

## Daily Analysis Runlog For Sequence/QC Batch ID # LB90235

|               |              |                                                         |        |                |         |        |
|---------------|--------------|---------------------------------------------------------|--------|----------------|---------|--------|
| Review By     |              | Review On                                               |        |                |         |        |
| SubDirectory  |              | LB90235                                                 |        | Test : Cyanide |         |        |
| STD. NAME     |              | STD REF.#                                               |        |                |         |        |
| ICAL Standard |              | WP58141,WP58142,WP58143,WP58144,WP58145,WP58146,WP58139 |        |                |         |        |
| ICV Standard  |              | wp58149                                                 |        |                |         |        |
| CCV Standard  |              | wp58147                                                 |        |                |         |        |
| ICSA Standard |              | N/A                                                     |        |                |         |        |
| CRI Standard  |              | N/A                                                     |        |                |         |        |
| LCS Standard  |              | N/A                                                     |        |                |         |        |
| Chk Standard  |              | WP58148,WP55355,WP55836                                 |        |                |         |        |
| Sr#           | SampleId     | ClientID                                                | QcType | Date           | Comment | Status |
| 1             | 0.0PPBCN     | 0.0PPBCN                                                | CAL1   | 09/21/17 10:35 |         | OK     |
| 2             | 5.0PPBCN     | 5.0PPBCN                                                | CAL2   | 09/21/17 10:35 |         | OK     |
| 3             | 10PPBCN      | 10PPBCN                                                 | CAL3   | 09/21/17 10:35 |         | OK     |
| 4             | 50PPBCN      | 50PPBCN                                                 | CAL4   | 09/21/17 10:35 |         | OK     |
| 5             | 100PPBCN     | 100PPBCN                                                | CAL5   | 09/21/17 10:35 |         | OK     |
| 6             | 250PPBCN     | 250PPBCN                                                | CAL6   | 09/21/17 10:35 |         | OK     |
| 7             | 500PPBCN     | 500PPBCN                                                | CAL7   | 09/21/17 10:35 |         | OK     |
| 8             | ICV1         | ICV1                                                    | ICV    | 09/21/17 14:07 |         | OK     |
| 9             | ICB1         | ICB1                                                    | ICB    | 09/21/17 14:07 |         | OK     |
| 10            | CCV1         | CCV1                                                    | CCV    | 09/21/17 14:07 |         | OK     |
| 11            | CCB1         | CCB1                                                    | CCB    | 09/21/17 14:07 |         | OK     |
| 12            | PB102506BL   | PB102506BL                                              | MB     | 09/21/17 14:07 |         | OK     |
| 13            | PB102506BS   | PB102506BS                                              | LCS    | 09/21/17 14:07 |         | OK     |
| 14            | LOWPB102506  | LOWPB102506                                             | SAM    | 09/21/17 14:14 |         | OK     |
| 15            | HIGHPB102506 | HIGHPB102506                                            | SAM    | 09/21/17 14:14 |         | OK     |
| 16            | I5309-01     | TP-1-4-COMP                                             | SAM    | 09/21/17 14:14 |         | OK     |
| 17            | I5309-01DUP  | TP-1-4-COMPDUP                                          | DUP    | 09/21/17 14:14 |         | OK     |
| 18            | I5309-01MS   | TP-1-4-COMPMS                                           | MS     | 09/21/17 14:14 |         | OK     |
| 19            | I5309-01MSD  | TP-1-4-COMPMSD                                          | MSD    | 09/21/17 14:14 |         | OK     |
| 20            | I5309-05     | TP-5-COMP                                               | SAM    | 09/21/17 14:14 |         | OK     |
| 21            | I5329-01     | CL-01092017-COMP                                        | SAM    | 09/21/17 14:14 |         | OK     |

