

| Facility Information Summary                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AER Reporting Year                                                                                                                                                                                                                                                                                                                                                                                                                              | 2013                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Licence Register Number                                                                                                                                                                                                                                                                                                                                                                                                                         | W0068-03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Name of site                                                                                                                                                                                                                                                                                                                                                                                                                                    | Youghal Landfill                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Site Location                                                                                                                                                                                                                                                                                                                                                                                                                                   | Foxhole, Youghal, co.Cork                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| NACE Code                                                                                                                                                                                                                                                                                                                                                                                                                                       | 3821                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Class/Classes of Activity                                                                                                                                                                                                                                                                                                                                                                                                                       | 5(c), 5(d), 50.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| National Grid Reference (6E, 6 N)                                                                                                                                                                                                                                                                                                                                                                                                               | 2100E 0800N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <p>A description of the activities/processes at the site for the reporting year. This should include information such as production increases or decreases on site, any infrastructural changes, environmental performance which was measured during the reporting year <b>and an overview of compliance with your licence listing all exceedances of licence limits (where applicable) and what they relate to e.g. air, water, noise.</b></p> | <p>Youghal landfill accepted waste at the facility until February 2012. Since that date only cover material (soil and stones) and road building material (suitable C&amp;D material) has been accepted to allow for a "pre-capping" profile to be constructed on Cell 9. This work is continued into 2013 and a void of 200m3 is still available whenever the management of the facility decide to fill it. A capping design is currently being investigated. The environmental performance of the facility has continued to improve in comparison with previous years. The number of odour complaints plummeted from 76 in 2011 to 4 in 2012. The gas extraction system has continued to perform well with 2 enclosed flares burning off the gas generated. The daily attendance and well leachate removal has ensured increased effective length of the gas wells and, hence, the proper functioning of the system. Minor exceedances have again been measured in the perimeter gas wells but are explained by the estuarine conditions that account for naturally occurring CO2. Both Leachate and groundwater results are similar to previous years. The noise survey was compliant for the year as would be expected with the removal of the large landfill compacting plant from the site. Overall the site has been compliant with its Licence.</p> |

**Declaration:**

All the data and information presented in this report has been checked and certified as being accurate. The quality of the information is assured to meet licence requirements.

|                                      |                                                                                     |
|--------------------------------------|-------------------------------------------------------------------------------------|
|                                      | 26/03/2014                                                                          |
| Signature                            | Date                                                                                |
| Grc<br>(or nr<br>experienced deputy) |  |

**AIR-summary template**

Lic No:

W0068-03

Year

2013

Answer all questions and complete all tables where relevant

Additional information

- 1 Does your site have licensed air emissions? If yes please complete table A1 and A2 below for the current reporting year and answer further questions. If **you do not have** licenced emissions and **do not complete a solvent management plan** (table A4 and A5) you do not need to complete the tables

Yes

**Periodic/Non-Continuous Monitoring**

- 2 Are there any results in breach of licence requirements? If yes please provide brief details in the comment section of TableA1 below

No

- 3 Was all monitoring carried out in accordance with EPA guidance note AG2 and using the basic air monitoring checklist? [Basic air monitoring checklist](#) [AGN2](#)

Yes

**Table A1: Licensed Mass Emissions/Ambient data-periodic monitoring (non-continuous)**

| Emission reference no: | Parameter/ Substance      | Frequency of Monitoring | ELV in licence or any revision thereof | Licence Compliance criteria      | Measured value | Unit of measurement | Compliant with licence limit | Method of analysis | Annual mass load (kg) | Comments - reason for change in % mass load from previous year if applicable |
|------------------------|---------------------------|-------------------------|----------------------------------------|----------------------------------|----------------|---------------------|------------------------------|--------------------|-----------------------|------------------------------------------------------------------------------|
| Flare Stack            | Methane (CH4)             | Continuous              | N/A                                    | SELECT                           | 1448820        | m3                  | yes                          | MAB                | 203755                | Annual mass load refers to difference                                        |
| Flare Stack            | Carbon dioxide (CO2)      | Continuous              | N/A                                    | SELECT                           | 1506283        | m3                  | yes                          | ISO 12039:2001     | 1769598               | Annual mass load refers to difference                                        |
| Flare Stack            | Carbon monoxide (CO)      | Continuous              | <50mg/Nm3                              | No 30min mean can exceed the ELV | 17.98          | mg/Nm3              | yes                          | ISO 12039:2001     | 61.24                 |                                                                              |
| Flare Stack            | Nitrogen oxides (NOx/NO2) | Annual                  | <150mg/Nm3                             | No 30min mean can exceed the ELV | 106.65         | mg/Nm3              | yes                          | EN 14792:2005      | 365.75                |                                                                              |
| Flare Stack            | Sulphur oxides (SOx/SO2)  | Annual                  | N/A                                    |                                  | 99.65          | mg/Nm3              | yes                          | EN 14791:2005      | 340.77                |                                                                              |

|                              |                  |            |
|------------------------------|------------------|------------|
| <b>AIR-summary template</b>  | Lic No: W0068-03 | Year: 2013 |
| <b>Continuous Monitoring</b> |                  |            |

|   |                                                                                                                                                                                                                                  |     |  |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--|
| 4 | Does your site carry out continuous air emissions monitoring?<br>If yes please review your continuous monitoring data and report the required fields below in Table A2 and compare it to its relevant Emission Limit Value (ELV) | Yes |  |
| 5 | Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below                                                                                                                         | Yes |  |
| 6 | Do you have a proactive service agreement for each piece of continuous monitoring equipment?                                                                                                                                     | Yes |  |
| 7 | Did your site experience any abatement system bypasses? If yes please detail them in table A3 below                                                                                                                              | No  |  |

**Table A2: Summary of average emissions -continuous monitoring**

| Emission reference no: | Parameter/ Substance | ELV in licence or any revision thereof | Averaging Period | Compliance Criteria   | Units of measurement | Annual Emission | Annual maximum | Monitoring Equipment downtime (hours) | Number of ELV exceedences in current reporting year | Comments                                                                         |
|------------------------|----------------------|----------------------------------------|------------------|-----------------------|----------------------|-----------------|----------------|---------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------|
| Flare Stack            | PRTR                 | N/A                                    | 12 month         | 100 % of values < ELV | m3                   |                 |                | 279.5                                 | 0                                                   | Have recorded the combined annual downtime of both Flares at Youghal Landfill in |
|                        | SELECT               |                                        |                  |                       | SELECT               |                 |                |                                       |                                                     |                                                                                  |
|                        | SELECT               |                                        |                  |                       | SELECT               |                 |                |                                       |                                                     |                                                                                  |
|                        | SELECT               |                                        |                  |                       | SELECT               |                 |                |                                       |                                                     |                                                                                  |
|                        | SELECT               |                                        |                  |                       | SELECT               |                 |                |                                       |                                                     |                                                                                  |

note 1: Volumetric flow shall be included as a reportable parameter.

**Table A3: Abatement system bypass reporting table** [Bypass protocol](#)

| Date* | Duration** (hours) | Location | Reason for bypass | Impact magnitude | Corrective action |
|-------|--------------------|----------|-------------------|------------------|-------------------|
|       |                    |          |                   |                  |                   |
|       |                    |          |                   |                  |                   |
|       |                    |          |                   |                  |                   |
|       |                    |          |                   |                  |                   |
|       |                    |          |                   |                  |                   |
|       |                    |          |                   |                  |                   |
|       |                    |          |                   |                  |                   |

\* this should include all dates that an abatement system bypass occurred

\*\* an accurate record of time bypass beginning and end should be logged on site and maintained for future Agency inspections please refer to bypass protocol link





this section. The emissions totals have been submitted in the above table.



## AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)

Lic No:

W0068-03

Year

2013

## Additional information

1 Does your site have licensed emissions direct to surface water or direct to sewer? If yes please complete table W2 and W3 below for the current reporting year and answer further questions. If you do not have licensed emissions you only need to complete table W1 and or W2 for storm water analysis and visual inspections

No

2 Was it a requirement of your licence to carry out visual inspections on any surface water discharges or watercourses on or near your site? If yes please complete table W2 below summarising only any evidence of contamination noted during visual inspections

