

Table 9. Logan Wash Mine Evaporation Pond Soil Data

|                                                                                         |             | EAST BACKGROUND    |                    |                                 |                     |                     |                                  |
|-----------------------------------------------------------------------------------------|-------------|--------------------|--------------------|---------------------------------|---------------------|---------------------|----------------------------------|
| SampleID                                                                                |             | LW-EB1: 5.0-7.0 FT | LW-EB1: 5.0-7.0 FT | LW-EB1: 5.0-7.0 FT<br>Composite | LW-EB1: 8.0-10.0 FT | LW-EB1: 8.0-10.0 FT | LW-EB1: 8.0-10.0 FT<br>Composite |
| Sample Date                                                                             |             | 2/9/2018           | 2/9/2018           | 2/9/2018                        | 2/9/2018            | 2/9/2018            | 2/9/2018                         |
| Parameters                                                                              | Units       |                    |                    |                                 |                     |                     |                                  |
| <b>General Chemistry</b>                                                                |             |                    |                    |                                 |                     |                     |                                  |
| Chloride                                                                                | mg/Kg       | ---                | ---                | 40 J                            | ---                 | ---                 | 70                               |
| Electrical Conductivity @ Saturation                                                    | mmhos/cm    | ---                | ---                | 10                              | ---                 | ---                 | 8.9                              |
| Fluoride                                                                                | mg/Kg       | ---                | ---                | 5.0 J                           | ---                 | ---                 | 7.6                              |
| Moisture                                                                                | % of sample | 10                 | 10                 | 10                              | 11                  | 11                  | 11                               |
| Nitrogen, Ammonia                                                                       | mg/Kg       | ---                | ---                | 8.6 J                           | ---                 | ---                 | 7.2 J                            |
| Nitrogen, Nitrate                                                                       | mg/Kg       | ---                | ---                | 3.6 J                           | ---                 | ---                 | 8.3                              |
| pH                                                                                      | s.u.        | ---                | ---                | 7.8                             | ---                 | ---                 | 7.87                             |
| Salinity                                                                                | mg/Kg       | ---                | ---                | 5500                            | ---                 | ---                 | 4600                             |
| Sodium Adsorption Ratio                                                                 | none        | ---                | ---                | 12                              | ---                 | ---                 | 10                               |
| Sulfate                                                                                 | mg/Kg       | ---                | ---                | 4500                            | ---                 | ---                 | 5100                             |
| <b>Metals</b>                                                                           |             |                    |                    |                                 |                     |                     |                                  |
| Arsenic                                                                                 | mg/Kg       | ---                | ---                | 4.9                             | ---                 | ---                 | 5                                |
| Boron                                                                                   | mg/Kg       | ---                | ---                | 41                              | ---                 | ---                 | 42                               |
| Calcium                                                                                 | mg/Kg       | ---                | ---                | 33000                           | ---                 | ---                 | 23000                            |
| Calcium                                                                                 | mg/L        | ---                | ---                | 450                             | ---                 | ---                 | 480                              |
| Magnesium                                                                               | mg/Kg       | ---                | ---                | 8800                            | ---                 | ---                 | 8700                             |
| Magnesium                                                                               | mg/L        | ---                | ---                | 220                             | ---                 | ---                 | 160                              |
| Potassium                                                                               | mg/Kg       | ---                | ---                | 2500                            | ---                 | ---                 | 2500                             |
| Selenium                                                                                | mg/Kg       | ---                | ---                | 12                              | ---                 | ---                 | 11                               |
| Sodium                                                                                  | mg/Kg       | ---                | ---                | 3900                            | ---                 | ---                 | 3100                             |
| Sodium                                                                                  | mg/L        | ---                | ---                | 1200                            | ---                 | ---                 | 990                              |
| <b>Volatile Organic Compounds - BTEX</b>                                                |             |                    |                    |                                 |                     |                     |                                  |
| Benzene                                                                                 | ug/Kg-dry   | ---                | ---                | 6.3 U                           | ---                 | ---                 | 6.4 U                            |
| Ethylbenzene                                                                            | ug/Kg-dry   | ---                | ---                | 7.7 U                           | ---                 | ---                 | 7.9 U                            |
| Toluene                                                                                 | ug/Kg-dry   | ---                | ---                | 10 U                            | ---                 | ---                 | 10 U                             |
| m,p-Xylene                                                                              | ug/Kg-dry   | ---                | ---                | 17 U                            | ---                 | ---                 | 18 U                             |
| o-Xylene                                                                                | ug/Kg-dry   | ---                | ---                | 14 U                            | ---                 | ---                 | 14 U                             |
| Xylenes, Total                                                                          | ug/Kg-dry   | ---                | ---                | 32 U                            | ---                 | ---                 | 32 U                             |
| <b>Petroleum Products</b>                                                               |             |                    |                    |                                 |                     |                     |                                  |
| DRO (C10-C28)                                                                           | mg/Kg       | ---                | ---                | 3.2 U                           | ---                 | ---                 | 3.1 U                            |
| GRO (C6-C10)                                                                            | ug/Kg-dry   | ---                | ---                | 2600 U                          | ---                 | ---                 | 2600 U                           |
| <b>Volatile Organic Compounds</b>                                                       |             |                    |                    |                                 |                     |                     |                                  |
| 2,3,4,6-Tetrachlorophenol                                                               | ug/Kg       | ---                | ---                | 9.6 U                           | ---                 | ---                 | 9.5 U                            |
| 2,3,5,6-Tetrachlorophenol                                                               | ug/Kg       | ---                | ---                | 9.6 U                           | ---                 | ---                 | 9.5 U                            |
| 2,4,5-Trichlorophenol                                                                   | ug/Kg       | ---                | ---                | 10 U                            | ---                 | ---                 | 10 U                             |
| 2,4,6-Tribromophenol                                                                    | ug/Kg       | ---                | ---                | 2100                            | ---                 | ---                 | 1900                             |
| 2,4,6-Trichlorophenol                                                                   | ug/Kg       | ---                | ---                | 9.8 U                           | ---                 | ---                 | 9.8 U                            |
| 2,4-Dichlorophenol                                                                      | ug/Kg       | ---                | ---                | 7.7 U                           | ---                 | ---                 | 7.7 U                            |
| 2,4-Dimethylphenol                                                                      | ug/Kg       | ---                | ---                | 7.5 U                           | ---                 | ---                 | 7.5 U                            |
| 2,4-Dinitrophenol                                                                       | ug/Kg       | ---                | ---                | 20 U                            | ---                 | ---                 | 20 U                             |
| 2,6-Dichlorophenol                                                                      | ug/Kg       | ---                | ---                | 9.4 U                           | ---                 | ---                 | 9.4 U                            |
| 2-Chlorophenol                                                                          | ug/Kg       | ---                | ---                | 12 U                            | ---                 | ---                 | 12 U                             |
| 2-Methylphenol                                                                          | ug/Kg       | ---                | ---                | 9.9 U                           | ---                 | ---                 | 9.9 U                            |
| 2-Nitrophenol                                                                           | ug/Kg       | ---                | ---                | 10 U                            | ---                 | ---                 | 10 U                             |
| 3&4-Methylphenol                                                                        | ug/Kg       | ---                | ---                | 7.4 U                           | ---                 | ---                 | 7.4 U                            |
| 4,6-Dinitro-2-methylphenol                                                              | ug/Kg       | ---                | ---                | 9.2 U                           | ---                 | ---                 | 9.2 U                            |
| 4-Chloro-3-methylphenol                                                                 | ug/Kg       | ---                | ---                | 10 U                            | ---                 | ---                 | 10 U                             |
| 4-Nitrophenol                                                                           | ug/Kg       | ---                | ---                | 33 U                            | ---                 | ---                 | 33 U                             |
| Dibromofluoromethane                                                                    | ug/Kg-dry   | ---                | ---                | 1200                            | ---                 | ---                 | 1200                             |
| Pentachlorophenol                                                                       | ug/Kg       | ---                | ---                | 14 U                            | ---                 | ---                 | 14 U                             |
| Phenol                                                                                  | ug/Kg       | ---                | ---                | 9.1 U                           | ---                 | ---                 | 9.1 U                            |
| Notes:                                                                                  |             |                    |                    |                                 |                     |                     |                                  |
| U = result not detected at the reporting limit                                          |             |                    |                    |                                 |                     |                     |                                  |
| J = result value greater than the MDL and less than the RL; result considered estimated |             |                    |                    |                                 |                     |                     |                                  |