**Daily Analysis Runlog For Sequence/QC Batch ID # LB90235**

|               |             |                                                         |     |                |  |    |
|---------------|-------------|---------------------------------------------------------|-----|----------------|--|----|
| Review By     |             | Review On                                               |     |                |  |    |
| SubDirectory  |             | LB90235                                                 |     | Test : Cyanide |  |    |
| STD. NAME     |             | STD REF.#                                               |     |                |  |    |
| ICAL Standard |             | WP58141,WP58142,WP58143,WP58144,WP58145,WP58146,WP58139 |     |                |  |    |
| ICV Standard  |             | wp58149                                                 |     |                |  |    |
| CCV Standard  |             | wp58147                                                 |     |                |  |    |
| ICSA Standard |             | N/A                                                     |     |                |  |    |
| CRI Standard  |             | N/A                                                     |     |                |  |    |
| LCS Standard  |             | N/A                                                     |     |                |  |    |
| Chk Standard  |             | WP58148,WP55355,WP55836                                 |     |                |  |    |
| 22            | CCV2        | CCV2                                                    | CCV | 09/21/17 14:22 |  | OK |
| 23            | CCB2        | CCB2                                                    | CCB | 09/21/17 14:22 |  | OK |
| 24            | I5330-01    | HD-01092017-COMP                                        | SAM | 09/21/17 14:22 |  | OK |
| 25            | I5331-01    | HR-05-92017-A                                           | SAM | 09/21/17 14:22 |  | OK |
| 26            | I5331-04    | HR-05-92017-B                                           | SAM | 09/21/17 14:22 |  | OK |
| 27            | I5331-07    | HR-05-92017-C                                           | SAM | 09/21/17 14:22 |  | OK |
| 28            | I5335-01    | SP-COMP                                                 | SAM | 09/21/17 14:22 |  | OK |
| 29            | I5336-01    | TR-05-092017                                            | SAM | 09/21/17 14:22 |  | OK |
| 30            | PB102507BL  | PB102507BL                                              | MB  | 09/21/17 14:22 |  | OK |
| 31            | PB102507BS  | PB102507BS                                              | LCS | 09/21/17 14:22 |  | OK |
| 32            | I5321-01    | 20170610-COMP-A                                         | SAM | 09/21/17 14:22 |  | OK |
| 33            | I5321-01DUP | 20170610-COMP-AD                                        | DUP | 09/21/17 14:29 |  | OK |
| 34            | CCV3        | CCV3                                                    | CCV | 09/21/17 14:29 |  | OK |
| 35            | CCB3        | CCB3                                                    | CCB | 09/21/17 14:29 |  | OK |
| 36            | I5321-01MS  | 20170610-COMP-AM                                        | MS  | 09/21/17 14:29 |  | OK |
| 37            | I5321-01MSD | 20170610-COMP-AM                                        | MSD | 09/21/17 14:29 |  | OK |
| 38            | I5321-02    | 20170611-COMP-B                                         | SAM | 09/21/17 14:29 |  | OK |
| 39            | I5321-03    | 20170530-LOC-6                                          | SAM | 09/21/17 14:29 |  | OK |
| 40            | I5321-04    | 20170610-COMP-A                                         | SAM | 09/21/17 14:29 |  | OK |
| 41            | I5321-05    | 20170611-COMP-B                                         | SAM | 09/21/17 14:29 |  | OK |
| 42            | I5321-06    | 20170530-LOC-6                                          | SAM | 09/21/17 14:29 |  | OK |
| 43            | I5333-01    | SV-30745L                                               | SAM | 09/21/17 14:30 |  | OK |