No

Table W1 Storm water monitoring

| Location reference | Location relative to site activities | PRTR Parameter                 | Licensed Parameter            | Monitoring date | ELV or trigger level in licence or any revision thereof* | Licence Compliance criteria | Measured value | Unit of measurement | Compliant with licence | Comments                                                   |
|--------------------|--------------------------------------|--------------------------------|-------------------------------|-----------------|----------------------------------------------------------|-----------------------------|----------------|---------------------|------------------------|------------------------------------------------------------|
| SW1                | upstream                             |                                | pH                            | Quarterly       | No ELV or trigger levels                                 | N/A                         | 7.79           | pH units            | yes                    | Median Value for 2013                                      |
| SW1                | upstream                             |                                | Temperature                   | Quarterly       | No ELV or trigger levels                                 | N/A                         | 5.8            | degrees C           | yes                    | Median Value for 2013                                      |
| SW1                | upstream                             |                                | Conductivity                  | Quarterly       | No ELV or trigger levels                                 | N/A                         | 7.670          | µS/cm@25oC          | yes                    | Median value for 2013. SW1 is influenced by saline waters. |
| SW1                | upstream                             |                                | Dissolved Oxygen              | Quarterly       | No ELV or trigger levels                                 | N/A                         | 10.84          | mg/L                | yes                    | Median Value for 2013                                      |
| SW1                | upstream                             | Chlorides (as Cl)              |                               | Quarterly       | No ELV or trigger levels                                 | N/A                         | 4265.83        | mg/L                | yes                    | Median value for 2013. SW1 is influenced by saline waters. |
| SW1                | upstream                             |                                | BOD                           | Quarterly       | No ELV or trigger levels                                 | N/A                         | 1.75           | mg/L                | yes                    | Median Value for 2013                                      |
| SW1                | upstream                             |                                | COD                           | Quarterly       | No ELV or trigger levels                                 | N/A                         | 8.5            | mg/L                | yes                    | Median Value for 2013                                      |
| SW1                | upstream                             |                                | Ammonia (as N)                | Quarterly       | No ELV or trigger levels                                 | N/A                         | 0.63           | mg/L                | yes                    | Median Value for 2013                                      |
| SW1                | upstream                             |                                | Suspended Solids              | Quarterly       | No ELV or trigger levels                                 | N/A                         | 30.75          | mg/L                | yes                    | Median Value for 2013                                      |
| SW1                | upstream                             | Chromium and compounds (as Cr) |                               | Annual          | No ELV or trigger levels                                 | N/A                         | <20            | µg/L                | yes                    | Annual result                                              |
| SW1                | upstream                             | Copper and compounds (as Cu)   |                               | Annual          | No ELV or trigger levels                                 | N/A                         | <20            | µg/L                | yes                    | Annual result                                              |
| SW1                | upstream                             | Cadmium and compounds (as Cd)  |                               | Annual          | No ELV or trigger levels                                 | N/A                         | <20            | µg/L                | yes                    | Annual result                                              |
| SW1                | upstream                             | Iron                           |                               | Annual          | No ELV or trigger levels                                 | N/A                         | 98             | µg/L                | yes                    | Annual result                                              |
| SW1                | upstream                             | Lead and compounds (as Pb)     |                               | Annual          | No ELV or trigger levels                                 | N/A                         | <20            | µg/L                | yes                    | Annual result                                              |
| SW1                | upstream                             |                                | Magnesium                     | Annual          | No ELV or trigger levels                                 | N/A                         | 27.9           | mg/L                | yes                    | Annual result                                              |
| SW1                | upstream                             |                                | Manganese (as Mn)             | Annual          | No ELV or trigger levels                                 | N/A                         | 28             | µg/L                | yes                    | Annual result                                              |
| SW1                | upstream                             | Mercury and compounds (as Hg)  |                               | Annual          | No ELV or trigger levels                                 | N/A                         | <0.1           | µg/L                | yes                    | Annual result                                              |
| SW1                | upstream                             |                                | Potassium                     | Annual          | No ELV or trigger levels                                 | N/A                         | 18.5           | mg/L                | yes                    | Annual result                                              |
| SW1                | upstream                             |                                | Sulphate                      | Annual          | No ELV or trigger levels                                 | N/A                         | 28.42          | mg/L                | yes                    | Annual result                                              |
| SW1                | upstream                             |                                | Total Oxidised Nitrogen (TON) | Annual          | No ELV or trigger levels                                 | N/A                         | 5.04           | mg/L                | yes                    | Annual result                                              |
| SW1                | upstream                             | Zinc and compounds (as Zn)     |                               | Annual          | No ELV or trigger levels                                 | N/A                         | <20            | µg/L                | yes                    | Annual result                                              |
| SW1                | upstream                             | Total phosphorus               |                               | Annual          | No ELV or trigger levels                                 | N/A                         | 0.16           | mg/L                | yes                    | Annual result                                              |
| SW2                | downstream                           |                                | pH                            | Quarterly       | No ELV or trigger levels                                 | N/A                         | 7.42           | pH units            | yes                    | Median Value for 2013                                      |
| SW2                | downstream                           |                                | Temperature                   | Quarterly       | No ELV or trigger levels                                 | N/A                         | 5              | degrees C           | yes                    | Median Value for 2013                                      |
| SW2                | downstream                           |                                | Conductivity                  | Quarterly       | No ELV or trigger levels                                 | N/A                         | 1,800          | µS/cm@25oC          | yes                    | Median value for 2013. SW2 is influenced by saline waters. |
| SW2                | downstream                           |                                | Dissolved Oxygen              | Quarterly       | No ELV or trigger levels                                 | N/A                         | 7.82           | mg/L                | yes                    | Median Value for 2013                                      |
| SW2                | downstream                           | Chlorides (as Cl)              |                               | Quarterly       | No ELV or trigger levels                                 | N/A                         | 5955.09        | mg/L                | yes                    | Median value for 2013. SW2 is influenced by saline waters. |
| SW2                | downstream                           |                                | BOD                           | Quarterly       | No ELV or trigger levels                                 | N/A                         | 5.17           | mg/L                | yes                    | Median Value for 2013                                      |
| SW2                | downstream                           |                                | COD                           | Quarterly       | No ELV or trigger levels                                 | N/A                         | 760            | mg/L                | yes                    | Median Value for 2013                                      |
| SW2                | downstream                           |                                | Ammonia (as N)                | Quarterly       |                                                          |                             | 3.85           | mg/L                | yes                    | Median Value for 2013                                      |
| SW2                | downstream                           |                                | Suspended Solids              | Quarterly       |                                                          |                             | 59.75          | mg/L                | yes                    | Median Value for 2013                                      |
| SW2                | downstream                           | Chromium and compounds (as Cr) |                               | Annual          | No ELV or trigger levels                                 | N/A                         | <20            | µg/L                | yes                    | Annual result                                              |
| SW2                | downstream                           | Copper and compounds (as Cu)   |                               | Annual          | No ELV or trigger levels                                 | N/A                         | <20            | µg/L                | yes                    | Annual result                                              |



| AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) |            |                                |                               |           |                          |      |         |            |     |                                                                                                                                          |
|-----------------------------------------------------------------|------------|--------------------------------|-------------------------------|-----------|--------------------------|------|---------|------------|-----|------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                 |            | Lic No:                        |                               | W0068-03  |                          | Year |         | 2013       |     |                                                                                                                                          |
| SW2                                                             | downstream | Cadmium and compounds (as Cd)  |                               | Annual    | No ELV or trigger levels | N/A  | <20     | µg/L       | yes | Annual result                                                                                                                            |
| SW2                                                             | downstream |                                | Iron                          | Annual    | No ELV or trigger levels | N/A  | 272     | µg/L       | yes | Annual result                                                                                                                            |
| SW2                                                             | downstream | Lead and compounds (as Pb)     |                               | Annual    | No ELV or trigger levels | N/A  | <20     | µg/L       | yes | Annual result                                                                                                                            |
| SW2                                                             | downstream |                                | Magnesium                     | Annual    | No ELV or trigger levels | N/A  | 247     | mg/L       | yes | Annual result                                                                                                                            |
| SW2                                                             | downstream |                                | Manganese (as Mn)             | Annual    | No ELV or trigger levels | N/A  | 936     | µg/L       | yes | Annual result                                                                                                                            |
| SW2                                                             | downstream | Mercury and compounds (as Hg)  |                               | Annual    | No ELV or trigger levels | N/A  | <0.1    | µg/L       | yes | Annual result                                                                                                                            |
| SW2                                                             | downstream |                                | Potassium                     | Annual    | No ELV or trigger levels | N/A  | 30.1    | mg/L       | yes | Annual result                                                                                                                            |
| SW2                                                             | downstream |                                | Sulphate                      | Annual    | No ELV or trigger levels | N/A  | 413.41  | mg/L       | yes | Annual result                                                                                                                            |
| SW2                                                             | downstream |                                | Total Oxidised Nitrogen (TON) | Annual    | No ELV or trigger levels | N/A  | 1.36    | mg/L       | yes | Annual result                                                                                                                            |
| SW2                                                             | downstream | Zinc and compounds (as Zn)     |                               | Annual    | No ELV or trigger levels | N/A  | <20     | µg/L       | yes | Annual result                                                                                                                            |
| SW2                                                             | downstream | Total phosphorus               |                               | Annual    | No ELV or trigger levels | N/A  | 0.23    | mg/L       | yes | Annual result                                                                                                                            |
| SW3                                                             | downstream |                                | PH                            | Quarterly | No ELV or trigger levels | N/A  | 8.03    | pH units   | yes | Median Value for 2013                                                                                                                    |
| SW3                                                             | downstream |                                | Temperature                   | Quarterly | No ELV or trigger levels | N/A  | 4.4     | degrees C  | yes | Median Value for 2013                                                                                                                    |
| SW3                                                             | downstream |                                | Conductivity                  | Quarterly | No ELV or trigger levels | N/A  | 3793    | µS/cm@25oC | yes | Median Value for 2013                                                                                                                    |
| SW3                                                             | downstream |                                | Dissolved Oxygen              | Quarterly | No ELV or trigger levels | N/A  | 10.14   | mg/L       | yes | Median Value for 2013                                                                                                                    |
| SW3                                                             | downstream | Chlorides (as Cl)              |                               | Quarterly | No ELV or trigger levels | N/A  | 5354    | mg/L       | yes | Median Value for 2013                                                                                                                    |
| SW3                                                             | downstream |                                | BOD                           | Quarterly | No ELV or trigger levels | N/A  | 68.33   | mg/L       | yes | Median Value for 2013                                                                                                                    |
| SW3                                                             | downstream |                                | COD                           | Quarterly | No ELV or trigger levels | N/A  | 859.5   | mg/L       | yes | Median Value for 2013                                                                                                                    |
| SW3                                                             | downstream |                                | Ammonia (as N)                | Quarterly | No ELV or trigger levels | N/A  | 2.7     | mg/L       | yes | Median Value for 2013                                                                                                                    |
| SW3                                                             | downstream |                                | Suspended Solids              | Quarterly | No ELV or trigger levels | N/A  | 132.75  | mg/L       | yes | Median Value for 2013                                                                                                                    |
| SW3                                                             | downstream | Chromium and compounds (as Cr) |                               | Annual    | No ELV or trigger levels | N/A  | <20     | µg/L       | yes | Annual result                                                                                                                            |
| SW3                                                             | downstream | Copper and compounds (as Cu)   |                               | Annual    | No ELV or trigger levels | N/A  | <20     | mg/L       | yes | Annual result                                                                                                                            |
| SW3                                                             | downstream | Cadmium and compounds (as Cd)  |                               | Annual    | No ELV or trigger levels | N/A  | <20     | µg/L       | yes | Annual result                                                                                                                            |
| SW3                                                             | downstream |                                | Iron                          | Annual    | No ELV or trigger levels | N/A  | 36      | µg/L       | yes | Annual result                                                                                                                            |
| SW3                                                             | downstream | Lead and compounds (as Pb)     |                               | Annual    | No ELV or trigger levels | N/A  | <20     | µg/L       | yes | Annual result                                                                                                                            |
| SW3                                                             | downstream |                                | Magnesium                     | Annual    | No ELV or trigger levels | N/A  | 1254    | mg/L       | yes | Annual result for 2013. EQS limit is 50 mg/L. Elevated levels are consistent with previous years and are due to the geology of the site. |
| SW3                                                             | downstream |                                | Manganese (as Mn)             | Annual    | No ELV or trigger levels | N/A  | <20     | µg/L       | yes | Annual result                                                                                                                            |
| SW3                                                             | downstream | Mercury and compounds (as Hg)  |                               | Annual    | No ELV or trigger levels | N/A  | <0.1    | µg/L       | yes | Annual result                                                                                                                            |
| SW3                                                             | downstream |                                | Potassium                     | Annual    | No ELV or trigger levels | N/A  | 19.5    | mg/L       | yes | Annual result                                                                                                                            |
| SW3                                                             | downstream |                                | Sulphate                      | Annual    | No ELV or trigger levels | N/A  | 1268.72 | mg/L       | yes | Annual result                                                                                                                            |
| SW3                                                             | downstream |                                | Total Oxidised Nitrogen (TON) | Annual    | No ELV or trigger levels | N/A  | <0.5    | mg/L       | yes | Annual result                                                                                                                            |
| SW3                                                             | downstream | Zinc and compounds (as Zn)     |                               | annual    | No ELV or trigger levels | N/A  | <20     | µg/L       | yes | Annual result                                                                                                                            |
| SW3                                                             | downstream | Total phosphorus               |                               | Annual    | No ELV or trigger levels | N/A  | 0.05    | mg/L       | yes | Annual result                                                                                                                            |
| SW6                                                             | downstream |                                | PH                            | Quarterly | No ELV or trigger levels | N/A  | 7.87    | pH units   | yes | Median Value for 2013                                                                                                                    |
| SW6                                                             | downstream |                                | Temperature                   | Quarterly | No ELV or trigger levels | N/A  | 6.61    | degrees C  | yes | Median Value for 2013                                                                                                                    |
| SW6                                                             | downstream |                                | Conductivity                  | Quarterly | No ELV or trigger levels | N/A  | 3196    | µS/cm@25oC | yes | Median Value for 2013                                                                                                                    |
| SW6                                                             | downstream |                                | Dissolved Oxygen              | Quarterly | No ELV or trigger levels | N/A  | 7.73    | mg/L       | yes | Median Value for 2013                                                                                                                    |
| SW6                                                             | downstream | Chlorides (as Cl)              |                               | Quarterly | No ELV or trigger levels | N/A  | 7414.73 | mg/L       | yes | Median Value for 2013                                                                                                                    |
| SW6                                                             | downstream |                                | BOD                           | Quarterly | No ELV or trigger levels | N/A  | 4.98    | mg/L       | yes | Median Value for 2013                                                                                                                    |
| SW6                                                             | downstream |                                | COD                           | Quarterly | No ELV or trigger levels | N/A  | 307.25  | mg/L       | yes | Median Value for 2013                                                                                                                    |
| SW6                                                             | downstream |                                | Ammonia (as N)                | Quarterly | No ELV or trigger levels | N/A  | 3.43    | mg/L       | yes | Median Value for 2013                                                                                                                    |
| SW6                                                             | downstream |                                | Suspended Solids              | Quarterly | No ELV or trigger levels | N/A  | 68.5    | mg/L       | yes | Median Value for 2013                                                                                                                    |
| SW6                                                             | downstream | Chromium and compounds (as Cr) |                               | Annual    | No ELV or trigger levels | N/A  | <20     | µg/L       | yes | Annual result                                                                                                                            |
| SW6                                                             | downstream | Copper and compounds (as Cu)   |                               | Annual    | No ELV or trigger levels | N/A  | <20     | mg/L       | yes | Annual result                                                                                                                            |
| SW6                                                             | downstream | Cadmium and compounds (as Cd)  |                               | Annual    | No ELV or trigger levels | N/A  | <20     | µg/L       | yes | Annual result                                                                                                                            |
| SW6                                                             | downstream |                                | Iron                          | Annual    | No ELV or trigger levels | N/A  | 285     | µg/L       | yes | Annual result                                                                                                                            |



**AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)** Lic No: W0068-03 Year 2013

Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box

[External/Internal Lab Quality checklist](#)
[Assessment of results checklist](#)

**Table W3: Licensed Emissions to water and /or wastewater (sewer)-periodic monitoring (non-continuous)**

| Emission reference no: | Emission released to | Parameter/ Substance <sup>Note 1</sup> | Type of sample | Frequency of monitoring | Averaging period | ELV or trigger values in licence or any revision therof <sup>Note 2</sup> | Licence Compliance criteria | Measured value | Unit of measurement | Compliant with licence | Method of analysis | Procedural reference source | Procedural reference standard number | Annual mass load (kg) | Comments |
|------------------------|----------------------|----------------------------------------|----------------|-------------------------|------------------|---------------------------------------------------------------------------|-----------------------------|----------------|---------------------|------------------------|--------------------|-----------------------------|--------------------------------------|-----------------------|----------|
|                        | SELECT               | SELECT                                 | SELECT         |                         | SELECT           |                                                                           | SELECT                      |                | SELECT              | SELECT                 | SELECT             | SELECT                      |                                      |                       |          |
|                        |                      |                                        |                |                         |                  |                                                                           |                             |                |                     |                        |                    |                             |                                      |                       |          |

Note 1: Volumetric flow shall be included as a reportable parameter

Note 2: Where Emission Limit Values (ELV) do not apply to your licence please compare results against EQS for Surface water or relevant receptor quality standards

**Continuous monitoring**  
 5 Does your site carry out continuous emissions to water/sewer monitoring?  Additional Information

If yes please summarise your continuous monitoring data below in Table W4 and compare it to its relevant Emission Limit Value (ELV)

6 Did continuous monitoring equipment experience downtime? If yes please record downtime in table W4 below

7 Do you have a proactive service contract for each piece of continuous monitoring equipment on site?

8 Did abatement system bypass occur during the reporting year? If yes please complete table W5 below

**Table W4: Summary of average emissions -continuous monitoring**

| Emission reference no: | Emission released to                | Parameter/ Substance                | ELV or trigger values in licence or any revision thereof | Averaging Period                    | Compliance Criteria                 | Units of measurement                | Annual Emission for current reporting year (kg) | % change +/- from previous reporting year | Monitoring Equipment downtime (hours) | Number of ELV exceedences in reporting year | Comments |
|------------------------|-------------------------------------|-------------------------------------|----------------------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------------------|-------------------------------------------|---------------------------------------|---------------------------------------------|----------|
|                        | <input type="text" value="SELECT"/> | <input type="text" value="SELECT"/> |                                                          | <input type="text" value="SELECT"/> | <input type="text" value="SELECT"/> | <input type="text" value="SELECT"/> |                                                 |                                           |                                       |                                             |          |
|                        | <input type="text" value="SELECT"/> | <input type="text" value="SELECT"/> |                                                          | <input type="text" value="SELECT"/> | <input type="text" value="SELECT"/> | <input type="text" value="SELECT"/> |                                                 |                                           |                                       |                                             |          |

note 1: Volumetric flow shall be included as a reportable parameter.

**Table W5: Abatement system bypass reporting table**

| Date | Duration (hours) | Location | Resultant emissions | Reason for bypass | Corrective action* | Was a report submitted to the EPA?  | When was this report submitted? |
|------|------------------|----------|---------------------|-------------------|--------------------|-------------------------------------|---------------------------------|
|      |                  |          |                     |                   |                    | <input type="text" value="SELECT"/> |                                 |
|      |                  |          |                     |                   |                    |                                     |                                 |

\*Measures taken or proposed to reduce or limit bypass frequency

**Bund testing**

dropdown menu click to see options

**Additional information**

Are you required by your licence to undertake integrity testing on bunds and containment structures? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test - **all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)

|         |                                                                                                                                            |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Yes     | Only one bund test is required at the site for the leachate lagoon. The lagoon is used for storage of leachate prior to transport to local |
| 3 years |                                                                                                                                            |
| No      |                                                                                                                                            |
| 1       |                                                                                                                                            |
| 1       |                                                                                                                                            |
| 1       |                                                                                                                                            |
| No      |                                                                                                                                            |
| 1       |                                                                                                                                            |
| 0       |                                                                                                                                            |
| N/A     |                                                                                                                                            |
| No      |                                                                                                                                            |
| N/A     |                                                                                                                                            |
| SELECT  |                                                                                                                                            |

- 1 Please provide integrity testing frequency period
  - 2 Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)
  - 3 How many bunds are on site?
  - 4 How many of these bunds have been tested within the required test schedule?
  - 5 How many mobile bunds are on site?
  - 6 Are the mobile bunds included in the bund test schedule?
  - 7 How many of these mobile bunds have been tested within the required test schedule?
  - 8 How many sumps on site are included in the integrity test schedule?
  - 9 How many of these sumps are integrity tested within the test schedule?
- Please list any sump integrity failures in table B1**
- 12 Do all sumps and chambers have high level liquid alarms?
  - 13 If yes to Q11 are these failsafe systems included in a maintenance and testing programme?
  - 13 Is the Fire Water Retention Pond included in your integrity test programme?

**Table B1: Summary details of bund /containment structure integrity test**

| Bund/Containment structure ID | Type                | Specify Other type     | Product containment | Actual capacity | Capacity required* | Type of integrity test | Other test type | Test date | Integrity reports maintained on site? | Results of test | Integrity test failure explanation <50 words | Corrective action taken | Scheduled date for retest | Results of retest (if in current reporting year) |
|-------------------------------|---------------------|------------------------|---------------------|-----------------|--------------------|------------------------|-----------------|-----------|---------------------------------------|-----------------|----------------------------------------------|-------------------------|---------------------------|--------------------------------------------------|
| Leachate Lagoon               | reinforced concrete | Liner covered concrete | Leachate            | 2000 m3         | 1500 m3            | Structural assessment  |                 | Oct-08    | Yes                                   | Pass            |                                              |                         |                           |                                                  |
|                               | SELECT              |                        |                     |                 |                    | SELECT                 |                 |           | SELECT                                | SELECT          |                                              | SELECT                  |                           |                                                  |

\* Capacity required should comply with 25% or 110% containment rule as detailed in your licence

Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance?

