

**Daily Analysis Runlog For Sequence/QC Batch ID # LB90170**

Review By

Review On

SubDirectory

LB90170

Test :

Anions

| STD. NAME     |  | STD REF.#                                               |  |  |  |  |
|---------------|--|---------------------------------------------------------|--|--|--|--|
| ICAL Standard |  | WP57962,WP57963,WP57964,WP57965,WP57966,WP57967,WP57968 |  |  |  |  |
| ICV Standard  |  | WP57969                                                 |  |  |  |  |
| CCV Standard  |  | WP58069                                                 |  |  |  |  |
| ICSA Standard |  | N/A                                                     |  |  |  |  |
| CRI Standard  |  | N/A                                                     |  |  |  |  |
| LCS Standard  |  | WP58070                                                 |  |  |  |  |
| Chk Standard  |  | WP57970,WP57732                                         |  |  |  |  |

| Sr# | SampleID   | ClientID      | QcType | Date           | Comment                | Status   |
|-----|------------|---------------|--------|----------------|------------------------|----------|
| 1   | STD1       | STD1          | CAL1   | 09/18/17 11:14 |                        | OK       |
| 2   | STD2       | STD2          | CAL2   | 09/18/17 11:43 |                        | OK       |
| 3   | STD3       | STD3          | CAL3   | 09/18/17 12:12 |                        | OK       |
| 4   | STD4       | STD4          | CAL4   | 09/18/17 12:41 |                        | OK       |
| 5   | STD5       | STD5          | CAL5   | 09/18/17 13:10 |                        | OK       |
| 6   | STD6       | STD6          | CAL6   | 09/18/17 13:39 |                        | OK       |
| 7   | STD7       | STD7          | CAL7   | 09/18/17 14:08 |                        | OK       |
| 8   | ICV1       | ICV1          | ICV    | 09/18/17 15:34 |                        | OK       |
| 9   | ICB1       | ICB1          | ICB    | 09/18/17 16:03 |                        | OK       |
| 10  | CCV1       | CCV1          | CCV    | 09/19/17 12:13 |                        | OK       |
| 11  | CCB1       | CCB1          | CCB    | 09/19/17 12:42 |                        | OK       |
| 12  | LB90170BLW | LB90170BLW    | MB     | 09/19/17 13:11 |                        | OK       |
| 13  | LB90170BSW | LB90170BSW    | LCS    | 09/19/17 13:40 |                        | OK       |
| 14  | I5300-02   | MW-1-091817   | SAM    | 09/19/17 14:24 | Chloride high          | Dilution |
| 15  | I5300-03   | MW-2-091817   | SAM    | 09/19/17 14:52 | Chloride high          | Dilution |
| 16  | I5300-05   | MW-8S-091817  | SAM    | 09/19/17 15:50 | Chloride high          | Dilution |
| 17  | I5300-10   | SUMP-091817   | SAM    | 09/19/17 16:19 | Chloride high          | Dilution |
| 18  | I5300-04   | MW-7-091817   | SAM    | 09/19/17 16:48 | Chloride high          | OK       |
| 19  | I5300-04MS | MW-7-091817MS | MS     | 09/19/17 17:17 |                        | OK       |
| 20  | CCV2       | CCV2          | CCV    | 09/19/17 17:46 | Phosphorus,Ortho fails | OK       |
| 21  | CCB2       | CCB2          | CCB    | 09/19/17 18:15 |                        | OK       |

