

#### Midwest Environmental Legacy Management Group

W132 N10487 Grant Drive Germantown, WI 53022 262 509 5630

October 2, 2023

Mr. Dale Alme FoamTech Insulation 2259 County Trunk A Stoughton, WI 53589

Dear Mr. Alme:

As required by the Unilateral Administrative Order for clean-up of the Hagen Farm Landfill, Waste Management of Wisconsin, Inc. (WMWI) samples the well (PW02) at the above referenced facility on an annual basis. This letter transmits the analytical data for that water supply well, which was sampled on August 23, 2023. Analytical results for water samples collected from the well are also sent to the United States Environmental Protection Agency (USEPA) and the Wisconsin Department of Natural Resources (WDNR) for review.

Compounds that attained or exceeded groundwater or drinking water criteria in the sample are summarized below.

|                 |                             | Regulatory Criteria |         |         |  |  |
|-----------------|-----------------------------|---------------------|---------|---------|--|--|
| Parameter       | Concentration               | PAL                 | ES      | MCL     |  |  |
| Nitrate-nitrite | 9.2 milligrams/liter (mg/L) | 2 mg/L              | 10 mg/L | 10 mg/L |  |  |

The regulatory criteria tabulated above are the Preventive Action Limit (PAL) and Enforcement Standard (ES) for Public Health Groundwater Quality Standards from Table 1 of Chapter NR 140.10 Wis. Adm. Code (Groundwater Quality) and the Federal Maximum Contaminant Level (MCL) established in the National Primary Drinking Water Regulations. The identified nitrate-nitrite result is below the concentration that would indicate that the water is potentially unsafe for consumption (i.e., ES and MCL).

A brief review of the recent laboratory results for water samples collected from that well indicates the water quality is typical of groundwater in the area. Nitrate-nitrite was present in the sample at a concentration consistent with previous samples and is generally associated with, or related to, farming activities. The concentration is also consistent with the results from analysis of a number of other samples throughout this area.

You may contact Christopher Black from the USEPA if you would like additional information regarding this correspondence. Mr. Black is the USEPA representative providing regulatory oversite for the Hagen Farm Landfill and can be contacted via telephone at (312) 886-1451.

Sincerely,

Waste Management of Wisconsin, Inc.

Ryan / barton

Ryan J. Baeten, PE District Manager

cc: Christopher Black, USEPA Bruce LeRoy, WDNR



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Ryan Baeten Waste Management W124 N9355 Boundary Road Menomonee Falls, Wisconsin 53051 Generated 9/22/2023 10:50:19 AM

# JOB DESCRIPTION

Hagen Farms - Groundwater Annual Private Wells (8)

## **JOB NUMBER**

480-212170-1

Eurofins Buffalo 10 Hazelwood Drive Amherst NY 14228-2298



## **Eurofins Buffalo**

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northeast, LLC Project Manager.

## Authorization

Generated 9/22/2023 10:50:19 AM 5

Authorized for release by Katelyn Ferguson, Project Manager I katelyn.ferguson@et.eurofinsus.com Designee for Katelyn Proulx, Project Manager I Katelyn.Proulx@et.eurofinsus.com (716)691-2600

## **Definitions/Glossary**

# Client: Waste Management Project/Site: Hagen Farms - Groundwater

Job ID: 480-212170-1

## Qualifiers

| /OA |         |
|-----|---------|
|     | Qualifi |

| <b>GC/MS VOA</b>   |   |   |
|--------------------|---|---|
| Qualifier          | Qualifier Description   |   |
| *                  | LCS or LCSD is outside acceptance limits.   |   |
| ^c                 | CCV Recovery is outside acceptance limits.  | 5 |
| J                  | Reported value was between the limit of detection and the limit of quantitation.  |   |
| Metals             |   |   |
| Qualifier          | Qualifier Description   |   |
| 4                  | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |   |
| В                  | Compound was found in the blank and sample.   | 0 |
| J                  | Reported value was between the limit of detection and the limit of quantitation.  | 0 |
| <b>General Che</b> | mistry  | Q |
| Qualifier          | Qualifier Description   | 3 |
| 4                  | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |   |
| F1                 | MS and/or MSD recovery exceeds control limits.  |   |
| Н                  | Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.   |   |
| J                  | Reported value was between the limit of detection and the limit of quantitation.  |   |
| Glossary           |   |   |

| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                 |
|----------------|---|
| ¤              | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |
| %R             | Percent Recovery  |
| CFL            | Contains Free Liquid  |
| CFU            | Colony Forming Unit   |
| CNF            | Contains No Free Liquid   |
| DER            | Duplicate Error Ratio (normalized absolute difference)  |
| Dil Fac        | Dilution Factor   |
| DL             | Detection Limit (DoD/DOE)   |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision Level Concentration (Radiochemistry)   |
| EDL            | Estimated Detection Limit (Dioxin)  |
| LOD            | Limit of Detection (DoD/DOE)  |
| LOQ            | Limit of Quantitation (DoD/DOE)   |
| MCL            | EPA recommended "Maximum Contaminant Level"   |
| MDA            | Minimum Detectable Activity (Radiochemistry)  |
| MDC            | Minimum Detectable Concentration (Radiochemistry)   |
| MDL            | Method Detection Limit  |
| ML             | Minimum Level (Dioxin)  |
| MPN            | Most Probable Number  |
| MQL            | Method Quantitation Limit   |
| NC             | Not Calculated  |
| ND             | Not Detected at the reporting limit (or MDL or EDL if shown)  |
| NEG            | Negative / Absent   |
| POS            | Positive / Present  |
| PQL            | Practical Quantitation Limit  |
| PRES           | Presumptive   |
| QC             | Quality Control   |
| RER            | Relative Error Ratio (Radiochemistry)   |
| RL             | Reporting Limit or Requested Limit (Radiochemistry)   |
| RPD            | Relative Percent Difference, a measure of the relative difference between two points                        |
| TEF            | Toxicity Equivalent Factor (Dioxin)   |
| TEQ            | Toxicity Equivalent Quotient (Dioxin)   |
| TNTC           | Too Numerous To Count   |
|                |   |

## Job ID: 480-212170-1

### Laboratory: Eurofins Buffalo

#### Narrative

#### Job Narrative 480-212170-1

#### Receipt

The samples were received on 8/25/2023 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.5° C, 2.7° C and 3.0° C.

#### GC/MS VOA

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-681445 recovered outside acceptance criteria, low biased, for 1,1,2,2-Tetrachloroethane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported. The associated samples are impacted: PW02 (480-212170-1), PW03 (480-212170-2) and TB (480-212170-6).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-681445 recovered above the upper control limit for Acetone and Chloromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4), PW09 (480-212170-5) and TB (480-212170-6).

Method 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 480-681445 recovered outside control limits for the following analytes: Chloromethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The associated samples are impacted: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4), PW09 (480-212170-5) and TB (480-212170-6).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-681768 recovered above the upper control limit for Acetone, 2-Butanone (MEK) and Tetrahydrofuran. The samples associated with this CCV were not detected above the reporting limit (RL) for the affected analytes; therefore, the data have been reported. The associated sample is impacted: TB (480-212170-6).

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

#### HPLC/IC

Method 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: PW03 (480-212170-2). Elevated reporting limits (RLs) are provided.

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

#### Metals

Method 6010C: The method blank for preparation batch 480-681710 and analytical batch 480-681955 contained Total Manganese above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4) and PW09 (480-212170-5) was not performed.

Method 6010C: The Total Manganese and Zinc results reported for the following sample do not concur with results previously reported for this site: PW02 (480-212170-1). Reanalysis was performed, and the result(s) confirmed.

Method 6010C: The Total Zinc result reported for the following sample do not concur with results previously reported for this site: PW03 (480-212170-2). Reanalysis was performed, and the result(s) confirmed.

Method 6010C: The Total Manganese result reported for the following sample do not concur with results previously reported for this site: PW05 (480-212170-4). Reanalysis was performed, and the result(s) confirmed.

Method 6010C: The Total Iron, Potassium and Zinc results reported for the following sample do not concur with results previously reported for this site: PW09 (480-212170-5). Reanalysis was performed, and the result(s) confirmed.

Method 6020A: The Total Arsenic results reported for the following sample do not concur with results previously reported for this site: PW09 (480-212170-5). Reanalysis was performed, and the result(s) confirmed.

## Job ID: 480-212170-1 (Continued)

## Laboratory: Eurofins Buffalo (Continued)

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

#### **General Chemistry**

Method SM 2540C: Reanalysis of the following samples were performed outside of the analytical holding time due to not achieving constant weight in the original dataset: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4) and PW09 (480-212170-5). Both sets of data have been reported.

Methods 335.4, 9012B: The method blank for batch 682037 contained Total Cyanide above the reporting limit (RL). None of the samples associated with this method blank contained the target compound above the reporting limit; therefore, re-extraction and/or re-analysis of samples were not performed: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4), PW09 (480-212170-5), (480-212164-D-8) and (480-212164-D-8 MS).

Method 353.2: The results reported for the following sample do not concur with results previously reported for this site: PW03 (480-212170-2). Reanalysis was performed, and the result(s) confirmed.

Method SM 4500 P E: The results reported for the following sample do not concur with results previously reported for this site: PW05 (480-212170-4). Reanalysis was performed, and the result(s) confirmed.

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

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## Lab Sample ID: 480-212170-1 Matrix: Potable Water

Date Collected: 08/23/23 10:30 Date Received: 08/25/23 10:30

**Client Sample ID: PW02** 

| Method: SW846 8260C SIM     | - Volatile Organi | ic Compo  | unds (GC/MS | 5)    |        |          | _        |                |         |
|-----------------------------|-------------------|-----------|-------------|-------|--------|----------|----------|----------------|---------|
| Analyte                     | Result            | Qualifier |             |       |        | Unit     | <u>D</u> | Analyzed       | Dil Fac |
| Vinyl chloride              | ND                |           | 0.020       | 0.013 | 0.0040 | ug/L     |          | 08/28/23 04:08 | 1       |
| Surrogate                   | %Recovery Q       | ualifier  | Limits      |       |        | Prepared |          | Analyzed       | Dil Fac |
| TBA-d9 (Surr)               | 83                |           | 50 - 150    |       |        |          |          | 08/28/23 04:08 | 1       |
| Dibromofluoromethane (Surr) | 111               |           | 50 - 150    |       |        |          |          | 08/28/23 04:08 | 1       |
|                             | latile Organic Co | ompound   | s by GC/MS  |       |        |          |          |                |         |
| Analyte                     | Result            | Qualifier | RL          | LOQ   | LOD    | Unit     | D        | Analyzed       | Dil Fac |
| 1,1,1-Trichloroethane       | ND                |           | 1.0         | 2.7   | 0.82   | ug/L     | _        | 08/28/23 16:07 | 1       |
| 1,1,2,2-Tetrachloroethane   | ND                | ^c        | 1.0         | 0.70  | 0.21   | ug/L     |          | 08/28/23 16:07 | 1       |
| 1,1,2-Trichloroethane       | ND                |           | 1.0         | 0.77  | 0.23   | ug/L     |          | 08/28/23 16:07 | 1       |
| 1,1-Dichloroethane          | ND                |           | 1.0         | 1.3   | 0.38   | ug/L     |          | 08/28/23 16:07 | 1       |
| 1,1-Dichloroethene          | ND                |           | 1.0         | 0.97  | 0.29   | ug/L     |          | 08/28/23 16:07 | 1       |
| 1,2,4-Trichlorobenzene      | ND                |           | 1.0         | 1.4   | 0.41   | ug/L     |          | 08/28/23 16:07 | 1       |
| 1,2-Dibromo-3-Chloropropane | ND                |           | 1.0         | 1.3   | 0.39   | ug/L     |          | 08/28/23 16:07 | 1       |
| 1,2-Dibromoethane (EDB)     | ND                |           | 1.0         | 2.4   | 0.73   | ug/L     |          | 08/28/23 16:07 | 1       |
| 1,2-Dichlorobenzene         | ND                |           | 1.0         | 2.6   | 0.79   | ug/L     |          | 08/28/23 16:07 | 1       |
| 1,2-Dichloroethane          | ND                |           | 1.0         | 0.70  | 0.21   | ug/L     |          | 08/28/23 16:07 | 1       |
| 1,2-Dichloropropane         | ND                |           | 1.0         | 2.4   | 0.72   | ug/L     |          | 08/28/23 16:07 | 1       |
| 1,3-Dichlorobenzene         | ND                |           | 1.0         | 2.6   | 0.78   | ug/L     |          | 08/28/23 16:07 | 1       |
| 1,4-Dichlorobenzene         | ND                |           | 1.0         | 2.8   | 0.84   | ug/L     |          | 08/28/23 16:07 | 1       |
| 2-Butanone (MEK)            | ND                |           | 10          | 4.4   | 1.3    | ug/L     |          | 08/28/23 16:07 | 1       |
| 2-Hexanone                  | ND                |           | 5.0         | 4.1   | 1.2    | ug/L     |          | 08/28/23 16:07 | 1       |
| 4-Methyl-2-pentanone (MIBK) | ND                |           | 5.0         | 7.0   | 2.1    | ug/L     |          | 08/28/23 16:07 | 1       |
| Acetone                     | ND                | ^c        | 10          | 10    | 3.0    | ug/L     |          | 08/28/23 16:07 | 1       |
| Benzene                     | ND                |           | 1.0         | 1.4   | 0.41   | ug/L     |          | 08/28/23 16:07 | 1       |
| Bromodichloromethane        | ND                |           | 1.0         | 1.3   | 0.39   | ug/L     |          | 08/28/23 16:07 | 1       |
| Bromoform                   | ND                |           | 1.0         | 0.87  | 0.26   | ug/L     |          | 08/28/23 16:07 | 1       |
| Bromomethane                | ND                |           | 1.0         | 2.3   | 0.69   | ug/L     |          | 08/28/23 16:07 | 1       |
| Carbon disulfide            | ND                |           | 1.0         | 0.63  | 0.19   | ug/L     |          | 08/28/23 16:07 | 1       |
| Carbon tetrachloride        | ND                |           | 1.0         | 0.90  | 0.27   | ug/L     |          | 08/28/23 16:07 | 1       |
| Chlorobenzene               | ND                |           | 1.0         | 2.5   | 0.75   | ug/L     |          | 08/28/23 16:07 | 1       |
| Chloroethane                | ND                |           | 1.0         | 1.1   | 0.32   | ug/L     |          | 08/28/23 16:07 | 1       |
| Chloroform                  | ND                |           | 1.0         | 1.1   | 0.34   | ug/L     |          | 08/28/23 16:07 | 1       |
| Chloromethane               | ND                | ^c *      | 1.0         | 1.2   | 0.35   | ug/L     |          | 08/28/23 16:07 | 1       |
| cis-1,2-Dichloroethene      | ND                |           | 1.0         | 2.7   | 0.81   | ug/L     |          | 08/28/23 16:07 | 1       |
| cis-1,3-Dichloropropene     | ND                |           | 1.0         | 1.2   | 0.36   | ug/L     |          | 08/28/23 16:07 | 1       |
| Dibromochloromethane        | ND                |           | 1.0         | 1.1   | 0.32   | ug/L     |          | 08/28/23 16:07 | 1       |
| Dibromomethane              | ND                |           | 1.0         | 1.4   | 0.41   | ug/L     |          | 08/28/23 16:07 | 1       |
| Dichlorodifluoromethane     | ND                |           | 1.0         | 2.3   | 0.68   | ug/L     |          | 08/28/23 16:07 | 1       |
| Ethylbenzene                | ND                |           | 1.0         | 2.5   | 0.74   | ua/L     |          | 08/28/23 16:07 | 1       |
| Methylene Chloride          | ND                |           | 1.0         | 1.5   | 0.44   | ug/L     |          | 08/28/23 16:07 | 1       |
| Methyl-t-Butyl Ether (MTBE) | ND                |           | 1.0         | 0.53  | 0.16   | ua/L     |          | 08/28/23 16:07 | 1       |
| Naphthalene                 | ND                |           | 1.0         | 1.4   | 0.43   | ua/L     |          | 08/28/23 16:07 | 1       |
| Styrene                     | ND                |           | 10          | 24    | 0.73   | ug/l     |          | 08/28/23 16:07 | 1       |
| Tetrachloroethene           | ND                |           | 1.0         | 1.2   | 0.36   | ua/L     |          | 08/28/23 16:07 | 1       |
| Tetrahvdrofuran             | ND                |           | 5.0         | 4.2   | 1.3    | ua/L     |          | 08/28/23 16:07 | 1       |
| Toluene                     | ND                |           | 10          | 17    | 0.51   | ua/L     |          | 08/28/23 16:07 |         |
| trans-1.2-Dichloroethene    |                   |           | 1.0         | 3.0   | 0.90   | ua/L     |          | 08/28/23 16:07 | 1       |
| trans-1.3-Dichloropropene   | ND                |           | 1.0         | 12    | 0.37   | ua/L     |          | 08/28/23 16.07 | 1       |
| .,                          | NB                |           |             |       | 0.01   | J        |          |                | •       |

Client: Waste Management Project/Site: Hagen Farms - Groundwater

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### Client Sample ID: PW02 Date Collected: 08/23/23 10:30 Date Received: 08/25/23 10:30

# Lab Sample ID: 480-212170-1

Matrix: Potable Water

| Method: SW846 8260C - Volati       | le Organic C | ompound      | s by GC/MS ( | Continued | )      |              |          |                |         |
|------------------------------------|--------------|--------------|--------------|-----------|--------|--------------|----------|----------------|---------|
| Analyte                            | Resu         | t Qualifier  | RL           | LOQ       | LOD    | Unit         | D        | Analyzed       | Dil Fac |
| Trichloroethene                    | N            | 5            | 1.0          | 1.5       | 0.46   | ug/L         |          | 08/28/23 16:07 | 1       |
| Trichlorofluoromethane             | N            | D            | 1.0          | 2.9       | 0.88   | ug/L         |          | 08/28/23 16:07 | 1       |
| Vinyl chloride                     | N            | C            | 1.0          | 3.0       | 0.90   | ug/L         |          | 08/28/23 16:07 | 1       |
| Xylenes, Total                     | N            | D            | 2.0          | 2.2       | 0.66   | ug/L         |          | 08/28/23 16:07 | 1       |
| Surrogate                          | %Recovery    | Qualifier    | Limits       |           |        | Pre          | pared    | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr)       | 116          |              | 77 - 120     |           |        |              |          | 08/28/23 16:07 | 1       |
| 4-Bromofluorobenzene (Surr)        | 100          |              | 73 - 120     |           |        |              |          | 08/28/23 16:07 | 1       |
| Toluene-d8 (Surr)                  | 94           |              | 80 - 120     |           |        |              |          | 08/28/23 16:07 | 1       |
|                                    | s (ICP)      |              |              |           |        |              |          |                |         |
| Analyte                            | Resu         | lt Qualifier | RL           | LOQ       | LOD    | Unit         | D        | Analyzed       | Dil Fac |
| Aluminum                           | N            | 5            | 80.0         | 200       | 60.0   | ug/L         |          | 08/31/23 02:10 | 1       |
| Barium                             | 47.          | 0            | 6.0          | 2.3       | 0.70   | ug/L         |          | 08/31/23 02:10 | 1       |
| Calcium                            | 89.          | 5            | 5.0          | 0.33      | 0.10   | mg/L         |          | 08/31/23 15:35 | 1       |
| Chromium                           | 1.           | 3 J          | 5.0          | 3.3       | 1.0    | ug/L         |          | 08/31/23 02:10 | 1       |
| Cobalt                             | N            | C            | 6.0          | 2.1       | 0.63   | ug/L         |          | 08/31/23 02:10 | 1       |
| Copper                             | 11.          | 3            | 25.0         | 5.3       | 1.6    | ug/L         |          | 08/31/23 02:10 | 1       |
| Iron                               | 0.04         | 7 J          | 0.10         | 0.064     | 0.019  | ma/L         |          | 08/31/23 02:10 | 1       |
| Magnesium                          | 46           | 3            | 5.0          | 0.14      | 0.043  | ma/L         |          | 08/31/23 02:10 | 1       |
| Manganese                          | 0.9          | 2.IB         | 3.0          | 13        | 0.40   | ua/l         |          | 08/31/23 02:10 | 1       |
| Nickel                             | NI           |              | 4.0          | 4.2       | 13     | ug/L         |          | 08/31/23 02:10 |         |
| Potassium                          | 1            | 1            | 4.0<br>5.0   | 0.33      | 0 10   | ug,∟<br>ma/l |          | 08/31/23 02:10 | 1       |
| Silver                             | I.<br>NI     | י            | 3.0          | 5.7       | 1 7    | ug/L         |          | 08/31/23 02:10 | 1       |
| Sodium                             |              |              | 5.0          | 1 1       | 0.32   | mg/L         |          | 08/31/23 02:10 |         |
| Soaium<br>Mara divez               | <b>0</b> .   | 2            | 5.0          | 1.1       | 0.52   | mg/∟         |          | 00/31/23 02.10 | 1       |
| Vanadum                            |              | 5            | 5.0          | 5.0       | 1.5    | ug/L         |          | 08/31/23 02:10 | 1       |
|                                    | 63.          | 5            | 4.0          | 5.0       | 1.5    | ug/L         |          | 08/31/23 02:10 | .1      |
| Method: SW846 6020A - Metals       | s (ICP/MS)   |              |              |           |        |              |          |                |         |
| Analyte                            | Resu         | lt Qualifier | RL           | LOQ       | LOD    | Unit         | D        | Analyzed       | Dil Fac |
| Antimony                           | N            | 2            | 0.50         | 1.2       | 0.35   | ug/L         |          | 08/31/23 14:19 | 1       |
| Arsenic                            | N            | C            | 2.0          | 0.90      | 0.27   | ug/L         |          | 08/30/23 17:02 | 1       |
| Beryllium                          | N            | C            | 0.20         | 0.10      | 0.030  | ug/L         |          | 08/30/23 17:02 | 1       |
| Cadmium                            | N            | D            | 0.20         | 0.24      | 0.071  | ug/L         |          | 08/30/23 17:02 | 1       |
| Selenium                           | 0.4          | 9 J          | 5.0          | 1.5       | 0.44   | ug/L         |          | 08/30/23 17:02 | 1       |
| Thallium                           | N            | C            | 0.20         | 0.063     | 0.019  | ug/L         |          | 08/30/23 17:02 | 1       |
| _<br>Method: SW846 7470A - Mercu   | irv (CVAA)   |              |              |           |        |              |          |                |         |
| Analyte                            | Resu         | lt Qualifier | RL           | LOQ       | LOD    | Unit         | D        | Analvzed       | Dil Fac |
| Mercury                            | N            | <u> </u>     | 0.20         | 0.14      | 0.043  | ug/L         |          | 09/06/23 14:36 | 1       |
| _<br>Method: SM 2340B - Total Harr | iness (as Ca | (CO3) by $c$ | alculation   |           |        |              |          |                |         |
| Analyte                            | Resu         | t Qualifier  | RL           | L00       | LOD    | Unit         | D        | Analyzed       | Dil Fac |
| Calcium and Magnesium Hardness     | 41           | 4            | 0.50         | 0.33      | 0.10   | mg/L         |          | 09/01/23 13:30 | 1       |
| General Chemistry                  |              |              |              |           |        |              |          |                |         |
|                                    | Docu         | It Qualifier | DI           | 100       |        | Unit         | п        | Analyzod       | Dil Fac |
| Chlorido (EPA 300.0)               |              |              | - <u> </u>   |           | 0.20   | ma/l         | <u> </u> | 08/26/22 21.F7 |         |
| Sulfate (EPA 200.0)                | 21.          | 0<br>E       | 0.00         | 0.94      | 0.28   | mg/L         |          | 08/26/22 21:37 | 1       |
| Sunale (EFA SUU.U)                 | 19.          | 7            | 2.0          | 1.2       | 0.00   | mg/L         |          | 08/20/20 21.0/ | ו<br>ב  |
| Aikalinity, lotal (EPA 310.2)      | 33           | <b>,</b>     | 0.00         | 0.00      | 20.0   | ing/∟        |          | 00/30/23 11:44 | ر       |
| iotal Cyanide (EPA 335.4)          | NI           | ر<br>ر       | 0.020        | 0.017     | 0.0041 | mg/L         |          | 08/31/23 01:35 | 1       |