Table 9. Logan Wash Mine Evaporation Pond Soil Data

|                                                                                                                                       |             | NORTHEAST BACKGROUND |                     |                                  |                      |                      |                                   |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------|---------------------|----------------------------------|----------------------|----------------------|-----------------------------------|
| SampleID                                                                                                                              |             | LW-NEB1: 5.0-7.0 FT  | LW-NEB1: 5.0-7.0 FT | LW-NEB1: 5.0-7.0 FT<br>Composite | LW-NEB1: 8.0-10.0 FT | LW-NEB1: 8.0-10.0 FT | LW-NEB1: 8.0-10.0 FT<br>Composite |
| Sample Date                                                                                                                           |             | 2/9/2018             | 2/9/2018            | 2/9/2018                         | 2/9/2018             | 2/9/2018             | 2/9/2018                          |
| Parameters                                                                                                                            | Units       |                      |                     |                                  |                      |                      |                                   |
| <b>General Chemistry</b>                                                                                                              |             |                      |                     |                                  |                      |                      |                                   |
| Chloride                                                                                                                              | mg/Kg       | ---                  | ---                 | 36 J                             | ---                  | ---                  | 21 J                              |
| Electrical Conductivity @ Saturation                                                                                                  | mmhos/cm    | ---                  | ---                 | 16                               | ---                  | ---                  | 15                                |
| Fluoride                                                                                                                              | mg/Kg       | ---                  | ---                 | 11 U                             | ---                  | ---                  | 6.6                               |
| Moisture                                                                                                                              | % of sample | 19                   | 19                  | 19                               | 17                   | 17                   | 17                                |
| Nitrogen, Ammonia                                                                                                                     | mg/Kg       | ---                  | ---                 | 16                               | ---                  | ---                  | 5.1 J                             |
| Nitrogen, Nitrate                                                                                                                     | mg/Kg       | ---                  | ---                 | 7.2 J                            | ---                  | ---                  | 8.1                               |
| pH                                                                                                                                    | s.u.        | ---                  | ---                 | 4.14                             | ---                  | ---                  | 3.78                              |
| Salinity                                                                                                                              | mg/Kg       | ---                  | ---                 | 9800                             | ---                  | ---                  | 9800                              |
| Sodium Adsorption Ratio                                                                                                               | none        | ---                  | ---                 | 12                               | ---                  | ---                  | 8.4                               |
| Sulfate                                                                                                                               | mg/Kg       | ---                  | ---                 | 10000                            | ---                  | ---                  | 8300                              |
| <b>Metals</b>                                                                                                                         |             |                      |                     |                                  |                      |                      |                                   |
| Arsenic                                                                                                                               | mg/Kg       | ---                  | ---                 | 93                               | ---                  | ---                  | 17                                |
| Boron                                                                                                                                 | mg/Kg       | ---                  | ---                 | 56                               | ---                  | ---                  | 36                                |
| Calcium                                                                                                                               | mg/Kg       | ---                  | ---                 | 20000                            | ---                  | ---                  | 14000                             |
| Calcium                                                                                                                               | mg/L        | ---                  | ---                 | 420                              | ---                  | ---                  | 400                               |
| Magnesium                                                                                                                             | mg/Kg       | ---                  | ---                 | 4700                             | ---                  | ---                  | 5500                              |
| Magnesium                                                                                                                             | mg/L        | ---                  | ---                 | 700                              | ---                  | ---                  | 730                               |
| Potassium                                                                                                                             | mg/Kg       | ---                  | ---                 | 1600                             | ---                  | ---                  | 1600                              |
| Selenium                                                                                                                              | mg/Kg       | ---                  | ---                 | 5.2                              | ---                  | ---                  | 16                                |
| Sodium                                                                                                                                | mg/Kg       | ---                  | ---                 | 8400                             | ---                  | ---                  | 5100                              |
| Sodium                                                                                                                                | mg/L        | ---                  | ---                 | 1700                             | ---                  | ---                  | 1200                              |
| <b>Volatile Organic Compounds - BTEX</b>                                                                                              |             |                      |                     |                                  |                      |                      |                                   |
| Benzene                                                                                                                               | ug/Kg-dry   | ---                  | ---                 | 7.5 U                            | ---                  | ---                  | 7.2 U                             |
| Ethylbenzene                                                                                                                          | ug/Kg-dry   | ---                  | ---                 | 9.3 U                            | ---                  | ---                  | 8.9 U                             |
| Toluene                                                                                                                               | ug/Kg-dry   | ---                  | ---                 | 46                               | ---                  | ---                  | 33 J                              |
| m,p-Xylene                                                                                                                            | ug/Kg-dry   | ---                  | ---                 | 21 U                             | ---                  | ---                  | 20 U                              |
| o-Xylene                                                                                                                              | ug/Kg-dry   | ---                  | ---                 | 17 U                             | ---                  | ---                  | 16 U                              |
| Xylenes, Total                                                                                                                        | ug/Kg-dry   | ---                  | ---                 | 38 U                             | ---                  | ---                  | 36 U                              |
| <b>Petroleum Products</b>                                                                                                             |             |                      |                     |                                  |                      |                      |                                   |
| DRO (C10-C28)                                                                                                                         | mg/Kg       | ---                  | ---                 | 3.5 U                            | ---                  | ---                  | 3.4 U                             |
| GRO (C6-C10)                                                                                                                          | ug/Kg-dry   | ---                  | ---                 | 3100 U                           | ---                  | ---                  | 2900 U                            |
| <b>Volatile Organic Compounds</b>                                                                                                     |             |                      |                     |                                  |                      |                      |                                   |
| 2,3,4,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                  | ---                 | 11 U                             | ---                  | ---                  | 10 U                              |
| 2,3,5,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                  | ---                 | 11 U                             | ---                  | ---                  | 10 U                              |
| 2,4,5-Trichlorophenol                                                                                                                 | ug/Kg       | ---                  | ---                 | 11 U                             | ---                  | ---                  | 11 U                              |
| 2,4,6-Tribromophenol                                                                                                                  | ug/Kg       | ---                  | ---                 | 2500                             | ---                  | ---                  | 2400                              |
| 2,4,6-Trichlorophenol                                                                                                                 | ug/Kg       | ---                  | ---                 | 11 U                             | ---                  | ---                  | 11 U                              |
| 2,4-Dichlorophenol                                                                                                                    | ug/Kg       | ---                  | ---                 | 8.6 U                            | ---                  | ---                  | 8.4 U                             |
| 2,4-Dimethylphenol                                                                                                                    | ug/Kg       | ---                  | ---                 | 8.3 U                            | ---                  | ---                  | 8.1 U                             |
| 2,4-Dinitrophenol                                                                                                                     | ug/Kg       | ---                  | ---                 | 22 U                             | ---                  | ---                  | 22 U                              |
| 2,6-Dichlorophenol                                                                                                                    | ug/Kg       | ---                  | ---                 | 10 U                             | ---                  | ---                  | 10 U                              |
| 2-Chlorophenol                                                                                                                        | ug/Kg       | ---                  | ---                 | 13 U                             | ---                  | ---                  | 13 U                              |
| 2-Methylphenol                                                                                                                        | ug/Kg       | ---                  | ---                 | 11 U                             | ---                  | ---                  | 11 U                              |
| 2-Nitrophenol                                                                                                                         | ug/Kg       | ---                  | ---                 | 12 U                             | ---                  | ---                  | 11 U                              |
| 3&4-Methylphenol                                                                                                                      | ug/Kg       | ---                  | ---                 | 8.2 U                            | ---                  | ---                  | 8.0 U                             |
| 4,6-Dinitro-2-methylphenol                                                                                                            | ug/Kg       | ---                  | ---                 | 10 U                             | ---                  | ---                  | 10 U                              |
| 4-Chloro-3-methylphenol                                                                                                               | ug/Kg       | ---                  | ---                 | 12 U                             | ---                  | ---                  | 11 U                              |
| 4-Nitrophenol                                                                                                                         | ug/Kg       | ---                  | ---                 | 36 U                             | ---                  | ---                  | 36 U                              |
| Dibromofluoromethane                                                                                                                  | ug/Kg-dry   | ---                  | ---                 | 1400                             | ---                  | ---                  | 1400                              |
| Pentachlorophenol                                                                                                                     | ug/Kg       | ---                  | ---                 | 15 U                             | ---                  | ---                  | 15 U                              |
| Phenol                                                                                                                                | ug/Kg       | ---                  | ---                 | 10 U                             | ---                  | ---                  | 9.9 U                             |
| Notes:<br>U = result not detected at the reporting limit<br>J = result value greater than the MDL and less than the RL; result consid |             |                      |                     |                                  |                      |                      |                                   |

Table 9. Logan Wash Mine Evaporation Pond Soil Data

|                                                                                                                                       |             | NORTHWEST BACKGROUND |                     |                                  |                      |                      |                                   |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------|---------------------|----------------------------------|----------------------|----------------------|-----------------------------------|
| SampleID                                                                                                                              |             | LW-NWB1: 5.0-7.0 FT  | LW-NWB1: 5.0-7.0 FT | LW-NWB1: 5.0-7.0 FT<br>Composite | LW-NWB1: 8.0-10.0 FT | LW-NWB1: 8.0-10.0 FT | LW-NWB1: 8.0-10.0 FT<br>Composite |
| Sample Date                                                                                                                           |             | 2/9/2018             | 2/9/2018            | 2/9/2018                         | 2/9/2018             | 2/9/2018             | 2/9/2018                          |
| Parameters                                                                                                                            | Units       |                      |                     |                                  |                      |                      |                                   |
| <b>General Chemistry</b>                                                                                                              |             |                      |                     |                                  |                      |                      |                                   |
| Chloride                                                                                                                              | mg/Kg       | ---                  | ---                 | 6.4 J                            | ---                  | ---                  | 8.7 J                             |
| Electrical Conductivity @ Saturation                                                                                                  | mmhos/cm    | ---                  | ---                 | 6.4                              | ---                  | ---                  | 7.2                               |
| Fluoride                                                                                                                              | mg/Kg       | ---                  | ---                 | 1.0 U                            | ---                  | ---                  | 6.9                               |
| Moisture                                                                                                                              | % of sample | 8.8                  | 8                   | 8.4                              | 10                   | 10                   | 10                                |
| Nitrogen, Ammonia                                                                                                                     | mg/Kg       | ---                  | ---                 | 5.5 J                            | ---                  | ---                  | 15 J                              |
| Nitrogen, Nitrate                                                                                                                     | mg/Kg       | ---                  | ---                 | 2.6                              | ---                  | ---                  | 3.5                               |
| pH                                                                                                                                    | s.u.        | ---                  | ---                 | 4.53                             | ---                  | ---                  | 7.41                              |
| Salinity                                                                                                                              | mg/Kg       | ---                  | ---                 | 3300                             | ---                  | ---                  | 3500                              |
| Sodium Adsorption Ratio                                                                                                               | none        | ---                  | ---                 | 2.3                              | ---                  | ---                  | 3.1                               |
| Sulfate                                                                                                                               | mg/Kg       | ---                  | ---                 | 3700                             | ---                  | ---                  | 4300                              |
| <b>Metals</b>                                                                                                                         |             |                      |                     |                                  |                      |                      |                                   |
| Arsenic                                                                                                                               | mg/Kg       | ---                  | ---                 | 12                               | ---                  | ---                  | 9.6                               |
| Boron                                                                                                                                 | mg/Kg       | ---                  | ---                 | 23                               | ---                  | ---                  | 36                                |
| Calcium                                                                                                                               | mg/Kg       | ---                  | ---                 | 5100                             | ---                  | ---                  | 22000                             |
| Calcium                                                                                                                               | mg/L        | ---                  | ---                 | 480                              | ---                  | ---                  | 480                               |
| Magnesium                                                                                                                             | mg/Kg       | ---                  | ---                 | 4500                             | ---                  | ---                  | 9100                              |
| Magnesium                                                                                                                             | mg/L        | ---                  | ---                 | 240                              | ---                  | ---                  | 320                               |
| Potassium                                                                                                                             | mg/Kg       | ---                  | ---                 | 1100                             | ---                  | ---                  | 1400                              |
| Selenium                                                                                                                              | mg/Kg       | ---                  | ---                 | 12                               | ---                  | ---                  | 14                                |
| Sodium                                                                                                                                | mg/Kg       | ---                  | ---                 | 330                              | ---                  | ---                  | 500                               |
| Sodium                                                                                                                                | mg/L        | ---                  | ---                 | 250                              | ---                  | ---                  | 360                               |
| <b>Volatile Organic Compounds - BTEX</b>                                                                                              |             |                      |                     |                                  |                      |                      |                                   |
| Benzene                                                                                                                               | ug/Kg-dry   | ---                  | ---                 | 6.1 U                            | ---                  | ---                  | 6.3 U                             |
| Ethylbenzene                                                                                                                          | ug/Kg-dry   | ---                  | ---                 | 7.5 U                            | ---                  | ---                  | 7.7 U                             |
| Toluene                                                                                                                               | ug/Kg-dry   | ---                  | ---                 | 9.7 U                            | ---                  | ---                  | 10 U                              |
| m,p-Xylene                                                                                                                            | ug/Kg-dry   | ---                  | ---                 | 17 U                             | ---                  | ---                  | 17 U                              |
| o-Xylene                                                                                                                              | ug/Kg-dry   | ---                  | ---                 | 14 U                             | ---                  | ---                  | 14 U                              |
| Xylenes, Total                                                                                                                        | ug/Kg-dry   | ---                  | ---                 | 31 U                             | ---                  | ---                  | 32 U                              |
| <b>Petroleum Products</b>                                                                                                             |             |                      |                     |                                  |                      |                      |                                   |
| DRO (C10-C28)                                                                                                                         | mg/Kg       | ---                  | ---                 | 3.1 U                            | ---                  | ---                  | 3.2 U                             |
| GRO (C6-C10)                                                                                                                          | ug/Kg-dry   | ---                  | ---                 | 2500 U                           | ---                  | ---                  | 2600 U                            |
| <b>Volatile Organic Compounds</b>                                                                                                     |             |                      |                     |                                  |                      |                      |                                   |
| 2,3,4,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                  | ---                 | 9.3 U                            | ---                  | ---                  | 9.5 U                             |
| 2,3,5,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                  | ---                 | 9.3 U                            | ---                  | ---                  | 9.5 U                             |
| 2,4,5-Trichlorophenol                                                                                                                 | ug/Kg       | ---                  | ---                 | 9.8 U                            | ---                  | ---                  | 9.9 U                             |
| 2,4,6-Tribromophenol                                                                                                                  | ug/Kg       | ---                  | ---                 | 380 S                            | ---                  | ---                  | 1900                              |
| 2,4,6-Trichlorophenol                                                                                                                 | ug/Kg       | ---                  | ---                 | 9.5 U                            | ---                  | ---                  | 9.7 U                             |
| 2,4-Dichlorophenol                                                                                                                    | ug/Kg       | ---                  | ---                 | 7.5 U                            | ---                  | ---                  | 7.7 U                             |
| 2,4-Dimethylphenol                                                                                                                    | ug/Kg       | ---                  | ---                 | 7.3 U                            | ---                  | ---                  | 7.4 U                             |
| 2,4-Dinitrophenol                                                                                                                     | ug/Kg       | ---                  | ---                 | 19 U                             | ---                  | ---                  | 20 U                              |
| 2,6-Dichlorophenol                                                                                                                    | ug/Kg       | ---                  | ---                 | 9.1 U                            | ---                  | ---                  | 9.3 U                             |
| 2-Chlorophenol                                                                                                                        | ug/Kg       | ---                  | ---                 | 11 U                             | ---                  | ---                  | 11 U                              |
| 2-Methylphenol                                                                                                                        | ug/Kg       | ---                  | ---                 | 9.7 U                            | ---                  | ---                  | 9.8 U                             |
| 2-Nitrophenol                                                                                                                         | ug/Kg       | ---                  | ---                 | 10 U                             | ---                  | ---                  | 10 U                              |
| 3&4-Methylphenol                                                                                                                      | ug/Kg       | ---                  | ---                 | 7.2 U                            | ---                  | ---                  | 7.3 U                             |
| 4,6-Dinitro-2-methylphenol                                                                                                            | ug/Kg       | ---                  | ---                 | 9.0 U                            | ---                  | ---                  | 9.1 U                             |
| 4-Chloro-3-methylphenol                                                                                                               | ug/Kg       | ---                  | ---                 | 10 U                             | ---                  | ---                  | 10 U                              |
| 4-Nitrophenol                                                                                                                         | ug/Kg       | ---                  | ---                 | 32 U                             | ---                  | ---                  | 33 U                              |
| Dibromofluoromethane                                                                                                                  | ug/Kg-dry   | ---                  | ---                 | 1200                             | ---                  | ---                  | 1200                              |
| Pentachlorophenol                                                                                                                     | ug/Kg       | ---                  | ---                 | 13 U                             | ---                  | ---                  | 13 U                              |
| Phenol                                                                                                                                | ug/Kg       | ---                  | ---                 | 8.9 U                            | ---                  | ---                  | 9.0 U                             |
| Notes:<br>U = result not detected at the reporting limit<br>J = result value greater than the MDL and less than the RL; result consid |             |                      |                     |                                  |                      |                      |                                   |

