/2020 14:51 | 306 | 30 | 4 | 0.133 | 5 | 0.167 | 30 | 1.8401 |
| 6 | 512274006.1 | 0.5000 | 2.0256E-05 | 5/26/2020 10:46 | 403 | 30 | 8 | 0.267 | 2 | 0.067 | 30 | 1.7460 |
| 7 | 512274007.1 | 0.5000 | 2.0256E-05 | 5/26/2020 8:05 | 502 | 30 | 5 | 0.167 | 1 | 0.033 | 30 | 1.9430 |
| 8 | 1204570026.1 | 0.5000 | 2.0256E-05 | 6/16/2020 0:00 | 708 | 30 | 6 | 0.200 | 1 | 0.033 | 30 | 1.7920 |
| 9 | 1204570027.1 | 0.5000 | 2.0256E-05 | 5/26/2020 12:56 | 805 | 30 | 12 | 0.400 | 6 | 0.200 | 30 | 1.4670 |
| 10 | 1204570028.1 | 0.5000 | 2.0256E-05 | 5/26/2020 12:56 | 105 | 30 | 779 | 25.967 | 2 | 0.067 | 30 | 2.0111 |
| 11 | 1204570029.1 | 0.5000 | 2.0256E-05 | 6/16/2020 0:00 | 202 | 30 | 722 | 24.067 | 1 | 0.033 | 30 | 1.8990 |

RA2006332

Pipet, 0.1 ml Stdev : +/- 0.000200 ml
 Pipet, 0.5 ml Stdev : +/- 0.001000 ml
 Pipet, 1 ml Stdev : +/- 0.002000 ml

Analytical SOP: GL-RAD-A-008
 Instrument SOP: GL-RAD-I-007

| Cell Efficiency Error (%) | Cell Calibration Date | Cell Calibration Due Date | De-Gas Date/Time | Rn-222 Ingrow End Date/Time | Count Start Date/Time | Rn-222 Corrections | | | Ra-226 Decay |
|---------------------------|-----------------------|---------------------------|------------------|-----------------------------|-----------------------|--------------------|-------------------|--------------|--------------|
| | | | | | | De-Gas to Ingrowth | Ingrowth to Count | During Count | |
| 0.500% | 11/1/2019 | 10/31/2020 | 6/16/2020 11:30 | 6/19/2020 6:15 | 6/19/2020 9:26 | 0.396 | 0.976 | 1.002 | 1.000 |
| 2.200% | 3/31/2020 | 3/31/2021 | 6/16/2020 11:30 | 6/19/2020 6:15 | 6/19/2020 9:26 | 0.396 | 0.976 | 1.002 | 1.000 |
| 2.523% | 5/1/2020 | 4/30/2021 | 6/16/2020 11:30 | 6/19/2020 7:00 | 6/19/2020 9:59 | 0.399 | 0.978 | 1.002 | 1.000 |
| 7.700% | 8/1/2019 | 7/31/2020 | 6/16/2020 11:30 | 6/19/2020 7:00 | 6/19/2020 9:59 | 0.399 | 0.978 | 1.002 | 1.000 |
| 6.024% | 1/20/2020 | 12/31/2020 | 6/16/2020 11:30 | 6/19/2020 7:00 | 6/19/2020 9:59 | 0.399 | 0.978 | 1.002 | 1.000 |
| 5.200% | 3/1/2020 | 1/31/2021 | 6/16/2020 11:30 | 6/19/2020 7:00 | 6/19/2020 9:59 | 0.399 | 0.978 | 1.002 | 1.000 |
| 4.700% | 6/2/2020 | 5/31/2021 | 6/16/2020 11:30 | 6/19/2020 7:00 | 6/19/2020 9:59 | 0.399 | 0.978 | 1.002 | 1.000 |
| 8.700% | 11/1/2019 | 10/31/2020 | 6/16/2020 11:30 | 6/19/2020 7:00 | 6/19/2020 9:58 | 0.399 | 0.978 | 1.002 | 1.000 |
| 6.300% | 3/31/2020 | 3/31/2021 | 6/16/2020 11:30 | 6/19/2020 7:00 | 6/19/2020 9:58 | 0.399 | 0.978 | 1.002 | 1.000 |
| 8.623% | 5/1/2020 | 4/30/2021 | 6/16/2020 11:30 | 6/19/2020 7:38 | 6/19/2020 10:38 | 0.402 | 0.978 | 1.002 | 1.000 |
| 3.600% | 8/1/2019 | 7/31/2020 | 6/16/2020 11:30 | 6/19/2020 7:38 | 6/19/2020 10:38 | 0.402 | 0.978 | 1.002 | 1.000 |

- Res:
 1 - Results are decay corrected to Sample Date/Time
 2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
 3 - Spike Nominals are decay corrected to Sample Date/Time

Spike S/N : 1715-E
Spike Exp Date : 6/18/2020
Spike Activity (dpm/ml): 300.29
Spike Volume Added: 0.10

LCS S/N : 1715-E
LCS Exp Date : 6/18/2020
LCS Activity (dpm/ml): 300.29
LCS Volume Added: 0.10

* RPD changed to 0% due to sample & dup activity below MDA

| Results Pos. | Decision | Critical | Required | Sample Act. Conc. pCi/L | Sample Act. Error % | Net Count Rate CPM | Net Count Rate Error CPM | 2 SIGMA | 2 SIGMA | Sample QC | Sample Type | RPD | RER | Nominal pCi/L | Recovery | |
|-----------------|----------------|----------------|--------------|-------------------------------|---------------------------|--------------------------|--------------------------------|--------------|----------------------------------|--------------|----------------|-----|-----|------------------|----------|-------------------------------------|
| | Level pCi/L | Level pCi/L | MDA pCi/L | | | | | MDA pCi/L | Counting Uncertainty pCi/L | | | | | | | Total Prop. Uncertainty pCi/L |
| 1 | 0.3959 | 0.2795 | 1 | 0.6865 | 0.3398 | 61.24% | 0.2667 | 0.1633 | 0.4079 | 0.4109 | | | | | | |
| 2 | 0.2567 | 0.1812 | 1 | 0.5276 | 0.0551 | 223.62% | 0.0333 | 0.0745 | 0.2414 | 0.2415 | | | | | | |
| 3 | 0.1644 | 0.1161 | 1 | 0.3818 | 0.5988 | 31.28% | 0.4000 | 0.1247 | 0.3659 | 0.3772 | | | | | | |
| 4 | 0.3502 | 0.2472 | 1 | 0.6150 | 1.0846 | 24.93% | 0.9000 | 0.2134 | 0.5041 | 0.5527 | | | | | | |
| 5 | 0.3085 | 0.2178 | 1 | 0.5612 | -0.0419 | 300.06% | -0.0333 | 0.1000 | 0.2462 | 0.2463 | | | | | | |
| 6 | 0.2056 | 0.1452 | 1 | 0.4227 | 0.2648 | 52.96% | 0.2000 | 0.1054 | 0.2735 | 0.2775 | | | | | | |
| 7 | 0.1307 | 0.0922 | 1 | 0.3034 | 0.1586 | 61.42% | 0.1333 | 0.0816 | 0.1904 | 0.1923 | | | | | | |
| 8 | 0.1416 | 0.1000 | 1 | 0.3290 | 0.2149 | 53.63% | 0.1667 | 0.0882 | 0.2229 | 0.2280 | | | | | | |
| 9 | 0.4238 | 0.2992 | 1 | 0.7560 | 0.3151 | 70.99% | 0.2000 | 0.1414 | 0.4367 | 0.4407 | 512274001.1 | DUP | * | 0.0% | | |
| 10 | 0.1773 | 0.1252 | 1 | 0.3644 | 29.5579 | 9.34% | 25.9000 | 0.9315 | 2.0837 | 6.8921 | 512274001.1 | MS | | | 27.0541 | 109.3% |
| 11 | 0.1327 | 0.0937 | 1 | 0.3083 | 29.0461 | 5.18% | 24.0333 | 0.8963 | 2.1231 | 5.1272 | | LCS | | | 27.0535 | 107.4% |

Continuing Calibration Data



Ludlum Alpha Scintillation Counter Checks for 19-JUN-2020

| Short Name | Parmname | Run Time | Count Time | Counts | CPM | Stdev | Status | Comments |
|------------|----------|----------|------------|----------|--------|-------|--------|----------|
| LUCAS1 | EFF | 06:37 | 1 | 1.26E+05 | 126437 | -0.16 | | |
| LUCAS2 | EFF | 06:59 | 1 | 1.37E+05 | 136924 | 2.66 | | |
| LUCAS3 | EFF | 07:03 | 1 | 1.39E+05 | 138975 | 2.27 | | |
| LUCAS4 | EFF | 06:54 | 1 | 1.31E+05 | 130742 | 1.36 | | |
| LUCAS5 | EFF | 06:52 | 1 | 1.34E+05 | 134042 | 2.25 | | |
| LUCAS6 | EFF | 06:47 | 1 | 1.35E+05 | 135269 | -0.18 | | |
| LUCAS7 | EFF | 06:45 | 1 | 1.38E+05 | 137748 | 1.65 | | |
| LUCAS8 | EFF | 06:43 | 1 | 1.40E+05 | 140499 | 2.42 | | |

Reviewed by: 
Elizabeth Krouse

Date: 19-JUN-20

GEL Laboratories LLC

Runlogs

Instrument Run Log

Instrument Type: LUCAS CELL DETECTOR

Batch ID: 2006332

| Sample ID | Sample Type | Analyst | Instrument | Run Date | Status | Geometry | Calibration Date |
|------------|-------------|---------|------------|--------------------|--------|------------|------------------|
| 512274001 | SAMPLE | MXH8 | LUCAS7 | JUN-19-20 09:26:00 | DONE | Lucas Cell | 01-NOV-19 00:00 |
| 512274002 | SAMPLE | MXH8 | LUCAS8 | JUN-19-20 09:26:00 | DONE | Lucas Cell | 31-MAR-20 00:00 |
| 1204570026 | MB | MXH8 | LUCAS7 | JUN-19-20 09:58:00 | DONE | Lucas Cell | 01-NOV-19 00:00 |
| 1204570027 | DUP | MXH8 | LUCAS8 | JUN-19-20 09:58:00 | DONE | Lucas Cell | 31-MAR-20 00:00 |
| 512274003 | SAMPLE | MXH8 | LUCAS1 | JUN-19-20 09:59:00 | DONE | Lucas Cell | 01-MAY-20 00:00 |
| 512274004 | SAMPLE | MXH8 | LUCAS2 | JUN-19-20 09:59:00 | DONE | Lucas Cell | 01-AUG-19 00:00 |
| 512274005 | SAMPLE | MXH8 | LUCAS3 | JUN-19-20 09:59:00 | DONE | Lucas Cell | 20-JAN-20 00:00 |
| 512274006 | SAMPLE | MXH8 | LUCAS4 | JUN-19-20 09:59:00 | DONE | Lucas Cell | 01-MAR-20 00:00 |
| 512274007 | SAMPLE | MXH8 | LUCAS5 | JUN-19-20 09:59:00 | DONE | Lucas Cell | 02-JUN-20 00:00 |
| 1204570028 | MS | MXH8 | LUCAS1 | JUN-19-20 10:38:00 | DONE | Lucas Cell | 01-MAY-20 00:00 |
| 1204570029 | LCS | MXH8 | LUCAS2 | JUN-19-20 10:38:00 | DONE | Lucas Cell | 01-AUG-19 00:00 |



Environmental Laboratory
 1232 Haco Drive
 Lansing
 Michigan, 48910

CHAIN OF CUSTODY


Page 1 of 1

Phone: (517)702-6372

Lab Work Order Number L005063

| | | | | | | | | | | | | | | |
|--|------------------------------|-------------------------------------|--|------------------------------|-----|--------------------|------------|------------|------------|--|-----------------------|--|--|---|
| Client Name BWL - Erickson Station | | Project Name Erickson GMP | | Requested Analyses | | | | | | | Requested Turn Around | | | |
| Client Contact Cheryl Louden | | Project Number [none] | | Metals, Hg (Total) per quote | TSS | TDS, Cl-, SO4-, F- | Radium 226 | Radium 228 | Field Data | | | | | Rush requests subject to additional charge. Rush requests subject to lab approval. |
| Address 3725 S. Canal | | Project Description | | | | | | | | | | | | |
| City Lansing | | PO Number | | | | | | | | | | | | |
| State/Zip MI, 48917 | | Shipped By | | | | | | | | | | | | |
| Phone (517) 702-6396 | Fax (517) 702-6373 | Tracking Number | | | | | | | | | | | | |
| Sampler Marc Wahrer | | | | | | | | | | | | | | |

| Sample Name or Field ID | Sampled Date | Sampled Time | Sample Type Grab/Composite | Matrix Code | Container Count | Preservation Code | | | | | | | | | | Sample | Comments | |
|-------------------------|--------------|--------------|-------------------------------|-------------|-----------------|-------------------|---|---|---|---|---|---|--|--|--|--------|----------|--|
| | | | | | | b | a | | | | | | | | | | | |
| MW-1 | 05/26/2020 | 12:56 | G | GW | 5 | 1 | 1 | 1 | 1 | 1 | 1 | X | | | | | | |
| MW-2 | 05/26/2020 | 16:27 | G | GW | 5 | 1 | 1 | 1 | 1 | 1 | 1 | X | | | | | | |
| MW-4 | 05/26/2020 | 10:46 | G | GW | 5 | 1 | 1 | 1 | 1 | 1 | 1 | X | | | | | | |
| MW-5 | 05/26/2020 | 17:05 | G | GW | 5 | 1 | 1 | 1 | 1 | 1 | 1 | X | | | | | | |
| MW-6 | 05/26/2020 | 14:51 | G | GW | 5 | 1 | 1 | 1 | 1 | 1 | 1 | X | | | | | | |
| MW-4 Duplicate | 05/26/2020 | 10:46 | G | GW | 5 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | |
| Field Blank | 05/26/2020 | 08:05 | G | GW | 5 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |

| | | | | |
|---|-----------------------------|------------------------------|-----------------------------|----------|
| Relinquished By  <small>05/27/2020 02:13:54 am SigPlus1</small> | Date/Time 5/27/2020 6:25 | Received By Kelly Gleason | Date/Time 5/27/2020 6:25 | Comments |
| Relinquished By | Date/Time | Received By | Date/Time | |
| Relinquished By | Date/Time | Received By | Date/Time | |
| Cooler Numbers and Temperatures Default Cooler | | | | Comments |
| Matrix Codes: GW=Ground Water | | | | |

Preserv. Codes: a=None,b=0.5% HNO3



Lansing Board of Water and Light
Environmental Services Laboratory
1232 Haco Dr.
Lansing, Michigan 48901

13 August 2020

BWL - Erickson Station
Attn: Cheryl Louden
3725 S. Canal
Lansing, MI 48917

Project: Erickson GMP

Dear Cheryl Louden,

Enclosed is a copy of the laboratory report for the following work order(s) received by Lansing Board of Water and Light Environmental Services Laboratory:

Work Order
L006016

Received
6/24/2020 7:40:00AM

Account Number
30926 10021

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Caporale

Jennifer Caporale, Supervisor



Analytical Report

Client: BWL - Erickson Station
Address: 3725 S. Canal
 Lansing MI, 48917

Client Project Manager: Cheryl Louden

Report Date: 08/13/2020

Sample Name: MW-1

Lab #: L006016-01 Ground Water

Collected: 23-Jun-20 12:22

By: Marc Wahrer

| Analyte | Reporting | | | Dilution | Regulatory | | Analysis Date/Time | By | Method | Notes |
|-------------------------------|-----------|--------|----------|----------|------------|-----------------|--------------------|------------|--------|-------|
| | Result | Limit | Units | | Limit | | | | | |
| Conductivity | 1200 | 1.0 | uS/cm | 1 | | 23-Jun-20 12:22 | maw | SM 2510B | | |
| Dissolved oxygen | ND | 0.100 | mg/L | 1 | | 23-Jun-20 12:22 | maw | FIELD | | |
| Gallons Purged | 3.00 | | Gallons | 1 | | 23-Jun-20 12:22 | maw | FIELD | | |
| Oxidation Reduction Potential | -87.20 | -999.0 | mV | 1 | | 23-Jun-20 12:22 | maw | FIELD | | |
| pH | 6.8 | 7.0 | pH Units | 1 | | 23-Jun-20 12:22 | maw | SM 4500H+B | | |
| Static Head Measurement | 15.2 | | Feet | 1 | | 23-Jun-20 12:22 | maw | FIELD | | |
| Temperature | 14 | | °C | 1 | | 23-Jun-20 12:22 | maw | SM 2550B | | |
| Turbidity | 17 | 0.10 | NTU | 1 | | 23-Jun-20 12:22 | maw | SM 2130B | | |

Sample Name: MW-2

Lab #: L006016-02 Ground Water

Collected: 23-Jun-20 16:01

By: Marc Wahrer

| Analyte | Reporting | | | Dilution | Regulatory | | Analysis Date/Time | By | Method | Notes |
|-------------------------------|-----------|--------|----------|----------|------------|-----------------|--------------------|------------|--------|-------|
| | Result | Limit | Units | | Limit | | | | | |
| Conductivity | 1700 | 1.0 | uS/cm | 1 | | 23-Jun-20 16:01 | maw | SM 2510B | | |
| Dissolved oxygen | ND | 0.100 | mg/L | 1 | | 23-Jun-20 16:01 | maw | FIELD | | |
| Gallons Purged | 3.50 | | Gallons | 1 | | 23-Jun-20 16:01 | maw | FIELD | | |
| Oxidation Reduction Potential | -40.20 | -999.0 | mV | 1 | | 23-Jun-20 16:01 | maw | FIELD | | |
| pH | 6.7 | 7.0 | pH Units | 1 | | 23-Jun-20 16:01 | maw | SM 4500H+B | | |
| Static Head Measurement | 19.3 | | Feet | 1 | | 23-Jun-20 16:01 | maw | FIELD | | |
| Temperature | 13 | | °C | 1 | | 23-Jun-20 16:01 | maw | SM 2550B | | |
| Turbidity | 9.0 | 0.10 | NTU | 1 | | 23-Jun-20 16:01 | maw | SM 2130B | | |



Analytical Report

Client: BWL - Erickson Station
Address: 3725 S. Canal
Lansing MI, 48917

Client Project Manager: Cheryl Loudon

Report Date: 08/13/2020

Sample Name: MW-4

Lab #: L006016-03 Ground Water

Collected: 23-Jun-20 10:15

By: Marc Wahrer

| Analyte | Reporting | | | Dilution | Regulatory Limit | Analysis Date/Time | By | Method | Notes |
|-------------------------------|-----------|--------|----------|----------|------------------|--------------------|-----|------------|-------|
| | Result | Limit | Units | | | | | | |
| Conductivity | 910 | 1.0 | uS/cm | 1 | | 23-Jun-20 10:15 | maw | SM 2510B | |
| Dissolved oxygen | ND | 0.100 | mg/L | 1 | | 23-Jun-20 10:15 | maw | FIELD | |
| Gallons Purged | 3.00 | | Gallons | 1 | | 23-Jun-20 10:15 | maw | FIELD | |
| Oxidation Reduction Potential | -174.8 | -999.0 | mV | 1 | | 23-Jun-20 10:15 | maw | FIELD | |
| pH | 7.1 | 7.0 | pH Units | 1 | | 23-Jun-20 10:15 | maw | SM 4500H+B | |
| Static Head Measurement | 16.6 | | Feet | 1 | | 23-Jun-20 10:15 | maw | FIELD | |
| Temperature | 14 | | °C | 1 | | 23-Jun-20 10:15 | maw | SM 2550B | |
| Turbidity | 3.0 | 0.10 | NTU | 1 | | 23-Jun-20 10:15 | maw | SM 2130B | |

Sample Name: MW-5

Lab #: L006016-04 Ground Water

Collected: 23-Jun-20 16:46

By: Marc Wahrer

| Analyte | Reporting | | | Dilution | Regulatory Limit | Analysis Date/Time | By | Method | Notes |
|-------------------------------|-----------|--------|----------|----------|------------------|--------------------|-----|------------|-------|
| | Result | Limit | Units | | | | | | |
| Conductivity | 2000 | 1.0 | uS/cm | 1 | | 23-Jun-20 16:46 | maw | SM 2510B | |
| Dissolved oxygen | 2.61 | 0.100 | mg/L | 1 | | 23-Jun-20 16:46 | maw | FIELD | |
| Gallons Purged | 5.00 | | Gallons | 1 | | 23-Jun-20 16:46 | maw | FIELD | |
| Oxidation Reduction Potential | -34.80 | -999.0 | mV | 1 | | 23-Jun-20 16:46 | maw | FIELD | |
| pH | 7.3 | 7.0 | pH Units | 1 | | 23-Jun-20 16:46 | maw | SM 4500H+B | |
| Static Head Measurement | 17.3 | | Feet | 1 | | 23-Jun-20 16:46 | maw | FIELD | |
| Temperature | 15 | | °C | 1 | | 23-Jun-20 16:46 | maw | SM 2550B | |
| Turbidity | 18 | 0.10 | NTU | 1 | | 23-Jun-20 16:46 | maw | SM 2130B | |



Analytical Report

Client: BWL - Erickson Station
Address: 3725 S. Canal
Lansing MI, 48917

Client Project Manager: Cheryl Louden

Report Date: 08/13/2020

Sample Name: MW-6

Lab #: L006016-05 Ground Water

Collected: 23-Jun-20 14:16

By: Marc Wahrer

| Analyte | Reporting | | | Dilution | Regulatory Limit | Analysis Date/Time | By | Method | Notes |
|-------------------------------|-----------|--------|----------|----------|------------------|--------------------|-----|------------|-------|
| | Result | Limit | Units | | | | | | |
| Conductivity | 1000 | 1.0 | uS/cm | 1 | | 23-Jun-20 14:16 | maw | SM 2510B | |
| Dissolved oxygen | ND | 0.100 | mg/L | 1 | | 23-Jun-20 14:16 | maw | FIELD | |
| Gallons Purged | 3.00 | | Gallons | 1 | | 23-Jun-20 14:16 | maw | FIELD | |
| Oxidation Reduction Potential | -45.40 | -999.0 | mV | 1 | | 23-Jun-20 14:16 | maw | FIELD | |
| pH | 6.7 | 7.0 | pH Units | 1 | | 23-Jun-20 14:16 | maw | SM 4500H+B | |
| Static Head Measurement | 18.9 | | Feet | 1 | | 23-Jun-20 14:16 | maw | FIELD | |
| Temperature | 12 | | °C | 1 | | 23-Jun-20 14:16 | maw | SM 2550B | |
| Turbidity | 34 | 0.10 | NTU | 1 | | 23-Jun-20 14:16 | maw | SM 2130B | |



Analytical Report

Client: BWL - Erickson Station
Address: 3725 S. Canal
Lansing MI, 48917

Client Project Manager: Cheryl Louden

Report Date: 08/13/2020

Approved By: _____

Jennifer Caporale

Notes and Definitions

AL Action Level (Action Level = Regulatory Limit)
MCL Maximum Contaminant Level
PEL Permissible Exposure Limit (Permissible Exposure Limit = Regulatory Limit)
RPD Relative Percent Difference
OT Odor Threshold
ND Non Detect

All drinking water regulatory limits are MCL's with the exception of Lead and Copper unless otherwise noted.



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BOARD OF WATER & LIGHT

ERICKSON GMP

SDG Batch:

15123

Pages 1 - 279



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PROJECT: ERICKSON GMP

SDG Batch:
15123.01

Prepared by:
Merit Laboratories, Inc.

July 29, 2020

Inorganics Inventory Sheet - SDG: S15123

Laboratory Name: Merit Laboratories, Inc.
City / State: East Lansing, MI
Sample Delivery Group: S15123.01 - .07

| Deliverable | References | | Pages | | Checklist | |
|--|------------|---------|-------|-----|-------------------------------------|--------------------------|
| | Form | CLP | From | To | Lab | Audit |
| 1. Inventory Sheet (not numbered) | This | DC-2 | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. SDG Case Narrative | | | 1 | 2 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Analytical Summary Report | | | 3 | 34 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. ICP/MS Metals Data | | | 35 | 175 | | |
| Sequence / Injection Log | | F.0 | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Data Sheet | | F. I | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Initial Calibration and Calibration Verification | | F. IIA | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| CRDL Standards | | F. IIB | | | <input type="checkbox"/> | <input type="checkbox"/> |
| Blanks | | F. III | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Interference Check Sample | | F. IVB | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Spike Sample Recovery | | F. VA | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Post-Digest Spike Sample Recovery | | F. VB | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Duplicates | | F. VI | | | <input type="checkbox"/> | <input type="checkbox"/> |
| Laboratory Control Sample | | F. VII | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Serial Dilutions | | F. VIII | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Analysis Run Log | | F. XIII | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| ICP/MS Tune | | F. XIV | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Internal Standard Relative Intensity Summary | | F. XV | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Instrument Detection Limits (IDL) & MDLs | | F. IX | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Linear Ranges | | F. XI | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| ICP/MS Raw Data | | | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Preparation / Digestion Log | | F. XII | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5. Mercury Data | | | 176 | 194 | | |
| Sequence / Injection Log | | F.0 | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Data Sheet | | F. I | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Initial Calibration and Calibration Verification | | F. IIA | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| CRDL Standards | | F. IIB | | | <input type="checkbox"/> | <input type="checkbox"/> |
| Blanks | | F. III | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Spike Sample Recovery | | F. VA | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Post-Digest Spike Sample Recovery | | F. VB | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Duplicates | | F. VI | | | <input type="checkbox"/> | <input type="checkbox"/> |
| Laboratory Control Sample | | F. VII | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Analysis Run Log | | F. XIII | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Mercury Cold Vapor Raw Data | | | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Preparation / Digestion Log | | | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Ion Chromatography Data | | | 195 | 272 | | |
| Bench Sheet - sample and QC sample evaluation | | | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Calibration Curve - data and evaluation | | | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7. Total Suspended Solids Data | | | 273 | 273 | | |
| Bench Sheet - sample and QC sample evaluation | | | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Inorganics Inventory Sheet - SDG: S15123

| Deliverable | References | | Pages | | Checklist | |
|---|------------|-----|-------|-----|-------------------------------------|--------------------------|
| | Form | CLP | From | To | Lab | Audit |
| 8. Total Dissolved Solids Data | | | 274 | 274 | | |
| Bench Sheet - sample and QC sample evaluation | | | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 9. Shipping / Receiving Documents | | | 275 | 279 | | |
| Chain-of-Custody | | | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Sample log-in sheet | | | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Sample Receipt | | | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 10. Subcontracted Analysis Report | | | | | | |
| GEL Laboratories – Radiological Analysis (Total Pages 50) | | | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |



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CASE NARRATIVE
CLIENT: BOARD OF WATER & LIGHT
PROJECT: ERICKSON GMP
Merit IDs: S15123.01-S15123.07

- Field Sampling:** Marc Wahrer performed the fieldwork.
- Analytical Bottles:** All bottles were sent with the appropriate preservation in it. Please see the bottle list attached.
- Sample Receiving:** All samples were received by the laboratory (06/24/2020). Dates and signatures can be found on the Chain of Custody Records. The sample receipts specify the actual tags and bottles received and logged into the laboratory “vlims” system.

ANALYSES

Metals: All metal analyses were performed according to Method 200.8. The metal digestion was performed according to Method 3015A. The QC requirements were followed for this specific project and method-specified criteria were met. *Outliers:* None

Notes: Dilution test not applicable if measured concentration is less than 100 times MDL.

Mercury: All mercury QC requirements were met according to the specifications in Method 245.1. *Outliers:* None

Fluoride: All fluoride QC requirements were met according to the specifications in Method 300.0. *Outliers:* None

Chloride: All chloride QC requirements were met according to the specifications in Method 300.0. *Outliers:* None

Sulfate: All Sulfate QC requirements were met according to the specifications in Method 300.0. *Outliers:* None

Total Suspended Solids: All total suspended solids QC requirements were met according to the specifications in Method 2540 D. *Outliers:* None

Total Dissolved Solids: All total suspended solids QC requirements were met according to the specifications in Method 2540 C. *Outliers:* None



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Radium 226 & 228: All radiological analysis were subcontracted out to GEL Laboratories. GEL Laboratories analytical report is included.

Data Reporting: The analytical reports are reflective of what is on a given Chain-of-Custody record (COC). Merit's IDs were assigned to the samples as they were delivered and accepted by our log-in staff.

"I certify that this data package is in compliance with the terms and conditions of the program, and project, and contractual requirements both technically and for completeness, for other than the condition detailed above. Release of the data contained in this hardcopy data package and its computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature."

Barb Ball

QA Officer

07/29/2020

Date



Analytical Laboratory Report

Report ID: S15123.01(01)
Generated on 07/10/2020

Report to

Attention: Jennifer Caporale
Board of Water & Light
P.O. Box 13007
Lansing, MI 48901

Phone: 517-702-6372 FAX:
Email: Environmental_Laboratory@LBWL.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S15123.01-S15123.07
Project: Erickson GMP
Collected Date(s): 06/23/2020
Submitted Date/Time: 06/24/2020 11:20
Sampled by: Marc Wahrer
P.O. #:

Table of Contents

- Cover Page (Page 1)
- General Report Notes (Page 2)
- Report Narrative (Page 2)
- Laboratory Certifications (Page 3)
- Qualifier Descriptions (Page 3)
- Glossary of Abbreviations (Page 3)
- Method Summary (Page 4)
- Sample Summary (Page 5)

Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

Report Narrative

All Metal Results Are Reported As Total



Analytical Laboratory Report

Laboratory Certifications

| Authority | Certification ID |
|---------------------|------------------|
| Michigan DEQ | #9956 |
| DOD ELAP/ISO 17025 | #69699 |
| WBENC | #2005110032 |
| Ohio VAP | #CL0002 |
| Indiana DOH | #C-MI-07 |
| New York NELAC | #11814 |
| North Carolina DENR | #680 |
| North Carolina DOH | #26702 |
| Alaska CSLAP | #17-001 |

Qualifier Descriptions

| Qualifier | Description |
|-----------|---|
| ! | Result is outside of stated limit criteria |
| B | Compound also found in associated method blank |
| E | Concentration exceeds calibration range |
| F | Analysis run outside of holding time |
| G | Estimated result due to extraction run outside of holding time |
| H | Sample submitted and run outside of holding time |
| I | Matrix interference with internal standard |
| J | Estimated value less than reporting limit, but greater than MDL |
| L | Elevated reporting limit due to low sample amount |
| M | Result reported to MDL not RDL |
| O | Analysis performed by outside laboratory. See attached report. |
| R | Preliminary result |
| S | Surrogate recovery outside of control limits |
| T | No correction for total solids |
| X | Elevated reporting limit due to matrix interference |
| Y | Elevated reporting limit due to high target concentration |
| b | Value detected less than reporting limit, but greater than MDL |
| e | Reported value estimated due to interference |
| j | Analyte also found in associated method blank |
| p | Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak. |
| x | Preserved from bulk sample |

Glossary of Abbreviations

| Abbreviation | Description |
|--------------|--|
| RL/RDL | Reporting Limit |
| MDL | Method Detection Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| SW | EPA SW 846 (Soil and Wastewater) Methods |
| E | EPA Methods |
| SM | Standard Methods |
| LN | Linear |
| BR | Branched |



Analytical Laboratory Report

Method Summary

| Method | Version |
|---------|--|
| E200.8 | EPA Method 200.8 Revision 5.4 |
| E245.1 | EPA Method 245.1 Revision 3.0 |
| E300.0 | EPA Method 300.0 Revision 2.1 |
| SM2540C | Standard Method 2540 C 2011 |
| SM2540D | Standard Method 2540 D 2011 |
| SW3015A | SW 846 Method 3015A Revision 1 February 2007 |



Analytical Laboratory Report

Sample Summary (7 samples)

| Sample ID | Sample Tag | Matrix | Collected Date/Time |
|-----------|---------------------------|-------------|---------------------|
| S15123.01 | MW-1 L006016-01 | Groundwater | 06/23/20 12:22 |
| S15123.02 | MW-2 L006016-02 | Groundwater | 06/23/20 16:01 |
| S15123.03 | MW-4 L006016-03 | Groundwater | 06/23/20 10:15 |
| S15123.04 | MW-5 L006016-04 | Groundwater | 06/23/20 16:46 |
| S15123.05 | MW-6 L006016-05 | Groundwater | 06/23/20 14:16 |
| S15123.06 | MW-4 Duplicate L006016-06 | Groundwater | 06/23/20 10:15 |
| S15123.07 | Field Blank L006016-07 | Water | 06/23/20 07:30 |



Analytical Laboratory Report

Lab Sample ID: S15123.01

Sample Tag: MW-1 L006016-01

Collected Date/Time: 06/23/2020 12:22

Matrix: Groundwater

COC Reference:

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---------------|-----------------|---------------|-------------------|---------------|
| 2 | 1L Plastic | HNO3 | Yes | 4.0 | IR |
| 2 | 1L Plastic | None | Yes | 4.0 | IR |
| 1 | 125ml Plastic | HNO3 | Yes | 4.0 | IR |

Extraction / Prep.

| Parameter | Result | Method | Run Date | Analyst | Flags |
|-------------------|-----------|---------|----------------|---------|-------|
| Mercury Digestion | Completed | E245.1 | 07/02/20 10:30 | JRH | |
| Metal Digestion | Completed | SW3015A | 06/30/20 13:20 | JRH | |

Inorganics

Method: E300.0, Run Date: 06/25/20 12:08, Analyst: JDP

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------------|-----|------|-------|----------|------------|-------|
| Chloride | 70 | 5 | 0.06 | mg/L | 5 | 16887-00-6 | |
| Fluoride (Undistilled) | Not detected | 1.0 | 0.08 | mg/L | 5 | 16984-48-8 | |
| Sulfate | 59 | 5 | 0.52 | mg/L | 5 | 14808-79-8 | |

Method: SM2540C, Run Date: 06/24/20 17:00, Analyst: NAW

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------|----|-----|-------|----------|------|-------|
| Total Dissolved Solids | 774 | 20 | 2 | mg/L | 2 | | |

Method: SM2540D, Run Date: 06/29/20 19:25, Analyst: ASB

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------|----|-----|-------|----------|------|-------|
| Total Suspended Solids | 43 | 3 | 1 | mg/L | 2.50 | | |

Metals

Method: E200.8, Run Date: 06/30/20 16:05, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------|-----|------|-------|----------|-----------|-------|
| Calcium* | 165 | 5.0 | 0.22 | mg/L | 25 | 7440-70-2 | |

Method: E200.8, Run Date: 06/30/20 14:05, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------|--------------|--------|----------|-------|----------|-----------|-------|
| Antimony | Not detected | 0.005 | 0.0026 | mg/L | 5 | 7440-36-0 | |
| Arsenic | 0.007 | 0.002 | 0.00026 | mg/L | 5 | 7440-38-2 | |
| Barium | 0.168 | 0.005 | 0.00016 | mg/L | 5 | 7440-39-3 | |
| Beryllium | Not detected | 0.001 | 0.00022 | mg/L | 5 | 7440-41-7 | |
| Boron | 0.39 | 0.04 | 0.0018 | mg/L | 5 | 7440-42-8 | |
| Cadmium | Not detected | 0.0005 | 0.00019 | mg/L | 5 | 7440-43-9 | |
| Chromium | Not detected | 0.005 | 0.000097 | mg/L | 5 | 7440-47-3 | |
| Cobalt | Not detected | 0.005 | 0.00011 | mg/L | 5 | 7440-48-4 | |
| Lead | Not detected | 0.003 | 0.00019 | mg/L | 5 | 7439-92-1 | |
| Lithium* | 0.032 | 0.005 | 0.0016 | mg/L | 5 | 7439-93-2 | |
| Molybdenum | Not detected | 0.005 | 0.00022 | mg/L | 5 | 7439-98-7 | |
| Selenium | Not detected | 0.005 | 0.0021 | mg/L | 5 | 7782-49-2 | |
| Thallium | Not detected | 0.002 | 0.000086 | mg/L | 5 | 7440-28-0 | |



Analytical Laboratory Report

Lab Sample ID: S15123.01 (continued)

Sample Tag: MW-1 L006016-01

Method: E245.1, Run Date: 07/06/20 12:50, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------------|--------|----------|-------|----------|-----------|-------|
| Mercury | Not detected | 0.0002 | 0.000016 | mg/L | 1 | 7439-97-6 | |

Other / Misc.

