

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

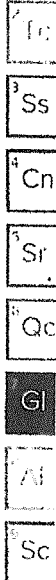
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDA | Minimum Detectable Activity. |
| MDL | Method Detection Limit |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RER | Replicate Error Ratio. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| (T) | Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation. |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

| | |
|----|---|
| E | The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL). |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |
| T8 | Sample(s) received past/too close to holding time expiration. |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |



FINISHED WATER

SAMPLE RESULTS - 01

ONE LAB. NATIONWIDE.

Collected date/time: 02/19/20 12:45

L1191158

Microbiology by Method 9215B

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|----------------------|--------|-----------|----------|----------------------|-----------|
| Standard Plate Count | 1.0 | DE | 1 | 02/20/2020 13:52 | WG1434166 |

Microbiology by Method 9223 B-1997

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|-----------------|--------|-----------|----------|----------------------|-----------|
| E.Coli | <1 | | 1 | 02/20/2020 14:00 | WG1431385 |
| Coliform, Total | <1 | | 1 | 02/20/2020 14:00 | WG1431385 |

Calculated Results

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|-------------------|--------|-----------|------|----------|----------------------|-----------|
| Hardness, calcium | 109 | | 2.50 | 1 | 02/24/2020 13:09 | WG1432418 |

Gravimetric Analysis by Method 2540 C-1997

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|------|----------|----------------------|-----------|
| Dissolved Solids | 204 | | 10.0 | 1 | 02/23/2020 09:16 | WG1431287 |

Wet Chemistry by Method 130.1

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|----------------------------------|--------|-----------|------|----------|----------------------|-----------|
| Hardness (colorimetric) as CaCO3 | 138 | | 30.0 | 1 | 03/03/2020 11:19 | WG1436652 |

Wet Chemistry by Method 2120B

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|----------|----------------------|-----------|
| Color | 1.00 | | 1.00 | 1 | 02/20/2020 12:41 | WG1431184 |

Sample Narrative:

L1191158 01 WG1431184: 7 83

Wet Chemistry by Method 2130 B-2001

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|-----------|--------|-----------|-------|----------|----------------------|-----------|
| Turbidity | ND | | 0.300 | 1 | 02/20/2020 16:40 | WG1431304 |

Wet Chemistry by Method 2150 B-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|----------|----------------------|-----------|
| Odor | 1.00 | | 1.00 | 1 | 02/20/2020 12:36 | WG1431176 |

Wet Chemistry by Method 2320 B-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------|--------|-----------|------|----------|----------------------|-----------|
| Alkalinity | 110 | | 20.0 | 1 | 02/21/2020 11:05 | WG1431379 |

Sample Narrative:

L1191158-01 WG1431379: Endpoint pH 4.5 HEADSPACE

- 1 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

FINISHED WATER

SAMPLE RESULTS - 01

ONE LAB. NATIONWIDE

Collected date/time: 02/19/20 12:45

L1191158

Wet Chemistry by Method 300.0

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|----------------|--------|-----------|-------|----------|----------------------|-----------|
| Bromide | ND | | 1.00 | 1 | 02/20/2020 21:12 | WG1431148 |
| Chloride | 13.7 | | 1.00 | 1 | 02/20/2020 21:12 | WG1431148 |
| Fluoride | ND | | 0.100 | 1 | 02/20/2020 21:12 | WG1431148 |
| Nitrate as (N) | 2.94 | | 0.100 | 1 | 02/20/2020 21:12 | WG1431148 |
| Nitrite as (N) | ND | | 0.100 | 1 | 02/20/2020 21:12 | WG1431148 |
| Sulfate | 5.70 | | 5.00 | 1 | 02/20/2020 21:12 | WG1431148 |

Wet Chemistry by Method 335.4

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|-----------|
| Cyanide | ND | | 0.00500 | 1 | 03/03/2020 14:23 | WG1436982 |

Wet Chemistry by Method 4500H + B-2000

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|-----|----------|----------------------|-----------|
| pH | 8.00 | | | 1 | 02/21/2020 15:00 | WG1431308 |

Sample Narrative:

L1191158-01 WG1431308: 8 at 19C

Wet Chemistry by Method 4500P E-1993

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|-----------------|--------|-----------|--------|----------|----------------------|-----------|
| Phosphate,Ortho | ND | | 0.0250 | 1 | 02/20/2020 15:59 | WG1431303 |

Wet Chemistry by Method 5540 C-2000

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|--------|----------|----------------------|-----------|
| MBAS | ND | | 0.0250 | .25 | 02/20/2020 16:23 | WG1431180 |

Wet Chemistry by Method 9066

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|----------------------|--------|-----------|--------|----------|----------------------|-----------|
| Total Phenol by 4AAP | ND | | 0.0400 | 1 | 02/27/2020 11:50 | WG1434074 |

Mercury by Method 245.1

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|----------|----------|----------------------|-----------|
| Mercury | ND | | 0.000200 | 1 | 02/24/2020 11:16 | WG1432779 |