Table 9. Logan Wash Mine Evaporation Pond Soil Data

|                                                                                                                                       |             | CENTER POND - DRY                       |                                         |                                                   |                                         |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------------|-----------------------------------------|---------------------------------------------------|-----------------------------------------|
| SampleID                                                                                                                              |             | LW-POND-C1: 0.0-0.5<br>FT<br>11/15/2017 | LW-POND-C1: 0.5-1.0<br>FT<br>11/15/2017 | LW-POND-C1: 0.0-1.0<br>FT Composite<br>11/15/2017 | LW-POND-C1: 2.4-2.8<br>FT<br>11/15/2017 |
| Sample Date                                                                                                                           | Units       |                                         |                                         |                                                   |                                         |
| Parameters                                                                                                                            |             |                                         |                                         |                                                   |                                         |
| <b>General Chemistry</b>                                                                                                              |             |                                         |                                         |                                                   |                                         |
| Chloride                                                                                                                              | mg/Kg       | ---                                     | ---                                     | 69                                                | 79                                      |
| Electrical Conductivity @ Saturation                                                                                                  | mmhos/cm    | ---                                     | ---                                     | 9.3                                               | 17                                      |
| Fluoride                                                                                                                              | mg/Kg       | ---                                     | ---                                     | 4.1                                               | 6.5                                     |
| Moisture                                                                                                                              | % of sample | 15                                      | 14                                      | 15                                                | 11                                      |
| Nitrogen, Ammonia                                                                                                                     | mg/Kg       | ---                                     | ---                                     | 3.0 U                                             | 5.0 J                                   |
| Nitrogen, Nitrate                                                                                                                     | mg/Kg       | ---                                     | ---                                     | 16                                                | 5                                       |
| pH                                                                                                                                    | s.u.        | ---                                     | ---                                     | 7.7                                               | 7.6                                     |
| Salinity                                                                                                                              | mg/Kg       | ---                                     | ---                                     | 3300                                              | 4700                                    |
| Sodium Adsorption Ratio                                                                                                               | none        | ---                                     | ---                                     | 11                                                | 20                                      |
| Sulfate                                                                                                                               | mg/Kg       | ---                                     | ---                                     | 2800                                              | 2700                                    |
| <b>Metals</b>                                                                                                                         |             |                                         |                                         |                                                   |                                         |
| Arsenic                                                                                                                               | mg/Kg       | ---                                     | ---                                     | 8.4                                               | 8                                       |
| Boron                                                                                                                                 | mg/Kg       | ---                                     | ---                                     | 0.38 U                                            | 0.37 U                                  |
| Calcium                                                                                                                               | mg/Kg       | ---                                     | ---                                     | 33000                                             | 9500                                    |
| Calcium                                                                                                                               | mg/L        | ---                                     | ---                                     | 460                                               | 420                                     |
| Magnesium                                                                                                                             | mg/Kg       | ---                                     | ---                                     | 4700                                              | 9500                                    |
| Magnesium                                                                                                                             | mg/L        | ---                                     | ---                                     | 88                                                | 310                                     |
| Potassium                                                                                                                             | mg/Kg       | ---                                     | ---                                     | 1400                                              | 1700                                    |
| Selenium                                                                                                                              | mg/Kg       | ---                                     | ---                                     | 2                                                 | 1.9                                     |
| Sodium                                                                                                                                | mg/Kg       | ---                                     | ---                                     | 2200                                              | 2900                                    |
| Sodium                                                                                                                                | mg/L        | ---                                     | ---                                     | 970                                               | 2200                                    |
| <b>Volatile Organic Compounds - BTEX</b>                                                                                              |             |                                         |                                         |                                                   |                                         |
| Benzene                                                                                                                               | ug/Kg-dry   | ---                                     | ---                                     | 6.9 U                                             | 6.4 U                                   |
| Ethylbenzene                                                                                                                          | ug/Kg-dry   | ---                                     | ---                                     | 8.6 U                                             | 7.9 U                                   |
| Toluene                                                                                                                               | ug/Kg-dry   | ---                                     | ---                                     | 11 U                                              | 10 U                                    |
| m,p-Xylene                                                                                                                            | ug/Kg-dry   | ---                                     | ---                                     | 19 U                                              | 18 U                                    |
| o-Xylene                                                                                                                              | ug/Kg-dry   | ---                                     | ---                                     | 16 U                                              | 14 U                                    |
| Xylenes, Total                                                                                                                        | ug/Kg-dry   | ---                                     | ---                                     | 35 U                                              | 32 U                                    |
| <b>Petroleum Products</b>                                                                                                             |             |                                         |                                         |                                                   |                                         |
| DRO (C10-C28)                                                                                                                         | mg/Kg       | ---                                     | ---                                     | 3.2 U                                             | 3.2 U                                   |
| GRO (C6-C10)                                                                                                                          | ug/Kg-dry   | ---                                     | ---                                     | 2800 U                                            | 2600 U                                  |
| <b>Volatile Organic Compounds</b>                                                                                                     |             |                                         |                                         |                                                   |                                         |
| 2,3,4,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                                     | ---                                     | 9.8 U                                             | 9.6 U                                   |
| 2,3,5,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                                     | ---                                     | 9.7 U                                             | 9.6 U                                   |
| 2,4,5-Trichlorophenol                                                                                                                 | ug/Kg       | ---                                     | ---                                     | 10 U                                              | 10 U                                    |
| 2,4,6-Tribromophenol                                                                                                                  | ug/Kg       | ---                                     | ---                                     | 1500                                              | 1300                                    |
| 2,4,6-Trichlorophenol                                                                                                                 | ug/Kg       | ---                                     | ---                                     | 10 U                                              | 9.8 U                                   |
| 2,4-Dichlorophenol                                                                                                                    | ug/Kg       | ---                                     | ---                                     | 7.9 U                                             | 7.8 U                                   |
| 2,4-Dimethylphenol                                                                                                                    | ug/Kg       | ---                                     | ---                                     | 7.7 U                                             | 7.5 U                                   |
| 2,4-Dinitrophenol                                                                                                                     | ug/Kg       | ---                                     | ---                                     | 20 U                                              | 20 U                                    |
| 2,6-Dichlorophenol                                                                                                                    | ug/Kg       | ---                                     | ---                                     | 9.6 U                                             | 9.4 U                                   |
| 2-Chlorophenol                                                                                                                        | ug/Kg       | ---                                     | ---                                     | 12 U                                              | 12 U                                    |
| 2-Methylphenol                                                                                                                        | ug/Kg       | ---                                     | ---                                     | 10 U                                              | 10 U                                    |
| 2-Nitrophenol                                                                                                                         | ug/Kg       | ---                                     | ---                                     | 11 U                                              | 10 U                                    |
| 3&4-Methylphenol                                                                                                                      | ug/Kg       | ---                                     | ---                                     | 7.5 U                                             | 7.4 U                                   |
| 4,6-Dinitro-2-methylphenol                                                                                                            | ug/Kg       | ---                                     | ---                                     | 9.4 U                                             | 9.2 U                                   |
| 4-Chloro-3-methylphenol                                                                                                               | ug/Kg       | ---                                     | ---                                     | 11 U                                              | 10 U                                    |
| 4-Nitrophenol                                                                                                                         | ug/Kg       | ---                                     | ---                                     | 33 U                                              | 33 U                                    |
| Dibromofluoromethane                                                                                                                  | ug/Kg-dry   | ---                                     | ---                                     | 1400                                              | 1300                                    |
| Pentachlorophenol                                                                                                                     | ug/Kg       | ---                                     | ---                                     | 14 U                                              | 14 U                                    |
| Phenol                                                                                                                                | ug/Kg       | ---                                     | ---                                     | 9.3 U                                             | 9.1 U                                   |
| Notes:<br>U = result not detected at the reporting limit<br>J = result value greater than the MDL and less than the RL; result consid |             |                                         |                                         |                                                   |                                         |