Method: , Run Date: 07/08/20 08:45, Analyst: GEL

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|-----------|----|-----|-------|----------|------|-------|
| Misc. Special Project* | Completed | | | | 1 | | O |

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S15123.02

Sample Tag: MW-2 L006016-02

Collected Date/Time: 06/23/2020 16:01

Matrix: Groundwater

COC Reference:

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---------------|-----------------|---------------|-------------------|---------------|
| 2 | 1L Plastic | HNO3 | Yes | 4.0 | IR |
| 2 | 1L Plastic | None | Yes | 4.0 | IR |
| 1 | 125ml Plastic | HNO3 | Yes | 4.0 | IR |

Extraction / Prep.

| Parameter | Result | Method | Run Date | Analyst | Flags |
|-------------------|-----------|---------|----------------|---------|-------|
| Mercury Digestion | Completed | E245.1 | 07/02/20 10:30 | JRH | |
| Metal Digestion | Completed | SW3015A | 06/30/20 13:20 | JRH | |

Inorganics

Method: E300.0, Run Date: 06/25/20 12:21, Analyst: JDP

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------------|-----|------|-------|----------|------------|-------|
| Fluoride (Undistilled) | Not detected | 1.0 | 0.08 | mg/L | 5 | 16984-48-8 | |

Method: E300.0, Run Date: 06/25/20 12:08, Analyst: JDP

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------|----|------|-------|----------|------------|-------|
| Chloride | 75 | 25 | 0.40 | mg/L | 25 | 16887-00-6 | |
| Sulfate | 484 | 25 | 1.5 | mg/L | 25 | 14808-79-8 | |

Method: SM2540C, Run Date: 06/24/20 17:00, Analyst: NAW

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------|----|-----|-------|----------|------|-------|
| Total Dissolved Solids | 1,300 | 20 | 2 | mg/L | 2 | | |

Method: SM2540D, Run Date: 06/29/20 19:25, Analyst: ASB

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------------|----|-----|-------|----------|------|-------|
| Total Suspended Solids | Not detected | 3 | 1 | mg/L | 1.00 | | |

Metals

Method: E200.8, Run Date: 06/30/20 16:09, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------|-----|------|-------|----------|-----------|-------|
| Calcium* | 268 | 5.0 | 0.87 | mg/L | 100 | 7440-70-2 | |

Method: E200.8, Run Date: 06/30/20 14:07, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------|--------------|--------|----------|-------|----------|-----------|-------|
| Antimony | Not detected | 0.005 | 0.0026 | mg/L | 5 | 7440-36-0 | |
| Arsenic | Not detected | 0.002 | 0.00026 | mg/L | 5 | 7440-38-2 | |
| Barium | 0.045 | 0.005 | 0.00016 | mg/L | 5 | 7440-39-3 | |
| Beryllium | Not detected | 0.001 | 0.00022 | mg/L | 5 | 7440-41-7 | |
| Boron | 4.05 | 0.04 | 0.0018 | mg/L | 5 | 7440-42-8 | |
| Cadmium | Not detected | 0.0005 | 0.00019 | mg/L | 5 | 7440-43-9 | |
| Chromium | Not detected | 0.005 | 0.000097 | mg/L | 5 | 7440-47-3 | |
| Cobalt | Not detected | 0.005 | 0.00011 | mg/L | 5 | 7440-48-4 | |
| Lead | Not detected | 0.003 | 0.00019 | mg/L | 5 | 7439-92-1 | |
| Lithium* | 0.055 | 0.005 | 0.0016 | mg/L | 5 | 7439-93-2 | |
| Molybdenum | 0.010 | 0.005 | 0.00022 | mg/L | 5 | 7439-98-7 | |
| Selenium | Not detected | 0.005 | 0.0021 | mg/L | 5 | 7782-49-2 | |



Analytical Laboratory Report

Lab Sample ID: S15123.02 (continued)

Sample Tag: MW-2 L006016-02

Method: E200.8, Run Date: 06/30/20 14:07, Analyst: JRH (continued)

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------------|-------|----------|-------|----------|-----------|-------|
| Thallium | Not detected | 0.002 | 0.000086 | mg/L | 5 | 7440-28-0 | |

Method: E245.1, Run Date: 07/06/20 12:52, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------------|--------|----------|-------|----------|-----------|-------|
| Mercury | Not detected | 0.0002 | 0.000016 | mg/L | 1 | 7439-97-6 | |

Other / Misc.

Method: , Run Date: 07/08/20 08:45, Analyst: GEL

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|-----------|----|-----|-------|----------|------|-------|
| Misc. Special Project* | Completed | | | | 1 | | O |

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S15123.03

Sample Tag: MW-4 L006016-03

Collected Date/Time: 06/23/2020 10:15

Matrix: Groundwater

COC Reference:

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---------------|-----------------|---------------|-------------------|---------------|
| 2 | 1L Plastic | HNO3 | Yes | 4.0 | IR |
| 2 | 1L Plastic | None | Yes | 4.0 | IR |
| 1 | 125ml Plastic | HNO3 | Yes | 4.0 | IR |

Extraction / Prep.

| Parameter | Result | Method | Run Date | Analyst | Flags |
|-------------------|-----------|---------|----------------|---------|-------|
| Mercury Digestion | Completed | E245.1 | 07/02/20 10:30 | JRH | |
| Metal Digestion | Completed | SW3015A | 06/30/20 13:20 | JRH | |

Inorganics

Method: E300.0, Run Date: 06/25/20 15:33, Analyst: JDP

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------|----|------|-------|----------|------------|-------|
| Chloride | 72 | 10 | 0.13 | mg/L | 10 | 16887-00-6 | |

Method: E300.0, Run Date: 06/25/20 12:33, Analyst: JDP

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------------|-----|------|-------|----------|------------|-------|
| Fluoride (Undistilled) | Not detected | 1.0 | 0.08 | mg/L | 5 | 16984-48-8 | |
| Sulfate | 57 | 5 | 0.52 | mg/L | 5 | 14808-79-8 | |

Method: SM2540C, Run Date: 06/24/20 17:00, Analyst: NAW

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------|----|-----|-------|----------|------|-------|
| Total Dissolved Solids | 558 | 20 | 2 | mg/L | 2 | | |

Method: SM2540D, Run Date: 06/29/20 19:25, Analyst: ASB

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------------|----|-----|-------|----------|------|-------|
| Total Suspended Solids | Not detected | 3 | 1 | mg/L | 1.00 | | |

Metals

Method: E200.8, Run Date: 06/30/20 16:10, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------|-----|------|-------|----------|-----------|-------|
| Calcium* | 108 | 5.0 | 0.87 | mg/L | 100 | 7440-70-2 | |

Method: E200.8, Run Date: 06/30/20 14:09, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------|--------------|--------|----------|-------|----------|-----------|-------|
| Antimony | Not detected | 0.005 | 0.0026 | mg/L | 5 | 7440-36-0 | |
| Arsenic | 0.007 | 0.002 | 0.00026 | mg/L | 5 | 7440-38-2 | |
| Barium | 0.165 | 0.005 | 0.00016 | mg/L | 5 | 7440-39-3 | |
| Beryllium | Not detected | 0.001 | 0.00022 | mg/L | 5 | 7440-41-7 | |
| Boron | 0.06 | 0.04 | 0.0018 | mg/L | 5 | 7440-42-8 | |
| Cadmium | Not detected | 0.0005 | 0.00019 | mg/L | 5 | 7440-43-9 | |
| Chromium | Not detected | 0.005 | 0.000097 | mg/L | 5 | 7440-47-3 | |
| Cobalt | Not detected | 0.005 | 0.00011 | mg/L | 5 | 7440-48-4 | |
| Lead | Not detected | 0.003 | 0.00019 | mg/L | 5 | 7439-92-1 | |
| Lithium* | 0.008 | 0.005 | 0.0016 | mg/L | 5 | 7439-93-2 | |
| Molybdenum | Not detected | 0.005 | 0.00022 | mg/L | 5 | 7439-98-7 | |
| Selenium | Not detected | 0.005 | 0.0021 | mg/L | 5 | 7782-49-2 | |



Analytical Laboratory Report

Lab Sample ID: S15123.03 (continued)

Sample Tag: MW-4 L006016-03

Method: E200.8, Run Date: 06/30/20 14:09, Analyst: JRH (continued)

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------------|-------|----------|-------|----------|-----------|-------|
| Thallium | Not detected | 0.002 | 0.000086 | mg/L | 5 | 7440-28-0 | |

Method: E245.1, Run Date: 07/06/20 12:54, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------------|--------|----------|-------|----------|-----------|-------|
| Mercury | Not detected | 0.0002 | 0.000016 | mg/L | 1 | 7439-97-6 | |

Other / Misc.

Method: , Run Date: 07/08/20 08:45, Analyst: GEL

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|-----------|----|-----|-------|----------|------|-------|
| Misc. Special Project* | Completed | | | | 1 | | O |

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S15123.04

Sample Tag: MW-5 L006016-04

Collected Date/Time: 06/23/2020 16:46

Matrix: Groundwater

COC Reference:

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---------------|-----------------|---------------|-------------------|---------------|
| 2 | 1L Plastic | HNO3 | Yes | 4.0 | IR |
| 2 | 1L Plastic | None | Yes | 4.0 | IR |
| 1 | 125ml Plastic | HNO3 | Yes | 4.0 | IR |

Extraction / Prep.

| Parameter | Result | Method | Run Date | Analyst | Flags |
|-------------------|-----------|---------|----------------|---------|-------|
| Mercury Digestion | Completed | E245.1 | 07/02/20 10:30 | JRH | |
| Metal Digestion | Completed | SW3015A | 06/30/20 13:20 | JRH | |

Inorganics

Method: E300.0, Run Date: 06/25/20 12:21, Analyst: JDP

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------|----|------|-------|----------|------------|-------|
| Chloride | 75 | 25 | 0.40 | mg/L | 25 | 16887-00-6 | |

Method: E300.0, Run Date: 06/25/20 12:46, Analyst: JDP

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------------|-----|------|-------|----------|------------|-------|
| Fluoride (Undistilled) | Not detected | 1.0 | 0.08 | mg/L | 5 | 16984-48-8 | |

Method: E300.0, Run Date: 06/25/20 15:08, Analyst: JDP

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------|----|-----|-------|----------|------------|-------|
| Sulfate | 931 | 50 | 3.0 | mg/L | 50 | 14808-79-8 | |

Method: SM2540C, Run Date: 06/24/20 17:00, Analyst: NAW

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------|----|-----|-------|----------|------|-------|
| Total Dissolved Solids | 1,720 | 20 | 2 | mg/L | 2 | | |

Method: SM2540D, Run Date: 06/29/20 19:25, Analyst: ASB

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------|----|-----|-------|----------|------|-------|
| Total Suspended Solids | 23 | 3 | 1 | mg/L | 1.33 | | |

Metals

Method: E200.8, Run Date: 06/30/20 16:12, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------|-----|------|-------|----------|-----------|-------|
| Calcium* | 289 | 5.0 | 0.87 | mg/L | 100 | 7440-70-2 | |

Method: E200.8, Run Date: 06/30/20 14:11, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------------|--------|----------|-------|----------|-----------|-------|
| Antimony | Not detected | 0.005 | 0.0026 | mg/L | 5 | 7440-36-0 | |
| Arsenic | Not detected | 0.002 | 0.00026 | mg/L | 5 | 7440-38-2 | |
| Barium | 0.049 | 0.005 | 0.00016 | mg/L | 5 | 7440-39-3 | |
| Beryllium | Not detected | 0.001 | 0.00022 | mg/L | 5 | 7440-41-7 | |
| Boron | 4.59 | 0.04 | 0.0018 | mg/L | 5 | 7440-42-8 | |
| Cadmium | Not detected | 0.0005 | 0.00019 | mg/L | 5 | 7440-43-9 | |
| Chromium | Not detected | 0.005 | 0.000097 | mg/L | 5 | 7440-47-3 | |
| Cobalt | Not detected | 0.005 | 0.00011 | mg/L | 5 | 7440-48-4 | |
| Lead | Not detected | 0.003 | 0.00019 | mg/L | 5 | 7439-92-1 | |



Analytical Laboratory Report

Lab Sample ID: S15123.04 (continued)

Sample Tag: MW-5 L006016-04

Method: E200.8, Run Date: 06/30/20 14:11, Analyst: JRH (continued)

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------|--------------|-------|----------|-------|----------|-----------|-------|
| Lithium* | 0.061 | 0.005 | 0.0016 | mg/L | 5 | 7439-93-2 | |
| Molybdenum | 0.050 | 0.005 | 0.00022 | mg/L | 5 | 7439-98-7 | |
| Selenium | Not detected | 0.005 | 0.0021 | mg/L | 5 | 7782-49-2 | |
| Thallium | Not detected | 0.002 | 0.000086 | mg/L | 5 | 7440-28-0 | |

Method: E245.1, Run Date: 07/06/20 12:56, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------------|--------|----------|-------|----------|-----------|-------|
| Mercury | Not detected | 0.0002 | 0.000016 | mg/L | 1 | 7439-97-6 | |

Other / Misc.

Method: , Run Date: 07/08/20 08:45, Analyst: GEL

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|-----------|----|-----|-------|----------|------|-------|
| Misc. Special Project* | Completed | | | | 1 | | O |

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S15123.05

Sample Tag: MW-6 L006016-05

Collected Date/Time: 06/23/2020 14:16

Matrix: Groundwater

COC Reference:

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---------------|-----------------|---------------|-------------------|---------------|
| 2 | 1L Plastic | HNO3 | Yes | 4.0 | IR |
| 2 | 1L Plastic | None | Yes | 4.0 | IR |
| 1 | 125ml Plastic | HNO3 | Yes | 4.0 | IR |

Extraction / Prep.

| Parameter | Result | Method | Run Date | Analyst | Flags |
|-------------------|-----------|---------|----------------|---------|-------|
| Mercury Digestion | Completed | E245.1 | 07/02/20 10:30 | JRH | |
| Metal Digestion | Completed | SW3015A | 06/30/20 13:20 | JRH | |

Inorganics

Method: E300.0, Run Date: 06/25/20 12:59, Analyst: JDP

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------------|-----|------|-------|----------|------------|-------|
| Fluoride (Undistilled) | Not detected | 1.0 | 0.08 | mg/L | 5 | 16984-48-8 | |

Method: E300.0, Run Date: 06/25/20 12:34, Analyst: JDP

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------|----|------|-------|----------|------------|-------|
| Chloride | 29 | 10 | 0.16 | mg/L | 10 | 16887-00-6 | |
| Sulfate | 154 | 10 | 0.59 | mg/L | 10 | 14808-79-8 | |

Method: SM2540C, Run Date: 06/24/20 17:00, Analyst: NAW

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------|----|-----|-------|----------|------|-------|
| Total Dissolved Solids | 706 | 20 | 2 | mg/L | 2 | | |

Method: SM2540D, Run Date: 06/29/20 19:25, Analyst: ASB

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------------|----|-----|-------|----------|------|-------|
| Total Suspended Solids | Not detected | 3 | 1 | mg/L | 1.00 | | |

Metals

Method: E200.8, Run Date: 06/30/20 16:13, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------|-----|------|-------|----------|-----------|-------|
| Calcium* | 154 | 5.0 | 0.87 | mg/L | 100 | 7440-70-2 | |

Method: E200.8, Run Date: 06/30/20 14:13, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------|--------------|--------|----------|-------|----------|-----------|-------|
| Antimony | Not detected | 0.005 | 0.0026 | mg/L | 5 | 7440-36-0 | |
| Arsenic | Not detected | 0.002 | 0.00026 | mg/L | 5 | 7440-38-2 | |
| Barium | 0.042 | 0.005 | 0.00016 | mg/L | 5 | 7440-39-3 | |
| Beryllium | Not detected | 0.001 | 0.00022 | mg/L | 5 | 7440-41-7 | |
| Boron | 0.65 | 0.04 | 0.0018 | mg/L | 5 | 7440-42-8 | |
| Cadmium | Not detected | 0.0005 | 0.00019 | mg/L | 5 | 7440-43-9 | |
| Chromium | Not detected | 0.005 | 0.000097 | mg/L | 5 | 7440-47-3 | |
| Cobalt | Not detected | 0.005 | 0.00011 | mg/L | 5 | 7440-48-4 | |
| Lead | Not detected | 0.003 | 0.00019 | mg/L | 5 | 7439-92-1 | |
| Lithium* | 0.037 | 0.005 | 0.0016 | mg/L | 5 | 7439-93-2 | |
| Molybdenum | 0.026 | 0.005 | 0.00022 | mg/L | 5 | 7439-98-7 | |
| Selenium | Not detected | 0.005 | 0.0021 | mg/L | 5 | 7782-49-2 | |



Analytical Laboratory Report

Lab Sample ID: S15123.05 (continued)

Sample Tag: MW-6 L006016-05

Method: E200.8, Run Date: 06/30/20 14:13, Analyst: JRH (continued)

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------------|-------|----------|-------|----------|-----------|-------|
| Thallium | Not detected | 0.002 | 0.000086 | mg/L | 5 | 7440-28-0 | |

Method: E245.1, Run Date: 07/06/20 12:59, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------------|--------|----------|-------|----------|-----------|-------|
| Mercury | Not detected | 0.0002 | 0.000016 | mg/L | 1 | 7439-97-6 | |

Other / Misc.

Method: , Run Date: 07/08/20 08:45, Analyst: GEL

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|-----------|----|-----|-------|----------|------|-------|
| Misc. Special Project* | Completed | | | | 1 | | O |

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S15123.06

Sample Tag: MW-4 Duplicate L006016-06

Collected Date/Time: 06/23/2020 10:15

Matrix: Groundwater

COC Reference:

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---------------|-----------------|---------------|-------------------|---------------|
| 2 | 1L Plastic | HNO3 | Yes | 4.0 | IR |
| 2 | 1L Plastic | None | Yes | 4.0 | IR |
| 1 | 125ml Plastic | HNO3 | Yes | 4.0 | IR |

Extraction / Prep.

| Parameter | Result | Method | Run Date | Analyst | Flags |
|-------------------|-----------|---------|----------------|---------|-------|
| Mercury Digestion | Completed | E245.1 | 07/02/20 10:30 | JRH | |
| Metal Digestion | Completed | SW3015A | 06/30/20 13:20 | JRH | |

Inorganics

Method: E300.0, Run Date: 06/25/20 15:46, Analyst: JDP

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------|----|------|-------|----------|------------|-------|
| Chloride | 73 | 10 | 0.13 | mg/L | 10 | 16887-00-6 | |

Method: E300.0, Run Date: 06/25/20 13:12, Analyst: JDP

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------------|-----|------|-------|----------|------------|-------|
| Fluoride (Undistilled) | Not detected | 1.0 | 0.08 | mg/L | 5 | 16984-48-8 | |
| Sulfate | 57 | 5 | 0.52 | mg/L | 5 | 14808-79-8 | |

Method: SM2540C, Run Date: 06/24/20 17:00, Analyst: NAW

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------|----|-----|-------|----------|------|-------|
| Total Dissolved Solids | 582 | 20 | 2 | mg/L | 2 | | |

Method: SM2540D, Run Date: 06/29/20 19:25, Analyst: ASB

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------------|----|-----|-------|----------|------|-------|
| Total Suspended Solids | Not detected | 3 | 1 | mg/L | 1.00 | | |

Metals

Method: E200.8, Run Date: 06/30/20 16:14, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------|-----|------|-------|----------|-----------|-------|
| Calcium* | 108 | 5.0 | 0.87 | mg/L | 100 | 7440-70-2 | |

Method: E200.8, Run Date: 06/30/20 14:17, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------|--------------|--------|----------|-------|----------|-----------|-------|
| Antimony | Not detected | 0.005 | 0.0026 | mg/L | 5 | 7440-36-0 | |
| Arsenic | 0.007 | 0.002 | 0.00026 | mg/L | 5 | 7440-38-2 | |
| Barium | 0.170 | 0.005 | 0.00016 | mg/L | 5 | 7440-39-3 | |
| Beryllium | Not detected | 0.001 | 0.00022 | mg/L | 5 | 7440-41-7 | |
| Boron | 0.05 | 0.04 | 0.0018 | mg/L | 5 | 7440-42-8 | |
| Cadmium | Not detected | 0.0005 | 0.00019 | mg/L | 5 | 7440-43-9 | |
| Chromium | Not detected | 0.005 | 0.000097 | mg/L | 5 | 7440-47-3 | |
| Cobalt | Not detected | 0.005 | 0.00011 | mg/L | 5 | 7440-48-4 | |
| Lead | Not detected | 0.003 | 0.00019 | mg/L | 5 | 7439-92-1 | |
| Lithium* | 0.008 | 0.005 | 0.0016 | mg/L | 5 | 7439-93-2 | |
| Molybdenum | 0.006 | 0.005 | 0.00022 | mg/L | 5 | 7439-98-7 | |
| Selenium | Not detected | 0.005 | 0.0021 | mg/L | 5 | 7782-49-2 | |



Analytical Laboratory Report

Lab Sample ID: S15123.06 (continued)

Sample Tag: MW-4 Duplicate L006016-06

Method: E200.8, Run Date: 06/30/20 14:17, Analyst: JRH (continued)

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------------|-------|----------|-------|----------|-----------|-------|
| Thallium | Not detected | 0.002 | 0.000086 | mg/L | 5 | 7440-28-0 | |

Method: E245.1, Run Date: 07/06/20 13:01, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------------|--------|----------|-------|----------|-----------|-------|
| Mercury | Not detected | 0.0002 | 0.000016 | mg/L | 1 | 7439-97-6 | |

Other / Misc.

Method: , Run Date: 07/08/20 08:45, Analyst: GEL

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|-----------|----|-----|-------|----------|------|-------|
| Misc. Special Project* | Completed | | | | 1 | | O |

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S15123.07

Sample Tag: Field Blank L006016-07

Collected Date/Time: 06/23/2020 07:30

Matrix: Water

COC Reference:

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---------------|-----------------|---------------|-------------------|---------------|
| 2 | 1L Plastic | HNO3 | Yes | 4.0 | IR |
| 2 | 1L Plastic | None | Yes | 4.0 | IR |
| 1 | 125ml Plastic | HNO3 | Yes | 4.0 | IR |

Extraction / Prep.

| Parameter | Result | Method | Run Date | Analyst | Flags |
|-------------------|-----------|---------|----------------|---------|-------|
| Mercury Digestion | Completed | E245.1 | 07/02/20 10:30 | JRH | |
| Metal Digestion | Completed | SW3015A | 06/30/20 13:20 | JRH | |

Inorganics

Method: E300.0, Run Date: 06/25/20 13:25, Analyst: JDP

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------------|-----|------|-------|----------|------------|-------|
| Chloride | Not detected | 2.5 | 0.03 | mg/L | 2.5 | 16887-00-6 | |
| Fluoride (Undistilled) | Not detected | 0.5 | 0.04 | mg/L | 2.5 | 16984-48-8 | |
| Sulfate | Not detected | 2.5 | 0.15 | mg/L | 2.5 | 14808-79-8 | |

Method: SM2540C, Run Date: 06/24/20 17:00, Analyst: NAW

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------------|----|-----|-------|----------|------|-------|
| Total Dissolved Solids | Not detected | 20 | 2 | mg/L | 2 | | |

Method: SM2540D, Run Date: 06/29/20 19:25, Analyst: ASB

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|--------------|----|-----|-------|----------|------|-------|
| Total Suspended Solids | Not detected | 3 | 1 | mg/L | 1.00 | | |

Metals

Method: E200.8, Run Date: 06/30/20 16:03, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------------|-----|-------|-------|----------|-----------|-------|
| Calcium* | Not detected | 0.5 | 0.017 | mg/L | 2 | 7440-70-2 | |

Method: E200.8, Run Date: 06/30/20 14:01, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------|--------------|--------|----------|-------|----------|-----------|-------|
| Antimony | Not detected | 0.005 | 0.0010 | mg/L | 2 | 7440-36-0 | |
| Arsenic | Not detected | 0.002 | 0.00010 | mg/L | 2 | 7440-38-2 | |
| Barium | Not detected | 0.005 | 0.000065 | mg/L | 2 | 7440-39-3 | |
| Beryllium | Not detected | 0.001 | 0.000086 | mg/L | 2 | 7440-41-7 | |
| Boron | Not detected | 0.04 | 0.00070 | mg/L | 2 | 7440-42-8 | |
| Cadmium | Not detected | 0.0005 | 0.000076 | mg/L | 2 | 7440-43-9 | |
| Chromium | Not detected | 0.005 | 0.000039 | mg/L | 2 | 7440-47-3 | |
| Cobalt | Not detected | 0.005 | 0.000043 | mg/L | 2 | 7440-48-4 | |
| Lead | Not detected | 0.003 | 0.000076 | mg/L | 2 | 7439-92-1 | |
| Lithium* | Not detected | 0.005 | 0.00065 | mg/L | 2 | 7439-93-2 | |
| Molybdenum | Not detected | 0.005 | 0.000087 | mg/L | 2 | 7439-98-7 | |
| Selenium | Not detected | 0.005 | 0.00084 | mg/L | 2 | 7782-49-2 | |
| Thallium | Not detected | 0.002 | 0.000034 | mg/L | 2 | 7440-28-0 | |



Analytical Laboratory Report

Lab Sample ID: S15123.07 (continued)

Sample Tag: Field Blank L006016-07

Method: E245.1, Run Date: 07/06/20 13:03, Analyst: JRH

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|-----------|--------------|--------|----------|-------|----------|-----------|-------|
| Mercury | Not detected | 0.0002 | 0.000016 | mg/L | 1 | 7439-97-6 | |

Other / Misc.

Method: , Run Date: 07/08/20 08:45, Analyst: GEL

| Parameter | Result | RL | MDL | Units | Dilution | CAS# | Flags |
|------------------------|-----------|----|-----|-------|----------|------|-------|
| Misc. Special Project* | Completed | | | | 1 | | O |

O-Analysis performed by outside laboratory. See attached report.



Quality Control Cover Page

Report ID: S15123.01(01)
Report Date: 07/10/2020
Project: Erickson GMP
Lab Sample ID(s): S15123.01-S15123.07

Report to:

Attention: Jennifer Caporale
Board of Water & Light
P.O. Box 13007
Lansing, MI 48901

| Sample ID | Sample Tag | Collected | Matrix | Analysis Departments |
|-----------|---------------------------|------------------|-------------|----------------------|
| S15123.01 | MW-1 L006016-01 | 06/23/2020 12:22 | Groundwater | Inorganics, Metals |
| S15123.02 | MW-2 L006016-02 | 06/23/2020 16:01 | Groundwater | Inorganics, Metals |
| S15123.03 | MW-4 L006016-03 | 06/23/2020 10:15 | Groundwater | Inorganics, Metals |
| S15123.04 | MW-5 L006016-04 | 06/23/2020 16:46 | Groundwater | Inorganics, Metals |
| S15123.05 | MW-6 L006016-05 | 06/23/2020 14:16 | Groundwater | Inorganics, Metals |
| S15123.06 | MW-4 Duplicate L006016-06 | 06/23/2020 10:15 | Groundwater | Inorganics, Metals |
| S15123.07 | Field Blank L006016-07 | 06/23/2020 07:30 | Water | Inorganics, Metals |

I certify that this data package is in compliance with the terms and conditions of the program, and project, and contractual requirements both technically and for completeness. Release of the data contained in this hardcopy data package and its computer-readable data submitted has been authorized by the Quality Assurance Manager and his/her designee, as verified by the following signature.

Barbara Ball
Quality Assurance Manager



Quality Control Report

Report ID: QC-S15123-01
Generated on 07/29/2020

Report to
Attention: Jennifer Caporale
Board of Water & Light
P.O. Box 13007
Lansing, MI 48901

Report Produced by
Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: 517-702-6372 FAX:

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S15123.01-S15123.07
Project: Erickson GMP
Submitted Date/Time: 06/24/2020 11:20
Sampled by: Marc Wahrer
P.O. #:

QC Report Sections

Cover Page (Page 1)
Analysis Summary (Pages 2-8)
Prep Batch Summary (Pages 9-12)

Report Flag Descriptions

*: QC result is outside of indicated control limits
W: Surrogate result not applicable due to sample dilution

I certify that this data package is in compliance with the terms and conditions of the program, and project, and contractual requirements both technically and for completeness. Release of the data contained in this hardcopy data package and its computer-readable data submitted has been authorized by the Quality Assurance Manager and his/her designee, as verified by the following signature.