Metals (ICP) by Method 200.7

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|-----------|--------|-----------|---------|----------|----------------------|-----------|
| Aluminum | ND | | 0.200 | 1 | 02/24/2020 13:09 | WG1432418 |
| Barium | 0.0282 | | 0.00500 | 1 | 02/24/2020 13:09 | WG1432418 |
| Boron | ND | | 0.200 | 1 | 02/24/2020 13:09 | WG1432418 |
| Calcium | 43.7 | | 1.00 | 1 | 02/24/2020 13:09 | WG1432418 |
| Chromium | ND | | 0.0100 | 1 | 02/24/2020 13:09 | WG1432418 |
| Copper | ND | | 0.0100 | 1 | 02/24/2020 13:09 | WG1432418 |
| Iron | ND | | 0.100 | 1 | 02/24/2020 13:09 | WG1432418 |
| Magnesium | 7.33 | | 1.00 | 1 | 02/24/2020 13:09 | WG1432418 |
| Manganese | ND | | 0.0100 | 1 | 02/24/2020 13:09 | WG1432418 |
| Nickel | ND | | 0.0100 | 1 | 02/24/2020 13:09 | WG1432418 |



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SAMPLE RESULTS - 03

ONE LAB. NATIONWIDE



Collected date/time: 02/19/20 13:15

L1191158

Radiochemistry by Method 900

| Analyte | Result | Qualifier | Uncertainty | MDA | Analysis Date | Batch |
|-------------|----------------|-----------|---------------|---------------|---------------------------------|------------------|
| GROSS ALPHA | pCi/l -1.04 | | + / - 1.22 | pCi/l 1.28 | date / time 03/18/2020 10:08 | <u>WG1443391</u> |

1
Ic

Radiochemistry by Method 904

| Analyte | Result | Qualifier | Uncertainty | MDA | Analysis Date | Batch |
|-------------|---------------|-----------|----------------|----------------|---------------------------------|------------------|
| RADIUM-228 | pCi/l 1.14 | | + / - 0.483 | pCi/l 0.492 | date / time 03/13/2020 14:10 | <u>WG1438507</u> |
| (1) Borium | 106 | | | 62.0-143 | 03/13/2020 14:10 | <u>WG1438507</u> |
| (1) Yttrium | 99.9 | | | 79.0-136 | 03/13/2020 14:10 | <u>WG1438507</u> |

3
Ss

4
Cn

5
St

Radiochemistry by Method D5174

| Analyte | Result | Qualifier | Uncertainty | RDL | Analysis Date | Batch |
|---------|------------|-----------|-------------|-----------------|---------------------------------|------------------|
| Urarium | mg/l ND | | + / - | mg/l 0.00100 | date / time 03/13/2020 13:26 | <u>WG1435720</u> |

6
Qc

7
Gl

Radiochemistry by Method SM 7500 Ra B

| Analyte | Result | Qualifier | Uncertainty | MDA | Analysis Date | Batch |
|------------|-----------------|-----------|----------------|----------------|---------------------------------|------------------|
| RADIUM-226 | pCi/l 0.0959 | | + / - 0.112 | pCi/l 0.174 | date / time 03/09/2020 15:40 | <u>WG1436689</u> |
| (1) Borium | 103 | | | 63.0-143 | 03/09/2020 15:40 | <u>WG1436689</u> |

8
Al

9
Sc

FINISHED WATER

SAMPLE RESULTS - 01

ONE LAB. NATIONWIDE



Collected date/time: 02/19/20 12:45

L1191158

Metals (ICP) by Method 200.7

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|-----------|--------|-----------|---------|----------|------------------|------------------|
| | mg/l | | mg/l | | date / time | |
| Potassium | 1.33 | | 1.00 | 1 | 02/24/2020 13:09 | <u>WG1432418</u> |
| Silver | ND | | 0.00500 | 1 | 02/24/2020 13:09 | <u>WG1432418</u> |
| Sodium | 6.89 | | 1.00 | 1 | 02/24/2020 13:09 | <u>WG1432418</u> |
| Zinc | ND | | 0.0500 | 1 | 02/24/2020 13:09 | <u>WG1432418</u> |

Metals (ICPMS) by Method 200.8

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|-----------|--------|-----------|---------|----------|------------------|------------------|
| | mg/l | | mg/l | | date / time | |
| Antimony | ND | | 0.00100 | 1 | 02/21/2020 16:36 | <u>WG1430928</u> |
| Arsenic | ND | | 0.00100 | 1 | 02/21/2020 16:36 | <u>WG1430928</u> |
| Beryllium | ND | | 0.00100 | 1 | 02/21/2020 16:36 | <u>WG1430928</u> |
| Cadmium | ND | | 0.00100 | 1 | 02/21/2020 16:36 | <u>WG1430928</u> |
| Lead | ND | | 0.00100 | 1 | 02/21/2020 16:36 | <u>WG1430928</u> |
| Scelenium | ND | | 0.00100 | 1 | 02/21/2020 16:36 | <u>WG1430928</u> |
| Thallium | ND | | 0.00100 | 1 | 02/21/2020 16:36 | <u>WG1430928</u> |

EDB / DBCP by Method 504.1

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|-----------------------------|--------|-----------|-----------|----------|------------------|------------------|
| | mg/l | | mg/l | | date / time | |
| Ethylene Dibromide | ND | | 0.0000101 | 1.01 | 02/26/2020 22:39 | <u>WG1434062</u> |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.0000202 | 1.01 | 02/26/2020 22:39 | <u>WG1434062</u> |

