

**Daily Analysis Runlog For Sequence/QC Batch ID # LB89809**

Review By

Review On

SubDirectory

LB89809

Test :

Anions

| STD. NAME     |  | STD REF.#                                               |  |  |  |  |
|---------------|--|---------------------------------------------------------|--|--|--|--|
| ICAL Standard |  | WP57402,WP57403,WP57404,WP57405,WP57406,WP57407,WP57408 |  |  |  |  |
| ICV Standard  |  | WP57409                                                 |  |  |  |  |
| CCV Standard  |  | WP57553                                                 |  |  |  |  |
| ICSA Standard |  | N/A                                                     |  |  |  |  |
| CRI Standard  |  | N/A                                                     |  |  |  |  |
| LCS Standard  |  | WP57554                                                 |  |  |  |  |
| Chk Standard  |  | WP57411,WP57005                                         |  |  |  |  |

| Sr# | SampleId    | ClientID   | QcType | Date           | Comment                 | Status   |
|-----|-------------|------------|--------|----------------|-------------------------|----------|
| 1   | STD1        | STD1       | CAL1   | 08/22/17 16:40 |                         | OK       |
| 2   | STD2        | STD2       | CAL2   | 08/22/17 17:10 |                         | OK       |
| 3   | STD3        | STD3       | CAL3   | 08/22/17 17:40 |                         | OK       |
| 4   | STD4        | STD4       | CAL4   | 08/22/17 18:10 |                         | OK       |
| 5   | STD5        | STD5       | CAL5   | 08/22/17 18:40 |                         | OK       |
| 6   | STD6        | STD6       | CAL6   | 08/22/17 19:10 |                         | OK       |
| 7   | STD7        | STD7       | CAL7   | 08/22/17 19:39 |                         | OK       |
| 8   | ICV1        | ICV1       | ICV    | 08/22/17 21:09 |                         | OK       |
| 9   | ICB1        | ICB1       | ICB    | 08/22/17 21:39 |                         | OK       |
| 10  | CCV1        | CCV1       | CCV    | 08/31/17 09:12 |                         | OK       |
| 11  | CCB1        | CCB1       | CCB    | 08/31/17 09:46 |                         | OK       |
| 12  | LB89809BLW  | LB89809BLW | MB     | 08/31/17 10:38 |                         | OK       |
| 13  | LB89809BSW  | LB89809BSW | LCS    | 08/31/17 11:07 |                         | OK       |
| 14  | I5057-01    | MWHR2-6    | SAM    | 08/31/17 11:35 | Chloride & Sulfate High | Dilution |
| 15  | I5057-04    | MWHR2-10   | SAM    | 08/31/17 12:04 | Chloride & Sulfate High | Dilution |
| 16  | I5057-05    | MWHR3-8    | SAM    | 08/31/17 12:33 | Chloride & Sulfate High | Dilution |
| 17  | I5057-01DUP | MWHR2-6DUP | DUP    | 08/31/17 13:02 |                         | OK       |
| 18  | I5057-02MS  | MWHR2-6MS  | MS     | 08/31/17 13:31 |                         | OK       |
| 19  | I5057-03MSD | MWHR2-6MSD | MSD    | 08/31/17 14:00 |                         | OK       |
| 20  | CCV2        | CCV2       | CCV    | 08/31/17 14:29 |                         | OK       |
| 21  | CCB2        | CCB2       | CCB    | 08/31/17 15:05 |                         | OK       |

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**Daily Analysis Runlog For Sequence/QC Batch ID # LB89809**