Instrument ID : KONELAB

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**Daily Analysis Runlog For Sequence/QC Batch ID # LB90235**

|                  |          |                                                         |     |                |  |    |
|------------------|----------|---------------------------------------------------------|-----|----------------|--|----|
| Review By        |          | Review On                                               |     |                |  |    |
| SubDirectory     |          | Test : Cyanide                                          |     |                |  |    |
| LB90235          |          |                                                         |     |                |  |    |
| <b>STD. NAME</b> |          | <b>STD REF.#</b>                                        |     |                |  |    |
| ICAL Standard    |          | WP58141,WP58142,WP58143,WP58144,WP58145,WP58146,WP58139 |     |                |  |    |
| ICV Standard     |          | wp58149                                                 |     |                |  |    |
| CCV Standard     |          | wp58147                                                 |     |                |  |    |
| ICSA Standard    |          | N/A                                                     |     |                |  |    |
| CRI Standard     |          | N/A                                                     |     |                |  |    |
| LCS Standard     |          | N/A                                                     |     |                |  |    |
| Chk Standard     |          | WP58148,WP55355,WP55836                                 |     |                |  |    |
| 44               | I5339-01 | FRAC-TANK-573094                                        | SAM | 09/21/17 14:33 |  | OK |
| 45               | CCV4     | CCV4                                                    | CCV | 09/21/17 14:33 |  | OK |
| 46               | CCB4     | CCB4                                                    | CCB | 09/21/17 14:33 |  | OK |



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## Report of Analysis

|                   |              |                 |         |
|-------------------|--------------|-----------------|---------|
| Client:           |              | Date Collected: |         |
| Project:          | LB90235      | Date Received:  |         |
| Client Sample ID: | HIGHPB102506 | SDG No.:        | LB90235 |
| Lab Sample ID:    | HIGHPB102506 | Matrix:         | WATER   |
| Level (low/med):  | low          | % Solid:        | 0       |

| Cas     | Parameter | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|---------|-----------|-------|------|----|-------|-----|------------|-------|-----------|------------|----------|
| 57-12-5 | Cyanide   | 0.48  |      | 1  | 0.003 |     | 0.005      | mg/L  |           | 09/21/2017 | 9012B    |



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## Report of Analysis

|                   |             |                 |                       |
|-------------------|-------------|-----------------|-----------------------|
| Client:           |             | Date Collected: | 9/19/2017 12:00:00 AM |
| Project:          | LB90235     | Date Received:  | 9/19/2017 12:00:00 AM |
| Client Sample ID: | TP-1-4-COMP | SDG No.:        | LB90235               |
| Lab Sample ID:    | I5309-01    | Matrix:         | Solid                 |
| Level (low/med):  | low         | % Solid:        | 89.5                  |

| Cas     | Parameter | Conc.   | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|---------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | -0.0072 | U    | 1  | 0.036 |     | 0.27       | mg/Kg | 09/21/2017 | 09/21/2017 | 9012B    |



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## Report of Analysis

|                   |           |                 |                       |
|-------------------|-----------|-----------------|-----------------------|
| Client:           |           | Date Collected: | 9/19/2017 12:00:00 AM |
| Project:          | LB90235   | Date Received:  | 9/19/2017 12:00:00 AM |
| Client Sample ID: | TP-5-COMP | SDG No.:        | LB90235               |
| Lab Sample ID:    | I5309-05  | Matrix:         | Solid                 |
| Level (low/med):  | low       | % Solid:        | 88.1                  |

| Cas     | Parameter | Conc.  | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|--------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | -0.029 | U    | 1  | 0.036 |     | 0.27       | mg/Kg | 09/21/2017 | 09/21/2017 | 9012B    |



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## Report of Analysis

|                   |                 |                 |                       |
|-------------------|-----------------|-----------------|-----------------------|
| Client:           |                 | Date Collected: | 9/19/2017 12:00:00 AM |
| Project:          | LB90235         | Date Received:  | 9/20/2017 12:00:00 AM |
| Client Sample ID: | 20170610-COMP-A | SDG No.:        | LB90235               |
| Lab Sample ID:    | I5321-01        | Matrix:         | WATER                 |
| Level (low/med):  | low             | % Solid:        | 0                     |

| Cas     | Parameter | Conc.    | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|----------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | -0.00061 | U    | 1  | 0.003 |     | 0.005      | mg/L  | 09/21/2017 | 09/21/2017 | 9012B    |



