

## Attachment 5 - Leachate Monitoring Program

**Table 1. Parameters and sampling frequency**

| Parameter                             | Units        | LP frequency | DW frequency            |
|---------------------------------------|--------------|--------------|-------------------------|
| Flow                                  | kL/day       | N/A          | Continuous <sup>1</sup> |
| Water Level                           | Measure      | Monthly      | Monthly                 |
| pH                                    | pH units     | Quarterly    | Biannually              |
| Electrical Conductivity (EC)          | µS/cm        |              |                         |
| Dissolved Oxygen (DO)                 | % saturation |              |                         |
| Temperature                           | °C           |              |                         |
| Turbidity                             | NTU          |              |                         |
| Metals/Metalloids <sup>2</sup>        |              |              |                         |
| Aluminium (Al)                        | µg/L         | Quarterly    | Biannually              |
| Arsenic (As)                          |              |              |                         |
| Boron (B)                             |              |              |                         |
| Cadmium (Cd)                          |              |              |                         |
| Chromium (Cr)                         |              |              |                         |
| Cobalt (Co)                           |              |              |                         |
| Copper (Cu)                           |              |              |                         |
| Iron (Fe)                             |              |              |                         |
| Lead (Pb)                             |              |              |                         |
| Lithium (Li)                          |              |              |                         |
| Manganese (Mn)                        |              |              |                         |
| Mercury (Hg)                          |              |              |                         |
| Nickel (Ni)                           |              |              |                         |
| Selenium (Se)                         |              |              |                         |
| Vanadium (V)                          |              |              |                         |
| Zinc (Zn)                             |              |              |                         |
| Major Ions                            |              |              |                         |
| Carbonate (CO <sub>3</sub> )          | mg/L         | Quarterly    | Biannually              |
| Bicarbonate (HCO <sub>3</sub> )       |              |              |                         |
| Calcium (Ca)                          |              |              |                         |
| Magnesium (Mg)                        |              |              |                         |
| Potassium (K)                         |              |              |                         |
| Sodium (Na)                           |              |              |                         |
| Chloride (Cl)                         |              |              |                         |
| Sulphate (SO <sub>4</sub> )           |              |              |                         |
| Nutrients                             |              |              |                         |
| Ammonia (NH <sub>3</sub> )            | µg/L         | Quarterly    | Biannually              |
| Ammonium (NH <sub>4</sub> )           |              |              |                         |
| Nitrate (NO <sub>3</sub> )            |              |              |                         |
| Nitrite (NO <sub>2</sub> )            |              |              |                         |
| Oxides of Nitrogen (NO <sub>x</sub> ) |              |              |                         |
| Total Nitrogen (TN)                   |              |              |                         |
| Total Phosphorous (TP )               |              |              |                         |
| Filterable reactive phosphorous (FRP) |              |              |                         |

| Parameter                               | Units      | LP frequency | DW frequency |
|-----------------------------------------|------------|--------------|--------------|
| Hydrocarbons                            |            |              |              |
| Total Recoverable Hydrocarbons (TRH)    | µg/L       | Quarterly    | Biannually   |
| Polycyclic Aromatic Hydrocarbons (PAHs) |            |              |              |
| Benzene                                 |            |              |              |
| Toluene                                 |            |              |              |
| Ethylbenzene                            |            |              |              |
| Xylene                                  |            |              |              |
| Naphthalene                             |            |              |              |
| PFAS <sup>3</sup>                       |            |              |              |
| PFOS                                    | µg/L       | Quarterly    | Biannually   |
| PFOA                                    |            |              |              |
| Other                                   |            |              |              |
| Organophosphate Pesticides              | µg/L       | Annually     | N/A          |
| Organochlorine Pesticides               |            |              |              |
| Polychlorinated Biphenyls               |            |              |              |
| Tributyltin Oxide                       |            |              |              |
| Phenols                                 |            |              |              |
| Chemical Oxygen Demand (COD)            | mg/L       | Quarterly    | Biannually   |
| Total Suspended Solids (TSS)            |            |              |              |
| Total Organic Carbon (TOC)              |            |              |              |
| Total Dissolved Solids (TDS)            |            |              |              |
| Escherichia Coli                        | CFU 100/ml | Annually     | N/A          |
| Enterococci                             |            |              |              |

1 – Using a flow meter

2 – Filtered (0.45µm) and unfiltered

3 – PFAS (per-and poly-fluoro alkyl substances).

Analysis on a minimum of 28 PFAS compounds using LC-MS/MS

Quarterly – January, April, July, October

Biannually – January, July

Annually – July

**Table 2. Sampling locations (MGA Zone 52)**

| Location type           | Site Code | Easting | Northing |
|-------------------------|-----------|---------|----------|
| Leachate Pond (LP)      | LP01      | 709534  | 8630726  |
|                         | LP02      | 709531  | 8630713  |
|                         | LP03      | 709497  | 8630873  |
| Down gradient Well (DW) | DW2       | 709029  | 8630459  |
|                         | DW3       | 709038  | 8630216  |
|                         | DW5       | 709023  | 8630122  |
|                         | DW6       | 709041  | 8630039  |
|                         | DW7       | 709450  | 8630121  |
|                         | DW8       | 709459  | 8630042  |
|                         | DW9       | 709696  | 8630589  |
|                         | TC Sump   | 709465  | 8630233  |
|                         | LMP02     | 709938  | 8629759  |