[bunding and storage guidelines](#)

|            |  |
|------------|--|
| Commentary |  |
| Yes        |  |
| SELECT     |  |
| SELECT     |  |

- 15 Are channels/transfer systems to remote containment systems tested?
- 17 Are channels/transfer systems compliant in both integrity and available volume?

**Pipeline/underground structure testing**

Are you required by your licence to undertake integrity testing\* on underground structures e.g. pipelines or sumps etc? if yes please fill out table 2 below listing all underground structures and pipelines on site **which failed the integrity test and all which have not been tested within the integrity test period as specified**

|        |  |
|--------|--|
| SELECT |  |
| SELECT |  |

- 1 Please provide integrity testing frequency period
- \*please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)

**Table B2: Summary details of pipeline/underground structures integrity test**

| Structure ID | Type system | Material of construction: | Does this structure have Secondary containment? | Type of secondary containment | Type integrity testing | Integrity reports maintained on site? | Results of test | Integrity test failure explanation <50 words | Corrective action taken | Scheduled date for retest | Results of retest (if in current reporting year) |
|--------------|-------------|---------------------------|-------------------------------------------------|-------------------------------|------------------------|---------------------------------------|-----------------|----------------------------------------------|-------------------------|---------------------------|--------------------------------------------------|
|              | SELECT      | SELECT                    | SELECT                                          | SELECT                        | SELECT                 | SELECT                                | SELECT          |                                              |                         |                           | SELECT                                           |
|              |             |                           |                                                 |                               |                        |                                       |                 |                                              |                         |                           |                                                  |
|              |             |                           |                                                 |                               |                        |                                       |                 |                                              |                         |                           |                                                  |

Please use commentary for additional details not answered by tables/ questions above

|                                             |                  |           |
|---------------------------------------------|------------------|-----------|
| <b>Groundwater/Soil monitoring template</b> | Lic No: W0068-03 | Year 2013 |
|---------------------------------------------|------------------|-----------|

|    |                                                                                                                                                                                                                                                                                                                                                                                                            |        | Comments                                                                                                                                                                                                                                                |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Are you required to carry out groundwater monitoring as part of your licence requirements?                                                                                                                                                                                                                                                                                                                 | yes    | Please provide an interpretation of groundwater monitoring data in the interpretation box below or if you require additional space please include a groundwater/contaminated land monitoring results interpretaion as an additional section in this AER |
| 2  | Are you required to carry out soil monitoring as part of your licence requirements?                                                                                                                                                                                                                                                                                                                        | no     |                                                                                                                                                                                                                                                         |
| 3  | Do you extract groundwater for use on site? If yes please specify use in comment section                                                                                                                                                                                                                                                                                                                   | no     |                                                                                                                                                                                                                                                         |
| 4  | Do monitoring results show that groundwater generic assessment criteria such as GTVs or IGVs are exceeded or is there an upward trend in results for a substance? If yes, please complete the Groundwater Monitoring Guideline Template <a href="#">Groundwater monitoring template</a> Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below. | no     |                                                                                                                                                                                                                                                         |
| 5  | Is the contamination related to operations at the facility (either current and/or historic)                                                                                                                                                                                                                                                                                                                | SELECT |                                                                                                                                                                                                                                                         |
| 6  | Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site                                                                                                                                                                                                                                                                    | SELECT |                                                                                                                                                                                                                                                         |
| 7  | Please specify the proposed time frame for the remediation strategy                                                                                                                                                                                                                                                                                                                                        | SELECT |                                                                                                                                                                                                                                                         |
| 8  | Is there a licence condition to carry out/update ELRA for the site?                                                                                                                                                                                                                                                                                                                                        | SELECT |                                                                                                                                                                                                                                                         |
| 9  | Has any type of risk assesment been carried out for the site?                                                                                                                                                                                                                                                                                                                                              | SELECT |                                                                                                                                                                                                                                                         |
| 10 | Has a Conceptual Site Model been developed for the site?                                                                                                                                                                                                                                                                                                                                                   | SELECT |                                                                                                                                                                                                                                                         |
| 11 | Have potential receptors been identified on and off site?                                                                                                                                                                                                                                                                                                                                                  | SELECT |                                                                                                                                                                                                                                                         |
| 12 | Is there evidence that contamination is migrating offsite?                                                                                                                                                                                                                                                                                                                                                 | SELECT |                                                                                                                                                                                                                                                         |

**Table 1: Upgradient Groundwater monitoring results**

| Date of sampling | Sample location reference | Parameter/ Substance | Methodology | Monitoring frequency | Maximum Concentration++ | Average Concentration+ | unit   | GTV's* | SELECT**                | Upward trend in pollutant concentration over last 5 years of monitoring data |
|------------------|---------------------------|----------------------|-------------|----------------------|-------------------------|------------------------|--------|--------|-------------------------|------------------------------------------------------------------------------|
| Quarterly        | MW4                       | pH                   | Meter       | Quarterly            | 7.64                    | 7.18                   | SELECT |        | 9.5                     | no                                                                           |
| Quarterly        | MW4                       | Temp                 | Meter       | Quarterly            | 6.8                     | 6.25                   |        |        | 25                      | no                                                                           |
| Quarterly        | MW4                       | Elec.Conductivity    | Meter       | Quarterly            | 2910                    | 1784                   |        |        | 1000                    | no                                                                           |
| Quarterly        | MW4                       | Chlorides            | titration   | Quarterly            | 6497                    | 1957                   | mg/l   |        | 250                     | no                                                                           |
| Quarterly        | MW4                       | Ammoniacal Nitrogen  | ISE         | Quarterly            | 19.14                   | 7.72                   | mg/l   |        | 80mg/l* (Trigger limit) | no                                                                           |
| Quarterly        | MW4                       | Iron                 |             | Quarterly            | 5466                    | 2536                   | ug/l   |        | 0.2                     | no                                                                           |
| Quarterly        | MW4                       | TON                  |             | Quarterly            | 15.84                   | 7                      | ug/l   |        | No abnormal change      | no                                                                           |
| Quarterly        | MW4                       | TOC                  | HACH        | Quarterly            | 18                      | 13.37                  | mg/l   |        | 30mg/l (Tigger limit)   | no                                                                           |
| Annual           | MW4                       | Cadmium              |             | Annual               | <20                     | <20                    | ug/l   |        | 0.005                   | no                                                                           |
| Annual           | MW4                       | Chromium (total)     |             | Annual               | <20                     | <20                    | ug/l   |        | 0.03                    | no                                                                           |
| Annual           | MW4                       | Copper               |             | Annual               | <20                     | <20                    | ug/l   |        | 0.03                    | no                                                                           |
| Annual           | MW4                       | Cyanide (Total)      |             | Annual               | <0.009                  | <0.009                 | ug/l   |        | 0.01                    | no                                                                           |
| Annual           | MW4                       | Lead                 |             | Annual               | <20                     | <20                    | ug/l   |        | 0.01                    | no                                                                           |
| Annual           | MW4                       | Mangnesium           |             | Annual               | 40.6                    | 40.6                   | mg/l   |        | 50                      | no                                                                           |
| Annual           | MW4                       | Manganese            |             | Annual               | 1821                    | 1821                   | ug/l   |        | 0.05                    | no                                                                           |

| Groundwater/Soil monitoring template |     |                        | Lic No: | W0068-03 | Year   | 2013 |       |    |
|--------------------------------------|-----|------------------------|---------|----------|--------|------|-------|----|
| Annual                               | MW4 | Mercury                | Annual  | <0.10    | <0.10  | ug/l | 0.001 | no |
| Annual                               | MW4 | Nickle                 | Annual  | <20      | <20    | ug/l | 0.02  | no |
| Annual                               | MW4 | Potassium              | Annual  | 21.8     | 21.8   | mg/l | 5     | no |
| Annual                               | MW4 | Sulphate               | Annual  | 9.78     | 9.78   | mg/l | 200   | no |
| Annual                               | MW4 | Total Alkalinity       | Annual  | 738.15   | 738.15 | mg/l |       | no |
| Annual                               | MW4 | Total Phosphorus       | Annual  | 0.08     | 0.08   | mg/l |       | no |
| Annual                               | MW4 | Phenols                | Annual  | <0.15    | <0.15  | ug/l | 0.5   | no |
| Annual                               | MW4 | Acenaphthylene         | Annual  | <0.5     | <0.5   | ug/l |       | no |
| Annual                               | MW4 | Anthracene             | Annual  | <0.5     | <0.5   | ug/l |       | no |
| Annual                               | MW4 | Benzene                | Annual  | <0.1     | <0.1   | ug/l | 1     | no |
| Annual                               | MW4 | Bromodichloromethane   | Annual  | <2       | <2     | ug/l |       | no |
| Annual                               | MW4 | Bromoform              | Annual  | <1       | <1     | ug/l |       | no |
| Annual                               | MW4 | Chloroform             | Annual  | <1       | <1     | ug/l | 12    | no |
| Annual                               | MW4 | Chrysene               | Annual  | <1       | <1     | ug/l |       | no |
| Annual                               | MW4 | Dibromochloromethane   | Annual  | <1       | <1     | ug/l |       | no |
| Annual                               | MW4 | Fluoranthene           | Annual  | <1       | <1     | ug/l |       | no |
| Annual                               | MW4 | Fluorene               | Annual  | <1       | <1     | ug/l |       | no |
| Annual                               | MW4 | Naphthalene            | Annual  | <2.0     | <2.0   | ug/l |       | no |
| Annual                               | MW4 | Dibromochloromethane   | Annual  | <1       | <1     | ug/l |       | no |
| Annual                               | MW4 | Pentachlorophenol      | Annual  | <1       | <1     | ug/l | 2     | no |
| Annual                               | MW4 | Phenanthrene           | Annual  | <1       | <1     | ug/l |       | no |
| Annual                               | MW4 | Pyrene                 | Annual  | <1       | <1     | ug/l |       | no |
| Annual                               | MW4 | Tetrachloroethene      | Annual  | <0.1     | <0.1   | ug/l |       | no |
| Annual                               | MW4 | Trichloroethene        | Annual  | <0.1     | <0.1   | ug/l |       | no |
| Annual                               | MW4 | Hexachlorobenzene      | Annual  | <1       | <1     | ug/l | 0.03  | no |
| Annual                               | MW4 | Hexachlorobutadiene    | Annual  | <0.5     | <0.5   | ug/l | 0.1   | no |
| Annual                               | MW4 | 2,4,6-Trichlorophenol  | Annual  | <1       | <1     | ug/l |       | no |
| Annual                               | MW4 | 2,4-Dichlorophenol     | Annual  | <1       | <1     | ug/l |       | no |
| Annual                               | MW4 | 2,4-Dimethylphenol     | Annual  | <1       | <1     | ug/l |       | no |
| Annual                               | MW4 | 2-Chlorophenol         | Annual  | <1       | <1     | ug/l |       | no |
| Annual                               | MW4 | 1,2,4-trichlorobenzene | Annual  | <0.5     | <0.5   | ug/l |       | no |
| Annual                               | MW4 | 1,2-dichlorobenzene    | Annual  | <0.5     | <0.5   | ug/l |       | no |
| Annual                               | MW4 | 1,3-dichlorobenzene    | Annual  | <0.5     | <0.5   | ug/l |       | no |
| Annual                               | MW4 | 1,4-dichlorobenzene    | Annual  | <0.5     | <0.5   | ug/l |       | no |
| Annual                               | MW4 | 2,4,5-Trichlorophenol  | Annual  | <1       | <1     | ug/l |       | no |