|               |             |                                                         |           |                 |                                               |          |
|---------------|-------------|---------------------------------------------------------|-----------|-----------------|-----------------------------------------------|----------|
| Review By     |             |                                                         | Review On |                 |                                               |          |
| SubDirectory  |             | LB89809                                                 |           | Test :   Anions |                                               |          |
| STD. NAME     |             | STD REF.#                                               |           |                 |                                               |          |
| ICAL Standard |             | WP57402,WP57403,WP57404,WP57405,WP57406,WP57407,WP57408 |           |                 |                                               |          |
| ICV Standard  |             | WP57409                                                 |           |                 |                                               |          |
| CCV Standard  |             | WP57553                                                 |           |                 |                                               |          |
| ICSA Standard |             | N/A                                                     |           |                 |                                               |          |
| CRI Standard  |             | N/A                                                     |           |                 |                                               |          |
| LCS Standard  |             | WP57554                                                 |           |                 |                                               |          |
| Chk Standard  |             | WP57411,WP57005                                         |           |                 |                                               |          |
| 22            | I5057-01DL  | MWHR2-6DL                                               | SAM       | 08/31/17 15:34  | 5X Dilution for Chloride & Sulfate            | Confirms |
| 23            | I5057-04DL  | MWHR2-10DL                                              | SAM       | 08/31/17 16:03  | 5X Dilution but still Chloride & Sulfate High | Dilution |
| 24            | I5057-04DL2 | MWHR2-10DL2                                             | SAM       | 08/31/17 16:32  | 20X Dilution for Chloride & Sulfate           | Confirms |
| 25            | I5057-05DL  | MWHR3-8DL                                               | SAM       | 08/31/17 17:01  | 5X Dilution but still Chloride & Sulfate High | Dilution |
| 26            | I5057-05DL2 | MWHR3-8DL2                                              | SAM       | 08/31/17 17:30  | 100X Diltuion for Chloride & Sulfate          | Confirms |
| 27            | CCV3        | CCV3                                                    | CCV       | 08/31/17 17:58  |                                               | OK       |
| 28            | CCB3        | CCB3                                                    | CCB       | 08/31/17 18:27  |                                               | OK       |



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## Report of Analysis

|                   |          |                 |                       |
|-------------------|----------|-----------------|-----------------------|
| Client:           |          | Date Collected: | 8/30/2017 12:00:00 AM |
| Project:          | LB89809  | Date Received:  | 8/31/2017 12:00:00 AM |
| Client Sample ID: | MWHR2-6  | SDG No.:        | LB89809               |
| Lab Sample ID:    | I5057-01 | Matrix:         | WATER                 |
| Level (low/med):  | low      | % Solid:        | 0                     |

| Cas | Parameter         | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------------|-------|------|----|-------|-----|------------|-------|-----------|------------|----------|
|     | Bromide           | 3.8   |      | 1  | 0.066 |     | 0.5        | mg/L  |           | 08/31/2017 | 300.0    |
|     | Chloride          | 13.5  | OR   | 1  | 0.075 |     | 0.15       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Fluoride          | 0     | U    | 1  | 0.043 |     | 0.1        | mg/L  |           | 08/31/2017 | 300.0    |
|     | Nitrate           | 0     | U    | 1  | 0.027 |     | 0.13       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Nitrite           | 0     | U    | 1  | 0.022 |     | 0.15       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | U    | 1  | 0.01  |     | 0.25       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Sulfate           | 161   | OR   | 1  | 0.13  |     | 0.75       | mg/L  |           | 08/31/2017 | 300.0    |



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## Report of Analysis

|                   |            |                 |                       |
|-------------------|------------|-----------------|-----------------------|
| Client:           |            | Date Collected: | 8/30/2017 12:00:00 AM |
| Project:          | LB89809    | Date Received:  | 8/31/2017 12:00:00 AM |
| Client Sample ID: | MWHR2-6DL  | SDG No.:        | LB89809               |
| Lab Sample ID:    | I5057-01DL | Matrix:         | WATER                 |
| Level (low/med):  | low        | % Solid:        | 0                     |

| Cas | Parameter         | Conc. | Qua. | DF | MDL  | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------------|-------|------|----|------|-----|------------|-------|-----------|------------|----------|
|     | Bromide           | 0     | UD   | 5  | 0.33 |     | 2.5        | mg/L  |           | 08/31/2017 | 300.0    |
|     | Chloride          | 12.5  | D    | 5  | 0.38 |     | 0.75       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Fluoride          | 0     | UD   | 5  | 0.22 |     | 0.5        | mg/L  |           | 08/31/2017 | 300.0    |
|     | Nitrate           | 0     | UD   | 5  | 0.14 |     | 0.63       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Nitrite           | 0     | UD   | 5  | 0.11 |     | 0.75       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | UD   | 5  | 0.05 |     | 1.3        | mg/L  |           | 08/31/2017 | 300.0    |
|     | Sulfate           | 131   | D    | 5  | 0.66 |     | 3.8        | mg/L  |           | 08/31/2017 | 300.0    |