RL

0.20

0.20

1.3

10.0

10.0

10.0

4.0

0.20

RL

LOQ

0.33

0.62

1.7

16.7

13.3

13.3

13.4

0.016

LOQ

LOD Unit

0.10 mg/L

5.0 mg/L

4.0 mg/L

4.0 mg/L

4.0 mg/L

0.0050 mg/L as P

Unit

NONE

mg/L

millivolts

umhos/cm

Degrees C

NONE

NONE

SU

LOD

0.19 mg/L as N

0.50 mg/L as N

**Result Qualifier** 

ND

ND

9.2

ND

388

ND

No

5.9

No

7.42

734

15.3

No

-59.1

0.050

392 H

**Result Qualifier** 

**Client: Waste Management** Project/Site: Hagen Farms - Groundwater

**General Chemistry (Continued)** 

Ammonia (as N) (EPA 350.1)

Total Kjeldahl Nitrogen (EPA 351.2)

Nitrate Nitrite as N (EPA 353.2)

Chemical Oxygen Demand (EPA 410.4)

Total Dissolved Solids (SM 2540C)

Total Dissolved Solids (SM 2540C)

Total Suspended Solids (SM 2540D)

Phosphorus, Total (SM 4500 P E)

**Dissolved Oxygen, Field** 

Specific Conductance, Field

Temperature, Field (C)

Analyte

Analyte

**Field EH/ORP** 

**Turbidity, Field** 

Color

Odor

pH, Field

Job ID: 480-212170-1

Analyzed

08/29/23 16:55

08/31/23 09:02

08/28/23 12:17

08/28/23 14:34

08/29/23 10:26

09/06/23 11:37

08/30/23 10:06

08/28/23 11:51

Analyzed

08/23/23 11:30

08/23/23 11:30

08/23/23 11:30

08/23/23 11:30

08/23/23 11:30

08/23/23 11:30

08/23/23 11:30

08/23/23 11:30

### **Client Sample ID: PW02** Date Collected: 08/23/23 10:30 Date Received: 08/25/23 10:30

Method: EPA Field Sampling - Field Sampling

| Lab | Sample | ID:   | 480   | )-212  | 170-1 |
|-----|--------|-------|-------|--------|-------|
|     | N      | atrix | x: Po | otable | Water |

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#### Midwest Environmental Legacy Management Group

W132 N10487 Grant Drive Germantown, WI 53022 262 509 5630

October 2, 2023

Mr. Greg Sundby Safety and Health Manager Wingra Redi-Mix, Inc. P.O. Box 44284 Madison, WI 53744-4284

Dear Mr. Sundby:

As required by the Unilateral Administrative Order for clean-up of the Hagen Farm Landfill, Waste Management of Wisconsin, Inc. (WMWI) samples the well (PW03) at the above referenced facility on an annual basis. This letter transmits the analytical data for that water supply well, which was sampled on August 23, 2023. Analytical results for water samples collected from the well are also sent to the United States Environmental Protection Agency (USEPA) and the Wisconsin Department of Natural Resources (WDNR) for review.

Compounds that attained or exceeded groundwater or drinking water criteria in the sample are summarized below.

|                        |                              | Regulatory Criteria |          |                    |  |  |
|------------------------|------------------------------|---------------------|----------|--------------------|--|--|
| Parameter              | Concentration                | PAL                 | ES       | MCL                |  |  |
| Iron <sup>2</sup>      | 2.1 milligrams/liter (mg/L)  | 0.15 mg/L           | 0.3 mg/L | Not<br>established |  |  |
| Manganese <sup>1</sup> | 86.3 micrograms/liter (ug/L) | 60 ug/L             | 300 ug/L | Not<br>established |  |  |
| Manganese <sup>2</sup> | 86.3 micrograms/liter (ug/L) | 25 ug/L             | 50 ug/L  | Not<br>established |  |  |
| Zinc <sup>2</sup>      | 2.78 milligrams/liter (mg/L) | 2.5 mg/L            | 5.0 mg/L | Not<br>established |  |  |

Notes

1. Public Health Groundwater Quality Standards from Table 1 of Chapter NR 140.10 Wis. Adm. Code.

2. Public Welfare Groundwater Quality Standards from Table 2 of Chapter NR 140.12 Wis. Adm. Code.

The regulatory criteria tabulated above for iron and manganese include the Enforcement Standards (ESs) for Public Welfare Groundwater Quality Standards from Table 2 of Chapter NR 140.12 Wis. Adm. Code. Additionally, the PAL in Table 1 of Chapter NR 140.10, Public Health Groundwater Quality Standards, regulatory criteria (i.e., 60 ug/L) applies to manganese. The regulatory criteria for zinc is the Preventive Action Limit (PAL) for Public Welfare Groundwater Quality Standards from Table 2 of Chapter NR 140.12 Wis. Adm. Code. Iron, manganese and zinc are not regulated by federal Maximum Contaminant

Levels (MCLs) established in the National Primary Drinking Water Regulations, thus criteria are not established. The identified results are below concentrations that would indicate the water is potentially unsafe for consumption over time (i.e., Table 1 ES and MCL).

A brief review of the recent laboratory results for water samples collected from that well indicates the water quality is typical of groundwater in the area. Iron and manganese are present in the sample, and groundwater throughout this area, at concentrations generally consistent with historical data and above the State of Wisconsin (State) groundwater criteria. The presence of these elements at the identified concentrations may cause staining and taste concerns. The zinc concentration, while higher than recent prior results, is also regulated as a public welfare parameter and thus not associated with health concerns.

You may contact Christopher Black from the USEPA if you would like additional information regarding this correspondence. Mr. Black is the USEPA representative providing regulatory oversite for the Hagen Farm Landfill and can be contacted via telephone at (312) 886-1451.

Sincerely,

### Waste Management of Wisconsin, Inc.

Kyan / barton

Ryan J. Baeten, PE District Manager

cc: Christopher Black, USEPA Bruce LeRoy, WDNR



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Ryan Baeten Waste Management W124 N9355 Boundary Road Menomonee Falls, Wisconsin 53051 Generated 9/22/2023 10:50:19 AM

# JOB DESCRIPTION

Hagen Farms - Groundwater Annual Private Wells (8)

## **JOB NUMBER**

480-212170-1

Eurofins Buffalo 10 Hazelwood Drive Amherst NY 14228-2298



## **Eurofins Buffalo**

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northeast, LLC Project Manager.

## Authorization

Generated 9/22/2023 10:50:19 AM 5

Authorized for release by Katelyn Ferguson, Project Manager I katelyn.ferguson@et.eurofinsus.com Designee for Katelyn Proulx, Project Manager I Katelyn.Proulx@et.eurofinsus.com (716)691-2600

## **Definitions/Glossary**

# Client: Waste Management Project/Site: Hagen Farms - Groundwater

Job ID: 480-212170-1

## Qualifiers

| /OA |         |
|-----|---------|
|     | Qualifi |

| <b>GC/MS VOA</b>   |   |   |
|--------------------|---|---|
| Qualifier          | Qualifier Description   |   |
| *                  | LCS or LCSD is outside acceptance limits.   |   |
| ^c                 | CCV Recovery is outside acceptance limits.  | 5 |
| J                  | Reported value was between the limit of detection and the limit of quantitation.  |   |
| Metals             |   |   |
| Qualifier          | Qualifier Description   |   |
| 4                  | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |   |
| В                  | Compound was found in the blank and sample.   | 0 |
| J                  | Reported value was between the limit of detection and the limit of quantitation.  | 0 |
| <b>General Che</b> | mistry  | Q |
| Qualifier          | Qualifier Description   | 3 |
| 4                  | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |   |
| F1                 | MS and/or MSD recovery exceeds control limits.  |   |
| Н                  | Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.   |   |
| J                  | Reported value was between the limit of detection and the limit of quantitation.  |   |
| Glossary           |   |   |

| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                 |
|----------------|---|
| ¤              | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |
| %R             | Percent Recovery  |
| CFL            | Contains Free Liquid  |
| CFU            | Colony Forming Unit   |
| CNF            | Contains No Free Liquid   |
| DER            | Duplicate Error Ratio (normalized absolute difference)  |
| Dil Fac        | Dilution Factor   |
| DL             | Detection Limit (DoD/DOE)   |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision Level Concentration (Radiochemistry)   |
| EDL            | Estimated Detection Limit (Dioxin)  |
| LOD            | Limit of Detection (DoD/DOE)  |
| LOQ            | Limit of Quantitation (DoD/DOE)   |
| MCL            | EPA recommended "Maximum Contaminant Level"   |
| MDA            | Minimum Detectable Activity (Radiochemistry)  |
| MDC            | Minimum Detectable Concentration (Radiochemistry)   |
| MDL            | Method Detection Limit  |
| ML             | Minimum Level (Dioxin)  |
| MPN            | Most Probable Number  |
| MQL            | Method Quantitation Limit   |
| NC             | Not Calculated  |
| ND             | Not Detected at the reporting limit (or MDL or EDL if shown)  |
| NEG            | Negative / Absent   |
| POS            | Positive / Present  |
| PQL            | Practical Quantitation Limit  |
| PRES           | Presumptive   |
| QC             | Quality Control   |
| RER            | Relative Error Ratio (Radiochemistry)   |
| RL             | Reporting Limit or Requested Limit (Radiochemistry)   |
| RPD            | Relative Percent Difference, a measure of the relative difference between two points                        |
| TEF            | Toxicity Equivalent Factor (Dioxin)   |
| TEQ            | Toxicity Equivalent Quotient (Dioxin)   |
| TNTC           | Too Numerous To Count   |
|                |   |

## Job ID: 480-212170-1

### Laboratory: Eurofins Buffalo

#### Narrative

#### Job Narrative 480-212170-1

#### Receipt

The samples were received on 8/25/2023 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.5° C, 2.7° C and 3.0° C.

#### GC/MS VOA

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-681445 recovered outside acceptance criteria, low biased, for 1,1,2,2-Tetrachloroethane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported. The associated samples are impacted: PW02 (480-212170-1), PW03 (480-212170-2) and TB (480-212170-6).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-681445 recovered above the upper control limit for Acetone and Chloromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4), PW09 (480-212170-5) and TB (480-212170-6).

Method 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 480-681445 recovered outside control limits for the following analytes: Chloromethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The associated samples are impacted: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4), PW09 (480-212170-5) and TB (480-212170-6).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-681768 recovered above the upper control limit for Acetone, 2-Butanone (MEK) and Tetrahydrofuran. The samples associated with this CCV were not detected above the reporting limit (RL) for the affected analytes; therefore, the data have been reported. The associated sample is impacted: TB (480-212170-6).

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

#### HPLC/IC

Method 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: PW03 (480-212170-2). Elevated reporting limits (RLs) are provided.

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

#### Metals

Method 6010C: The method blank for preparation batch 480-681710 and analytical batch 480-681955 contained Total Manganese above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4) and PW09 (480-212170-5) was not performed.

Method 6010C: The Total Manganese and Zinc results reported for the following sample do not concur with results previously reported for this site: PW02 (480-212170-1). Reanalysis was performed, and the result(s) confirmed.

Method 6010C: The Total Zinc result reported for the following sample do not concur with results previously reported for this site: PW03 (480-212170-2). Reanalysis was performed, and the result(s) confirmed.

Method 6010C: The Total Manganese result reported for the following sample do not concur with results previously reported for this site: PW05 (480-212170-4). Reanalysis was performed, and the result(s) confirmed.

Method 6010C: The Total Iron, Potassium and Zinc results reported for the following sample do not concur with results previously reported for this site: PW09 (480-212170-5). Reanalysis was performed, and the result(s) confirmed.

Method 6020A: The Total Arsenic results reported for the following sample do not concur with results previously reported for this site: PW09 (480-212170-5). Reanalysis was performed, and the result(s) confirmed.

## Job ID: 480-212170-1 (Continued)

## Laboratory: Eurofins Buffalo (Continued)

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

#### **General Chemistry**

Method SM 2540C: Reanalysis of the following samples were performed outside of the analytical holding time due to not achieving constant weight in the original dataset: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4) and PW09 (480-212170-5). Both sets of data have been reported.

Methods 335.4, 9012B: The method blank for batch 682037 contained Total Cyanide above the reporting limit (RL). None of the samples associated with this method blank contained the target compound above the reporting limit; therefore, re-extraction and/or re-analysis of samples were not performed: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4), PW09 (480-212170-5), (480-212164-D-8) and (480-212164-D-8 MS).

Method 353.2: The results reported for the following sample do not concur with results previously reported for this site: PW03 (480-212170-2). Reanalysis was performed, and the result(s) confirmed.

Method SM 4500 P E: The results reported for the following sample do not concur with results previously reported for this site: PW05 (480-212170-4). Reanalysis was performed, and the result(s) confirmed.

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

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8

## Lab Sample ID: 480-212170-2 Matrix: Potable Water

Date Collected: 08/23/23 09:50 Date Received: 08/25/23 10:30

**Client Sample ID: PW03** 

| Analyte                     | Result           | Qualifier | RL         | LOQ                    | LOD          | Unit        | D    | Analyzed       | Dil Fac  |
|-----------------------------|------------------|-----------|------------|------------------------|--------------|-------------|------|----------------|----------|
| Vinyl chloride              | ND               |           | 0.020      | 0.013                  | 0.0040       | ug/L        |      | 08/28/23 11:43 | 1        |
| Surrogate                   | %Recovery G      | ualifier  | Limits     |                        |              | Prep        | ared | Analyzed       | Dil Fac  |
| TBA-d9 (Surr)               | 83               |           | 50 - 150   |                        |              |             |      | 08/28/23 11:43 | 1        |
| Dibromofluoromethane (Surr) | 110              |           | 50 - 150   |                        |              |             |      | 08/28/23 11:43 | 1        |
| Method: SW846 8260C - Vol   | atile Organic Co | ompound   | s by GC/MS |                        |              |             |      |                |          |
| Analyte                     | Result           | Qualifier | RL         | LOQ                    | LOD          | Unit        | D    | Analyzed       | Dil Fac  |
| 1,1,1-Trichloroethane       | ND               |           | 1.0        | 2.7                    | 0.82         | ug/L        |      | 08/28/23 16:30 | 1        |
| 1,1,2,2-Tetrachloroethane   | ND               | ^c        | 1.0        | 0.70                   | 0.21         | ug/L        |      | 08/28/23 16:30 | 1        |
| 1,1,2-Trichloroethane       | ND               |           | 1.0        | 0.77                   | 0.23         | ug/L        |      | 08/28/23 16:30 | 1        |
| 1,1-Dichloroethane          | ND               |           | 1.0        | 1.3                    | 0.38         | ug/L        |      | 08/28/23 16:30 | 1        |
| 1,1-Dichloroethene          | ND               |           | 1.0        | 0.97                   | 0.29         | ug/L        |      | 08/28/23 16:30 | 1        |
| 1,2,4-Trichlorobenzene      | ND               |           | 1.0        | 1.4                    | 0.41         | ug/L        |      | 08/28/23 16:30 | 1        |
| 1,2-Dibromo-3-Chloropropane | ND               |           | 1.0        | 1.3                    | 0.39         | ug/L        |      | 08/28/23 16:30 | 1        |
| 1,2-Dibromoethane (EDB)     | ND               |           | 1.0        | 2.4                    | 0.73         | ug/L        |      | 08/28/23 16:30 | 1        |
| 1,2-Dichlorobenzene         | ND               |           | 1.0        | 2.6                    | 0.79         | ug/L        |      | 08/28/23 16:30 | 1        |
| 1,2-Dichloroethane          | ND               |           | 1.0        | 0.70                   | 0.21         | ug/L        |      | 08/28/23 16:30 | 1        |
| 1,2-Dichloropropane         | ND               |           | 1.0        | 2.4                    | 0.72         | ug/L        |      | 08/28/23 16:30 | 1        |
| 1,3-Dichlorobenzene         | ND               |           | 1.0        | 2.6                    | 0.78         | ug/L        |      | 08/28/23 16:30 | 1        |
| 1,4-Dichlorobenzene         | ND               |           | 1.0        | 2.8                    | 0.84         | ug/L        |      | 08/28/23 16:30 | 1        |
| 2-Butanone (MEK)            | ND               |           | 10         | 4.4                    | 1.3          | ug/L        |      | 08/28/23 16:30 | 1        |
| 2-Hexanone                  | ND               |           | 5.0        | 4.1                    | 1.2          | ug/L        |      | 08/28/23 16:30 | 1        |
| 4-Methyl-2-pentanone (MIBK) | ND               |           | 5.0        | 7.0                    | 2.1          | ug/L        |      | 08/28/23 16:30 | 1        |
| Acetone                     | ND               | ^c        | 10         | 10                     | 3.0          | ug/L        |      | 08/28/23 16:30 | 1        |
| Benzene                     | ND               |           | 1.0        | 1.4                    | 0.41         | ug/L        |      | 08/28/23 16:30 | 1        |
| Bromodichloromethane        | ND               |           | 1.0        | 1.3                    | 0.39         | ug/L        |      | 08/28/23 16:30 | 1        |
| Bromoform                   | ND               |           | 1.0        | 0.87                   | 0.26         | uq/L        |      | 08/28/23 16:30 | 1        |
| Bromomethane                | ND               |           | 1.0        | 2.3                    | 0.69         | uq/L        |      | 08/28/23 16:30 | 1        |
| Carbon disulfide            | ND               |           | 1.0        | 0.63                   | 0.19         | uq/L        |      | 08/28/23 16:30 | 1        |
| Carbon tetrachloride        | ND               |           | 1.0        | 0.90                   | 0.27         | ua/L        |      | 08/28/23 16:30 | 1        |
| Chlorobenzene               | ND               |           | 1.0        | 2.5                    | 0.75         | ua/L        |      | 08/28/23 16:30 | 1        |
| Chloroethane                | ND               |           | 10         | 11                     | 0.32         | ua/l        |      | 08/28/23 16:30 | 1        |
| Chloroform                  | ND               |           | 1.0        | 1.1                    | 0.34         | ua/L        |      | 08/28/23 16:30 | 1        |
| Chloromethane               | ND               | ^c *      | 10         | 12                     | 0.35         | 9/=<br>ua/l |      | 08/28/23 16:30 | 1        |
| cis-1 2-Dichloroethene      | ND               |           | 1.0        | 27                     | 0.81         | ua/l        |      | 08/28/23 16:30 |          |
| cis-1 3-Dichloropropene     | ND               |           | 1.0        | 12                     | 0.36         | ua/l        |      | 08/28/23 16:30 | 1        |
| Dibromochloromethane        | ND               |           | 1.0        | 11                     | 0.32         | ua/l        |      | 08/28/23 16:30 | 1        |
| Dibromomethane              | ND               |           | 1.0        | 14                     | 0.02         | ug/L        |      | 08/28/23 16:30 | 1        |
| Dichlorodifluoromethane     | ND               |           | 1.0        | 2.3                    | 0.68         | ug/L        |      | 08/28/23 16:30 | 1        |
| Ethylbenzene                |                  |           | 1.0        | 2.5                    | 0.00         | ug/L        |      | 08/28/23 16:30 | 1        |
| Methylene Chloride          | ND               |           | 1.0        | 15                     | 0.74         | ug/L        |      | 08/28/23 16:30 |          |
| Methyl-t-Butyl Ether (MTBE) |                  |           | 1.0        | 0.53                   | 0.44         | ug/L        |      | 08/28/23 16:30 | 1        |
|                             |                  |           | 1.0        | 0.55<br>1 A            | 0.10         | ug/L        |      | 08/28/23 16:30 | 1        |
| Styrene                     | ם או<br>חוא      |           | 1.0        | 1. <del>4</del><br>2 / | 0.43<br>0.72 | ug/L        |      | 08/28/23 16.20 |          |
| Tetrachloroethene           |                  |           | 1.0        | 2. <del>4</del><br>1 0 | 0.13         | ug/L        |      | 08/28/23 16:20 | 1        |
| Tetrahydrofuran             |                  |           | 5.0        | 1.2                    | 0.00         | ug/L        |      | 08/28/23 16:20 | 1        |
|                             |                  |           | J.U<br>4 A | 4.4                    | 1.J<br>0 =4  | ug/L        |      | 08/28/22 10.30 | ······ 4 |
| trans-1.2-Dichloroothono    |                  |           | 1.0        | 1.7                    | 0.01         | ug/L        |      | 08/28/22 10.30 | 1        |
|                             |                  |           | 1.0        | 3.0                    | 0.90         | ug/L        |      |                | 1        |