| Groundwater/Soil monitoring template |     |                             | Lic No: | W0068-03 | Year | 2013 |      |  |  |    |
|--------------------------------------|-----|-----------------------------|---------|----------|------|------|------|--|--|----|
| Annual                               | MW4 | 2,4-Dinitrotoluene          |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | 2,6-Dinitrotoluene          |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | 2-Chloronaphthalene         |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | 2-Methylnaphthalene         |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | 2-Methylphenol              |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | 2-Nitrophenol               |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | 4-Bromophenyl Phenyl Ether  |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | 4-Chloro-3-methylphenol     |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | 4-Chlorophenyl phenyl ether |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | 4-Nitrophenol               |         | Annual   | <5   | <5   | ug/l |  |  | no |
| Annual                               | MW4 | Acenaphthene                |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Benzo(a)anthracene          |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Benzo(a)pyrene              |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Benzo(b)fluoranthene        |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Benzo(g,h,i)perylene        |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Benzyl Butyl Phthalate      |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Bis(2-chloroethoxy)methane  |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Bis(2-chloroethyl)ether     |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Bis(2-chloroisopropyl)ether |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Bis(2-ethylhexyl)phthalate  |         | Annual   | <5   | <5   | ug/l |  |  | no |
| Annual                               | MW4 | Dibenz(a,h)anthracene       |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Dibenzofuran                |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Diethylphthalate            |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | di-n-Butylphthalate         |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Di-n-octylphthalate         |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Diphenylamine               |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Hexachloroethane            |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Indeno(1,2,3-c,d)pyrene     |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Isophorone                  |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Nitrobenzene                |         | Annual   | <0.5 | <0.5 | ug/l |  |  | no |
| Annual                               | MW4 | n-Nitrosodi-n-propylamine   |         | Annual   | <1   | <1   | ug/l |  |  | no |
| Annual                               | MW4 | Acetone                     |         | Annual   | <2   | <2   | ug/l |  |  | no |
| Annual                               | MW4 | Dichloromethane             |         | Annual   | <5   | <5   | ug/l |  |  | no |



| Groundwater/Soil monitoring template |     |                                         | Lic No: | W0068-03 | Year | 2013 |        |
|--------------------------------------|-----|-----------------------------------------|---------|----------|------|------|--------|
| Annual                               | MW4 | Tetrahydrofuran                         | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | Toluene                                 | Annual  | <0.5     | <0.5 | ug/l | 10 no  |
| Annual                               | MW4 | Xylene -o                               | Annual  | 0.6      | 0.6  | ug/l | 10 no  |
| Annual                               | MW4 | Dichlorodifluoromethane                 | Annual  | <10      | <10  | ug/l | no     |
| Annual                               | MW4 | Chloromethane                           | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | Ethyl Chloride/Chloroethane             | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | Vinyl Chloride                          | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | Bromomethane                            | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | Trichloromonofluoromethane              | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | Ethyl Ether/Diethyl Ether               | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | 1,1 Dichloroethene                      | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | Iodomethane/Methyl iodide               | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | Carbon Disulphide                       | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | Allyl Chloride                          | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | Chloromethyl Cyanide/Chloroacetonitrile | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | Propanenitrile                          | Annual  | <10      | <10  | ug/l | no     |
| Annual                               | MW4 | Trans-1,2 Dichloroethene                | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | MtBE                                    | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | 1,1-dichloroethane                      | Annual  | <0.5     | <0.5 | ug/l | 30 no  |
| Annual                               | MW4 | 2,2-dichloropropane                     | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | cis-1,2 Dichloroethene                  | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | 2-Butanone                              | Annual  | <5       | <5   | ug/l | no     |
| Annual                               | MW4 | Methyl Acrylate                         | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | Bromochloromethane                      | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | Methacrylonitrile                       | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | 1,1,1-trichloroethane                   | Annual  | <0.5     | <0.5 | ug/l | 500 no |
| Annual                               | MW4 | 1-Chlorobutane                          | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | Carbon Tetrachloride                    | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | 1,1 Dichloropropene                     | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | 1,2 dichloroethane                      | Annual  | <0.1     | <0.1 | ug/l | no     |
| Annual                               | MW4 | 1,2-dichloropropane                     | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | Dibromomethane                          | Annual  | <0.5     | <0.5 | ug/l | no     |
| Annual                               | MW4 | Methyl Methacrylate                     | Annual  | <0.5     | <0.5 | ug/l | no     |

| Groundwater/Soil monitoring template |     |                                          | Lic No: | W0068-03 | Year | 2013 |      |  |  |  |       |
|--------------------------------------|-----|------------------------------------------|---------|----------|------|------|------|--|--|--|-------|
| Annual                               | MW4 | 13<br>Dichloropropene, cis               |         | Annual   | <2   | <2   | ug/l |  |  |  | no    |
| Annual                               | MW4 | MIBK/4 Methyl 2<br>Pentanone             |         | Annual   | <2   | <2   | ug/l |  |  |  | no    |
| Annual                               | MW4 | 13<br>Dichloropropene, trans             |         | Annual   | <2   | <2   | ug/l |  |  |  | no    |
| Annual                               | MW4 | Ethyl<br>Methacrylate                    |         | Annual   | <2   | <2   | ug/l |  |  |  | no    |
| Annual                               | MW4 | 112<br>Trichloroethane                   |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | no    |
| Annual                               | MW4 | 1,3-<br>dichloropropane                  |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | no    |
| Annual                               | MW4 | 2-Hexanone                               |         | Annual   | <1   | <1   | ug/l |  |  |  | no    |
| Annual                               | MW4 | 1,2-<br>dibromoethane                    |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | no    |
| Annual                               | MW4 | Chlorobenzene                            |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | 1 no  |
| Annual                               | MW4 | 1,1,1,2-<br>tetrachloroethane            |         | Annual   | <2   | <2   | ug/l |  |  |  | no    |
| Annual                               | MW4 | Ethylbenzene                             |         | Annual   | 0.6  | 0.6  | ug/l |  |  |  | 10 no |
| Annual                               | MW4 | Xylene P&M                               |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | no    |
| Annual                               | MW4 | Styrene                                  |         | Annual   | <2   | <2   | ug/l |  |  |  | no    |
| Annual                               | MW4 | Isopropylbenzene                         |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | no    |
| Annual                               | MW4 | Bromobenzene                             |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | no    |
| Annual                               | MW4 | 1,1,2,2-<br>tetrachloroethane            |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | no    |
| Annual                               | MW4 | 1,2,3-<br>trichloropropane               |         | Annual   | <2   | <2   | ug/l |  |  |  | no    |
| Annual                               | MW4 | Trans 1,4<br>Dichloro<br>2 Butene, trans |         | Annual   | <2   | <2   | ug/l |  |  |  | no    |
| Annual                               | MW4 | Propylbenzene                            |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | no    |
| Annual                               | MW4 | 2-chlorotoluene                          |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | no    |
| Annual                               | MW4 | 4-chlorotoluene                          |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | no    |
| Annual                               | MW4 | 1,3,5-<br>trimethylbenzene               |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | no    |
| Annual                               | MW4 | Tert Butyl Benzene                       |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | no    |
| Annual                               | MW4 | 1,2,4-<br>trimethylbenzene               |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | no    |
| Annual                               | MW4 | sec-butylbenzene                         |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | no    |
| Annual                               | MW4 | p<br>Isopropyltoluene                    |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | no    |
| Annual                               | MW4 | N Butyl Benzene                          |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | no    |
| Annual                               | MW4 | 1,2-dibromo-3-<br>chloropropane          |         | Annual   | <2   | <2   | ug/l |  |  |  | no    |
| Annual                               | MW4 | 1,2,3-<br>trichlorobenzene               |         | Annual   | <0.5 | <0.5 | ug/l |  |  |  | no    |