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## Report of Analysis

|                   |          |                 |                       |
|-------------------|----------|-----------------|-----------------------|
| Client:           |          | Date Collected: | 8/30/2017 12:00:00 AM |
| Project:          | LB89809  | Date Received:  | 8/31/2017 12:00:00 AM |
| Client Sample ID: | MWHR2-10 | SDG No.:        | LB89809               |
| Lab Sample ID:    | I5057-04 | Matrix:         | WATER                 |
| Level (low/med):  | low      | % Solid:        | 0                     |

| Cas | Parameter         | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------------|-------|------|----|-------|-----|------------|-------|-----------|------------|----------|
|     | Bromide           | 2.9   |      | 1  | 0.066 |     | 0.5        | mg/L  |           | 08/31/2017 | 300.0    |
|     | Chloride          | 107   | OR   | 1  | 0.075 |     | 0.15       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Fluoride          | 0     | U    | 1  | 0.043 |     | 0.1        | mg/L  |           | 08/31/2017 | 300.0    |
|     | Nitrate           | 0     | U    | 1  | 0.027 |     | 0.13       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Nitrite           | 0     | U    | 1  | 0.022 |     | 0.15       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | U    | 1  | 0.01  |     | 0.25       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Sulfate           | 107   | OR   | 1  | 0.13  |     | 0.75       | mg/L  |           | 08/31/2017 | 300.0    |



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## Report of Analysis

|                   |            |                 |                       |
|-------------------|------------|-----------------|-----------------------|
| Client:           |            | Date Collected: | 8/30/2017 12:00:00 AM |
| Project:          | LB89809    | Date Received:  | 8/31/2017 12:00:00 AM |
| Client Sample ID: | MWHR2-10DL | SDG No.:        | LB89809               |
| Lab Sample ID:    | I5057-04DL | Matrix:         | WATER                 |
| Level (low/med):  | low        | % Solid:        | 0                     |

| Cas | Parameter         | Conc. | Qua. | DF | MDL  | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------------|-------|------|----|------|-----|------------|-------|-----------|------------|----------|
|     | Bromide           | 0     | UD   | 5  | 0.33 |     | 2.5        | mg/L  |           | 08/31/2017 | 300.0    |
|     | Chloride          | 86.2  | OR   | 5  | 0.38 |     | 0.75       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Fluoride          | 0     | UD   | 5  | 0.22 |     | 0.5        | mg/L  |           | 08/31/2017 | 300.0    |
|     | Nitrate           | 0     | UD   | 5  | 0.14 |     | 0.63       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Nitrite           | 0     | UD   | 5  | 0.11 |     | 0.75       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | UD   | 5  | 0.05 |     | 1.3        | mg/L  |           | 08/31/2017 | 300.0    |
|     | Sulfate           | 90.1  | D    | 5  | 0.66 |     | 3.8        | mg/L  |           | 08/31/2017 | 300.0    |



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## Report of Analysis

|                   |             |                 |                       |
|-------------------|-------------|-----------------|-----------------------|
| Client:           |             | Date Collected: | 8/30/2017 12:00:00 AM |
| Project:          | LB89809     | Date Received:  | 8/31/2017 12:00:00 AM |
| Client Sample ID: | MWHR2-10DL2 | SDG No.:        | LB89809               |
| Lab Sample ID:    | I5057-04DL2 | Matrix:         | WATER                 |
| Level (low/med):  | low         | % Solid:        | 0                     |

| Cas | Parameter         | Conc. | Qua. | DF | MDL  | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------------|-------|------|----|------|-----|------------|-------|-----------|------------|----------|
|     | Bromide           | 0     | UD   | 20 | 1.3  |     | 10         | mg/L  |           | 08/31/2017 | 300.0    |
|     | Chloride          | 79.3  | D    | 20 | 1.5  |     | 3          | mg/L  |           | 08/31/2017 | 300.0    |
|     | Fluoride          | 0     | UD   | 20 | 0.86 |     | 2          | mg/L  |           | 08/31/2017 | 300.0    |
|     | Nitrate           | 0     | UD   | 20 | 0.54 |     | 2.5        | mg/L  |           | 08/31/2017 | 300.0    |
|     | Nitrite           | 0     | UD   | 20 | 0.44 |     | 3          | mg/L  |           | 08/31/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | UD   | 20 | 0.2  |     | 5          | mg/L  |           | 08/31/2017 | 300.0    |
|     | Sulfate           | 95.1  | D    | 20 | 2.6  |     | 15         | mg/L  |           | 08/31/2017 | 300.0    |