Barbara Ball
Quality Assurance Manager

QC Report - Analysis Summary

Lab Sample ID: S15123.01

Sample Tag: MW-1 L006016-01

Collected Date/Time: 06/23/2020 12:22

Matrix: Groundwater

COC Reference:

| Analysis | Method | Run Date/Time | Batch ID | Prep ID | Surr | QC Types |
|--------------------------|---------|----------------|------------------------------|----------------|------|-------------------|
| <i>Inorganics</i> | | | | | | |
| Chloride | E300.0 | 06/25/20 12:08 | CL200625-W1-A | CL200625-W1-A | No | BLK/LCS/MS/MSD/DU |
| Fluoride (Undistilled) | E300.0 | 06/25/20 12:08 | FL200625-W1-A | FL200625-W1-A | No | BLK/LCS/MS/MSD/DU |
| Sulfate | E300.0 | 06/25/20 12:08 | SFT200625-W1-A | SFT200625-W1-A | No | BLK/LCS/MS/MSD/DU |
| Total Dissolved Solids | SM2540C | 06/24/20 17:00 | TDS200624 | TDS200624 | No | BLK/LCS/DUP |
| Total Suspended Solids | SM2540D | 06/29/20 19:25 | TSS200629B | TSS200629B | No | BLK/LCS/DUP |
| <i>Metals</i> | | | | | | |
| Antimony | E200.8 | 06/30/20 14:05 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Arsenic | E200.8 | 06/30/20 14:05 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Barium | E200.8 | 06/30/20 14:05 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Beryllium | E200.8 | 06/30/20 14:05 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Boron | E200.8 | 06/30/20 14:05 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Cadmium | E200.8 | 06/30/20 14:05 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Calcium | E200.8 | 06/30/20 16:05 | MT5-20-0630B | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Chromium | E200.8 | 06/30/20 14:05 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Cobalt | E200.8 | 06/30/20 14:05 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Lead | E200.8 | 06/30/20 14:05 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Lithium | E200.8 | 06/30/20 14:05 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Mercury | E245.1 | 07/06/20 12:50 | HG2-HG3-20-0706AHGD-070120-1 | | No | BLK/LCS/MS/MSD |
| Molybdenum | E200.8 | 06/30/20 14:05 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Selenium | E200.8 | 06/30/20 14:05 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Thallium | E200.8 | 06/30/20 14:05 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |

QC Report - Analysis Summary

Lab Sample ID: S15123.02

Sample Tag: MW-2 L006016-02

Collected Date/Time: 06/23/2020 16:01

Matrix: Groundwater

COC Reference:

| Analysis | Method | Run Date/Time | Batch ID | Prep ID | Surr | QC Types |
|--------------------------|---------|----------------|------------------------------|----------------|------|-------------------|
| <i>Inorganics</i> | | | | | | |
| Chloride | E300.0 | 06/25/20 12:08 | CL200625-W1-B | CL200625-W1-B | No | BLK/LCS/MS/MSD/DU |
| Fluoride (Undistilled) | E300.0 | 06/25/20 12:21 | FL200625-W1-A | FL200625-W1-A | No | BLK/LCS/MS/MSD/DU |
| Sulfate | E300.0 | 06/25/20 12:08 | SFT200625-W1-B | SFT200625-W1-B | No | BLK/LCS/MS/MSD/DU |
| Total Dissolved Solids | SM2540C | 06/24/20 17:00 | TDS200624 | TDS200624 | No | BLK/LCS/DUP |
| Total Suspended Solids | SM2540D | 06/29/20 19:25 | TSS200629B | TSS200629B | No | BLK/LCS/DUP |
| <i>Metals</i> | | | | | | |
| Antimony | E200.8 | 06/30/20 14:07 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Arsenic | E200.8 | 06/30/20 14:07 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Barium | E200.8 | 06/30/20 14:07 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Beryllium | E200.8 | 06/30/20 14:07 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Boron | E200.8 | 06/30/20 14:07 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Cadmium | E200.8 | 06/30/20 14:07 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Calcium | E200.8 | 06/30/20 16:09 | MT5-20-0630B | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Chromium | E200.8 | 06/30/20 14:07 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Cobalt | E200.8 | 06/30/20 14:07 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Lead | E200.8 | 06/30/20 14:07 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Lithium | E200.8 | 06/30/20 14:07 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Mercury | E245.1 | 07/06/20 12:52 | HG2-HG3-20-0706AHGD-070120-1 | | No | BLK/LCS/MS/MSD |
| Molybdenum | E200.8 | 06/30/20 14:07 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Selenium | E200.8 | 06/30/20 14:07 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Thallium | E200.8 | 06/30/20 14:07 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |

QC Report - Analysis Summary

Lab Sample ID: S15123.03

Sample Tag: MW-4 L006016-03

Collected Date/Time: 06/23/2020 10:15

Matrix: Groundwater

COC Reference:

| Analysis | Method | Run Date/Time | Batch ID | Prep ID | Surr | QC Types |
|--------------------------|---------|----------------|------------------------------|----------------|------|-------------------|
| <i>Inorganics</i> | | | | | | |
| Chloride | E300.0 | 06/25/20 15:33 | CL200625-W1-A | CL200625-W1-A | No | BLK/LCS/MS/MSD/DU |
| Fluoride (Undistilled) | E300.0 | 06/25/20 12:33 | FL200625-W1-A | FL200625-W1-A | No | BLK/LCS/MS/MSD/DU |
| Sulfate | E300.0 | 06/25/20 12:33 | SFT200625-W1-A | SFT200625-W1-A | No | BLK/LCS/MS/MSD/DU |
| Total Dissolved Solids | SM2540C | 06/24/20 17:00 | TDS200624 | TDS200624 | No | BLK/LCS/DUP |
| Total Suspended Solids | SM2540D | 06/29/20 19:25 | TSS200629B | TSS200629B | No | BLK/LCS/DUP |
| <i>Metals</i> | | | | | | |
| Antimony | E200.8 | 06/30/20 14:09 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Arsenic | E200.8 | 06/30/20 14:09 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Barium | E200.8 | 06/30/20 14:09 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Beryllium | E200.8 | 06/30/20 14:09 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Boron | E200.8 | 06/30/20 14:09 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Cadmium | E200.8 | 06/30/20 14:09 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Calcium | E200.8 | 06/30/20 16:10 | MT5-20-0630B | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Chromium | E200.8 | 06/30/20 14:09 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Cobalt | E200.8 | 06/30/20 14:09 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Lead | E200.8 | 06/30/20 14:09 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Lithium | E200.8 | 06/30/20 14:09 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Mercury | E245.1 | 07/06/20 12:54 | HG2-HG3-20-0706AHGD-070120-1 | | No | BLK/LCS/MS/MSD |
| Molybdenum | E200.8 | 06/30/20 14:09 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Selenium | E200.8 | 06/30/20 14:09 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Thallium | E200.8 | 06/30/20 14:09 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |

QC Report - Analysis Summary

Lab Sample ID: S15123.04

Sample Tag: MW-5 L006016-04

Collected Date/Time: 06/23/2020 16:46

Matrix: Groundwater

COC Reference:

| Analysis | Method | Run Date/Time | Batch ID | Prep ID | Surr | QC Types |
|--------------------------|---------|----------------|------------------------------|----------------|------|-------------------|
| <i>Inorganics</i> | | | | | | |
| Chloride | E300.0 | 06/25/20 12:21 | CL200625-W1-B | CL200625-W1-B | No | BLK/LCS/MS/MSD/DU |
| Fluoride (Undistilled) | E300.0 | 06/25/20 12:46 | FL200625-W1-A | FL200625-W1-A | No | BLK/LCS/MS/MSD/DU |
| Sulfate | E300.0 | 06/25/20 15:08 | SFT200625-W1-B | SFT200625-W1-B | No | BLK/LCS/MS/MSD/DU |
| Total Dissolved Solids | SM2540C | 06/24/20 17:00 | TDS200624 | TDS200624 | No | BLK/LCS/DUP |
| Total Suspended Solids | SM2540D | 06/29/20 19:25 | TSS200629B | TSS200629B | No | BLK/LCS/DUP |
| <i>Metals</i> | | | | | | |
| Antimony | E200.8 | 06/30/20 14:11 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Arsenic | E200.8 | 06/30/20 14:11 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Barium | E200.8 | 06/30/20 14:11 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Beryllium | E200.8 | 06/30/20 14:11 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Boron | E200.8 | 06/30/20 14:11 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Cadmium | E200.8 | 06/30/20 14:11 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Calcium | E200.8 | 06/30/20 16:12 | MT5-20-0630B | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Chromium | E200.8 | 06/30/20 14:11 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Cobalt | E200.8 | 06/30/20 14:11 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Lead | E200.8 | 06/30/20 14:11 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Lithium | E200.8 | 06/30/20 14:11 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Mercury | E245.1 | 07/06/20 12:56 | HG2-HG3-20-0706AHGD-070120-1 | | No | BLK/LCS/MS/MSD |
| Molybdenum | E200.8 | 06/30/20 14:11 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Selenium | E200.8 | 06/30/20 14:11 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Thallium | E200.8 | 06/30/20 14:11 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |

QC Report - Analysis Summary

Lab Sample ID: S15123.05

Sample Tag: MW-6 L006016-05

Collected Date/Time: 06/23/2020 14:16

Matrix: Groundwater

COC Reference:

| Analysis | Method | Run Date/Time | Batch ID | Prep ID | Surr | QC Types |
|--------------------------|---------|----------------|------------------------------|----------------|------|-------------------|
| <i>Inorganics</i> | | | | | | |
| Chloride | E300.0 | 06/25/20 12:34 | CL200625-W1-B | CL200625-W1-B | No | BLK/LCS/MS/MSD/DU |
| Fluoride (Undistilled) | E300.0 | 06/25/20 12:59 | FL200625-W1-A | FL200625-W1-A | No | BLK/LCS/MS/MSD/DU |
| Sulfate | E300.0 | 06/25/20 12:34 | SFT200625-W1-B | SFT200625-W1-B | No | BLK/LCS/MS/MSD/DU |
| Total Dissolved Solids | SM2540C | 06/24/20 17:00 | TDS200624 | TDS200624 | No | BLK/LCS/DUP |
| Total Suspended Solids | SM2540D | 06/29/20 19:25 | TSS200629B | TSS200629B | No | BLK/LCS/DUP |
| <i>Metals</i> | | | | | | |
| Antimony | E200.8 | 06/30/20 14:13 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Arsenic | E200.8 | 06/30/20 14:13 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Barium | E200.8 | 06/30/20 14:13 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Beryllium | E200.8 | 06/30/20 14:13 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Boron | E200.8 | 06/30/20 14:13 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Cadmium | E200.8 | 06/30/20 14:13 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Calcium | E200.8 | 06/30/20 16:13 | MT5-20-0630B | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Chromium | E200.8 | 06/30/20 14:13 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Cobalt | E200.8 | 06/30/20 14:13 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Lead | E200.8 | 06/30/20 14:13 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Lithium | E200.8 | 06/30/20 14:13 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Mercury | E245.1 | 07/06/20 12:59 | HG2-HG3-20-0706AHGD-070120-1 | | No | BLK/LCS/MS/MSD |
| Molybdenum | E200.8 | 06/30/20 14:13 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Selenium | E200.8 | 06/30/20 14:13 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Thallium | E200.8 | 06/30/20 14:13 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |

QC Report - Analysis Summary

Lab Sample ID: S15123.06

Sample Tag: MW-4 Duplicate L006016-06

Collected Date/Time: 06/23/2020 10:15

Matrix: Groundwater

COC Reference:

| Analysis | Method | Run Date/Time | Batch ID | Prep ID | Surr | QC Types |
|--------------------------|---------|----------------|------------------------------|----------------|------|-------------------|
| <i>Inorganics</i> | | | | | | |
| Chloride | E300.0 | 06/25/20 15:46 | CL200625-W1-A | CL200625-W1-A | No | BLK/LCS/MS/MSD/DU |
| Fluoride (Undistilled) | E300.0 | 06/25/20 13:12 | FL200625-W1-A | FL200625-W1-A | No | BLK/LCS/MS/MSD/DU |
| Sulfate | E300.0 | 06/25/20 13:12 | SFT200625-W1-A | SFT200625-W1-A | No | BLK/LCS/MS/MSD/DU |
| Total Dissolved Solids | SM2540C | 06/24/20 17:00 | TDS200624 | TDS200624 | No | BLK/LCS/DUP |
| Total Suspended Solids | SM2540D | 06/29/20 19:25 | TSS200629B | TSS200629B | No | BLK/LCS/DUP |
| <i>Metals</i> | | | | | | |
| Antimony | E200.8 | 06/30/20 14:17 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Arsenic | E200.8 | 06/30/20 14:17 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Barium | E200.8 | 06/30/20 14:17 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Beryllium | E200.8 | 06/30/20 14:17 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Boron | E200.8 | 06/30/20 14:17 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Cadmium | E200.8 | 06/30/20 14:17 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Calcium | E200.8 | 06/30/20 16:14 | MT5-20-0630B | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Chromium | E200.8 | 06/30/20 14:17 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Cobalt | E200.8 | 06/30/20 14:17 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Lead | E200.8 | 06/30/20 14:17 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Lithium | E200.8 | 06/30/20 14:17 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Mercury | E245.1 | 07/06/20 13:01 | HG2-HG3-20-0706AHGD-070120-1 | | No | BLK/LCS/MS/MSD |
| Molybdenum | E200.8 | 06/30/20 14:17 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Selenium | E200.8 | 06/30/20 14:17 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Thallium | E200.8 | 06/30/20 14:17 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |

QC Report - Analysis Summary

Lab Sample ID: S15123.07

Sample Tag: Field Blank L006016-07

Collected Date/Time: 06/23/2020 07:30

Matrix: Water

COC Reference:

| Analysis | Method | Run Date/Time | Batch ID | Prep ID | Surr | QC Types |
|--------------------------|---------|----------------|------------------------------|----------------|------|-------------------|
| <i>Inorganics</i> | | | | | | |
| Chloride | E300.0 | 06/25/20 13:25 | CL200625-W1-A | CL200625-W1-A | No | BLK/LCS/MS/MSD/DU |
| Fluoride (Undistilled) | E300.0 | 06/25/20 13:25 | FL200625-W1-A | FL200625-W1-A | No | BLK/LCS/MS/MSD/DU |
| Sulfate | E300.0 | 06/25/20 13:25 | SFT200625-W1-A | SFT200625-W1-A | No | BLK/LCS/MS/MSD/DU |
| Total Dissolved Solids | SM2540C | 06/24/20 17:00 | TDS200624 | TDS200624 | No | BLK/LCS/DUP |
| Total Suspended Solids | SM2540D | 06/29/20 19:25 | TSS200629B | TSS200629B | No | BLK/LCS/DUP |
| <i>Metals</i> | | | | | | |
| Antimony | E200.8 | 06/30/20 14:01 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Arsenic | E200.8 | 06/30/20 14:01 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Barium | E200.8 | 06/30/20 14:01 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Beryllium | E200.8 | 06/30/20 14:01 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Boron | E200.8 | 06/30/20 14:01 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Cadmium | E200.8 | 06/30/20 14:01 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Calcium | E200.8 | 06/30/20 16:03 | MT5-20-0630B | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Chromium | E200.8 | 06/30/20 14:01 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Cobalt | E200.8 | 06/30/20 14:01 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Lead | E200.8 | 06/30/20 14:01 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Lithium | E200.8 | 06/30/20 14:01 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Mercury | E245.1 | 07/06/20 13:03 | HG2-HG3-20-0706AHGD-070120-1 | | No | BLK/LCS/MS/MSD |
| Molybdenum | E200.8 | 06/30/20 14:01 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Selenium | E200.8 | 06/30/20 14:01 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |
| Thallium | E200.8 | 06/30/20 14:01 | MT5-20-0630A | MTD-063020-5 | No | BLK/LCS/MS/MSD |

QC Report - Prep Batch Summary

Inorganics, Prep Batch ID: CL200625-W1-A

Surrogates: No, QC Types: BLK/LCS/MS/MSD/DUP

| Sample ID | Analysis | Method | Run Date/Time | Batch ID |
|-----------|----------|--------|----------------|---------------|
| S15123.01 | Chloride | E300.0 | 06/25/20 12:08 | CL200625-W1-A |
| S15123.03 | Chloride | E300.0 | 06/25/20 15:33 | CL200625-W1-A |
| S15123.06 | Chloride | E300.0 | 06/25/20 15:46 | CL200625-W1-A |
| S15123.07 | Chloride | E300.0 | 06/25/20 13:25 | CL200625-W1-A |

Inorganics, Prep Batch ID: CL200625-W1-B

Surrogates: No, QC Types: BLK/LCS/MS/MSD/DUP

| Sample ID | Analysis | Method | Run Date/Time | Batch ID |
|-----------|----------|--------|----------------|---------------|
| S15123.02 | Chloride | E300.0 | 06/25/20 12:08 | CL200625-W1-B |
| S15123.04 | Chloride | E300.0 | 06/25/20 12:21 | CL200625-W1-B |
| S15123.05 | Chloride | E300.0 | 06/25/20 12:34 | CL200625-W1-B |

Inorganics, Prep Batch ID: FL200625-W1-A

Surrogates: No, QC Types: BLK/LCS/MS/MSD/DUP

| Sample ID | Analysis | Method | Run Date/Time | Batch ID |
|-----------|------------------------|--------|----------------|---------------|
| S15123.01 | Fluoride (Undistilled) | E300.0 | 06/25/20 12:08 | FL200625-W1-A |
| S15123.02 | Fluoride (Undistilled) | E300.0 | 06/25/20 12:21 | FL200625-W1-A |
| S15123.03 | Fluoride (Undistilled) | E300.0 | 06/25/20 12:33 | FL200625-W1-A |
| S15123.04 | Fluoride (Undistilled) | E300.0 | 06/25/20 12:46 | FL200625-W1-A |
| S15123.05 | Fluoride (Undistilled) | E300.0 | 06/25/20 12:59 | FL200625-W1-A |
| S15123.06 | Fluoride (Undistilled) | E300.0 | 06/25/20 13:12 | FL200625-W1-A |
| S15123.07 | Fluoride (Undistilled) | E300.0 | 06/25/20 13:25 | FL200625-W1-A |

Inorganics, Prep Batch ID: SFT200625-W1-A

Surrogates: No, QC Types: BLK/LCS/MS/MSD/DUP

| Sample ID | Analysis | Method | Run Date/Time | Batch ID |
|-----------|----------|--------|----------------|----------------|
| S15123.01 | Sulfate | E300.0 | 06/25/20 12:08 | SFT200625-W1-A |
| S15123.03 | Sulfate | E300.0 | 06/25/20 12:33 | SFT200625-W1-A |
| S15123.06 | Sulfate | E300.0 | 06/25/20 13:12 | SFT200625-W1-A |
| S15123.07 | Sulfate | E300.0 | 06/25/20 13:25 | SFT200625-W1-A |

Inorganics, Prep Batch ID: SFT200625-W1-B

Surrogates: No, QC Types: BLK/LCS/MS/MSD/DUP

| Sample ID | Analysis | Method | Run Date/Time | Batch ID |
|-----------|----------|--------|----------------|----------------|
| S15123.02 | Sulfate | E300.0 | 06/25/20 12:08 | SFT200625-W1-B |
| S15123.04 | Sulfate | E300.0 | 06/25/20 15:08 | SFT200625-W1-B |
| S15123.05 | Sulfate | E300.0 | 06/25/20 12:34 | SFT200625-W1-B |

Inorganics, Prep Batch ID: TDS200624

Surrogates: No, QC Types: BLK/LCS/DUP

| Sample ID | Analysis | Method | Run Date/Time | Batch ID |
|-----------|------------------------|---------|----------------|-----------|
| S15123.01 | Total Dissolved Solids | SM2540C | 06/24/20 17:00 | TDS200624 |
| S15123.02 | Total Dissolved Solids | SM2540C | 06/24/20 17:00 | TDS200624 |
| S15123.03 | Total Dissolved Solids | SM2540C | 06/24/20 17:00 | TDS200624 |
| S15123.04 | Total Dissolved Solids | SM2540C | 06/24/20 17:00 | TDS200624 |
| S15123.05 | Total Dissolved Solids | SM2540C | 06/24/20 17:00 | TDS200624 |
| S15123.06 | Total Dissolved Solids | SM2540C | 06/24/20 17:00 | TDS200624 |
| S15123.07 | Total Dissolved Solids | SM2540C | 06/24/20 17:00 | TDS200624 |

QC Report - Prep Batch Summary

Inorganics, Prep Batch ID: TSS200629B

Surrogates: No, QC Types: BLK/LCS/DUP

| Sample ID | Analysis | Method | Run Date/Time | Batch ID |
|-----------|------------------------|---------|----------------|------------|
| S15123.01 | Total Suspended Solids | SM2540D | 06/29/20 19:25 | TSS200629B |
| S15123.02 | Total Suspended Solids | SM2540D | 06/29/20 19:25 | TSS200629B |
| S15123.03 | Total Suspended Solids | SM2540D | 06/29/20 19:25 | TSS200629B |
| S15123.04 | Total Suspended Solids | SM2540D | 06/29/20 19:25 | TSS200629B |
| S15123.05 | Total Suspended Solids | SM2540D | 06/29/20 19:25 | TSS200629B |
| S15123.06 | Total Suspended Solids | SM2540D | 06/29/20 19:25 | TSS200629B |
| S15123.07 | Total Suspended Solids | SM2540D | 06/29/20 19:25 | TSS200629B |

Metals, Prep Batch ID: HGD-070120-1

Surrogates: No, QC Types: BLK/LCS/MS/MSD

| Sample ID | Analysis | Method | Run Date/Time | Batch ID |
|-----------|----------|--------|----------------|------------------|
| S15123.01 | Mercury | E245.1 | 07/06/20 12:50 | HG2-HG3-20-0706A |
| S15123.02 | Mercury | E245.1 | 07/06/20 12:52 | HG2-HG3-20-0706A |
| S15123.03 | Mercury | E245.1 | 07/06/20 12:54 | HG2-HG3-20-0706A |
| S15123.04 | Mercury | E245.1 | 07/06/20 12:56 | HG2-HG3-20-0706A |
| S15123.05 | Mercury | E245.1 | 07/06/20 12:59 | HG2-HG3-20-0706A |
| S15123.06 | Mercury | E245.1 | 07/06/20 13:01 | HG2-HG3-20-0706A |
| S15123.07 | Mercury | E245.1 | 07/06/20 13:03 | HG2-HG3-20-0706A |

Metals, Prep Batch ID: MTD-063020-5

Surrogates: No, QC Types: BLK/LCS/MS/MSD

| Sample ID | Analysis | Method | Run Date/Time | Batch ID |
|-----------|------------|--------|----------------|--------------|
| S15123.01 | Antimony | E200.8 | 06/30/20 14:05 | MT5-20-0630A |
| S15123.01 | Arsenic | E200.8 | 06/30/20 14:05 | MT5-20-0630A |
| S15123.01 | Barium | E200.8 | 06/30/20 14:05 | MT5-20-0630A |
| S15123.01 | Beryllium | E200.8 | 06/30/20 14:05 | MT5-20-0630A |
| S15123.01 | Boron | E200.8 | 06/30/20 14:05 | MT5-20-0630A |
| S15123.01 | Cadmium | E200.8 | 06/30/20 14:05 | MT5-20-0630A |
| S15123.01 | Calcium | E200.8 | 06/30/20 16:05 | MT5-20-0630B |
| S15123.01 | Chromium | E200.8 | 06/30/20 14:05 | MT5-20-0630A |
| S15123.01 | Cobalt | E200.8 | 06/30/20 14:05 | MT5-20-0630A |
| S15123.01 | Lead | E200.8 | 06/30/20 14:05 | MT5-20-0630A |
| S15123.01 | Lithium | E200.8 | 06/30/20 14:05 | MT5-20-0630A |
| S15123.01 | Molybdenum | E200.8 | 06/30/20 14:05 | MT5-20-0630A |
| S15123.01 | Selenium | E200.8 | 06/30/20 14:05 | MT5-20-0630A |
| S15123.01 | Thallium | E200.8 | 06/30/20 14:05 | MT5-20-0630A |
| S15123.02 | Antimony | E200.8 | 06/30/20 14:07 | MT5-20-0630A |
| S15123.02 | Arsenic | E200.8 | 06/30/20 14:07 | MT5-20-0630A |
| S15123.02 | Barium | E200.8 | 06/30/20 14:07 | MT5-20-0630A |
| S15123.02 | Beryllium | E200.8 | 06/30/20 14:07 | MT5-20-0630A |
| S15123.02 | Boron | E200.8 | 06/30/20 14:07 | MT5-20-0630A |
| S15123.02 | Cadmium | E200.8 | 06/30/20 14:07 | MT5-20-0630A |
| S15123.02 | Calcium | E200.8 | 06/30/20 16:09 | MT5-20-0630B |
| S15123.02 | Chromium | E200.8 | 06/30/20 14:07 | MT5-20-0630A |
| S15123.02 | Cobalt | E200.8 | 06/30/20 14:07 | MT5-20-0630A |
| S15123.02 | Lead | E200.8 | 06/30/20 14:07 | MT5-20-0630A |
| S15123.02 | Lithium | E200.8 | 06/30/20 14:07 | MT5-20-0630A |
| S15123.02 | Molybdenum | E200.8 | 06/30/20 14:07 | MT5-20-0630A |
| S15123.02 | Selenium | E200.8 | 06/30/20 14:07 | MT5-20-0630A |

QC Report - Prep Batch Summary

Metals, Prep Batch ID: MTD-063020-5 (continued)

Surrogates: No, QC Types: BLK/LCS/MS/MSD

| Sample ID | Analysis | Method | Run Date/Time | Batch ID |
|-----------|------------|--------|----------------|--------------|
| S15123.02 | Thallium | E200.8 | 06/30/20 14:07 | MT5-20-0630A |
| S15123.03 | Antimony | E200.8 | 06/30/20 14:09 | MT5-20-0630A |
| S15123.03 | Arsenic | E200.8 | 06/30/20 14:09 | MT5-20-0630A |
| S15123.03 | Barium | E200.8 | 06/30/20 14:09 | MT5-20-0630A |
| S15123.03 | Beryllium | E200.8 | 06/30/20 14:09 | MT5-20-0630A |
| S15123.03 | Boron | E200.8 | 06/30/20 14:09 | MT5-20-0630A |
| S15123.03 | Cadmium | E200.8 | 06/30/20 14:09 | MT5-20-0630A |
| S15123.03 | Calcium | E200.8 | 06/30/20 16:10 | MT5-20-0630B |
| S15123.03 | Chromium | E200.8 | 06/30/20 14:09 | MT5-20-0630A |
| S15123.03 | Cobalt | E200.8 | 06/30/20 14:09 | MT5-20-0630A |
| S15123.03 | Lead | E200.8 | 06/30/20 14:09 | MT5-20-0630A |
| S15123.03 | Lithium | E200.8 | 06/30/20 14:09 | MT5-20-0630A |
| S15123.03 | Molybdenum | E200.8 | 06/30/20 14:09 | MT5-20-0630A |
| S15123.03 | Selenium | E200.8 | 06/30/20 14:09 | MT5-20-0630A |
| S15123.03 | Thallium | E200.8 | 06/30/20 14:09 | MT5-20-0630A |
| S15123.04 | Antimony | E200.8 | 06/30/20 14:11 | MT5-20-0630A |
| S15123.04 | Arsenic | E200.8 | 06/30/20 14:11 | MT5-20-0630A |
| S15123.04 | Barium | E200.8 | 06/30/20 14:11 | MT5-20-0630A |
| S15123.04 | Beryllium | E200.8 | 06/30/20 14:11 | MT5-20-0630A |
| S15123.04 | Boron | E200.8 | 06/30/20 14:11 | MT5-20-0630A |
| S15123.04 | Cadmium | E200.8 | 06/30/20 14:11 | MT5-20-0630A |
| S15123.04 | Calcium | E200.8 | 06/30/20 16:12 | MT5-20-0630B |
| S15123.04 | Chromium | E200.8 | 06/30/20 14:11 | MT5-20-0630A |
| S15123.04 | Cobalt | E200.8 | 06/30/20 14:11 | MT5-20-0630A |
| S15123.04 | Lead | E200.8 | 06/30/20 14:11 | MT5-20-0630A |
| S15123.04 | Lithium | E200.8 | 06/30/20 14:11 | MT5-20-0630A |
| S15123.04 | Molybdenum | E200.8 | 06/30/20 14:11 | MT5-20-0630A |
| S15123.04 | Selenium | E200.8 | 06/30/20 14:11 | MT5-20-0630A |
| S15123.04 | Thallium | E200.8 | 06/30/20 14:11 | MT5-20-0630A |
| S15123.05 | Antimony | E200.8 | 06/30/20 14:13 | MT5-20-0630A |
| S15123.05 | Arsenic | E200.8 | 06/30/20 14:13 | MT5-20-0630A |
| S15123.05 | Barium | E200.8 | 06/30/20 14:13 | MT5-20-0630A |
| S15123.05 | Beryllium | E200.8 | 06/30/20 14:13 | MT5-20-0630A |
| S15123.05 | Boron | E200.8 | 06/30/20 14:13 | MT5-20-0630A |
| S15123.05 | Cadmium | E200.8 | 06/30/20 14:13 | MT5-20-0630A |
| S15123.05 | Calcium | E200.8 | 06/30/20 16:13 | MT5-20-0630B |
| S15123.05 | Chromium | E200.8 | 06/30/20 14:13 | MT5-20-0630A |
| S15123.05 | Cobalt | E200.8 | 06/30/20 14:13 | MT5-20-0630A |
| S15123.05 | Lead | E200.8 | 06/30/20 14:13 | MT5-20-0630A |
| S15123.05 | Lithium | E200.8 | 06/30/20 14:13 | MT5-20-0630A |
| S15123.05 | Molybdenum | E200.8 | 06/30/20 14:13 | MT5-20-0630A |
| S15123.05 | Selenium | E200.8 | 06/30/20 14:13 | MT5-20-0630A |
| S15123.05 | Thallium | E200.8 | 06/30/20 14:13 | MT5-20-0630A |
| S15123.06 | Antimony | E200.8 | 06/30/20 14:17 | MT5-20-0630A |
| S15123.06 | Arsenic | E200.8 | 06/30/20 14:17 | MT5-20-0630A |
| S15123.06 | Barium | E200.8 | 06/30/20 14:17 | MT5-20-0630A |
| S15123.06 | Beryllium | E200.8 | 06/30/20 14:17 | MT5-20-0630A |
| S15123.06 | Boron | E200.8 | 06/30/20 14:17 | MT5-20-0630A |
| S15123.06 | Cadmium | E200.8 | 06/30/20 14:17 | MT5-20-0630A |

QC Report - Prep Batch Summary

Metals, Prep Batch ID: MTD-063020-5 (continued)

Surrogates: No, QC Types: BLK/LCS/MS/MSD

| Sample ID | Analysis | Method | Run Date/Time | Batch ID |
|-----------|------------|--------|----------------|--------------|
| S15123.06 | Calcium | E200.8 | 06/30/20 16:14 | MT5-20-0630B |
| S15123.06 | Chromium | E200.8 | 06/30/20 14:17 | MT5-20-0630A |
| S15123.06 | Cobalt | E200.8 | 06/30/20 14:17 | MT5-20-0630A |
| S15123.06 | Lead | E200.8 | 06/30/20 14:17 | MT5-20-0630A |
| S15123.06 | Lithium | E200.8 | 06/30/20 14:17 | MT5-20-0630A |
| S15123.06 | Molybdenum | E200.8 | 06/30/20 14:17 | MT5-20-0630A |
| S15123.06 | Selenium | E200.8 | 06/30/20 14:17 | MT5-20-0630A |
| S15123.06 | Thallium | E200.8 | 06/30/20 14:17 | MT5-20-0630A |
| S15123.07 | Antimony | E200.8 | 06/30/20 14:01 | MT5-20-0630A |
| S15123.07 | Arsenic | E200.8 | 06/30/20 14:01 | MT5-20-0630A |
| S15123.07 | Barium | E200.8 | 06/30/20 14:01 | MT5-20-0630A |
| S15123.07 | Beryllium | E200.8 | 06/30/20 14:01 | MT5-20-0630A |
| S15123.07 | Boron | E200.8 | 06/30/20 14:01 | MT5-20-0630A |
| S15123.07 | Cadmium | E200.8 | 06/30/20 14:01 | MT5-20-0630A |
| S15123.07 | Calcium | E200.8 | 06/30/20 16:03 | MT5-20-0630B |
| S15123.07 | Chromium | E200.8 | 06/30/20 14:01 | MT5-20-0630A |
| S15123.07 | Cobalt | E200.8 | 06/30/20 14:01 | MT5-20-0630A |
| S15123.07 | Lead | E200.8 | 06/30/20 14:01 | MT5-20-0630A |
| S15123.07 | Lithium | E200.8 | 06/30/20 14:01 | MT5-20-0630A |
| S15123.07 | Molybdenum | E200.8 | 06/30/20 14:01 | MT5-20-0630A |
| S15123.07 | Selenium | E200.8 | 06/30/20 14:01 | MT5-20-0630A |
| S15123.07 | Thallium | E200.8 | 06/30/20 14:01 | MT5-20-0630A |