| Groundwater/Soil monitoring template |     |                       |           | Lic No:   | W0068-03 | Year    | 2013               |                    |
|--------------------------------------|-----|-----------------------|-----------|-----------|----------|---------|--------------------|--------------------|
| Quarterly                            | MW7 | pH                    | Meter     | Quarterly | 7.6      | 7.1     | 9.5                | data not available |
| Quarterly                            | MW7 | Temp                  | Meter     | Quarterly | 6.5      | 4.4     | 25                 | data not available |
| Quarterly                            | MW7 | Elec.Conductivity     | Meter     | Quarterly | 3900     | 3362    | 1000               | data not available |
| Quarterly                            | MW7 | Chlorides             | titration | Quarterly | 12496    | 3518    | 250                | data not available |
| Quarterly                            | MW7 | Ammoniacal Nitrogen   | ISE       | Quarterly | 179      | 61.4    | 0.02               | data not available |
| Quarterly                            | MW7 | Iron                  |           | Quarterly | 31217    | 10517   | 0.2                | data not available |
| Quarterly                            | MW7 | TON                   |           | Quarterly | 0.77     | 0.47    | No abnormal change | data not available |
| Quarterly                            | MW7 | TOC                   | HACH      | Quarterly | 48       | 30.67   |                    | data not available |
| Annual                               | MW7 | Cadmium               |           | Annual    | <20      | <20     | 0.005              | data not available |
| Annual                               | MW7 | Chromium (total)      |           | Annual    | <20      |         | 0.03               | data not available |
| Annual                               | MW7 | Copper                |           | Annual    | <20      |         | 0.03               | data not available |
| Annual                               | MW7 | Cyanide (Total)       |           | Annual    | <0.009   | <0.009  | 0.01               | data not available |
| Annual                               | MW7 | Lead                  |           | Annual    | <20      | <20     | 0.01               | data not available |
| Annual                               | MW7 | Magnesium             |           | Annual    | 46.9     | 46.9    | 50                 | data not available |
| Annual                               | MW7 | Manganese             |           | Annual    | 3853     | 3853    | 0.05               | data not available |
| Annual                               | MW7 | Mercury               |           | Annual    | <0.10    | <0.10   | 0.001              | data not available |
| Annual                               | MW7 | Nickle                |           | Annual    | <20      |         | 0.02               | data not available |
| Annual                               | MW7 | Potassium             |           | Annual    | 6        | 6       | 5                  | data not available |
| Annual                               | MW7 | Sulphate              |           | Annual    | <2.5     | <2.5    | 200                | data not available |
| Annual                               | MW7 | Total Alkalinity      |           | Annual    | 1286.44  | 1286.44 |                    | data not available |
| Annual                               | MW7 | Total Phosphorus      |           | Annual    | 0.15     | 0.15    |                    | data not available |
| Annual                               | MW7 | Phenols               |           | Annual    | <0.15    | <0.15   | 0.5                | data not available |
| Annual                               | MW7 | Acenaphthylene        |           | Annual    | <0.5     | <0.5    |                    | data not available |
| Annual                               | MW7 | Anthracene            |           | Annual    | 0.1      | 0.1     |                    | data not available |
| Annual                               | MW7 | Benzene               |           | Annual    | <2       | <2      | 1                  | data not available |
| Annual                               | MW7 | Bromodichloromethane  |           | Annual    | <1       | <1      |                    | data not available |
| Annual                               | MW7 | Bromoform             |           | Annual    | <1       | <1      |                    | data not available |
| Annual                               | MW7 | Chloroform            |           | Annual    | <1       | <1      | 12                 | data not available |
| Annual                               | MW7 | Chrysene              |           | Annual    | <1       | <1      |                    | data not available |
| Annual                               | MW7 | Dibromochloromethane  |           | Annual    | <1       | <1      |                    | data not available |
| Annual                               | MW7 | Fluoranthene          |           | Annual    | <1       | <1      |                    | data not available |
| Annual                               | MW7 | Fluorene              |           | Annual    | <1       | <1      |                    | data not available |
| Annual                               | MW7 | Naphthalene           |           | Annual    | <0.5     | 37.7    |                    | data not available |
| Annual                               | MW7 | Dibromochloromethane  |           | Annual    | <1       | <1      |                    | data not available |
| Annual                               | MW7 | Pentachlorophenol     |           | Annual    | <1       | <1      | 2                  | data not available |
| Annual                               | MW7 | Phenanthrene          |           | Annual    | <1       | <1      |                    | data not available |
| Annual                               | MW7 | Pyrene                |           | Annual    | <1       | <1      |                    | data not available |
| Annual                               | MW7 | Tetrachloroethene     |           | Annual    | <0.1     | <0.1    |                    | data not available |
| Annual                               | MW7 | Trichloroethene       |           | Annual    | <0.1     | <0.1    |                    | data not available |
| Annual                               | MW7 | Hexachlorobenzene     |           | Annual    | <1       | <1      | 0.03               | data not available |
| Annual                               | MW7 | Hexachlorobutadiene   |           | Annual    | <0.5     | <0.5    | 0.1                | data not available |
| Annual                               | MW7 | 2,4,6-Trichlorophenol |           | Annual    | <1       | <1      |                    | data not available |

| Groundwater/Soil monitoring template |     |                             | Lic No: | W0068-03 | Year | 2013 |                    |
|--------------------------------------|-----|-----------------------------|---------|----------|------|------|--------------------|
| Annual                               | MW7 | 2,4-Dichlorophenol          | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | 2,4-Dimethylphenol          | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | 2-Chlorophenol              | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | 1,2,4-trichlorobenzene      | Annual  | <0.5     | <0.5 | ug/l | data not available |
| Annual                               | MW7 | 1,2-dichlorobenzene         | Annual  | <0.5     | <0.5 | ug/l | data not available |
| Annual                               | MW7 | 1,3-dichlorobenzene         | Annual  | <0.5     | <0.5 | ug/l | data not available |
| Annual                               | MW7 | 1,4-dichlorobenzene         | Annual  | <0.5     | <0.5 | ug/l | data not available |
| Annual                               | MW7 | 2,4,5-Trichlorophenol       | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | 2,4-Dinitrotoluene          | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | 2,6-Dinitrotoluene          | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | 2-Chloronaphthalene         | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | 2-Methylnaphthalene         | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | 2-Methylphenol              | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | 2-Nitrophenol               | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | 4-Bromophenyl Phenyl Ether  | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | 4-Chloro-3-methylphenol     | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | 4-Chlorophenyl phenyl ether | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | 4-Nitrophenol               | Annual  | <5       | <5   | ug/l | data not available |
| Annual                               | MW7 | Acenaphthene                | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | Benzo(a)anthracene          | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | Benzo(a)pyrene              | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | Benzo(b)fluoranthene        | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | Benzo(g,h,i)perylene        | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | Benzyl Butyl Phthalate      | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | Bis(2-chloroethoxy)methane  | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | Bis(2-chloroethyl)ether     | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | Bis(2-chloroisopropyl)ether | Annual  | <1       | <1   | ug/l | data not available |
| Annual                               | MW7 | Bis(2-ethylhexyl)phthalate  | Annual  | <5       | <5   | ug/l | data not available |

| Groundwater/Soil monitoring template |     |                                         | Lic No: | W0068-03 | Year | 2013 |                       |
|--------------------------------------|-----|-----------------------------------------|---------|----------|------|------|-----------------------|
| Annual                               | MW7 | Dibenz(a,h)anthracene                   | Annual  | <1       | <1   | ug/l | data not available    |
| Annual                               | MW7 | Dibenzofuran                            | Annual  | <1       | <1   | ug/l | data not available    |
| Annual                               | MW7 | Diethylphthalate                        | Annual  | <1       | <1   | ug/l | data not available    |
| Annual                               | MW7 | di-n-Butylphthalate                     | Annual  | <1       | <1   | ug/l | data not available    |
| Annual                               | MW7 | Di-n-octylphthalate                     | Annual  | <1       | <1   | ug/l | data not available    |
| Annual                               | MW7 | Diphenylamine                           | Annual  | <1       | <1   | ug/l | data not available    |
| Annual                               | MW7 | Hexachloroethane                        | Annual  | <1       | <1   | ug/l | data not available    |
| Annual                               | MW7 | Indeno(1,2,3-c,d)pyrene                 | Annual  | <1       | <1   | ug/l | data not available    |
| Annual                               | MW7 | Isophorone                              | Annual  | <1       | <1   | ug/l | data not available    |
| Annual                               | MW7 | Nitrobenzene                            | Annual  | <0.5     | <0.5 | ug/l | data not available    |
| Annual                               | MW7 | n-Nitrosodi-n-propylamine               | Annual  | <1       | <1   | ug/l | data not available    |
| Annual                               | MW7 | Acetone                                 | Annual  | <2       | <2   | ug/l | data not available    |
| Annual                               | MW7 | Dichloromethane                         | Annual  | <5       | <5   | ug/l | data not available    |
| Annual                               | MW7 | Tetrahydrofuran                         | Annual  | <0.5     | <0.5 | ug/l | data not available    |
| Annual                               | MW7 | Toluene                                 | Annual  | <0.5     | <0.5 | ug/l | 10 data not available |
| Annual                               | MW7 | Xylene -o                               | Annual  | <0.5     | <0.5 | ug/l | 10 data not available |
| Annual                               | MW7 | Dichlorodifluoromethane                 | Annual  | <10      | <10  | ug/l | data not available    |
| Annual                               | MW7 | Chloromethane                           | Annual  | <0.5     | <0.5 | ug/l | data not available    |
| Annual                               | MW7 | Ethyl Chloride/Chloroethane             | Annual  | <0.5     | <0.5 | ug/l | data not available    |
| Annual                               | MW7 | Vinyl Chloride                          | Annual  | <0.5     | <0.5 | ug/l | data not available    |
| Annual                               | MW7 | Bromomethane                            | Annual  | <0.5     | <0.5 | ug/l | data not available    |
| Annual                               | MW7 | Trichloromonofluoromethane              | Annual  | <0.5     | <0.5 | ug/l | data not available    |
| Annual                               | MW7 | Ethyl Ether/Diethyl Ether               | Annual  | <0.5     | <0.5 | ug/l | data not available    |
| Annual                               | MW7 | 1,1-Dichloroethene                      | Annual  | <0.5     | <0.5 | ug/l | data not available    |
| Annual                               | MW7 | Iodomethane/Methyl Iodide               | Annual  | <0.5     | <0.5 | ug/l | data not available    |
| Annual                               | MW7 | Carbon Disulphide                       | Annual  | <0.5     | <0.5 | ug/l | data not available    |
| Annual                               | MW7 | Allyl Chloride                          | Annual  | <0.5     | <0.5 | ug/l | data not available    |
| Annual                               | MW7 | Chloromethyl Cyanide/Chloroacetonitrile | Annual  | <0.5     | <0.5 | ug/l | data not available    |
| Annual                               | MW7 | Propanenitrile                          | Annual  | <10      | <10  | ug/l | data not available    |
| Annual                               | MW7 | Trans-1,2-Dichloroethene                | Annual  | <0.5     | <0.5 | ug/l | data not available    |
| Annual                               | MW7 | MTBE                                    | Annual  | <0.5     | <0.5 | ug/l | data not available    |
| Annual                               | MW7 | 1,1-dichloroethane                      | Annual  | <0.5     | <0.5 | ug/l | 30 data not available |
| Annual                               | MW7 | 2,2-dichloropropane                     | Annual  | <0.5     | <0.5 | ug/l | data not available    |
| Annual                               | MW7 | cis-1,2-Dichloroethene                  | Annual  | <0.5     | <0.5 | ug/l | data not available    |
| Annual                               | MW7 | 2-Butanone                              | Annual  | <5       | <5   | ug/l | data not available    |
| Annual                               | MW7 | Methyl Acrylate                         | Annual  | <0.5     | <0.5 | ug/l | data not available    |