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|-------------------|-----------------|-----------------|-----------------------|
| Client:           |                 | Date Collected: | 9/19/2017 12:00:00 AM |
| Project:          | LB90235         | Date Received:  | 9/20/2017 12:00:00 AM |
| Client Sample ID: | 20170611-COMP-B | SDG No.:        | LB90235               |
| Lab Sample ID:    | I5321-02        | Matrix:         | WATER                 |
| Level (low/med):  | low             | % Solid:        | 0                     |

| Cas     | Parameter | Conc.    | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|----------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | -0.00038 | U    | 1  | 0.003 |     | 0.005      | mg/L  | 09/21/2017 | 09/21/2017 | 9012B    |



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| Client:           |                | Date Collected: | 9/19/2017 12:00:00 AM |
| Project:          | LB90235        | Date Received:  | 9/20/2017 12:00:00 AM |
| Client Sample ID: | 20170530-LOC-6 | SDG No.:        | LB90235               |
| Lab Sample ID:    | I5321-03       | Matrix:         | WATER                 |
| Level (low/med):  | low            | % Solid:        | 0                     |

| Cas     | Parameter | Conc.    | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|----------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | -0.00039 | U    | 1  | 0.003 |     | 0.005      | mg/L  | 09/21/2017 | 09/21/2017 | 9012B    |



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|-------------------|-----------------|-----------------|-----------------------|
| Client:           |                 | Date Collected: | 9/19/2017 12:00:00 AM |
| Project:          | LB90235         | Date Received:  | 9/20/2017 12:00:00 AM |
| Client Sample ID: | 20170610-COMP-A | SDG No.:        | LB90235               |
| Lab Sample ID:    | I5321-04        | Matrix:         | WATER                 |
| Level (low/med):  | low             | % Solid:        | 0                     |

| Cas     | Parameter | Conc.    | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|----------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | -0.00073 | U    | 1  | 0.003 |     | 0.005      | mg/L  | 09/21/2017 | 09/21/2017 | 9012B    |



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## Report of Analysis

|                   |                 |                 |                       |
|-------------------|-----------------|-----------------|-----------------------|
| Client:           |                 | Date Collected: | 9/19/2017 12:00:00 AM |
| Project:          | LB90235         | Date Received:  | 9/20/2017 12:00:00 AM |
| Client Sample ID: | 20170611-COMP-B | SDG No.:        | LB90235               |
| Lab Sample ID:    | I5321-05        | Matrix:         | WATER                 |
| Level (low/med):  | low             | % Solid:        | 0                     |

| Cas     | Parameter | Conc.    | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|----------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | -0.00048 | U    | 1  | 0.003 |     | 0.005      | mg/L  | 09/21/2017 | 09/21/2017 | 9012B    |



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| Client:           |                | Date Collected: | 9/19/2017 12:00:00 AM |
| Project:          | LB90235        | Date Received:  | 9/20/2017 12:00:00 AM |
| Client Sample ID: | 20170530-LOC-6 | SDG No.:        | LB90235               |
| Lab Sample ID:    | I5321-06       | Matrix:         | WATER                 |
| Level (low/med):  | low            | % Solid:        | 0                     |

| Cas     | Parameter | Conc.    | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|----------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | -0.00078 | U    | 1  | 0.003 |     | 0.005      | mg/L  | 09/21/2017 | 09/21/2017 | 9012B    |



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| Client:           |                  | Date Collected: | 9/20/2017 12:00:00 AM |
| Project:          | LB90235          | Date Received:  | 9/20/2017 12:00:00 AM |
| Client Sample ID: | CL-01092017-COMP | SDG No.:        | LB90235               |
| Lab Sample ID:    | I5329-01         | Matrix:         | Solid                 |
| Level (low/med):  | low              | % Solid:        | 94.3                  |

| Cas     | Parameter | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|-------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | -0.02 | U    | 1  | 0.033 |     | 0.25       | mg/Kg | 09/21/2017 | 09/21/2017 | 9012B    |