Table 9. Logan Wash Mine Evaporation Pond Soil Data

|                                                                                                                                       |             | NORTHEAST POND - DRY                     |                                          |                                                    |                                          |                                          |                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------|------------------------------------------|----------------------------------------------------|------------------------------------------|------------------------------------------|----------------------------------------------------|
| SampleID                                                                                                                              |             | LW-POND-NE1: 0.0-0.5<br>FT<br>11/15/2017 | LW-POND-NE1: 0.5-1.0<br>FT<br>11/15/2017 | LW-POND-NE1: 0.0-1.0<br>FT Composite<br>11/15/2017 | LW-POND-NE1: 3.0-3.5<br>FT<br>11/15/2017 | LW-POND-NE1: 3.5-4.0<br>FT<br>11/15/2017 | LW-POND-NE1: 3.0-4.0<br>FT Composite<br>11/15/2017 |
| Sample Date                                                                                                                           | Units       |                                          |                                          |                                                    |                                          |                                          |                                                    |
| Parameters                                                                                                                            |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| <b>General Chemistry</b>                                                                                                              |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| Chloride                                                                                                                              | mg/Kg       | ---                                      | ---                                      | 37                                                 | ---                                      | ---                                      | 63                                                 |
| Electrical Conductivity @ Saturation                                                                                                  | mmhos/cm    | ---                                      | ---                                      | 15                                                 | ---                                      | ---                                      | 15                                                 |
| Fluoride                                                                                                                              | mg/Kg       | ---                                      | ---                                      | 3.7                                                | ---                                      | ---                                      | 2.2 U                                              |
| Moisture                                                                                                                              | % of sample | 13                                       | 20                                       | 16                                                 | 18                                       | 17                                       | 17                                                 |
| Nitrogen, Ammonia                                                                                                                     | mg/Kg       | ---                                      | ---                                      | 4.5 U                                              | ---                                      | ---                                      | 3.3 U                                              |
| Nitrogen, Nitrate                                                                                                                     | mg/Kg       | ---                                      | ---                                      | 13                                                 | ---                                      | ---                                      | 7.5                                                |
| pH                                                                                                                                    | s.u.        | ---                                      | ---                                      | 7.78                                               | ---                                      | ---                                      | 4.68                                               |
| Salinity                                                                                                                              | mg/Kg       | ---                                      | ---                                      | 5200                                               | ---                                      | ---                                      | 4800                                               |
| Sodium Adsorption Ratio                                                                                                               | none        | ---                                      | ---                                      | 14                                                 | ---                                      | ---                                      | 13                                                 |
| Sulfate                                                                                                                               | mg/Kg       | ---                                      | ---                                      | 2800                                               | ---                                      | ---                                      | 2400                                               |
| <b>Metals</b>                                                                                                                         |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| Arsenic                                                                                                                               | mg/Kg       | ---                                      | ---                                      | 9.9                                                | ---                                      | ---                                      | 25                                                 |
| Boron                                                                                                                                 | mg/Kg       | ---                                      | ---                                      | 0.49 U                                             | ---                                      | ---                                      | 0.48 U                                             |
| Calcium                                                                                                                               | mg/Kg       | ---                                      | ---                                      | 19000                                              | ---                                      | ---                                      | 2000                                               |
| Calcium                                                                                                                               | mg/L        | ---                                      | ---                                      | 460                                                | ---                                      | ---                                      | 410                                                |
| Magnesium                                                                                                                             | mg/Kg       | ---                                      | ---                                      | 6500                                               | ---                                      | ---                                      | 4600                                               |
| Magnesium                                                                                                                             | mg/L        | ---                                      | ---                                      | 430                                                | ---                                      | ---                                      | 400                                                |
| Potassium                                                                                                                             | mg/Kg       | ---                                      | ---                                      | 1800                                               | ---                                      | ---                                      | 2000                                               |
| Selenium                                                                                                                              | mg/Kg       | ---                                      | ---                                      | 2.5                                                | ---                                      | ---                                      | 2.8                                                |
| Sodium                                                                                                                                | mg/Kg       | ---                                      | ---                                      | 4600                                               | ---                                      | ---                                      | 2800                                               |
| Sodium                                                                                                                                | mg/L        | ---                                      | ---                                      | 1700                                               | ---                                      | ---                                      | 1500                                               |
| <b>Volatile Organic Compounds - BTEX</b>                                                                                              |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| Benzene                                                                                                                               | ug/Kg-dry   | ---                                      | ---                                      | 7.1 U                                              | ---                                      | ---                                      | 7.2 U                                              |
| Ethylbenzene                                                                                                                          | ug/Kg-dry   | ---                                      | ---                                      | 8.7 U                                              | ---                                      | ---                                      | 8.9 U                                              |
| Toluene                                                                                                                               | ug/Kg-dry   | ---                                      | ---                                      | 11 U                                               | ---                                      | ---                                      | 12 U                                               |
| m,p-Xylene                                                                                                                            | ug/Kg-dry   | ---                                      | ---                                      | 20 U                                               | ---                                      | ---                                      | 20 U                                               |
| o-Xylene                                                                                                                              | ug/Kg-dry   | ---                                      | ---                                      | 16 U                                               | ---                                      | ---                                      | 16 U                                               |
| Xylenes, Total                                                                                                                        | ug/Kg-dry   | ---                                      | ---                                      | 36 U                                               | ---                                      | ---                                      | 36 U                                               |
| <b>Petroleum Products</b>                                                                                                             |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| DRO (C10-C28)                                                                                                                         | mg/Kg       | ---                                      | ---                                      | 3.3 U                                              | ---                                      | ---                                      | 3.4 U                                              |
| GRO (C6-C10)                                                                                                                          | ug/Kg-dry   | ---                                      | ---                                      | 2900 U                                             | ---                                      | ---                                      | 2900 U                                             |
| <b>Volatile Organic Compounds</b>                                                                                                     |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| 2,3,4,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                                      | ---                                      | 10 U                                               | ---                                      | ---                                      | 10 U                                               |
| 2,3,5,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                                      | ---                                      | 10 U                                               | ---                                      | ---                                      | 10 U                                               |
| 2,4,5-Trichlorophenol                                                                                                                 | ug/Kg       | ---                                      | ---                                      | 10 U                                               | ---                                      | ---                                      | 11 U                                               |
| 2,4,6-Tribromophenol                                                                                                                  | ug/Kg       | ---                                      | ---                                      | 1700                                               | ---                                      | ---                                      | 1900                                               |
| 2,4,6-Trichlorophenol                                                                                                                 | ug/Kg       | ---                                      | ---                                      | 10 U                                               | ---                                      | ---                                      | 11 U                                               |
| 2,4-Dichlorophenol                                                                                                                    | ug/Kg       | ---                                      | ---                                      | 8.1 U                                              | ---                                      | ---                                      | 8.4 U                                              |
| 2,4-Dimethylphenol                                                                                                                    | ug/Kg       | ---                                      | ---                                      | 7.8 U                                              | ---                                      | ---                                      | 8.1 U                                              |
| 2,4-Dinitrophenol                                                                                                                     | ug/Kg       | ---                                      | ---                                      | 21 U                                               | ---                                      | ---                                      | 21 U                                               |
| 2,6-Dichlorophenol                                                                                                                    | ug/Kg       | ---                                      | ---                                      | 9.8 U                                              | ---                                      | ---                                      | 10 U                                               |
| 2-Chlorophenol                                                                                                                        | ug/Kg       | ---                                      | ---                                      | 12 U                                               | ---                                      | ---                                      | 12 U                                               |
| 2-Methylphenol                                                                                                                        | ug/Kg       | ---                                      | ---                                      | 10 U                                               | ---                                      | ---                                      | 11 U                                               |
| 2-Nitrophenol                                                                                                                         | ug/Kg       | ---                                      | ---                                      | 11 U                                               | ---                                      | ---                                      | 11 U                                               |
| 3&4-Methylphenol                                                                                                                      | ug/Kg       | ---                                      | ---                                      | 7.7 U                                              | ---                                      | ---                                      | 8.0 U                                              |
| 4,6-Dinitro-2-methylphenol                                                                                                            | ug/Kg       | ---                                      | ---                                      | 9.6 U                                              | ---                                      | ---                                      | 10 U                                               |
| 4-Chloro-3-methylphenol                                                                                                               | ug/Kg       | ---                                      | ---                                      | 11 U                                               | ---                                      | ---                                      | 11 U                                               |
| 4-Nitrophenol                                                                                                                         | ug/Kg       | ---                                      | ---                                      | 34 U                                               | ---                                      | ---                                      | 35 U                                               |
| Dibromofluoromethane                                                                                                                  | ug/Kg-dry   | ---                                      | ---                                      | 1500                                               | ---                                      | ---                                      | 1500                                               |
| Pentachlorophenol                                                                                                                     | ug/Kg       | ---                                      | ---                                      | 14 U                                               | ---                                      | ---                                      | 15 U                                               |
| Phenol                                                                                                                                | ug/Kg       | ---                                      | ---                                      | 9.5 U                                              | ---                                      | ---                                      | 9.8 U                                              |
| Notes:<br>U = result not detected at the reporting limit<br>J = result value greater than the MDL and less than the RL; result consid |             |                                          |                                          |                                                    |                                          |                                          |                                                    |

Table 9. Logan Wash Mine Evaporation Pond Soil Data

|                                                                                                                                       |             | NORTHWEST POND - DRY                     |                                          |                                                    |                                          |                                          |                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------|------------------------------------------|----------------------------------------------------|------------------------------------------|------------------------------------------|----------------------------------------------------|
| SampleID                                                                                                                              |             | LW-POND-NW1: 0.0-0.5<br>FT<br>11/16/2018 | LW-POND-NW1: 0.5-1.0<br>FT<br>11/16/2018 | LW-POND-NW1: 0.0-1.0<br>FT Composite<br>11/16/2018 | LW-POND-NW1: 3.0-3.5<br>FT<br>11/16/2018 | LW-POND-NW1: 3.5-4.0<br>FT<br>11/16/2018 | LW-POND-NW1: 3.0-4.0<br>FT Composite<br>11/16/2018 |
| Sample Date                                                                                                                           | Units       |                                          |                                          |                                                    |                                          |                                          |                                                    |
| Parameters                                                                                                                            |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| <b>General Chemistry</b>                                                                                                              |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| Chloride                                                                                                                              | mg/Kg       | ---                                      | ---                                      | 58                                                 | ---                                      | ---                                      | 200                                                |
| Electrical Conductivity @ Saturation                                                                                                  | mmhos/cm    | ---                                      | ---                                      | 7.6                                                | ---                                      | ---                                      | 10                                                 |
| Fluoride                                                                                                                              | mg/Kg       | ---                                      | ---                                      | 3.9                                                | ---                                      | ---                                      | 10 U                                               |
| Moisture                                                                                                                              | % of sample | 15                                       | 14                                       | 15                                                 | 15                                       | 16                                       | 15                                                 |
| Nitrogen, Ammonia                                                                                                                     | mg/Kg       | ---                                      | ---                                      | 3.0 U                                              | ---                                      | ---                                      | 3.2 U                                              |
| Nitrogen, Nitrate                                                                                                                     | mg/Kg       | ---                                      | ---                                      | 7.8                                                | ---                                      | ---                                      | 8.8 J                                              |
| pH                                                                                                                                    | s.u.        | ---                                      | ---                                      | 7.69                                               | ---                                      | ---                                      | 7.83                                               |
| Salinity                                                                                                                              | mg/Kg       | ---                                      | ---                                      | 3000                                               | ---                                      | ---                                      | 13000                                              |
| Sodium Adsorption Ratio                                                                                                               | none        | ---                                      | ---                                      | 5.2                                                | ---                                      | ---                                      | 8.8                                                |
| Sulfate                                                                                                                               | mg/Kg       | ---                                      | ---                                      | 2800                                               | ---                                      | ---                                      | 8200                                               |
| <b>Metals</b>                                                                                                                         |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| Arsenic                                                                                                                               | mg/Kg       | ---                                      | ---                                      | 7.4                                                | ---                                      | ---                                      | 9.3                                                |
| Boron                                                                                                                                 | mg/Kg       | ---                                      | ---                                      | 0.46 U                                             | ---                                      | ---                                      | 18                                                 |
| Calcium                                                                                                                               | mg/Kg       | ---                                      | ---                                      | 39000                                              | ---                                      | ---                                      | 50000                                              |
| Calcium                                                                                                                               | mg/L        | ---                                      | ---                                      | 520                                                | ---                                      | ---                                      | 470                                                |
| Magnesium                                                                                                                             | mg/Kg       | ---                                      | ---                                      | 6900                                               | ---                                      | ---                                      | 6100                                               |
| Magnesium                                                                                                                             | mg/L        | ---                                      | ---                                      | 170                                                | ---                                      | ---                                      | 280                                                |
| Potassium                                                                                                                             | mg/Kg       | ---                                      | ---                                      | 1900                                               | ---                                      | ---                                      | 1500                                               |
| Selenium                                                                                                                              | mg/Kg       | ---                                      | ---                                      | 2.1                                                | ---                                      | ---                                      | 1.6                                                |
| Sodium                                                                                                                                | mg/Kg       | ---                                      | ---                                      | 1500                                               | ---                                      | ---                                      | 2600                                               |
| Sodium                                                                                                                                | mg/L        | ---                                      | ---                                      | 540                                                | ---                                      | ---                                      | 980                                                |
| <b>Volatile Organic Compounds - BTEX</b>                                                                                              |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| Benzene                                                                                                                               | ug/Kg-dry   | ---                                      | ---                                      | 6.9 U                                              | ---                                      | ---                                      | 6.9 U                                              |
| Ethylbenzene                                                                                                                          | ug/Kg-dry   | ---                                      | ---                                      | 8.6 U                                              | ---                                      | ---                                      | 8.6 U                                              |
| Toluene                                                                                                                               | ug/Kg-dry   | ---                                      | ---                                      | 11 U                                               | ---                                      | ---                                      | 11 U                                               |
| m,p-Xylene                                                                                                                            | ug/Kg-dry   | ---                                      | ---                                      | 19 U                                               | ---                                      | ---                                      | 19 U                                               |
| o-Xylene                                                                                                                              | ug/Kg-dry   | ---                                      | ---                                      | 16 U                                               | ---                                      | ---                                      | 16 U                                               |
| Xylenes, Total                                                                                                                        | ug/Kg-dry   | ---                                      | ---                                      | 35 U                                               | ---                                      | ---                                      | 35 U                                               |
| <b>Petroleum Products</b>                                                                                                             |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| DRO (C10-C28)                                                                                                                         | mg/Kg       | ---                                      | ---                                      | 3.3 U                                              | ---                                      | ---                                      | 3.3 U                                              |
| GRO (C6-C10)                                                                                                                          | ug/Kg-dry   | ---                                      | ---                                      | 2800 U                                             | ---                                      | ---                                      | 2800 U                                             |
| <b>Volatile Organic Compounds</b>                                                                                                     |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| 2,3,4,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                                      | ---                                      | 9.7 U                                              | ---                                      | ---                                      | 10 U                                               |
| 2,3,5,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                                      | ---                                      | 9.7 U                                              | ---                                      | ---                                      | 10 U                                               |
| 2,4,5-Trichlorophenol                                                                                                                 | ug/Kg       | ---                                      | ---                                      | 10 U                                               | ---                                      | ---                                      | 11 U                                               |
| 2,4,6-Tribromophenol                                                                                                                  | ug/Kg       | ---                                      | ---                                      | 1400                                               | ---                                      | ---                                      | 1700                                               |
| 2,4,6-Trichlorophenol                                                                                                                 | ug/Kg       | ---                                      | ---                                      | 9.9 U                                              | ---                                      | ---                                      | 10 U                                               |
| 2,4-Dichlorophenol                                                                                                                    | ug/Kg       | ---                                      | ---                                      | 7.8 U                                              | ---                                      | ---                                      | 8.2 U                                              |
| 2,4-Dimethylphenol                                                                                                                    | ug/Kg       | ---                                      | ---                                      | 7.6 U                                              | ---                                      | ---                                      | 8.0 U                                              |
| 2,4-Dinitrophenol                                                                                                                     | ug/Kg       | ---                                      | ---                                      | 20 U                                               | ---                                      | ---                                      | 21 U                                               |
| 2,6-Dichlorophenol                                                                                                                    | ug/Kg       | ---                                      | ---                                      | 9.5 U                                              | ---                                      | ---                                      | 9.9 U                                              |
| 2-Chlorophenol                                                                                                                        | ug/Kg       | ---                                      | ---                                      | 12 U                                               | ---                                      | ---                                      | 12 U                                               |
| 2-Methylphenol                                                                                                                        | ug/Kg       | ---                                      | ---                                      | 10 U                                               | ---                                      | ---                                      | 11 U                                               |
| 2-Nitrophenol                                                                                                                         | ug/Kg       | ---                                      | ---                                      | 11 U                                               | ---                                      | ---                                      | 11 U                                               |
| 3&4-Methylphenol                                                                                                                      | ug/Kg       | ---                                      | ---                                      | 7.5 U                                              | ---                                      | ---                                      | 7.8 U                                              |
| 4,6-Dinitro-2-methylphenol                                                                                                            | ug/Kg       | ---                                      | ---                                      | 9.3 U                                              | ---                                      | ---                                      | 9.8 U                                              |
| 4-Chloro-3-methylphenol                                                                                                               | ug/Kg       | ---                                      | ---                                      | 11 U                                               | ---                                      | ---                                      | 11 U                                               |
| 4-Nitrophenol                                                                                                                         | ug/Kg       | ---                                      | ---                                      | 33 U                                               | ---                                      | ---                                      | 35 U                                               |
| Dibromofluoromethane                                                                                                                  | ug/Kg-dry   | ---                                      | ---                                      | 1500                                               | ---                                      | ---                                      | 1400                                               |
| Pentachlorophenol                                                                                                                     | ug/Kg       | ---                                      | ---                                      | 14 U                                               | ---                                      | ---                                      | 14 U                                               |
| Phenol                                                                                                                                | ug/Kg       | ---                                      | ---                                      | 9.2 U                                              | ---                                      | ---                                      | 9.7 U                                              |
| Notes:<br>U = result not detected at the reporting limit<br>J = result value greater than the MDL and less than the RL; result consid |             |                                          |                                          |                                                    |                                          |                                          |                                                    |