Client: Waste Management Project/Site: Hagen Farms - Groundwater

### Client Sample ID: PW03 Date Collected: 08/23/23 09:50 Date Received: 08/25/23 10:30

### Lab Sample ID: 480-212170-2 Matrix: Potable Water

Matrix: Potable Water

5 6 7

| Method: SW846 8260C - Volati  | le Organic Co | mpounds   | s by GC/MS ( | Continue | d)     |       |          |                |         |
|-------------------------------|---------------|-----------|--------------|----------|--------|-------|----------|----------------|---------|
| Analyte                       | Result        | Qualifier | RL           | LOQ      | LOD    | Unit  | D        | Analyzed       | Dil Fac |
| Trichloroethene               | ND            |           | 1.0          | 1.5      | 0.46   | ug/L  |          | 08/28/23 16:30 | 1       |
| Trichlorofluoromethane        | ND            |           | 1.0          | 2.9      | 0.88   | ug/L  |          | 08/28/23 16:30 | 1       |
| Vinyl chloride                | ND            |           | 1.0          | 3.0      | 0.90   | ug/L  |          | 08/28/23 16:30 | 1       |
| Xylenes, Total                | ND            |           | 2.0          | 2.2      | 0.66   | ug/L  |          | 08/28/23 16:30 | 1       |
| Surrogate                     | %Recovery Q   | ualifier  | Limits       |          |        | F     | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr)  | 115           |           | 77 - 120     |          |        |       |          | 08/28/23 16:30 | 1       |
| 4-Bromofluorobenzene (Surr)   | 111           |           | 73 - 120     |          |        |       |          | 08/28/23 16:30 | 1       |
| Toluene-d8 (Surr)             | 98            |           | 80 - 120     |          |        |       |          | 08/28/23 16:30 | 1       |
| Method: SW846 6010C - Metals  | s (ICP)       |           |              |          |        |       |          |                |         |
| Analyte                       | Result        | Qualifier | RL           | LOQ      | LOD    | Unit  | D        | Analyzed       | Dil Fac |
| Aluminum                      | ND            |           | 80.0         | 200      | 60.0   | ug/L  |          | 08/31/23 02:14 | 1       |
| Barium                        | 39.1          |           | 6.0          | 2.3      | 0.70   | ug/L  |          | 08/31/23 02:14 | 1       |
| Calcium                       | 81.7          |           | 5.0          | 0.33     | 0.10   | mg/L  |          | 08/31/23 15:39 | 1       |
| Chromium                      | ND            |           | 5.0          | 3.3      | 1.0    | ug/L  |          | 08/31/23 02:14 | 1       |
| Cobalt                        | ND            |           | 6.0          | 2.1      | 0.63   | ug/L  |          | 08/31/23 02:14 | 1       |
| Copper                        | 6.0           |           | 25.0         | 5.3      | 1.6    | ug/L  |          | 08/31/23 02:14 | 1       |
| Iron                          | 2.1           |           | 0.10         | 0.064    | 0.019  | mg/L  |          | 08/31/23 02:14 | 1       |
| Magnesium                     | 38.2          |           | 5.0          | 0.14     | 0.043  | mg/L  |          | 08/31/23 02:14 | 1       |
| Manganese                     | 86.3          | В         | 3.0          | 1.3      | 0.40   | ug/L  |          | 08/31/23 02:14 | 1       |
| Nickel                        | 2.1           | J         | 4.0          | 4.2      | 1.3    | ug/L  |          | 08/31/23 02:14 | 1       |
| Potassium                     | 1.7           |           | 5.0          | 0.33     | 0.10   | mg/L  |          | 08/31/23 02:14 | 1       |
| Silver                        | ND            |           | 3.0          | 5.7      | 1.7    | ug/L  |          | 08/31/23 02:14 | 1       |
| Sodium                        | 66.9          |           | 5.0          | 1.1      | 0.32   | mg/L  |          | 08/31/23 02:14 | 1       |
| Vanadium                      | ND            |           | 5.0          | 5.0      | 1.5    | ug/L  |          | 08/31/23 02:14 | 1       |
| Zinc                          | 2780          |           | 4.0          | 5.0      | 1.5    | ug/L  |          | 08/31/23 02:14 | 1       |
| Method: SW846 6020A - Metal   | s (ICP/MS)    |           |              |          |        |       |          |                |         |
| Analyte                       | Result        | Qualifier | RL           | LOQ      | LOD    | Unit  | D        | Analyzed       | Dil Fac |
| Antimony                      | ND            |           | 0.50         | 1.2      | 0.35   | ua/L  |          | 08/31/23 14:42 | 1       |
| Arsenic                       | ND            |           | 2.0          | 0.90     | 0.27   | ug/L  |          | 08/30/23 17:14 | 1       |
| Bervllium                     | ND            |           | 0.20         | 0.10     | 0.030  | ua/L  |          | 08/30/23 17:14 | 1       |
| Cadmium                       | ND            |           | 0.20         | 0.24     | 0.071  | ug/L  |          | 08/30/23 17:14 | 1       |
| Selenium                      | ND            |           | 5.0          | 1.5      | 0.44   | ug/L  |          | 08/30/23 17:14 | 1       |
| Thallium                      | 0.034         | J         | 0.20         | 0.063    | 0.019  | ug/L  |          | 08/30/23 17:14 | 1       |
|                               |               |           |              |          |        |       |          |                |         |
| Analyta                       | Docult        | Qualifier | DI           | 100      |        | Unit  | л        | Analyzod       | Dil Eac |
| Mercury                       | ND            | guuillei  | 0.20         | 0.14     | 0.043  | ug/L  |          | 09/06/23 14:37 | 1       |
|                               |               |           |              |          |        | U     |          |                |         |
| Method: SM 2340B - Total Hard | dness (as CaC | CO3) by c | alculation   | 100      |        | 11014 | ~        | Apolyzed       |         |
| Analyte                       |               | Qualifier | - <u>KL</u>  |          |        |       | <u> </u> |                |         |
|                               | 361           |           | 0.50         | 0.33     | 0.10   | ing/L |          | 09/01/23 13:30 | T       |
| General Chemistry             |               |           |              |          |        |       |          |                |         |
| Analyte                       | Result        | Qualifier | RL           | LOQ      | LOD    | Unit  | D        | Analyzed       | Dil Fac |
| Chloride (EPA 300.0)          | 103           |           | 2.5          | 4.7      | 1.4    | mg/L  |          | 08/26/23 22:16 | 5       |
| Sulfate (EPA 300.0)           | 9.0           |           | 10.0         | 5.8      | 1.7    | mg/L  |          | 08/26/23 22:16 | 5       |
| Alkalinity, Total (EPA 310.2) | 333           |           | 50.0         | 66.7     | 20.0   | mg/L  |          | 08/30/23 11:51 | 5       |
| Total Cyanide (EPA 335.4)     | ND            |           | 0.020        | 0.017    | 0.0041 | mg/L  |          | 08/31/23 01:38 | 1       |

Client: Waste Management Project/Site: Hagen Farms - Groundwater

## Lab Sample ID: 480-212170-2 Matrix: Potable Water

08/23/23 10:50

NONE

Client Sample ID: PW03 Date Collected: 08/23/23 09:50 Date Received: 08/25/23 10:30

Turbidity, Field

| General Chemistry (Continued)        |                    |           |          |       |        |            |   |                |         |
|--------------------------------------|--------------------|-----------|----------|-------|--------|------------|---|----------------|---------|
| Analyte                              | Result             | Qualifier | RL       | LOQ   | LOD    | Unit       | D | Analyzed       | Dil Fac |
| Ammonia (as N) (EPA 350.1)           | ND                 | F1        | 0.20     | 0.33  | 0.10   | mg/L       |   | 08/29/23 17:13 | 1       |
| Total Kjeldahl Nitrogen (EPA 351.2)  | 0.23               | J         | 0.20     | 0.62  | 0.19   | mg/L as N  |   | 08/31/23 09:02 | 1       |
| Nitrate Nitrite as N (EPA 353.2)     | 0.088              | F1        | 0.050    | 0.067 | 0.020  | mg/L as N  |   | 08/28/23 16:06 | 1       |
| Chemical Oxygen Demand (EPA 410.4)   | ND                 |           | 10.0     | 16.7  | 5.0    | mg/L       |   | 08/28/23 14:34 | 1       |
| Total Dissolved Solids (SM 2540C)    | 497                |           | 10.0     | 13.3  | 4.0    | mg/L       |   | 08/29/23 10:26 | 1       |
| Total Dissolved Solids (SM 2540C)    | 460                | Н         | 10.0     | 13.3  | 4.0    | mg/L       |   | 09/06/23 11:37 | 1       |
| Total Suspended Solids (SM 2540D)    | ND                 |           | 4.0      | 13.4  | 4.0    | mg/L       |   | 08/30/23 10:06 | 1       |
| Phosphorus, Total (SM 4500 P E)      | ND                 |           | 0.20     | 0.016 | 0.0050 | mg/L as P  |   | 08/28/23 11:51 | 1       |
| -<br>Methody EDA Field Sempling Fiel | d Complin          |           |          |       |        |            |   |                |         |
| Analyto                              | u Sampin<br>Posult | Qualifier | Ы        | 100   |        | Unit       | п | Analyzod       | Dil Eac |
|                                      | Nesur              | Quaimer   | <u> </u> |       |        |            |   | 08/23/23 10:50 |         |
|                                      | NO                 |           |          |       |        |            |   | 00/23/23 10.50 | י<br>א  |
| Dissolved Oxygen, Field              | 1.9                |           |          |       |        | mg/L       |   | 08/23/23 10:50 | 1       |
| Field EH/ORP                         | 11.1               |           |          |       |        | millivolts |   | 08/23/23 10:50 | 1       |
| Odor                                 | No                 |           |          |       |        | NONE       |   | 08/23/23 10:50 | 1       |
| pH, Field                            | 7.05               |           |          |       |        | SU         |   | 08/23/23 10:50 | 1       |
| Our settle O such set such a Field   |                    |           |          |       |        |            |   |                |         |
| Specific Conductance, Field          | 933                |           |          |       |        | umhos/cm   |   | 08/23/23 10:50 | 1       |

No

15

1

5

**8** 9



#### Midwest Environmental Legacy Management Group

W132 N10487 Grant Drive Germantown, WI 53022 262 509 5630

October 2, 2023

Mr. R. Gullickson 1036 Collins Road Stoughton, WI 53589

Dear Mr. Gullickson:

As required by the Unilateral Administrative Order for clean-up of the Hagen Farm Landfill, Waste Management of Wisconsin, Inc. (WMWI) samples your well (PW04) on an annual basis. This letter transmits the analytical data for your water supply well, which was sampled on August 23, 2023. Analytical results for water samples collected from the well are also sent to the United States Environmental Protection Agency (USEPA) and the Wisconsin Department of Natural Resources (WDNR) for review.

Compounds that attained or exceeded groundwater or drinking water criteria in the sample are summarized below.

|                 |                             |        | Regulatory Criteri | a       |
|-----------------|-----------------------------|--------|--------------------|---------|
| Parameter       | Concentration               | PAL    | ES                 | MCL     |
| Nitrate-nitrite | 9.4 milligrams/liter (mg/L) | 2 mg/L | 10 mg/L            | 10 mg/L |

The regulatory criteria tabulated above are the Preventive Action Limit (PAL) and Enforcement Standard (ES) for Public Health Groundwater Quality Standards from Table 1 of Chapter NR 140.10 Wis. Adm. Code (Groundwater Quality) and the Federal Maximum Contaminant Level (MCL) established in the National Primary Drinking Water Regulations. The identified nitrate-nitrite result is below the concentration that would indicate that the water is potentially unsafe for consumption (i.e., ES and MCL).

A brief review of the recent laboratory results for water samples collected from your well indicates the water quality is typical of groundwater in the area. Nitrate-nitrite was present in the sample at a concentration consistent with previous samples and is generally associated with, or related to, farming activities. The concentration is also consistent with the results from analysis of a number of other samples throughout this area.

You may contact Christopher Black from the USEPA if you would like additional information regarding this correspondence. Mr. Black is the USEPA representative providing regulatory oversite for the Hagen Farm Landfill and can be contacted via telephone at (312) 886-1451.

Sincerely,

Waste Management of Wisconsin, Inc.

Ryan / barton

Ryan J. Baeten, PE District Manager

cc: Christopher Black, USEPA Bruce LeRoy, WDNR



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Ryan Baeten Waste Management W124 N9355 Boundary Road Menomonee Falls, Wisconsin 53051 Generated 9/22/2023 10:50:19 AM

# JOB DESCRIPTION

Hagen Farms - Groundwater Annual Private Wells (8)

## **JOB NUMBER**

480-212170-1

Eurofins Buffalo 10 Hazelwood Drive Amherst NY 14228-2298



## **Eurofins Buffalo**

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northeast, LLC Project Manager.

## Authorization

Generated 9/22/2023 10:50:19 AM 5

Authorized for release by Katelyn Ferguson, Project Manager I katelyn.ferguson@et.eurofinsus.com Designee for Katelyn Proulx, Project Manager I Katelyn.Proulx@et.eurofinsus.com (716)691-2600

## **Definitions/Glossary**

# Client: Waste Management Project/Site: Hagen Farms - Groundwater

Job ID: 480-212170-1

## Qualifiers

| /OA |         |
|-----|---------|
|     | Qualifi |

| <b>GC/MS VOA</b>   |   |   |
|--------------------|---|---|
| Qualifier          | Qualifier Description   |   |
| *                  | LCS or LCSD is outside acceptance limits.   |   |
| ^c                 | CCV Recovery is outside acceptance limits.  | 5 |
| J                  | Reported value was between the limit of detection and the limit of quantitation.  |   |
| Metals             |   |   |
| Qualifier          | Qualifier Description   |   |
| 4                  | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |   |
| В                  | Compound was found in the blank and sample.   | 0 |
| J                  | Reported value was between the limit of detection and the limit of quantitation.  | 0 |
| <b>General Che</b> | mistry  | Q |
| Qualifier          | Qualifier Description   | 3 |
| 4                  | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |   |
| F1                 | MS and/or MSD recovery exceeds control limits.  |   |
| Н                  | Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.   |   |
| J                  | Reported value was between the limit of detection and the limit of quantitation.  |   |
| Glossary           |   |   |

| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                 |
|----------------|---|
| ¤              | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |
| %R             | Percent Recovery  |
| CFL            | Contains Free Liquid  |
| CFU            | Colony Forming Unit   |
| CNF            | Contains No Free Liquid   |
| DER            | Duplicate Error Ratio (normalized absolute difference)  |
| Dil Fac        | Dilution Factor   |
| DL             | Detection Limit (DoD/DOE)   |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision Level Concentration (Radiochemistry)   |
| EDL            | Estimated Detection Limit (Dioxin)  |
| LOD            | Limit of Detection (DoD/DOE)  |
| LOQ            | Limit of Quantitation (DoD/DOE)   |
| MCL            | EPA recommended "Maximum Contaminant Level"   |
| MDA            | Minimum Detectable Activity (Radiochemistry)  |
| MDC            | Minimum Detectable Concentration (Radiochemistry)   |
| MDL            | Method Detection Limit  |
| ML             | Minimum Level (Dioxin)  |
| MPN            | Most Probable Number  |
| MQL            | Method Quantitation Limit   |
| NC             | Not Calculated  |
| ND             | Not Detected at the reporting limit (or MDL or EDL if shown)  |
| NEG            | Negative / Absent   |
| POS            | Positive / Present  |
| PQL            | Practical Quantitation Limit  |
| PRES           | Presumptive   |
| QC             | Quality Control   |
| RER            | Relative Error Ratio (Radiochemistry)   |
| RL             | Reporting Limit or Requested Limit (Radiochemistry)   |
| RPD            | Relative Percent Difference, a measure of the relative difference between two points                        |
| TEF            | Toxicity Equivalent Factor (Dioxin)   |
| TEQ            | Toxicity Equivalent Quotient (Dioxin)   |
| TNTC           | Too Numerous To Count   |
|                |   |

## Job ID: 480-212170-1

### Laboratory: Eurofins Buffalo

#### Narrative

#### Job Narrative 480-212170-1

#### Receipt

The samples were received on 8/25/2023 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.5° C, 2.7° C and 3.0° C.

#### GC/MS VOA

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-681445 recovered outside acceptance criteria, low biased, for 1,1,2,2-Tetrachloroethane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported. The associated samples are impacted: PW02 (480-212170-1), PW03 (480-212170-2) and TB (480-212170-6).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-681445 recovered above the upper control limit for Acetone and Chloromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4), PW09 (480-212170-5) and TB (480-212170-6).

Method 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 480-681445 recovered outside control limits for the following analytes: Chloromethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The associated samples are impacted: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4), PW09 (480-212170-5) and TB (480-212170-6).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-681768 recovered above the upper control limit for Acetone, 2-Butanone (MEK) and Tetrahydrofuran. The samples associated with this CCV were not detected above the reporting limit (RL) for the affected analytes; therefore, the data have been reported. The associated sample is impacted: TB (480-212170-6).

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

#### HPLC/IC

Method 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: PW03 (480-212170-2). Elevated reporting limits (RLs) are provided.

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

#### Metals

Method 6010C: The method blank for preparation batch 480-681710 and analytical batch 480-681955 contained Total Manganese above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4) and PW09 (480-212170-5) was not performed.

Method 6010C: The Total Manganese and Zinc results reported for the following sample do not concur with results previously reported for this site: PW02 (480-212170-1). Reanalysis was performed, and the result(s) confirmed.

Method 6010C: The Total Zinc result reported for the following sample do not concur with results previously reported for this site: PW03 (480-212170-2). Reanalysis was performed, and the result(s) confirmed.

Method 6010C: The Total Manganese result reported for the following sample do not concur with results previously reported for this site: PW05 (480-212170-4). Reanalysis was performed, and the result(s) confirmed.

Method 6010C: The Total Iron, Potassium and Zinc results reported for the following sample do not concur with results previously reported for this site: PW09 (480-212170-5). Reanalysis was performed, and the result(s) confirmed.

Method 6020A: The Total Arsenic results reported for the following sample do not concur with results previously reported for this site: PW09 (480-212170-5). Reanalysis was performed, and the result(s) confirmed.

## Job ID: 480-212170-1 (Continued)

## Laboratory: Eurofins Buffalo (Continued)

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

#### **General Chemistry**

Method SM 2540C: Reanalysis of the following samples were performed outside of the analytical holding time due to not achieving constant weight in the original dataset: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4) and PW09 (480-212170-5). Both sets of data have been reported.

Methods 335.4, 9012B: The method blank for batch 682037 contained Total Cyanide above the reporting limit (RL). None of the samples associated with this method blank contained the target compound above the reporting limit; therefore, re-extraction and/or re-analysis of samples were not performed: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4), PW09 (480-212170-5), (480-212164-D-8) and (480-212164-D-8 MS).

Method 353.2: The results reported for the following sample do not concur with results previously reported for this site: PW03 (480-212170-2). Reanalysis was performed, and the result(s) confirmed.

Method SM 4500 P E: The results reported for the following sample do not concur with results previously reported for this site: PW05 (480-212170-4). Reanalysis was performed, and the result(s) confirmed.