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## Report of Analysis

|                   |          |                 |                       |
|-------------------|----------|-----------------|-----------------------|
| Client:           |          | Date Collected: | 8/30/2017 12:00:00 AM |
| Project:          | LB89809  | Date Received:  | 8/31/2017 12:00:00 AM |
| Client Sample ID: | MWHR3-8  | SDG No.:        | LB89809               |
| Lab Sample ID:    | I5057-05 | Matrix:         | WATER                 |
| Level (low/med):  | low      | % Solid:        | 0                     |

| Cas | Parameter         | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------------|-------|------|----|-------|-----|------------|-------|-----------|------------|----------|
|     | Bromide           | 3.1   |      | 1  | 0.066 |     | 0.5        | mg/L  |           | 08/31/2017 | 300.0    |
|     | Chloride          | 723   | OR   | 1  | 0.075 |     | 0.15       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Fluoride          | 0     | U    | 1  | 0.043 |     | 0.1        | mg/L  |           | 08/31/2017 | 300.0    |
|     | Nitrate           | 2.7   |      | 1  | 0.027 |     | 0.13       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Nitrite           | 0     | U    | 1  | 0.022 |     | 0.15       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | U    | 1  | 0.01  |     | 0.25       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Sulfate           | 118   | OR   | 1  | 0.13  |     | 0.75       | mg/L  |           | 08/31/2017 | 300.0    |



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## Report of Analysis

|                   |            |                 |                       |
|-------------------|------------|-----------------|-----------------------|
| Client:           |            | Date Collected: | 8/30/2017 12:00:00 AM |
| Project:          | LB89809    | Date Received:  | 8/31/2017 12:00:00 AM |
| Client Sample ID: | MWHR3-8DL  | SDG No.:        | LB89809               |
| Lab Sample ID:    | I5057-05DL | Matrix:         | WATER                 |
| Level (low/med):  | low        | % Solid:        | 0                     |

| Cas | Parameter         | Conc. | Qua. | DF | MDL  | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------------|-------|------|----|------|-----|------------|-------|-----------|------------|----------|
|     | Bromide           | 0     | UD   | 5  | 0.33 |     | 2.5        | mg/L  |           | 08/31/2017 | 300.0    |
|     | Chloride          | 653   | OR   | 5  | 0.38 |     | 0.75       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Fluoride          | 0     | UD   | 5  | 0.22 |     | 0.5        | mg/L  |           | 08/31/2017 | 300.0    |
|     | Nitrate           | 3     | D    | 5  | 0.14 |     | 0.63       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Nitrite           | 0     | UD   | 5  | 0.11 |     | 0.75       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | UD   | 5  | 0.05 |     | 1.3        | mg/L  |           | 08/31/2017 | 300.0    |
|     | Sulfate           | 101   | D    | 5  | 0.66 |     | 3.8        | mg/L  |           | 08/31/2017 | 300.0    |



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## Report of Analysis

|                   |             |                 |                       |
|-------------------|-------------|-----------------|-----------------------|
| Client:           |             | Date Collected: | 8/30/2017 12:00:00 AM |
| Project:          | LB89809     | Date Received:  | 8/31/2017 12:00:00 AM |
| Client Sample ID: | MWHR3-8DL2  | SDG No.:        | LB89809               |
| Lab Sample ID:    | I5057-05DL2 | Matrix:         | WATER                 |
| Level (low/med):  | low         | % Solid:        | 0                     |

| Cas | Parameter         | Conc. | Qua. | DF  | MDL  | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------------|-------|------|-----|------|-----|------------|-------|-----------|------------|----------|
|     | Bromide           | 0     | UD   | 100 | 6.6  |     | 50         | mg/L  |           | 08/31/2017 | 300.0    |
|     | Chloride          | 482   | D    | 100 | 7.5  |     | 15         | mg/L  |           | 08/31/2017 | 300.0    |
|     | Fluoride          | 0     | UD   | 100 | 4.3  |     | 10         | mg/L  |           | 08/31/2017 | 300.0    |
|     | Nitrate           | 0     | UD   | 100 | 2.7  |     | 12.5       | mg/L  |           | 08/31/2017 | 300.0    |
|     | Nitrite           | 0     | UD   | 100 | 2.2  |     | 15         | mg/L  |           | 08/31/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | UD   | 100 | 1    |     | 25         | mg/L  |           | 08/31/2017 | 300.0    |
|     | Sulfate           | 150   | D    | 100 | 13.2 |     | 75         | mg/L  |           | 08/31/2017 | 300.0    |