**Daily Analysis Runlog For Sequence/QC Batch ID # LB90170**

|               |             |                                                         |     |                 |                                   |          |
|---------------|-------------|---------------------------------------------------------|-----|-----------------|-----------------------------------|----------|
| Review By     |             | Review On                                               |     |                 |                                   |          |
| SubDirectory  |             | LB90170                                                 |     | Test :   Anions |                                   |          |
| STD. NAME     |             | STD REF.#                                               |     |                 |                                   |          |
| ICAL Standard |             | WP57962,WP57963,WP57964,WP57965,WP57966,WP57967,WP57968 |     |                 |                                   |          |
| ICV Standard  |             | WP57969                                                 |     |                 |                                   |          |
| CCV Standard  |             | WP58069                                                 |     |                 |                                   |          |
| ICSA Standard |             | N/A                                                     |     |                 |                                   |          |
| CRI Standard  |             | N/A                                                     |     |                 |                                   |          |
| LCS Standard  |             | WP58070                                                 |     |                 |                                   |          |
| Chk Standard  |             | WP57970,WP57732                                         |     |                 |                                   |          |
| 22            | I5300-02DL  | MW-1-091817DL                                           | SAM | 09/19/17 20:11  | 500X Dilution for Chloride        | Confirms |
| 23            | I5300-03DL  | MW-2-091817DL                                           | SAM | 09/19/17 20:40  | 200X Dilution for Chloride        | Confirms |
| 24            | I5300-04DL  | MW-7-091817DL                                           | SAM | 09/19/17 21:09  | 500X Dilution for Chloride        | Confirms |
| 25            | I5300-05DL  | MW-8S-091817DL                                          | SAM | 09/19/17 21:37  | 500X Dilution for Chloride        | Confirms |
| 26            | I5300-10DL  | SUMP-091817DL                                           | SAM | 09/19/17 22:06  | 200X Dilution for Chloride        | Confirms |
| 27            | CCV3        | CCV3                                                    | CCV | 09/19/17 22:35  | Phosphorus,Ortho and Nitrite fail | OK       |
| 28            | CCB3        | CCB3                                                    | CCB | 09/19/17 23:04  |                                   | OK       |
| 29            | CCV4        | CCV4                                                    | CCV | 09/20/17 10:57  | Phosphorus,Ortho fails            | OK       |
| 30            | CCB4        | CCB4                                                    | CCB | 09/20/17 11:30  |                                   | OK       |
| 31            | I5300-04DUP | MW-7-091817DUP                                          | DUP | 09/20/17 13:25  |                                   | OK       |
| 32            | CCV5        | CCV5                                                    | CCV | 09/20/17 16:00  | Phosphorus,Ortho fails            | OK       |
| 33            | CCB5        | CCB5                                                    | CCB | 09/20/17 16:31  |                                   | OK       |



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## Report of Analysis

|                   |             |                 |                       |
|-------------------|-------------|-----------------|-----------------------|
| Client:           |             | Date Collected: | 9/18/2017 12:00:00 AM |
| Project:          | LB90170     | Date Received:  | 9/19/2017 12:00:00 AM |
| Client Sample ID: | MW-1-091817 | SDG No.:        | LB90170               |
| Lab Sample ID:    | I5300-02    | 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     | U    | 1  | 0.066 |     | 0.5        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Chloride          | 2030  | OR   | 1  | 0.075 |     | 0.15       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Fluoride          | 0     | U    | 1  | 0.043 |     | 0.1        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrate           | 0     | U    | 1  | 0.027 |     | 0.13       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrite           | 0     | U    | 1  | 0.022 |     | 0.15       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | U    | 1  | 0.01  |     | 0.25       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Sulfate           | 7.3   |      | 1  | 0.13  |     | 0.75       | mg/L  |           | 09/19/2017 | 300.0    |



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## Report of Analysis

|                   |               |                 |                       |
|-------------------|---------------|-----------------|-----------------------|
| Client:           |               | Date Collected: | 9/18/2017 12:00:00 AM |
| Project:          | LB90170       | Date Received:  | 9/19/2017 12:00:00 AM |
| Client Sample ID: | MW-1-091817DL | SDG No.:        | LB90170               |
| Lab Sample ID:    | I5300-02DL    | 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   | 500 | 33   |     | 250        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Chloride          | 1270  | D    | 500 | 37.5 |     | 75         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Fluoride          | 0     | UD   | 500 | 21.5 |     | 50         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrate           | 0     | UD   | 500 | 13.5 |     | 62.5       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrite           | 0     | UD   | 500 | 11   |     | 75         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | UD   | 500 | 5    |     | 125        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Sulfate           | 0     | UD   | 500 | 66   |     | 375        | mg/L  |           | 09/19/2017 | 300.0    |