Table 9. Logan Wash Mine Evaporation Pond Soil Data

|                                                                                                                                       |             | SOUTHEAST POND - DRY                     |                                          |                                                    |                                          |                                          |                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------|------------------------------------------|----------------------------------------------------|------------------------------------------|------------------------------------------|----------------------------------------------------|
| SampleID                                                                                                                              |             | LW-POND-SE1: 0.0-0.5<br>FT<br>11/16/2018 | LW-POND-SE1: 0.5-1.0<br>FT<br>11/16/2018 | LW-POND-SE1: 0.0-1.0<br>FT Composite<br>11/16/2018 | LW-POND-SE1: 3.0-3.5<br>FT<br>11/16/2018 | LW-POND-SE1: 3.5-4.0<br>FT<br>11/16/2018 | LW-POND-SE1: 3.0-4.0<br>FT Composite<br>11/16/2018 |
| Sample Date                                                                                                                           | Units       |                                          |                                          |                                                    |                                          |                                          |                                                    |
| Parameters                                                                                                                            |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| <b>General Chemistry</b>                                                                                                              |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| Chloride                                                                                                                              | mg/Kg       | ---                                      | ---                                      | 600                                                | ---                                      | ---                                      | 410                                                |
| Electrical Conductivity @ Saturation                                                                                                  | mmhos/cm    | ---                                      | ---                                      | 27                                                 | ---                                      | ---                                      | 13                                                 |
| Fluoride                                                                                                                              | mg/Kg       | ---                                      | ---                                      | 3.1                                                | ---                                      | ---                                      | 2.6                                                |
| Moisture                                                                                                                              | % of sample | 19                                       | 21                                       | 20                                                 | 18                                       | 17                                       | 17                                                 |
| Nitrogen, Ammonia                                                                                                                     | mg/Kg       | ---                                      | ---                                      | 3.6 U                                              | ---                                      | ---                                      | 4.1 J                                              |
| Nitrogen, Nitrate                                                                                                                     | mg/Kg       | ---                                      | ---                                      | 5.2                                                | ---                                      | ---                                      | 2.7                                                |
| pH                                                                                                                                    | s.u.        | ---                                      | ---                                      | 7.88                                               | ---                                      | ---                                      | 7.57                                               |
| Salinity                                                                                                                              | mg/Kg       | ---                                      | ---                                      | 7800                                               | ---                                      | ---                                      | 5300                                               |
| Sodium Adsorption Ratio                                                                                                               | none        | ---                                      | ---                                      | 31                                                 | ---                                      | ---                                      | 13                                                 |
| Sulfate                                                                                                                               | mg/Kg       | ---                                      | ---                                      | 5500                                               | ---                                      | ---                                      | 2500                                               |
| <b>Metals</b>                                                                                                                         |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| Arsenic                                                                                                                               | mg/Kg       | ---                                      | ---                                      | 12                                                 | ---                                      | ---                                      | 7.7                                                |
| Boron                                                                                                                                 | mg/Kg       | ---                                      | ---                                      | 54                                                 | ---                                      | ---                                      | 0.43 U                                             |
| Calcium                                                                                                                               | mg/Kg       | ---                                      | ---                                      | 32000                                              | ---                                      | ---                                      | 13000                                              |
| Calcium                                                                                                                               | mg/L        | ---                                      | ---                                      | 510                                                | ---                                      | ---                                      | 490                                                |
| Magnesium                                                                                                                             | mg/Kg       | ---                                      | ---                                      | 5300                                               | ---                                      | ---                                      | 6400                                               |
| Magnesium                                                                                                                             | mg/L        | ---                                      | ---                                      | 480                                                | ---                                      | ---                                      | 270                                                |
| Potassium                                                                                                                             | mg/Kg       | ---                                      | ---                                      | 4000                                               | ---                                      | ---                                      | 1800                                               |
| Selenium                                                                                                                              | mg/Kg       | ---                                      | ---                                      | 2.4                                                | ---                                      | ---                                      | 2.7                                                |
| Sodium                                                                                                                                | mg/Kg       | ---                                      | ---                                      | 6000                                               | ---                                      | ---                                      | 4100                                               |
| Sodium                                                                                                                                | mg/L        | ---                                      | ---                                      | 4000                                               | ---                                      | ---                                      | 1500                                               |
| <b>Volatile Organic Compounds - BTEX</b>                                                                                              |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| Benzene                                                                                                                               | ug/Kg-dry   | ---                                      | ---                                      | 7.7 U                                              | ---                                      | ---                                      | 7.2 U                                              |
| Ethylbenzene                                                                                                                          | ug/Kg-dry   | ---                                      | ---                                      | 9.5 U                                              | ---                                      | ---                                      | 8.9 U                                              |
| Toluene                                                                                                                               | ug/Kg-dry   | ---                                      | ---                                      | 12 U                                               | ---                                      | ---                                      | 12 U                                               |
| m,p-Xylene                                                                                                                            | ug/Kg-dry   | ---                                      | ---                                      | 21 U                                               | ---                                      | ---                                      | 20 U                                               |
| o-Xylene                                                                                                                              | ug/Kg-dry   | ---                                      | ---                                      | 17 U                                               | ---                                      | ---                                      | 16 U                                               |
| Xylenes, Total                                                                                                                        | ug/Kg-dry   | ---                                      | ---                                      | 39 U                                               | ---                                      | ---                                      | 36 U                                               |
| <b>Petroleum Products</b>                                                                                                             |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| DRO (C10-C28)                                                                                                                         | mg/Kg       | ---                                      | ---                                      | 3.5 U                                              | ---                                      | ---                                      | 3.5 U                                              |
| GRO (C6-C10)                                                                                                                          | ug/Kg-dry   | ---                                      | ---                                      | 3100 U                                             | ---                                      | ---                                      | 2900 U                                             |
| <b>Volatile Organic Compounds</b>                                                                                                     |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| 2,3,4,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                                      | ---                                      | 11 U                                               | ---                                      | ---                                      | 10 U                                               |
| 2,3,5,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                                      | ---                                      | 11 U                                               | ---                                      | ---                                      | 10 U                                               |
| 2,4,5-Trichlorophenol                                                                                                                 | ug/Kg       | ---                                      | ---                                      | 11 U                                               | ---                                      | ---                                      | 11 U                                               |
| 2,4,6-Tribromophenol                                                                                                                  | ug/Kg       | ---                                      | ---                                      | 1300                                               | ---                                      | ---                                      | 1500                                               |
| 2,4,6-Trichlorophenol                                                                                                                 | ug/Kg       | ---                                      | ---                                      | 11 U                                               | ---                                      | ---                                      | 10 U                                               |
| 2,4-Dichlorophenol                                                                                                                    | ug/Kg       | ---                                      | ---                                      | 8.7 U                                              | ---                                      | ---                                      | 8.1 U                                              |
| 2,4-Dimethylphenol                                                                                                                    | ug/Kg       | ---                                      | ---                                      | 8.4 U                                              | ---                                      | ---                                      | 7.9 U                                              |
| 2,4-Dinitrophenol                                                                                                                     | ug/Kg       | ---                                      | ---                                      | 22 U                                               | ---                                      | ---                                      | 21 U                                               |
| 2,6-Dichlorophenol                                                                                                                    | ug/Kg       | ---                                      | ---                                      | 11 U                                               | ---                                      | ---                                      | 9.8 U                                              |
| 2-Chlorophenol                                                                                                                        | ug/Kg       | ---                                      | ---                                      | 13 U                                               | ---                                      | ---                                      | 12 U                                               |
| 2-Methylphenol                                                                                                                        | ug/Kg       | ---                                      | ---                                      | 11 U                                               | ---                                      | ---                                      | 10 U                                               |
| 2-Nitrophenol                                                                                                                         | ug/Kg       | ---                                      | ---                                      | 12 U                                               | ---                                      | ---                                      | 11 U                                               |
| 3&4-Methylphenol                                                                                                                      | ug/Kg       | ---                                      | ---                                      | 8.3 U                                              | ---                                      | ---                                      | 7.7 U                                              |
| 4,6-Dinitro-2-methylphenol                                                                                                            | ug/Kg       | ---                                      | ---                                      | 10 U                                               | ---                                      | ---                                      | 9.7 U                                              |
| 4-Chloro-3-methylphenol                                                                                                               | ug/Kg       | ---                                      | ---                                      | 12 U                                               | ---                                      | ---                                      | 11 U                                               |
| 4-Nitrophenol                                                                                                                         | ug/Kg       | ---                                      | ---                                      | 37 U                                               | ---                                      | ---                                      | 34 U                                               |
| Dibromofluoromethane                                                                                                                  | ug/Kg-dry   | ---                                      | ---                                      | 1500                                               | ---                                      | ---                                      | 1400                                               |
| Pentachlorophenol                                                                                                                     | ug/Kg       | ---                                      | ---                                      | 15 U                                               | ---                                      | ---                                      | 14 U                                               |
| Phenol                                                                                                                                | ug/Kg       | ---                                      | ---                                      | 10 U                                               | ---                                      | ---                                      | 9.6 U                                              |
| Notes:<br>U = result not detected at the reporting limit<br>J = result value greater than the MDL and less than the RL; result consid |             |                                          |                                          |                                                    |                                          |                                          |                                                    |