| Groundwater/Soil monitoring template |     |                                  | Lic No: | W0068-03 | Year | 2013 |                        |
|--------------------------------------|-----|----------------------------------|---------|----------|------|------|------------------------|
| Annual                               | MW7 | Bromochloromethane               | Annual  | <0.5     | <0.5 | ug/l | data not available     |
| Annual                               | MW7 | Methacrylonitrile                | Annual  | <0.5     | <0.5 | ug/l | data not available     |
| Annual                               | MW7 | 1,1,1-trichloroethane            | Annual  | <0.5     | <0.5 | ug/l | 500 data not available |
| Annual                               | MW7 | 1-Chlorobutane                   | Annual  | <0.5     | <0.5 | ug/l | data not available     |
| Annual                               | MW7 | Carbon Tetrachloride             | Annual  | <0.5     | <0.5 | ug/l | data not available     |
| Annual                               | MW7 | 1,1-Dichloropropene              | Annual  | <0.5     | <0.5 | ug/l | data not available     |
| Annual                               | MW7 | 1,2-dichloroethane               | Annual  | <0.1     | <0.1 | ug/l | data not available     |
| Annual                               | MW7 | 1,2-dichloropropane              | Annual  | <0.5     | <0.5 | ug/l | data not available     |
| Annual                               | MW7 | Dibromomethane                   | Annual  | <0.5     | <0.5 | ug/l | data not available     |
| Annual                               | MW7 | Methyl Methacrylate              | Annual  | <0.5     | <0.5 | ug/l | data not available     |
| Annual                               | MW7 | 1,3-Dichloropropene, cis         | Annual  | <2       | <2   | ug/l | data not available     |
| Annual                               | MW7 | MIBK/4 Methyl 2 Pentanone        | Annual  | <2       | <2   | ug/l | data not available     |
| Annual                               | MW7 | 1,3-Dichloropropene, trans       | Annual  | <2       | <2   | ug/l | data not available     |
| Annual                               | MW7 | Ethyl Methacrylate               | Annual  | <2       | <2   | ug/l | data not available     |
| Annual                               | MW7 | 1,1,2-Trichloroethane            | Annual  | <0.5     | <0.5 | ug/l | data not available     |
| Annual                               | MW7 | 1,3-dichloropropane              | Annual  | <0.5     | <0.5 | ug/l | data not available     |
| Annual                               | MW7 | 2-Hexanone                       | Annual  | <1       | <1   | ug/l | data not available     |
| Annual                               | MW7 | 1,2-dibromoethane                | Annual  | <0.5     | <0.5 | ug/l | data not available     |
| Annual                               | MW7 | Chlorobenzene                    | Annual  | <0.5     | <0.5 | ug/l | 1 data not available   |
| Annual                               | MW7 | 1,1,1,2-tetrachloroethane        | Annual  | <2       | <2   | ug/l | data not available     |
| Annual                               | MW7 | Ethylbenzene                     | Annual  | <0.5     | <0.5 | ug/l | 10 data not available  |
| Annual                               | MW7 | Xylene P&M                       | Annual  | <0.5     | <0.5 | ug/l | data not available     |
| Annual                               | MW7 | Styrene                          | Annual  | <2       | <2   | ug/l | data not available     |
| Annual                               | MW7 | Isopropylbenzene                 | Annual  | 2        | 2    | ug/l | data not available     |
| Annual                               | MW7 | Bromobenzene                     | Annual  | <0.5     | <0.5 | ug/l | data not available     |
| Annual                               | MW7 | 1,1,2,2-tetrachloroethane        | Annual  | <0.5     | <0.5 | ug/l | data not available     |
| Annual                               | MW7 | 1,2,3-trichloropropane           | Annual  | <2       | <2   | ug/l | data not available     |
| Annual                               | MW7 | Trans 1,2-Dichloro Butene, trans | Annual  | <2       | <2   | ug/l | data not available     |
| Annual                               | MW7 | Propylbenzene                    | Annual  | <0.5     | <0.5 | ug/l | data not available     |
| Annual                               | MW7 | 2-chlorotoluene                  | Annual  | <0.5     | <0.5 | ug/l | data not available     |

| Groundwater/Soil monitoring template |     |                             |  | Lic No: | W0068-03 | Year | 2013   |  |  |                    |
|--------------------------------------|-----|-----------------------------|--|---------|----------|------|--------|--|--|--------------------|
| Annual                               | MW7 | 4-chlorotoluene             |  | Annual  | <0.5     | <0.5 | ug/l   |  |  | data not available |
| Annual                               | MW7 | 1,3,5-trimethylbenzene      |  | Annual  | <0.5     | <0.5 | ug/l   |  |  | data not available |
| Annual                               | MW7 | Tert Butyl Benzene          |  | Annual  | <0.5     | <0.5 | ug/l   |  |  | data not available |
| Annual                               | MW7 | 1,2,4-trimethylbenzene      |  | Annual  | <0.5     | <0.5 | ug/l   |  |  | data not available |
| Annual                               | MW7 | sec-butylbenzene            |  | Annual  | <0.5     | <0.5 | ug/l   |  |  | data not available |
| Annual                               | MW7 | p Isopropyltoluene          |  | Annual  | <0.5     | <0.5 | ug/l   |  |  | data not available |
| Annual                               | MW7 | N Butyl Benzene             |  | Annual  | <0.5     | <0.5 | ug/l   |  |  | data not available |
| Annual                               | MW7 | 1,2-dibromo-3-chloropropane |  | Annual  | <2       | <2   | ug/l   |  |  | data not available |
| Annual                               | MW7 | 1,2,3-trichlorobenzene      |  | Annual  | <0.5     | <0.5 | ug/l   |  |  | data not available |
|                                      |     |                             |  |         |          |      | SELECT |  |  | SELECT             |

.+ where average indicates arithmetic mean

.++ maximum concentration indicates the maximum measured concentration from all monitoring results produced during the reporting year

**Table 2: Downgradient Groundwater monitoring results**

| Date of sampling | Sample location reference | Parameter/ Substance | Methodology | Monitoring frequency | Maximum Concentration | Average Concentration | unit | GTV's* | SELECT**                | Upward trend in yearly average pollutant concentration over last 5 years of monitoring data |
|------------------|---------------------------|----------------------|-------------|----------------------|-----------------------|-----------------------|------|--------|-------------------------|---------------------------------------------------------------------------------------------|
| Quarterly        | MW1                       | pH                   | Meter       | Quarterly            | 7.5                   | 7.31                  |      |        | 9.5                     | no                                                                                          |
| Quarterly        | MW1                       | Temp                 | Meter       | Quarterly            | 6.7                   | 6.4                   |      |        | 25                      | no                                                                                          |
| Quarterly        | MW1                       | Elec.Conductivity    | Meter       | Quarterly            | 2950                  | 2782                  |      |        | 1000                    | no                                                                                          |
| Quarterly        | MW1                       | Chlorides            | titration   | Quarterly            | 14995                 | 6960.02               | mg/l |        | 250                     | no                                                                                          |
| Quarterly        | MW1                       | Ammoniacal Nitrogen  | ISE         | Quarterly            | 5.17                  | 2.71                  | mg/l |        | Trigger Limit of 20mg/l | no                                                                                          |
| Quarterly        | MW1                       | Iron                 |             | Quarterly            | 890                   | 408.15                | ug/l |        | 0.2                     | no                                                                                          |
| Quarterly        | MW1                       | TON                  |             | Quarterly            | 5.71                  | 2.68                  | mg/l |        | No abnormal change      | no                                                                                          |
| Quarterly        | MW1                       | TOC                  | HACH        | Quarterly            | 7.1                   | 3.58                  | mg/l |        | Trigger limit 10-12mg/l | no                                                                                          |
| Annual           | MW1                       | Cadmium              |             | Annual               | 1.1                   | 0.1                   | ug/l |        | 0.005                   | no                                                                                          |
| Annual           | MW1                       | Chromium (total)     |             | Annual               | 34.9                  | 39.8                  | ug/l |        | 0.03                    | no                                                                                          |
| Annual           | MW1                       | Copper               |             | Annual               | 0.118                 | 0.006                 | ug/l |        | 0.03                    | no                                                                                          |
| Annual           | MW1                       | Cyanide (Total)      |             | Annual               | 10                    | 12                    | ug/l |        | 0.01                    | no                                                                                          |
| Annual           | MW1                       | Lead                 |             | Annual               | <0.3                  | <0.3                  | ug/l |        | 0.01                    | no                                                                                          |
| Annual           | MW1                       | Magnesium            |             | Annual               | 596.1                 | 50.4                  | mg/l |        | 50                      | no                                                                                          |
| Annual           | MW1                       | Manganese            |             | Annual               | 4870.6                | 5337.6                | ug/l |        | 0.05                    | no                                                                                          |
| Annual           | MW1                       | Mercury              |             | Annual               | 0.1                   | 0.05                  | ug/l |        | 0.001                   | no                                                                                          |
| Annual           | MW1                       | Nickle               |             | Annual               | 4.3                   | 21.6                  | ug/l |        | 0.02                    | no                                                                                          |
| Annual           | MW1                       | Potassium            |             | Annual               | 199.3                 | 156.7                 | mg/l |        | 5                       | no                                                                                          |
| Annual           | MW1                       | Sulphate             |             | Annual               | 1132.2                | 48.8                  | mg/l |        | 200                     | no                                                                                          |