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## Report of Analysis

|                   |             |                 |                       |
|-------------------|-------------|-----------------|-----------------------|
| Client:           |             | Date Collected: | 9/18/2017 12:00:00 AM |
| Project:          | LB90170     | Date Received:  | 9/19/2017 12:00:00 AM |
| Client Sample ID: | MW-2-091817 | SDG No.:        | LB90170               |
| Lab Sample ID:    | I5300-03    | 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     | U    | 1  | 0.066 |     | 0.5        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Chloride          | 1480  | OR   | 1  | 0.075 |     | 0.15       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Fluoride          | 0     | U    | 1  | 0.043 |     | 0.1        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrate           | 0     | U    | 1  | 0.027 |     | 0.13       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrite           | 0     | U    | 1  | 0.022 |     | 0.15       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | U    | 1  | 0.01  |     | 0.25       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Sulfate           | 29.3  |      | 1  | 0.13  |     | 0.75       | mg/L  |           | 09/19/2017 | 300.0    |



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| Client:           |               | Date Collected: | 9/18/2017 12:00:00 AM |
| Project:          | LB90170       | Date Received:  | 9/19/2017 12:00:00 AM |
| Client Sample ID: | MW-2-091817DL | SDG No.:        | LB90170               |
| Lab Sample ID:    | I5300-03DL    | 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   | 200 | 13.2 |     | 100        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Chloride          | 983   | D    | 200 | 15   |     | 30         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Fluoride          | 0     | UD   | 200 | 8.6  |     | 20         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrate           | 0     | UD   | 200 | 5.4  |     | 25         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrite           | 0     | UD   | 200 | 4.4  |     | 30         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | UD   | 200 | 2    |     | 50         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Sulfate           | 0     | UD   | 200 | 26.4 |     | 150        | mg/L  |           | 09/19/2017 | 300.0    |



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| Client:           |             | Date Collected: | 9/18/2017 12:00:00 AM |
| Project:          | LB90170     | Date Received:  | 9/19/2017 12:00:00 AM |
| Client Sample ID: | MW-7-091817 | SDG No.:        | LB90170               |
| Lab Sample ID:    | I5300-04    | 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           | 0     | U    | 1  | 0.066 |     | 0.5        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Chloride          | 1770  | OR   | 1  | 0.075 |     | 0.15       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Fluoride          | 0     | U    | 1  | 0.043 |     | 0.1        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrate           | 0.26  |      | 1  | 0.027 |     | 0.13       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrite           | 0     | U    | 1  | 0.022 |     | 0.15       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | U    | 1  | 0.01  |     | 0.25       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Sulfate           | 8.9   |      | 1  | 0.13  |     | 0.75       | mg/L  |           | 09/19/2017 | 300.0    |



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|                   |               |                 |                       |
|-------------------|---------------|-----------------|-----------------------|
| Client:           |               | Date Collected: | 9/18/2017 12:00:00 AM |
| Project:          | LB90170       | Date Received:  | 9/19/2017 12:00:00 AM |
| Client Sample ID: | MW-7-091817DL | SDG No.:        | LB90170               |
| Lab Sample ID:    | I5300-04DL    | 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   | 500 | 33   |     | 250        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Chloride          | 1070  | D    | 500 | 37.5 |     | 75         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Fluoride          | 0     | UD   | 500 | 21.5 |     | 50         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrate           | 0     | UD   | 500 | 13.5 |     | 62.5       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrite           | 0     | UD   | 500 | 11   |     | 75         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | UD   | 500 | 5    |     | 125        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Sulfate           | 0     | UD   | 500 | 66   |     | 375        | mg/L  |           | 09/19/2017 | 300.0    |