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## Report of Analysis

|                   |             |                 |                       |
|-------------------|-------------|-----------------|-----------------------|
| Client:           |             | Date Collected: | 8/30/2017 12:00:00 AM |
| Project:          | LB89809     | Date Received:  | 8/31/2017 12:00:00 AM |
| Client Sample ID: | MWHR3-8DL2  | SDG No.:        | LB89809               |
| Lab Sample ID:    | I5057-05DL2 | Matrix:         | WATER                 |
| Level (low/med):  | low         | % Solid:        | 0                     |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|-----|-----------|-------|------|----|-----|-----|------------|-------|-----------|-----------|----------|
|-----|-----------|-------|------|----|-----|-----|------------|-------|-----------|-----------|----------|

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N = Spiked sample recovery not within control limits



## GENCHEM

- 2a -

### INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB89809

SDG No.: LB89809

Contract: \_\_\_\_\_ Lab Code: CHEM

Case No.: LB89809

SAS No.: LB89809

Initial Calibration Source: \_\_\_\_\_

Continuing Calibration Source: \_\_\_\_\_

| Sample ID | Analyte           | Result<br>mg/L | True Value | %<br>Recovery | %<br>RSD | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|-------------------|----------------|------------|---------------|----------|---------------------------|---|------------------|------------------|---------------|
| ICV1      | Bromide           | 9.8            | 10         | 98            | 0        | 90 - 110                  |   | 08/22/2017       | 21:09            | LB89809       |
|           | Chloride          | 3              | 3          | 100           | 0        | 90 - 110                  |   | 08/22/2017       | 21:09            | LB89809       |
|           | Fluoride          | 2              | 2          | 100           | 0        | 90 - 110                  |   | 08/22/2017       | 21:09            | LB89809       |
|           | Phosphorus, Ortho | 4.1            | 5          | 82            | 0        | 90 - 110                  |   | 08/22/2017       | 21:09            | LB89809       |
|           | Nitrite           | 3              | 3          | 100           | 0        | 90 - 110                  |   | 08/22/2017       | 21:09            | LB89809       |
|           | Nitrate           | 2.4            | 2.5        | 96            | 0        | 90 - 110                  |   | 08/22/2017       | 21:09            | LB89809       |
|           | Sulfate           | 14.7           | 15         | 98            | 0        | 90 - 110                  |   | 08/22/2017       | 21:09            | LB89809       |





**GENCHEM**

- 3a -

### INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** LB89809

SDG No.: LB89809

Contract: Lab Code: CHEM

**Case No.:** LB89809

**SAS No.:** LB89809

| Sample ID | Analyte           | Result<br>mg/L | Acceptance<br>Limit | Conc<br>Qual | LOD | CRQL | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|-------------------|----------------|---------------------|--------------|-----|------|---|------------------|------------------|---------------|
| ICB1      | Bromide           | 0.066          | +/-0.5              | U            |     | 0.5  |   | 08/22/2017       | 21:39            | LB89809       |
|           | Chloride          | 0.075          | +/-0.15             | U            |     | 0.15 |   | 08/22/2017       | 21:39            | LB89809       |
|           | Fluoride          | 0.043          | +/-0.1              | U            |     | 0.1  |   | 08/22/2017       | 21:39            | LB89809       |
|           | Phosphorus, Ortho | 0.01           | +/-0.25             | U            |     | 0.25 |   | 08/22/2017       | 21:39            | LB89809       |
|           | Nitrite           | 0.022          | +/-0.15             | U            |     | 0.15 |   | 08/22/2017       | 21:39            | LB89809       |
|           | Nitrate           | 0.027          | +/-0.13             | U            |     | 0.13 |   | 08/22/2017       | 21:39            | LB89809       |
|           | Sulfate           | 0.13           | +/-0.75             | U            |     | 0.75 |   | 08/22/2017       | 21:39            | LB89809       |