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

5

8

## Lab Sample ID: 480-212170-3 Matrix: Potable Water

Date Collected: 08/23/23 10:55 Date Received: 08/25/23 10:30

**Client Sample ID: PW04** 

| Analyte                       | Resu             | t Qualifier | RL         | LOQ   | LOD    | Unit     | D | Analyzed       | Dil Fac |
|-------------------------------|------------------|-------------|------------|-------|--------|----------|---|----------------|---------|
| Vinyl chloride                | NI               | <u> </u>    | 0.020      | 0.013 | 0.0040 | ug/L     |   | 08/28/23 12:07 | 1       |
| Surrogate                     | %Recovery        | Qualifier   | Limits     |       |        | Prepared | ł | Analyzed       | Dil Fac |
| TBA-d9 (Surr)                 | 80               |             | 50 - 150   |       |        |          |   | 08/28/23 12:07 | 1       |
| Dibromofluoromethane (Surr)   | 110              |             | 50 - 150   |       |        |          |   | 08/28/23 12:07 | 1       |
| _<br>Method: SW846 8260C - Vo | latile Organic C | ompound     | s by GC/MS |       |        |          |   |                |         |
| Analyte                       | Resu             | t Qualifier | RL         | LOQ   | LOD    | Unit     | D | Analyzed       | Dil Fac |
| 1,1,1-Trichloroethane         | NI               | <u> </u>    | 1.0        | 2.7   | 0.82   | ug/L     | _ | 08/28/23 16:52 | 1       |
| 1,1,2,2-Tetrachloroethane     | N                | ⊃ ^c        | 1.0        | 0.70  | 0.21   | ug/L     |   | 08/28/23 16:52 | 1       |
| 1,1,2-Trichloroethane         | NI               | C           | 1.0        | 0.77  | 0.23   | ug/L     |   | 08/28/23 16:52 | 1       |
| 1,1-Dichloroethane            | NI               | 5           | 1.0        | 1.3   | 0.38   | ug/L     |   | 08/28/23 16:52 | 1       |
| 1,1-Dichloroethene            | N                | C           | 1.0        | 0.97  | 0.29   | ug/L     |   | 08/28/23 16:52 | 1       |
| 1,2,4-Trichlorobenzene        | N                | C           | 1.0        | 1.4   | 0.41   | ug/L     |   | 08/28/23 16:52 | 1       |
| 1,2-Dibromo-3-Chloropropane   | N                | )<br>)      | 1.0        | 1.3   | 0.39   | ug/L     |   | 08/28/23 16:52 | 1       |
| 1,2-Dibromoethane (EDB)       | N                | C           | 1.0        | 2.4   | 0.73   | ug/L     |   | 08/28/23 16:52 | 1       |
| 1.2-Dichlorobenzene           | N                | C           | 1.0        | 2.6   | 0.79   | ua/L     |   | 08/28/23 16:52 | 1       |
| 1.2-Dichloroethane            | N                |             | 1.0        | 0.70  | 0.21   | ua/L     |   | 08/28/23 16:52 | 1       |
| 1 2-Dichloropropane           | N                | -<br>ר      | 10         | 24    | 0.72   | ug/l     |   | 08/28/23 16:52 | 1       |
| 1 3-Dichlorobenzene           | N                | -<br>ר      | 10         | 2.6   | 0.78   | ug/l     |   | 08/28/23 16:52 | 1       |
| 1 4-Dichlorobenzene           | NI               | -<br>-<br>- | 10         | 2.8   | 0.84   | ug/l     |   | 08/28/23 16:52 | 1       |
| 2-Butanone (MEK)              | NI               | )           | 10         | 4 4   | 1.3    | ug/L     |   | 08/28/23 16:52 | 1       |
| 2-Hexanone                    | NI               | 2           | 50         | 4 1   | 1.0    | ug/L     |   | 08/28/23 16:52 | 1       |
| 4-Methyl-2-pentanone (MIBK)   | NI               | -<br>       | 5.0        | 7.0   | 2.1    | ug/L     |   | 08/28/23 16:52 |         |
| Acetone                       | NI               |             | 10         | 10    | 2.1    | ug/L     |   | 08/28/23 16:52 | 1       |
| Benzene                       |                  |             | 10         | 1.4   | 0.0    | ug/L     |   | 08/28/23 16:52 | 1       |
| Bromodichloromethane          | NI               | ,<br>       | 1.0        | 1.7   | 0.30   | ug/L     |   | 08/28/23 16:52 | '1      |
| Bromoform                     |                  |             | 1.0        | 0.97  | 0.03   | ug/L     |   | 08/28/23 16:52 | 1       |
| Bromomothano                  |                  |             | 1.0        | 0.07  | 0.20   | ug/L     |   | 08/28/23 16:52 | 1       |
|                               | INI<br>NI        | ע<br>       | 1.0        | 2.3   | 0.09   | ug/L     |   | 08/28/23 16:52 |         |
|                               | INL              |             | 1.0        | 0.03  | 0.19   | ug/L     |   | 00/20/23 10.32 | 1       |
|                               | INL              | 5           | 1.0        | 0.90  | 0.27   | ug/L     |   | 08/28/23 10:52 | 1       |
| Chloroothana                  |                  |             | 1.0        | 2.0   | 0.75   | ug/L     |   | 08/28/23 10.32 |         |
|                               | INL              | 5           | 1.0        | 1.1   | 0.32   | ug/L     |   | 08/28/23 10:52 | 1       |
|                               | INI              | J<br>D ^- * | 1.0        | 1.1   | 0.34   | ug/L     |   | 08/28/23 16:52 | 1       |
|                               | INI              | J ^C "      | 1.0        | 1.Z   | 0.35   | ug/L     |   | 08/28/23 16:52 | ····· } |
| cis-1,2-Dichloroethene        | NI               | 5           | 1.0        | 2.7   | 0.81   | ug/L     |   | 08/28/23 16:52 | 1       |
| cis-1,3-Dichloropropene       | NI               |             | 1.0        | 1.2   | 0.36   | ug/L     |   | 08/28/23 16:52 | 1       |
| Dibromochloromethane          | NI               | )<br>       | 1.0        | 1.1   | 0.32   | ug/L     |   | 08/28/23 16:52 | 1       |
| Dibromomethane                | N                | 2           | 1.0        | 1.4   | 0.41   | ug/L     |   | 08/28/23 16:52 | 1       |
| Dichlorodifluoromethane       | N                | 2           | 1.0        | 2.3   | 0.68   | ug/L     |   | 08/28/23 16:52 | 1       |
| Ethylbenzene                  | N                | )           | 1.0        | 2.5   | 0.74   | ug/L     |   | 08/28/23 16:52 | 1       |
| Methylene Chloride            | NI               | 2           | 1.0        | 1.5   | 0.44   | ug/L     |   | 08/28/23 16:52 | 1       |
| Methyl-t-Butyl Ether (MTBE)   | NI               | D           | 1.0        | 0.53  | 0.16   | ug/L     |   | 08/28/23 16:52 | 1       |
| Naphthalene                   | NI               | )           | 1.0        | 1.4   | 0.43   | ug/L     |   | 08/28/23 16:52 | 1       |
| Styrene                       | N                | C           | 1.0        | 2.4   | 0.73   | ug/L     |   | 08/28/23 16:52 | 1       |
| Tetrachloroethene             | N                | C           | 1.0        | 1.2   | 0.36   | ug/L     |   | 08/28/23 16:52 | 1       |
| Tetrahydrofuran               | N                | )           | 5.0        | 4.2   | 1.3    | ug/L     |   | 08/28/23 16:52 | 1       |
| Toluene                       | N                | )           | 1.0        | 1.7   | 0.51   | ug/L     |   | 08/28/23 16:52 | 1       |
| trans-1,2-Dichloroethene      | N                | C           | 1.0        | 3.0   | 0.90   | ug/L     |   | 08/28/23 16:52 | 1       |
| trans-1,3-Dichloropropene     | N                | C           | 1.0        | 1.2   | 0.37   | ug/L     |   | 08/28/23 16:52 | 1       |

Client: Waste Management Project/Site: Hagen Farms - Groundwater

### Client Sample ID: PW04 Date Collected: 08/23/23 10:55 Date Received: 08/25/23 10:30

## Lab Sample ID: 480-212170-3 Matrix: Potable Water

Matrix: Potable Water

| Method: SW846 8260C - Volati   | le Organic C | ompounds  | s by GC/MS ( | Continued  | d)           |              |          |                 |                                       |
|--------------------------------|--------------|-----------|--------------|------------|--------------|--------------|----------|-----------------|---------------------------------------|
| Analyte                        | Result       | Qualifier | RL           | LOQ        | LOD          | Unit         | D        | Analyzed        | Dil Fac                               |
| Trichloroethene                | ND           |           | 1.0          | 1.5        | 0.46         | ug/L         |          | 08/28/23 16:52  | 1                                     |
| Trichlorofluoromethane         | ND           |           | 1.0          | 2.9        | 0.88         | ug/L         |          | 08/28/23 16:52  | 1                                     |
| Vinyl chloride                 | NE           | 1         | 1.0          | 3.0        | 0.90         | ug/L         |          | 08/28/23 16:52  | 1                                     |
| Xylenes, Total                 | NC           |           | 2.0          | 2.2        | 0.66         | ug/L         |          | 08/28/23 16:52  | 1                                     |
|                                |              |           |              |            |              |              |          |                 |                                       |
| Surrogate                      | %Recovery    | ualifier  | Limits       |            |              | <b>P</b>     | Prepared | Analyzed        | Dil Fac                               |
| 1,2-Dichloroethane-d4 (Surr)   | 115          |           | 77 - 120     |            |              |              |          | 08/28/23 16:52  | 1                                     |
| 4-Bromofluorobenzene (Surr)    | 103          |           | 73 - 120     |            |              |              |          | 08/28/23 16:52  | 1                                     |
| Toluene-d8 (Surr)              | 96           |           | 80 - 120     |            |              |              |          | 08/28/23 16:52  | 1                                     |
| Mothod: SW846 6010C Motol      |              |           |              |            |              |              |          |                 |                                       |
| Analyte                        | Basul        | Qualifier | RI           | 100        |              | Unit         | п        | Analyzod        | Dil Fac                               |
| Aluminum                       | N            |           |              | 200        | 60.0         |              |          | 08/31/23 02:32  | 1                                     |
| Barium                         | 39.0         |           | 0.00<br>6.0  | 200        | 00.0         | ug/L         |          | 08/31/23 02:32  | 1                                     |
| Calcium                        | 95.0         |           | 5.0          | 0.33       | 0.70         | ma/l         |          | 08/31/23 15:57  | 1                                     |
| Chromium                       | 4 /          |           | 5.0          | 3.3        | 1.0          | ug/L         |          | 08/31/23 02:32  |                                       |
| Cobalt                         |              | J         | 5.0<br>6.0   | 0.0<br>2.1 | 0.63         | ug/L         |          | 08/31/23 02:32  | 1                                     |
| Coppor                         | 11.0         |           | 25.0         | 5.3        | 1.6          | ug/L         |          | 08/31/23 02:32  | 1                                     |
| Iron                           | 0.000        |           | 0.10         | 0.064      | 0.010        | mg/L         |          | 08/31/23 02:32  | · · · · · · · · · · · · · · · · · · · |
| Magnasium                      | 0.050        |           | 5.0          | 0.004      | 0.013        | mg/L         |          | 08/31/23 02:32  | 1                                     |
| Magnesium                      | 40. I        |           | 3.0          | 1 2        | 0.045        | ing/∟        |          | 08/31/23 02:32  | 1                                     |
| Nickol                         |              |           | 3.0          | 1.3        | 0.40         | ug/L         |          | 08/31/23 02:32  | 1                                     |
| Beteesium                      |              |           | 4.0          | 4.2        | 0.10         | ug/∟<br>ma/l |          | 00/31/23 02.32  | 1                                     |
| Silver                         | 1.2          |           | 5.0          | 0.33       | 0.10         | mg/∟         |          | 00/31/23 02.32  | 1                                     |
|                                |              |           | 5.0          | J./<br>1 1 | 1.7          | ug/L         |          | 00/31/23 02.32  |                                       |
| Soaium                         | 8.1          |           | 5.0          | 1.1<br>5.0 | 0.32         | mg/∟         |          | 08/31/23 02:32  | 1                                     |
| vanadium                       | NL           |           | 5.0          | 5.0        | 1.5          | ug/L         |          | 08/31/23 02:32  | 1                                     |
|                                | 35.1         |           | 4.0          | 5.0        | 1.5          | ug/L         |          | 00/31/23 02:32  | I                                     |
| Method: SW846 6020A - Metals   | (ICP/MS)     |           |              |            |              |              |          |                 |                                       |
| Analyte                        | Result       | Qualifier | RL           | LOQ        | LOD          | Unit         | D        | Analyzed        | Dil Fac                               |
| Antimony                       | ND           |           | 0.50         | 1.2        | 0.35         | ua/L         |          | 08/31/23 14:44  | 1                                     |
| Arsenic                        | 0.27         | J         | 2.0          | 0.90       | 0.27         | ua/L         |          | 08/30/23 17:16  | 1                                     |
| Bervllium                      | NE           |           | 0.20         | 0.10       | 0.030        | ua/L         |          | 08/30/23 17:16  | 1                                     |
| Cadmium                        | NE           |           | 0.20         | 0.24       | 0.071        | ua/L         |          | 08/30/23 17:16  |                                       |
| Selenium                       | 0.54         | J         | 5.0          | 1.5        | 0.44         | ua/L         |          | 08/30/23 17:16  | 1                                     |
| Thallium                       | NE           |           | 0.20         | 0.063      | 0.019        | ua/L         |          | 08/30/23 17:16  | 1                                     |
|                                |              |           |              |            |              | 0            |          |                 |                                       |
| Method: SW846 7470A - Mercu    | ry (CVAA)    |           |              |            |              |              |          |                 |                                       |
| Analyte                        | Result       | Qualifier | RL           | LOQ        | LOD          | Unit         | D        | Analyzed        | Dil Fac                               |
| Mercury                        | NC           |           | 0.20         | 0.14       | 0.043        | ug/L         |          | 09/06/23 14:38  | 1                                     |
| —<br>Г                         |              |           |              |            |              |              |          |                 |                                       |
| Method: SM 2340B - Total Hard  | ness (as Ca  | CO3) by c | alculation   |            |              |              | ~        |                 |                                       |
| Analyte                        | Resul        | Qualifier |              | LOQ        | LOD          | Unit         | <u>D</u> | Analyzed        | Dil Fac                               |
| Calcium and Magnesium Hardness | 405          |           | 0.50         | 0.33       | 0.10         | mg/L         |          | 09/01/23 13:30  | 1                                     |
| General Chemistry              |              |           |              |            |              |              |          |                 |                                       |
|                                | Docul        | Qualifiar | ы            | 100        |              | Unit         | л        | Analyzod        | Dil Eso                               |
|                                |              |           | - <u> </u>   |            | 0.20         | mc/l         | <u>D</u> | 08/26/22 22:26  |                                       |
| Sulfato (EDA 300.0)            | 22.0         |           | 0.00         | 1.54       | 0.20         | mg/∟         |          | 08/26/22 22:30  | 1<br>1                                |
| Alkalinity Total (EPA 310.2)   | 21.3         |           | 2.0<br>50.0  | 66.7       | 0.00<br>20 0 | mg/⊑         |          | 08/30/23 11.56  | 5                                     |
| Total Cvanide (EPA 335.4)      |              | ,<br>     | 0.020        | 0.017      | 0 0041       | ma/l         |          | 08/31/23 01:40  | 1                                     |
|                                | INL          |           | 0.020        | 0.017      | 0.00+1       |              |          | 33,3 //20 01.40 |                                       |

Client: Waste Management Project/Site: Hagen Farms - Groundwater Job ID: 480-212170-1

Matrix: Potable Water

Lab Sample ID: 480-212170-3

### Client Sample ID: PW04 Date Collected: 08/23/23 10:55 Date Received: 08/25/23 10:30

| General Chemistry (Continued)       |            |           |      |       |        |            |   |                |         |
|-------------------------------------|------------|-----------|------|-------|--------|------------|---|----------------|---------|
| Analyte                             | Result     | Qualifier | RL   | LOQ   | LOD    | Unit       | D | Analyzed       | Dil Fac |
| Ammonia (as N) (EPA 350.1)          | ND         |           | 0.20 | 0.33  | 0.10   | mg/L       |   | 08/29/23 17:19 | 1       |
| Total Kjeldahl Nitrogen (EPA 351.2) | ND         |           | 0.20 | 0.62  | 0.19   | mg/L as N  |   | 08/31/23 09:02 | 1       |
| Nitrate Nitrite as N (EPA 353.2)    | 9.4        |           | 1.3  | 1.7   | 0.50   | mg/L as N  |   | 08/28/23 12:25 | 25      |
| Chemical Oxygen Demand (EPA 410.4)  | ND         |           | 10.0 | 16.7  | 5.0    | mg/L       |   | 08/28/23 14:34 | 1       |
| Total Dissolved Solids (SM 2540C)   | 458        |           | 10.0 | 13.3  | 4.0    | mg/L       |   | 08/29/23 10:26 | 1       |
| Total Dissolved Solids (SM 2540C)   | 361        | Н         | 10.0 | 13.3  | 4.0    | mg/L       |   | 09/06/23 11:37 | 1       |
| Total Suspended Solids (SM 2540D)   | ND         |           | 4.0  | 13.4  | 4.0    | mg/L       |   | 08/30/23 10:06 | 1       |
| Phosphorus, Total (SM 4500 P E)     | 0.011      | J         | 0.20 | 0.016 | 0.0050 | mg/L as P  |   | 08/28/23 11:51 | 1       |
| Method: EPA Field Sampling - Fie    | ld Samplir | ng        |      |       |        |            |   |                |         |
| Analyte                             | Result     | Qualifier | RL   | LOQ   | LOD    | Unit       | D | Analyzed       | Dil Fac |
| Color                               | No         |           |      |       |        | NONE       |   | 08/23/23 11:55 | 1       |
| Dissolved Oxygen, Field             | 5.8        |           |      |       |        | mg/L       |   | 08/23/23 11:55 | 1       |
| Field EH/ORP                        | -1.2       |           |      |       |        | millivolts |   | 08/23/23 11:55 | 1       |
| Odor                                | No         |           |      |       |        | NONE       |   | 08/23/23 11:55 | 1       |

|                             |      | 0          |                |
|-----------------------------|------|------------|----------------|
| Field EH/ORP                | -1.2 | millivolts | 08/23/23 11:55 |
| Odor                        | No   | NONE       | 08/23/23 11:55 |
| pH, Field                   | 7.44 | SU         | 08/23/23 11:55 |
| Specific Conductance, Field | 735  | umhos/cm   | 08/23/23 11:55 |
| Temperature, Field (C)      | 16.4 | Degrees C  | 08/23/23 11:55 |
| Turbidity, Field            | No   | NONE       | 08/23/23 11:55 |
| -                           |      |            |                |



Midwest Environmental Legacy Management Group

W132 N10487 Grant Drive Germantown, WI 53022 262 509 5630

October 2, 2023

Mr. and Mrs. Scott Harried 2362 County Trunk A Stoughton, WI 53589

Dear Mr. and Mrs. Harried:

As required by the Unilateral Administrative Order for clean-up of the Hagen Farm Landfill, Waste Management of Wisconsin, Inc. (WMWI) samples your well (PW05) on an annual basis. This letter transmits the analytical data for your water supply well, which was sampled on August 23, 2023. Analytical results for water samples collected from the well are also sent to the United States Environmental Protection Agency (USEPA) and the Wisconsin Department of Natural Resources (WDNR) for review.

A brief review of the recent laboratory results for water samples collected from your well indicates the water quality is typical of groundwater in the area and does not indicate any affect from the Hagen Farm Landfill. No results were in excess of the Preventive Action Limits (PALs) or Enforcement Standards (ESs) established in Chapter NR 140 Wis. Adm. Code (Groundwater Quality) or the Federal Maximum Contaminant Levels (MCLs) established in the National Primary Drinking Water Regulations (NPDWR).

You may contact Christopher Black from the USEPA if you would like additional information regarding this correspondence. Mr. Black is the USEPA representative providing regulatory oversite for the Hagen Farm Landfill and can be contacted via telephone at (312) 886-1451.

Sincerely,

Waste Management of Wisconsin, Inc.

Kyan / baiten

Ryan J. Baeten, PE District Manager

cc: Christopher Black, USEPA Bruce LeRoy, WDNR



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Ryan Baeten Waste Management W124 N9355 Boundary Road Menomonee Falls, Wisconsin 53051 Generated 9/22/2023 10:50:19 AM

# JOB DESCRIPTION

Hagen Farms - Groundwater Annual Private Wells (8)

## **JOB NUMBER**

480-212170-1

Eurofins Buffalo 10 Hazelwood Drive Amherst NY 14228-2298



## **Eurofins Buffalo**

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northeast, LLC Project Manager.

## Authorization

Generated 9/22/2023 10:50:19 AM 5

Authorized for release by Katelyn Ferguson, Project Manager I katelyn.ferguson@et.eurofinsus.com Designee for Katelyn Proulx, Project Manager I Katelyn.Proulx@et.eurofinsus.com (716)691-2600

## **Definitions/Glossary**

# Client: Waste Management Project/Site: Hagen Farms - Groundwater

Job ID: 480-212170-1

## Qualifiers

| /OA |         |
|-----|---------|
|     | Qualifi |

| <b>GC/MS VOA</b>   |   |   |
|--------------------|---|---|
| Qualifier          | Qualifier Description   |   |
| *                  | LCS or LCSD is outside acceptance limits.   |   |
| ^c                 | CCV Recovery is outside acceptance limits.  | 5 |
| J                  | Reported value was between the limit of detection and the limit of quantitation.  |   |
| Metals             |   |   |
| Qualifier          | Qualifier Description   |   |
| 4                  | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |   |
| В                  | Compound was found in the blank and sample.   | 0 |
| J                  | Reported value was between the limit of detection and the limit of quantitation.  | 0 |
| <b>General Che</b> | mistry  | Q |
| Qualifier          | Qualifier Description   | 3 |
| 4                  | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |   |
| F1                 | MS and/or MSD recovery exceeds control limits.  |   |
| Н                  | Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.   |   |
| J                  | Reported value was between the limit of detection and the limit of quantitation.  |   |
| Glossary           |   |   |

| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                 |
|----------------|---|
| ¤              | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |
| %R             | Percent Recovery  |
| CFL            | Contains Free Liquid  |
| CFU            | Colony Forming Unit   |
| CNF            | Contains No Free Liquid   |
| DER            | Duplicate Error Ratio (normalized absolute difference)  |
| Dil Fac        | Dilution Factor   |
| DL             | Detection Limit (DoD/DOE)   |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision Level Concentration (Radiochemistry)   |
| EDL            | Estimated Detection Limit (Dioxin)  |
| LOD            | Limit of Detection (DoD/DOE)  |
| LOQ            | Limit of Quantitation (DoD/DOE)   |
| MCL            | EPA recommended "Maximum Contaminant Level"   |
| MDA            | Minimum Detectable Activity (Radiochemistry)  |
| MDC            | Minimum Detectable Concentration (Radiochemistry)   |
| MDL            | Method Detection Limit  |
| ML             | Minimum Level (Dioxin)  |
| MPN            | Most Probable Number  |
| MQL            | Method Quantitation Limit   |
| NC             | Not Calculated  |
| ND             | Not Detected at the reporting limit (or MDL or EDL if shown)  |
| NEG            | Negative / Absent   |
| POS            | Positive / Present  |
| PQL            | Practical Quantitation Limit  |
| PRES           | Presumptive   |
| QC             | Quality Control   |
| RER            | Relative Error Ratio (Radiochemistry)   |
| RL             | Reporting Limit or Requested Limit (Radiochemistry)   |
| RPD            | Relative Percent Difference, a measure of the relative difference between two points                        |
| TEF            | Toxicity Equivalent Factor (Dioxin)   |
| TEQ            | Toxicity Equivalent Quotient (Dioxin)   |
| TNTC           | Too Numerous To Count   |
|                |   |

## Job ID: 480-212170-1

### Laboratory: Eurofins Buffalo

#### Narrative

#### Job Narrative 480-212170-1

#### Receipt

The samples were received on 8/25/2023 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.5° C, 2.7° C and 3.0° C.