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|                   |              |                 |                       |
|-------------------|--------------|-----------------|-----------------------|
| Client:           |              | Date Collected: | 9/18/2017 12:00:00 AM |
| Project:          | LB90170      | Date Received:  | 9/19/2017 12:00:00 AM |
| Client Sample ID: | MW-8S-091817 | SDG No.:        | LB90170               |
| Lab Sample ID:    | I5300-05     | 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           | 0     | U    | 1  | 0.066 |     | 0.5        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Chloride          | 2820  | OR   | 1  | 0.075 |     | 0.15       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Fluoride          | 0     | U    | 1  | 0.043 |     | 0.1        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrate           | 0     | U    | 1  | 0.027 |     | 0.13       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrite           | 0     | U    | 1  | 0.022 |     | 0.15       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | U    | 1  | 0.01  |     | 0.25       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Sulfate           | 27.4  |      | 1  | 0.13  |     | 0.75       | mg/L  |           | 09/19/2017 | 300.0    |



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| Client:           |                | Date Collected: | 9/18/2017 12:00:00 AM |
| Project:          | LB90170        | Date Received:  | 9/19/2017 12:00:00 AM |
| Client Sample ID: | MW-8S-091817DL | SDG No.:        | LB90170               |
| Lab Sample ID:    | I5300-05DL     | 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   | 500 | 33   |     | 250        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Chloride          | 1680  | D    | 500 | 37.5 |     | 75         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Fluoride          | 0     | UD   | 500 | 21.5 |     | 50         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrate           | 0     | UD   | 500 | 13.5 |     | 62.5       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrite           | 0     | UD   | 500 | 11   |     | 75         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | UD   | 500 | 5    |     | 125        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Sulfate           | 0     | UD   | 500 | 66   |     | 375        | mg/L  |           | 09/19/2017 | 300.0    |



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|-------------------|-------------|-----------------|-----------------------|
| Client:           |             | Date Collected: | 9/18/2017 12:00:00 AM |
| Project:          | LB90170     | Date Received:  | 9/19/2017 12:00:00 AM |
| Client Sample ID: | SUMP-091817 | SDG No.:        | LB90170               |
| Lab Sample ID:    | I5300-10    | 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     | U    | 1  | 0.066 |     | 0.5        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Chloride          | 1350  | OR   | 1  | 0.075 |     | 0.15       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Fluoride          | 0     | U    | 1  | 0.043 |     | 0.1        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrate           | 0.3   |      | 1  | 0.027 |     | 0.13       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrite           | 0     | U    | 1  | 0.022 |     | 0.15       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | U    | 1  | 0.01  |     | 0.25       | mg/L  |           | 09/19/2017 | 300.0    |
|     | Sulfate           | 18.6  |      | 1  | 0.13  |     | 0.75       | mg/L  |           | 09/19/2017 | 300.0    |



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|                   |               |                 |                       |
|-------------------|---------------|-----------------|-----------------------|
| Client:           |               | Date Collected: | 9/18/2017 12:00:00 AM |
| Project:          | LB90170       | Date Received:  | 9/19/2017 12:00:00 AM |
| Client Sample ID: | SUMP-091817DL | SDG No.:        | LB90170               |
| Lab Sample ID:    | I5300-10DL    | 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   | 200 | 13.2 |     | 100        | mg/L  |           | 09/19/2017 | 300.0    |
|     | Chloride          | 865   | D    | 200 | 15   |     | 30         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Fluoride          | 0     | UD   | 200 | 8.6  |     | 20         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrate           | 0     | UD   | 200 | 5.4  |     | 25         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Nitrite           | 0     | UD   | 200 | 4.4  |     | 30         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Phosphorus, Ortho | 0     | UD   | 200 | 2    |     | 50         | mg/L  |           | 09/19/2017 | 300.0    |
|     | Sulfate           | 0     | UD   | 200 | 26.4 |     | 150        | mg/L  |           | 09/19/2017 | 300.0    |



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|                   |               |                 |                       |
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| Project:          | LB90170       | Date Received:  | 9/19/2017 12:00:00 AM |
| Client Sample ID: | SUMP-091817DL | SDG No.:        | LB90170               |
| Lab Sample ID:    | I5300-10DL    | 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

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### INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB90170

