

# DEPARTMENT OF HEALTH

*Protecting, Maintaining and Improving the Health of All Minnesotans*

**To:** Community Water System Owner/Operator

**From:** Community Water Supply Unit  
Section of Drinking Water Protection

**Subject:** Sample Analysis Results for your Public Water System

Enclosed are the results of analyses performed on water sample(s) collected from your public water system. These results show that your system is in compliance with maximum contaminant levels set by the state and federal Safe Drinking Water Rules for the contaminants analyzed. These results must be kept in your files for a minimum of ten (10) years.

Analyses are attached for the contaminant groups checked below:

- |  |  |
|--|--|
| <input type="checkbox"/> Ammonia           | <input type="checkbox"/> Radon (proposed rule-MCL 4000)              |
| <input type="checkbox"/> Coliform Bacteria | <input type="checkbox"/> Synthetic Organics                          |
| <input type="checkbox"/> Inorganics        | <input checked="" type="checkbox"/> Trihalomethanes/Haloacetic Acids |
| <input type="checkbox"/> Nitrate           | <input type="checkbox"/> Volatile Organics                           |
| <input type="checkbox"/> Nitrite           | <input type="checkbox"/> Other                                       |
| <input type="checkbox"/> Radiochemical(s)  |  |

If you have any questions concerning these results, please contact your Department of Health district engineer.