**GENCHEM**

- 3a -

### INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** LB89809

SDG No.: LB89809

**Contract:**

**Lab Code:** CHEM

**Case No.:** LB89809

**SAS No.:** LB89809

| Sample ID | Analyte           | Result<br>mg/L | Acceptance<br>Limit | Conc<br>Qual | LOD | CRQL | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|-------------------|----------------|---------------------|--------------|-----|------|---|------------------|------------------|---------------|
| CCB1      | Bromide           | 0.066          | +/-0.5              | U            |     | 0.5  |   | 08/31/2017       | 09:46            | LB89809       |
|           | Chloride          | 0.075          | +/-0.15             | U            |     | 0.15 |   | 08/31/2017       | 09:46            | LB89809       |
|           | Fluoride          | 0.043          | +/-0.1              | U            |     | 0.1  |   | 08/31/2017       | 09:46            | LB89809       |
|           | Phosphorus, Ortho | 0.01           | +/-0.25             | U            |     | 0.25 |   | 08/31/2017       | 09:46            | LB89809       |
|           | Nitrite           | 0.022          | +/-0.15             | U            |     | 0.15 |   | 08/31/2017       | 09:46            | LB89809       |
|           | Nitrate           | 0.027          | +/-0.13             | U            |     | 0.13 |   | 08/31/2017       | 09:46            | LB89809       |
|           | Sulfate           | 0.13           | +/-0.75             | U            |     | 0.75 |   | 08/31/2017       | 09:46            | LB89809       |
| CCB2      | Bromide           | 0.066          | +/-0.5              | U            |     | 0.5  |   | 08/31/2017       | 15:05            | LB89809       |
|           | Chloride          | 0.075          | +/-0.15             | U            |     | 0.15 |   | 08/31/2017       | 15:05            | LB89809       |
|           | Fluoride          | 0.043          | +/-0.1              | U            |     | 0.1  |   | 08/31/2017       | 15:05            | LB89809       |
|           | Phosphorus, Ortho | 0.01           | +/-0.25             | U            |     | 0.25 |   | 08/31/2017       | 15:05            | LB89809       |
|           | Nitrite           | 0.022          | +/-0.15             | U            |     | 0.15 |   | 08/31/2017       | 15:05            | LB89809       |
|           | Nitrate           | 0.027          | +/-0.13             | U            |     | 0.13 |   | 08/31/2017       | 15:05            | LB89809       |
|           | Sulfate           | 0.13           | +/-0.75             | U            |     | 0.75 |   | 08/31/2017       | 15:05            | LB89809       |
| CCB3      | Bromide           | 0.066          | +/-0.5              | U            |     | 0.5  |   | 08/31/2017       | 18:27            | LB89809       |
|           | Chloride          | 0.075          | +/-0.15             | U            |     | 0.15 |   | 08/31/2017       | 18:27            | LB89809       |
|           | Fluoride          | 0.043          | +/-0.1              | U            |     | 0.1  |   | 08/31/2017       | 18:27            | LB89809       |
|           | Phosphorus, Ortho | 0.01           | +/-0.25             | U            |     | 0.25 |   | 08/31/2017       | 18:27            | LB89809       |
|           | Nitrite           | 0.022          | +/-0.15             | U            |     | 0.15 |   | 08/31/2017       | 18:27            | LB89809       |
|           | Nitrate           | 0.027          | +/-0.13             | U            |     | 0.13 |   | 08/31/2017       | 18:27            | LB89809       |
|           | Sulfate           | 0.13           | +/-0.75             | U            |     | 0.75 |   | 08/31/2017       | 18:27            | LB89809       |



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB89809

SDG No.: LB89809

Contract: Lab Code: CHEM

Case No.: LB89809

SAS No.: LB89809

| Sample ID | Analyte | Result<br>mg/L | Acceptance<br>Limit | Conc<br>Qual | LOD | CRQL | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|---------------------|--------------|-----|------|---|------------------|------------------|---------------|
|-----------|---------|----------------|---------------------|--------------|-----|------|---|------------------|------------------|---------------|