SDG No.: LB90170

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

Case No.: LB90170

SAS No.: LB90170

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           | 10             | 10         | 100           | 0        | 90 - 110                  |   | 09/18/2017       | 15:34            | LB90170       |
|           | Chloride          | 2.9            | 3          | 96.7          | 0        | 90 - 110                  |   | 09/18/2017       | 15:34            | LB90170       |
|           | Fluoride          | 2              | 2          | 100           | 0        | 90 - 110                  |   | 09/18/2017       | 15:34            | LB90170       |
|           | Phosphorus, Ortho | 4.8            | 5          | 96            | 0        | 90 - 110                  |   | 09/18/2017       | 15:34            | LB90170       |
|           | Nitrite           | 2.9            | 3          | 96.7          | 0        | 90 - 110                  |   | 09/18/2017       | 15:34            | LB90170       |
|           | Nitrate           | 2.5            | 2.5        | 100           | 0        | 90 - 110                  |   | 09/18/2017       | 15:34            | LB90170       |
|           | Sulfate           | 14.3           | 15         | 95.3          | 0        | 90 - 110                  |   | 09/18/2017       | 15:34            | LB90170       |







**GENCHEM**

- 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** LB90170

SDG No.: LB90170

Contract: Lab Code: CHEM

**Case No.:** LB90170

**SAS No.:** LB90170

| 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  |   | 09/18/2017       | 16:03            | LB90170       |
|           | Chloride          | 0.075          | +/-0.15             | U            |     | 0.15 |   | 09/18/2017       | 16:03            | LB90170       |
|           | Fluoride          | 0.043          | +/-0.1              | U            |     | 0.1  |   | 09/18/2017       | 16:03            | LB90170       |
|           | Phosphorus, Ortho | 0.01           | +/-0.25             | U            |     | 0.25 |   | 09/18/2017       | 16:03            | LB90170       |
|           | Nitrite           | 0.022          | +/-0.15             | U            |     | 0.15 |   | 09/18/2017       | 16:03            | LB90170       |
|           | Nitrate           | 0.027          | +/-0.13             | U            |     | 0.13 |   | 09/18/2017       | 16:03            | LB90170       |
|           | Sulfate           | 0.13           | +/-0.75             | U            |     | 0.75 |   | 09/18/2017       | 16:03            | LB90170       |