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| Client:           |                  | Date Collected: | 9/20/2017 12:00:00 AM |
| Project:          | LB90235          | Date Received:  | 9/20/2017 12:00:00 AM |
| Client Sample ID: | HD-01092017-COMP | SDG No.:        | LB90235               |
| Lab Sample ID:    | I5330-01         | Matrix:         | Solid                 |
| Level (low/med):  | low              | % Solid:        | 91.2                  |

| Cas     | Parameter | Conc.   | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|---------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | -0.0083 | U    | 1  | 0.035 |     | 0.26       | mg/Kg | 09/21/2017 | 09/21/2017 | 9012B    |



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| Project:          | LB90235       | Date Received:  | 9/20/2017 12:00:00 AM |
| Client Sample ID: | HR-05-92017-A | SDG No.:        | LB90235               |
| Lab Sample ID:    | I5331-01      | Matrix:         | Solid                 |
| Level (low/med):  | low           | % Solid:        | 95.3                  |

| Cas     | Parameter | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|-------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | 1.6   |      | 1  | 0.034 |     | 0.25       | mg/Kg | 09/21/2017 | 09/21/2017 | 9012B    |



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| Project:          | LB90235       | Date Received:  | 9/20/2017 12:00:00 AM |
| Client Sample ID: | HR-05-92017-B | SDG No.:        | LB90235               |
| Lab Sample ID:    | I5331-04      | Matrix:         | Solid                 |
| Level (low/med):  | low           | % Solid:        | 93.9                  |

| Cas     | Parameter | Conc.  | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|--------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | 0.0079 | U    | 1  | 0.033 |     | 0.25       | mg/Kg | 09/21/2017 | 09/21/2017 | 9012B    |



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| Project:          | LB90235       | Date Received:  | 9/20/2017 12:00:00 AM |
| Client Sample ID: | HR-05-92017-C | SDG No.:        | LB90235               |
| Lab Sample ID:    | I5331-07      | Matrix:         | Solid                 |
| Level (low/med):  | low           | % Solid:        | 96.1                  |

| Cas     | Parameter | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|-------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | 0.011 | U    | 1  | 0.033 |     | 0.25       | mg/Kg | 09/21/2017 | 09/21/2017 | 9012B    |



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| Client:           |           | Date Collected: | 9/20/2017 12:00:00 AM |
| Project:          | LB90235   | Date Received:  | 9/20/2017 12:00:00 AM |
| Client Sample ID: | SV-30745L | SDG No.:        | LB90235               |
| Lab Sample ID:    | I5333-01  | Matrix:         | WATER                 |
| Level (low/med):  | low       | % Solid:        | 0                     |

| Cas     | Parameter | Conc.    | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|----------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | -0.00082 | U    | 1  | 0.003 |     | 0.005      | mg/L  | 09/21/2017 | 09/21/2017 | 9012B    |



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| Client:           |          | Date Collected: | 9/20/2017 12:00:00 AM |
| Project:          | LB90235  | Date Received:  | 9/20/2017 12:00:00 AM |
| Client Sample ID: | SP-COMP  | SDG No.:        | LB90235               |
| Lab Sample ID:    | I5335-01 | Matrix:         | Solid                 |
| Level (low/med):  | low      | % Solid:        | 89.9                  |

| Cas     | Parameter | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|-------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | 0.29  |      | 1  | 0.036 |     | 0.27       | mg/Kg | 09/21/2017 | 09/21/2017 | 9012B    |



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| Project:          | LB90235      | Date Received:  | 9/20/2017 12:00:00 AM |
| Client Sample ID: | TR-05-092017 | SDG No.:        | LB90235               |
| Lab Sample ID:    | I5336-01     | Matrix:         | Solid                 |
| Level (low/med):  | low          | % Solid:        | 89.6                  |

| Cas     | Parameter | Conc.  | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|--------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | -0.033 | U    | 1  | 0.035 |     | 0.27       | mg/Kg | 09/21/2017 | 09/21/2017 | 9012B    |