#### GC/MS VOA

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-681445 recovered outside acceptance criteria, low biased, for 1,1,2,2-Tetrachloroethane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported. The associated samples are impacted: PW02 (480-212170-1), PW03 (480-212170-2) and TB (480-212170-6).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-681445 recovered above the upper control limit for Acetone and Chloromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4), PW09 (480-212170-5) and TB (480-212170-6).

Method 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 480-681445 recovered outside control limits for the following analytes: Chloromethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The associated samples are impacted: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4), PW09 (480-212170-5) and TB (480-212170-6).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-681768 recovered above the upper control limit for Acetone, 2-Butanone (MEK) and Tetrahydrofuran. The samples associated with this CCV were not detected above the reporting limit (RL) for the affected analytes; therefore, the data have been reported. The associated sample is impacted: TB (480-212170-6).

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

#### HPLC/IC

Method 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: PW03 (480-212170-2). Elevated reporting limits (RLs) are provided.

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

#### Metals

Method 6010C: The method blank for preparation batch 480-681710 and analytical batch 480-681955 contained Total Manganese above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4) and PW09 (480-212170-5) was not performed.

Method 6010C: The Total Manganese and Zinc results reported for the following sample do not concur with results previously reported for this site: PW02 (480-212170-1). Reanalysis was performed, and the result(s) confirmed.

Method 6010C: The Total Zinc result reported for the following sample do not concur with results previously reported for this site: PW03 (480-212170-2). Reanalysis was performed, and the result(s) confirmed.

Method 6010C: The Total Manganese result reported for the following sample do not concur with results previously reported for this site: PW05 (480-212170-4). Reanalysis was performed, and the result(s) confirmed.

Method 6010C: The Total Iron, Potassium and Zinc results reported for the following sample do not concur with results previously reported for this site: PW09 (480-212170-5). Reanalysis was performed, and the result(s) confirmed.

Method 6020A: The Total Arsenic results reported for the following sample do not concur with results previously reported for this site: PW09 (480-212170-5). Reanalysis was performed, and the result(s) confirmed.

## Job ID: 480-212170-1 (Continued)

## Laboratory: Eurofins Buffalo (Continued)

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

#### **General Chemistry**

Method SM 2540C: Reanalysis of the following samples were performed outside of the analytical holding time due to not achieving constant weight in the original dataset: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4) and PW09 (480-212170-5). Both sets of data have been reported.

Methods 335.4, 9012B: The method blank for batch 682037 contained Total Cyanide above the reporting limit (RL). None of the samples associated with this method blank contained the target compound above the reporting limit; therefore, re-extraction and/or re-analysis of samples were not performed: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4), PW09 (480-212170-5), (480-212164-D-8) and (480-212164-D-8 MS).

Method 353.2: The results reported for the following sample do not concur with results previously reported for this site: PW03 (480-212170-2). Reanalysis was performed, and the result(s) confirmed.

Method SM 4500 P E: The results reported for the following sample do not concur with results previously reported for this site: PW05 (480-212170-4). Reanalysis was performed, and the result(s) confirmed.

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

5

8

## Lab Sample ID: 480-212170-4 Matrix: Potable Water

Date Collected: 08/23/23 12:10 Date Received: 08/25/23 10:30

**Client Sample ID: PW05** 

| Analyte                       | Result            | Qualifier | RL         | LOQ   | LOD    | Unit |       | D | Analyzed       | Dil Fac |
|-------------------------------|-------------------|-----------|------------|-------|--------|------|-------|---|----------------|---------|
| Vinyl chloride                | ND                |           | 0.020      | 0.013 | 0.0040 | ug/L |       | _ | 08/28/23 12:31 | 1       |
| Surrogate                     | %Recovery Q       | ualifier  | Limits     |       |        | Pre  | pared |   | Analyzed       | Dil Fac |
| TBA-d9 (Surr)                 |                   |           | 50 - 150   |       |        |      | -     |   | 08/28/23 12:31 | 1       |
| Dibromofluoromethane (Surr)   | 113               |           | 50 - 150   |       |        |      |       |   | 08/28/23 12:31 | 1       |
| _<br>Method: SW846 8260C - Vo | latile Organic Co | mpound    | s by GC/MS |       |        |      |       |   |                |         |
| Analyte                       | Result            | Qualifier | RL         | LOQ   | LOD    | Unit |       | D | Analyzed       | Dil Fac |
| 1,1,1-Trichloroethane         | ND                |           | 1.0        | 2.7   | 0.82   | ug/L |       | _ | 08/28/23 17:14 | 1       |
| 1,1,2,2-Tetrachloroethane     | ND                | ^c        | 1.0        | 0.70  | 0.21   | ug/L |       |   | 08/28/23 17:14 | 1       |
| 1,1,2-Trichloroethane         | ND                |           | 1.0        | 0.77  | 0.23   | ug/L |       |   | 08/28/23 17:14 | 1       |
| 1,1-Dichloroethane            | ND                |           | 1.0        | 1.3   | 0.38   | ug/L |       |   | 08/28/23 17:14 | 1       |
| 1,1-Dichloroethene            | ND                |           | 1.0        | 0.97  | 0.29   | ug/L |       |   | 08/28/23 17:14 | 1       |
| 1,2,4-Trichlorobenzene        | ND                |           | 1.0        | 1.4   | 0.41   | ug/L |       |   | 08/28/23 17:14 | 1       |
| 1,2-Dibromo-3-Chloropropane   | ND                |           | 1.0        | 1.3   | 0.39   | ug/L |       |   | 08/28/23 17:14 | 1       |
| 1,2-Dibromoethane (EDB)       | ND                |           | 1.0        | 2.4   | 0.73   | ug/L |       |   | 08/28/23 17:14 | 1       |
| 1.2-Dichlorobenzene           | ND                |           | 1.0        | 2.6   | 0.79   | ua/L |       |   | 08/28/23 17:14 | 1       |
| 1.2-Dichloroethane            | ND                |           | 1.0        | 0.70  | 0.21   | ua/L |       |   | 08/28/23 17:14 | 1       |
| 1.2-Dichloropropane           | ND                |           | 1.0        | 2.4   | 0.72   | ua/L |       |   | 08/28/23 17:14 | 1       |
| 1.3-Dichlorobenzene           | ND                |           | 1.0        | 2.6   | 0.78   | ua/L |       |   | 08/28/23 17:14 | 1       |
| 1 4-Dichlorobenzene           | ND                |           | 10         | 28    | 0.84   | ua/l |       |   | 08/28/23 17.14 | 1       |
| 2-Butanone (MEK)              | ND                |           | 10         | 4.4   | 1.3    | ua/L |       |   | 08/28/23 17:14 | 1       |
| 2-Hexanone                    |                   |           | 5.0        | 4 1   | 12     | ua/l |       |   | 08/28/23 17:14 | 1       |
| 4-Methyl-2-pentanone (MIBK)   | ND                |           | 5.0        | 7.0   | 21     | ug/L |       |   | 08/28/23 17:14 |         |
| Acetone                       |                   | ^c        | 10         | 10    | 3.0    | ug/L |       |   | 08/28/23 17:14 | 1       |
| Benzene                       |                   | 0         | 10         | 14    | 0.41   | ug/L |       |   | 08/28/23 17:14 | 1       |
| Bromodichloromethane          | ND                |           | 1.0        | 13    | 0.39   | ug/L |       |   | 08/28/23 17:14 |         |
| Bromoform                     |                   |           | 1.0        | 0.87  | 0.00   | ug/L |       |   | 08/28/23 17:14 | 1       |
| Bromomethane                  |                   |           | 1.0        | 23    | 0.20   | ug/L |       |   | 08/28/23 17:14 | 1       |
| Carbon disulfide              |                   |           | 1.0        | 0.63  | 0.00   | ug/L |       |   | 08/28/23 17:14 |         |
| Carbon tetrachloride          |                   |           | 1.0        | 0.00  | 0.10   | ug/L |       |   | 08/28/23 17:14 | 1       |
| Chlorobenzene                 |                   |           | 1.0        | 2.5   | 0.27   | ug/L |       |   | 08/28/23 17:14 | 1       |
| Chloroethane                  |                   |           | 1.0        | 1 1   | 0.73   | ug/L |       |   | 08/28/23 17:14 |         |
| Chloroform                    |                   |           | 1.0        | 1.1   | 0.32   | ug/L |       |   | 08/28/23 17:14 | 1       |
| Chloromethane                 |                   | ^c *      | 1.0        | 1.1   | 0.04   | ug/L |       |   | 08/28/23 17:14 | 1       |
| cis-1 2-Dichloroethene        |                   |           | 1.0        | 27    | 0.00   | ug/L |       |   | 08/28/23 17:14 |         |
| cis-1,2-Dichloropropene       |                   |           | 1.0        | 1.7   | 0.01   | ug/L |       |   | 08/28/23 17:14 | 1       |
| Dibromochloromothano          |                   |           | 1.0        | 1.2   | 0.30   | ug/L |       |   | 08/28/23 17:14 | 1       |
| Dibromomothano                |                   |           | 1.0        | 1.1   | 0.32   | ug/L |       |   | 08/28/23 17:14 |         |
| Dishloradifluoromothana       |                   |           | 1.0        | 1.4   | 0.41   | ug/L |       |   | 08/28/23 17:14 | 1       |
|                               |                   |           | 1.0        | 2.5   | 0.00   | ug/L |       |   | 00/20/23 17.14 | 1       |
| Mothylono Chlorido            |                   |           | 1.0        | 2.0   | 0.74   | ug/L |       |   | 00/20/23 17.14 |         |
| Methyl t Butyl Ethor (MTRE)   |                   |           | 1.0        | 0.52  | 0.44   | ug/L |       |   | 00/20/23 17.14 | 1       |
| Nanhthalana                   |                   |           | 1.0        | 0.00  | 0.10   | ug/L |       |   | 08/28/22 17:14 | 1       |
| Styropo                       |                   |           | 1.0        | 1.4   | 0.43   | ug/L |       |   | 00/20/23 17.14 | ۱<br>۲  |
|                               | ND                |           | 1.0        | 2.4   | 0.73   | ug/L |       |   | 00/20/23 17:14 | 1       |
| Tetrabudrafuran               | ND                |           | 1.0        | 1.2   | 0.36   | ug/L |       |   | 00/20/23 17:14 | 1       |
|                               | ND                |           | 5.0        | 4.2   | 1.3    | ug/L |       |   | 00/20/23 17:14 |         |
|                               | ND                |           | 1.0        | 1.7   | 0.51   | ug/L |       |   | 08/28/23 17:14 | 1       |
|                               | ND                |           | 1.0        | 3.0   | 0.90   | ug/L |       |   | 00/20/23 1/:14 | 1       |
| uans-1,3-Dichloropropene      | ND                |           | 1.0        | 1.2   | 0.37   | ug/L |       |   | 00/20/23 17:14 | 1       |

Client: Waste Management Project/Site: Hagen Farms - Groundwater

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### Client Sample ID: PW05 Date Collected: 08/23/23 12:10 Date Received: 08/25/23 10:30