**Bemidji**

Eric Weller 218/308-2107

**Duluth**

Kim Larsen 218/302-6178

**Fergus Falls**

Lucas Hoffman 218/332-5146

**Mankato**

Amy Lynch 507/344-2713

**Marshall**

Kim Larsen 507/476-4238

**Rochester**

Kate Novy 507/206-2724

**St. Cloud**

Hunter Blommer 320/223-7339

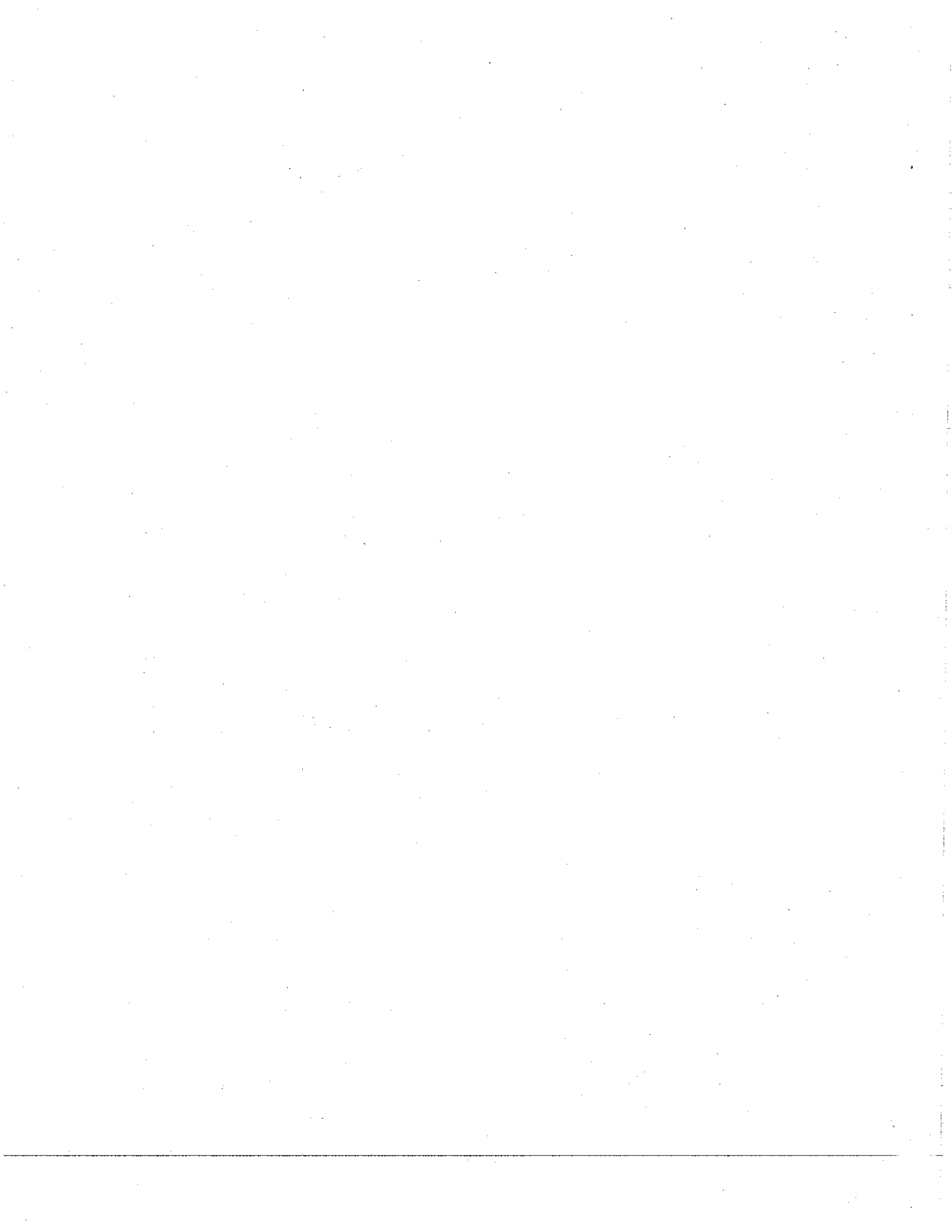
Jennifer Showers 320/223-7340

**St. Paul**

Lucas Martin 651/201-4144

Andrew Karp 320/428-5249

Brian Noma 651/201-3971





# Final Report

Minnesota Department of Health  
Public Health Laboratory  
Environmental Laboratory Section  
601 Robert St. N., P.O. Box 64899  
St. Paul, MN 55164-0899  
651-201-5300

PWSID: 1720006  
System Name: Henderson  
City: Henderson

Program Code: HC

Type: B

Date Received: 07/26/23 09:52  
Rep. Temp. (°C): 8.4

Collector Name: James Kroehler  
Collector ID: None

## MDH Sample Number: 23G1732-01

Location ID: 00034  
Sampling Point: Allansons Park - Restroom

Collect Date: 07/26/23  
Collect Time: 08:00  
Matrix: Drinking Water

Field Residual Chlorine Result: None  
Field Fluoride Result: None  
Field pH Result: None  
Field PO4 Result: None

Results were produced by the Minnesota Department of Health, except where noted.

### Haloacetic Acids, ICR

| Analyte                         | Result | Reporting Limit | Units | Batch   | Prepared       | Analyzed       | Init. | Method    | Qualifiers |
|---------------------------------|--------|-----------------|-------|---------|----------------|----------------|-------|-----------|------------|
| Dibromoacetic Acid              | <      | 1.0             | ug/L  | B3G1640 | 07/28/23 08:32 | 08/01/23 04:08 | MAG   | EPA 552.3 |            |
| Dichloroacetic Acid             | 1.9    | 1.0             | ug/L  | B3G1640 | 07/28/23 08:32 | 08/01/23 04:08 | MAG   | EPA 552.3 |            |
| Monobromoacetic Acid            | <      | 1.0             | ug/L  | B3G1640 | 07/28/23 08:32 | 08/01/23 04:08 | MAG   | EPA 552.3 |            |
| Monochloroacetic Acid           | <      | 2.0             | ug/L  | B3G1640 | 07/28/23 08:32 | 08/01/23 04:08 | MAG   | EPA 552.3 |            |
| Trichloroacetic Acid            | <      | 1.0             | ug/L  | B3G1640 | 07/28/23 08:32 | 08/01/23 04:08 | MAG   | EPA 552.3 |            |
| Surrogate: 2-Bromobutanoic Acid | 94     | 70-130          | %     | B3G1640 | 07/28/23 08:32 | 08/01/23 04:08 | MAG   | EPA 552.3 |            |

### THMs by GCMS

| Analyte                                   | Result | Reporting Limit | Units | Batch   | Prepared       | Analyzed       | Init. | Method    | Qualifiers |
|---|--------|-----------------|-------|---------|----------------|----------------|-------|-----------|------------|
| Bromodichloromethane                      | <      | 0.5             | ug/L  | B3G1658 | 07/29/23 13:40 | 07/29/23 13:40 | CLS   | EPA 524.3 |            |
| Bromoform                                 | <      | 0.5             | ug/L  | B3G1658 | 07/29/23 13:40 | 07/29/23 13:40 | CLS   | EPA 524.3 |            |
| Chlorodibromomethane                      | <      | 0.5             | ug/L  | B3G1658 | 07/29/23 13:40 | 07/29/23 13:40 | CLS   | EPA 524.3 |            |
| Chloroform                                | 1.0    | 0.5             | ug/L  | B3G1658 | 07/29/23 13:40 | 07/29/23 13:40 | CLS   | EPA 524.3 |            |
| Surrogate: 1,2-Dichlorobenzene-d4         | 96     | 70-130          | %     | B3G1658 | 07/29/23 13:40 | 07/29/23 13:40 | CLS   | EPA 524.3 |            |
| Surrogate: 4-Bromofluorobenzene           | 102    | 70-130          | %     | B3G1658 | 07/29/23 13:40 | 07/29/23 13:40 | CLS   | EPA 524.3 |            |
| Surrogate: Methyl tertiary butyl ether-d3 | 99     | 70-130          | %     | B3G1658 | 07/29/23 13:40 | 07/29/23 13:40 | CLS   | EPA 524.3 |            |