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## Report of Analysis

|                   |                  |                 |                       |
|-------------------|------------------|-----------------|-----------------------|
| Client:           |                  | Date Collected: | 9/20/2017 12:00:00 AM |
| Project:          | LB90235          | Date Received:  | 9/20/2017 12:00:00 AM |
| Client Sample ID: | FRAC-TANK-573094 | SDG No.:        | LB90235               |
| Lab Sample ID:    | I5339-01         | Matrix:         | WATER                 |
| Level (low/med):  | low              | % Solid:        | 0                     |

| Cas     | Parameter | Conc.  | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|--------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | 0.0033 | J    | 1  | 0.003 |     | 0.005      | mg/L  | 09/21/2017 | 09/21/2017 | 9012B    |



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## Report of Analysis

|                   |             |                 |         |
|-------------------|-------------|-----------------|---------|
| Client:           |             | Date Collected: |         |
| Project:          | LB90235     | Date Received:  |         |
| Client Sample ID: | LOWPB102506 | SDG No.:        | LB90235 |
| Lab Sample ID:    | LOWPB102506 | Matrix:         | WATER   |
| Level (low/med):  | low         | % Solid:        | 0       |

| Cas     | Parameter | Conc.  | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|---------|-----------|--------|------|----|-------|-----|------------|-------|-----------|------------|----------|
| 57-12-5 | Cyanide   | 0.0093 |      | 1  | 0.003 |     | 0.005      | mg/L  |           | 09/21/2017 | 9012B    |



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## Report of Analysis

|                   |             |                 |         |
|-------------------|-------------|-----------------|---------|
| Client:           |             | Date Collected: |         |
| Project:          | LB90235     | Date Received:  |         |
| Client Sample ID: | LOWPB102506 | SDG No.:        | LB90235 |
| Lab Sample ID:    | LOWPB102506 | 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: LB90235

SDG No.: LB90235

Contract: \_\_\_\_\_

Lab Code: CHEM

Case No.: LB90235

SAS No.: LB90235

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      | Cyanide | 0.096          | 0.099      | 97            | 0        | 85 - 115                  |   | 09/21/2017       | 14:07            | LB90235       |

---



## GENCHEM

- 2a -

### INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB90235

SDG No.: LB90235

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

Case No.: LB90235

SAS No.: LB90235

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 |
|-----------|---------|----------------|------------|---------------|----------|---------------------------|---|------------------|------------------|---------------|
| CCV1      | Cyanide | 0.25           | 0.25       | 100           | 0        | 90 - 110                  |   | 09/21/2017       | 14:07            | LB90235       |
| CCV2      | Cyanide | 0.25           | 0.25       | 100           | 0        | 90 - 110                  |   | 09/21/2017       | 14:22            | LB90235       |
| CCV3      | Cyanide | 0.25           | 0.25       | 100           | 0        | 90 - 110                  |   | 09/21/2017       | 14:29            | LB90235       |
| CCV4      | Cyanide | 0.26           | 0.25       | 104           | 0        | 90 - 110                  |   | 09/21/2017       | 14:33            | LB90235       |



**GENCHEM**

- 3a -

### INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** LB90235

SDG No.: LB90235

**Contract:**

Lab Code: CHEM

**Case No.:** LB90235

**SAS No.:** LB90235

| 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      | Cyanide | 0.00048        | +/-0.005            | U            |     | 0.005 |   | 09/21/2017       | 14:07            | LB90235       |

| 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      | Cyanide | 0              | +/-0.005            | U            |     | 0.005 |   | 09/21/2017       | 14:07            | LB90235       |
| CCB2      | Cyanide | -0.00016       | +/-0.005            | U            |     | 0.005 |   | 09/21/2017       | 14:22            | LB90235       |
| CCB3      | Cyanide | 0.00043        | +/-0.005            | U            |     | 0.005 |   | 09/21/2017       | 14:29            | LB90235       |
| CCB4      | Cyanide | 0.00037        | +/-0.005            | U            |     | 0.005 |   | 09/21/2017       | 14:33            | LB90235       |