# Lab Sample ID: 480-212170-4

Matrix: Potable Water

| Analyte     Result     Qualifier     PL     LOQ     LOQ     Unit     D     Analyzed     DIFAc       Trichkorchhnen     ND     10     15     0.46 upl.     082823 17:14     1       Viny chorde     ND     10     30     0.90 upl.     082823 17:14     1       Surrogate     'KRecovery     Qualifier     Limits     Prepared     Analyzed     DIFAc       1,2-Bichlorochhane-d4 (Surr)     173     77.120     Prepared     Analyzed     DIFAc       4-Bornofucorobanenes (Surr)     92     80 - 120     0.85 023 17:14     1     1       Method: SW446 6010C - Metals (ICP)     Analyzed     0.01 Fac     0.83 023 17:14     1       Austrim     66.2     5.0     0.33     0.10 upl.     0.83 032 20:36     1       Galchum     66.2     5.0     0.33     1.0 upl.     0.83 123 02:36     1       Cobat     ND     6.0     2.1     0.63 upl.     0.83 123 02:36     1       Iron     0.042 J     0.10     0.04     0.04 upl.   | Method: SW846 8260C - \  | /olatile Organic Co | bnpound                               | s by GC/MS (  | Continue   | d)     |              |          |                                       |                                       |   |
|---|--|---------------------|---------------------------------------|---------------|------------|--------|--------------|----------|---------------------------------------|---------------------------------------|---|
| Titchicorolitonemethane     ND     10     1.5     0.46     ugl     0822823 17:14     1       Vinyl chloride     ND     1.0     3.0     0.00     ugl     0822823 17:14     1       Xylems, Total     ND     2.0     2.2     0.06     ugl     0822823 17:14     1       Surrogate     Skecovery Quelifier     Limits     Prepared     Analyzed     Dil Fac       Calculatoreditane-d4 (Surr)     113     77:120     082823 17:14     1     1       Adminium     92     80-120     082823 17:14     1     082823 17:14     1       Method: SW846 6010C - Metals (ICP)     Analyzed     0803 122 02:36     1     0833 10.10     mgl     083123 02:36     1       Choronium     1.2     3     5.0     3.3     1.00     mgl     083123 02:36     1       Cobat     ND     6.0     2.1     0.63     1.00     0.83 123 02:36     1       Copper     4.4     2.6.0     5.3     1.6     ugl     083123 02:36     1 <tr< th=""><th>Analyte</th><th>Result</th><th>Qualifier</th><th>RL</th><th>LOQ</th><th>LOD</th><th>Unit</th><th>D</th><th>Analyzed</th><th>Dil Fac</th></tr<>  | Analyte  | Result              | Qualifier                             | RL            | LOQ        | LOD    | Unit         | D        | Analyzed                              | Dil Fac                               |   |
| The discription of the operation of the second se | Trichloroethene  | ND                  |                                       | 1.0           | 1.5        | 0.46   | ug/L         |          | 08/28/23 17:14                        | 1                                     |   |
| Viny dixindia     ND     1.0     3.0     0.90     upt.     082/823 17:14     1       Surrogate     Staccovery Qualifier     Limits     Prepared     Analyzed     Dil Fac       1.2-Dichorodenane-d4 (Surr)     113     77: 120     082/823 17:14     1       Automotionobanzene (Surr)     104     77: 120     082/823 37:14     1       Dialene-d6 (Surr)     92     80 - 120     082/823 37:14     1       Automicum     ND     80 - 120     082/823 37:14     1       Method: SW846 6010C - Metals (ICP)     Analyzed     Dil Fac     Dil Fac       Auminum     66.2     5.0     0.33     0.10     mgL     0871/23 02:36     1       Calcium     66.2     5.0     0.33     1.0     ugL     0831/23 02:36     1       Cobalt     ND     6.0     2.1     0.05     3.8     1.0     ugL     0831/23 02:36     1       Inon     0.042     0.10     0.664     0.019     mgL     0831/23 02:36     1       ND     3.0   | Trichlorofluoromethane   | ND                  |                                       | 1.0           | 2.9        | 0.88   | ug/L         |          | 08/28/23 17:14                        | 1                                     |   |
| Xylenes, Total     ND     2.0     2.2     0.66     ugL     08/28/23 17:14     1       Surragate     SiRecovery     Qualifier     Limits     77.120     08/28/23 17:14     1       1.2.Okchoreshne-d4 (Surr)     104     73.120     08/28/23 17:14     1       Analyte     Result     Qualifier     RL     LOQ     LOD     Unit     D     Analyzed     DIFace       Aluminum     ND     80.0     200     60.0     001L     D     Analyzed     DIFace       Aluminum     ND     80.0     200     60.0     001L     08/31/23 02.36     1       Calcium     66.2     5.0     0.33     0.10     001L     08/31/23 02.36     1       Cobati     ND     6.0     2.1     0.63     ugL     08/31/23 02.36     1       Iron     0.042     J     0.10     0.04     0.042     0.01     0.04     0.01     0.01/31 0.023     1     1       Magnessim     37.7     5.0     0.14     0.033<   | Vinyl chloride   | ND                  |                                       | 1.0           | 3.0        | 0.90   | ug/L         |          | 08/28/23 17:14                        | 1                                     |   |
| Surrogate     %Recovery     Qualifier     Limits       1.2:Dichorenstham-d4 (Surr)     113     77.120     08/26/23 17:14     1       1.2:Dichorenstham-d4 (Surr)     92     80-120     08/26/23 17:14     1       Toblenet-d8 (Surr)     92     80-120     08/26/23 17:14     1       Method:     SW846 6010C - Metals (ICP)     08/31/23 02:36     1       Analyzed     ND     80.0     2.0     0.00     ugL     08/31/23 02:36     1       Bartum     24.9     6.0     2.3     0.70     ugL     08/31/23 02:36     1       Chornium     1.2     J     5.0     3.3     1.0     ugL     08/31/23 02:36     1       Cobat     ND     6.0     2.1     0.63     0.61     0.33     1.0     ugL     08/31/23 02:36     1       Copper     4.4     J     25.0     5.3     1.6     ugL     08/31/23 02:36     1       Magnesium     3.7.7     5.0     0.1.4     0.04     0.04     0.33     0.10     mgL<   | Xylenes, Total   | ND                  |                                       | 2.0           | 2.2        | 0.66   | ug/L         |          | 08/28/23 17:14                        | 1                                     |   |
| Surrogate     %Recovery Qualifier     Limits     Propared     Analyzed     Dil Fac       1.2-Dickhoresthane-d4 (Surr)     104     73.120     08/28/23 17:14     1       Toluene-d8 (Surr)     92     80 - 120     08/28/23 17:14     1       Method: SW846 6010C - Metals (ICP)     Analyte     Result Qualifier     RL     LOQ     LOD     Unit     D     Analyzed     Dil Fac       Aluminum     ND     80.0     200     60.0     ugl.     08/31/23 02:36     1       Galcium     66.2     5.0     0.33     0.10     mgl.     08/31/23 02:36     1       Cobelt     ND     6.0     2.1     0.63     ugl.     08/31/23 02:36     1       Cobelt     ND     0.0     1.4     J     25.0     5.3     1.6     ugl.     08/31/23 02:36     1       Maganese     ND     3.0     1.3     0.40     ugl.     08/31/23 02:36     1       Maganese     ND     3.0     1.7     ugl.     08/31/23 02:36     1   |  |                     |                                       |               |            |        | -            |          |                                       |                                       |   |
| 1,2-Dichloroschane-df (Surr)   113   77.120   08/28/23 17:14   1     Hesmonfluoroscharsen (Surr)   92   80 - 120   08/28/23 17:14   1     Method: SW846 6010C - Metals (ICP)   Analyte   Result Qualifier   RL   LOQ   LOD   Unit   D   Analyzed   Dil Fac     Aluminum   ND   80.0   2.3   0.70   ugl.   08/31/23 02:36   1     Calcium   66.2   5.0   0.33   0.10   mgl.   08/31/23 02:36   1     Cobatt   ND   6.0   2.1   0.83   0.01   mgl.   08/31/23 02:36   1     Cobatt   ND   6.0   2.1   0.83   0.01   mgl.   08/31/23 02:36   1     Magnesum   3.7.7   5.0   0.13   0.044   0.041   mgl.   08/31/23 02:36   1     Magnesum   3.7.7   5.0   0.3   1.01   0.04   0.01   0.043   mgl.   08/31/23 02:36   1     Nokel   ND   4.0   4.2   1.3   ugl.   08/31/23 02:36   1     Nokel   N  | Surrogate  | %Recovery Q         | ualifier                              | Limits        |            |        | Pro          | epared   | Analyzed                              | Dil Fac                               |   |
| 4-Bromoluuroberzene (Surr)     104     73-120     08/28/23 17:14     1       Dialene-08 (Surr)     92     80-120     08/28/23 17:14     1       Method:     SW846 6010C - Metals (ICP)     Result Qualifier     RL     LOQ     CDD     Unit     D     Analyzed     Dil Fac       Aluminum     ND     80.0     200     60.0     ugl.     08/31/23 02:36     1       Calcium     66.2     5.0     0.33     0.10 mgl.     08/31/23 02:36     1       Chromium     1.2     J     5.0     3.3     1.0 ugl.     08/31/23 02:36     1       Cobalt     ND     6.0     2.1     0.63     u/d/d/d/d/d/d/d/d/d/d/d/d/d/d/d/d/d/d/  | 1,2-Dichloroethane-d4 (Surr)   | 113                 |                                       | 77 - 120      |            |        |              |          | 08/28/23 17:14                        | 1                                     |   |
| Toluene-d8 (Surr)     92     80-120     08/28/23 17:14     1       Method:     SW846 6010C - Metals (ICP)     Result     Cualifier     RL     LOQ     OD     Unit     D     Analyzed     Dil Fac       Auminum     ND     80.0     200     60.0     ug/L     08/31/23 02:36     1       Barlum     24.9     6.0     2.3     0.70     ug/L     08/31/23 02:36     1       Caticum     66.2     5.0     0.33     1.00     ug/L     08/31/23 02:36     1       Cobalt     ND     6.0     2.1     0.63     ug/L     08/31/23 02:36     1       Iron     0.042     J     0.10     0.064     0.019     mg/L     08/31/23 02:36     1       Marganese     ND     3.0     1.3     0.40     ug/L     08/31/23 02:36     1       Storer     ND     3.0     1.3     0.40     0.42     1.3     ug/L     08/31/23 02:36     1       Storer     ND     3.0     5.7     1.7     <  | 4-Bromofluorobenzene (Surr)  | 104                 |                                       | 73 - 120      |            |        |              |          | 08/28/23 17:14                        | 1                                     |   |
| Method:     SW846 6010C - Metals (ICP)       Analyzo     Result     Qualifier     RL     LOQ     LOD     Unit     D     Analyzed     DI       Aluminum     ND     80.0     2.0     60.0     ugit     06831/23 02:36     1       Calcium     66.2     5.0     0.33     0.10     mgft     06831/23 02:36     1       Chromium     1.2     J     5.0     3.3     1.0     ugft     06831/23 02:36     1       Cobalt     ND     6.0     2.1     0.63     ugft     06831/23 02:36     1       Iron     0.042     J     0.10     0.064     0.019     mgft     06831/23 02:36     1       Magnese     ND     3.0     1.3     0.40     ugft     0631/23 02:36     1       Mangenese     ND     3.0     5.7     1.7     ugft     0631/23 02:36     1       Solter     ND     3.0     5.7     1.7     ugft     0631/23 02:36     1       Solter     ND  | Toluene-d8 (Surr)  | 92                  |                                       | 80 - 120      |            |        |              |          | 08/28/23 17:14                        | 1                                     |   |
| Interfluor.     Silvere     Result     Qualifier     RL     LOQ     LOQ     LOD     Unit     D     Analyzed     DI Fac       Aluminum     ND     80.0     200     60.0     ug/L     06/31/23 02:36     1       Barium     24.9     6.0     2.3     0.70     ug/L     08/31/23 02:36     1       Chromium     1.2     J     5.0     0.33     0.10     mg/L     08/31/23 02:36     1       Cobalt     ND     6.0     2.1     0.63     0.014     0.043/1/23 02:36     1       Kagnesium     37.7     5.0     0.14     0.044     mg/L     08/31/23 02:36     1       Magnesium     3.7     5.0     0.33     0.10     mg/L     08/31/23 02:36     1       Magnesium     1.4     5.0     0.33     0.10     mg/L     08/31/23 02:36     1       Nokel     ND     3.0     5.7     1.1     0.32     1     0.37/31/23 02:36     1       Sodium     2.7     5.0  | Mathed: SW846 60400  |                     |                                       |               |            |        |              |          |                                       |                                       |   |
| Analyse     Result     Column     FL     LOQ     LOQ     Diff all     Diff all     Diff all       Barlum     24.9     6.0     2.3     0.70     ug/L     08/31/23 02:36     1       Calcium     66.2     5.0     0.33     0.10     mg/L     08/31/23 02:36     1       Cobalt     ND     6.0     2.1     0.63     ug/L     08/31/23 02:36     1       Cobalt     ND     6.0     2.1     0.63     ug/L     08/31/23 02:36     1       Cobalt     ND     6.0     2.1     0.64     0.019     mg/L     08/31/23 02:36     1       Manganese     ND     3.0     1.3     0.40     ug/L     08/31/23 02:36     1       Marganese     ND     3.0     1.3     0.40     ug/L     08/31/23 02:36     1       Solicium     2.7     5.0     1.1     0.32     1.7     ug/L     08/31/23 02:36     1       Solicium     2.7     5.0     1.1     0.35     ug/L <td< th=""><th>Niethoa: Sw846 6010C - I</th><th></th><th>Qualifier</th><th>ы</th><th>1.00</th><th></th><th>Unit</th><th><b>۔</b></th><th>Apolyzod</th><th></th></td<>   | Niethoa: Sw846 6010C - I   |                     | Qualifier                             | ы             | 1.00       |        | Unit         | <b>۔</b> | Apolyzod                              |                                       |   |
| Nomination     ND     0.003     0.031/23     0.236     1 <t< th=""><th>Aluminum</th><th></th><th>Quaimer</th><th>- <u>RL</u> -</th><th>200</th><th>60.0</th><th></th><th> <u>D</u></th><th>Allalyzeu</th><th></th></t<>   | Aluminum   |                     | Quaimer                               | - <u>RL</u> - | 200        | 60.0   |              | <u>D</u> | Allalyzeu                             |                                       |   |
| Dartition     24.3     0.03     0.13     0.16     0.017.3     0.2.30     0.17.3     0.017.3 <td>Borium</td> <td>24.0</td> <td></td> <td>6.0</td> <td>200</td> <td>00.0</td> <td>ug/L</td> <td></td> <td>08/31/23 02:30</td> <td>1</td>  | Borium   | 24.0                |                                       | 6.0           | 200        | 00.0   | ug/L         |          | 08/31/23 02:30                        | 1                                     |   |
| Calculut     06.2     0.30     0.10     Ingl.L     00/31/23     0.12     1       Chromium     1.2     J     5.0     0.33     1.0     0g/L     0g/31/23     02.36     1       Cobalt     ND     6.0     2.1     0.63     ug/L     0g/31/23     02.36     1       Copper     4.4     J     25.0     5.3     1.6     ug/L     0g/31/23     02.36     1       Magnesium     37.7     5.0     0.14     0.43     ug/L     0g/31/23     02.36     1       Nickel     ND     4.0     4.2     1.3     ug/L     0g/31/23     02.36     1       Silver     ND     3.0     5.7     1.7     ug/L     0g/31/23     02.36     1       Vanadium     ND     5.0     5.0     1.5     ug/L     0g/31/23     02.36     1       Vanadium     ND     5.0     5.0     1.5     ug/L     0g/31/23     02.36     1       Vanadium     ND  | Calaium  | 24.3                |                                       | 5.0           | 0.33       | 0.70   | ug/L<br>ma/l |          | 08/31/23 16:12                        | 1                                     |   |
| Chromium     1.2     J     0.0     3.1     0.0     0.01/1.2     0.02/1.2     0.01/1.2     0.02/1.2     0.01/1.2     0.02/1.2     0.01/1.2     0.02/1.2     0.01/1.2     0.02/1.2     0.01/1.2     0.02/1.2     0.01/1.2     0.02/1.2     0.01/1.2     0.01/1.2     0.02/1.2     0.01/1.2   | Chromium   | 00.2                | · · · · · · · · · · · · · · · · · · · | 5.0           | 0.00       | 1.0    | mg/∟         |          | 00/31/23 10.12                        |                                       |   |
| Location     Inc.     0.0     2.1     0.03     0.9L     0.93/1/23 (2:36     1       Iron     0.042     J     0.10     0.064     0.019     mg/L     08/31/23 (2:36     1       Magnesium     37.7     5.0     0.14     0.04 ug/L     08/31/23 (2:36     1       Magnese     ND     3.0     0.13     0.40 ug/L     08/31/23 (2:36     1       Nickel     ND     4.0     4.2     1.3     ug/L     08/31/23 (2:36     1       Nickel     ND     4.0     4.2     1.3     ug/L     08/31/23 (2:36     1       Solium     2.7     5.0     1.1     0.32     mg/L     08/31/23 (2:36     1       Vanadium     ND     5.0     5.0     1.5     ug/L     08/31/23 (2:36     1       Zinc     10.9     4.0     5.0     1.5     ug/L     08/31/23 (2:36     1       Antimony     ND     0.50     1.2     0.35     ug/L     08/31/23 (2:36     1       Analyte   | Cobalt   | 1.2<br>ND           | J                                     | 5.U<br>6.0    | 0.0<br>0.1 | 0.60   | ug/L         |          | 00/31/23 02.30                        | 1                                     |   |
| Dopper     4.4     J     23.0     5.3     1.0     0.0112 002.35     1       Iron     0.042     J     0.00     0.064     0.019     mg/L     0.8/31/23 02.36     1       Margnesium     37.7     5.0     0.14     0.043     mg/L     0.8/31/23 02.36     1       Margnese     ND     3.0     1.3     0.40     ug/L     0.8/31/23 02.36     1       Nickel     ND     4.0     4.2     1.3     ug/L     0.8/31/23 02.36     1       Potassium     1.4     5.0     0.33     0.10     mg/L     0.8/31/23 02.36     1       Solium     2.7     5.0     1.1     0.32     mg/L     0.8/31/23 02.36     1       Zinc     10.9     4.0     5.0     1.5     ug/L     0.8/31/23 02.36     1       Analyte     Result     Qualifier     RL     LOQ     LOD     Unit     D     Analyzed     Dil Fac       Analyte     Result     Qualifier     RL     LOQ     LOD  | Cobait   |                     |                                       | 0.0           | Z.1        | 0.03   | ug/L         |          | 00/31/23 02.30                        | 1                                     |   |
| Iron     U.042     J     0.10     0.043     0.015     0.043     0.013     0.0312.02.35     1       Magnesium     37.7     5.0     0.14     0.043     mg/L     0.8/31/23.02.36     1       Magnese     ND     4.0     4.2     1.3     ug/L     0.8/31/23.02.36     1       Potassium     1.4     5.0     0.33     0.10     mg/L     0.8/31/23.02.36     1       Silver     ND     3.0     5.7     1.7     ug/L     0.8/31/23.02.36     1       Sodium     2.7     5.0     1.1     0.32     mg/L     0.8/31/23.02.36     1       Zinc     10.9     4.0     5.0     1.5     ug/L     0.8/31/23.02.36     1       Analyte     Result Qualifier     RL     LOQ     LOD     Unit     D     Analyte     0       Analyte     ND     0.50     1.2     0.35     ug/L     0.8/31/23.17.91     1       Garaium     ND     0.20     0.10     0.030     ug/L <t< td=""><td>Copper</td><td>4.4</td><td></td><td>25.0</td><td>0.064</td><td>0.10</td><td>ug/L</td><td></td><td>08/31/23 02:30</td><td>· · · · · · · · · · · · · · · · · · ·</td></t<>   | Copper   | 4.4                 |                                       | 25.0          | 0.064      | 0.10   | ug/L         |          | 08/31/23 02:30                        | · · · · · · · · · · · · · · · · · · · |   |
| Magnessum     37.7     3.0     0.14     0.043     Ingr     003/17.3     02.36     1       Magnesse     ND     3.0     1.3     0.40     ug/L     08/31/23     02.36     1       Nickel     ND     4.0     4.2     1.3     ug/L     08/31/23     02.36     1       Potassium     1.4     5.0     0.33     0.10     mg/L     08/31/23     02.36     1       Silver     ND     3.0     5.7     1.7     ug/L     08/31/23     02.36     1       Vanadum     ND     5.0     5.0     1.5     ug/L     08/31/23     02.36     1       Zinc     10.9     4.0     5.0     1.5     ug/L     08/31/23     02.36     1       Analyte     Result     Qualifier     RL     LOQ     LOD     Unit     D     Analyzed     Dif Fac       Analyte     Result     Qualifier     RL     LOQ     LOD     Unit     D     08/30/23     17:19     1   | Iron   | 0.042               | J                                     | 0.10          | 0.004      | 0.019  | mg/L         |          | 08/31/23 02:30                        | 1                                     |   |
| Marganese     ND     3.0     1.3     0.40     0gr.     0.804     0.803     0.2036     1       Sodium     2.7     5.0     1.1     0.32     mg/L     0.803/1/23     0.236     1       Vanadium     ND     5.0     5.0     1.5     ug/L     0.803/1/23     0.236     1       Vanadium     ND     0.50     1.5     ug/L     0.803/1/23     0.236     1       Analyte     Resuit     Qualifier     RL     LOQ     LOD     Unit     D     Analyzed     Dil Fac       Ansenic     ND     0.20     0.10     0.030     ug/L     0.830/23     17:19     1       Gadmium     ND     0.20 </td <td>Magnesium</td> <td>37.7</td> <td></td> <td>5.0</td> <td>0.14</td> <td>0.043</td> <td>mg/∟</td> <td></td> <td>08/31/23 02:30</td> <td>1</td>  | Magnesium  | 37.7                |                                       | 5.0           | 0.14       | 0.043  | mg/∟         |          | 08/31/23 02:30                        | 1                                     |   |
| Nicket     ND     4.0     4.2     1.3     UgL     0631/23 02:36     1       Potassium     1.4     5.0     0.33     0.10     mg/L     06/31/23 02:36     1       Silver     ND     3.0     5.7     1.7     ug/L     08/31/23 02:36     1       Vanadum     ND     5.0     5.0     1.5     ug/L     08/31/23 02:36     1       Zinc     10.9     4.0     5.0     1.5     ug/L     08/31/23 02:36     1       Method:     SW846 6020A - Metals (ICP/MS)       5.0     1.5     ug/L     08/31/23 12:3     02:36     1       Analyte     Resuit     Qualifier     RL     LOQ     LOD     Unit     D     Analyzed     08/31/23 12:3     1     1       Arsenic     ND     0.50     1.2     0.35     ug/L     08/30/23 17:19     1       Cadmium     ND     0.20     0.10     0.030     ug/L     08/30/23 17:19     1       Selenium     0.78     J   | Manganese  | ND                  |                                       | 3.0           | 1.3        | 0.40   | ug/L         |          | 08/31/23 02:36                        | · · · · · · · · · · · ·               |   |
| Potassium   1.4   5.0   0.33   0.10   mg/L   08/31/23 02:36   1     Silver   ND   3.0   5.7   1.7   ug/L   08/31/23 02:36   1     Sodium   2.7   5.0   1.1   0.32   mg/L   08/31/23 02:36   1     Vanadium   ND   5.0   5.0   1.5   ug/L   08/31/23 02:36   1     Zinc   10.9   4.0   5.0   5.0   1.5   ug/L   08/31/23 02:36   1     Method:   SW846 6020A - Metals (ICP/MS)   Analyte   Result   Qualifier   RL   LOQ   LOD   Unit   D   Analyzed   Dil Fac     Arsenic   ND   0.50   1.2   0.35   ug/L   0.8/30/23 17:19   1     Beryllium   ND   0.20   0.01   0.030   ug/L   08/30/23 17:19   1     Selenium   ND   0.20   0.063   0.019   ug/L   08/30/23 17:19   1     Method:   SW846 7470A - Mercury (CVAA)   Analyte   Result   Qualifier   RL   LOQ   LOD   Unit   |  | ND                  |                                       | 4.0           | 4.2        | 1.3    | ug/L         |          | 08/31/23 02:36                        | 1                                     |   |
| Silver     ND     3.0     5.7     1.7     Ug/L     09/31/23 02/36     1       Sodium     2.7     5.0     1.1     0.32     mg/L     08/31/23 02/36     1       Vanadium     ND     5.0     5.0     1.5     ug/L     08/31/23 02/36     1       Zinc     10.9     4.0     5.0     1.5     ug/L     08/31/23 02/36     1       Method:     SW846 6020A - Metals (ICP/MS)     Analyte     Result     Qualifier     RL     LOQ     LOD     Unit     D     Analyzed     Dil Fac       Antimony     ND     0.50     1.2     0.35     ug/L     08/31/23 14:47     1       Arsenic     ND     2.0     0.90     0.27     ug/L     08/30/23 17:19     1       Cadmium     ND     0.20     0.10     0.030     ug/L     08/30/23 17:19     1       Selenium     0.78     J     5.0     1.5     0.44     ug/L     08/30/23 17:19     1       Thallium     ND     0.20     0.  | Potassium  | 1.4                 |                                       | 5.0           | 0.33       | 0.10   | mg/L         |          | 08/31/23 02:36                        | 1                                     |   |
| Sodium     2.7     5.0     1.1     0.32     mg/L     09/31/23     02/35     1       Vanadium     ND     5.0     5.0     1.5     ug/L     08/31/23     02/36     1       Zinc     10.9     4.0     5.0     1.5     ug/L     08/31/23     02/36     1       Method:     SW846     6020A - Metals (ICP/MS)     RL     LOQ     LOD     Unit     D     Analyzed     Dil Fac       Antimony     ND     0.50     1.2     0.35     ug/L     08/31/23     14/47     1       Arsenic     ND     2.0     0.90     0.27     ug/L     08/30/23     17.19     1       Cadmium     ND     0.20     0.10     0.030     ug/L     08/30/23     17.19     1       Cadmium     ND     0.20     0.24     0.071     ug/L     08/30/23     17.19     1       Thallium     ND     0.20     0.063     0.019     ug/L     08/30/23     17.19     1       Metho  | Silver   | UN                  |                                       | 3.0           | 5./        | 1.7    | ug/L         |          | 08/31/23 02:36                        | 1                                     |   |
| Vanadum     ND     5.0     5.0     1.5     ug/L     08/31/23 02:36     1       Zinc     10.9     4.0     5.0     1.5     ug/L     08/31/23 02:36     1       Method: SW846 6020A - Metals (ICP/MS)     Analyte     Result     Qualifier     RL     LOQ     LOD     Unit     D     08/31/23 02:36     1       Analyte     Result     Qualifier     RL     LOQ     LOD     Unit     D     08/31/23 02:36     1       Analyte     Result     Qualifier     RL     LOQ     LOD     Unit     D     08/31/23 02:36     1       Arsenic     ND     0.20     0.90     0.27     ug/L     08/31/23 17:19     1       Cadmium     ND     0.20     0.024     0.071     ug/L     08/30/23 17:19     1       Selenium     0.78     J     5.0     1.5     0.44     ug/L     08/30/23 17:19     1       Method: SW846 7470A - Mercury (CVAA)     MD     0.20     0.163     Unit     D     Analyzed     09/06  | Sodium   | 2.7                 |                                       | 5.0           | 1.1        | 0.32   | mg/L         |          | 08/31/23 02:36                        | 1                                     |   |
| Zinc     10.9     4.0     5.0     1.5     ug/L     08/31/23     02:36     1       Method:     SW846     6020A - Metals (ICP/MS)     Result     Qualifier     RL     LOQ     LOD     Unit     D     Analyzed     Dil Fac       Antimony     ND     0.50     1.2     0.35     ug/L     08/31/23     14:47     1       Arsenic     ND     2.0     0.90     0.27     ug/L     08/30/23     17:19     1       Beryllium     ND     0.20     0.10     0.030     ug/L     08/30/23     17:19     1       Cadmium     ND     0.20     0.24     0.071     ug/L     08/30/23     17:19     1       Selenium     0.78     J     5.0     1.5     0.44     ug/L     08/30/23     17:19     1       Method:     SW846 7470A - Mercury (CVAA)     Mercury     ND     0.20     0.063     0.019     ug/L     08/30/23     17:19     1       Method:     SM 2340B - Total Hardness     (as CaCO3)   | Vanadium   | ND                  |                                       | 5.0           | 5.0        | 1.5    | ug/L         |          | 08/31/23 02:36                        | 1                                     |   |
| Method:     SW846     6020A - Metals (ICP/MS)       Analyte     Result     Qualifier     RL     LOQ     LOD     Unit     D     Analyzed     Dil Fac       Antimony     ND     0.50     1.2     0.35     ug/L     08/31/23     14:47     1       Arsenic     ND     2.0     0.90     0.27     ug/L     08/30/23     17:19     1       Beryllium     ND     0.20     0.10     0.030     ug/L     08/30/23     17:19     1       Cadmium     ND     0.20     0.24     0.071     ug/L     08/30/23     17:19     1       Cadmium     0.78     J     5.0     1.5     0.44     ug/L     08/30/23     17:19     1       Selenium     ND     0.20     0.663     0.019     ug/L     08/30/23     17:19     1       Method:     SW846     7470A - Mercury (CVAA)     Mercury     ND     0.20     0.14     0.043     ug/L     D     Analyzed     Dil Fac       Method: <td>Zinc</td> <td>10.9</td> <td></td> <td>4.0</td> <td>5.0</td> <td>1.5</td> <td>ug/L</td> <td></td> <td>08/31/23 02:36</td> <td>1</td>   | Zinc   | 10.9                |                                       | 4.0           | 5.0        | 1.5    | ug/L         |          | 08/31/23 02:36                        | 1                                     |   |
| Method:     SW846     7470A     Mesult Qualifier     RL DQ     LOQ     LOD Unit     D     Analyzed 08/31/23 14:47     Dil Fac 08/31/23 14:47       Arsenic     ND     2.0     0.90     0.27     ug/L     08/30/23 17:19     1       Beryllium     ND     0.20     0.10     0.030     ug/L     08/30/23 17:19     1       Cadmium     ND     0.20     0.24     0.071     ug/L     08/30/23 17:19     1       Cadmium     ND     0.20     0.24     0.071     ug/L     08/30/23 17:19     1       Cadmium     ND     0.20     0.24     0.071     ug/L     08/30/23 17:19     1       Selenium     0.78     J     5.0     1.5     0.44     ug/L     08/30/23 17:19     1       Method: SW846 7470A - Mercury (CVAA)     MD     0.20     0.063     0.019     ug/L     08/30/23 17:19     1       Method: SM 2340B - Total Hardness (as CaCO3) by calculation     Analyte     Dil Fac     0.20     0.14     0.043     ug/L     D     Analyzed   | Method: SW846 6020A - M  | Motals (ICP/MS)     |                                       |               |            |        |              |          |                                       |                                       |   |
| Antimory     ND     0.50     1.2     0.35     ug/L     08/3/23 14:47     1       Arsenic     ND     2.0     0.90     0.27     ug/L     08/3/23 17:19     1       Arsenic     ND     2.0     0.90     0.27     ug/L     08/3/23 17:19     1       Beryllium     ND     0.20     0.10     0.030     ug/L     08/3/23 17:19     1       Cadmium     ND     0.20     0.24     0.071     ug/L     08/30/23 17:19     1       Cadmium     ND     0.20     0.24     0.071     ug/L     08/30/23 17:19     1       Selenium     0.78     J     5.0     1.5     0.44     ug/L     08/30/23 17:19     1       Thallium     ND     0.20     0.063     0.019     ug/L     08/30/23 17:19     1       Method: SW846 7470A - Mercury (CVAA)     Analyte     Result     Qualifier     RL     LOQ     LOD     Unit     D     Analyzed     Dil Fac       Mercury     ND     0.20     0.14 <th>Analyte</th> <th></th> <th>Qualifier</th> <th>RI</th> <th>100</th> <th></th> <th>Unit</th> <th>П</th> <th>Analyzed</th> <th>Dil Fac</th>   | Analyte  |                     | Qualifier                             | RI            | 100        |        | Unit         | П        | Analyzed                              | Dil Fac                               |   |
| Arsenic   ND   2.0   0.90   0.27   ug/L   08/0/128   1111   1     Arsenic   ND   0.20   0.90   0.27   ug/L   08/30/23   17:19   1     Beryllium   ND   0.20   0.10   0.030   ug/L   08/30/23   17:19   1     Cadmium   ND   0.20   0.24   0.071   ug/L   08/30/23   17:19   1     Selenium   0.78   J   5.0   1.5   0.44   ug/L   08/30/23   17:19   1     Thallium   ND   0.20   0.063   0.019   ug/L   08/30/23   17:19   1     Method:   SW846   7470A - Mercury (CVAA)   Analyte   Result   Qualifier   RL   LOQ   LOD   Unit   D   Analyzed   Dil Fac     Mercury   ND   0.20   0.14   0.043   ug/L   D   Analyzed   Dil Fac     Method:   SM 2340B - Total Hardness (as CaCO3) by calculation   Analyte   Result   Qualifier   RL   LOQ   LOD   Unit   D   Analyzed <td>Antimony</td> <td></td> <td>Quanter</td> <td></td> <td>12</td> <td>0.35</td> <td></td> <td></td> <td>1000000000000000000000000000000000000</td> <td>1</td>  | Antimony   |                     | Quanter                               |               | 12         | 0.35   |              |          | 1000000000000000000000000000000000000 | 1                                     |   |
| Beryllium   ND   0.20   0.10   0.030   ug/L   08/30/23 17:19   1     Cadmium   ND   0.20   0.10   0.030   ug/L   08/30/23 17:19   1     Selenium   0.78   J   5.0   1.5   0.44   ug/L   08/30/23 17:19   1     Thallium   ND   0.20   0.063   0.019   ug/L   08/30/23 17:19   1     Method:   SW846 7470A - Mercury (CVAA)   Analyte   D   0.20   0.063   0.019   ug/L   08/30/23 17:19   1     Method:   SW846 7470A - Mercury (CVAA)   Analyte   D  | Arsenic  | ND                  |                                       | 2.0           | 0.90       | 0.00   | ug/L         |          | 08/30/23 17:19                        | 1                                     |   |
| Cadmium   ND   0.20   0.24   0.071   ug/L   08/30/23   17:19   1     Selenium   0.78   J   5.0   1.5   0.44   ug/L   08/30/23   17:19   1     Thallium   ND   0.20   0.063   0.019   ug/L   08/30/23   17:19   1     Method:   SW846   7470A - Mercury (CVAA)   ND   0.20   0.063   0.019   ug/L   08/30/23   17:19   1     Method:   SW846   7470A - Mercury (CVAA)   Analyte   P   Analyzed   Dil Fac     Mercury   ND   0.20   0.14   0.043   ug/L   P   Analyzed   Dil Fac     Method:   SM 2340B - Total Hardness (as CaCO3) by calculation   Analyte   Result   Qualifier   RL   LOQ   LOD   Unit   D   Analyzed   Dil Fac     Calcium and Magnesium Hardness   321   0.50   0.33   0.10   mg/L   D   Analyzed   Dil Fac     General Chemistry   Analyte   Result   Qualifier   RL   LOQ   LOD   Unit   D <td>Bervilium</td> <td></td> <td></td> <td>0.20</td> <td>0.00</td> <td>0.030</td> <td>ug/L</td> <td></td> <td>08/30/23 17:19</td> <td>1</td>  | Bervilium  |                     |                                       | 0.20          | 0.00       | 0.030  | ug/L         |          | 08/30/23 17:19                        | 1                                     |   |
| Selenium   0.78 J   5.0   1.5   0.44 ug/L   08/30/23 17:19   1     Thallium   ND   0.20   0.063   0.019 ug/L   08/30/23 17:19   1     Method: SW846 7470A - Mercury (CVAA)   Result   Qualifier   RL   LOQ   LOD   Unit   D   Analyzed   Dil Fac     Mercury   ND   0.20   0.14   0.043   ug/L   D   Analyzed   Dil Fac     Mercury   ND   0.20   0.14   0.043   ug/L   D   Analyzed   Dil Fac     Method: SM 2340B - Total Hardness (as CaCO3) by calculation   Analyte   Result   Qualifier   RL   LOQ   LOD   Unit   D   Analyzed   Dil Fac     Calcium and Magnesium Hardness   321   0.50   0.33   0.10   mg/L   D   Analyzed   Dil Fac     General Chemistry   Analyte   Result   Qualifier   RL   LOQ   LOD   Unit   D   Analyzed   Dil Fac     Chloride (EPA 300.0)   2.2   0.50   0.94   0.28   mg/L   08/26/23 22:56   1     Su   | Cadmium  | ND                  |                                       | 0.20          | 0.10       | 0.000  | ug/L         |          | 08/30/23 17:19                        |                                       |   |
| Output <th colspan<="" td=""><td>Selenium</td><td>0.78</td><td></td><td>5.0</td><td>15</td><td>0.071</td><td>ug/L</td><td></td><td>08/30/23 17:19</td><td>1</td></th>   | <td>Selenium</td> <td>0.78</td> <td></td> <td>5.0</td> <td>15</td> <td>0.071</td> <td>ug/L</td> <td></td> <td>08/30/23 17:19</td> <td>1</td> | Selenium            | 0.78                                  |               | 5.0        | 15     | 0.071        | ug/L     |                                       | 08/30/23 17:19                        | 1 |
| Method:SW846 7470A - Mercury (CVAA)AnalyteResultQualifierRLLOQLODUnitDAnalyzedDil FacMercuryND0.200.140.043ug/LDAnalyzedDil FacMethod:SM 2340B - Total Hardness (as CaCO3) by calculationAnalyteResultQualifierRLLOQLODUnitDAnalyzedDil FacCalcium and Magnesium Hardness3210.500.500.330.10mg/LDAnalyzedDil FacGeneral ChemistryAnalyteResultQualifierRLLOQLODUnitDAnalyzedDil FacChloride (EPA 300.0)2.20.500.940.28mg/L08/26/23 22:561Sulfate (EPA 300.0)13.52.01.20.35mg/L08/26/23 22:561   | Thallium   |                     | •                                     | 0.20          | 0.063      | 0.019  | ug/L         |          | 08/30/23 17:19                        | 1                                     |   |
| Method: SW846 7470A - Mercury (CVAA)AnalyteResultQualifierRLLOQLODUnitDAnalyzedDil FacMercuryND0.200.140.043ug/LDAnalyzedDil FacMethod: SM 2340B - Total Hardness (as CaCO3) by calculationAnalyteResultQualifierRLLOQLODUnitDAnalyzedDil FacCalcium and Magnesium Hardness3210.500.500.330.10mg/LDAnalyzedDil FacGeneral ChemistryAnalyteResultQualifierRLLOQLODUnitDAnalyzedDil FacChloride (EPA 300.0)2.20.500.940.28mg/LD08/26/23 22:561Sulfate (EPA 300.0)13.52.01.20.35mg/L08/26/23 22:561  | _  | NB                  |                                       | 0.20          | 0.000      | 0.010  | ug, E        |          | 00/00/20 11:10                        | •                                     |   |
| Analyte<br>MercuryResult<br>NDQualifierRL<br>0.20LOQ<br>0.14LOQ<br>0.043Unit<br>ug/LDAnalyzed<br>09/06/23 14:39Dil Fac<br>1Method: SM 2340B - Total Hardness (as CaCO3) by calculation<br>Analyte<br>Calcium and Magnesium HardnessResult<br>QualifierRL<br>Calcium and Magnesium HardnessDil Fac<br>   | Method: SW846 7470A - M  | Mercury (CVAA)      |                                       |               |            |        |              |          |                                       |                                       |   |
| Mercury     ND     0.20     0.14     0.043     ug/L     09/06/23 14:39     1       Method: SM 2340B - Total Hardness (as CaCO3) by calculation<br>Analyte     Result     Qualifier     RL     LOQ     LOD     Unit     D     Analyzed     Dil Fac       Calcium and Magnesium Hardness     321     0.50     0.33     0.10     mg/L     D     Analyzed     Dil Fac       General Chemistry     Analyte     Result     Qualifier     RL     LOQ     LOD     Unit     D     Analyzed     Dil Fac       Chloride (EPA 300.0)     2.2     0.50     0.94     0.28     mg/L     D     08/26/23 22:56     1       Sulfate (EPA 300.0)     13.5     2.0     12     0.35     mg/L     08/26/23 22:56     1  | Analyte  | Result              | Qualifier                             | RL            | LOQ        | LOD    | Unit         | D        | Analyzed                              | Dil Fac                               |   |
| Method: SM 2340B - Total Hardness (as CaCO3) by calculationAnalyteResultQualifierRLLOQLODUnitDAnalyzedDil FacCalcium and Magnesium Hardness3210.500.500.330.10mg/LDAnalyzedDil FacGeneral ChemistryAnalyteResultQualifierRLLOQLODUnitDAnalyzedDil FacChloride (EPA 300.0)2.20.500.940.28mg/LD08/26/23 22:561Sulfate (EPA 300.0)13.52.01.20.35mg/L08/26/23 22:561  | Mercury  | ND                  |                                       | 0.20          | 0.14       | 0.043  | ug/L         |          | 09/06/23 14:39                        | 1                                     |   |
| Method: SM 2340B - Total Hardness (as CaCO3) by calculationAnalyteResultQualifierRLLOQLODUnitDAnalyzedDil FacCalcium and Magnesium Hardness3210.500.500.330.10mg/LDAnalyzedDil FacGeneral ChemistryAnalyteResultQualifierRLLOQLODUnitDAnalyzedDil FacChloride (EPA 300.0)2.20.500.940.28mg/LD08/26/23 22:561Sulfate (EPA 300.0)13.52.01.20.35mg/L08/26/23 22:561  |  |                     |                                       |               |            |        |              |          |                                       |                                       |   |
| AnalyteResultQualifierRLLOQLODUnitDAnalyzedDil FacCalcium and Magnesium Hardness3210.500.500.330.10mg/LD09/01/23 13:301General ChemistryAnalyteResultQualifierRLLOQLODUnitDAnalyzedDil FacChloride (EPA 300.0)2.20.500.940.28mg/LDAnalyzedDil FacSulfate (EPA 300.0)13.52.01.20.35mg/L08/26/23 22:561   | Method: SM 2340B - Tota  | I Hardness (as Ca   | CO3) by c                             | alculation    |            |        |              |          |                                       |                                       |   |
| Calcium and Magnesium Hardness     321     0.50     0.33     0.10 mg/L     09/01/23 13:30     1       General Chemistry     Analyte     Result     Qualifier     RL     LOQ     LOD     Unit     D     Analyzed     Dil Fac       Chloride (EPA 300.0)     2.2     0.50     0.94     0.28     mg/L     08/26/23 22:56     1       Sulfate (EPA 300.0)     13.5     2.0     1.2     0.35     mg/L     08/26/23 22:56     1   | Analyte  | Result              | Qualifier                             | RL            | LOQ        | LOD    | Unit         | D        | Analyzed                              | Dil Fac                               |   |
| General Chemistry     Result     Qualifier     RL     LOQ     LOD     Unit     D     Analyzed     Dil Fac       Chloride (EPA 300.0)     2.2     0.50     0.94     0.28     mg/L     08/26/23 22:56     1       Sulfate (EPA 300.0)     13.5     2.0     1.2     0.35     mg/L     08/26/23 22:56     1   | Calcium and Magnesium Hare   | dness 321           |                                       | 0.50          | 0.33       | 0.10   | mg/L         |          | 09/01/23 13:30                        | 1                                     |   |
| Analyte     Result     Qualifier     RL     LOQ     LOD     Unit     D     Analyzed     Dil Fac       Chloride (EPA 300.0)     2.2     0.50     0.94     0.28     mg/L     08/26/23 22:56     1       Sulfate (EPA 300.0)     13.5     2.0     1.2     0.35     mg/L     08/26/23 22:56     1   | General Chemistry  |                     |                                       |               |            |        |              |          |                                       |                                       |   |
| Analyte     Result     Guanner     RL     LOG     LOD     Onit     D     Analyzed     Dil Fac       Chloride (EPA 300.0)     2.2     0.50     0.94     0.28     mg/L     08/26/23 22:56     1       Sulfate (EPA 300.0)     13.5     2.0     1.2     0.35     mg/L     08/26/23 22:56     1   |  | Decult              | Qualifier                             | ы             | 1.00       |        | l Init       | ~        | Applyrod                              |                                       |   |
| Childred (EFA 300.0) Z.Z 0.50 0.94 0.20 mg/L 08/20/23 22:50 1   Sulfate (EPA 300.0) 13.5 2.0 1.2 0.35 mg/L 08/26/23 22:56 1   | Chlorido (EPA 200.0)   |                     | Quaimer                               | - <u> </u>    |            | 0.20   | ma/l         | U        | 08/26/22 22:56                        |                                       |   |
|   | Sulfato (EDA 200.0)  | 2.2<br>40 E         |                                       | 0.00<br>2 A   | 1.94       | 0.20   | mg/L<br>mg/l |          | 08/26/23 22.30                        | 1                                     |   |
| Alkalinity Total (EPA 310.2) 311 50.0 66.7 20.0 mg/L 08/20/23 11:56 5   | Alkalinity Total (EDA 310.2)   | 13.3                |                                       | 2.0<br>50.0   | 66.7       | 20.00  | mg/⊑         |          | 08/30/23 11.56                        | 5                                     |   |
| Total Cvanide (EPA 335.4) ND 0.020 0.017 0.0041 mg/L 0.8/31/23.01:43 1  | Total Cvanide (EPA 335.4)  |                     |                                       | 0.020         | 0.017      | 0 0041 | mg/⊑         |          | 08/31/23 01:43                        |                                       |   |