FINAL REPORT

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Authorized by:

Stefan Saravia, Environmental Laboratory Manager  
Public Health Laboratory, Minnesota Department of Health

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Environmental Laboratory Section  
601 Robert St. N., P.O. Box 64899  
St. Paul, MN 55164-0899  
651-201-5300

PWSID: 1720006

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**Batch B3G1640 - HAA Extraction**

**Blank (B3G1640-BLK1)**

Prepared: 07/28/23 08:32 Analyzed: 07/31/23 16:11

| Analyte                         | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Init. | Qualifiers |
|---------------------------------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|------------|
| Dibromoacetic Acid              | <      | 1.0             | ug/L  |             |               |      |             |     |           | MAG   |            |
| Dichloroacetic Acid             | <      | 1.0             | ug/L  |             |               |      |             |     |           | MAG   |            |
| Monobromoacetic Acid            | <      | 1.0             | ug/L  |             |               |      |             |     |           | MAG   |            |
| Monochloroacetic Acid           | <      | 2.0             | ug/L  |             |               |      |             |     |           | MAG   |            |
| Trichloroacetic Acid            | <      | 1.0             | ug/L  |             |               |      |             |     |           | MAG   |            |
| Surrogate: 2-Bromobutanoic Acid | 102    | 70-130          | %     | 10          |               |      |             |     |           | MAG   |            |

**LCS (B3G1640-BS1)**

Prepared: 07/28/23 08:32 Analyzed: 07/31/23 23:29

| Analyte                         | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Init. | Qualifiers |
|---------------------------------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|------------|
| Dibromoacetic Acid              | 8.5    | 1.0             | ug/L  | 10          |               | 85   | 70-130      |     |           | MAG   |            |
| Dichloroacetic Acid             | 10     | 1.0             | ug/L  | 10          |               | 103  | 70-130      |     |           | MAG   |            |
| Monobromoacetic Acid            | 10     | 1.0             | ug/L  | 10          |               | 102  | 70-130      |     |           | MAG   |            |
| Monochloroacetic Acid           | 22     | 2.0             | ug/L  | 20          |               | 108  | 70-130      |     |           | MAG   |            |
| Trichloroacetic Acid            | 9.8    | 1.0             | ug/L  | 10          |               | 98   | 70-130      |     |           | MAG   |            |
| Surrogate: 2-Bromobutanoic Acid | 101    | 70-130          | %     | 10          |               |      |             |     |           | MAG   |            |

**LCS (B3G1640-BS2)**

Prepared: 07/28/23 08:32 Analyzed: 08/01/23 06:08

| Analyte                         | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Init. | Qualifiers |
|---------------------------------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|------------|
| Dibromoacetic Acid              | 20     | 1.0             | ug/L  | 20          |               | 98   | 70-130      |     |           | MAG   |            |
| Dichloroacetic Acid             | 22     | 1.0             | ug/L  | 20          |               | 108  | 70-130      |     |           | MAG   |            |
| Monobromoacetic Acid            | 21     | 1.0             | ug/L  | 20          |               | 107  | 70-130      |     |           | MAG   |            |
| Monochloroacetic Acid           | 44     | 2.0             | ug/L  | 40          |               | 110  | 70-130      |     |           | MAG   |            |
| Trichloroacetic Acid            | 21     | 1.0             | ug/L  | 20          |               | 105  | 70-130      |     |           | MAG   |            |
| Surrogate: 2-Bromobutanoic Acid | 106    | 70-130          | %     | 10          |               |      |             |     |           | MAG   |            |