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB90235

SDG No.: LB90235

Contract: Lab Code: CHEM

Case No.: LB90235

SAS No.: LB90235

| 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:** LB90235

**SDG No.:** LB90235

**Instrument:** Konelab 20

| Sample ID  | Analyte | Result<br>(mg/Kg) | Acceptance<br>Limit | Conc<br>Qual  | LOD<br>mg/Kg | CRQL<br>mg/Kg | M | Analysis<br>Date | Analysis<br>Time | Run     |
|------------|---------|-------------------|---------------------|---------------|--------------|---------------|---|------------------|------------------|---------|
| PB102506BL | Cyanide | SOLID             |                     | Batch Number: |              | PB102506      |   | Prep Date:       | 09/21/2017       |         |
|            |         | -0.028            | <0.25               | U             |              | 0.25          |   | 09/21/2017       | 14:07            | LB90235 |
| 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     |
| PB102507BL | Cyanide | WATER             |                     | Batch Number: |              | PB102507      |   | Prep Date:       | 09/21/2017       |         |
|            |         | 0                 | <0.005              | U             |              | 0.005         |   | 09/21/2017       | 14:22            | LB90235 |



GENCHEM  
- 5a -  
MATRIX SPIKE SUMMARY

client: LB90235 level: low sdg no.: LB90235  
contract: lab code: CHEM case no.: LB90235 sas no.: LB90235  
matrix: Solid sample id: I5309-01 client id: TP-1-4-COMPMS  
Percent Solids for Sample: 89.5 Spiked ID: I5309-01MS Percent Solids for Spike Sample: 89.5

| Analyte | Units | Acceptance<br>Limit %R | Spiked<br>Result | C | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M |
|---------|-------|------------------------|------------------|---|------------------|---|----------------|---------------|------|---|
| Cyanide | mg/Kg | 75 - 125               | 2                |   | 0.036            | U | 2.2            | 90.9          |      |   |



GENCHEM  
- 5a -  
MATRIX SPIKE DUPLICATE SUMMARY

client: LB90235 level: low sdg no.: LB90235  
contract: lab code: CHEM case no.: LB90235 sas no.: LB90235  
matrix: Solid sample id: I5309-01 client id: TP-1-4-COMPMSD  
Percent Solids for Sample: 89.5 Spiked ID: I5309-01MSD Percent Solids for Spike Sample: 89.5

| Analyte | Units | Acceptance<br>Limit %R | MSD<br>Result | C | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M |
|---------|-------|------------------------|---------------|---|------------------|---|----------------|---------------|------|---|
| Cyanide | mg/Kg | 75 - 125               |               | 2 | 0.036            | U | 2.1            | 95.2          |      |   |



GENCHEM  
- 5a -  
MATRIX SPIKE SUMMARY

client: LB90235 level: low sdg no.: LB90235  
contract: lab code: CHEM case no.: LB90235 sas no.: LB90235  
matrix: WATER sample id: I5321-01 client id: 20170610-COMP-AMS  
Percent Solids for Sample: 0 Spiked ID: I5321-01MS 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 |
|---------|-------|------------------------|------------------|---|------------------|---|----------------|---------------|------|---|
| Cyanide | mg/L  | 75 - 125               | 0.033            |   | 0.003            | U | 0.04           | 82.5          |      |   |



GENCHEM  
- 5a -  
MATRIX SPIKE DUPLICATE SUMMARY

client: LB90235 level: low sdg no.: LB90235  
contract: lab code: CHEM case no.: LB90235 sas no.: LB90235  
matrix: WATER sample id: I5321-01 client id: 20170610-COMP-AMSD  
Percent Solids for Sample: 0 Spiked ID: I5321-01MSD Percent Solids for Spike Sample: 0

| Analyte | Units | Acceptance<br>Limit %R | MSD<br>Result | C | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M |
|---------|-------|------------------------|---------------|---|------------------|---|----------------|---------------|------|---|
| Cyanide | mg/L  | 75 - 125               | 0.033         |   | 0.003            | U | 0.04           | 82.5          |      |   |