**GENCHEM**  
**- 3b -**  
**PREPARATION BLANK SUMMARY**

**Client:** LB89809

**SDG No.:** LB89809

**Instrument:** IC-1

| Sample ID         | Analyte           | Result<br>(mg/L) | Acceptance<br>Limit | Conc<br>Qual         | LOD<br>mg/L | CRQL<br>mg/L | M                 | Analysis<br>Date | Analysis<br>Time | Run     |
|-------------------|-------------------|------------------|---------------------|----------------------|-------------|--------------|-------------------|------------------|------------------|---------|
| <b>LB89809BLW</b> |                   | <b>WATER</b>     |                     | <b>Batch Number:</b> |             |              | <b>Prep Date:</b> |                  |                  |         |
|                   | Bromide           | 0.066            | <0.5                | U                    |             | 0.5          |                   | 08/31/2017       | 10:38            | LB89809 |
|                   | Chloride          | 0.075            | <0.15               | U                    |             | 0.15         |                   | 08/31/2017       | 10:38            | LB89809 |
|                   | Fluoride          | 0.043            | <0.1                | U                    |             | 0.1          |                   | 08/31/2017       | 10:38            | LB89809 |
|                   | Phosphorus, Ortho | 0.01             | <0.25               | U                    |             | 0.25         |                   | 08/31/2017       | 10:38            | LB89809 |
|                   | Nitrite           | 0.022            | <0.15               | U                    |             | 0.15         |                   | 08/31/2017       | 10:38            | LB89809 |
|                   | Nitrate           | 0.027            | <0.13               | U                    |             | 0.13         |                   | 08/31/2017       | 10:38            | LB89809 |
|                   | Sulfate           | 0.13             | <0.75               | U                    |             | 0.75         |                   | 08/31/2017       | 10:38            | LB89809 |



GENCHEM  
- 5a -  
MATRIX SPIKE SUMMARY

client: LB89809 level: low sdg no.: LB89809  
contract: lab code: CHEM case no.: LB89809 sas no.: LB89809  
matrix: WATER sample id: I5057-02 client id: MWHR2-6MS  
Percent Solids for Sample: 0 Spiked ID: I5057-02MS Percent Solids for Spike Sample:

| Analyte           | Units | Acceptance<br>Limit %R | Spiked<br>Result | C  | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M |
|-------------------|-------|------------------------|------------------|----|------------------|---|----------------|---------------|------|---|
| Bromide           | mg/L  | 80 - 120               | 9.7              |    |                  |   | 10             | 97            |      |   |
| Chloride          | mg/L  | 80 - 120               | 16.6             | OR |                  |   | 3              | 553.3         | *    |   |
| Fluoride          | mg/L  | 80 - 120               | 2.5              |    |                  |   | 2              | 125           | *    |   |
| Phosphorus, Ortho | mg/L  | 80 - 120               | 8.4              |    |                  |   | 5              | 168           | *    |   |
| Nitrite           | mg/L  | 80 - 120               | 3                |    |                  |   | 3              | 100           |      |   |
| Nitrate           | mg/L  | 80 - 120               | 2.5              |    |                  |   | 2.5            | 100           |      |   |
| Sulfate           | mg/L  | 80 - 120               | 163              | OR |                  |   | 15             | 1086.7        | *    |   |



GENCHEM  
- 5a -  
MATRIX SPIKE DUPLICATE SUMMARY

client: LB89809

level: low

sdg no.: LB89809

contract:

lab code: CHEM

case no.: LB89809

sas no.: LB89809

matrix: WATER

sample id: I5057-03

client id: MWHR2-6MSD

Percent Solids for Sample: 0

Spiked ID: I5057-03MSD

Percent Solids for Spike Sample:

| Analyte           | Units | Acceptance<br>Limit %R | MSD<br>Result | C  | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M |
|-------------------|-------|------------------------|---------------|----|------------------|---|----------------|---------------|------|---|
| Bromide           | mg/L  | 80 - 120               | 9.4           |    |                  |   | 10             | 94            |      |   |
| Chloride          | mg/L  | 80 - 120               | 16.5          | OR |                  |   | 3              | 550           | *    |   |
| Fluoride          | mg/L  | 80 - 120               | 2.5           |    |                  |   | 2              | 125           | *    |   |
| Phosphorus, Ortho | mg/L  | 80 - 120               | 5.2           |    |                  |   | 5              | 104           |      |   |
| Nitrite           | mg/L  | 80 - 120               | 2.9           |    |                  |   | 3              | 96.7          |      |   |
| Nitrate           | mg/L  | 80 - 120               | 2.5           |    |                  |   | 2.5            | 100           |      |   |
| Sulfate           | mg/L  | 80 - 120               | 163           | OR |                  |   | 15             | 1086.7        | *    |   |