Form 0: Sequence Log

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Filename</i> | <i>Run Time</i> | <i>Sample ID</i> | <i>Matrix</i> | <i>QC Type</i> |
|-----------------|------------------------|-----------------------|---------------|----------------|
| 001 | 10:30:07 Tue 30-Jun-20 | Blank | Liquid | |
| 002 | 10:32:06 Tue 30-Jun-20 | Std-0.0001 | Liquid | |
| 003 | 10:34:05 Tue 30-Jun-20 | Std-0.0005 | Liquid | |
| 004 | 10:36:03 Tue 30-Jun-20 | Std-0.001 | Liquid | |
| 005 | 10:38:02 Tue 30-Jun-20 | Std-0.005 | Liquid | |
| 006 | 10:40:01 Tue 30-Jun-20 | Std-0.02 | Liquid | |
| 007 | 10:42:00 Tue 30-Jun-20 | Std-0.05 | Liquid | |
| 008 | 10:43:59 Tue 30-Jun-20 | Std-0.2 | Liquid | |
| 009 | 10:45:57 Tue 30-Jun-20 | rinse | Liquid | |
| 010 | 10:51:53 Tue 30-Jun-20 | ICV-0.1 | Liquid | ICV |
| 011 | 10:53:52 Tue 30-Jun-20 | CCV-0.1 | Liquid | CCV |
| 012 | 10:55:50 Tue 30-Jun-20 | rinse | Liquid | |
| 013 | 11:01:57 Tue 30-Jun-20 | ICB | Liquid | ICB |
| 014 | 11:03:56 Tue 30-Jun-20 | CCB | Liquid | CCB |
| 015 | 11:05:54 Tue 30-Jun-20 | LOD 0.00005 | Liquid | |
| 016 | 11:07:53 Tue 30-Jun-20 | LOD 0.00005 | Liquid | |
| 017 | 11:10:04 Tue 30-Jun-20 | BS-0.0001 | Liquid | BS |
| 018 | 11:14:29 Tue 30-Jun-20 | BS-0.00025 | Liquid | BS |
| 019 | 11:16:28 Tue 30-Jun-20 | BS-0.0005 | Liquid | BS |
| 020 | 11:29:03 Tue 30-Jun-20 | BS-0.001 | Liquid | BS |
| 021 | 11:32:32 Tue 30-Jun-20 | BS-0.001 | Liquid | |
| 022 | 11:37:33 Tue 30-Jun-20 | BS-0.0025 | Liquid | BS |
| 023 | 11:42:04 Tue 30-Jun-20 | BS-0.0025 | Liquid | |
| 024 | 11:44:02 Tue 30-Jun-20 | Solu-AB | Liquid | AB |
| 025 | 11:46:01 Tue 30-Jun-20 | Solu-AA | Liquid | AA |
| 026 | 11:48:00 Tue 30-Jun-20 | Rinse | Liquid | |
| 027 | 11:53:35 Tue 30-Jun-20 | 063020_1 LCS-0.05 | Liquid | LCS |
| 028 | 11:55:37 Tue 30-Jun-20 | Rinse | Liquid | |
| 029 | 11:57:35 Tue 30-Jun-20 | 063020_1 LRB | Liquid | LRB |
| 030 | 12:00:26 Tue 30-Jun-20 | 14870.01 dil | Liquid | DIL |
| 031 | 12:02:24 Tue 30-Jun-20 | 14870.01s tot | Liquid | S |
| 032 | 12:04:23 Tue 30-Jun-20 | Rinse | Liquid | |
| 033 | 12:06:22 Tue 30-Jun-20 | 14870.01s diss | Liquid | S |
| 034 | 12:08:20 Tue 30-Jun-20 | Rinse | Liquid | |
| 035 | 12:10:19 Tue 30-Jun-20 | 14870.02s tot | Liquid | S |
| 036 | 12:12:18 Tue 30-Jun-20 | Rinse | Liquid | |
| 037 | 12:14:16 Tue 30-Jun-20 | 14870.02s diss | Liquid | S |
| 038 | 12:16:15 Tue 30-Jun-20 | Rinse | Liquid | |
| 039 | 12:18:13 Tue 30-Jun-20 | 14870.03s tot | Liquid | S |
| 040 | 12:20:12 Tue 30-Jun-20 | Rinse | Liquid | |
| 041 | 12:22:10 Tue 30-Jun-20 | 14870.03s diss | Liquid | S |
| 042 | 12:24:09 Tue 30-Jun-20 | Rinse | Liquid | |
| 043 | 12:26:07 Tue 30-Jun-20 | 14870.04s tot | Liquid | S |
| 044 | 12:28:05 Tue 30-Jun-20 | Rinse | Liquid | |
| 045 | 12:30:04 Tue 30-Jun-20 | 14870.04s diss | Liquid | S |
| 046 | 12:32:03 Tue 30-Jun-20 | Rinse | Liquid | |
| 047 | 12:34:01 Tue 30-Jun-20 | 14870.05s tot | Liquid | S |
| 048 | 12:36:00 Tue 30-Jun-20 | Rinse | Liquid | |
| 049 | 12:37:59 Tue 30-Jun-20 | 14870.05s diss | Liquid | S |
| 050 | 12:41:54 Tue 30-Jun-20 | 14870.01 MS-0.05 diss | Liquid | MS |
| 051 | 12:43:52 Tue 30-Jun-20 | 14870.01 MSD diss | Liquid | MSD |
| 052 | 12:45:51 Tue 30-Jun-20 | CCV2-0.1 | Liquid | CCV |
| 053 | 12:47:49 Tue 30-Jun-20 | Rinse | Liquid | |
| 054 | 12:52:08 Tue 30-Jun-20 | CCB2 | Liquid | CCB |
| 055 | 12:54:06 Tue 30-Jun-20 | 14938.01s tot | Liquid | S |
| 056 | 12:57:05 Tue 30-Jun-20 | 14938.01s diss | Liquid | S |

Form 0: Sequence Log

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Filename</i> | <i>Run Time</i> | <i>Sample ID</i> | <i>Matrix</i> | <i>QC Type</i> |
|-----------------|------------------------|----------------------|---------------|----------------|
| 057 | 12:58:03 Tue 30-Jun-20 | 14938.02s tot | Liquid | S |
| 058 | 13:00:01 Tue 30-Jun-20 | 14938.02s diss | Liquid | S |
| 059 | 13:01:59 Tue 30-Jun-20 | 14938.03s tot | Liquid | S |
| 060 | 13:03:58 Tue 30-Jun-20 | 14938.03s diss | Liquid | S |
| 061 | 13:05:56 Tue 30-Jun-20 | 14938.04s tot | Liquid | S |
| 062 | 13:07:54 Tue 30-Jun-20 | 14938.04s diss | Liquid | S |
| 063 | 13:15:38 Tue 30-Jun-20 | 14938.05s tot | Liquid | S |
| 064 | 13:19:56 Tue 30-Jun-20 | 14938.05s diss | Liquid | S |
| 065 | 13:22:58 Tue 30-Jun-20 | 14938.05 MS-0.05diss | Liquid | MS |
| 066 | 13:24:57 Tue 30-Jun-20 | 14938.05 MSD diss | Liquid | MSD |
| 067 | 13:26:56 Tue 30-Jun-20 | CCV3-0.1 | Liquid | CCV |
| 068 | 13:28:54 Tue 30-Jun-20 | Rinse | Liquid | |
| 069 | 13:33:47 Tue 30-Jun-20 | CCB3 | Liquid | CCB |
| 070 | 13:53:31 Tue 30-Jun-20 | 063020_5 LCS-0.05 | Liquid | LCS |
| 071 | 13:55:30 Tue 30-Jun-20 | Rinse | Liquid | |
| 072 | 13:57:32 Tue 30-Jun-20 | 063020_5 LRB | Liquid | LRB |
| 073 | 13:59:38 Tue 30-Jun-20 | 15123.07s | Liquid | |
| 074 | 14:01:55 Tue 30-Jun-20 | 15123.07s | Liquid | S |
| 075 | 14:03:52 Tue 30-Jun-20 | 15123.01 dil | Liquid | DIL |
| 076 | 14:05:50 Tue 30-Jun-20 | 15123.01s | Liquid | S |
| 077 | 14:07:48 Tue 30-Jun-20 | 15123.02s | Liquid | S |
| 078 | 14:09:45 Tue 30-Jun-20 | 15123.03s | Liquid | S |
| 079 | 14:11:42 Tue 30-Jun-20 | 15123.04s | Liquid | S |
| 080 | 14:13:41 Tue 30-Jun-20 | 15123.05s | Liquid | S |
| 081 | 14:15:38 Tue 30-Jun-20 | 15232.02s | Liquid | S |
| 082 | 14:17:37 Tue 30-Jun-20 | 15123.06s | Liquid | S |
| 083 | 14:19:34 Tue 30-Jun-20 | 15123.06 MS-0.05 | Liquid | MS |
| 084 | 14:21:32 Tue 30-Jun-20 | 15123.06 MSD | Liquid | MSD |
| 085 | 14:23:32 Tue 30-Jun-20 | CCV4-0.1 | Liquid | CCV |
| 086 | 14:25:30 Tue 30-Jun-20 | Rinse | Liquid | |
| 087 | 14:29:41 Tue 30-Jun-20 | CCB4 | Liquid | CCB |

Form 0: Sequence Log

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Filename</i> | <i>Run Time</i> | <i>Sample ID</i> | <i>Matrix</i> | <i>QC Type</i> |
|-----------------|------------------------|----------------------|---------------|----------------|
| 001 | 14:59:57 Tue 30-Jun-20 | Blank | Liquid | |
| 002 | 15:01:08 Tue 30-Jun-20 | Std-0.20 | Liquid | |
| 003 | 15:02:18 Tue 30-Jun-20 | Std-0.50 | Liquid | |
| 004 | 15:03:29 Tue 30-Jun-20 | Std-1.0 | Liquid | |
| 005 | 15:04:39 Tue 30-Jun-20 | Std-2.0 | Liquid | |
| 006 | 15:05:50 Tue 30-Jun-20 | Std-5.0 | Liquid | |
| 007 | 15:07:00 Tue 30-Jun-20 | ICV-2.0 | Liquid | ICV |
| 008 | 15:08:11 Tue 30-Jun-20 | CCV-2.0 | Liquid | CCV |
| 009 | 15:09:22 Tue 30-Jun-20 | ICB | Liquid | ICB |
| 010 | 15:10:33 Tue 30-Jun-20 | CCB | Liquid | CCB |
| 011 | 15:11:43 Tue 30-Jun-20 | BS-0.05 | Liquid | BS |
| 012 | 15:22:40 Tue 30-Jun-20 | 063020_1 LCS-1.0 | Liquid | LCS |
| 013 | 15:23:49 Tue 30-Jun-20 | 063020_1 LRB | Liquid | LRB |
| 014 | 15:25:38 Tue 30-Jun-20 | 14870.01 dil | Liquid | DIL |
| 015 | 15:26:48 Tue 30-Jun-20 | 14870.01s tot | Liquid | S |
| 016 | 15:27:59 Tue 30-Jun-20 | 14870.01s diss | Liquid | S |
| 017 | 15:29:09 Tue 30-Jun-20 | 14870.02s tot | Liquid | S |
| 018 | 15:30:19 Tue 30-Jun-20 | 14870.02s diss | Liquid | S |
| 019 | 15:31:29 Tue 30-Jun-20 | 14870.03s tot | Liquid | S |
| 020 | 15:32:39 Tue 30-Jun-20 | 14870.03s diss | Liquid | S |
| 021 | 15:33:48 Tue 30-Jun-20 | 14870.04s tot | Liquid | S |
| 022 | 15:34:59 Tue 30-Jun-20 | 14870.04s diss | Liquid | S |
| 023 | 15:36:09 Tue 30-Jun-20 | 14870.05s tot | Liquid | S |
| 024 | 15:37:19 Tue 30-Jun-20 | 14870.05s diss | Liquid | S |
| 025 | 15:39:54 Tue 30-Jun-20 | 14870.01 MS-2.0 diss | Liquid | MS |
| 026 | 15:41:03 Tue 30-Jun-20 | 14870.01 MSD diss | Liquid | MSD |
| 027 | 15:42:22 Tue 30-Jun-20 | CCV2-2.0 | Liquid | CCV |
| 028 | 15:43:33 Tue 30-Jun-20 | CCB2 | Liquid | CCB |
| 029 | 15:44:42 Tue 30-Jun-20 | 14938.01s tot | Liquid | S |
| 030 | 15:45:53 Tue 30-Jun-20 | 14938.01s diss | Liquid | S |
| 031 | 15:47:03 Tue 30-Jun-20 | 14938.02s tot | Liquid | S |
| 032 | 15:48:12 Tue 30-Jun-20 | 14938.02s diss | Liquid | S |
| 033 | 15:49:22 Tue 30-Jun-20 | 14938.03s tot | Liquid | S |
| 034 | 15:50:33 Tue 30-Jun-20 | 14938.03s diss | Liquid | S |
| 035 | 15:51:43 Tue 30-Jun-20 | 14938.04s tot | Liquid | S |
| 036 | 15:52:53 Tue 30-Jun-20 | 14938.04s diss | Liquid | S |
| 037 | 15:54:03 Tue 30-Jun-20 | 14938.05s tot | Liquid | S |
| 038 | 15:55:12 Tue 30-Jun-20 | 14938.05s diss | Liquid | S |
| 039 | 15:56:33 Tue 30-Jun-20 | 14938.05 MS-2.0 diss | Liquid | MS |
| 040 | 15:57:43 Tue 30-Jun-20 | 14938.05 MSD | Liquid | MSD |
| 041 | 15:58:53 Tue 30-Jun-20 | CCV3-2.0 | Liquid | CCV |
| 042 | 16:00:04 Tue 30-Jun-20 | CCB3 | Liquid | CCB |
| 043 | 16:01:29 Tue 30-Jun-20 | 063020_5 LCS-1.0 | Liquid | LCS |
| 044 | 16:02:39 Tue 30-Jun-20 | 063020_5 LRB | Liquid | LRB |
| 045 | 16:03:48 Tue 30-Jun-20 | 15123.07s | Liquid | S |
| 046 | 16:05:41 Tue 30-Jun-20 | 15123.01 dil | Liquid | DIL |
| 047 | 16:06:50 Tue 30-Jun-20 | 15123.01s | Liquid | S |
| 048 | 16:07:59 Tue 30-Jun-20 | 15123.02s | Liquid | S |
| 049 | 16:09:44 Tue 30-Jun-20 | 15123.02s -d | Liquid | S |
| 050 | 16:10:53 Tue 30-Jun-20 | 15123.03s | Liquid | S |
| 051 | 16:12:02 Tue 30-Jun-20 | 15123.04s | Liquid | S |
| 052 | 16:13:12 Tue 30-Jun-20 | 15123.05s | Liquid | S |
| 053 | 16:14:22 Tue 30-Jun-20 | 15123.06s | Liquid | S |
| 054 | 16:15:31 Tue 30-Jun-20 | 15123.06 MS-2.0 | Liquid | MS |
| 055 | 16:16:41 Tue 30-Jun-20 | 15123.06 MSD | Liquid | MSD |
| 056 | 16:17:50 Tue 30-Jun-20 | CCV4-2.0 | Liquid | CCV |

Form 0: Sequence Log

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Filename</i> | <i>Run Time</i> | <i>Sample ID</i> | <i>Matrix</i> | <i>QC Type</i> |
|-----------------|------------------------|------------------|---------------|----------------|
| 057 | 16:26:39 Tue 30-Jun-20 | CCB4 | Liquid | CCB |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

Lab Sample ID: S15123.01

Sample Tag: MW-1 L006016-01

Date Collected: 06/23/2020

Matrix: Groundwater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-47-3 | Chromium | Not detected | 0.005 | 0.000097 | mg/L | 5 | 06/30/2020 | |
| 7440-42-8 | Boron | 0.39 | 0.04 | 0.0018 | mg/L | 5 | 06/30/2020 | |
| 7440-38-2 | Arsenic | 0.007 | 0.002 | 0.00026 | mg/L | 5 | 06/30/2020 | |
| 7782-49-2 | Selenium | Not detected | 0.005 | 0.0021 | mg/L | 5 | 06/30/2020 | |
| 7439-98-7 | Molybdenum | Not detected | 0.005 | 0.00022 | mg/L | 5 | 06/30/2020 | |
| 7440-43-9 | Cadmium | Not detected | 0.0005 | 0.00019 | mg/L | 5 | 06/30/2020 | |
| 7440-36-0 | Antimony | Not detected | 0.005 | 0.0026 | mg/L | 5 | 06/30/2020 | |
| 7440-39-3 | Barium | 0.168 | 0.005 | 0.00016 | mg/L | 5 | 06/30/2020 | |
| 7440-28-0 | Thallium | Not detected | 0.002 | 0.000086 | mg/L | 5 | 06/30/2020 | |
| 7439-92-1 | Lead | Not detected | 0.003 | 0.00019 | mg/L | 5 | 06/30/2020 | |
| 7440-41-7 | Beryllium | Not detected | 0.001 | 0.00022 | mg/L | 5 | 06/30/2020 | |
| 7440-48-4 | Cobalt | Not detected | 0.005 | 0.00011 | mg/L | 5 | 06/30/2020 | |
| 7439-93-2 | Lithium | 0.032 | 0.005 | 0.0016 | mg/L | 5 | 06/30/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

Lab Sample ID: S15123.01

Sample Tag: MW-1 L006016-01

Date Collected: 06/23/2020

Matrix: Groundwater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-70-2 | Calcium | 165 | 5.0 | 0.22 | mg/L | 25 | 06/30/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

Lab Sample ID: S15123.02

Sample Tag: MW-2 L006016-02

Date Collected: 06/23/2020

Matrix: Groundwater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-47-3 | Chromium | Not detected | 0.005 | 0.000097 | mg/L | 5 | 06/30/2020 | |
| 7440-42-8 | Boron | 4.05 | 0.04 | 0.0018 | mg/L | 5 | 06/30/2020 | |
| 7440-38-2 | Arsenic | Not detected | 0.002 | 0.00026 | mg/L | 5 | 06/30/2020 | |
| 7782-49-2 | Selenium | Not detected | 0.005 | 0.0021 | mg/L | 5 | 06/30/2020 | |
| 7439-98-7 | Molybdenum | 0.010 | 0.005 | 0.00022 | mg/L | 5 | 06/30/2020 | |
| 7440-43-9 | Cadmium | Not detected | 0.0005 | 0.00019 | mg/L | 5 | 06/30/2020 | |
| 7440-36-0 | Antimony | Not detected | 0.005 | 0.0026 | mg/L | 5 | 06/30/2020 | |
| 7440-39-3 | Barium | 0.045 | 0.005 | 0.00016 | mg/L | 5 | 06/30/2020 | |
| 7440-28-0 | Thallium | Not detected | 0.002 | 0.000086 | mg/L | 5 | 06/30/2020 | |
| 7439-92-1 | Lead | Not detected | 0.003 | 0.00019 | mg/L | 5 | 06/30/2020 | |
| 7440-41-7 | Beryllium | Not detected | 0.001 | 0.00022 | mg/L | 5 | 06/30/2020 | |
| 7440-48-4 | Cobalt | Not detected | 0.005 | 0.00011 | mg/L | 5 | 06/30/2020 | |
| 7439-93-2 | Lithium | 0.055 | 0.005 | 0.0016 | mg/L | 5 | 06/30/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

Lab Sample ID: S15123.02

Sample Tag: MW-2 L006016-02

Date Collected: 06/23/2020

Matrix: Groundwater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-70-2 | Calcium | 268 | 5.0 | 0.87 | mg/L | 100 | 06/30/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

Lab Sample ID: S15123.03

Sample Tag: MW-4 L006016-03

Date Collected: 06/23/2020

Matrix: Groundwater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-47-3 | Chromium | Not detected | 0.005 | 0.000097 | mg/L | 5 | 06/30/2020 | |
| 7440-42-8 | Boron | 0.06 | 0.04 | 0.0018 | mg/L | 5 | 06/30/2020 | |
| 7440-38-2 | Arsenic | 0.007 | 0.002 | 0.00026 | mg/L | 5 | 06/30/2020 | |
| 7782-49-2 | Selenium | Not detected | 0.005 | 0.0021 | mg/L | 5 | 06/30/2020 | |
| 7439-98-7 | Molybdenum | Not detected | 0.005 | 0.00022 | mg/L | 5 | 06/30/2020 | |
| 7440-43-9 | Cadmium | Not detected | 0.0005 | 0.00019 | mg/L | 5 | 06/30/2020 | |
| 7440-36-0 | Antimony | Not detected | 0.005 | 0.0026 | mg/L | 5 | 06/30/2020 | |
| 7440-39-3 | Barium | 0.165 | 0.005 | 0.00016 | mg/L | 5 | 06/30/2020 | |
| 7440-28-0 | Thallium | Not detected | 0.002 | 0.000086 | mg/L | 5 | 06/30/2020 | |
| 7439-92-1 | Lead | Not detected | 0.003 | 0.00019 | mg/L | 5 | 06/30/2020 | |
| 7440-41-7 | Beryllium | Not detected | 0.001 | 0.00022 | mg/L | 5 | 06/30/2020 | |
| 7440-48-4 | Cobalt | Not detected | 0.005 | 0.00011 | mg/L | 5 | 06/30/2020 | |
| 7439-93-2 | Lithium | 0.008 | 0.005 | 0.0016 | mg/L | 5 | 06/30/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

Lab Sample ID: S15123.03

Sample Tag: MW-4 L006016-03

Date Collected: 06/23/2020

Matrix: Groundwater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-70-2 | Calcium | 108 | 5.0 | 0.87 | mg/L | 100 | 06/30/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

Lab Sample ID: S15123.04

Sample Tag: MW-5 L006016-04

Date Collected: 06/23/2020

Matrix: Groundwater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-47-3 | Chromium | Not detected | 0.005 | 0.000097 | mg/L | 5 | 06/30/2020 | |
| 7440-42-8 | Boron | 4.59 | 0.04 | 0.0018 | mg/L | 5 | 06/30/2020 | |
| 7440-38-2 | Arsenic | Not detected | 0.002 | 0.00026 | mg/L | 5 | 06/30/2020 | |
| 7782-49-2 | Selenium | Not detected | 0.005 | 0.0021 | mg/L | 5 | 06/30/2020 | |
| 7439-98-7 | Molybdenum | 0.050 | 0.005 | 0.00022 | mg/L | 5 | 06/30/2020 | |
| 7440-43-9 | Cadmium | Not detected | 0.0005 | 0.00019 | mg/L | 5 | 06/30/2020 | |
| 7440-36-0 | Antimony | Not detected | 0.005 | 0.0026 | mg/L | 5 | 06/30/2020 | |
| 7440-39-3 | Barium | 0.049 | 0.005 | 0.00016 | mg/L | 5 | 06/30/2020 | |
| 7440-28-0 | Thallium | Not detected | 0.002 | 0.000086 | mg/L | 5 | 06/30/2020 | |
| 7439-92-1 | Lead | Not detected | 0.003 | 0.00019 | mg/L | 5 | 06/30/2020 | |
| 7440-41-7 | Beryllium | Not detected | 0.001 | 0.00022 | mg/L | 5 | 06/30/2020 | |
| 7440-48-4 | Cobalt | Not detected | 0.005 | 0.00011 | mg/L | 5 | 06/30/2020 | |
| 7439-93-2 | Lithium | 0.061 | 0.005 | 0.0016 | mg/L | 5 | 06/30/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

Lab Sample ID: S15123.04

Sample Tag: MW-5 L006016-04

Date Collected: 06/23/2020

Matrix: Groundwater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-70-2 | Calcium | 289 | 5.0 | 0.87 | mg/L | 100 | 06/30/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

Lab Sample ID: S15123.05

Sample Tag: MW-6 L006016-05

Date Collected: 06/23/2020

Matrix: Groundwater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-47-3 | Chromium | Not detected | 0.005 | 0.000097 | mg/L | 5 | 06/30/2020 | |
| 7440-42-8 | Boron | 0.65 | 0.04 | 0.0018 | mg/L | 5 | 06/30/2020 | |
| 7440-38-2 | Arsenic | Not detected | 0.002 | 0.00026 | mg/L | 5 | 06/30/2020 | |
| 7782-49-2 | Selenium | Not detected | 0.005 | 0.0021 | mg/L | 5 | 06/30/2020 | |
| 7439-98-7 | Molybdenum | 0.026 | 0.005 | 0.00022 | mg/L | 5 | 06/30/2020 | |
| 7440-43-9 | Cadmium | Not detected | 0.0005 | 0.00019 | mg/L | 5 | 06/30/2020 | |
| 7440-36-0 | Antimony | Not detected | 0.005 | 0.0026 | mg/L | 5 | 06/30/2020 | |
| 7440-39-3 | Barium | 0.042 | 0.005 | 0.00016 | mg/L | 5 | 06/30/2020 | |
| 7440-28-0 | Thallium | Not detected | 0.002 | 0.000086 | mg/L | 5 | 06/30/2020 | |
| 7439-92-1 | Lead | Not detected | 0.003 | 0.00019 | mg/L | 5 | 06/30/2020 | |
| 7440-41-7 | Beryllium | Not detected | 0.001 | 0.00022 | mg/L | 5 | 06/30/2020 | |
| 7440-48-4 | Cobalt | Not detected | 0.005 | 0.00011 | mg/L | 5 | 06/30/2020 | |
| 7439-93-2 | Lithium | 0.037 | 0.005 | 0.0016 | mg/L | 5 | 06/30/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

Lab Sample ID: S15123.05

Sample Tag: MW-6 L006016-05

Date Collected: 06/23/2020

Matrix: Groundwater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-70-2 | Calcium | 154 | 5.0 | 0.87 | mg/L | 100 | 06/30/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

Lab Sample ID: S15123.06

Sample Tag: MW-4 Duplicate L006016-06

Date Collected: 06/23/2020

Matrix: Groundwater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-47-3 | Chromium | Not detected | 0.005 | 0.000097 | mg/L | 5 | 06/30/2020 | |
| 7440-42-8 | Boron | 0.05 | 0.04 | 0.0018 | mg/L | 5 | 06/30/2020 | |
| 7440-38-2 | Arsenic | 0.007 | 0.002 | 0.00026 | mg/L | 5 | 06/30/2020 | |
| 7782-49-2 | Selenium | Not detected | 0.005 | 0.0021 | mg/L | 5 | 06/30/2020 | |
| 7439-98-7 | Molybdenum | 0.006 | 0.005 | 0.00022 | mg/L | 5 | 06/30/2020 | |
| 7440-43-9 | Cadmium | Not detected | 0.0005 | 0.00019 | mg/L | 5 | 06/30/2020 | |
| 7440-36-0 | Antimony | Not detected | 0.005 | 0.0026 | mg/L | 5 | 06/30/2020 | |
| 7440-39-3 | Barium | 0.170 | 0.005 | 0.00016 | mg/L | 5 | 06/30/2020 | |
| 7440-28-0 | Thallium | Not detected | 0.002 | 0.000086 | mg/L | 5 | 06/30/2020 | |
| 7439-92-1 | Lead | Not detected | 0.003 | 0.00019 | mg/L | 5 | 06/30/2020 | |
| 7440-41-7 | Beryllium | Not detected | 0.001 | 0.00022 | mg/L | 5 | 06/30/2020 | |
| 7440-48-4 | Cobalt | Not detected | 0.005 | 0.00011 | mg/L | 5 | 06/30/2020 | |
| 7439-93-2 | Lithium | 0.008 | 0.005 | 0.0016 | mg/L | 5 | 06/30/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

Lab Sample ID: S15123.06

Sample Tag: MW-4 Duplicate L006016-06

Date Collected: 06/23/2020

Matrix: Groundwater

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-70-2 | Calcium | 108 | 5.0 | 0.87 | mg/L | 100 | 06/30/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

Lab Sample ID: S15123.07

Sample Tag: Field Blank L006016-07

Date Collected: 06/23/2020

Matrix: Water

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-47-3 | Chromium | Not detected | 0.005 | 0.000039 | mg/L | 2 | 06/30/2020 | |
| 7440-42-8 | Boron | Not detected | 0.04 | 0.00070 | mg/L | 2 | 06/30/2020 | |
| 7440-38-2 | Arsenic | Not detected | 0.002 | 0.00010 | mg/L | 2 | 06/30/2020 | |
| 7782-49-2 | Selenium | Not detected | 0.005 | 0.00084 | mg/L | 2 | 06/30/2020 | |
| 7439-98-7 | Molybdenum | Not detected | 0.005 | 0.000087 | mg/L | 2 | 06/30/2020 | |
| 7440-43-9 | Cadmium | Not detected | 0.0005 | 0.000076 | mg/L | 2 | 06/30/2020 | |
| 7440-36-0 | Antimony | Not detected | 0.005 | 0.0010 | mg/L | 2 | 06/30/2020 | |
| 7440-39-3 | Barium | Not detected | 0.005 | 0.000065 | mg/L | 2 | 06/30/2020 | |
| 7440-28-0 | Thallium | Not detected | 0.002 | 0.000034 | mg/L | 2 | 06/30/2020 | |
| 7439-92-1 | Lead | Not detected | 0.003 | 0.000076 | mg/L | 2 | 06/30/2020 | |
| 7440-41-7 | Beryllium | Not detected | 0.001 | 0.000086 | mg/L | 2 | 06/30/2020 | |
| 7440-48-4 | Cobalt | Not detected | 0.005 | 0.000043 | mg/L | 2 | 06/30/2020 | |
| 7439-93-2 | Lithium | Not detected | 0.005 | 0.00065 | mg/L | 2 | 06/30/2020 | |

Form 1: Metals Analysis Data Sheet

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

Lab Sample ID: S15123.07

Sample Tag: Field Blank L006016-07

Date Collected: 06/23/2020

Matrix: Water

| <i>CAS #</i> | <i>Analyte</i> | <i>Result</i> | <i>RL</i> | <i>MDL</i> | <i>Units</i> | <i>Dilute</i> | <i>Run Date</i> | <i>Notes</i> |
|--------------|----------------|---------------|-----------|------------|--------------|---------------|-----------------|--------------|
| 7440-70-2 | Calcium | Not detected | 0.5 | 0.017 | mg/L | 2 | 06/30/2020 | |

Form 1: Metals Analysis Data Sheet - Flag Description Key

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

Note/Qualifier Key

| | |
|---|---|
| b | Value detected less than reporting limit, but greater than MDL |
| e | Reported value estimated due to interference |
| j | Analyte also found in associated method blank |
| m | Duplicate injection precision not met |
| n | Spiked sample recovery outside control limits |
| s | Reported value determined by the MSA |
| u | Analyte not detected above reporting limit |
| A | TIC is a suspected aldol-condensation product |
| B | Compound also found in associated method blank |
| C | Analyte presence confirmed by GC/MS |
| D | Identified in an analysis at a secondary dilution factor |
| E | Concentration exceeds calibration range |
| J | Estimated value less than reporting limit, but greater than MDL |
| N | Presumptive evidence of TIC |
| P | Pesticide/Aroclor 2-column RPD exceeds limit |
| U | Analyte not detected above reporting limit |
| ! | Result is outside of stated limit criteria |
| F | Analysis run outside of holding time |
| G | Estimated result due to extraction run outside of holding time |
| H | Sample submitted and run outside of holding time |
| I | Matrix interference with internal standard |
| K | Elevated reporting limit due to low total solids |
| L | Elevated reporting limit due to low sample amount |
| M | Result reported to MDL not RDL |
| O | Analysis performed by outside laboratory. See attached report. |
| Q | Reported result represents most abundant aroclor |
| R | Preliminary result |
| S | Surrogate recovery outside of control limits |
| T | No correction for total solids |
| V | Accurate value not available due to presence of multiple aroclors |
| W | Surrogate result not applicable due to sample dilution |
| X | Elevated reporting limit due to matrix interference |
| Y | Elevated reporting limit due to high target concentration |
| Z | Estimated result due to matrix interference |
| a | ASTM prep method F963-11 |
| d | Duplicate analysis not within control limits |
| f | Filtered and preserved in lab |
| i | Incremental sampling |
| p | Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one |
| r | This analyte is being reported as the best result from multiple |
| v | VOCs analyzed outside of holding time based on the measurement of |
| x | Preserved from bulk sample |
| c | Filtered in lab |

Form 2A: Initial and Continuing Calibration Verification

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| Sample Name | QC Type | Dilute | Element | Sample Conc | Actual Conc | %Rec | LCL/UCL | Units | Matrix |
|--------------|---------|--------|---------|-------------|-------------|------|---------|-------|--------|
| 010 ICV-0.1 | ICV | 1 | Li | 0.100 | 0.1 | 100 | 90/110 | mg/L | Liquid |
| | | | Be | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | B | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Al | 0.103 | 0.1 | 103 | 90/110 | | |
| | | | Se | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Cr | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | Fe | 0.0997 | 0.1 | 100 | 90/110 | | |
| | | | Co | 0.102 | 0.1 | 102 | 90/110 | | |
| | | | Ni | 0.0983 | 0.1 | 98 | 90/110 | | |
| | | | Cu | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | Zn | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | As | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Sr | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | Mo | 0.103 | 0.1 | 103 | 90/110 | | |
| | | | Ag | 0.0976 | 0.1 | 98 | 90/110 | | |
| | | | Cd | 0.0979 | 0.1 | 98 | 90/110 | | |
| | | | Sb | 0.104 | 0.1 | 104 | 90/110 | | |
| | | | Ba | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Tl | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | Pb | 0.101 | 0.1 | 101 | 90/110 | | |
| 011 CCV-0.1 | CCV | 1 | Li | 0.0936 | 0.1 | 94 | 90/110 | mg/L | Liquid |
| | | | Be | 0.0930 | 0.1 | 93 | 90/110 | | |
| | | | B | 0.0938 | 0.1 | 94 | 90/110 | | |
| | | | Al | 0.0923 | 0.1 | 92 | 90/110 | | |
| | | | Se | 0.102 | 0.1 | 102 | 90/110 | | |
| | | | Cr | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Fe | 0.0994 | 0.1 | 99 | 90/110 | | |
| | | | Co | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Ni | 0.0987 | 0.1 | 99 | 90/110 | | |
| | | | Cu | 0.102 | 0.1 | 102 | 90/110 | | |
| | | | Zn | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | As | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Sr | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Mo | 0.102 | 0.1 | 102 | 90/110 | | |
| | | | Ag | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | Cd | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | Sb | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Ba | 0.103 | 0.1 | 103 | 90/110 | | |
| | | | Tl | 0.0961 | 0.1 | 96 | 90/110 | | |
| | | | Pb | 0.0961 | 0.1 | 96 | 90/110 | | |
| 052 CCV2-0.1 | CCV | 1 | Li | 0.102 | 0.1 | 102 | 90/110 | mg/L | Liquid |
| | | | Be | 0.0995 | 0.1 | 100 | 90/110 | | |
| | | | B | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | Al | 0.0972 | 0.1 | 97 | 90/110 | | |
| | | | Se | 0.0974 | 0.1 | 97 | 90/110 | | |
| | | | Cr | 0.103 | 0.1 | 103 | 90/110 | | |
| | | | Fe | 0.103 | 0.1 | 103 | 90/110 | | |
| | | | Co | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Ni | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Cu | 0.102 | 0.1 | 102 | 90/110 | | |
| | | | Zn | 0.106 | 0.1 | 106 | 90/110 | | |
| | | | As | 0.104 | 0.1 | 104 | 90/110 | | |
| | | | Sr | 0.104 | 0.1 | 104 | 90/110 | | |
| | | | Mo | 0.0999 | 0.1 | 100 | 90/110 | | |
| | | | Ag | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Cd | 0.102 | 0.1 | 102 | 90/110 | | |
| Sb | 0.104 | 0.1 | 104 | 90/110 | | | | | |