# GENCHEM

- 6 -

## DUPLICATE SAMPLE SUMMARY

**Client:** LB90235      **Level:** LOW      **SDG No.:** LB90235  
**Contract:**                           **Lab Code:** CHEM      **Case No.:** LB90235      **SAS No.:** LB90235  
**Matrix:** Solid      **Sample ID:** I5309-01      **Client ID:** TP-1-4-COMPDUP  
**Percent Solids for Sample:** 89.5      **Duplicate ID** I5309-01DUP      **Percent Solids for Spike Sample:** 89.5

| Analyte | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C | RPD | Qual | M |
|---------|-------|------------------|---------------|---|------------------|---|-----|------|---|
| Cyanide | mg/Kg | 20               | 0.036         | U | -0.029           | U |     |      |   |

# GENCHEM

- 6 -

## DUPLICATE SAMPLE SUMMARY

**Client:** LB90235      **Level:** LOW      **SDG No.:** LB90235  
**Contract:**                           **Lab Code:** CHEM      **Case No.:** LB90235      **SAS No.:** LB90235  
**Matrix:** Solid      **Sample ID:** I5309-01MS      **Client ID:** TP-1-4-COMPMSD  
**Percent Solids for Sample:** 89.5      **Duplicate ID** I5309-01MSD      **Percent Solids for Spike Sample:** 89.5

| Analyte | Units | Acceptance<br>Limit | Sample<br>Result | C | Duplicate<br>Result | C | RPD | Qual | M |
|---------|-------|---------------------|------------------|---|---------------------|---|-----|------|---|
| Cyanide | mg/Kg | 20                  | 2                |   | 2                   |   | 0   |      |   |

## GENCHEM

- 6 -

## DUPLICATE SAMPLE SUMMARY

Client: LB90235 Level: LOW SDG No.: LB90235  
Contract: \_\_\_\_\_ Lab Code: CHEM Case No.: LB90235 SAS No.: LB90235  
Matrix: WATER Sample ID: I5321-01 Client ID: 20170610-COMP-ADUP  
Percent Solids for Sample: 0 Duplicate ID I5321-01DUP Percent Solids for Spike Sample: 0

| Analyte | Units | Acceptance<br>Limit | Sample<br>Result | C | Duplicate<br>Result | C | RPD | Qual | M |
|---------|-------|---------------------|------------------|---|---------------------|---|-----|------|---|
| Cyanide | mg/L  | 20                  | 0.003            | U | 0.00021             | U |     |      |   |

# GENCHEM

- 6 -

## DUPLICATE SAMPLE SUMMARY

**Client:** LB90235      **Level:** LOW      **SDG No.:** LB90235  
**Contract:**                           **Lab Code:** CHEM      **Case No.:** LB90235      **SAS No.:** LB90235  
**Matrix:** WATER      **Sample ID:** I5321-01MS      **Client ID:** 20170610-COMP-AMSD  
**Percent Solids for Sample:** 0      **Duplicate ID** I5321-01MSD      **Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance<br>Limit | Sample<br>Result | C | Duplicate<br>Result | C | RPD | Qual | M |
|---------|-------|---------------------|------------------|---|---------------------|---|-----|------|---|
| Cyanide | mg/L  | 20                  | 0.033            |   | 0.033               |   | 0   |      |   |





GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB90235

SDG No.: LB90235

Contract:

Lab Code: CHEM

Case No.: LB90235

SAS No.: LB90235

| Analyte               | Units | True Value | Result | C | %<br>Recovery | Acceptance<br>Limits | M |
|-----------------------|-------|------------|--------|---|---------------|----------------------|---|
| PB102507BS<br>Cyanide | mg/L  | 0.1        | 0.097  |   | 97            | 85 - 115             |   |