**Matrix Spike (B3G1640-MS1)**

Source: 23G1757-01

Prepared: 07/28/23 08:32 Analyzed: 07/31/23 17:31

| Analyte               | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Init. | Qualifiers |
|-----------------------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|------------|
| Dibromoacetic Acid    | 19     | 1.0             | ug/L  | 20          | <             | 92   | 70-130      |     |           | MAG   |            |
| Dichloroacetic Acid   | 27     | 1.0             | ug/L  | 20          | 7.4           | 100  | 70-130      |     |           | MAG   |            |
| Monobromoacetic Acid  | 20     | 1.0             | ug/L  | 20          | <             | 101  | 70-130      |     |           | MAG   |            |
| Monochloroacetic Acid | 38     | 2.0             | ug/L  | 40          | <             | 93   | 70-130      |     |           | MAG   |            |

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Stefan Saravia, Environmental Laboratory Manager  
Public Health Laboratory, Minnesota Department of Health

PWSID: 1720006

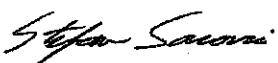
Results were produced by Minnesota Department of Health, except where noted.

Batch B3G1640 - HAA Extraction

| Matrix Spike (B3G1640-MS1)      |        | Source: 23G1757-01 |       |             | Prepared: 07/28/23 08:32 Analyzed: 07/31/23 17:31 |      |             |     |           |       |            |
|---------------------------------|--------|--------------------|-------|-------------|---|------|-------------|-----|-----------|-------|------------|
| Analyte                         | Result | Reporting Limit    | Units | Spike Level | Source Result                                     | %REC | %REC Limits | RPD | RPD Limit | Init. | Qualifiers |
| Trichloroacetic Acid            | 27     | 1.0                | ug/L  | 20          | 6.9   | 99   | 70-130      |     |           | MAG   |            |
| Surrogate: 2-Bromobutanoic Acid | 88     | 70-130             | %     | 10          |   |      |             |     |           | MAG   |            |

| Matrix Spike Dup (B3G1640-MSD1) |        | Source: 23G1757-01 |       |             | Prepared: 07/28/23 08:32 Analyzed: 07/31/23 18:11 |      |             |     |           |       |            |
|---------------------------------|--------|--------------------|-------|-------------|---|------|-------------|-----|-----------|-------|------------|
| Analyte                         | Result | Reporting Limit    | Units | Spike Level | Source Result                                     | %REC | %REC Limits | RPD | RPD Limit | Init. | Qualifiers |
| Dibromoacetic Acid              | 19     | 1.0                | ug/L  | 20          | <   | 93   | 70-130      | 0.8 | 30        | MAG   |            |
| Dichloroacetic Acid             | 28     | 1.0                | ug/L  | 20          | 7.4   | 104  | 70-130      | 3   | 30        | MAG   |            |
| Monobromoacetic Acid            | 21     | 1.0                | ug/L  | 20          | <   | 104  | 70-130      | 3   | 30        | MAG   |            |
| Monochloroacetic Acid           | 38     | 2.0                | ug/L  | 40          | <   | 93   | 70-130      | 0.5 | 30        | MAG   |            |
| Trichloroacetic Acid            | 27     | 1.0                | ug/L  | 20          | 6.9   | 102  | 70-130      | 3   | 30        | MAG   |            |
| Surrogate: 2-Bromobutanoic Acid | 89     | 70-130             | %     | 10          |   |      |             |     |           | MAG   |            |

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St. Paul, MN 55164-0899  
651-201-5300

PWSID: 1720006

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Batch B3G1658 - EPA 524 Prep

**Blank (B3G1658-BLK1)**

Prepared: 07/29/23 11:27 Analyzed: 07/29/23 11:27

| Analyte                                   | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Init. | Qualifiers |
|---|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|------------|
| Bromodichloromethane                      | <      | 0.5             | ug/L  |             |               |      |             |     |           | CLS   |            |
| Bromoform                                 | <      | 0.5             | ug/L  |             |               |      |             |     |           | CLS   |            |
| Chlorodibromomethane                      | <      | 0.5             | ug/L  |             |               |      |             |     |           | CLS   |            |
| Chloroform                                | <      | 0.5             | ug/L  |             |               |      |             |     |           | CLS   |            |
| Surrogate: 1,2-Dichlorobenzene-d4         | 96     | 70-130          | %     | 10          |               |      |             |     |           | CLS   |            |
| Surrogate: 4-Bromofluorobenzene           | 100    | 70-130          | %     | 10          |               |      |             |     |           | CLS   |            |
| Surrogate: Methyl tertiary butyl ether-d3 | 97     | 70-130          | %     | 10          |               |      |             |     |           | CLS   |            |