Form 2A: Initial and Continuing Calibration Verification

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| Sample Name | QC Type | Dilute | Element | Sample Conc | Actual Conc | %Rec | LCL/UCL | Units | Matrix |
|--------------|---------|--------|---------|-------------|-------------|------|---------|-------|--------|
| 052 CCV2-0.1 | CCV | 1 | Ba | 0.103 | 0.1 | 103 | 90/110 | mg/L | Liquid |
| | | | Tl | 0.0942 | 0.1 | 94 | 90/110 | | |
| | | | Pb | 0.0970 | 0.1 | 97 | 90/110 | | |
| 067 CCV3-0.1 | CCV | 1 | Li | 0.100 | 0.1 | 100 | 90/110 | mg/L | Liquid |
| | | | Be | 0.0962 | 0.1 | 96 | 90/110 | | |
| | | | B | 0.0970 | 0.1 | 97 | 90/110 | | |
| | | | Al | 0.0934 | 0.1 | 93 | 90/110 | | |
| | | | Se | 0.0990 | 0.1 | 99 | 90/110 | | |
| | | | Cr | 0.103 | 0.1 | 103 | 90/110 | | |
| | | | Fe | 0.102 | 0.1 | 102 | 90/110 | | |
| | | | Co | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | Ni | 0.0998 | 0.1 | 100 | 90/110 | | |
| | | | Cu | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | Zn | 0.102 | 0.1 | 102 | 90/110 | | |
| | | | As | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | Sr | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Mo | 0.0975 | 0.1 | 98 | 90/110 | | |
| | | | Ag | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | Cd | 0.0998 | 0.1 | 100 | 90/110 | | |
| | | | Sb | 0.103 | 0.1 | 103 | 90/110 | | |
| | | | Ba | 0.102 | 0.1 | 102 | 90/110 | | |
| Tl | 0.0968 | 0.1 | 97 | 90/110 | | | | | |
| Pb | 0.0985 | 0.1 | 99 | 90/110 | | | | | |
| 085 CCV4-0.1 | CCV | 1 | Li | 0.100 | 0.1 | 100 | 90/110 | mg/L | Liquid |
| | | | Be | 0.0979 | 0.1 | 98 | 90/110 | | |
| | | | B | 0.0962 | 0.1 | 96 | 90/110 | | |
| | | | Al | 0.0938 | 0.1 | 94 | 90/110 | | |
| | | | Se | 0.0996 | 0.1 | 100 | 90/110 | | |
| | | | Cr | 0.104 | 0.1 | 104 | 90/110 | | |
| | | | Fe | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Co | 0.102 | 0.1 | 102 | 90/110 | | |
| | | | Ni | 0.0988 | 0.1 | 99 | 90/110 | | |
| | | | Cu | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | Zn | 0.104 | 0.1 | 104 | 90/110 | | |
| | | | As | 0.100 | 0.1 | 100 | 90/110 | | |
| | | | Sr | 0.102 | 0.1 | 102 | 90/110 | | |
| | | | Mo | 0.0975 | 0.1 | 98 | 90/110 | | |
| | | | Ag | 0.101 | 0.1 | 101 | 90/110 | | |
| | | | Cd | 0.102 | 0.1 | 102 | 90/110 | | |
| | | | Sb | 0.104 | 0.1 | 104 | 90/110 | | |
| | | | Ba | 0.105 | 0.1 | 105 | 90/110 | | |
| Tl | 0.0924 | 0.1 | 92 | 90/110 | | | | | |
| Pb | 0.0934 | 0.1 | 93 | 90/110 | | | | | |

Form 2A: Initial and Continuing Calibration Verification

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Sample Name</i> | <i>QC Type</i> | <i>Dilute</i> | <i>Element</i> | <i>Sample Conc</i> | <i>Actual Conc</i> | <i>%Rec</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|--------------------|----------------|---------------|----------------|--------------------|--------------------|-------------|----------------|--------------|---------------|
| 007 ICV-2.0 | ICV | 1 | Mg | 2.02 | 2.0 | 101 | 90/110 | mg/L | Liquid |
| | | | Ca | 1.96 | 2.0 | 98 | 90/110 | | |
| 008 CCV-2.0 | CCV | 1 | Mg | 2.03 | 2.0 | 102 | 90/110 | mg/L | Liquid |
| | | | Ca | 1.98 | 2.0 | 99 | 90/110 | | |
| 027 CCV2-2.0 | CCV | 1 | Mg | 2.04 | 2.0 | 102 | 90/110 | mg/L | Liquid |
| | | | Ca | 2.08 | 2.0 | 104 | 90/110 | | |
| 041 CCV3-2.0 | CCV | 1 | Mg | 2.04 | 2.0 | 102 | 90/110 | mg/L | Liquid |
| | | | Ca | 2.02 | 2.0 | 101 | 90/110 | | |
| 056 CCV4-2.0 | CCV | 1 | Mg | 2.00 | 2.0 | 100 | 90/110 | mg/L | Liquid |
| | | | Ca | 2.00 | 2.0 | 100 | 90/110 | | |

Form 3: Blanks

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Sample Name</i> | <i>QC Type</i> | <i>Dilute</i> | <i>Element</i> | <i>Sample Conc</i> | <i>Raw Conc</i> | <i>Units</i> | <i>Matrix</i> |
|-------------------------|----------------|---------------|----------------|--------------------|-----------------|--------------|---------------|
| 013 ICB | ICB | 1 | Li | <0.001 | 0.000083 | mg/L | Liquid |
| | | | Be | <0.0002 | 0.000052 | | |
| | | | B | <0.008 | 0.000331 | | |
| | | | Al | <0.002 | 0.000083 | | |
| | | | Se | <0.001 | 0.000753 | | |
| | | | Cr | <0.001 | -0.000008 | | |
| | | | Fe | <0.004 | -0.000845 | | |
| | | | Co | <0.001 | 0.000009 | | |
| | | | Ni | <0.001 | -0.000018 | | |
| | | | Cu | <0.001 | 0.000010 | | |
| | | | Zn | <0.001 | -0.000090 | | |
| | | | As | <0.0004 | 0.000116 | | |
| | | | Sr | <0.001 | -0.000000 | | |
| | | | Mo | <0.001 | 0.000515 | | |
| | | | Ag | <0.0001 | 0.000006 | | |
| | | | Cd | <0.0001 | 0.000013 | | |
| | | | Sb | <0.001 | 0.000667 | | |
| | | | Ba | <0.001 | 0.000010 | | |
| | | | Tl | <0.0004 | 0.000023 | | |
| | | | Pb | <0.0006 | 0.000013 | | |
| 014 CCB | CCB | 1 | Li | <0.001 | -0.000017 | mg/L | Liquid |
| | | | Be | <0.0002 | 0.000002 | | |
| | | | B | <0.008 | 0.000260 | | |
| | | | Al | <0.002 | -0.000007 | | |
| | | | Se | <0.001 | 0.000367 | | |
| | | | Cr | <0.001 | -0.000008 | | |
| | | | Fe | <0.004 | -0.001053 | | |
| | | | Co | <0.001 | 0.000004 | | |
| | | | Ni | <0.001 | -0.000018 | | |
| | | | Cu | <0.001 | 0.000007 | | |
| | | | Zn | <0.001 | -0.000136 | | |
| | | | As | <0.0004 | 0.000170 | | |
| | | | Sr | <0.001 | -0.000001 | | |
| | | | Mo | <0.001 | 0.000380 | | |
| | | | Ag | <0.0001 | 0.000002 | | |
| | | | Cd | <0.0001 | -0.000000 | | |
| | | | Sb | <0.001 | 0.000498 | | |
| | | | Ba | <0.001 | 0.000003 | | |
| | | | Tl | <0.0004 | 0.000015 | | |
| | | | Pb | <0.0006 | 0.000008 | | |
| 029 063020_1 LRB | LRB | 1 | Li | <0.001 | 0.000033 | mg/L | Liquid |
| | | | Be | <0.0002 | 0.000019 | | |
| | | | B | <0.008 | 0.000116 | | |
| | | | Al | <0.002 | 0.001203 | | |
| | | | Se | <0.001 | 0.000169 | | |
| | | | Cr | <0.001 | 0.000011 | | |
| | | | Fe | <0.004 | 0.000723 | | |
| | | | Co | <0.001 | 0.000011 | | |
| | | | Ni | <0.001 | -0.000009 | | |
| | | | Cu | <0.001 | 0.000029 | | |
| | | | Zn | <0.001 | -0.000040 | | |
| | | | As | <0.0004 | 0.000097 | | |
| | | | Sr | <0.001 | 0.000011 | | |
| | | | Mo | <0.001 | 0.000823 | | |
| | | | Ag | <0.0001 | 0.000017 | | |
| | | | Cd | <0.0001 | 0.000014 | | |
| | | | Sb | <0.001 | 0.000301 | | |

Form 3: Blanks

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| Sample Name | QC Type | Dilute | Element | Sample Conc | Raw Conc | Units | Matrix |
|------------------|---------|----------|---------|-------------|-----------|-------|--------|
| 029 063020_1 LRB | LRB | 1 | Ba | <0.001 | 0.000001 | mg/L | Liquid |
| | | | Tl | <0.0004 | 0.000018 | | |
| | | | Pb | <0.0006 | 0.000030 | | |
| 054 CCB2 | CCB | 1 | Li | <0.001 | -0.000007 | mg/L | Liquid |
| | | | Be | <0.0002 | 0.000004 | | |
| | | | B | <0.008 | 0.000423 | | |
| | | | Al | <0.002 | -0.000002 | | |
| | | | Se | <0.001 | 0.000544 | | |
| | | | Cr | <0.001 | 0.000018 | | |
| | | | Fe | <0.004 | -0.000688 | | |
| | | | Co | <0.001 | 0.000022 | | |
| | | | Ni | <0.001 | -0.000004 | | |
| | | | Cu | <0.001 | 0.000024 | | |
| | | | Zn | <0.001 | -0.000099 | | |
| | | | As | <0.0004 | 0.000107 | | |
| | | | Sr | <0.001 | 0.000128 | | |
| | | | Mo | <0.001 | 0.000611 | | |
| | | | Ag | <0.0001 | 0.000036 | | |
| | | | Cd | <0.0001 | 0.000024 | | |
| | | | Sb | <0.001 | 0.000716 | | |
| | | | Ba | <0.001 | 0.000039 | | |
| | | | Tl | <0.0004 | 0.000027 | | |
| Pb | <0.0006 | 0.000026 | | | | | |
| 069 CCB3 | CCB | 1 | Li | <0.001 | -0.000039 | mg/L | Liquid |
| | | | Be | <0.0002 | 0.000001 | | |
| | | | B | <0.008 | 0.000333 | | |
| | | | Al | <0.002 | -0.000029 | | |
| | | | Se | <0.001 | -0.000011 | | |
| | | | Cr | <0.001 | -0.000014 | | |
| | | | Fe | <0.004 | -0.001005 | | |
| | | | Co | <0.001 | 0.000009 | | |
| | | | Ni | <0.001 | -0.000018 | | |
| | | | Cu | <0.001 | 0.000007 | | |
| | | | Zn | <0.001 | -0.000096 | | |
| | | | As | <0.0004 | 0.000100 | | |
| | | | Sr | <0.001 | 0.000009 | | |
| | | | Mo | <0.001 | 0.000572 | | |
| | | | Ag | <0.0001 | 0.000009 | | |
| | | | Cd | <0.0001 | 0.000014 | | |
| | | | Sb | <0.001 | 0.000644 | | |
| | | | Ba | <0.001 | 0.000007 | | |
| | | | Tl | <0.0004 | 0.000007 | | |
| Pb | <0.0006 | 0.000005 | | | | | |
| 072 063020_5 LRB | LRB | 1 | Li | <0.001 | -0.000047 | mg/L | Liquid |
| | | | Be | <0.0002 | 0.000003 | | |
| | | | B | <0.008 | 0.000083 | | |
| | | | Al | <0.002 | 0.000118 | | |
| | | | Se | <0.001 | 0.000787 | | |
| | | | Cr | <0.001 | -0.000002 | | |
| | | | Fe | <0.004 | -0.001340 | | |
| | | | Co | <0.001 | 0.000005 | | |
| | | | Ni | <0.001 | -0.000027 | | |
| | | | Cu | <0.001 | 0.000010 | | |
| | | | Zn | <0.001 | -0.000009 | | |
| | | | As | <0.0004 | 0.000116 | | |
| | | | Sr | <0.001 | 0.000030 | | |
| | | | Mo | <0.001 | 0.000552 | | |

Form 3: Blanks

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Sample Name</i> | <i>QC Type</i> | <i>Dilute</i> | <i>Element</i> | <i>Sample Conc</i> | <i>Raw Conc</i> | <i>Units</i> | <i>Matrix</i> |
|--------------------|----------------|---------------|----------------|--------------------|-----------------|--------------|---------------|
| 072 063020_5 LRB | LRB | 1 | Ag | <0.0001 | 0.000009 | mg/L | Liquid |
| | | | Cd | <0.0001 | 0.000004 | | |
| | | | Sb | <0.001 | 0.000334 | | |
| | | | Ba | <0.001 | 0.000012 | | |
| | | | Tl | <0.0004 | 0.000000 | | |
| | | | Pb | <0.0006 | 0.000010 | | |
| 087 CCB4 | CCB | 1 | Li | <0.001 | -0.000005 | mg/L | Liquid |
| | | | Be | <0.0002 | 0.000001 | | |
| | | | B | <0.008 | 0.000667 | | |
| | | | Al | <0.002 | -0.000031 | | |
| | | | Se | <0.001 | 0.000076 | | |
| | | | Cr | <0.001 | -0.000004 | | |
| | | | Fe | <0.004 | -0.001129 | | |
| | | | Co | <0.001 | 0.000013 | | |
| | | | Ni | <0.001 | -0.000012 | | |
| | | | Cu | <0.001 | 0.000008 | | |
| | | | Zn | <0.001 | -0.000122 | | |
| | | | As | <0.0004 | 0.000090 | | |
| | | | Sr | <0.001 | 0.000006 | | |
| | | | Mo | <0.001 | 0.000659 | | |
| | | | Ag | <0.0001 | 0.000011 | | |
| | | | Cd | <0.0001 | 0.000010 | | |
| | | | Sb | <0.001 | 0.000615 | | |
| | | | Ba | <0.001 | 0.000015 | | |
| Tl | <0.0004 | 0.000005 | | | | | |
| Pb | <0.0006 | 0.000008 | | | | | |

Form 3: Blanks

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Sample Name</i> | <i>QC Type</i> | <i>Dilute</i> | <i>Element</i> | <i>Sample Conc</i> | <i>Raw Conc</i> | <i>Units</i> | <i>Matrix</i> |
|--------------------|----------------|---------------|----------------|--------------------|-----------------|--------------|---------------|
| 009 ICB | ICB | 1 | Mg | <0.05 | 0.000194 | mg/L | Liquid |
| | | | Ca | <0.05 | -0.008620 | | |
| 010 CCB | CCB | 1 | Mg | <0.05 | 0.000185 | mg/L | Liquid |
| | | | Ca | <0.05 | -0.003430 | | |
| 013 063020_1 LRB | LRB | 1 | Mg | <0.05 | 0.000941 | mg/L | Liquid |
| 028 CCB2 | CCB | 1 | Mg | <0.05 | 0.000807 | mg/L | Liquid |
| | | | Ca | <0.05 | -0.007986 | | |
| 042 CCB3 | CCB | 1 | Mg | <0.05 | 0.001072 | mg/L | Liquid |
| | | | Ca | <0.05 | -0.007554 | | |
| 044 063020_5 LRB | LRB | 1 | Mg | <0.05 | 0.000809 | mg/L | Liquid |
| | | | Ca | <0.05 | -0.007561 | | |
| 057 CCB4 | CCB | 1 | Mg | <0.05 | 0.000433 | mg/L | Liquid |
| | | | Ca | <0.05 | -0.006573 | | |

Form 4B: ICP Interference Check Sample

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| Sample Name | QC Type | Dilute | Element | Sample Conc | Actual Conc | %Rec | LCL/UCL | Units | Matrix | | | | | |
|-------------|---------|--------|-------------|-------------|-------------|------|---------|-------|--------|-----|-----|-----|------|--------|
| 024 Solu-AB | AB | 1 | Al | 9.86 | 10 | 99 | 65/135 | mg/L | Liquid | | | | | |
| | | | Cr | 0.0229 | 0.02 | 115 | 65/135 | | | | | | | |
| | | | Fe | 11.2 | 10 | 112 | 65/135 | | | | | | | |
| | | | Co | 0.0228 | 0.02 | 114 | 65/135 | | | | | | | |
| | | | Ni | 0.0222 | 0.02 | 111 | 65/135 | | | | | | | |
| | | | Cu | 0.0224 | 0.02 | 112 | 65/135 | | | | | | | |
| | | | Zn | 0.0234 | 0.02 | 117 | 65/135 | | | | | | | |
| | | | As | 0.0228 | 0.02 | 114 | 65/135 | | | | | | | |
| | | | Mo | 0.228 | 0.20 | 114 | 65/135 | | | | | | | |
| | | | Ag | 0.0222 | 0.02 | 111 | 65/135 | | | | | | | |
| | | | Cd | 0.0228 | 0.02 | 114 | 65/135 | | | | | | | |
| | | | 025 Solu-AA | AA | 1 | Li | <0.010 | | | 0.0 | N/A | N/A | mg/L | Liquid |
| | | | | | | Be | <0.001 | | | 0.0 | N/A | N/A | | |
| B | <0.04 | 0.0 | | | | N/A | N/A | | | | | | | |
| Se | <0.005 | 0.0 | | | | N/A | N/A | | | | | | | |
| Cr | <0.005 | 0.0 | | | | N/A | N/A | | | | | | | |
| Co | <0.005 | 0.0 | | | | N/A | N/A | | | | | | | |
| Ni | <0.005 | 0.0 | | | | N/A | N/A | | | | | | | |
| Cu | <0.005 | 0.0 | | | | N/A | N/A | | | | | | | |
| Zn | <0.005 | 0.0 | | | | N/A | N/A | | | | | | | |
| As | <0.002 | 0.0 | | | | N/A | N/A | | | | | | | |
| Sr | <0.005 | 0.0 | | | | N/A | N/A | | | | | | | |
| Ag | <0.0005 | 0.0 | | | | N/A | N/A | | | | | | | |
| Cd | <0.0005 | 0.0 | | | | N/A | N/A | | | | | | | |
| Sb | <0.005 | 0.0 | | | | N/A | N/A | | | | | | | |
| Ba | <0.005 | 0.0 | | | | N/A | N/A | | | | | | | |
| Tl | <0.002 | 0.0 | | | | N/A | N/A | | | | | | | |
| Pb | <0.003 | 0.0 | | | | N/A | N/A | | | | | | | |

Form 5A: Matrix Spike Sample Recovery

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Spike Name</i> | <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Spike Conc</i> | <i>Sample Conc</i> | <i>Spike Amount</i> | <i>%Rec</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|-------------------|--------------------|---------------|----------------|-------------------|--------------------|---------------------|-------------|----------------|--------------|---------------|
| 017 BS-0.0001 | | 1 | Li | 0.00009 | ND | 0.0001 | 90 | 70/130 | mg/L | Liquid |
| | | | Be | 0.00010 | ND | 0.0001 | 100 | 70/130 | | |
| | | | Cr | 0.00011 | ND | 0.0001 | 110 | 70/130 | | |
| | | | Co | 0.00011 | ND | 0.0001 | 110 | 70/130 | | |
| | | | Ni | 0.00010 | ND | 0.0001 | 100 | 70/130 | | |
| | | | Cu | 0.00010 | ND | 0.0001 | 100 | 70/130 | | |
| | | | Zn | 0.00013 | ND | 0.0001 | 130 | 70/130 | | |
| | | | Sr | 0.00010 | ND | 0.0001 | 100 | 70/130 | | |
| | | | Ag | 0.00010 | ND | 0.0001 | 100 | 70/130 | | |
| | | | Cd | 0.00011 | ND | 0.0001 | 110 | 70/130 | | |
| | | | Ba | 0.00012 | ND | 0.0001 | 120 | 70/130 | | |
| | | | Tl | 0.00011 | ND | 0.0001 | 110 | 70/130 | | |
| | | | Pb | 0.00010 | ND | 0.0001 | 100 | 70/130 | | |
| 018 BS-0.00025 | | 1 | Li | 0.00026 | ND | 0.00025 | 104 | 70/130 | mg/L | Liquid |
| | | | Be | 0.00031 | ND | 0.00025 | 124 | 70/130 | | |
| | | | B | 0.00031 | ND | 0.00025 | 124 | 70/130 | | |
| | | | Al | 0.00030 | ND | 0.00025 | 120 | 70/130 | | |
| | | | Cr | 0.00026 | ND | 0.00025 | 104 | 70/130 | | |
| | | | Co | 0.00030 | ND | 0.00025 | 120 | 70/130 | | |
| | | | Ni | 0.00028 | ND | 0.00025 | 112 | 70/130 | | |
| | | | Cu | 0.00031 | ND | 0.00025 | 124 | 70/130 | | |
| | | | Sr | 0.00030 | ND | 0.00025 | 120 | 70/130 | | |
| | | | Ag | 0.00028 | ND | 0.00025 | 112 | 70/130 | | |
| | | | Cd | 0.00032 | ND | 0.00025 | 128 | 70/130 | | |
| | | | Ba | 0.00027 | ND | 0.00025 | 108 | 70/130 | | |
| | | | Tl | 0.00028 | ND | 0.00025 | 112 | 70/130 | | |
| Pb | 0.00026 | ND | 0.00025 | 104 | 70/130 | | | | | |
| 019 BS-0.0005 | | 1 | Li | 0.00058 | ND | 0.0005 | 116 | 70/130 | mg/L | Liquid |
| | | | Be | 0.00056 | ND | 0.0005 | 112 | 70/130 | | |
| | | | B | 0.00062 | ND | 0.0005 | 124 | 70/130 | | |
| | | | Al | 0.00058 | ND | 0.0005 | 116 | 70/130 | | |
| | | | Se | 0.00042 | ND | 0.0005 | 84 | 70/130 | | |
| | | | Cr | 0.00053 | ND | 0.0005 | 106 | 70/130 | | |
| | | | Co | 0.00056 | ND | 0.0005 | 112 | 70/130 | | |
| | | | Ni | 0.00057 | ND | 0.0005 | 114 | 70/130 | | |
| | | | Cu | 0.00059 | ND | 0.0005 | 118 | 70/130 | | |
| | | | Zn | 0.00062 | ND | 0.0005 | 124 | 70/130 | | |
| | | | As | 0.00056 | ND | 0.0005 | 112 | 70/130 | | |
| | | | Sr | 0.00055 | ND | 0.0005 | 110 | 70/130 | | |
| | | | Mo | 0.00058 | ND | 0.0005 | 116 | 70/130 | | |
| Ag | 0.00053 | ND | 0.0005 | 106 | 70/130 | | | | | |
| Cd | 0.00053 | ND | 0.0005 | 106 | 70/130 | | | | | |
| Ba | 0.00052 | ND | 0.0005 | 104 | 70/130 | | | | | |
| Tl | 0.00056 | ND | 0.0005 | 112 | 70/130 | | | | | |
| Pb | 0.00053 | ND | 0.0005 | 106 | 70/130 | | | | | |
| 020 BS-0.001 | | 1 | Li | 0.00108 | ND | 0.001 | 108 | 70/130 | mg/L | Liquid |
| | | | Be | 0.00109 | ND | 0.001 | 109 | 70/130 | | |
| | | | B | 0.00120 | ND | 0.001 | 120 | 70/130 | | |
| | | | Al | 0.00111 | ND | 0.001 | 111 | 70/130 | | |
| | | | Se | 0.00119 | ND | 0.001 | 119 | 70/130 | | |
| | | | Cr | 0.00113 | ND | 0.001 | 113 | 70/130 | | |
| | | | Co | 0.00113 | ND | 0.001 | 113 | 70/130 | | |
| | | | Ni | 0.00103 | ND | 0.001 | 103 | 70/130 | | |
| | | | Cu | 0.00117 | ND | 0.001 | 117 | 70/130 | | |
| | | | Zn | 0.00130 | ND | 0.001 | 130 | 70/130 | | |
| | | | As | 0.00116 | ND | 0.001 | 116 | 70/130 | | |
| | | | Sr | 0.00114 | ND | 0.001 | 114 | 70/130 | | |

Form 5A: Matrix Spike Sample Recovery

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Spike Name</i> | <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Spike Conc</i> | <i>Sample Conc</i> | <i>Spike Amount</i> | <i>%Rec</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|-------------------|--------------------|---------------|----------------|-------------------|--------------------|---------------------|-------------|----------------|--------------|---------------|
| 020 BS-0.001 | | 1 | Mo | 0.00096 | ND | 0.001 | 96 | 70/130 | mg/L | Liquid |
| | | | Ag | 0.00111 | ND | 0.001 | 111 | 70/130 | | |
| | | | Cd | 0.00119 | ND | 0.001 | 119 | 70/130 | | |
| | | | Sb | 0.0013 | ND | 0.001 | 130 | 70/130 | | |
| | | | Ba | 0.00108 | ND | 0.001 | 108 | 70/130 | | |
| | | | Tl | 0.00109 | ND | 0.001 | 109 | 70/130 | | |
| | | | Pb | 0.00108 | ND | 0.001 | 108 | 70/130 | | |
| 022 BS-0.0025 | | 1 | Fe | 0.00207 | ND | 0.0025 | 83 | 70/130 | mg/L | Liquid |
| 050 14870.01 | 033 14870.01s diss | 5 | Li | 0.258 | <0.005 | 0.25 | 103 | 75/125 | mg/L | Liquid |
| | | | Be | 0.248 | <0.001 | 0.25 | 99 | 75/125 | | |
| | | | B | 0.291 | 0.04 | 0.25 | 100 | 75/125 | | |
| | | | Al | 0.244 | 0.018 | 0.25 | 90 | 75/125 | | |
| | | | Se | 0.250 | <0.005 | 0.25 | 100 | 75/125 | | |
| | | | Cr | 0.258 | <0.005 | 0.25 | 103 | 75/125 | | |
| | | | Fe | 0.360 | 0.11 | 0.25 | 100 | 75/125 | | |
| | | | Co | 0.254 | <0.005 | 0.25 | 102 | 75/125 | | |
| | | | Ni | 0.246 | <0.005 | 0.25 | 98 | 75/125 | | |
| | | | Cu | 0.250 | <0.005 | 0.25 | 100 | 75/125 | | |
| | | | Zn | 0.258 | <0.005 | 0.25 | 103 | 75/125 | | |
| | | | As | 0.254 | 0.002 | 0.25 | 101 | 75/125 | | |
| | | | Sr | 0.453 | 0.209 | 0.25 | 98 | 75/125 | | |
| | | | Mo | 0.238 | <0.005 | 0.25 | 95 | 75/125 | | |
| | | | Ag | 0.246 | <0.0005 | 0.25 | 98 | 75/125 | | |
| | | | Cd | 0.252 | <0.0005 | 0.25 | 101 | 75/125 | | |
| | | | Sb | 0.226 | <0.005 | 0.25 | 90 | 75/125 | | |
| Ba | 0.338 | 0.072 | 0.25 | 106 | 75/125 | | | | | |
| Tl | 0.228 | <0.002 | 0.25 | 91 | 75/125 | | | | | |
| Pb | 0.232 | <0.003 | 0.25 | 93 | 75/125 | | | | | |
| 065 14938.05 | 064 14938.05s diss | 5 | Li | 0.250 | 0.008 | 0.25 | 97 | 75/125 | mg/L | Liquid |
| | | | Be | 0.230 | <0.001 | 0.25 | 92 | 75/125 | | |
| | | | B | 0.345 | 0.12 | 0.25 | 90 | 75/125 | | |
| | | | Al | 0.226 | <0.010 | 0.25 | 90 | 75/125 | | |
| | | | Se | 0.255 | <0.005 | 0.25 | 102 | 75/125 | | |
| | | | Cr | 0.256 | <0.005 | 0.25 | 102 | 75/125 | | |
| | | | Fe | 0.282 | 0.03 | 0.25 | 101 | 75/125 | | |
| | | | Co | 0.254 | <0.005 | 0.25 | 102 | 75/125 | | |
| | | | Ni | 0.248 | <0.005 | 0.25 | 99 | 75/125 | | |
| | | | Cu | 0.250 | <0.005 | 0.25 | 100 | 75/125 | | |
| | | | Zn | 0.254 | <0.005 | 0.25 | 102 | 75/125 | | |
| | | | As | 0.254 | <0.002 | 0.25 | 102 | 75/125 | | |
| | | | Sr | 0.525 | 0.264 | 0.25 | 104 | 75/125 | | |
| | | | Mo | 0.242 | <0.005 | 0.25 | 97 | 75/125 | | |
| | | | Ag | 0.248 | <0.0005 | 0.25 | 99 | 75/125 | | |
| | | | Cd | 0.252 | <0.0005 | 0.25 | 101 | 75/125 | | |
| | | | Sb | 0.231 | <0.005 | 0.25 | 92 | 75/125 | | |
| Ba | 0.372 | 0.107 | 0.25 | 106 | 75/125 | | | | | |
| Tl | 0.230 | <0.002 | 0.25 | 92 | 75/125 | | | | | |
| Pb | 0.228 | <0.003 | 0.25 | 91 | 75/125 | | | | | |
| 083 15123.06 | 082 15123.06s | 5 | Li | 0.251 | 0.008 | 0.25 | 97 | 75/125 | mg/L | Liquid |
| | | | Be | 0.233 | <0.001 | 0.25 | 93 | 75/125 | | |
| | | | B | 0.283 | 0.05 | 0.25 | 93 | 75/125 | | |
| | | | Al | 0.223 | <0.010 | 0.25 | 89 | 75/125 | | |
| | | | Se | 0.251 | <0.005 | 0.25 | 100 | 75/125 | | |
| | | | Cr | 0.260 | <0.005 | 0.25 | 104 | 75/125 | | |
| | | | Fe | 1.53 | 1.30 | 0.25 | 92 | 75/125 | | |
| | | | Co | 0.251 | <0.005 | 0.25 | 100 | 75/125 | | |
| | | | Ni | 0.246 | <0.005 | 0.25 | 98 | 75/125 | | |

Form 5A: Matrix Spike Sample Recovery

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Spike Name</i> | <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Spike Conc</i> | <i>Sample Conc</i> | <i>Spike Amount</i> | <i>%Rec</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|-------------------|--------------------|---------------|----------------|-------------------|--------------------|---------------------|-------------|----------------|--------------|---------------|
| 083 15123.06 | 082 15123.06s | 5 | Cu | 0.239 | <0.005 | 0.25 | 96 | 75/125 | mg/L | Liquid |
| | | | Zn | 0.251 | <0.005 | 0.25 | 100 | 75/125 | | |
| | | | As | 0.261 | 0.007 | 0.25 | 102 | 75/125 | | |
| | | | Sr | 0.401 | 0.141 | 0.25 | 104 | 75/125 | | |
| | | | Mo | 0.236 | 0.006 | 0.25 | 92 | 75/125 | | |
| | | | Ag | 0.245 | <0.0005 | 0.25 | 98 | 75/125 | | |
| | | | Cd | 0.250 | <0.0005 | 0.25 | 100 | 75/125 | | |
| | | | Sb | 0.228 | <0.005 | 0.25 | 91 | 75/125 | | |
| | | | Ba | 0.437 | 0.170 | 0.25 | 107 | 75/125 | | |
| | | | Tl | 0.228 | <0.002 | 0.25 | 91 | 75/125 | | |
| | | | Pb | 0.225 | <0.003 | 0.25 | 90 | 75/125 | | |