| 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  |   | 09/19/2017       | 12:42            | LB90170       |
|           | Chloride          | 0.075          | +/-0.15             | U            |     | 0.15 |   | 09/19/2017       | 12:42            | LB90170       |
|           | Fluoride          | 0.043          | +/-0.1              | U            |     | 0.1  |   | 09/19/2017       | 12:42            | LB90170       |
|           | Phosphorus, Ortho | 0.01           | +/-0.25             | U            |     | 0.25 |   | 09/19/2017       | 12:42            | LB90170       |
|           | Nitrite           | 0.022          | +/-0.15             | U            |     | 0.15 |   | 09/19/2017       | 12:42            | LB90170       |
|           | Nitrate           | 0.027          | +/-0.13             | U            |     | 0.13 |   | 09/19/2017       | 12:42            | LB90170       |
|           | Sulfate           | 0.13           | +/-0.75             | U            |     | 0.75 |   | 09/19/2017       | 12:42            | LB90170       |
| CCB2      | Bromide           | 0.066          | +/-0.5              | U            |     | 0.5  |   | 09/19/2017       | 18:15            | LB90170       |
|           | Chloride          | 0.075          | +/-0.15             | U            |     | 0.15 |   | 09/19/2017       | 18:15            | LB90170       |
|           | Fluoride          | 0.043          | +/-0.1              | U            |     | 0.1  |   | 09/19/2017       | 18:15            | LB90170       |
|           | Phosphorus, Ortho | 0.01           | +/-0.25             | U            |     | 0.25 |   | 09/19/2017       | 18:15            | LB90170       |
|           | Nitrite           | 0.022          | +/-0.15             | U            |     | 0.15 |   | 09/19/2017       | 18:15            | LB90170       |
|           | Nitrate           | 0.027          | +/-0.13             | U            |     | 0.13 |   | 09/19/2017       | 18:15            | LB90170       |
|           | Sulfate           | 0.13           | +/-0.75             | U            |     | 0.75 |   | 09/19/2017       | 18:15            | LB90170       |
| CCB3      | Bromide           | 0.066          | +/-0.5              | U            |     | 0.5  |   | 09/19/2017       | 23:04            | LB90170       |
|           | Chloride          | 0.075          | +/-0.15             | U            |     | 0.15 |   | 09/19/2017       | 23:04            | LB90170       |
|           | Fluoride          | 0.043          | +/-0.1              | U            |     | 0.1  |   | 09/19/2017       | 23:04            | LB90170       |
|           | Phosphorus, Ortho | 0.01           | +/-0.25             | U            |     | 0.25 |   | 09/19/2017       | 23:04            | LB90170       |
|           | Nitrite           | 0.022          | +/-0.15             | U            |     | 0.15 |   | 09/19/2017       | 23:04            | LB90170       |
|           | Nitrate           | 0.027          | +/-0.13             | U            |     | 0.13 |   | 09/19/2017       | 23:04            | LB90170       |
|           | Sulfate           | 0.13           | +/-0.75             | U            |     | 0.75 |   | 09/19/2017       | 23:04            | LB90170       |
| CCB4      | Bromide           | 0.066          | +/-0.5              | U            |     | 0.5  |   | 09/20/2017       | 11:30            | LB90170       |
|           | Chloride          | 0.075          | +/-0.15             | U            |     | 0.15 |   | 09/20/2017       | 11:30            | LB90170       |
|           | Fluoride          | 0.043          | +/-0.1              | U            |     | 0.1  |   | 09/20/2017       | 11:30            | LB90170       |
|           | Phosphorus, Ortho | 0.01           | +/-0.25             | U            |     | 0.25 |   | 09/20/2017       | 11:30            | LB90170       |
|           | Nitrite           | 0.022          | +/-0.15             | U            |     | 0.15 |   | 09/20/2017       | 11:30            | LB90170       |
|           | Nitrate           | 0.027          | +/-0.13             | U            |     | 0.13 |   | 09/20/2017       | 11:30            | LB90170       |
|           | Sulfate           | 0.13           | +/-0.75             | U            |     | 0.75 |   | 09/20/2017       | 11:30            | LB90170       |
| CCB5      | Bromide           | 0.066          | +/-0.5              | U            |     | 0.5  |   | 09/20/2017       | 16:31            | LB90170       |
|           | Chloride          | 0.075          | +/-0.15             | U            |     | 0.15 |   | 09/20/2017       | 16:31            | LB90170       |
|           | Fluoride          | 0.043          | +/-0.1              | U            |     | 0.1  |   | 09/20/2017       | 16:31            | LB90170       |
|           | Phosphorus, Ortho | 0.01           | +/-0.25             | U            |     | 0.25 |   | 09/20/2017       | 16:31            | LB90170       |
|           | Nitrite           | 0.022          | +/-0.15             | U            |     | 0.15 |   | 09/20/2017       | 16:31            | LB90170       |
|           | Nitrate           | 0.027          | +/-0.13             | U            |     | 0.13 |   | 09/20/2017       | 16:31            | LB90170       |
|           | Sulfate           | 0.13           | +/-0.75             | U            |     | 0.75 |   | 09/20/2017       | 16:31            | LB90170       |