# GENCHEM

- 6 -

## DUPLICATE SAMPLE SUMMARY

**Client:** LB89809      **Level:** LOW      **SDG No.:** LB89809  
**Contract:**                           **Lab Code:** CHEM      **Case No.:** LB89809      **SAS No.:** LB89809  
**Matrix:** WATER      **Sample ID:** I5057-01      **Client ID:** MWHR2-6DUP  
**Percent Solids for Sample:** 0      **Duplicate ID** I5057-01DUP      **Percent Solids for Spike Sample:** 0

| Analyte           | Units | Acceptance Limit | Sample Result | C  | Duplicate Result | C  | RPD | Qual | M |
|-------------------|-------|------------------|---------------|----|------------------|----|-----|------|---|
| Bromide           | mg/L  | 20               | 3.8           |    | 3.9              |    | 3   |      |   |
| Chloride          | mg/L  | 20               | 13.5          | OR | 13.2             | OR | 2   |      |   |
| Fluoride          | mg/L  | 20               | 0.043         | U  | 0                | U  |     |      |   |
| Phosphorus, Ortho | mg/L  | 20               | 0.01          | U  | 0                | U  |     |      |   |
| Nitrite           | mg/L  | 20               | 0.022         | U  | 0                | U  |     |      |   |
| Nitrate           | mg/L  | 20               | 0.027         | U  | 0                | U  |     |      |   |
| Sulfate           | mg/L  | 20               | 161           | OR | 159              | OR | 1   |      |   |

# GENCHEM

- 6 -

## DUPLICATE SAMPLE SUMMARY

**Client:** LB89809      **Level:** LOW      **SDG No.:** LB89809  
**Contract:**                           **Lab Code:** CHEM      **Case No.:** LB89809      **SAS No.:** LB89809  
**Matrix:** WATER      **Sample ID:** I5057-03MS      **Client ID:** MWHR2-6MSD  
**Percent Solids for Sample:** 0      **Duplicate ID** I5057-03MSD      **Percent Solids for Spike Sample:**                     

| Analyte           | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C  | RPD | Qual | M |
|-------------------|-------|------------------|---------------|---|------------------|----|-----|------|---|
| Bromide           | mg/L  | 20               |               |   | 9.4              |    |     |      |   |
| Chloride          | mg/L  | 20               |               |   | 16.5             | OR |     |      |   |
| Fluoride          | mg/L  | 20               |               |   | 2.5              |    |     |      |   |
| Phosphorus, Ortho | mg/L  | 20               |               |   | 5.2              |    |     |      |   |
| Nitrite           | mg/L  | 20               |               |   | 2.9              |    |     |      |   |
| Nitrate           | mg/L  | 20               |               |   | 2.5              |    |     |      |   |
| Sulfate           | mg/L  | 20               |               |   | 163              | OR |     |      |   |



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB89809

SDG No.: LB89809

Contract:                     

Lab Code: CHEM

Case No.: LB89809

SAS No.: LB89809

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| Analyte           | Units | True Value | Result | C | %<br>Recovery | Acceptance<br>Limits | M |
|-------------------|-------|------------|--------|---|---------------|----------------------|---|
| LB89809BSW        |       |            |        |   |               |                      |   |
| Bromide           | mg/L  | 10         | 10.6   |   | 106           | 90 - 110             |   |
| Chloride          | mg/L  | 3          | 2.9    |   | 96.7          | 90 - 110             |   |
| Fluoride          | mg/L  | 2          | 2      |   | 100           | 90 - 110             |   |
| Phosphorus, Ortho | mg/L  | 5          | 10.2   |   | 204           | 90 - 110             |   |
| Nitrite           | mg/L  | 3          | 2.9    |   | 96.7          | 90 - 110             |   |
| Nitrate           | mg/L  | 2.5        | 2.4    |   | 96            | 90 - 110             |   |
| Sulfate           | mg/L  | 15         | 14.1   |   | 94            | 90 - 110             |   |

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