Form 5A: Matrix Spike Sample Recovery

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Spike Name</i> | <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Spike Conc</i> | <i>Sample Conc</i> | <i>Spike Amount</i> | <i>%Rec</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|---------------------|--------------------|---------------|----------------|-------------------|--------------------|---------------------|-------------|----------------|--------------|---------------|
| 011 BS-0.05 | | 1 | Mg | 0.051 | ND | 0.05 | 102 | 70/130 | mg/L | Liquid |
| | | | Ca | 0.048 | ND | 0.05 | 96 | 70/130 | | |
| 025 14870.01 MS-2.0 | 016 14870.01s diss | 1 | Mg | 6.62 | 4.55 | 2.0 | 104 | 75/125 | mg/L | Liquid |
| | | | Ca | 18.9 | 16.9 | 2.0 | 100 | 75/125 | | |
| 039 14938.05 MS-2.0 | 038 14938.05s diss | 1 | Mg | 8.15 | 6.44 | 2.0 | 86 | 75/125 | mg/L | Liquid |
| 054 15123.06 MS-2.0 | 053 15123.06s | 5 | Ca | 118 | 108 | 10.0 | 100 | 75/125 | mg/L | Liquid |

Form 5B: Matrix Spike Duplicate Evaluation

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| Duplicate Name | Sample Name | Dilute | Element | Dup Conc | Samp Conc | %RPD | LCL/UCL | Units | Matrix |
|------------------|----------------------|--------|---------|----------|-----------|------|---------|-------|--------|
| 051 14870.01 MSD | 050 14870.01 MS-0.05 | 5 | Li | 0.243 | 0.258 | 6 | 0/20 | mg/L | Liquid |
| | | | Be | 0.233 | 0.248 | 6 | 0/20 | | |
| | | | B | 0.282 | 0.291 | 3 | 0/20 | | |
| | | | Al | 0.242 | 0.244 | 1 | 0/20 | | |
| | | | Se | 0.252 | 0.250 | 1 | 0/20 | | |
| | | | Cr | 0.250 | 0.258 | 3 | 0/20 | | |
| | | | Fe | 0.357 | 0.360 | 1 | 0/20 | | |
| | | | Co | 0.249 | 0.254 | 2 | 0/20 | | |
| | | | Ni | 0.245 | 0.246 | 0 | 0/20 | | |
| | | | Cu | 0.243 | 0.250 | 3 | 0/20 | | |
| | | | Zn | 0.246 | 0.258 | 5 | 0/20 | | |
| | | | As | 0.249 | 0.254 | 2 | 0/20 | | |
| | | | Sr | 0.450 | 0.453 | 1 | 0/20 | | |
| | | | Mo | 0.247 | 0.238 | 4 | 0/20 | | |
| | | | Ag | 0.244 | 0.246 | 1 | 0/20 | | |
| | | | Cd | 0.249 | 0.252 | 1 | 0/20 | | |
| | | | Sb | 0.229 | 0.226 | 1 | 0/20 | | |
| | | | Ba | 0.324 | 0.338 | 4 | 0/20 | | |
| | | | Tl | 0.234 | 0.228 | 3 | 0/20 | | |
| | | | Pb | 0.232 | 0.232 | 0 | 0/20 | | |
| 066 14938.05 MSD | 065 14938.05 | 5 | Li | 0.248 | 0.250 | 1 | 0/20 | mg/L | Liquid |
| | | | Be | 0.235 | 0.230 | 2 | 0/20 | | |
| | | | B | 0.356 | 0.345 | 3 | 0/20 | | |
| | | | Al | 0.236 | 0.226 | 4 | 0/20 | | |
| | | | Se | 0.259 | 0.255 | 2 | 0/20 | | |
| | | | Cr | 0.264 | 0.256 | 3 | 0/20 | | |
| | | | Fe | 0.270 | 0.282 | 4 | 0/20 | | |
| | | | Co | 0.255 | 0.254 | 0 | 0/20 | | |
| | | | Ni | 0.245 | 0.248 | 1 | 0/20 | | |
| | | | Cu | 0.252 | 0.250 | 1 | 0/20 | | |
| | | | Zn | 0.260 | 0.254 | 2 | 0/20 | | |
| | | | As | 0.256 | 0.254 | 1 | 0/20 | | |
| | | | Sr | 0.521 | 0.525 | 1 | 0/20 | | |
| | | | Mo | 0.252 | 0.242 | 4 | 0/20 | | |
| | | | Ag | 0.242 | 0.248 | 2 | 0/20 | | |
| | | | Cd | 0.247 | 0.252 | 2 | 0/20 | | |
| | | | Sb | 0.236 | 0.231 | 2 | 0/20 | | |
| | | | Ba | 0.368 | 0.372 | 1 | 0/20 | | |
| | | | Tl | 0.228 | 0.230 | 1 | 0/20 | | |
| | | | Pb | 0.228 | 0.228 | 0 | 0/20 | | |
| 084 15123.06 MSD | 083 15123.06 MS-0.05 | 5 | Li | 0.252 | 0.251 | 0 | 0/20 | mg/L | Liquid |
| | | | Be | 0.237 | 0.233 | 2 | 0/20 | | |
| | | | B | 0.283 | 0.283 | 0 | 0/20 | | |
| | | | Al | 0.232 | 0.223 | 4 | 0/20 | | |
| | | | Se | 0.252 | 0.251 | 0 | 0/20 | | |
| | | | Cr | 0.254 | 0.260 | 2 | 0/20 | | |
| | | | Fe | 1.55 | 1.53 | 1 | 0/20 | | |
| | | | Co | 0.250 | 0.251 | 0 | 0/20 | | |
| | | | Ni | 0.246 | 0.246 | 0 | 0/20 | | |
| | | | Cu | 0.245 | 0.239 | 2 | 0/20 | | |
| | | | Zn | 0.251 | 0.251 | 0 | 0/20 | | |
| | | | As | 0.259 | 0.261 | 1 | 0/20 | | |
| | | | Sr | 0.402 | 0.401 | 0 | 0/20 | | |
| | | | Mo | 0.250 | 0.236 | 6 | 0/20 | | |
| | | | Ag | 0.243 | 0.245 | 1 | 0/20 | | |
| | | | Cd | 0.249 | 0.250 | 0 | 0/20 | | |
| | | | Sb | 0.230 | 0.228 | 1 | 0/20 | | |

Form 5B: Matrix Spike Duplicate Evaluation

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Duplicate Name</i> | <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Dup Conc</i> | <i>Samp Conc</i> | <i>%RPD</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|-----------------------|----------------------|---------------|----------------|-----------------|------------------|-------------|----------------|--------------|---------------|
| 084 15123.06 MSD | 083 15123.06 MS-0.05 | 5 | Ba | 0.425 | 0.437 | 3 | 0/20 | mg/L | Liquid |
| | | | Tl | 0.224 | 0.228 | 2 | 0/20 | | |
| | | | Pb | 0.227 | 0.225 | 1 | 0/20 | | |

Form 5B: Matrix Spike Duplicate Evaluation

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Duplicate Name</i> | <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Dup Conc</i> | <i>Samp Conc</i> | <i>%RPD</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|-----------------------|---------------------|---------------|----------------|-----------------|------------------|-------------|----------------|--------------|---------------|
| 026 14870.01 MSD | 025 14870.01 MS-2.0 | 1 | Mg | 6.54 | 6.62 | 1 | 0/20 | mg/L | Liquid |
| | | | Ca | 18.6 | 18.9 | 2 | 0/20 | | |
| 040 14938.05 MSD | 039 14938.05 MS-2.0 | 1 | Mg | 8.36 | 8.15 | 3 | 0/20 | mg/L | Liquid |
| 055 15123.06 MSD | 054 15123.06 MS-2.0 | 5 | Ca | 108 | 118 | 9 | 0/20 | mg/L | Liquid |

Form 7: Laboratory Control Sample

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Sample Conc</i> | <i>Actual Conc</i> | <i>%Rec</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|-----------------------|---------------|----------------|--------------------|--------------------|-------------|----------------|--------------|---------------|
| 027 063020_1 LCS-0.05 | 1 | Li | 0.0479 | 0.05 | 96 | 85/115 | mg/L | Liquid |
| | | Be | 0.0487 | 0.05 | 97 | 85/115 | | |
| | | B | 0.0473 | 0.05 | 95 | 85/115 | | |
| | | Al | 0.0471 | 0.05 | 94 | 85/115 | | |
| | | Se | 0.0482 | 0.05 | 96 | 85/115 | | |
| | | Cr | 0.0492 | 0.05 | 98 | 85/115 | | |
| | | Fe | 0.0484 | 0.05 | 97 | 85/115 | | |
| | | Co | 0.0480 | 0.05 | 96 | 85/115 | | |
| | | Ni | 0.0482 | 0.05 | 96 | 85/115 | | |
| | | Cu | 0.0488 | 0.05 | 98 | 85/115 | | |
| | | Zn | 0.0506 | 0.05 | 101 | 85/115 | | |
| | | As | 0.0487 | 0.05 | 97 | 85/115 | | |
| | | Sr | 0.0479 | 0.05 | 96 | 85/115 | | |
| | | Mo | 0.0460 | 0.05 | 92 | 85/115 | | |
| | | Ag | 0.0491 | 0.05 | 98 | 85/115 | | |
| | | Cd | 0.0495 | 0.05 | 99 | 85/115 | | |
| | | Sb | 0.0437 | 0.05 | 87 | 85/115 | | |
| | | Ba | 0.0499 | 0.05 | 100 | 85/115 | | |
| | | Tl | 0.0468 | 0.05 | 94 | 85/115 | | |
| | | Pb | 0.0474 | 0.05 | 95 | 85/115 | | |
| 070 063020_5 LCS-0.05 | 1 | Li | 0.0459 | 0.05 | 92 | 85/115 | mg/L | Liquid |
| | | Be | 0.0444 | 0.05 | 89 | 85/115 | | |
| | | B | 0.0457 | 0.05 | 91 | 85/115 | | |
| | | Al | 0.0449 | 0.05 | 90 | 85/115 | | |
| | | Se | 0.0460 | 0.05 | 92 | 85/115 | | |
| | | Cr | 0.0497 | 0.05 | 99 | 85/115 | | |
| | | Fe | 0.0494 | 0.05 | 99 | 85/115 | | |
| | | Co | 0.0498 | 0.05 | 100 | 85/115 | | |
| | | Ni | 0.0501 | 0.05 | 100 | 85/115 | | |
| | | Cu | 0.0496 | 0.05 | 99 | 85/115 | | |
| | | Zn | 0.0503 | 0.05 | 101 | 85/115 | | |
| | | As | 0.0495 | 0.05 | 99 | 85/115 | | |
| | | Sr | 0.0502 | 0.05 | 100 | 85/115 | | |
| | | Mo | 0.0445 | 0.05 | 89 | 85/115 | | |
| | | Ag | 0.0491 | 0.05 | 98 | 85/115 | | |
| | | Cd | 0.0486 | 0.05 | 97 | 85/115 | | |
| | | Sb | 0.0453 | 0.05 | 91 | 85/115 | | |
| | | Ba | 0.0492 | 0.05 | 98 | 85/115 | | |
| | | Tl | 0.0477 | 0.05 | 95 | 85/115 | | |
| | | Pb | 0.0471 | 0.05 | 94 | 85/115 | | |

Form 7: Laboratory Control Sample

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Sample Conc</i> | <i>Actual Conc</i> | <i>%Rec</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|----------------------|---------------|----------------|--------------------|--------------------|-------------|----------------|--------------|---------------|
| 012 063020_1 LCS-1.0 | 1 | Mg | 1.00 | 1.0 | 100 | 85/115 | mg/L | Liquid |
| | | Ca | 1.03 | 1.0 | 103 | 85/115 | | |
| 043 063020_5 LCS-1.0 | 1 | Mg | 0.993 | 1.0 | 99 | 85/115 | mg/L | Liquid |
| | | Ca | 1.03 | 1.0 | 103 | 85/115 | | |

Form 8: Serial Dilutions

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| Duplicate Name | Sample Name | Dilute | Element | Dup Conc | Samp Conc | %D | LCL/UCL | Units | Matrix |
|------------------|-------------------|--------|---------|----------|-----------|-----|---------|-------|--------|
| 030 14870.01 dil | 031 14870.01s tot | 5 | Li | <0.005 | <0.005 | NC | 0/10 | mg/L | Liquid |
| | | | Be | <0.001 | <0.001 | NC | 0/10 | | |
| | | | B | 0.04 | 0.04 | 0 | 0/10 | | |
| | | | Al | 0.064 | 0.054 | 19* | 0/10 | | |
| | | | Se | 0.009 | <0.005 | NC | 0/10 | | |
| | | | Cr | <0.005 | <0.005 | NC | 0/10 | | |
| | | | Fe | 0.39 | 0.45 | 13* | 0/10 | | |
| | | | Co | <0.005 | <0.005 | NC | 0/10 | | |
| | | | Ni | <0.005 | <0.005 | NC | 0/10 | | |
| | | | Cu | <0.005 | <0.005 | NC | 0/10 | | |
| | | | Zn | 0.005 | <0.005 | NC | 0/10 | | |
| | | | As | 0.003 | 0.002 | 50* | 0/10 | | |
| | | | Sr | 0.190 | 0.207 | 8 | 0/10 | | |
| | | | Mo | 0.011 | <0.005 | NC | 0/10 | | |
| | | | Ag | <0.0005 | <0.0005 | NC | 0/10 | | |
| | | | Cd | <0.0005 | <0.0005 | NC | 0/10 | | |
| | | | Sb | <0.005 | <0.005 | NC | 0/10 | | |
| | | | Ba | 0.063 | 0.073 | 14* | 0/10 | | |
| | | | Tl | <0.002 | <0.002 | NC | 0/10 | | |
| | | | Pb | <0.003 | <0.003 | NC | 0/10 | | |
| 075 15123.01 dil | 076 15123.01s | 5 | Li | 0.029 | 0.032 | 9 | 0/10 | mg/L | Liquid |
| | | | Be | <0.001 | <0.001 | NC | 0/10 | | |
| | | | B | 0.40 | 0.39 | 3 | 0/10 | | |
| | | | Al | 0.249 | 0.244 | 2 | 0/10 | | |
| | | | Se | <0.005 | <0.005 | NC | 0/10 | | |
| | | | Cr | <0.005 | <0.005 | NC | 0/10 | | |
| | | | Fe | 9.21 | 9.63 | 4 | 0/10 | | |
| | | | Co | <0.005 | <0.005 | NC | 0/10 | | |
| | | | Ni | <0.005 | <0.005 | NC | 0/10 | | |
| | | | Cu | <0.005 | <0.005 | NC | 0/10 | | |
| | | | Zn | 0.012 | <0.005 | NC | 0/10 | | |
| | | | As | 0.006 | 0.007 | 14* | 0/10 | | |
| | | | Sr | 0.232 | 0.246 | 6 | 0/10 | | |
| | | | Mo | 0.010 | <0.005 | NC | 0/10 | | |
| | | | Ag | <0.0005 | <0.0005 | NC | 0/10 | | |
| | | | Cd | <0.0005 | <0.0005 | NC | 0/10 | | |
| | | | Sb | 0.007 | <0.005 | NC | 0/10 | | |
| | | | Ba | 0.161 | 0.168 | 4 | 0/10 | | |
| | | | Tl | <0.002 | <0.002 | NC | 0/10 | | |
| | | | Pb | <0.003 | <0.003 | NC | 0/10 | | |

Form 8: Serial Dilutions

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Duplicate Name</i> | <i>Sample Name</i> | <i>Dilute</i> | <i>Element</i> | <i>Dup Conc</i> | <i>Samp Conc</i> | <i>%D</i> | <i>LCL/UCL</i> | <i>Units</i> | <i>Matrix</i> |
|-----------------------|--------------------|---------------|----------------|-----------------|------------------|-----------|----------------|--------------|---------------|
| 014 14870.01 dil | 015 14870.01s tot | 1 | Mg | 4.61 | 4.81 | 4 | 0/10 | mg/L | Liquid |
| | | | Ca | 16.9 | 16.9 | 0 | 0/10 | | |
| 046 15123.01 dil | 047 15123.01s | 5 | Mg | 42.0 | 42.8 | 2 | 0/10 | mg/L | Liquid |
| | | | Ca | 165 | 165 | 0 | 0/10 | | |

Form 13: Analysis Run Log

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Filename</i> | <i>Run Time</i> | <i>Matrix</i> | <i>Analytes</i> |
|-----------------------|-----------------|---------------|--|
| 001 Blank | 10:30:07 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 002 Std-0.0001 | 10:32:06 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 003 Std-0.0005 | 10:34:05 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 004 Std-0.001 | 10:36:03 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 005 Std-0.005 | 10:38:02 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 006 Std-0.02 | 10:40:01 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 007 Std-0.05 | 10:42:00 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 008 Std-0.2 | 10:43:59 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 009 rinse | 10:45:57 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 010 ICV-0.1 | 10:51:53 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 011 CCV-0.1 | 10:53:52 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 012 rinse | 10:55:50 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 013 ICB | 11:01:57 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 014 CCB | 11:03:56 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 015 LOD 0.00005 | 11:05:54 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 016 LOD 0.00005 | 11:07:53 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 017 BS-0.0001 | 11:10:04 Tue | Liquid | Ag,Ba,Be,Cd,Co,Cr,Cu,Li,Ni,Pb,Sr,Tl,Zn |
| 018 BS-0.00025 | 11:14:29 Tue | Liquid | Ag,Al,B,Ba,Be,Cd,Co,Cr,Cu,Li,Ni,Pb,Sr,Tl |
| 019 BS-0.0005 | 11:16:28 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Li,Mo,Ni,Pb,Se,Sr,Tl,Zn |
| 020 BS-0.001 | 11:29:03 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 021 BS-0.001 | 11:32:32 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 022 BS-0.0025 | 11:37:33 Tue | Liquid | Fe |
| 023 BS-0.0025 | 11:42:04 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 024 Solu-AB | 11:44:02 Tue | Liquid | Ag,Al,As,Cd,Co,Cr,Cu,Fe,Mo,Ni,Zn |
| 025 Solu-AA | 11:46:01 Tue | Liquid | Ag,As,B,Ba,Be,Cd,Co,Cr,Cu,Li,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 026 Rinse | 11:48:00 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 027 063020_1 LCS-0.05 | 11:53:35 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 028 Rinse | 11:55:37 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 029 063020_1 LRB | 11:57:35 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 030 14870.01 dil | 12:00:26 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |

Form 13: Analysis Run Log

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Filename</i> | <i>Run Time</i> | <i>Matrix</i> | <i>Analytes</i> |
|---------------------------|-----------------|---------------|--|
| 031 14870.01s tot | 12:02:24 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 032 Rinse | 12:04:23 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 033 14870.01s diss | 12:06:22 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 034 Rinse | 12:08:20 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 035 14870.02s tot | 12:10:19 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 036 Rinse | 12:12:18 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 037 14870.02s diss | 12:14:16 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 038 Rinse | 12:16:15 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 039 14870.03s tot | 12:18:13 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 040 Rinse | 12:20:12 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 041 14870.03s diss | 12:22:10 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 042 Rinse | 12:24:09 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 043 14870.04s tot | 12:26:07 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 044 Rinse | 12:28:05 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 045 14870.04s diss | 12:30:04 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 046 Rinse | 12:32:03 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 047 14870.05s tot | 12:34:01 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 048 Rinse | 12:36:00 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 049 14870.05s diss | 12:37:59 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 050 14870.01 MS-0.05 diss | 12:41:54 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 051 14870.01 MSD diss | 12:43:52 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 052 CCV2-0.1 | 12:45:51 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 053 Rinse | 12:47:49 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 054 CCB2 | 12:52:08 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 055 14938.01s tot | 12:54:06 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 056 14938.01s diss | 12:56:05 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 057 14938.02s tot | 12:58:03 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 058 14938.02s diss | 13:00:01 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |

Form 13: Analysis Run Log

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Filename</i> | <i>Run Time</i> | <i>Matrix</i> | <i>Analytes</i> |
|--------------------------|-----------------|---------------|--|
| 059 14938.03s tot | 13:01:59 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 060 14938.03s diss | 13:03:58 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 061 14938.04s tot | 13:05:56 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 062 14938.04s diss | 13:07:54 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 063 14938.05s tot | 13:15:38 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 064 14938.05s diss | 13:19:56 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 065 14938.05 MS-0.05diss | 13:22:58 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 066 14938.05 MSD diss | 13:24:57 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 067 CCV3-0.1 | 13:26:56 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 068 Rinse | 13:28:54 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 069 CCB3 | 13:33:47 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 070 063020_5 LCS-0.05 | 13:53:31 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 071 Rinse | 13:55:30 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 072 063020_5 LRB | 13:57:32 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 073 15123.07s | 13:59:38 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 074 15123.07s | 14:01:55 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 075 15123.01 dil | 14:03:52 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 076 15123.01s | 14:05:50 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 077 15123.02s | 14:07:48 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 078 15123.03s | 14:09:45 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 079 15123.04s | 14:11:42 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 080 15123.05s | 14:13:41 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 081 15232.02s | 14:15:38 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 082 15123.06s | 14:17:37 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 083 15123.06 MS-0.05 | 14:19:34 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 084 15123.06 MSD | 14:21:32 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 085 CCV4-0.1 | 14:23:32 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |
| 086 Rinse | 14:25:30 Tue | Liquid | Ag,Al,As,B,Ba,Be,Cd,Co,Cr,Cu,Fe,Li,Mo,Ni,Pb,Sb,Se,Sr,Tl,Zn |

Form 13: Analysis Run Log

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Filename</i> | <i>Run Time</i> | <i>Matrix</i> | <i>Analytes</i> |
|-----------------|-----------------|---------------|---|
| 087 CCB4 | 14:29:41 Tue | Liquid | Ag, Al, As, B, Ba, Be, Cd, Co, Cr, Cu, Fe, Li, Mo, Ni, Pb, Sb, Se, Sr, Tl, Zn |

Form 13: Analysis Run Log

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Filename</i> | <i>Run Time</i> | <i>Matrix</i> | <i>Analytes</i> |
|--------------------------|-----------------|---------------|-----------------|
| 001 Blank | 14:59:57 Tue | Liquid | Ca, Mg |
| 002 Std-0.20 | 15:01:08 Tue | Liquid | Ca, Mg |
| 003 Std-0.50 | 15:02:18 Tue | Liquid | Ca, Mg |
| 004 Std-1.0 | 15:03:29 Tue | Liquid | Ca, Mg |
| 005 Std-2.0 | 15:04:39 Tue | Liquid | Ca, Mg |
| 006 Std-5.0 | 15:05:50 Tue | Liquid | Ca, Mg |
| 007 ICV-2.0 | 15:07:00 Tue | Liquid | Ca, Mg |
| 008 CCV-2.0 | 15:08:11 Tue | Liquid | Ca, Mg |
| 009 ICB | 15:09:22 Tue | Liquid | Ca, Mg |
| 010 CCB | 15:10:33 Tue | Liquid | Ca, Mg |
| 011 BS-0.05 | 15:11:43 Tue | Liquid | Ca, Mg |
| 012 063020_1 LCS-1.0 | 15:22:40 Tue | Liquid | Ca, Mg |
| 013 063020_1 LRB | 15:23:49 Tue | Liquid | Mg |
| 014 14870.01 dil | 15:25:38 Tue | Liquid | Ca, Mg |
| 015 14870.01s tot | 15:26:48 Tue | Liquid | Ca, Mg |
| 016 14870.01s diss | 15:27:59 Tue | Liquid | Ca, Mg |
| 017 14870.02s tot | 15:29:09 Tue | Liquid | Ca, Mg |
| 018 14870.02s diss | 15:30:19 Tue | Liquid | Ca, Mg |
| 019 14870.03s tot | 15:31:29 Tue | Liquid | Ca, Mg |
| 020 14870.03s diss | 15:32:39 Tue | Liquid | Ca, Mg |
| 021 14870.04s tot | 15:33:48 Tue | Liquid | Ca, Mg |
| 022 14870.04s diss | 15:34:59 Tue | Liquid | Ca, Mg |
| 023 14870.05s tot | 15:36:09 Tue | Liquid | Ca, Mg |
| 024 14870.05s diss | 15:37:19 Tue | Liquid | Ca, Mg |
| 025 14870.01 MS-2.0 diss | 15:39:54 Tue | Liquid | Ca, Mg |
| 026 14870.01 MSD diss | 15:41:03 Tue | Liquid | Ca, Mg |
| 027 CCV2-2.0 | 15:42:22 Tue | Liquid | Ca, Mg |
| 028 CCB2 | 15:43:33 Tue | Liquid | Ca, Mg |
| 029 14938.01s tot | 15:44:42 Tue | Liquid | Ca, Mg |
| 030 14938.01s diss | 15:45:53 Tue | Liquid | Ca, Mg |
| 031 14938.02s tot | 15:47:03 Tue | Liquid | Ca, Mg |
| 032 14938.02s diss | 15:48:12 Tue | Liquid | Ca, Mg |
| 033 14938.03s tot | 15:49:22 Tue | Liquid | Ca, Mg |
| 034 14938.03s diss | 15:50:33 Tue | Liquid | Ca, Mg |
| 035 14938.04s tot | 15:51:43 Tue | Liquid | Ca, Mg |
| 036 14938.04s diss | 15:52:53 Tue | Liquid | Ca, Mg |
| 037 14938.05s tot | 15:54:03 Tue | Liquid | Ca, Mg |
| 038 14938.05s diss | 15:55:12 Tue | Liquid | Ca, Mg |
| 039 14938.05 MS-2.0 diss | 15:56:33 Tue | Liquid | Mg |
| 040 14938.05 MSD | 15:57:43 Tue | Liquid | Mg |
| 041 CCV3-2.0 | 15:58:53 Tue | Liquid | Ca, Mg |
| 042 CCB3 | 16:00:04 Tue | Liquid | Ca, Mg |
| 043 063020_5 LCS-1.0 | 16:01:29 Tue | Liquid | Ca, Mg |
| 044 063020_5 LRB | 16:02:39 Tue | Liquid | Ca, Mg |
| 045 15123.07s | 16:03:48 Tue | Liquid | Ca, Mg |
| 046 15123.01 dil | 16:05:41 Tue | Liquid | Ca, Mg |
| 047 15123.01s | 16:06:50 Tue | Liquid | Ca, Mg |
| 048 15123.02s | 16:07:59 Tue | Liquid | Ca, Mg |
| 049 15123.02s -d | 16:09:44 Tue | Liquid | Ca, Mg |
| 050 15123.03s | 16:10:53 Tue | Liquid | Ca, Mg |
| 051 15123.04s | 16:12:02 Tue | Liquid | Ca, Mg |
| 052 15123.05s | 16:13:12 Tue | Liquid | Ca, Mg |
| 053 15123.06s | 16:14:22 Tue | Liquid | Ca, Mg |
| 054 15123.06 MS-2.0 | 16:15:31 Tue | Liquid | Ca |
| 055 15123.06 MSD | 16:16:41 Tue | Liquid | Ca |
| 056 CCV4-2.0 | 16:19:20 Tue | Liquid | Ca, Mg |

Form 13: Analysis Run Log

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| <i>Filename</i> | <i>Run Time</i> | <i>Matrix</i> | <i>Analytes</i> |
|-----------------|-----------------|---------------|-----------------|
| 057 CCB4 | 16:26:39 Tue | Liquid | Ca,Mg |

Performance Check Report

Sample ID: STD Performance Check

Sample Date/Time: Tuesday, June 30, 2020 10:13:18

Sample Description:

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth

Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Optimize2020\STD Performance Check.940

MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Dual Detector Mode: Pulse

Acq. Dead Time (ns): 35

Current Dead Time (ns): 35

Torch Z position (mm): 0.00

Summary

| Analyte | Mass | Meas. Intens. | Mean | Net Intens. | Mean | Net Intens. SD | Net Intens. RSD | Mode | | | |
|---------|-------|---------------|---------|-------------|-----------|----------------|-----------------|----------|----------|----------|----------|
| Be | 9.0 | | 11202.1 | | 11202.057 | 92.697 | 0.8 | Standard | | | |
| In | 114.9 | | 93051.1 | | 93051.089 | 943.642 | 1.0 | Standard | | | |
| U | 238.1 | | 70669.5 | | 70669.503 | 407.201 | 0.6 | Standard | | | |
| [| CeO | 155.9 | | 1948.5 | | 0.022 | | 1.5 | Standard | | |
| > | Ce | 139.9 | | 88849.7 | | 88849.713 | | 333.460 | 0.4 | Standard | |
| [| Ce++ | 70.0 | | 2140.1 | | 0.024 | | 0.000 | | 1.9 | Standard |
| | Bkgd | 220.0 | | 0.3 | | 0.333 | | 0.204 | | 61.2 | Standard |

Current Conditions File Data

| Current Value | Description |
|---------------|-------------------------------------|
| 0.93 | Nebulizer Gas Flow STD/KED [NEB] |
| 1.20 | Auxiliary Gas Flow |
| 18.00 | Plasma Gas Flow |
| -12.00 | Deflector Voltage |
| 1600.00 | ICP RF Power |
| -1675.00 | Analog Stage Voltage |
| 1300.00 | Pulse Stage Voltage |
| -4.00 | Quadrupole Rod Offset STD [QRO] |
| -15.00 | Cell Rod Offset STD [CRO] |
| 14.00 | Discriminator Threshold |
| -9.00 | Cell Entrance/Exit Voltage STD |
| 0.00 | RPa |
| 0.45 | RPq |
| 0.93 | DRC Mode NEB |
| -9.00 | DRC Mode QRO |
| -2.00 | DRC Mode CRO |
| -7.00 | DRC Mode Cell Entrance/Exit Voltage |
| 0.60 | Cell Gas A |
| 200.00 | Axial Field Voltage |
| -13.00 | KED Mode CRO |
| -12.00 | KED Mode QRO |
| -8.00 | KED Mode Cell Entrance Voltage |
| -32.00 | KED Mode Cell Exit Voltage |
| 4.00 | KED Cell Gas A |
| 0.00 | KED RPa |
| 0.25 | KED RPq |
| 475.00 | KED Mode Axial Field Voltage |

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\daily optimization.swz

Start Time: 6/30/2020 10:08:04 AM

End Time: 6/30/2020 10:15:23 AM

Torch Alignment - [Passed]

| Vertical | Horizontal | Intensity |
|----------|------------|-----------|
| 0.58 mm | 0.03 mm | 96784.75 |

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 0.93

Obtained Intensity (In 115): 96102.16

Obtained Formula (CeO 156 / Ce 140): 0.0232 (=2146.16 / 92560.89)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.999; Intercept = -12.99

KED Mode QID - Optimum value(s): Correlation Coefficient = 0.998; Intercept = -13.29

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A

Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.704)

Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.705)

Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.706)

Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.701)

STD Performance Check - [Passed] Optimum value(s): N/A

Obtained Intensity (Be 9): 11202.06

Obtained Intensity (In 115): 93051.09

Obtained Intensity (U 238): 70669.50

Obtained Intensity (Bkgd 220): 0.33

Obtained Formula (CeO 156 / Ce 140): 0.022 (=1948.53 / 88849.71)

Obtained Formula (Ce++ 70 / Ce 140): 0.024 (=2140.09 / 88849.71)

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\daily optimization.swz

Optimization Status

Start Time: 6/30/2020 10:08:04 AM

Torch Alignment

Optimization Settings:

Method: Torch Alignment.mth.
Intensity Criterion: In 115 Maximum

Optimization Results:

| | Vertical | Horizontal | Intensity |
|----------|----------|------------|-----------|
| [Passed] | 0.58 mm | 0.03 mm | 96784.75 |

Nebulizer Gas Flow STD/KED [NEB]

Optimization Settings:

Method: Optimize.mth.
Initial Try - Start/End/Step: 0.9/0.96/0.01.
Intensity Criterion: In 115 Maximum
Formula Criterion: CeO 156 / Ce 140 <= 0.025

Optimization Results:

Initial Try

Obtained Intensity (In 115): 96102.16
Obtained Formula (CeO 156 / Ce 140): 0.0232 (=2146.16 / 92560.89)

[Passed] Optimum value(s): 0.93

QID STD/DRC

Optimization Settings:

Method: QID Calibration.mth.
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.999; Intercept = -12.99

| Analyte | Mass | Points | DAC | MaxIntensity |
|---------|------|--------|-------|--------------|
| Li | 7 | 41 | -13 | 47880.1 |
| Mg | 24 | 41 | -13 | 106117 |
| In | 115 | 41 | -11 | 96001.5 |
| Ce | 140 | 41 | -10.5 | 89012.5 |
| Pb | 208 | 41 | -8.5 | 40441.2 |
| U | 238 | 41 | -7.5 | 72415.1 |

KED Mode QID

Optimization Settings:

Method: QID Calibration.mth.
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.998; Intercept = -13.29

| Analyte | Mass | Points | DAC | MaxIntensity |
|---------|------|--------|-------|--------------|
| Li | 7 | 41 | -13.5 | 36093.5 |
| Mg | 24 | 41 | -13.5 | 117538 |
| In | 115 | 41 | -11 | 92341.5 |
| Ce | 140 | 41 | -10 | 62150.9 |
| Pb | 208 | 41 | -9 | 26620.8 |
| U | 238 | 41 | -8 | 69569 |

Mass Calibration and Resolution

Optimization Settings:

Method: Tuning.mth.

MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Iterations: 6

Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution

Peak height (%) for Res. Opt.: 10

Optimization Results:

Initial Try

Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.704)

Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.705)

Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.706)

Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.701)

[Passed] Optimum value(s): N/A

STD Performance Check

Optimization Settings:

Method: STD Performance Check.mth.