GENCHEM

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB90170

SDG No.: LB90170

Contract: Lab Code: CHEM

Case No.: LB90170

SAS No.: LB90170

| 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:** LB90170

**SDG No.:** LB90170

**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>LB90170BLW</b> |                   | <b>WATER</b>     |                     | <b>Batch Number:</b> |             |              |   | <b>Prep Date:</b> |                  |         |
|                   | Bromide           | 0.066            | <0.5                | U                    |             | 0.5          |   | 09/19/2017        | 13:11            | LB90170 |
|                   | Chloride          | 0.075            | <0.15               | U                    |             | 0.15         |   | 09/19/2017        | 13:11            | LB90170 |
|                   | Fluoride          | 0.043            | <0.1                | U                    |             | 0.1          |   | 09/19/2017        | 13:11            | LB90170 |
|                   | Phosphorus, Ortho | 0.01             | <0.25               | U                    |             | 0.25         |   | 09/19/2017        | 13:11            | LB90170 |
|                   | Nitrite           | 0.022            | <0.15               | U                    |             | 0.15         |   | 09/19/2017        | 13:11            | LB90170 |
|                   | Nitrate           | 0.027            | <0.13               | U                    |             | 0.13         |   | 09/19/2017        | 13:11            | LB90170 |
|                   | Sulfate           | 0.13             | <0.75               | U                    |             | 0.75         |   | 09/19/2017        | 13:11            | LB90170 |



GENCHEM  
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MATRIX SPIKE SUMMARY

client: LB90170 level: low sdg no.: LB90170  
contract: lab code: CHEM case no.: LB90170 sas no.: LB90170  
matrix: WATER sample id: I5300-04 client id: MW-7-091817MS  
Percent Solids for Sample: 0 Spiked ID: I5300-04MS Percent Solids for Spike Sample: 0

| 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               | 13.7             |    | 0.066            | U  | 10             | 137           | *    |   |
| Chloride          | mg/L  | 80 - 120               | 1540             | OR | 1770             | OR | 3              | -7667         | *    |   |
| Fluoride          | mg/L  | 80 - 120               | 2.6              |    | 0.043            | U  | 2              | 130           | *    |   |
| Phosphorus, Ortho | mg/L  | 80 - 120               | 3.5              |    | 0.01             | U  | 5              | 70            | *    |   |
| Nitrite           | mg/L  | 80 - 120               | 2.2              |    | 0.022            | U  | 3              | 73.3          | *    |   |
| Nitrate           | mg/L  | 80 - 120               | 2.8              |    | 0.26             |    | 2.5            | 102           |      |   |
| Sulfate           | mg/L  | 80 - 120               | 23.6             |    | 8.9              |    | 15             | 98            |      |   |



# GENCHEM

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## DUPLICATE SAMPLE SUMMARY

**Client:** LB90170 **Level:** LOW **SDG No.:** LB90170  
**Contract:**                      **Lab Code:** CHEM **Case No.:** LB90170 **SAS No.:** LB90170  
**Matrix:** WATER **Sample ID:** I5300-04 **Client ID:** MW-7-091817DUP  
**Percent Solids for Sample:** 0 **Duplicate ID** I5300-04DUP **Percent Solids for Spike Sample:** 0

| Analyte           | Units | Acceptance<br>Limit | Sample<br>Result | C  | Duplicate<br>Result | C  | RPD | Qual | M |
|-------------------|-------|---------------------|------------------|----|---------------------|----|-----|------|---|
| Bromide           | mg/L  | 20                  | 0.066            | U  | 0                   | U  |     |      |   |
| Chloride          | mg/L  | 20                  | 1770             | OR | 1730                | 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                  | 0.26             |    | 0.25                |    | 4   |      |   |
| Sulfate           | mg/L  | 20                  | 8.9              |    | 9.3                 |    | 4   |      |   |



GENCHEM

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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB90170

SDG No.: LB90170

Contract:                     

Lab Code: CHEM

Case No.: LB90170

SAS No.: LB90170

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| Analyte           | Units | True Value | Result | C | %<br>Recovery | Acceptance<br>Limits | M |
|-------------------|-------|------------|--------|---|---------------|----------------------|---|
| LB90170BSW        |       |            |        |   |               |                      |   |
| Bromide           | mg/L  | 10         | 9.9    |   | 99            | 90 - 110             |   |
| Chloride          | mg/L  | 3          | 2.9    |   | 96.7          | 90 - 110             |   |
| Fluoride          | mg/L  | 2          | 2.1    |   | 105           | 90 - 110             |   |
| Phosphorus, Ortho | mg/L  | 5          | 5.3    |   | 106           | 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         | 14.9   |   | 99.3          | 90 - 110             |   |

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