**LCS (B3G1658-BS1)**

Prepared: 07/29/23 17:39 Analyzed: 07/29/23 17:39

| Analyte                                   | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Init. | Qualifiers |
|---|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|------------|
| Bromodichloromethane                      | 3.7    | 0.5             | ug/L  | 4           |               | 93   | 70-130      |     |           | CLS   |            |
| Bromoform                                 | 3.2    | 0.5             | ug/L  | 4           |               | 81   | 70-130      |     |           | CLS   |            |
| Chlorodibromomethane                      | 3.6    | 0.5             | ug/L  | 4           |               | 91   | 70-130      |     |           | CLS   |            |
| Chloroform                                | 3.6    | 0.5             | ug/L  | 4           |               | 91   | 70-130      |     |           | CLS   |            |
| Surrogate: 1,2-Dichlorobenzene-d4         | 97     | 70-130          | %     | 10          |               |      |             |     |           | CLS   |            |
| Surrogate: 4-Bromofluorobenzene           | 102    | 70-130          | %     | 10          |               |      |             |     |           | CLS   |            |
| Surrogate: Methyl tertiary butyl ether-d3 | 100    | 70-130          | %     | 10          |               |      |             |     |           | CLS   |            |

**Duplicate (B3G1658-DUP1)**

Source: 23G1888-01

Prepared: 07/29/23 17:12 Analyzed: 07/29/23 17:12

| Analyte                                   | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Init. | Qualifiers |
|---|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|------------|
| Bromodichloromethane                      | <      | 0.5             | ug/L  |             | <             |      |             |     | 30        | CLS   |            |
| Bromoform                                 | <      | 0.5             | ug/L  |             | <             |      |             |     | 30        | CLS   |            |
| Chlorodibromomethane                      | <      | 0.5             | ug/L  |             | <             |      |             |     | 30        | CLS   |            |
| Chloroform                                | 0.5    | 0.5             | ug/L  |             | 0.6           |      |             | 9   | 30        | CLS   |            |
| Surrogate: 1,2-Dichlorobenzene-d4         | 100    | 70-130          | %     | 10          |               |      |             |     |           | CLS   |            |
| Surrogate: 4-Bromofluorobenzene           | 101    | 70-130          | %     | 10          |               |      |             |     |           | CLS   |            |
| Surrogate: Methyl tertiary butyl ether-d3 | 100    | 70-130          | %     | 10          |               |      |             |     |           | CLS   |            |

**Matrix Spike (B3G1658-MS1)**

Source: 23G1687-01

Prepared: 07/29/23 11:54 Analyzed: 07/29/23 11:54

| Analyte              | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Init. | Qualifiers |
|----------------------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|------------|
| Bromodichloromethane | 12     | 0.5             | ug/L  | 6           | 6.1           | 96   | 70-130      |     |           | CLS   |            |
| Bromoform            | 5.4    | 0.5             | ug/L  | 6           | <             | 89   | 70-130      |     |           | CLS   |            |

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Public Health Laboratory, Minnesota Department of Health

PWSID: 1720006

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Batch B3G1658 - EPA 524 Prep

Matrix Spike (B3G1658-MS1)

Source: 23G1687-01

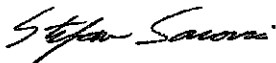
Prepared: 07/29/23 11:54 Analyzed: 07/29/23 11:54

| Analyte                                   | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Init. | Qualifiers |
|---|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|------------|
| Chlorodibromomethane                      | 6.2    | 0.5             | ug/L  | 6           | 0.6           | 93   | 70-130      |     |           | CLS   |            |
| Chloroform                                | 30     | 0.5             | ug/L  | 6           | 24            | 92   | 70-130      |     |           | CLS   |            |
| Surrogate: 1,2-Dichlorobenzene-d4         | 94     | 70-130          | %     | 10          |               |      |             |     |           | CLS   |            |
| Surrogate: 4-Bromofluorobenzene           | 99     | 70-130          | %     | 10          |               |      |             |     |           | CLS   |            |
| Surrogate: Methyl tertiary butyl ether-d3 | 98     | 70-130          | %     | 10          |               |      |             |     |           | CLS   |            |

**Work Order Comments**

Samples were received in proper condition.

Authorized by:



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