Intensity Criterion: Be 9 > 2000

Intensity Criterion: In 115 > 30000

Intensity Criterion: U 238 > 30000

Intensity Criterion: Bkgd 220 <= 5

Formula Criterion: CeO 156 / Ce 140 <= 0.025

Formula Criterion: Ce++ 70 / Ce 140 <= 0.03

Optimization Results:

Initial Try

Obtained Intensity (Be 9): 11202.06

Obtained Intensity (In 115): 93051.09

Obtained Intensity (U 238): 70669.50

Obtained Intensity (Bkgd 220): 0.33

Obtained Formula (CeO 156 / Ce 140): 0.022 (=1948.53 / 88849.71)

Obtained Formula (Ce++ 70 / Ce 140): 0.024 (=2140.09 / 88849.71)

[Passed] Optimum value(s): N/A

End Time: 6/30/2020 10:15:23 AM

Form 15: Internal Standards Summary

IS Check Reference Sample: 001 Blank

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| Element | Count | non-ICB/CCB/ICV/CCV | | ICB/CCB/ICV/CCV | | Flags |
|---------|--------|---------------------|---------------|-----------------|---------------|-------|
| | | LCL-UCL | Accept.Range | LCL-UCL | Accept.Range | |
| Li | 64036 | 70-125 | 44825-80045 | 80-120 | 51229-76843 | 0 |
| Rh-1 | 700391 | 70-125 | 490274-875489 | 80-120 | 560313-840469 | 0 |
| Rh | 229279 | 70-125 | 160495-286599 | 80-120 | 183423-275135 | 0 |
| Re | 231739 | 70-125 | 162217-289674 | 80-120 | 185391-278087 | 0 |

| Seq ID | QC Type | Li | Rh-1 | Rh | Re |
|--------|----------------|-----|------|-----|-----|
| 001 | | 100 | 100 | 100 | 100 |
| 002 | | 101 | 105 | 122 | 120 |
| 003 | | 96 | 98 | 102 | 97 |
| 004 | | 99 | 100 | 102 | 98 |
| 005 | | 97 | 98 | 101 | 98 |
| 006 | | 97 | 96 | 102 | 97 |
| 007 | | 99 | 95 | 101 | 97 |
| 008 | | 96 | 94 | 98 | 95 |
| 009 | | 96 | 97 | 99 | 97 |
| 010 | ICV | 94 | 96 | 100 | 96 |
| 011 | CCV | 99 | 93 | 97 | 97 |
| 012 | | 93 | 94 | 99 | 98 |
| 013 | ICB | 95 | 94 | 98 | 95 |
| 014 | CCB | 95 | 95 | 99 | 97 |
| 015 | | 93 | 94 | 97 | 98 |
| 016 | | 94 | 93 | 97 | 97 |
| 017 | BS | 92 | 93 | 96 | 96 |
| 018 | BS | 96 | 96 | 94 | 95 |
| 019 | BS | 94 | 93 | 97 | 95 |
| 020 | BS | 94 | 93 | 96 | 94 |
| 021 | BS | 94 | 92 | 97 | 94 |
| 022 | BS | 92 | 93 | 95 | 95 |
| 023 | BS | 95 | 94 | 97 | 96 |
| 024 | AB | 91 | 85 | 88 | 95 |
| 025 | AA | 90 | 86 | 89 | 96 |
| 026 | | 97 | 95 | 96 | 101 |
| 027 | LCS | 96 | 92 | 96 | 97 |
| 028 | | 95 | 94 | 96 | 93 |
| 029 | LRB | 91 | 90 | 94 | 95 |
| 030 | DIL | 93 | 91 | 94 | 99 |
| 031 | S | 95 | 89 | 91 | 95 |
| 032 | | 94 | 91 | 94 | 97 |
| 033 | S | 93 | 90 | 91 | 95 |
| 034 | | 96 | 92 | 96 | 96 |
| 035 | S | 92 | 85 | 86 | 96 |
| 036 | | 93 | 91 | 96 | 97 |
| 037 | S | 90 | 84 | 86 | 97 |
| 038 | | 96 | 92 | 94 | 96 |
| 039 | S | 95 | 86 | 88 | 96 |
| 040 | Page 83 of 279 | 92 | 94 | 95 | |

Form 15: Internal Standards Summary

IS Check Reference Sample: 001 Blank

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| Element | Count | non-ICB/CCB/ICV/CCV | | ICB/CCB/ICV/CCV | | Flags |
|---------|--------|---------------------|---------------|-----------------|---------------|-------|
| | | LCL-UCL | Accept.Range | LCL-UCL | Accept.Range | |
| Li | 64036 | 70-125 | 44825-80045 | 80-120 | 51229-76843 | 0 |
| Rh-1 | 700391 | 70-125 | 490274-875489 | 80-120 | 560313-840469 | 0 |
| Rh | 229279 | 70-125 | 160495-286599 | 80-120 | 183423-275135 | 0 |
| Re | 231739 | 70-125 | 162217-289674 | 80-120 | 185391-278087 | 0 |

| Seq ID | QC Type | Li | Rh-1 | Rh | Re |
|--------|---------|-----|------|----|-----|
| 041 | S | 95 | 85 | 87 | 96 |
| 042 | | 99 | 91 | 95 | 95 |
| 043 | S | 94 | 85 | 85 | 95 |
| 044 | | 101 | 92 | 97 | 97 |
| 045 | S | 91 | 84 | 86 | 97 |
| 046 | | 100 | 93 | 93 | 97 |
| 047 | S | 94 | 86 | 88 | 94 |
| 048 | | 103 | 93 | 98 | 100 |
| 049 | S | 93 | 84 | 87 | 96 |
| 050 | MS | 100 | 88 | 91 | 96 |
| 051 | MSD | 101 | 89 | 92 | 95 |
| 052 | CCV | 99 | 92 | 94 | 96 |
| 053 | | 101 | 91 | 97 | 97 |
| 054 | CCB | 105 | 95 | 97 | 96 |
| 055 | S | 98 | 87 | 91 | 97 |
| 056 | S | 98 | 88 | 90 | 98 |
| 057 | S | 103 | 92 | 94 | 100 |
| 058 | S | 110 | 96 | 96 | 104 |
| 059 | S | 105 | 90 | 92 | 101 |
| 060 | S | 102 | 88 | 94 | 103 |
| 061 | S | 108 | 95 | 97 | 102 |
| 062 | S | 111 | 95 | 95 | 101 |
| 063 | S | 104 | 90 | 92 | 98 |
| 064 | S | 104 | 90 | 91 | 99 |
| 065 | MS | 107 | 88 | 91 | 99 |
| 066 | MSD | 101 | 89 | 91 | 100 |
| 067 | CCV | 106 | 94 | 95 | 96 |
| 068 | | 104 | 94 | 97 | 96 |
| 069 | CCB | 107 | 95 | 96 | 98 |
| 070 | LCS | 114 | 98 | 97 | 96 |
| 071 | | 106 | 94 | 97 | 97 |
| 072 | LRB | 105 | 92 | 95 | 95 |
| 073 | S | 105 | 95 | 96 | 97 |
| 074 | S | 104 | 94 | 97 | 98 |
| 075 | DIL | 104 | 91 | 96 | 96 |
| 076 | S | 100 | 88 | 89 | 95 |
| 077 | S | 96 | 84 | 87 | 98 |
| 078 | S | 102 | 90 | 91 | 97 |
| 079 | S | 100 | 84 | 86 | 99 |
| 080 | S | 100 | 88 | 88 | 98 |

Form 15: Internal Standards Summary

IS Check Reference Sample: 001 Blank

Data Set ID: MT5-20-0630A

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| Element | Count | non-ICB/CCB/ICV/CCV | | ICB/CCB/ICV/CCV | | Flags |
|---------|--------|---------------------|---------------|-----------------|---------------|-------|
| | | LCL-UCL | Accept.Range | LCL-UCL | Accept.Range | |
| Li | 64036 | 70-125 | 44825-80045 | 80-120 | 51229-76843 | 0 |
| Rh-1 | 700391 | 70-125 | 490274-875489 | 80-120 | 560313-840469 | 0 |
| Rh | 229279 | 70-125 | 160495-286599 | 80-120 | 183423-275135 | 0 |
| Re | 231739 | 70-125 | 162217-289674 | 80-120 | 185391-278087 | 0 |

| Seq ID | QC Type | Li | Rh-1 | Rh | Re |
|--------|---------|-----|------|----|-----|
| 081 | S | 101 | 86 | 89 | 98 |
| 082 | S | 104 | 88 | 88 | 98 |
| 083 | MS | 106 | 89 | 90 | 99 |
| 084 | MSD | 102 | 88 | 91 | 98 |
| 085 | CCV | 106 | 91 | 94 | 100 |
| 086 | | 110 | 93 | 95 | 98 |
| 087 | CCB | 110 | 94 | 95 | 97 |

Form 15: Internal Standards Summary

IS Check Reference Sample: 001 Blank

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| Element | Count | non-ICB/CCB/ICV/CCV | | ICB/CCB/ICV/CCV | | Flags |
|---------|-------|---------------------|--------------|-----------------|--------------|-------|
| | | LCL-UCL | Accept.Range | LCL-UCL | Accept.Range | |
| Rh | 10410 | 70-125 | 7287-13013 | 80-120 | 8328-12492 | 0 |

| Seq ID | QC Type | Rh |
|--------|---------|-----|
| 001 | | 100 |
| 002 | | 100 |
| 003 | | 101 |
| 004 | | 98 |
| 005 | | 102 |
| 006 | | 101 |
| 007 | ICV | 101 |
| 008 | CCV | 101 |
| 009 | ICB | 103 |
| 010 | CCB | 101 |
| 011 | BS | 102 |
| 012 | LCS | 102 |
| 013 | LRB | 102 |
| 014 | DIL | 102 |
| 015 | S | 99 |
| 016 | S | 102 |
| 017 | S | 103 |
| 018 | S | 102 |
| 019 | S | 102 |
| 020 | S | 103 |
| 021 | S | 102 |
| 022 | S | 105 |
| 023 | S | 104 |
| 024 | S | 105 |
| 025 | MS | 102 |
| 026 | MSD | 103 |
| 027 | CCV | 103 |
| 028 | CCB | 104 |
| 029 | S | 103 |
| 030 | S | 103 |
| 031 | S | 104 |
| 032 | S | 103 |
| 033 | S | 102 |
| 034 | S | 102 |
| 035 | S | 105 |
| 036 | S | 104 |
| 037 | S | 104 |
| 038 | S | 103 |
| 039 | MS | 104 |
| 040 | MS | 104 |

Form 15: Internal Standards Summary

IS Check Reference Sample: 001 Blank

Data Set ID: MT5-20-0630B

Instrument ID: PE NEXION 2

Analysis Date: 06/30/20

Analyst: JRH

| Element | Count | non-ICB/CCB/ICV/CCV | | ICB/CCB/ICV/CCV | | Flags |
|---------|-------|---------------------|--------------|-----------------|--------------|-------|
| | | LCL-UCL | Accept.Range | LCL-UCL | Accept.Range | |
| Rh | 10410 | 70-125 | 7287-13013 | 80-120 | 8328-12492 | 0 |

| Seq ID | QC Type | Rh |
|--------|---------|-----|
| 041 | CCV | 104 |
| 042 | CCB | 105 |
| 043 | LCS | 104 |
| 044 | LRB | 107 |
| 045 | S | 105 |
| 046 | DIL | 105 |
| 047 | S | 102 |
| 048 | S | 105 |
| 049 | S | 105 |
| 050 | S | 103 |
| 051 | S | 103 |
| 052 | S | 103 |
| 053 | S | 104 |
| 054 | MS | 104 |
| 055 | MSD | 105 |
| 056 | CCV | 104 |
| 057 | CCB | 104 |

Form 9

Analysis Date varies
 Analytical Method 6020A/6020/200.8
 Digestion Date varies
 Spiked Value varies (ug/L)
 Estimated Limit varies (ug/L)

| Element/Mass | Date | Spike (ug/l) | MDL (ug/l) | Prep Batch |
|--------------|-----------|--------------|------------|--------------|
| Al-27 | 4/9/2012 | 0.50 | 0.189 | MTD-040212-1 |
| Sb-121 | 3/20/2012 | 1.00 | 0.105 | MTD-032012-3 |
| As-75 | 3/20/2012 | 0.05 | 0.032 | MTD-032012-2 |
| Ba-137 | 3/20/2012 | 0.50 | 0.202 | MTD-032012-2 |
| Be-9 | 4/10/2012 | 0.10 | 0.079 | MTD-041012-1 |
| B-10 | 3/20/2012 | 1.00 | 0.589 | MTD-032012-3 |
| B-11 | 3/20/2012 | 1.00 | 0.277 | MTD-032012-3 |
| Cd-111 | 3/20/2012 | 0.05 | 0.038 | MTD-032012-2 |
| Cd-114 | 3/20/2012 | 0.10 | 0.030 | MTD-032012-2 |
| Cr-52 | 3/20/2012 | 0.10 | 0.023 | MTD-032012-2 |
| Cr-53 | 3/20/2012 | 0.10 | 0.054 | MTD-032012-2 |
| Co-59 | 3/20/2012 | 0.10 | 0.035 | MTD-032012-2 |
| Cu-65 | 3/20/2012 | 0.50 | 0.068 | MTD-032012-2 |
| Fe-56 | 4/9/2012 | 2.00 | 0.470 | MTD-040912-1 |
| Fe-57 | 4/9/2012 | 2.00 | 0.824 | MTD-040912-1 |
| Pb-208 | 3/20/2012 | 0.10 | 0.052 | MTD-032012-2 |
| Li-7 | 3/20/2012 | 1.00 | 0.166 | MTD-032012-3 |
| Mn-55 | 3/20/2012 | 0.10 | 0.187 | MTD-032012-2 |
| Mo-95 | 4/9/2012 | 0.50 | 0.442 | MTD-040212-1 |
| Ni-60 | 4/13/2012 | 0.10 | 0.035 | MTD-041012-1 |
| Se-78 | 3/20/2012 | 0.10 | 0.058 | MTD-032012-2 |
| Se-82 | 3/20/2012 | 0.50 | 0.475 | MTD-032012-2 |
| Ag-107 | 3/20/2012 | 0.10 | 0.025 | MTD-032012-2 |
| Sr-88 | 3/20/2012 | 0.10 | 0.016 | MTD-032012-2 |
| Tl-205 | 4/9/2012 | 0.50 | 0.089 | MTD-040212-1 |
| Sn-118 | 3/20/2012 | 0.10 | 0.079 | MTD-032012-2 |
| Ti-47 | 3/20/2012 | 0.50 | 0.124 | MTD-032012-2 |
| V-51 | 3/20/2012 | 0.05 | 0.018 | MTD-032012-2 |
| Zn-66 | 4/9/2012 | 2.00 | 0.366 | MTD-040912-1 |

| Element/Mass | Date | Spike (mg/l) | MDL (mg/l) | Prep Batch |
|--------------|-----------|--------------|------------|--------------|
| Ca-43 | 4/16/2012 | 0.01 | 0.0101 | MTD-041012-4 |
| Ca-44 | 4/16/2012 | 0.01 | 0.0041 | MTD-041012-4 |
| Mg-24 | 4/16/2012 | 0.01 | 0.0006 | MTD-041012-4 |
| K-39 | 4/16/2012 | 0.01 | 0.0030 | MTD-041012-4 |
| Na-23 | 4/16/2012 | 0.10 | 0.0101 | MTD-041012-4 |

Linear Range June 2012

| | | Prep Batch | Run Batch |
|--------------|--------|-------------------|------------------|
| Aluminum | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Antimony | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Arsenic | 1.0ppm | MTD-061912-5 | MT3-12-0619C |
| Barium | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Boron-10 | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Boron-11 | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Beryllium | 2.0ppm | MTD-061912-5 | MT3-12-0619C |
| Cadmium-111 | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Cadmium-114 | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Chromium | 2.0ppm | MTD-061912-5 | MT3-12-0619C |
| Cobalt | 2.0ppm | MTD-061912-5 | MT3-12-0619C |
| Copper | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Iron-56 | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Iron-57 | 2.0ppm | MTD-061912-5 | MT3-12-0619C |
| Lead | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Lithium | 2.0ppm | MTD-061912-5 | MT3-12-0619C |
| Manganese | 1.0ppm | MTD-061912-5 | MT3-12-0619C |
| Molybdenum | 1.0ppm | MTD-061912-5 | MT3-12-0619C |
| Nickel | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Selenium-78 | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Selenium-82 | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Silver | 1.0ppm | MTD-061912-5 | MT3-12-0619C |
| Strontium-86 | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Thallium | 5.0ppm | MTD-061912-5 | MT3-12-0619C |
| Tin | 1.0ppm | MTD-061912-5 | MT3-12-0619C |
| Titanium | 1.0ppm | MTD-061912-5 | MT3-12-0619C |
| Vanadium | 1.0ppm | MTD-061912-5 | MT3-12-0619C |
| Zinc | 2.0ppm | MTD-061912-5 | MT3-12-0619C |

| | | | |
|--------------|-------|--------------|--------------|
| Sodium-23 | 50ppm | MTD-061912-5 | MT3-12-0619B |
| Magnesium-24 | 50ppm | MTD-061912-5 | MT3-12-0619B |
| Potassium-39 | 50ppm | MTD-061912-5 | MT3-12-0619B |
| Calcium-43 | 50ppm | MTD-061912-5 | MT3-12-0619B |
| Calcium-44 | 50ppm | MTD-061912-5 | MT3-12-0619B |

Maximum spiking levels are instated to ensure the safety and longevity of the instrument. Any sample results above this level result in extended wash runs and sample dilution.