Table 9. Logan Wash Mine Evaporation Pond Soil Data

|                                                                                                                                       |             | SOUTHWEST POND - DRY                     |                                          |                                                    |                                          |                                          |                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------|------------------------------------------|----------------------------------------------------|------------------------------------------|------------------------------------------|----------------------------------------------------|
| SampleID                                                                                                                              |             | LW-POND-SW1: 0.0-0.5<br>FT<br>11/16/2018 | LW-POND-SW1: 0.5-1.0<br>FT<br>11/16/2018 | LW-POND-SW1: 0.0-1.0<br>FT Composite<br>11/16/2018 | LW-POND-SW1: 3.0-3.5<br>FT<br>11/16/2018 | LW-POND-SW1: 3.5-4.0<br>FT<br>11/16/2018 | LW-POND-SW1: 3.0-4.0<br>FT Composite<br>11/16/2018 |
| Sample Date                                                                                                                           | Units       |                                          |                                          |                                                    |                                          |                                          |                                                    |
| Parameters                                                                                                                            |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| <b>General Chemistry</b>                                                                                                              |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| Chloride                                                                                                                              | mg/Kg       | ---                                      | ---                                      | 91                                                 | ---                                      | ---                                      | 40                                                 |
| Electrical Conductivity @ Saturation                                                                                                  | mmhos/cm    | ---                                      | ---                                      | 7.5                                                | ---                                      | ---                                      | 14                                                 |
| Fluoride                                                                                                                              | mg/Kg       | ---                                      | ---                                      | 5.8                                                | ---                                      | ---                                      | 4.8                                                |
| Moisture                                                                                                                              | % of sample | 9.6                                      | 13                                       | 11                                                 | 15                                       | 16                                       | 15                                                 |
| Nitrogen, Ammonia                                                                                                                     | mg/Kg       | ---                                      | ---                                      | 3.3 U                                              | ---                                      | ---                                      | 3.9 U                                              |
| Nitrogen, Nitrate                                                                                                                     | mg/Kg       | ---                                      | ---                                      | 59                                                 | ---                                      | ---                                      | 20                                                 |
| pH                                                                                                                                    | s.u.        | ---                                      | ---                                      | 7.63                                               | ---                                      | ---                                      | 7.24                                               |
| Salinity                                                                                                                              | mg/Kg       | ---                                      | ---                                      | 3300                                               | ---                                      | ---                                      | 5400                                               |
| Sodium Adsorption Ratio                                                                                                               | none        | ---                                      | ---                                      | 7.6                                                | ---                                      | ---                                      | 13                                                 |
| Sulfate                                                                                                                               | mg/Kg       | ---                                      | ---                                      | 6900                                               | ---                                      | ---                                      | 2500                                               |
| <b>Metals</b>                                                                                                                         |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| Arsenic                                                                                                                               | mg/Kg       | ---                                      | ---                                      | 6.6                                                | ---                                      | ---                                      | 37                                                 |
| Boron                                                                                                                                 | mg/Kg       | ---                                      | ---                                      | 0.45 U                                             | ---                                      | ---                                      | 0.42 U                                             |
| Calcium                                                                                                                               | mg/Kg       | ---                                      | ---                                      | 36000                                              | ---                                      | ---                                      | 4100                                               |
| Calcium                                                                                                                               | mg/L        | ---                                      | ---                                      | 520                                                | ---                                      | ---                                      | 430                                                |
| Magnesium                                                                                                                             | mg/Kg       | ---                                      | ---                                      | 4500                                               | ---                                      | ---                                      | 6300                                               |
| Magnesium                                                                                                                             | mg/L        | ---                                      | ---                                      | 97                                                 | ---                                      | ---                                      | 440                                                |
| Potassium                                                                                                                             | mg/Kg       | ---                                      | ---                                      | 1600                                               | ---                                      | ---                                      | 2100                                               |
| Selenium                                                                                                                              | mg/Kg       | ---                                      | ---                                      | 2.1                                                | ---                                      | ---                                      | 4.1                                                |
| Sodium                                                                                                                                | mg/Kg       | ---                                      | ---                                      | 1300                                               | ---                                      | ---                                      | 3300                                               |
| Sodium                                                                                                                                | mg/L        | ---                                      | ---                                      | 730                                                | ---                                      | ---                                      | 1600                                               |
| <b>Volatile Organic Compounds - BTEX</b>                                                                                              |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| Benzene                                                                                                                               | ug/Kg-dry   | ---                                      | ---                                      | 6.4 U                                              | ---                                      | ---                                      | 6.9 U                                              |
| Ethylbenzene                                                                                                                          | ug/Kg-dry   | ---                                      | ---                                      | 7.9 U                                              | ---                                      | ---                                      | 8.6 U                                              |
| Toluene                                                                                                                               | ug/Kg-dry   | ---                                      | ---                                      | 10 U                                               | ---                                      | ---                                      | 11 U                                               |
| m,p-Xylene                                                                                                                            | ug/Kg-dry   | ---                                      | ---                                      | 18 U                                               | ---                                      | ---                                      | 19 U                                               |
| o-Xylene                                                                                                                              | ug/Kg-dry   | ---                                      | ---                                      | 14 U                                               | ---                                      | ---                                      | 16 U                                               |
| Xylenes, Total                                                                                                                        | ug/Kg-dry   | ---                                      | ---                                      | 32 U                                               | ---                                      | ---                                      | 35 U                                               |
| <b>Petroleum Products</b>                                                                                                             |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| DRO (C10-C28)                                                                                                                         | mg/Kg       | ---                                      | ---                                      | 3.2 U                                              | ---                                      | ---                                      | 3.4 U                                              |
| GRO (C6-C10)                                                                                                                          | ug/Kg-dry   | ---                                      | ---                                      | 2600 U                                             | ---                                      | ---                                      | 2800 U                                             |
| <b>Volatile Organic Compounds</b>                                                                                                     |             |                                          |                                          |                                                    |                                          |                                          |                                                    |
| 2,3,4,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                                      | ---                                      | 9.7 U                                              | ---                                      | ---                                      | 9.9 U                                              |
| 2,3,5,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                                      | ---                                      | 9.7 U                                              | ---                                      | ---                                      | 9.9 U                                              |
| 2,4,5-Trichlorophenol                                                                                                                 | ug/Kg       | ---                                      | ---                                      | 10 U                                               | ---                                      | ---                                      | 10 U                                               |
| 2,4,6-Tribromophenol                                                                                                                  | ug/Kg       | ---                                      | ---                                      | 1300                                               | ---                                      | ---                                      | 1800                                               |
| 2,4,6-Trichlorophenol                                                                                                                 | ug/Kg       | ---                                      | ---                                      | 9.9 U                                              | ---                                      | ---                                      | 10 U                                               |
| 2,4-Dichlorophenol                                                                                                                    | ug/Kg       | ---                                      | ---                                      | 7.9 U                                              | ---                                      | ---                                      | 8.0 U                                              |
| 2,4-Dimethylphenol                                                                                                                    | ug/Kg       | ---                                      | ---                                      | 7.6 U                                              | ---                                      | ---                                      | 7.8 U                                              |
| 2,4-Dinitrophenol                                                                                                                     | ug/Kg       | ---                                      | ---                                      | 20 U                                               | ---                                      | ---                                      | 21 U                                               |
| 2,6-Dichlorophenol                                                                                                                    | ug/Kg       | ---                                      | ---                                      | 9.5 U                                              | ---                                      | ---                                      | 9.7 U                                              |
| 2-Chlorophenol                                                                                                                        | ug/Kg       | ---                                      | ---                                      | 12 U                                               | ---                                      | ---                                      | 12 U                                               |
| 2-Methylphenol                                                                                                                        | ug/Kg       | ---                                      | ---                                      | 10 U                                               | ---                                      | ---                                      | 10 U                                               |
| 2-Nitrophenol                                                                                                                         | ug/Kg       | ---                                      | ---                                      | 11 U                                               | ---                                      | ---                                      | 11 U                                               |
| 3&4-Methylphenol                                                                                                                      | ug/Kg       | ---                                      | ---                                      | 7.5 U                                              | ---                                      | ---                                      | 7.7 U                                              |
| 4,6-Dinitro-2-methylphenol                                                                                                            | ug/Kg       | ---                                      | ---                                      | 9.4 U                                              | ---                                      | ---                                      | 9.6 U                                              |
| 4-Chloro-3-methylphenol                                                                                                               | ug/Kg       | ---                                      | ---                                      | 11 U                                               | ---                                      | ---                                      | 11 U                                               |
| 4-Nitrophenol                                                                                                                         | ug/Kg       | ---                                      | ---                                      | 33 U                                               | ---                                      | ---                                      | 34 U                                               |
| Dibromofluoromethane                                                                                                                  | ug/Kg-dry   | ---                                      | ---                                      | 1400                                               | ---                                      | ---                                      | 1400                                               |
| Pentachlorophenol                                                                                                                     | ug/Kg       | ---                                      | ---                                      | 14 U                                               | ---                                      | ---                                      | 14 U                                               |
| Phenol                                                                                                                                | ug/Kg       | ---                                      | ---                                      | 9.3 U                                              | ---                                      | ---                                      | 9.5 U                                              |
| Notes:<br>U = result not detected at the reporting limit<br>J = result value greater than the MDL and less than the RL; result consid |             |                                          |                                          |                                                    |                                          |                                          |                                                    |