Client: Waste Management Project/Site: Hagen Farms - Groundwater

## Lab Sample ID: 480-212170-4 Matrix: Potable Water

Client Sample ID: PW05 Date Collected: 08/23/23 12:10 Date Received: 08/25/23 10:30

| General Chemistry (Continued)       |           |           |       |       |        |            |   |                |         |
|-------------------------------------|-----------|-----------|-------|-------|--------|------------|---|----------------|---------|
| Analyte                             | Result    | Qualifier | RL    | LOQ   | LOD    | Unit       | D | Analyzed       | Dil Fac |
| Ammonia (as N) (EPA 350.1)          | ND        |           | 0.20  | 0.33  | 0.10   | mg/L       |   | 08/29/23 17:21 | 1       |
| Total Kjeldahl Nitrogen (EPA 351.2) | ND        |           | 0.20  | 0.62  | 0.19   | mg/L as N  |   | 08/31/23 09:02 | 1       |
| Nitrate Nitrite as N (EPA 353.2)    | 0.67      |           | 0.050 | 0.067 | 0.020  | mg/L as N  |   | 08/28/23 12:23 | 1       |
| Chemical Oxygen Demand (EPA 410.4)  | ND        |           | 10.0  | 16.7  | 5.0    | mg/L       |   | 08/28/23 14:34 | 1       |
| Total Dissolved Solids (SM 2540C)   | 285       |           | 10.0  | 13.3  | 4.0    | mg/L       |   | 08/29/23 10:26 | 1       |
| Total Dissolved Solids (SM 2540C)   | 250       | Н         | 10.0  | 13.3  | 4.0    | mg/L       |   | 09/06/23 11:37 | 1       |
| Total Suspended Solids (SM 2540D)   | ND        |           | 4.0   | 13.4  | 4.0    | mg/L       |   | 08/30/23 10:06 | 1       |
| Phosphorus, Total (SM 4500 P E)     | 0.022     |           | 0.20  | 0.016 | 0.0050 | mg/L as P  |   | 09/08/23 15:44 | 1       |
| Method: EPA Field Sampling - Fiel   | d Samplin | g         |       |       |        |            |   |                |         |
| Analyte                             | Result    | Qualifier | RL    | LOQ   | LOD    | Unit       | D | Analyzed       | Dil Fac |
| Color                               | No        |           |       |       |        | NONE       |   | 08/23/23 13:10 | 1       |
| Dissolved Oxygen, Field             | 4.3       |           |       |       |        | mg/L       |   | 08/23/23 13:10 | 1       |
| Field EH/ORP                        | 26.5      |           |       |       |        | millivolts |   | 08/23/23 13:10 | 1       |
| Odor                                | No        |           |       |       |        | NONE       |   | 08/23/23 13:10 | 1       |
| pH, Field                           | 7.39      |           |       |       |        | SU         |   | 08/23/23 13:10 | 1       |
| Specific Conductance, Field         | 547       |           |       |       |        | umhos/cm   |   | 08/23/23 13:10 | 1       |
| Temperature Field (C)               | 40.0      |           |       |       |        | Degrees C  |   | 08/23/23 13.10 |         |
| Temperature, Fleid (C)              | 10.0      |           |       |       |        | Dogrood O  |   | 00/20/20 10.10 | - I     |

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**8** 9



#### Midwest Environmental Legacy Management Group

W132 N10487 Grant Drive Germantown, WI 53022 262 509 5630

October 2, 2023

Stoughton Conservation Club 984 Collins Road Stoughton, WI 53589

To whom it may concern:

As required by the Unilateral Administrative Order for clean-up of the Hagen Farm Landfill, Waste Management of Wisconsin, Inc. (WMWI) samples the well at the above referenced facility (PW09) on an annual basis. This letter transmits the analytical data for that water supply well, which was sampled on August 23, 2023. Analytical results for water samples collected from the well are also sent to the United States Environmental Protection Agency (USEPA) and the Wisconsin Department of Natural Resources (WDNR) for review.

Compounds that attained or exceeded groundwater or drinking water criteria in the sample are summarized below.

|                |                              | Regulatory Criteria |          |         |  |  |  |  |
|----------------|------------------------------|---------------------|----------|---------|--|--|--|--|
| Parameter      | Concentration                | PAL                 | ES       | MCL     |  |  |  |  |
|                |                              |                     |          |         |  |  |  |  |
| Arsenic        | 8.7 micrograms/liter (ug/L)  | 1 ug/L              | 10 ug/L  | 10 ug/L |  |  |  |  |
| Vinyl chloride | 0.02 micrograms/liter (ug/L) | 0.02 ug/L           | 0.2 ug/L | 2 ug/L  |  |  |  |  |

The regulatory criteria tabulated above are the Preventive Action Limit (PAL) and Enforcement Standard (ES) for Public Health Groundwater Quality Standards from Table 1 of Chapter NR 140.10 Wis. Adm. Code (Groundwater Quality) and the Federal Maximum Contaminant Level (MCL) established in the National Primary Drinking Water Regulations. The identified results are below the concentrations that would indicate that the water is potentially unsafe for consumption over time (i.e., ES and MCL).

The identified concentration of arsenic is consistent with recent prior results. Arsenic is naturally present in subsurface soils and rock, thus concentrations in groundwater similar to that reported in this sample are not unusual.

You may contact Christopher Black from the USEPA if you would like additional information regarding this correspondence. Mr. Black is the USEPA representative providing regulatory oversite for the Hagen Farm Landfill and can be contacted via telephone at (312) 886-1451.

Sincerely,

Waste Management of Wisconsin, Inc.

Ryan / barton

Ryan J. Baeten, PE District Manager

cc: Christopher Black, USEPA Bruce LeRoy, WDNR



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Ryan Baeten Waste Management W124 N9355 Boundary Road Menomonee Falls, Wisconsin 53051 Generated 9/22/2023 10:50:19 AM

# JOB DESCRIPTION

Hagen Farms - Groundwater Annual Private Wells (8)

## **JOB NUMBER**

480-212170-1

Eurofins Buffalo 10 Hazelwood Drive Amherst NY 14228-2298



## **Eurofins Buffalo**

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northeast, LLC Project Manager.

## Authorization

Generated 9/22/2023 10:50:19 AM 5

Authorized for release by Katelyn Ferguson, Project Manager I katelyn.ferguson@et.eurofinsus.com Designee for Katelyn Proulx, Project Manager I Katelyn.Proulx@et.eurofinsus.com (716)691-2600

## **Definitions/Glossary**

# Client: Waste Management Project/Site: Hagen Farms - Groundwater

Job ID: 480-212170-1

## Qualifiers

| /OA |         |
|-----|---------|
|     | Qualifi |

| <b>GC/MS VOA</b>   |   |   |
|--------------------|---|---|
| Qualifier          | Qualifier Description   |   |
| *                  | LCS or LCSD is outside acceptance limits.   |   |
| ^c                 | CCV Recovery is outside acceptance limits.  | 5 |
| J                  | Reported value was between the limit of detection and the limit of quantitation.  |   |
| Metals             |   |   |
| Qualifier          | Qualifier Description   |   |
| 4                  | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |   |
| В                  | Compound was found in the blank and sample.   | 0 |
| J                  | Reported value was between the limit of detection and the limit of quantitation.  | 0 |
| <b>General Che</b> | mistry  | Q |
| Qualifier          | Qualifier Description   | 3 |
| 4                  | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |   |
| F1                 | MS and/or MSD recovery exceeds control limits.  |   |
| Н                  | Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.   |   |
| J                  | Reported value was between the limit of detection and the limit of quantitation.  |   |
| Glossary           |   |   |

| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                 |
|----------------|---|
| ¤              | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |
| %R             | Percent Recovery  |
| CFL            | Contains Free Liquid  |
| CFU            | Colony Forming Unit   |
| CNF            | Contains No Free Liquid   |
| DER            | Duplicate Error Ratio (normalized absolute difference)  |
| Dil Fac        | Dilution Factor   |
| DL             | Detection Limit (DoD/DOE)   |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision Level Concentration (Radiochemistry)   |
| EDL            | Estimated Detection Limit (Dioxin)  |
| LOD            | Limit of Detection (DoD/DOE)  |
| LOQ            | Limit of Quantitation (DoD/DOE)   |
| MCL            | EPA recommended "Maximum Contaminant Level"   |
| MDA            | Minimum Detectable Activity (Radiochemistry)  |
| MDC            | Minimum Detectable Concentration (Radiochemistry)   |
| MDL            | Method Detection Limit  |
| ML             | Minimum Level (Dioxin)  |
| MPN            | Most Probable Number  |
| MQL            | Method Quantitation Limit   |
| NC             | Not Calculated  |
| ND             | Not Detected at the reporting limit (or MDL or EDL if shown)  |
| NEG            | Negative / Absent   |
| POS            | Positive / Present  |
| PQL            | Practical Quantitation Limit  |
| PRES           | Presumptive   |
| QC             | Quality Control   |
| RER            | Relative Error Ratio (Radiochemistry)   |
| RL             | Reporting Limit or Requested Limit (Radiochemistry)   |
| RPD            | Relative Percent Difference, a measure of the relative difference between two points                        |
| TEF            | Toxicity Equivalent Factor (Dioxin)   |
| TEQ            | Toxicity Equivalent Quotient (Dioxin)   |
| TNTC           | Too Numerous To Count   |
|                |   |

## Job ID: 480-212170-1

### Laboratory: Eurofins Buffalo

#### Narrative

#### Job Narrative 480-212170-1

#### Receipt

The samples were received on 8/25/2023 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.5° C, 2.7° C and 3.0° C.