Metals Quantitation Summary Report

Sequence #: 001
Method: 18-R+AI
Acq Time: 10:30:07 Tue 30-Jun-20
Sample Name: Blank
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-------|-------|-----|
| Li | 7 | 3248.703 | 0 | mg/L | 3 |
| Be | 9 | 0.000 | 0 | mg/L | 3 |
| B | 11 | 263.336 | 0 | mg/L | 3 |
| Al | 27 | 760.020 | 0 | mg/L | 3 |
| Se | 82 | -83.917 | 0 | mg/L | 3 |
| Cr | 52 | 216.668 | 0 | mg/L | 3 |
| Fe | 57 | 150.001 | 0 | mg/L | 3 |
| Co | 59 | 8.333 | 0 | mg/L | 3 |
| Ni | 60 | 88.334 | 0 | mg/L | 3 |
| Cu | 65 | 71.667 | 0 | mg/L | 3 |
| Zn | 66 | 161.668 | 0 | mg/L | 3 |
| As | 75 | 6.667 | 0 | mg/L | 3 |
| Sr | 88 | 20.000 | 0 | mg/L | 3 |
| Mo | 95 | 65.000 | 0 | mg/L | 3 |
| Ag | 107 | 21.667 | 0 | mg/L | 3 |
| Cd | 111 | 5.000 | 0 | mg/L | 3 |
| Sb | 123 | 129.371 | 0 | mg/L | 3 |
| Ba | 137 | 13.333 | 0 | mg/L | 3 |
| Tl | 205 | 260.002 | 0 | mg/L | 3 |
| Pb | 208 | 533.337 | 0 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 002
Method: 18-R+AI
Acq Time: 10:32:06 Tue 30-Jun-20
Sample Name: Std-0.0001
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Li | 7 | 3850.519 | 0.000141 | mg/L | 3 |
| Be | 9 | 153.334 | 0.000140 | mg/L | 3 |
| B | 11 | 596.679 | 0.000325 | mg/L | 3 |
| Al | 27 | 1618.425 | 0.000225 | mg/L | 3 |
| Se | 82 | 40.155 | 0.000567 | mg/L | 3 |
| Cr | 52 | 536.677 | 0.000069 | mg/L | 3 |
| Fe | 57 | 75.000 | -0.001183 | mg/L | 3 |
| Co | 59 | 970.033 | 0.000111 | mg/L | 3 |
| Ni | 60 | 368.338 | 0.000103 | mg/L | 3 |
| Cu | 65 | 498.342 | 0.000131 | mg/L | 3 |
| Zn | 66 | 270.003 | 0.000110 | mg/L | 3 |
| As | 75 | 51.667 | 0.000128 | mg/L | 3 |
| Sr | 88 | 348.338 | 0.000100 | mg/L | 3 |
| Mo | 95 | 238.335 | 0.000061 | mg/L | 3 |
| Ag | 107 | 1115.044 | 0.000106 | mg/L | 3 |
| Cd | 111 | 163.334 | 0.000127 | mg/L | 3 |
| Sb | 123 | 326.041 | 0.000085 | mg/L | 3 |
| Ba | 137 | 171.668 | 0.000115 | mg/L | 3 |
| Tl | 205 | 2690.254 | 0.000098 | mg/L | 3 |
| Pb | 208 | 3735.193 | 0.000097 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 003
Method: 18-R+AI
Acq Time: 10:34:05 Tue 30-Jun-20
Sample Name: Std-0.0005
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Li | 7 | 5284.311 | 0.000566 | mg/L | 3 |
| Be | 9 | 668.349 | 0.000643 | mg/L | 3 |
| B | 11 | 811.690 | 0.000578 | mg/L | 3 |
| Al | 27 | 2960.307 | 0.000620 | mg/L | 3 |
| Se | 82 | 53.189 | 0.000646 | mg/L | 3 |
| Cr | 52 | 1953.467 | 0.000527 | mg/L | 3 |
| Fe | 57 | 110.000 | -0.000552 | mg/L | 3 |
| Co | 59 | 4045.573 | 0.000562 | mg/L | 3 |
| Ni | 60 | 1236.720 | 0.000548 | mg/L | 3 |
| Cu | 65 | 1666.764 | 0.000611 | mg/L | 3 |
| Zn | 66 | 475.008 | 0.000574 | mg/L | 3 |
| As | 75 | 175.001 | 0.000597 | mg/L | 3 |
| Sr | 88 | 1488.411 | 0.000547 | mg/L | 3 |
| Mo | 95 | 1063.373 | 0.000460 | mg/L | 3 |
| Ag | 107 | 4517.381 | 0.000529 | mg/L | 3 |
| Cd | 111 | 516.676 | 0.000495 | mg/L | 3 |
| Sb | 123 | 1149.627 | 0.000617 | mg/L | 3 |
| Ba | 137 | 593.346 | 0.000517 | mg/L | 3 |
| Tl | 205 | 10512.200 | 0.000524 | mg/L | 3 |
| Pb | 208 | 13837.635 | 0.000519 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 004
Method: 18-R+AI
Acq Time: 10:36:03 Tue 30-Jun-20
Sample Name: Std-0.001
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Li | 7 | 7310.204 | 0.001025 | mg/L | 3 |
| Be | 9 | 1201.717 | 0.001115 | mg/L | 3 |
| B | 11 | 1331.729 | 0.001067 | mg/L | 3 |
| Al | 27 | 4880.834 | 0.001106 | mg/L | 3 |
| Se | 82 | 231.652 | 0.001481 | mg/L | 3 |
| Cr | 52 | 3740.490 | 0.001064 | mg/L | 3 |
| Fe | 57 | 151.667 | -0.000017 | mg/L | 3 |
| Co | 59 | 7630.371 | 0.001056 | mg/L | 3 |
| Ni | 60 | 2506.887 | 0.001150 | mg/L | 3 |
| Cu | 65 | 3223.698 | 0.001202 | mg/L | 3 |
| Zn | 66 | 781.688 | 0.001134 | mg/L | 3 |
| As | 75 | 330.004 | 0.001142 | mg/L | 3 |
| Sr | 88 | 2845.283 | 0.001048 | mg/L | 3 |
| Mo | 95 | 2060.149 | 0.000915 | mg/L | 3 |
| Ag | 107 | 9314.704 | 0.001088 | mg/L | 3 |
| Cd | 111 | 1136.712 | 0.001089 | mg/L | 3 |
| Sb | 123 | 2211.209 | 0.001254 | mg/L | 3 |
| Ba | 137 | 1258.389 | 0.001104 | mg/L | 3 |
| Tl | 205 | 21980.230 | 0.001098 | mg/L | 3 |
| Pb | 208 | 28432.965 | 0.001076 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 005
Method: 18-R+AI
Acq Time: 10:38:02 Tue 30-Jun-20
Sample Name: Std-0.005
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Li | 7 | 24704.691 | 0.005547 | mg/L | 3 |
| Be | 9 | 5514.398 | 0.005245 | mg/L | 3 |
| B | 11 | 5779.503 | 0.005646 | mg/L | 3 |
| Al | 27 | 21781.602 | 0.005780 | mg/L | 3 |
| Se | 82 | 996.964 | 0.005162 | mg/L | 3 |
| Cr | 52 | 18809.053 | 0.005650 | mg/L | 3 |
| Fe | 57 | 483.342 | 0.004339 | mg/L | 3 |
| Co | 59 | 40477.267 | 0.005641 | mg/L | 3 |
| Ni | 60 | 11522.983 | 0.005473 | mg/L | 3 |
| Cu | 65 | 15526.774 | 0.005926 | mg/L | 3 |
| Zn | 66 | 3157.017 | 0.005531 | mg/L | 3 |
| As | 75 | 1541.750 | 0.005451 | mg/L | 3 |
| Sr | 88 | 14514.036 | 0.005408 | mg/L | 3 |
| Mo | 95 | 10795.746 | 0.004953 | mg/L | 3 |
| Ag | 107 | 46754.722 | 0.005501 | mg/L | 3 |
| Cd | 111 | 5337.664 | 0.005162 | mg/L | 3 |
| Sb | 123 | 10850.367 | 0.006501 | mg/L | 3 |
| Ba | 137 | 6379.758 | 0.005679 | mg/L | 3 |
| Tl | 205 | 107320.069 | 0.005403 | mg/L | 3 |
| Pb | 208 | 139635.068 | 0.005356 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 006
Method: 18-R+Al
Acq Time: 10:40:01 Tue 30-Jun-20
Sample Name: Std-0.02
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Li | 7 | 79470.522 | 0.019559 | mg/L | 3 |
| Be | 9 | 20891.935 | 0.019801 | mg/L | 3 |
| B | 11 | 20189.260 | 0.020308 | mg/L | 3 |
| Al | 27 | 73324.486 | 0.019856 | mg/L | 3 |
| Se | 82 | 4128.761 | 0.020422 | mg/L | 3 |
| Cr | 52 | 62938.339 | 0.019062 | mg/L | 3 |
| Fe | 57 | 1556.752 | 0.018399 | mg/L | 3 |
| Co | 59 | 140989.256 | 0.019637 | mg/L | 3 |
| Ni | 60 | 40335.211 | 0.019251 | mg/L | 3 |
| Cu | 65 | 50281.734 | 0.019257 | mg/L | 3 |
| Zn | 66 | 11042.601 | 0.020108 | mg/L | 3 |
| As | 75 | 5457.710 | 0.019369 | mg/L | 3 |
| Sr | 88 | 52046.358 | 0.019416 | mg/L | 3 |
| Mo | 95 | 38286.266 | 0.017641 | mg/L | 3 |
| Ag | 107 | 165487.091 | 0.019456 | mg/L | 3 |
| Cd | 111 | 20740.051 | 0.020069 | mg/L | 3 |
| Sb | 123 | 32089.124 | 0.019376 | mg/L | 3 |
| Ba | 137 | 21746.545 | 0.019367 | mg/L | 3 |
| Tl | 205 | 369790.462 | 0.018910 | mg/L | 3 |
| Pb | 208 | 490218.819 | 0.019127 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 007
Method: 18-R+AI
Acq Time: 10:42:00 Tue 30-Jun-20
Sample Name: Std-0.05
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Li | 7 | 193654.272 | 0.048175 | mg/L | 3 |
| Be | 9 | 53095.176 | 0.049649 | mg/L | 3 |
| B | 11 | 50666.364 | 0.050681 | mg/L | 3 |
| Al | 27 | 190091.513 | 0.051124 | mg/L | 3 |
| Se | 82 | 10521.128 | 0.051974 | mg/L | 3 |
| Cr | 52 | 163141.329 | 0.049618 | mg/L | 3 |
| Fe | 57 | 3888.863 | 0.049034 | mg/L | 3 |
| Co | 59 | 362066.994 | 0.050559 | mg/L | 3 |
| Ni | 60 | 101927.677 | 0.048827 | mg/L | 3 |
| Cu | 65 | 130457.992 | 0.050094 | mg/L | 3 |
| Zn | 66 | 26933.720 | 0.049586 | mg/L | 3 |
| As | 75 | 14033.557 | 0.049911 | mg/L | 3 |
| Sr | 88 | 134976.453 | 0.050441 | mg/L | 3 |
| Mo | 95 | 102404.060 | 0.047322 | mg/L | 3 |
| Ag | 107 | 431237.266 | 0.050837 | mg/L | 3 |
| Cd | 111 | 50261.603 | 0.048735 | mg/L | 3 |
| Sb | 123 | 83311.396 | 0.050535 | mg/L | 3 |
| Ba | 137 | 56009.610 | 0.050017 | mg/L | 3 |
| Tl | 205 | 964168.380 | 0.049081 | mg/L | 3 |
| Pb | 208 | 1257810.998 | 0.048845 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 008
Method: 18-R+AI
Acq Time: 10:43:59 Tue 30-Jun-20
Sample Name: Std-0.2
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Li | 7 | 771745.581 | 0.200487 | mg/L | 3 |
| Be | 9 | 207454.081 | 0.200101 | mg/L | 3 |
| B | 11 | 193012.893 | 0.199783 | mg/L | 3 |
| Al | 27 | 717965.250 | 0.199713 | mg/L | 3 |
| Se | 82 | 39844.588 | 0.199457 | mg/L | 3 |
| Cr | 52 | 638700.530 | 0.200173 | mg/L | 3 |
| Fe | 57 | 14982.865 | 0.200423 | mg/L | 3 |
| Co | 59 | 1390555.545 | 0.199880 | mg/L | 3 |
| Ni | 60 | 406081.753 | 0.200356 | mg/L | 3 |
| Cu | 65 | 505820.142 | 0.200026 | mg/L | 3 |
| Zn | 66 | 105113.765 | 0.200079 | mg/L | 3 |
| As | 75 | 54627.585 | 0.200074 | mg/L | 3 |
| Sr | 88 | 519654.178 | 0.199938 | mg/L | 3 |
| Mo | 95 | 422102.424 | 0.200907 | mg/L | 3 |
| Ag | 107 | 1646976.072 | 0.199832 | mg/L | 3 |
| Cd | 111 | 200676.704 | 0.200305 | mg/L | 3 |
| Sb | 123 | 319756.521 | 0.199890 | mg/L | 3 |
| Ba | 137 | 217539.363 | 0.200042 | mg/L | 3 |
| Tl | 205 | 3860489.339 | 0.200328 | mg/L | 3 |
| Pb | 208 | 5059980.049 | 0.200367 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 009
Method: 18-R+AI
Acq Time: 10:45:57 Tue 30-Jun-20
Sample Name: rinse
Sample Type: Sample
Matrix: Liquid
Comments: IV-std made 06/24/20
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Li | 7 | 3365.397 | 0.000068 | mg/L | 3 |
| Be | 9 | 51.667 | 0.000050 | mg/L | 3 |
| B | 11 | 965.033 | 0.000739 | mg/L | 3 |
| Al | 27 | 1466.742 | 0.000207 | mg/L | 3 |
| Se | 82 | 565.080 | 0.003132 | mg/L | 3 |
| Cr | 52 | 286.670 | 0.000023 | mg/L | 3 |
| Fe | 57 | 165.001 | 0.000223 | mg/L | 3 |
| Co | 59 | 268.336 | 0.000037 | mg/L | 3 |
| Ni | 60 | 286.670 | 0.000098 | mg/L | 3 |
| Cu | 65 | 223.335 | 0.000060 | mg/L | 3 |
| Zn | 66 | 260.002 | 0.000191 | mg/L | 3 |
| As | 75 | 231.669 | 0.000823 | mg/L | 3 |
| Sr | 88 | 81.667 | 0.000024 | mg/L | 3 |
| Mo | 95 | 7540.325 | 0.003545 | mg/L | 3 |
| Ag | 107 | 476.675 | 0.000055 | mg/L | 3 |
| Cd | 111 | 35.000 | 0.000030 | mg/L | 3 |
| Sb | 123 | 3478.127 | 0.002089 | mg/L | 3 |
| Ba | 137 | 41.667 | 0.000026 | mg/L | 3 |
| Tl | 205 | 1675.099 | 0.000072 | mg/L | 3 |
| Pb | 208 | 3076.797 | 0.000099 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 010
Method: 18-R+AI
Acq Time: 10:51:53 Tue 30-Jun-20
Sample Name: ICV-0.1
Sample Type: Sample
Matrix: Liquid
Comments: Spex-std made 06/24/
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Li | 7 | 381629.362 | 0.100602 | mg/L | 3 |
| Be | 9 | 102175.903 | 0.100423 | mg/L | 3 |
| B | 11 | 95922.824 | 0.101121 | mg/L | 3 |
| Al | 27 | 364577.637 | 0.103268 | mg/L | 3 |
| Se | 82 | 20803.336 | 0.101602 | mg/L | 3 |
| Cr | 52 | 326295.466 | 0.100663 | mg/L | 3 |
| Fe | 57 | 7647.047 | 0.099712 | mg/L | 3 |
| Co | 59 | 724064.524 | 0.102505 | mg/L | 3 |
| Ni | 60 | 202450.115 | 0.098374 | mg/L | 3 |
| Cu | 65 | 259117.822 | 0.100903 | mg/L | 3 |
| Zn | 66 | 54078.898 | 0.101265 | mg/L | 3 |
| As | 75 | 28186.113 | 0.101639 | mg/L | 3 |
| Sr | 88 | 264331.434 | 0.100161 | mg/L | 3 |
| Mo | 95 | 221366.461 | 0.103734 | mg/L | 3 |
| Ag | 107 | 817369.425 | 0.097694 | mg/L | 3 |
| Cd | 111 | 99648.149 | 0.097988 | mg/L | 3 |
| Sb | 123 | 170560.681 | 0.104962 | mg/L | 3 |
| Ba | 137 | 111584.183 | 0.101014 | mg/L | 3 |
| Tl | 205 | 1951757.814 | 0.100559 | mg/L | 3 |
| Pb | 208 | 2590853.098 | 0.101861 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 011
Method: 18-R+AI
Acq Time: 10:53:52 Tue 30-Jun-20
Sample Name: CCV-0.1
Sample Type: Sample
Matrix: Liquid
Comments: IV-std made 06/24/20
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Li | 7 | 375896.388 | 0.093665 | mg/L | 3 |
| Be | 9 | 100131.543 | 0.093023 | mg/L | 3 |
| B | 11 | 94184.469 | 0.093830 | mg/L | 3 |
| Al | 27 | 345119.079 | 0.092354 | mg/L | 3 |
| Se | 82 | 20163.612 | 0.102258 | mg/L | 3 |
| Cr | 52 | 316897.113 | 0.101076 | mg/L | 3 |
| Fe | 57 | 7383.576 | 0.099473 | mg/L | 3 |
| Co | 59 | 694050.694 | 0.101517 | mg/L | 3 |
| Ni | 60 | 196639.388 | 0.098717 | mg/L | 3 |
| Cu | 65 | 255503.259 | 0.102827 | mg/L | 3 |
| Zn | 66 | 52476.222 | 0.101545 | mg/L | 3 |
| As | 75 | 27250.968 | 0.101573 | mg/L | 3 |
| Sr | 88 | 259477.206 | 0.101622 | mg/L | 3 |
| Mo | 95 | 211524.542 | 0.102464 | mg/L | 3 |
| Ag | 107 | 816430.358 | 0.100841 | mg/L | 3 |
| Cd | 111 | 98800.487 | 0.100397 | mg/L | 3 |
| Sb | 123 | 160231.084 | 0.101925 | mg/L | 3 |
| Ba | 137 | 110482.369 | 0.103381 | mg/L | 3 |
| Tl | 205 | 1891022.602 | 0.096103 | mg/L | 3 |
| Pb | 208 | 2478499.405 | 0.096130 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 012
Method: 18-R+AI
Acq Time: 10:55:50 Tue 30-Jun-20
Sample Name: rinse
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Li | 7 | 3177.020 | 0.000044 | mg/L | 3 |
| Be | 9 | 23.333 | 0.000024 | mg/L | 3 |
| B | 11 | 963.366 | 0.000767 | mg/L | 3 |
| Al | 27 | 1763.442 | 0.000304 | mg/L | 3 |
| Se | 82 | 296.696 | 0.001861 | mg/L | 3 |
| Cr | 52 | 261.669 | 0.000015 | mg/L | 3 |
| Fe | 57 | 168.334 | 0.000267 | mg/L | 3 |
| Co | 59 | 196.668 | 0.000027 | mg/L | 3 |
| Ni | 60 | 216.668 | 0.000064 | mg/L | 3 |
| Cu | 65 | 231.669 | 0.000063 | mg/L | 3 |
| Zn | 66 | 471.675 | 0.000590 | mg/L | 3 |
| As | 75 | 190.001 | 0.000665 | mg/L | 3 |
| Sr | 88 | 93.334 | 0.000028 | mg/L | 3 |
| Mo | 95 | 6218.020 | 0.002913 | mg/L | 3 |
| Ag | 107 | 381.672 | 0.000044 | mg/L | 3 |
| Cd | 111 | 11.667 | 0.000007 | mg/L | 3 |
| Sb | 123 | 3108.042 | 0.001854 | mg/L | 3 |
| Ba | 137 | 46.667 | 0.000031 | mg/L | 3 |
| Tl | 205 | 1543.417 | 0.000065 | mg/L | 3 |
| Pb | 208 | 2775.110 | 0.000086 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 013
Method: 18-R+AI
Acq Time: 11:01:57 Tue 30-Jun-20
Sample Name: ICB
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Li | 7 | 3388.737 | 0.000083 | mg/L | 3 |
| Be | 9 | 53.333 | 0.000052 | mg/L | 3 |
| B | 11 | 565.011 | 0.000331 | mg/L | 3 |
| Al | 27 | 1015.036 | 0.000083 | mg/L | 3 |
| Se | 82 | 72.045 | 0.000753 | mg/L | 3 |
| Cr | 52 | 188.335 | -0.000008 | mg/L | 3 |
| Fe | 57 | 85.000 | -0.000845 | mg/L | 3 |
| Co | 59 | 68.334 | 0.000009 | mg/L | 3 |
| Ni | 60 | 51.667 | -0.000018 | mg/L | 3 |
| Cu | 65 | 95.000 | 0.000010 | mg/L | 3 |
| Zn | 66 | 111.667 | -0.000090 | mg/L | 3 |
| As | 75 | 38.333 | 0.000116 | mg/L | 3 |
| Sr | 88 | 18.333 | -0.000000 | mg/L | 3 |
| Mo | 95 | 1146.713 | 0.000515 | mg/L | 3 |
| Ag | 107 | 66.667 | 0.000006 | mg/L | 3 |
| Cd | 111 | 18.333 | 0.000013 | mg/L | 3 |
| Sb | 123 | 1192.964 | 0.000667 | mg/L | 3 |
| Ba | 137 | 23.333 | 0.000010 | mg/L | 3 |
| Tl | 205 | 681.683 | 0.000023 | mg/L | 3 |
| Pb | 208 | 835.009 | 0.000013 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 014
Method: 18-R+AI
Acq Time: 11:03:56 Tue 30-Jun-20
Sample Name: CCB
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Li | 7 | 3020.320 | -0.000017 | mg/L | 3 |
| Be | 9 | 1.667 | 0.000002 | mg/L | 3 |
| B | 11 | 498.342 | 0.000260 | mg/L | 3 |
| Al | 27 | 695.017 | -0.000007 | mg/L | 3 |
| Se | 82 | -4.639 | 0.000367 | mg/L | 3 |
| Cr | 52 | 188.335 | -0.000008 | mg/L | 3 |
| Fe | 57 | 70.000 | -0.001053 | mg/L | 3 |
| Co | 59 | 35.000 | 0.000004 | mg/L | 3 |
| Ni | 60 | 50.000 | -0.000018 | mg/L | 3 |
| Cu | 65 | 90.000 | 0.000007 | mg/L | 3 |
| Zn | 66 | 88.334 | -0.000136 | mg/L | 3 |
| As | 75 | 53.333 | 0.000170 | mg/L | 3 |
| Sr | 88 | 16.667 | -0.000001 | mg/L | 3 |
| Mo | 95 | 866.693 | 0.000380 | mg/L | 3 |
| Ag | 107 | 38.333 | 0.000002 | mg/L | 3 |
| Cd | 111 | 5.000 | -0.000000 | mg/L | 3 |
| Sb | 123 | 927.944 | 0.000498 | mg/L | 3 |
| Ba | 137 | 16.667 | 0.000003 | mg/L | 3 |
| Tl | 205 | 545.010 | 0.000015 | mg/L | 3 |
| Pb | 208 | 713.340 | 0.000008 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 015
Method: 18-R+AI
Acq Time: 11:05:54 Tue 30-Jun-20
Sample Name: LOD 0.00005
Sample Type: Sample
Matrix: Liquid
Comments: soil
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Li | 7 | 3215.362 | 0.000058 | mg/L | 3 |
| Be | 9 | 35.000 | 0.000034 | mg/L | 3 |
| B | 11 | 440.007 | 0.000209 | mg/L | 3 |
| Al | 27 | 925.030 | 0.000064 | mg/L | 3 |
| Se | 82 | 82.177 | 0.000808 | mg/L | 3 |
| Cr | 52 | 288.336 | 0.000024 | mg/L | 3 |
| Fe | 57 | 65.000 | -0.001106 | mg/L | 3 |
| Co | 59 | 341.671 | 0.000048 | mg/L | 3 |
| Ni | 60 | 128.334 | 0.000021 | mg/L | 3 |
| Cu | 65 | 198.335 | 0.000051 | mg/L | 3 |
| Zn | 66 | 230.002 | 0.000140 | mg/L | 3 |
| As | 75 | 45.000 | 0.000143 | mg/L | 3 |
| Sr | 88 | 135.001 | 0.000045 | mg/L | 3 |
| Mo | 95 | 671.683 | 0.000293 | mg/L | 3 |
| Ag | 107 | 373.338 | 0.000043 | mg/L | 3 |
| Cd | 111 | 56.667 | 0.000052 | mg/L | 3 |
| Sb | 123 | 768.144 | 0.000405 | mg/L | 3 |
| Ba | 137 | 55.000 | 0.000039 | mg/L | 3 |
| Tl | 205 | 1126.711 | 0.000044 | mg/L | 3 |
| Pb | 208 | 1535.032 | 0.000039 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 016
Method: 18-R+AI
Acq Time: 11:07:53 Tue 30-Jun-20
Sample Name: LOD 0.00005
Sample Type: Sample
Matrix: Liquid
Comments: water
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Li | 7 | 3103.671 | 0.000014 | mg/L | 3 |
| Be | 9 | 33.333 | 0.000033 | mg/L | 3 |
| B | 11 | 438.340 | 0.000201 | mg/L | 3 |
| Al | 27 | 856.692 | 0.000041 | mg/L | 3 |
| Se | 82 | 52.331 | 0.000656 | mg/L | 3 |
| Cr | 52 | 378.338 | 0.000053 | mg/L | 3 |
| Fe | 57 | 38.333 | -0.001469 | mg/L | 3 |
| Co | 59 | 338.337 | 0.000048 | mg/L | 3 |
| Ni | 60 | 130.001 | 0.000022 | mg/L | 3 |
| Cu | 65 | 186.668 | 0.000047 | mg/L | 3 |
| Zn | 66 | 228.335 | 0.000138 | mg/L | 3 |
| As | 75 | 63.333 | 0.000210 | mg/L | 3 |
| Sr | 88 | 120.001 | 0.000039 | mg/L | 3 |
| Mo | 95 | 601.679 | 0.000259 | mg/L | 3 |
| Ag | 107 | 365.005 | 0.000042 | mg/L | 3 |
| Cd | 111 | 70.000 | 0.000066 | mg/L | 3 |
| Sb | 123 | 597.087 | 0.000298 | mg/L | 3 |
| Ba | 137 | 68.333 | 0.000051 | mg/L | 3 |
| Tl | 205 | 1245.055 | 0.000051 | mg/L | 3 |
| Pb | 208 | 1541.701 | 0.000040 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 017
Method: 18-R+AI
Acq Time: 11:10:04 Tue 30-Jun-20
Sample Name: BS-0.0001
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Li | 7 | 3312.051 | 0.000091 | mg/L | 3 |
| Be | 9 | 103.334 | 0.000104 | mg/L | 3 |
| Cr | 52 | 553.344 | 0.000111 | mg/L | 3 |
| Co | 59 | 783.355 | 0.000114 | mg/L | 3 |
| Ni | 60 | 288.336 | 0.000103 | mg/L | 3 |
| Cu | 65 | 303.337 | 0.000095 | mg/L | 3 |
| Zn | 66 | 223.335 | 0.000133 | mg/L | 3 |
| Sr | 88 | 263.336 | 0.000096 | mg/L | 3 |
| Ag | 107 | 845.025 | 0.000102 | mg/L | 3 |
| Cd | 111 | 110.000 | 0.000107 | mg/L | 3 |
| Ba | 137 | 143.334 | 0.000123 | mg/L | 3 |
| Tl | 205 | 2331.858 | 0.000108 | mg/L | 3 |
| Pb | 208 | 3065.128 | 0.000101 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 018
Method: 18-R+AI
Acq Time: 11:14:29 Tue 30-Jun-20
Sample Name: BS-0.00025
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Li | 7 | 4093.920 | 0.000258 | mg/L | 3 |
| Be | 9 | 316.670 | 0.000305 | mg/L | 3 |
| B | 11 | 548.344 | 0.000307 | mg/L | 3 |
| Al | 27 | 1815.115 | 0.000303 | mg/L | 3 |
| Cr | 52 | 991.701 | 0.000259 | mg/L | 3 |
| Co | 59 | 2023.477 | 0.000303 | mg/L | 3 |
| Ni | 60 | 615.013 | 0.000275 | mg/L | 3 |
| Cu | 65 | 811.690 | 0.000309 | mg/L | 3 |
| Sr | 88 | 751.687 | 0.000295 | mg/L | 3 |
| Ag | 107 | 2195.169 | 0.000277 | mg/L | 3 |
| Cd | 111 | 306.670 | 0.000316 | mg/L | 3 |
| Ba | 137 | 291.670 | 0.000269 | mg/L | 3 |
| Tl | 205 | 5582.757 | 0.000277 | mg/L | 3 |
| Pb | 208 | 7154.053 | 0.000263 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 019
Method: 18-R+Al
Acq Time: 11:16:28 Tue 30-Jun-20
Sample Name: BS-0.0005
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Li | 7 | 5224.289 | 0.000583 | mg/L | 3 |
| Be | 9 | 568.345 | 0.000561 | mg/L | 3 |
| B | 11 | 833.358 | 0.000624 | mg/L | 3 |
| Al | 27 | 2731.928 | 0.000576 | mg/L | 3 |
| Se | 82 | 4.918 | 0.000420 | mg/L | 3 |
| Cr | 52 | 1886.791 | 0.000532 | mg/L | 3 |
| Co | 59 | 3838.849 | 0.000558 | mg/L | 3 |
| Ni | 60 | 1216.719 | 0.000565 | mg/L | 3 |
| Cu | 65 | 1545.084 | 0.000591 | mg/L | 3 |
| Zn | 66 | 480.008 | 0.000624 | mg/L | 3 |
| As | 75 | 158.334 | 0.000562 | mg/L | 3 |
| Sr | 88 | 1418.404 | 0.000545 | mg/L | 3 |
| Mo | 95 | 1255.055 | 0.000575 | mg/L | 3 |
| Ag | 107 | 4355.665 | 0.000533 | mg/L | 3 |
| Cd | 111 | 526.676 | 0.000527 | mg/L | 3 |
| Ba | 137 | 570.011 | 0.000519 | mg/L | 3 |
| Tl | 205 | 10944.195 | 0.000557 | mg/L | 3 |
| Pb | 208 | 13740.954 | 0.000526 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 020
Method: 18-R+AI
Acq Time: 11:29:03 Tue 30-Jun-20
Sample Name: BS-0.001
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Li | 7 | 7128.445 | 0.001088 | mg/L | 3 |
| Be | 9 | 1116.710 | 0.001099 | mg/L | 3 |
| B | 11 | 1388.401 | 0.001209 | mg/L | 3 |
| Al | 27 | 4642.422 | 0.001117 | mg/L | 3 |
| Se | 82 | 159.980 | 0.001199 | mg/L | 3 |
| Cr | 52 | 3728.821 | 0.001131 | mg/L | 3 |
| Co | 59 | 7707.080 | 0.001133 | mg/L | 3 |
| Ni | 60 | 2136.827 | 0.001037 | mg/L | 3 |
| Cu | 65 | 2975.310 | 0.001178 | mg/L | 3 |
| Zn | 68 | 600.013 | 0.001302 | mg/L | 3 |
| As | 75 | 315.003 | 0.001160 | mg/L | 3 |
| Sr | 88 | 2911.964 | 0.001141 | mg/L | 3 |
| Mo | 95 | 2036.812 | 0.000963 | mg/L | 3 |
| Ag | 107 | 8982.826 | 0.001114 | mg/L | 3 |
| Cd | 111 | 1176.715 | 0.001199 | mg/L | 3 |
| Sb | 123 | 2214.543 | 0.001340 | mg/L | 3 |
| Ba | 137 | 1165.048 | 0.001085 | mg/L | 3 |
| Tl | 205 | 21125.609 | 0.001096 | mg/L | 3 |
| Pb | 208 | 27637.472 | 0.001087 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 021
Method: 18-R+AI
Acq Time: 11:32:32 Tue 30-Jun-20
Sample Name: BS-0.001
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Li | 7 | 7183.476 | 0.001091 | mg/L | 3 |
| Be | 9 | 1121.711 | 0.001096 | mg/L | 3 |
| B | 11 | 1256.722 | 0.001061 | mg/L | 3 |
| Al | 27 | 4817.479 | 0.001157 | mg/L | 3 |
| Se | 82 | 176.974 | 0.001288 | mg/L | 3 |
| Cr | 52 | 3685.475 | 0.001107 | mg/L | 3 |
| Co | 59 | 7777.116 | 0.001135 | mg/L | 3 |
| Ni | 60 | 2256.845 | 0.001089 | mg/L | 3 |
| Cu | 65 | 3063.662 | 0.001204 | mg/L | 3 |
| Zn | 66 | 805.023 | 0.001256 | mg/L | 3 |
| As | 75 | 315.004 | 0.001149 | mg/L | 3 |
| Sr | 88 | 2865.288 | 0.001113 | mg/L | 3 |
| Mo | 95 | 2213.505 | 0.001041 | mg/L | 3 |
| Ag | 107 | 8879.426 | 0.001093 | mg/L | 3 |
| Cd | 111 | 1148.380 | 0.001160 | mg/L | 3 |
| Sb | 123 | 2236.003 | 0.001342 | mg/L | 3 |
| Ba | 137 | 1238.387 | 0.001145 | mg/L | 3 |
| Tl | 205 | 20381.205 | 0.001057 | mg/L | 3 |
| Pb | 208 | 27200.328 | 0.001069 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 022
Method: 18-R+AI
Acq Time: 11:37:33 Tue 30-Jun-20
Sample Name: BS-0.0025
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Fe | 57 | 290.003 | 0.002075 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 023
Method: 18-R+AI
Acq Time: 11:42:04 Tue 30-Jun-20
Sample Name: BS-0.0025
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Li | 7 | 13372.924 | 0.002689 | mg/L | 3 |
| Be | 9 | 2643.578 | 0.002557 | mg/L | 3 |
| B | 11 | 2751.932 | 0.002599 | mg/L | 3 |
| Al | 27 | 10660.645 | 0.002776 | mg/L | 3 |
| Se | 82 | 528.449 | 0.003035 | mg/L | 3 |
| Cr | 52 | 8867.753 | 0.002762 | mg/L | 3 |
| Fe | 57 | 266.669 | 0.001672 | mg/L | 3 |
| Co | 59 | 18693.897 | 0.002735 | mg/L | 3 |
| Ni | 60 | 5399.354 | 0.002670 | mg/L | 3 |
| Cu | 65 | 7328.547 | 0.002922 | mg/L | 3 |
| Zn | 66 | 1716.770 | 0.003028 | mg/L | 3 |
| As | 75 | 651.682 | 0.002408 | mg/L | 3 |
| Sr | 88 | 6863.315 | 0.002680 | mg/L | 3 |
| Mo | 95 | 5094.242 | 0.002438 | mg/L | 3 |
| Ag | 107 | 21524.558 | 0.002656 | mg/L | 3 |
| Cd | 111 | 2575.232 | 0.002613 | mg/L | 3 |
| Sb | 123 | 5273.258 | 0.003277 | mg/L | 3 |
| Ba | 137 | 2860.286 | 0.002666 | mg/L | 3 |
| Tl | 205 | 50681.410 | 0.002603 | mg/L | 3 |
| Pb | 208 | 67389.741 | 0.002634 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 024
Method: 18-R+AI
Acq Time: 11:44:02 Tue 30-Jun-20
Sample Name: Solu-AB
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Al | 27 | 33701415.477 | 9.865482 | mg/L | 3 |
| Cr | 52 | 65843.080 | 0.022929 | mg/L | 3 |
| Fe | 57 | 745210.167 | 11.209159 | mg/L | 3 |
| Co | 59 | 142909.613 | 0.022881 | mg/L | 3 |
| Ni | 60 | 40552.479 | 0.022251 | mg/L | 3 |
| Cu | 65 | 51054.452 | 0.022466 | mg/L | 3 |
| Zn | 66 | 11181.042 | 0.023445 | mg/L | 3 |
| As | 75 | 5596.096 | 0.022808 | mg/L | 3 |
| Mo | 95 | 431837.831 | 0.228961 | mg/L | 3 |
| Ag | 107 | 164570.882 | 0.022245 | mg/L | 3 |
| Cd | 111 | 20576.483 | 0.022876 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 025
Method: 18-R+AI
Acq Time: 11:46:01 Tue 30-Jun-20
Sample Name: Solu-AA
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Li | 7 | 3183.689 | 0.000077 | mg/L | 3 |
| Be | 9 | 5.000 | 0.000005 | mg/L | 3 |
| B | 11 | 591.679 | 0.000395 | mg/L | 3 |
| Se | 82 | -33.000 | 0.000214 | mg/L | 3 |
| Cr | 52 | 291.670 | 0.000034 | mg/L | 3 |
| Co | 59 | 211.668 | 0.000032 | mg/L | 3 |
| Ni | 60 | 176.668 | 0.000053 | mg/L | 3 |
| Cu | 65 | 1541.750 | 0.000643 | mg/L | 3 |
| Zn | 66 | 1021.703 | 0.001839 | mg/L | 3 |
| As | 75 | 46.667 | 0.000164 | mg/L | 3 |
| Sr | 88 | 273.336 | 0.000108 | mg/L | 3 |
| Ag | 107 | 93.334 | 0.000010 | mg/L | 3 |
| Cd | 111 | 145.001 | 0.000154 | mg/L | 3 |
| Sb | 123 | 210.002 | 0.000065 | mg/L | 3 |
| Ba | 137 | 550.011 | 0.000544 | mg/L | 3 |
| Tl | 205 | 225.002 | -0.000001 | mg/L | 3 |
| Pb | 208 | 2545.091 | 0.000080 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 026
Method: 18-R+AI
Acq Time: 11:48:00 Tue 30-Jun-20
Sample Name: Rinse
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib:
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Li | 7 | 3190.357 | 0.000013 | mg/L | 3 |
| Be | 9 | 1.667 | 0.000002 | mg/L | 3 |
| B | 11 | 406.672 | 0.000156 | mg/L | 3 |
| Al | 27 | 9016.194 | 0.002288 | mg/L | 3 |
| Se | 82 | -81.610 | -0.000005 | mg/L | 3 |
| Cr | 52 | 268.336 | 0.000020 | mg/L | 3 |
| Fe | 57 | 1140.047 | 0.013889 | mg/L | 3 |
| Co | 59 | 101.667 | 0.000014 | mg/L | 3 |
| Ni | 60 | 201.668 | 0.000059 | mg/L | 3 |
| Cu | 65 | 178.334 | 0.000045 | mg/L | 3 |
| Zn | 66 | 473.341 | 0.000626 | mg/L | 3 |
| As | 75 | 20.000 | 0.000052 | mg/L | 3 |
| Sr | 88 | 48.333 | 0.000011 | mg/L | 3 |
| Mo | 95 | 9181.288 | 0.004467 | mg/L | 3 |
| Ag | 107 | 170.001 | 0.000019 | mg/L | 3 |
| Cd | 111 | 15.000 | 0.000011 | mg/L | 3 |
| Sb | 123 | 129.791 | 0.000004 | mg/L | 3 |
| Ba | 137 | 21.667 | 0.000008 | mg/L | 3 |
| Tl | 205 | 338.337 | 0.000004 | mg/L | 3 |
| Pb | 208 | 1018.347 | 0.000018 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 027
Method: 18-R+AI
Acq Time: 11:53:35 Tue 30-Jun-20
Sample Name: 063020_1 LCS-0.05
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib: MTD-063020-1
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Li | 7 | 187504.373 | 0.047900 | mg/L | 3 |
| Be | 9 | 50788.473 | 0.048779 | mg/L | 3 |
| B | 11 | 46126.091 | 0.047367 | mg/L | 3 |
| Al | 27 | 170726.388 | 0.047162 | mg/L | 3 |
| Se | 82 | 9430.126 | 0.048253 | mg/L | 3 |
| Cr | 52 | 154277.531 | 0.049241 | mg/L | 3 |
| Fe | 57 | 3658.804 | 0.048483 | mg/L | 3 |
| Co | 59 | 327549.331 | 0.048019 | mg/L | 3 |
| Ni | 60 | 95897.465 | 0.048225 | mg/L | 3 |
| Cu | 65 | 121185.262 | 0.048848 | mg/L | 3 |
| Zn | 66 | 26200.672 | 0.050649 | mg/L | 3 |
| As | 75 | 13057.635 | 0.048736 | mg/L | 3 |
| Sr | 88 | 122339.962 | 0.047997 | mg/L | 3 |
| Mo | 95 | 94837.116 | 0.046024 | mg/L | 3 |
| Ag | 107 | 397096.001 | 0.049153 | mg/L | 3 |
| Cd | 111 | 48726.308 | 0.049598 | mg/L | 3 |
| Sb | 123 | 68705.274 | 0.043739 | mg/L | 3 |
| Ba | 137 | 53270.850 | 0.049933 | mg/L | 3 |
| Tl | 205 | 921902.154 | 0.046822 | mg/L | 3 |
| Pb | 208 | 1224150.467 | 0.047439 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 028
Method: 18-R+AI
Acq Time: 11:55:37 Tue 30-Jun-20
Sample Name: Rinse
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib: MTD-063020-1
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Li | 7 | 3073.664 | 0.000001 | mg/L | 3 |
| Be | 9 | 33.333 | 0.000032 | mg/L | 3 |
| B | 11 | 583.345 | 0.000351 | mg/L | 3 |
| Al | 27 | 10369.099 | 0.002720 | mg/L | 3 |
| Se | 82 | 158.639 | 0.001186 | mg/L | 3 |
| Cr | 52 | 260.002 | 0.000017 | mg/L | 3 |
| Fe | 57 | 331.671 | 0.002592 | mg/L | 3 |
| Co | 59 | 150.001 | 0.000021 | mg/L | 3 |
| Ni | 60 | 208.335 | 0.000062 | mg/L | 3 |
| Cu | 65 | 240.002 | 0.000069 | mg/L | 3 |
| Zn | 66 | 451.674 | 0.000582 | mg/L | 3 |
| As | 75 | 48.333 | 0.000159 | mg/L | 3 |
| Sr | 88 | 76.667 | 0.000023 | mg/L | 3 |
| Mo | 95 | 3415.409 | 0.001635 | mg/L | 3 |
| Ag | 107 | 271.669 | 0.000031 | mg/L | 3 |
| Cd | 111 | 25.000 | 0.000021 | mg/L | 3 |
| Sb | 123 | 899.819 | 0.000497 | mg/L | 3 |
| Ba | 137 | 48.333 | 0.000033 | mg/L | 3 |
| Tl | 205 | 783.355 | 0.000029 | mg/L | 3 |
| Pb | 208 | 2531.756 | 0.000082 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 029
Method: 18-R+AI
Acq Time: 11:57:35 Tue 30-Jun-20
Sample Name: 063020_1 LRB
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib: MTD-063020-1
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Li | 7 | 3071.997 | 0.000033 | mg/L | 3 |
| Be | 9 | 18.333 | 0.000019 | mg/L | 3 |
| B | 11 | 345.004 | 0.000116 | mg/L | 3 |
| Al | 27 | 4789.154 | 0.001203 | mg/L | 3 |
| Se | 82 | -43.131 | 0.000169 | mg/L | 3 |
| Cr | 52 | 236.669 | 0.000011 | mg/L | 3 |
| Fe | 57 | 191.668 | 0.000723 | mg/L | 3 |
| Co | 59 | 78.334 | 0.000011 | mg/L | 3 |
| Ni | 60 | 65.000 | -0.000009 | mg/L | 3 |
| Cu | 65 | 136.667 | 0.000029 | mg/L | 3 |
| Zn | 66 | 131.667 | -0.000040 | mg/L | 3 |
| As | 75 | 31.667 | 0.000097 | mg/L | 3 |
| Sr | 88 | 46.667 | 0.000011 | mg/L | 3 |
| Mo | 95 | 1710.102 | 0.000823 | mg/L | 3 |
| Ag | 107 | 155.001 | 0.000017 | mg/L | 3 |
| Cd | 111 | 18.333 | 0.000014 | mg/L | 3 |
| Sb | 123 | 581.259 | 0.000301 | mg/L | 3 |
| Ba | 137 | 13.333 | 0.000001 | mg/L | 3 |
| Tl | 205 | 590.012 | 0.000018 | mg/L | 3 |
| Pb | 208 | 1266.690 | 0.000030 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 052
Method: 18-R+AI
Acq Time: 12:45:51 Tue 30-Jun-20
Sample Name: CCV2-0.1
Sample Type: Sample
Matrix: Liquid
Comments: IV-std made 06/24/20
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib: MTD-063020-1
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|----------|-------|-----|
| Li | 7 | 406939.436 | 0.102349 | mg/L | 3 |
| Be | 9 | 106272.282 | 0.099559 | mg/L | 3 |
| B | 11 | 100210.574 | 0.100822 | mg/L | 3 |
| Al | 27 | 360213.721 | 0.097201 | mg/L | 3 |
| Se | 82 | 19093.604 | 0.097456 | mg/L | 3 |
| Cr | 52 | 315674.001 | 0.103995 | mg/L | 3 |
| Fe | 57 | 7431.933 | 0.103575 | mg/L | 3 |
| Co | 59 | 672382.201 | 0.101634 | mg/L | 3 |
| Ni | 60 | 195176.725 | 0.101259 | mg/L | 3 |
| Cu | 65 | 246721.774 | 0.102604 | mg/L | 3 |
| Zn | 66 | 53153.752 | 0.106273 | mg/L | 3 |
| As | 75 | 27007.172 | 0.104026 | mg/L | 3 |
| Sr | 88 | 258455.779 | 0.104558 | mg/L | 3 |
| Mo | 95 | 199735.453 | 0.099969 | mg/L | 3 |
| Ag | 107 | 794519.978 | 0.101386 | mg/L | 3 |
| Cd | 111 | 97664.375 | 0.102542 | mg/L | 3 |
| Sb | 123 | 159597.656 | 0.104894 | mg/L | 3 |
| Ba | 137 | 107182.265 | 0.103643 | mg/L | 3 |
| Tl | 205 | 1833198.221 | 0.094283 | mg/L | 3 |
| Pb | 208 | 2471704.391 | 0.097012 | mg/L | 3 |

Metals Quantitation Summary Report

Sequence #: 053
Method: 18-R+Al
Acq Time: 12:47:49 Tue 30-Jun-20
Sample Name: Rinse
Sample Type: Sample
Matrix: Liquid
Comments:
Dilution: 1

Operator:
Acq Mode: Data Acquisition
Cal Title: 20-0630A.cal
Cal Type: External Calibration
Last Calib: MTD-063020-1
Bkg File:
Int Correct:
Blank File: Blank.012

| Element | Mass | Concentration | Units | RSD % | Rep |
|---------|------|---------------|-----------|-------|-----|
| Li | 7 | 3218.697 | -0.000012 | mg/L | 3 |
| Be | 9 | 20.000 | 0.000018 | mg/L | 3 |
| B | 11 | 1043.372 | 0.000767 | mg/L | 3 |
| Al | 27 | 1831.784 | 0.000283 | mg/L | 3 |
| Se | 82 | 373.512 | 0.002319 | mg/L | 3 |
| Cr | 52 | 236.669 | 0.000009 | mg/L | 3 |
| Fe | 57 | 133.334 | -0.000162 | mg/L | 3 |
| Co | 59 | 105.000 | 0.000014 | mg/L | 3 |
| Ni | 60 | 226.669 | 0.000071 | mg/L | 3 |
| Cu | 65 | 198.335 | 0.000052 | mg/L | 3 |
| Zn | 66 | 483.342 | 0.000633 | mg/L | 3 |
| As | 75 | 153.334 | 0.000547 | mg/L | 3 |
| Sr | 88 | 60.000 | 0.000016 | mg/L | 3 |
| Mo | 95 | 5816.185 | 0.002782 | mg/L | 3 |
| Ag | 107 | 253.336 | 0.000029 | mg/L | 3 |
| Cd | 111 | 18.333 | 0.000014 | mg/L | 3 |
| Sb | 123 | 2520.013 | 0.001522 | mg/L | 3 |
| Ba | 137 | 31.667 | 0.000018 | mg/L | 3 |
| Tl | 205 | 873.360 | 0.000032 | mg/L | 3 |
| Pb | 208 | 2155.064 | 0.000064 | mg/L | 3 |