Table 9. Logan Wash Mine Evaporation Pond Soil Data

|                                                                                                                                       |             | NORTHEAST POND - FLOODED |                     |                                  |                     |                     |                                  |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|---------------------|----------------------------------|---------------------|---------------------|----------------------------------|
| SampleID                                                                                                                              |             | LWP-NE2: 5.0-5.5 FT      | LWP-NE2: 5.5-6.0 FT | LWP-NE2: 5.0-6.0 FT<br>Composite | LWP-NE2: 8.0-8.5 FT | LWP-NE2: 8.5-9.0 FT | LWP-NE2: 8.0-9.0 FT<br>Composite |
| Sample Date                                                                                                                           |             | 2/28/2018                | 2/28/2018           | 2/28/2018                        | 2/28/2018           | 2/28/2018           | 2/28/2018                        |
| Parameters                                                                                                                            | Units       |                          |                     |                                  |                     |                     |                                  |
| <b>General Chemistry</b>                                                                                                              |             |                          |                     |                                  |                     |                     |                                  |
| Chloride                                                                                                                              | mg/Kg       | ---                      | ---                 | 43 J                             | ---                 | ---                 | 36 J                             |
| Electrical Conductivity @ Saturation                                                                                                  | mmhos/cm    | ---                      | ---                 | 7.9                              | ---                 | ---                 | 9.7                              |
| Fluoride                                                                                                                              | mg/Kg       | ---                      | ---                 | 5.0 U                            | ---                 | ---                 | 10 U                             |
| Moisture                                                                                                                              | % of sample | 11                       | 9.5                 | 10                               | 9.7                 | 12                  | 11                               |
| Nitrogen, Ammonia                                                                                                                     | mg/Kg       | ---                      | ---                 | 4.9 J                            | ---                 | ---                 | 3.5 U                            |
| Nitrogen, Nitrate                                                                                                                     | mg/Kg       | ---                      | ---                 | 11                               | ---                 | ---                 | 11                               |
| pH                                                                                                                                    | s.u.        | ---                      | ---                 | 7.76 H                           | ---                 | ---                 | 7.86 H                           |
| Salinity                                                                                                                              | mg/Kg       | ---                      | ---                 | 3600                             | ---                 | ---                 | 4700                             |
| Sodium Adsorption Ratio                                                                                                               | none        | ---                      | ---                 | 7.8                              | ---                 | ---                 | 12                               |
| Sulfate                                                                                                                               | mg/Kg       | ---                      | ---                 | 4900                             | ---                 | ---                 | 6100                             |
| <b>Metals</b>                                                                                                                         |             |                          |                     |                                  |                     |                     |                                  |
| Arsenic                                                                                                                               | mg/Kg       | ---                      | ---                 | 2.5                              | ---                 | ---                 | 2.9                              |
| Boron                                                                                                                                 | mg/Kg       | ---                      | ---                 | 21                               | ---                 | ---                 | 22                               |
| Calcium                                                                                                                               | mg/Kg       | ---                      | ---                 | 19000                            | ---                 | ---                 | 20000                            |
| Calcium                                                                                                                               | mg/L        | ---                      | ---                 | 510                              | ---                 | ---                 | 490                              |
| Magnesium                                                                                                                             | mg/Kg       | ---                      | ---                 | 5100                             | ---                 | ---                 | 5200                             |
| Magnesium                                                                                                                             | mg/L        | ---                      | ---                 | 140                              | ---                 | ---                 | 170                              |
| Potassium                                                                                                                             | mg/Kg       | ---                      | ---                 | 1400                             | ---                 | ---                 | 1400                             |
| Selenium                                                                                                                              | mg/Kg       | ---                      | ---                 | 1                                | ---                 | ---                 | 1.3                              |
| Sodium                                                                                                                                | mg/Kg       | ---                      | ---                 | 1300                             | ---                 | ---                 | 1900                             |
| Sodium                                                                                                                                | mg/L        | ---                      | ---                 | 780                              | ---                 | ---                 | 1200                             |
| <b>Volatile Organic Compounds - BTEX</b>                                                                                              |             |                          |                     |                                  |                     |                     |                                  |
| Benzene                                                                                                                               | ug/Kg-dry   | ---                      | ---                 | 6.3 U                            | ---                 | ---                 | 6.4 U                            |
| Ethylbenzene                                                                                                                          | ug/Kg-dry   | ---                      | ---                 | 7.7 U                            | ---                 | ---                 | 7.9 U                            |
| Toluene                                                                                                                               | ug/Kg-dry   | ---                      | ---                 | 10 U                             | ---                 | ---                 | 10 U                             |
| m,p-Xylene                                                                                                                            | ug/Kg-dry   | ---                      | ---                 | 17 U                             | ---                 | ---                 | 18 U                             |
| o-Xylene                                                                                                                              | ug/Kg-dry   | ---                      | ---                 | 14 U                             | ---                 | ---                 | 14 U                             |
| Xylenes, Total                                                                                                                        | ug/Kg-dry   | ---                      | ---                 | 32 U                             | ---                 | ---                 | 32 U                             |
| <b>Petroleum Products</b>                                                                                                             |             |                          |                     |                                  |                     |                     |                                  |
| DRO (C10-C28)                                                                                                                         | mg/Kg       | ---                      | ---                 | 14                               | ---                 | ---                 | 3.2 U                            |
| GRO (C6-C10)                                                                                                                          | ug/Kg-dry   | ---                      | ---                 | 2600 U                           | ---                 | ---                 | 2600 U                           |
| <b>Volatile Organic Compounds</b>                                                                                                     |             |                          |                     |                                  |                     |                     |                                  |
| 2,3,4,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                      | ---                 | 9.5 U                            | ---                 | ---                 | 9.7 U                            |
| 2,3,5,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                      | ---                 | 9.5 U                            | ---                 | ---                 | 9.7 U                            |
| 2,4,5-Trichlorophenol                                                                                                                 | ug/Kg       | ---                      | ---                 | 9.9 U                            | ---                 | ---                 | 10 U                             |
| 2,4,6-Tribromophenol                                                                                                                  | ug/Kg       | ---                      | ---                 | 1400                             | ---                 | ---                 | 1700                             |
| 2,4,6-Trichlorophenol                                                                                                                 | ug/Kg       | ---                      | ---                 | 9.7 U                            | ---                 | ---                 | 9.9 U                            |
| 2,4-Dichlorophenol                                                                                                                    | ug/Kg       | ---                      | ---                 | 7.7 U                            | ---                 | ---                 | 7.8 U                            |
| 2,4-Dimethylphenol                                                                                                                    | ug/Kg       | ---                      | ---                 | 7.4 U                            | ---                 | ---                 | 7.6 U                            |
| 2,4-Dinitrophenol                                                                                                                     | ug/Kg       | ---                      | ---                 | 20 U                             | ---                 | ---                 | 20 U                             |
| 2,6-Dichlorophenol                                                                                                                    | ug/Kg       | ---                      | ---                 | 9.3 U                            | ---                 | ---                 | 9.5 U                            |
| 2-Chlorophenol                                                                                                                        | ug/Kg       | ---                      | ---                 | 11 U                             | ---                 | ---                 | 12 U                             |
| 2-Methylphenol                                                                                                                        | ug/Kg       | ---                      | ---                 | 9.8 U                            | ---                 | ---                 | 10 U                             |
| 2-Nitrophenol                                                                                                                         | ug/Kg       | ---                      | ---                 | 10 U                             | ---                 | ---                 | 11 U                             |
| 3&4-Methylphenol                                                                                                                      | ug/Kg       | ---                      | ---                 | 7.3 U                            | ---                 | ---                 | 7.5 U                            |
| 4,6-Dinitro-2-methylphenol                                                                                                            | ug/Kg       | ---                      | ---                 | 9.1 U                            | ---                 | ---                 | 9.3 U                            |
| 4-Chloro-3-methylphenol                                                                                                               | ug/Kg       | ---                      | ---                 | 10 U                             | ---                 | ---                 | 11 U                             |
| 4-Nitrophenol                                                                                                                         | ug/Kg       | ---                      | ---                 | 33 U                             | ---                 | ---                 | 33 U                             |
| Dibromofluoromethane                                                                                                                  | ug/Kg-dry   | ---                      | ---                 | 1100                             | ---                 | ---                 | 1100                             |
| Pentachlorophenol                                                                                                                     | ug/Kg       | ---                      | ---                 | 13 U                             | ---                 | ---                 | 14 U                             |
| Phenol                                                                                                                                | ug/Kg       | ---                      | ---                 | 9.0 U                            | ---                 | ---                 | 9.2 U                            |
| Notes:<br>U = result not detected at the reporting limit<br>J = result value greater than the MDL and less than the RL; result consid |             |                          |                     |                                  |                     |                     |                                  |

Table 9. Logan Wash Mine Evaporation Pond Soil Data

|                                                                                                                                       |             | NORTHWEST POND - FLOODED |                     |                                  |                     |                     |                                  |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|---------------------|----------------------------------|---------------------|---------------------|----------------------------------|
| SampleID                                                                                                                              |             | LWP-NW2: 5.0-5.5 FT      | LWP-NW2: 5.5-6.0 FT | LWP-NW2: 5.0-6.0 FT<br>Composite | LWP-NW2: 8.0-8.5 FT | LWP-NW2: 8.5-9.0 FT | LWP-NW2: 8.0-9.0 FT<br>Composite |
| Sample Date                                                                                                                           | Units       | 2/28/2018                | 2/28/2018           | 2/28/2018                        | 2/28/2018           | 2/28/2018           | 2/28/2018                        |
| Parameters                                                                                                                            | Units       |                          |                     |                                  |                     |                     |                                  |
| <b>General Chemistry</b>                                                                                                              |             |                          |                     |                                  |                     |                     |                                  |
| Chloride                                                                                                                              | mg/Kg       | ---                      | ---                 | 490                              | ---                 | ---                 | 35                               |
| Electrical Conductivity @ Saturation                                                                                                  | mmhos/cm    | ---                      | ---                 | 58                               | ---                 | ---                 | 9.4                              |
| Fluoride                                                                                                                              | mg/Kg       | ---                      | ---                 | 10 U                             | ---                 | ---                 | 7.2                              |
| Moisture                                                                                                                              | % of sample | 15                       | 14                  | 15                               | 11                  | 9.1                 | 10                               |
| Nitrogen, Ammonia                                                                                                                     | mg/Kg       | ---                      | ---                 | 3.8 J                            | ---                 | ---                 | 8.3 J                            |
| Nitrogen, Nitrate                                                                                                                     | mg/Kg       | ---                      | ---                 | 5.0 J                            | ---                 | ---                 | 2.4                              |
| pH                                                                                                                                    | s.u.        | ---                      | ---                 | 8.40 H                           | ---                 | ---                 | 7.68 H                           |
| Salinity                                                                                                                              | mg/Kg       | ---                      | ---                 | 23000                            | ---                 | ---                 | 4500                             |
| Sodium Adsorption Ratio                                                                                                               | none        | ---                      | ---                 | 62                               | ---                 | ---                 | 8.2                              |
| Sulfate                                                                                                                               | mg/Kg       | ---                      | ---                 | 9100                             | ---                 | ---                 | 1700                             |
| <b>Metals</b>                                                                                                                         |             |                          |                     |                                  |                     |                     |                                  |
| Arsenic                                                                                                                               | mg/Kg       | ---                      | ---                 | 9.2                              | ---                 | ---                 | 6.6                              |
| Boron                                                                                                                                 | mg/Kg       | ---                      | ---                 | 45                               | ---                 | ---                 | 30                               |
| Calcium                                                                                                                               | mg/Kg       | ---                      | ---                 | 36000                            | ---                 | ---                 | 8400                             |
| Calcium                                                                                                                               | mg/L        | ---                      | ---                 | 520                              | ---                 | ---                 | 470                              |
| Magnesium                                                                                                                             | mg/Kg       | ---                      | ---                 | 4500                             | ---                 | ---                 | 8300                             |
| Magnesium                                                                                                                             | mg/L        | ---                      | ---                 | 400                              | ---                 | ---                 | 290                              |
| Potassium                                                                                                                             | mg/Kg       | ---                      | ---                 | 2200                             | ---                 | ---                 | 1200                             |
| Selenium                                                                                                                              | mg/Kg       | ---                      | ---                 | 2                                | ---                 | ---                 | 7.3 J                            |
| Sodium                                                                                                                                | mg/Kg       | ---                      | ---                 | 2600                             | ---                 | ---                 | 1400                             |
| Sodium                                                                                                                                | mg/L        | ---                      | ---                 | 7800                             | ---                 | ---                 | 910                              |
| <b>Volatile Organic Compounds - BTEX</b>                                                                                              |             |                          |                     |                                  |                     |                     |                                  |
| Benzene                                                                                                                               | ug/Kg-dry   | ---                      | ---                 | 6.9 U                            | ---                 | ---                 | 6.3 U                            |
| Ethylbenzene                                                                                                                          | ug/Kg-dry   | ---                      | ---                 | 8.6 U                            | ---                 | ---                 | 7.7 U                            |
| Toluene                                                                                                                               | ug/Kg-dry   | ---                      | ---                 | 11 U                             | ---                 | ---                 | 10 U                             |
| m,p-Xylene                                                                                                                            | ug/Kg-dry   | ---                      | ---                 | 19 U                             | ---                 | ---                 | 30 J                             |
| o-Xylene                                                                                                                              | ug/Kg-dry   | ---                      | ---                 | 16 U                             | ---                 | ---                 | 14 U                             |
| Xylenes, Total                                                                                                                        | ug/Kg-dry   | ---                      | ---                 | 35 U                             | ---                 | ---                 | 32 U                             |
| <b>Petroleum Products</b>                                                                                                             |             |                          |                     |                                  |                     |                     |                                  |
| DRO (C10-C28)                                                                                                                         | mg/Kg       | ---                      | ---                 | 3.3 U                            | ---                 | ---                 | 3.1 U                            |
| GRO (C6-C10)                                                                                                                          | ug/Kg-dry   | ---                      | ---                 | 2800 U                           | ---                 | ---                 | 2600 U                           |
| <b>Volatile Organic Compounds</b>                                                                                                     |             |                          |                     |                                  |                     |                     |                                  |
| 2,3,4,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                      | ---                 | 9.7 U                            | ---                 | ---                 | 12 U                             |
| 2,3,5,6-Tetrachlorophenol                                                                                                             | ug/Kg       | ---                      | ---                 | 9.7 U                            | ---                 | ---                 | 12 U                             |
| 2,4,5-Trichlorophenol                                                                                                                 | ug/Kg       | ---                      | ---                 | 10 U                             | ---                 | ---                 | 12 U                             |
| 2,4,6-Tribromophenol                                                                                                                  | ug/Kg       | ---                      | ---                 | 930 S                            | ---                 | ---                 | 830 S                            |
| 2,4,6-Trichlorophenol                                                                                                                 | ug/Kg       | ---                      | ---                 | 9.9 U                            | ---                 | ---                 | 12 U                             |
| 2,4-Dichlorophenol                                                                                                                    | ug/Kg       | ---                      | ---                 | 7.9 U                            | ---                 | ---                 | 9.4 U                            |
| 2,4-Dimethylphenol                                                                                                                    | ug/Kg       | ---                      | ---                 | 7.6 U                            | ---                 | ---                 | 9.1 U                            |
| 2,4-Dinitrophenol                                                                                                                     | ug/Kg       | ---                      | ---                 | 20 U                             | ---                 | ---                 | 24 U                             |
| 2,6-Dichlorophenol                                                                                                                    | ug/Kg       | ---                      | ---                 | 9.5 U                            | ---                 | ---                 | 11 U                             |
| 2-Chlorophenol                                                                                                                        | ug/Kg       | ---                      | ---                 | 12 U                             | ---                 | ---                 | 14 U                             |
| 2-Methylphenol                                                                                                                        | ug/Kg       | ---                      | ---                 | 10 U                             | ---                 | ---                 | 12 U                             |
| 2-Nitrophenol                                                                                                                         | ug/Kg       | ---                      | ---                 | 11 U                             | ---                 | ---                 | 13 U                             |
| 3&4-Methylphenol                                                                                                                      | ug/Kg       | ---                      | ---                 | 7.5 U                            | ---                 | ---                 | 9.0 U                            |
| 4,6-Dinitro-2-methylphenol                                                                                                            | ug/Kg       | ---                      | ---                 | 9.4 U                            | ---                 | ---                 | 11 U                             |
| 4-Chloro-3-methylphenol                                                                                                               | ug/Kg       | ---                      | ---                 | 11 U                             | ---                 | ---                 | 13 U                             |
| 4-Nitrophenol                                                                                                                         | ug/Kg       | ---                      | ---                 | 33 U                             | ---                 | ---                 | 40 U                             |
| Dibromofluoromethane                                                                                                                  | ug/Kg-dry   | ---                      | ---                 | 1200                             | ---                 | ---                 | 1000                             |
| Pentachlorophenol                                                                                                                     | ug/Kg       | ---                      | ---                 | 14 U                             | ---                 | ---                 | 16 U                             |
| Phenol                                                                                                                                | ug/Kg       | ---                      | ---                 | 9.3 U                            | ---                 | ---                 | 11 U                             |
| Notes:<br>U = result not detected at the reporting limit<br>J = result value greater than the MDL and less than the RL; result consid |             |                          |                     |                                  |                     |                     |                                  |