#### GC/MS VOA

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-681445 recovered outside acceptance criteria, low biased, for 1,1,2,2-Tetrachloroethane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported. The associated samples are impacted: PW02 (480-212170-1), PW03 (480-212170-2) and TB (480-212170-6).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-681445 recovered above the upper control limit for Acetone and Chloromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4), PW09 (480-212170-5) and TB (480-212170-6).

Method 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 480-681445 recovered outside control limits for the following analytes: Chloromethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The associated samples are impacted: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4), PW09 (480-212170-5) and TB (480-212170-6).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-681768 recovered above the upper control limit for Acetone, 2-Butanone (MEK) and Tetrahydrofuran. The samples associated with this CCV were not detected above the reporting limit (RL) for the affected analytes; therefore, the data have been reported. The associated sample is impacted: TB (480-212170-6).

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

#### HPLC/IC

Method 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: PW03 (480-212170-2). Elevated reporting limits (RLs) are provided.

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

#### Metals

Method 6010C: The method blank for preparation batch 480-681710 and analytical batch 480-681955 contained Total Manganese above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4) and PW09 (480-212170-5) was not performed.

Method 6010C: The Total Manganese and Zinc results reported for the following sample do not concur with results previously reported for this site: PW02 (480-212170-1). Reanalysis was performed, and the result(s) confirmed.

Method 6010C: The Total Zinc result reported for the following sample do not concur with results previously reported for this site: PW03 (480-212170-2). Reanalysis was performed, and the result(s) confirmed.

Method 6010C: The Total Manganese result reported for the following sample do not concur with results previously reported for this site: PW05 (480-212170-4). Reanalysis was performed, and the result(s) confirmed.

Method 6010C: The Total Iron, Potassium and Zinc results reported for the following sample do not concur with results previously reported for this site: PW09 (480-212170-5). Reanalysis was performed, and the result(s) confirmed.

Method 6020A: The Total Arsenic results reported for the following sample do not concur with results previously reported for this site: PW09 (480-212170-5). Reanalysis was performed, and the result(s) confirmed.

## Job ID: 480-212170-1 (Continued)

## Laboratory: Eurofins Buffalo (Continued)

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

#### **General Chemistry**

Method SM 2540C: Reanalysis of the following samples were performed outside of the analytical holding time due to not achieving constant weight in the original dataset: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4) and PW09 (480-212170-5). Both sets of data have been reported.

Methods 335.4, 9012B: The method blank for batch 682037 contained Total Cyanide above the reporting limit (RL). None of the samples associated with this method blank contained the target compound above the reporting limit; therefore, re-extraction and/or re-analysis of samples were not performed: PW02 (480-212170-1), PW03 (480-212170-2), PW04 (480-212170-3), PW05 (480-212170-4), PW09 (480-212170-5), (480-212164-D-8) and (480-212164-D-8 MS).

Method 353.2: The results reported for the following sample do not concur with results previously reported for this site: PW03 (480-212170-2). Reanalysis was performed, and the result(s) confirmed.

Method SM 4500 P E: The results reported for the following sample do not concur with results previously reported for this site: PW05 (480-212170-4). Reanalysis was performed, and the result(s) confirmed.

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

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## Lab Sample ID: 480-212170-5 Matrix: Potable Water

Date Collected: 08/23/23 12:20 Date Received: 08/25/23 10:30

**Client Sample ID: PW09** 

| Method: SW846 8260C SIM     | - Volatile Organ  | ic Compo  | unds (GC/MS | )                      |             |       |     |                |         |
|-----------------------------|-------------------|-----------|-------------|------------------------|-------------|-------|-----|----------------|---------|
| Analyte                     | Result            | Qualifier |             | LOQ                    | LOD         | Unit  | D   | Analyzed       | Dil Fac |
| Vinyl chloride              | 0.020             |           | 0.020       | 0.013                  | 0.0040      | ug/L  |     | 08/28/23 12:55 | 1       |
| Surrogate                   | %Recovery Q       | ualifier  | Limits      |                        |             | Prepa | red | Analyzed       | Dil Fac |
| TBA-d9 (Surr)               | 80                |           | 50 - 150    |                        |             |       |     | 08/28/23 12:55 | 1       |
| Dibromofluoromethane (Surr) | 110               |           | 50 - 150    |                        |             |       |     | 08/28/23 12:55 | 1       |
|                             | latile Organic Co | ompound   | s by GC/MS  |                        |             |       |     |                |         |
| Analyte                     | Result            | Qualifier | RL          | LOQ                    | LOD         | Unit  | D   | Analyzed       | Dil Fac |
| 1,1,1-Trichloroethane       | ND                |           | 1.0         | 2.7                    | 0.82        | ug/L  |     | 08/28/23 17:36 | 1       |
| 1,1,2,2-Tetrachloroethane   | ND                | ^c        | 1.0         | 0.70                   | 0.21        | ug/L  |     | 08/28/23 17:36 | 1       |
| 1,1,2-Trichloroethane       | ND                |           | 1.0         | 0.77                   | 0.23        | ug/L  |     | 08/28/23 17:36 | 1       |
| 1,1-Dichloroethane          | ND                |           | 1.0         | 1.3                    | 0.38        | ug/L  |     | 08/28/23 17:36 | 1       |
| 1,1-Dichloroethene          | ND                |           | 1.0         | 0.97                   | 0.29        | ug/L  |     | 08/28/23 17:36 | 1       |
| 1,2,4-Trichlorobenzene      | ND                |           | 1.0         | 1.4                    | 0.41        | ug/L  |     | 08/28/23 17:36 | 1       |
| 1,2-Dibromo-3-Chloropropane | ND                |           | 1.0         | 1.3                    | 0.39        | ug/L  |     | 08/28/23 17:36 | 1       |
| 1,2-Dibromoethane (EDB)     | ND                |           | 1.0         | 2.4                    | 0.73        | ug/L  |     | 08/28/23 17:36 | 1       |
| 1,2-Dichlorobenzene         | ND                |           | 1.0         | 2.6                    | 0.79        | ug/L  |     | 08/28/23 17:36 | 1       |
| 1,2-Dichloroethane          | ND                |           | 1.0         | 0.70                   | 0.21        | ug/L  |     | 08/28/23 17:36 | 1       |
| 1,2-Dichloropropane         | ND                |           | 1.0         | 2.4                    | 0.72        | ug/L  |     | 08/28/23 17:36 | 1       |
| 1,3-Dichlorobenzene         | ND                |           | 1.0         | 2.6                    | 0.78        | ug/L  |     | 08/28/23 17:36 | 1       |
| 1,4-Dichlorobenzene         | ND                |           | 1.0         | 2.8                    | 0.84        | ug/L  |     | 08/28/23 17:36 | 1       |
| 2-Butanone (MEK)            | ND                |           | 10          | 4.4                    | 1.3         | ug/L  |     | 08/28/23 17:36 | 1       |
| 2-Hexanone                  | ND                |           | 5.0         | 4.1                    | 1.2         | ug/L  |     | 08/28/23 17:36 | 1       |
| 4-Methyl-2-pentanone (MIBK) | ND                |           | 5.0         | 7.0                    | 2.1         | ug/L  |     | 08/28/23 17:36 | 1       |
| Acetone                     | ND                | ^c        | 10          | 10                     | 3.0         | ug/L  |     | 08/28/23 17:36 | 1       |
| Benzene                     | ND                |           | 1.0         | 1.4                    | 0.41        | ug/L  |     | 08/28/23 17:36 | 1       |
| Bromodichloromethane        | ND                |           | 1.0         | 1.3                    | 0.39        | ug/L  |     | 08/28/23 17:36 | 1       |
| Bromoform                   | ND                |           | 1.0         | 0.87                   | 0.26        | ua/L  |     | 08/28/23 17:36 | 1       |
| Bromomethane                | ND                |           | 1.0         | 2.3                    | 0.69        | ua/L  |     | 08/28/23 17:36 | 1       |
| Carbon disulfide            | ND                |           | 1.0         | 0.63                   | 0.19        | ua/L  |     | 08/28/23 17:36 |         |
| Carbon tetrachloride        | ND                |           | 1.0         | 0.90                   | 0.27        | ua/L  |     | 08/28/23 17:36 | 1       |
| Chlorobenzene               | ND                |           | 1.0         | 2.5                    | 0.75        | ua/L  |     | 08/28/23 17:36 | 1       |
| Chloroethane                | ND                |           | 10          | 11                     | 0.32        | ua/l  |     | 08/28/23 17:36 | 1       |
| Chloroform                  | ND                |           | 1.0         | 11                     | 0.34        | ua/l  |     | 08/28/23 17:36 | 1       |
| Chloromethane               | ND                | ^c *      | 1.0         | 12                     | 0.35        | ua/l  |     | 08/28/23 17:36 | 1       |
| cis-1 2-Dichloroethene      | ND                |           | 10          | 27                     | 0.81        | ua/l  |     | 08/28/23 17:36 | 1       |
| cis-1 3-Dichloropropene     | ND                |           | 1.0         | 12                     | 0.36        | ua/l  |     | 08/28/23 17:36 | 1       |
| Dibromochloromethane        | ND                |           | 1.0         | 1 1                    | 0.32        | ua/l  |     | 08/28/23 17:36 | 1       |
| Dibromomethane              | ND                |           | 1.0         | 14                     | 0.02        | ug/L  |     | 08/28/23 17:36 |         |
| Dichlorodifluoromethane     | ND                |           | 1.0         | 23                     | 0.68        | ug/L  |     | 08/28/23 17:36 | 1       |
| Ethylbenzene                | ND                |           | 1.0         | 2.5                    | 0.00        | ug/L  |     | 08/28/23 17:36 | 1       |
| Methylene Chloride          | ND                |           | 1.0         | 15                     | 0.14        | ug/L  |     | 08/28/23 17:36 |         |
| Methyl-t-Butyl Ether (MTBE) |                   |           | 1.0         | 0.53                   | 0.16        | ug/L  |     | 08/28/23 17:36 | 1       |
| Nanhthalene                 |                   |           | 1.0         | 1 4                    | 0.10        | ug/L  |     | 08/28/23 17:36 | 1       |
| Styrene                     |                   |           | 1.0         | 24                     | 0.40        | ug/L  |     | 08/28/23 17:36 |         |
| Tetrachloroethene           |                   |           | 1.0         | 2. <del>4</del><br>1.2 | 0.73        | ug/L  |     | 08/28/23 17:36 | 1       |
| Tetrahydrofuran             |                   |           | 5.0         | 1.2                    | 0.00        | ug/L  |     | 08/28/23 17:36 | 1       |
| Toluene                     | םא<br>חוא         |           | 1.0         | 17                     | 1.J<br>0.51 | ug/L  |     | 08/28/23 17.26 | ····· 1 |
| trans-1.2-Dichloroothono    |                   |           | 1.0         | 3.0                    | 0.01        | ug/L  |     | 08/28/22 17.20 | 1       |
| trans-1.2-Dichloropropopo   |                   |           | 1.0         | 10                     | 0.90        | ug/L  |     | 08/28/22 17.20 | 1       |
|                             | ND                |           | 1.0         | 1.2                    | 0.37        | uy/L  |     | 00/20/23 11.30 | I       |

**Client: Waste Management** Project/Site: Hagen Farms - Groundwater

### **Client Sample ID: PW09** Date Collected: 08/23/23 12:20 Date Received: 08/25/23 10:30

# Lab Sample ID: 480-212170-5

**Matrix: Potable Water** 

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| Method: SW846 8260C - Volati   | le Organic Co | mpounds    | by GC/MS ( | Continue | d)     |      |          |                 |         |
|--------------------------------|---------------|------------|------------|----------|--------|------|----------|-----------------|---------|
| Analyte                        | Result        | Qualifier  | RL         | LOQ      | LOD    | Unit | D        | Analyzed        | Dil Fac |
| Trichloroethene                | ND            |            | 1.0        | 1.5      | 0.46   | ug/L |          | 08/28/23 17:36  | 1       |
| Trichlorofluoromethane         | ND            |            | 1.0        | 2.9      | 0.88   | ug/L |          | 08/28/23 17:36  | 1       |
| Vinyl chloride                 | ND            |            | 1.0        | 3.0      | 0.90   | ug/L |          | 08/28/23 17:36  | 1       |
| Xylenes, Total                 | ND            |            | 2.0        | 2.2      | 0.66   | ug/L |          | 08/28/23 17:36  | 1       |
|                                |               |            |            |          |        | •    |          |                 |         |
| Surrogate                      | %Recovery Q   | ualifier   | Limits     |          |        | F    | Prepared | Analyzed        | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr)   | 115           |            | 77 - 120   |          |        |      |          | 08/28/23 17:36  | 1       |
| 4-Bromofluorobenzene (Surr)    | 106           |            | 73 - 120   |          |        |      |          | 08/28/23 17:36  | 1       |
| Toluene-d8 (Surr)              | 94            |            | 80 - 120   |          |        |      |          | 08/28/23 17:36  | 1       |
| Mathada CM/04C C040C Matal     |               |            |            |          |        |      |          |                 |         |
| Method: SW846 6010C - Metals   | s (ICP)       | Qualifian  |            | 1.00     |        | 11   |          | A sea h sea al  |         |
|                                |               | Qualifier  | RL _       |          |        | Unit | <u>D</u> |                 |         |
| Aluminum                       | ND            |            | 80.0       | 200      | 0.00   | ug/L |          | 08/31/23 02:52  | 1       |
| Banum                          | ND            |            | 6.0        | 2.3      | 0.70   | ug/L |          | 08/31/23 02:52  | 1       |
|                                | 0.23          | J          | 5.0        | 0.33     | 0.10   | mg/L |          | 08/31/23 02:52  |         |
| Chromium                       | ND            |            | 5.0        | 3.3      | 1.0    | ug/L |          | 08/31/23 02:52  | 1       |
| Copali                         | ND            |            | 6.0        | 2.1      | 0.63   | ug/L |          | 08/31/23 02:52  | 1       |
| Copper                         | 23.2          |            | 25.0       | 5.3      | 1.6    | ug/L |          | 08/31/23 02:52  | 1       |
| Iron                           | 0.13          |            | 0.10       | 0.064    | 0.019  | mg/L |          | 08/31/23 16:16  | 1       |
| Magnesium                      | 0.12          | J          | 5.0        | 0.14     | 0.043  | mg/L |          | 08/31/23 02:52  | 1       |
| Manganese                      | 0.93          | JB         | 3.0        | 1.3      | 0.40   | ug/L |          | 08/31/23 02:52  | 1       |
| Nickel                         | ND            |            | 4.0        | 4.2      | 1.3    | ug/L |          | 08/31/23 02:52  | 1       |
| Potassium                      | 15.3          |            | 5.0        | 0.33     | 0.10   | mg/L |          | 08/31/23 02:52  | 1       |
| Silver                         | ND            |            | 3.0        | 5.7      | 1.7    | ug/L |          | 08/31/23 02:52  | 1       |
| Sodium                         | 176           |            | 5.0        | 1.1      | 0.32   | mg/L |          | 08/31/23 02:52  | 1       |
| Vanadium                       | ND            |            | 5.0        | 5.0      | 1.5    | ug/L |          | 08/31/23 02:52  | 1       |
| Zinc                           | 24.6          |            | 4.0        | 5.0      | 1.5    | ug/L |          | 08/31/23 02:52  | 1       |
|                                |               |            |            |          |        |      |          |                 |         |
| Method: SW846 6020A - Metals   | s (ICP/IVIS)  | Qualifian  | DI.        | 1.00     |        | 11   |          | A sea la sea al |         |
|                                |               | Quaimer    | RL .       |          | 0.25   |      | <u> </u> |                 |         |
| Anumony                        |               |            | 0.50       | 0.00     | 0.33   | ug/∟ |          | 00/31/23 14.49  | 1       |
| Arsenic                        | 0./           |            | 2.0        | 0.90     | 0.27   | ug/∟ |          | 00/30/23 17.20  | 1       |
|                                | ND            |            | 0.20       | 0.10     | 0.030  | ug/L |          | 00/30/23 17.20  |         |
| Cadmium                        | ND            |            | 0.20       | 0.24     | 0.071  | ug/L |          | 00/30/23 17:20  | 1       |
|                                | ND            |            | 5.0        | 1.5      | 0.44   | ug/L |          | 08/30/23 17:28  | 1       |
| Inallium                       | ND            |            | 0.20       | 0.063    | 0.019  | ug/L |          | 08/30/23 17:28  | 1       |
| Method: SW846 7470A - Mercu    | rv(CVAA)      |            |            |          |        |      |          |                 |         |
| Analyte                        | Result        | Qualifier  | RI         | 100      |        | Unit | р        | Analyzed        | Dil Fac |
| Mercury                        |               |            | 0.20       | 0.14     | 0.043  |      |          | 09/06/23 14:41  | 1       |
|                                |               |            | 0.20       | 0.11     | 0.010  | ug/L |          | 00/00/20 1111   |         |
| Method: SM 2340B - Total Hard  | dness (as CaC | CO3) by ca | alculation |          |        |      |          |                 |         |
| Analyte                        | Result        | Qualifier  | RL         | LOQ      | LOD    | Unit | D        | Analyzed        | Dil Fac |
| Calcium and Magnesium Hardness | 1.1           |            | 0.50       | 0.33     | 0.10   | mg/L |          | 09/01/23 13:30  | 1       |
|                                |               |            |            |          |        | -    |          |                 |         |
| General Chemistry              |               |            |            |          |        |      |          |                 |         |
| Analyte                        | Result        | Qualifier  | RL         | LOQ      | LOD    | Unit | D        | Analyzed        | Dil Fac |
| Chloride (EPA 300.0)           | 24.9          |            | 0.50       | 0.94     | 0.28   | mg/L |          | 08/26/23 23:15  | 1       |
| Sulfate (EPA 300.0)            | 4.7           |            | 2.0        | 1.2      | 0.35   | mg/L |          | 08/26/23 23:15  | 1       |
| Alkalinity, Total (EPA 310.2)  | 370           |            | 50.0       | 66.7     | 20.0   | mg/L |          | 08/30/23 11:57  | 5       |
| Total Cyanide (EPA 335.4)      | ND            |            | 0.020      | 0.017    | 0.0041 | mg/L |          | 08/31/23 01:46  | 1       |

**Eurofins Buffalo** 

Client: Waste Management Project/Site: Hagen Farms - Groundwater

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## Lab Sample ID: 480-212170-5 Matrix: Potable Water

Date Collected: 08/23/23 12:20 Date Received: 08/25/23 10:30

**Client Sample ID: PW09** 

| General Chemistry (Continued)       |            |           |       |       |        |           |   |                |         |
|-------------------------------------|------------|-----------|-------|-------|--------|-----------|---|----------------|---------|
| Analyte                             | Result     | Qualifier | RL    | LOQ   | LOD    | Unit      | D | Analyzed       | Dil Fac |
| Ammonia (as N) (EPA 350.1)          | ND         |           | 0.20  | 0.33  | 0.10   | mg/L      |   | 08/29/23 17:24 | 1       |
| Total Kjeldahl Nitrogen (EPA 351.2) | ND         |           | 0.20  | 0.62  | 0.19   | mg/L as N |   | 08/31/23 09:02 | 1       |
| Nitrate Nitrite as N (EPA 353.2)    | ND         |           | 0.050 | 0.067 | 0.020  | mg/L as N |   | 08/28/23 12:27 | 1       |
| Chemical Oxygen Demand (EPA 410.4)  | 5.7        | J         | 10.0  | 16.7  | 5.0    | mg/L      |   | 08/30/23 10:26 | 1       |
| Total Dissolved Solids (SM 2540C)   | <b>628</b> |           | 10.0  | 13.3  | 4.0    | mg/L      |   | 08/29/23 10:26 | 1       |
| Total Dissolved Solids (SM 2540C)   | 577        | Н         | 10.0  | 13.3  | 4.0    | mg/L      |   | 09/11/23 15:18 | 1       |
| Total Suspended Solids (SM 2540D)   | ND         |           | 4.0   | 13.4  | 4.0    | mg/L      |   | 08/30/23 10:06 | 1       |
| Phosphorus, Total (SM 4500 P E)     | 0.14       |           | 0.20  | 0.016 | 0.0050 | mg/L as P |   | 08/28/23 11:51 | 1       |

| Method: EPA Field Sampling - Field Sampling |        |           |    |     |     |            |   |                |         |
|---|--------|-----------|----|-----|-----|------------|---|----------------|---------|
| Analyte                                     | Result | Qualifier | RL | LOQ | LOD | Unit       | D | Analyzed       | Dil Fac |
| Color                                       | No     |           |    |     |     | NONE       |   | 08/23/23 13:20 | 1       |
| Dissolved Oxygen, Field                     | 1.8    |           |    |     |     | mg/L       |   | 08/23/23 13:20 | 1       |
| Field EH/ORP                                | -15.1  |           |    |     |     | millivolts |   | 08/23/23 13:20 | 1       |
| Odor  | No     |           |    |     |     | NONE       |   | 08/23/23 13:20 | 1       |
| pH, Field                                   | 7.45   |           |    |     |     | SU         |   | 08/23/23 13:20 | 1       |
| Specific Conductance, Field                 | 732    |           |    |     |     | umhos/cm   |   | 08/23/23 13:20 | 1       |
| Temperature, Field (C)                      | 23.1   |           |    |     |     | Degrees C  |   | 08/23/23 13:20 | 1       |
| Turbidity, Field                            | No     |           |    |     |     | NONE       |   | 08/23/23 13:20 | 1       |