Table 9. Logan Wash Mine Evaporation Pond Soil Data

|                                                                           |             | SOUTHWEST POND - FLOODED |                     |                                  |                     |                     |                                  |
|---------------------------------------------------------------------------|-------------|--------------------------|---------------------|----------------------------------|---------------------|---------------------|----------------------------------|
| SampleID                                                                  |             | LWP-SW2: 5.0-5.5 FT      | LWP-SW2: 5.5-6.0 FT | LWP-SW2: 5.0-6.0 FT<br>Composite | LWP-SW2: 8.0-8.5 FT | LWP-SW2: 8.5-9.0 FT | LWP-SW2: 8.0-9.0 FT<br>Composite |
| Sample Date                                                               | Units       | 2/28/2018                | 2/28/2018           | 2/28/2018                        | 2/28/2018           | 2/28/2018           | 2/28/2018                        |
| Parameters                                                                | Units       |                          |                     |                                  |                     |                     |                                  |
| <b>General Chemistry</b>                                                  |             |                          |                     |                                  |                     |                     |                                  |
| Chloride                                                                  | mg/Kg       | ---                      | ---                 | 81                               | ---                 | ---                 | 52 J                             |
| Electrical Conductivity @ Saturation                                      | mmhos/cm    | ---                      | ---                 | 5.9                              | ---                 | ---                 | 5.6                              |
| Fluoride                                                                  | mg/Kg       | ---                      | ---                 | 7.9                              | ---                 | ---                 | 4.9 U                            |
| Moisture                                                                  | % of sample | 9.5                      | 9.2                 | 9.4                              | 7.8                 | 7.4                 | 7.6                              |
| Nitrogen, Ammonia                                                         | mg/Kg       | ---                      | ---                 | 5.1 J                            | ---                 | ---                 | 4.1 J                            |
| Nitrogen, Nitrate                                                         | mg/Kg       | ---                      | ---                 | 20                               | ---                 | ---                 | 5.7                              |
| pH                                                                        | s.u.        | ---                      | ---                 | 7.61 H                           | ---                 | ---                 | 7.65 H                           |
| Salinity                                                                  | mg/Kg       | ---                      | ---                 | 2900                             | ---                 | ---                 | 3200                             |
| Sodium Adsorption Ratio                                                   | none        | ---                      | ---                 | 4.6                              | ---                 | ---                 | 4.2                              |
| Sulfate                                                                   | mg/Kg       | ---                      | ---                 | 5300                             | ---                 | ---                 | 2800                             |
| <b>Metals</b>                                                             |             |                          |                     |                                  |                     |                     |                                  |
| Arsenic                                                                   | mg/Kg       | ---                      | ---                 | 4.7                              | ---                 | ---                 | 3.5                              |
| Boron                                                                     | mg/Kg       | ---                      | ---                 | 25                               | ---                 | ---                 | 21                               |
| Calcium                                                                   | mg/Kg       | ---                      | ---                 | 28000                            | ---                 | ---                 | 19000                            |
| Calcium                                                                   | mg/L        | ---                      | ---                 | 600                              | ---                 | ---                 | 560                              |
| Magnesium                                                                 | mg/Kg       | ---                      | ---                 | 4500                             | ---                 | ---                 | 3700                             |
| Magnesium                                                                 | mg/L        | ---                      | ---                 | 95                               | ---                 | ---                 | 67                               |
| Potassium                                                                 | mg/Kg       | ---                      | ---                 | 1600                             | ---                 | ---                 | 1200                             |
| Selenium                                                                  | mg/Kg       | ---                      | ---                 | 1.1                              | ---                 | ---                 | 0.81                             |
| Sodium                                                                    | mg/Kg       | ---                      | ---                 | 790                              | ---                 | ---                 | 500                              |
| Sodium                                                                    | mg/L        | ---                      | ---                 | 460                              | ---                 | ---                 | 400                              |
| <b>Volatile Organic Compounds - BTEX</b>                                  |             |                          |                     |                                  |                     |                     |                                  |
| Benzene                                                                   | ug/Kg-dry   | ---                      | ---                 | 6.2 U                            | ---                 | ---                 | 6.0 U                            |
| Ethylbenzene                                                              | ug/Kg-dry   | ---                      | ---                 | 7.6 U                            | ---                 | ---                 | 7.4 U                            |
| Toluene                                                                   | ug/Kg-dry   | ---                      | ---                 | 9.9 U                            | ---                 | ---                 | 9.5 U                            |
| m,p-Xylene                                                                | ug/Kg-dry   | ---                      | ---                 | 17 U                             | ---                 | ---                 | 17 U                             |
| o-Xylene                                                                  | ug/Kg-dry   | ---                      | ---                 | 14 U                             | ---                 | ---                 | 14 U                             |
| Xylenes, Total                                                            | ug/Kg-dry   | ---                      | ---                 | 31 U                             | ---                 | ---                 | 30 U                             |
| <b>Petroleum Products</b>                                                 |             |                          |                     |                                  |                     |                     |                                  |
| DRO (C10-C28)                                                             | mg/Kg       | ---                      | ---                 | 3.1 U                            | ---                 | ---                 | 3.0 U                            |
| GRO (C6-C10)                                                              | ug/Kg-dry   | ---                      | ---                 | 2500 U                           | ---                 | ---                 | 2400 U                           |
| <b>Volatile Organic Compounds</b>                                         |             |                          |                     |                                  |                     |                     |                                  |
| 2,3,4,6-Tetrachlorophenol                                                 | ug/Kg       | ---                      | ---                 | 9.1 U                            | ---                 | ---                 | 9.0 U                            |
| 2,3,5,6-Tetrachlorophenol                                                 | ug/Kg       | ---                      | ---                 | 9.1 U                            | ---                 | ---                 | 9.0 U                            |
| 2,4,5-Trichlorophenol                                                     | ug/Kg       | ---                      | ---                 | 9.6 U                            | ---                 | ---                 | 9.4 U                            |
| 2,4,6-Tribromophenol                                                      | ug/Kg       | ---                      | ---                 | 1700                             | ---                 | ---                 | 1300                             |
| 2,4,6-Trichlorophenol                                                     | ug/Kg       | ---                      | ---                 | 9.3 U                            | ---                 | ---                 | 9.2 U                            |
| 2,4-Dichlorophenol                                                        | ug/Kg       | ---                      | ---                 | 7.4 U                            | ---                 | ---                 | 7.3 U                            |
| 2,4-Dimethylphenol                                                        | ug/Kg       | ---                      | ---                 | 7.2 U                            | ---                 | ---                 | 7.0 U                            |
| 2,4-Dinitrophenol                                                         | ug/Kg       | ---                      | ---                 | 19 U                             | ---                 | ---                 | 19 U                             |
| 2,6-Dichlorophenol                                                        | ug/Kg       | ---                      | ---                 | 9.0 U                            | ---                 | ---                 | 8.8 U                            |
| 2-Chlorophenol                                                            | ug/Kg       | ---                      | ---                 | 11 U                             | ---                 | ---                 | 11 U                             |
| 2-Methylphenol                                                            | ug/Kg       | ---                      | ---                 | 9.5 U                            | ---                 | ---                 | 9.3 U                            |
| 2-Nitrophenol                                                             | ug/Kg       | ---                      | ---                 | 10 U                             | ---                 | ---                 | 9.8 U                            |
| 3&4-Methylphenol                                                          | ug/Kg       | ---                      | ---                 | 7.1 U                            | ---                 | ---                 | 6.9 U                            |
| 4,6-Dinitro-2-methylphenol                                                | ug/Kg       | ---                      | ---                 | 8.8 U                            | ---                 | ---                 | 8.6 U                            |
| 4-Chloro-3-methylphenol                                                   | ug/Kg       | ---                      | ---                 | 10 U                             | ---                 | ---                 | 9.8 U                            |
| 4-Nitrophenol                                                             | ug/Kg       | ---                      | ---                 | 31 U                             | ---                 | ---                 | 31 U                             |
| Dibromofluoromethane                                                      | ug/Kg-dry   | ---                      | ---                 | 1000                             | ---                 | ---                 | 980                              |
| Pentachlorophenol                                                         | ug/Kg       | ---                      | ---                 | 13 U                             | ---                 | ---                 | 13 U                             |
| Phenol                                                                    | ug/Kg       | ---                      | ---                 | 8.7 U                            | ---                 | ---                 | 8.6 U                            |
| Notes:                                                                    |             |                          |                     |                                  |                     |                     |                                  |
| U = result not detected at the reporting limit                            |             |                          |                     |                                  |                     |                     |                                  |
| J = result value greater than the MDL and less than the RL; result consid |             |                          |                     |                                  |                     |                     |                                  |