| Groundwater/Soil monitoring template |     |                        | Lic No: | W0068-03 | Year | 2013    |
|--------------------------------------|-----|------------------------|---------|----------|------|---------|
| Annual                               | MW1 | Total Alkalinity       | 509     | 1587.7   | mg/l | no      |
| Annual                               | MW1 | Total Phosphorus       | 5.09    |          | mg/l | no      |
| Annual                               | MW1 | Phenols                | <0.15   |          | ug/l | 0.5 no  |
| Annual                               | MW1 | Acenaphthylene         | <0.5    | <0.5     | ug/l | no      |
| Annual                               | MW1 | Anthracene             | 0.1     | 0.1      | ug/l | no      |
| Annual                               | MW1 | Benzene                | <2      | <2       | ug/l | 1 no    |
| Annual                               | MW1 | Bromodichloromethane   | <1      | <1       | ug/l | no      |
| Annual                               | MW1 | Bromoform              | <1      | <1       | ug/l | no      |
| Annual                               | MW1 | Chloroform             | <1      | <1       | ug/l | 12 no   |
| Annual                               | MW1 | Chrysene               | <1      | <1       | ug/l | no      |
| Annual                               | MW1 | Dibromochloromethane   | <1      | <1       | ug/l | no      |
| Annual                               | MW1 | Fluoranthene           | <1      | <1       | ug/l | no      |
| Annual                               | MW1 | Fluorene               | <1      | <1       | ug/l | no      |
| Annual                               | MW1 | Naphthalene            | <2.0    | <2.0     | ug/l | no      |
| Annual                               | MW1 | Dibromochloromethane   | <1      | <1       | ug/l | no      |
| Annual                               | MW1 | Pentachlorophenol      | <1      | <1       | ug/l | 2 no    |
| Annual                               | MW1 | Phenanthrene           | <1      | <1       | ug/l | no      |
| Annual                               | MW1 | Pyrene                 | <1      | <1       | ug/l | no      |
| Annual                               | MW1 | Tetrachloroethene      | <0.1    | <0.1     | ug/l | no      |
| Annual                               | MW1 | Trichloroethene        | <0.1    | <0.1     | ug/l | no      |
| Annual                               | MW1 | Hexachlorobenzene      | <1      | <1       | ug/l | 0.03 no |
| Annual                               | MW1 | Hexachlorobutadiene    | <0.5    | <0.5     | ug/l | 0.1 no  |
| Annual                               | MW1 | 2,4,6-Trichlorophenol  | <1      | <1       | ug/l | no      |
| Annual                               | MW1 | 2,4-Dichlorophenol     | <1      | <1       | ug/l | no      |
| Annual                               | MW1 | 2,4-Dimethylphenol     | <1      | <1       | ug/l | no      |
| Annual                               | MW1 | 2-Chlorophenol         | <1      | <1       | ug/l | no      |
| Annual                               | MW1 | 1,2,4-trichlorobenzene | <0.5    | <0.5     | ug/l | no      |
| Annual                               | MW1 | 1,2-dichlorobenzene    | <0.5    | <0.5     | ug/l | no      |
| Annual                               | MW1 | 1,3-dichlorobenzene    | <0.5    | <0.5     | ug/l | no      |
| Annual                               | MW1 | 1,4-dichlorobenzene    | <0.5    | <0.5     | ug/l | no      |
| Annual                               | MW1 | 2,4,5-Trichlorophenol  | <1      | <1       | ug/l | no      |
| Annual                               | MW1 | 2,4-Dinitrotoluene     | <1      | <1       | ug/l | no      |
| Annual                               | MW1 | 2,6-Dinitrotoluene     | <1      | <1       | ug/l | no      |



| Groundwater/Soil monitoring template |     |                             | Lic No: | W0068-03 | Year | 2013 |       |
|--------------------------------------|-----|-----------------------------|---------|----------|------|------|-------|
| Annual                               | MW1 | 2-Chloronaphthalene         | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | 2-Methylnaphthalene         | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | 2-Methylphenol              | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | 2-Nitrophenol               | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | 4-Bromophenyl Phenyl Ether  | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | 4-Chloro-3-methylphenol     | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | 4-Chlorophenyl phenyl ether | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | 4-Nitrophenol               | Annual  | <5       | <5   | ug/l | no    |
| Annual                               | MW1 | Acenaphthene                | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Benzo(a)anthracene          | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Benzo(a)pyrene              | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Benzo(b)fluoranthene        | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Benzo(g,h,i)perylene        | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Benzyl Butyl Phthalate      | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Bis(2-chloroethoxy)methane  | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Bis(2-chloroethyl)ether     | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Bis(2-chloroisopropyl)ether | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Bis(2-ethylhexyl)phthalate  | Annual  | <5       | <5   | ug/l | no    |
| Annual                               | MW1 | Dibenz(a,h)anthracene       | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Dibenzofuran                | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Diethylphthalate            | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | di-n-Butylphthalate         | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Di-n-octylphthalate         | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Diphenylamine               | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Hexachloroethane            | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Indeno(1,2,3-c,d)pyrene     | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Isophorone                  | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Nitrobenzene                | Annual  | <0.5     | <0.5 | ug/l | no    |
| Annual                               | MW1 | n-Nitrosodi-n-propylamine   | Annual  | <1       | <1   | ug/l | no    |
| Annual                               | MW1 | Acetone                     | Annual  | <2       | <2   | ug/l | no    |
| Annual                               | MW1 | Dichloromethane             | Annual  | <5       | <5   | ug/l | no    |
| Annual                               | MW1 | Tetrahydrofuran             | Annual  | <0.5     | <0.5 | ug/l | no    |
| Annual                               | MW1 | Toluene                     | Annual  | <0.5     | <0.5 | ug/l | 10 no |

| Groundwater/Soil monitoring template |     |                                         | Lic No: | W0068-03 | Year | 2013 |  |     |    |
|--------------------------------------|-----|-----------------------------------------|---------|----------|------|------|--|-----|----|
| Annual                               | MW1 | Xylene -o                               |         | <0.5     | <0.5 | ug/l |  | 10  | no |
| Annual                               | MW1 | Dichlorodifluoromethane                 |         | <10      | <10  | ug/l |  |     | no |
| Annual                               | MW1 | Chloromethane                           |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | Ethyl Chloride/Chloroethane             |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | Vinyl Chloride                          |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | Bromomethane                            |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | Trichloromonofluoromethane              |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | Ethyl Ether/Diethyl Ether               |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | 1,1 Dichloroethene                      |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | Iodomethane/Methyl iodide               |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | Carbon Disulphide                       |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | Allyl Chloride                          |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | Chloromethyl Cyanide/Chloroacetonitrile |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | Propanenitrile                          |         | <10      | <10  | ug/l |  |     | no |
| Annual                               | MW1 | Trans-1,2 Dichloroethene                |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | MtBE                                    |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | 1,1-dichloroethane                      |         | <0.5     | <0.5 | ug/l |  | 30  | no |
| Annual                               | MW1 | 2,2-dichloropropane                     |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | cis-1,2 Dichloroethene                  |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | 2-Butanone                              |         | <5       | <5   | ug/l |  |     | no |
| Annual                               | MW1 | Methyl Acrylate                         |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | Bromochloromethane                      |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | Methacrylonitrile                       |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | 1,1,1-trichloroethane                   |         | <0.5     | <0.5 | ug/l |  | 500 | no |
| Annual                               | MW1 | 1-Chlorobutane                          |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | Carbon Tetrachloride                    |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | 1,1 Dichloropropene                     |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | 1,2 dichloroethane                      |         | <0.1     | <0.1 | ug/l |  |     | no |
| Annual                               | MW1 | 1,2-dichloropropane                     |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | Dibromomethane                          |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | Methyl Methacrylate                     |         | <0.5     | <0.5 | ug/l |  |     | no |
| Annual                               | MW1 | 1,3 Dichloropropene,cis                 |         | <2       | <2   | ug/l |  |     | no |

| Groundwater/Soil monitoring template |     |                                    | Lic No: | W0068-03 | Year | 2013 |        |  |    |        |
|--------------------------------------|-----|------------------------------------|---------|----------|------|------|--------|--|----|--------|
| Annual                               | MW1 | MBK/4 Methyl 2 Pentanone           |         | Annual   | <2   | <2   | ug/l   |  |    | no     |
| Annual                               | MW1 | 1,3-Dichloropropene,trans          |         | Annual   | <2   | <2   | ug/l   |  |    | no     |
| Annual                               | MW1 | Ethyl Methacrylate                 |         | Annual   | <2   | <2   | ug/l   |  |    | no     |
| Annual                               | MW1 | 1,1,2-Trichloroethane              |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
| Annual                               | MW1 | 1,3-dichloropropane                |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
| Annual                               | MW1 | 2-Hexanone                         |         | Annual   | <1   | <1   | ug/l   |  |    | no     |
| Annual                               | MW1 | 1,2-dibromoethane                  |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
| Annual                               | MW1 | Chlorobenzene                      |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
| Annual                               | MW1 | 1,1,1,2-tetrachloroethane          |         | Annual   | <2   | <2   | ug/l   |  |    | no     |
| Annual                               | MW1 | Ethylbenzene                       |         | Annual   | <0.5 | <0.5 | ug/l   |  | 10 | no     |
| Annual                               | MW1 | Xylene P&M                         |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
| Annual                               | MW1 | Styrene                            |         | Annual   | <2   | <2   | ug/l   |  |    | no     |
| Annual                               | MW1 | Isopropylbenzene                   |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
| Annual                               | MW1 | Bromobenzene                       |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
| Annual                               | MW1 | 1,1,2,2-tetrachloroethane          |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
| Annual                               | MW1 | 1,2,3-trichloropropane             |         | Annual   | <2   | <2   | ug/l   |  |    | no     |
| Annual                               | MW1 | Trans 1,4-Dichloro 2 Butene, trans |         | Annual   | <2   | <2   | ug/l   |  |    | no     |
| Annual                               | MW1 | Propylbenzene                      |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
| Annual                               | MW1 | 2-chlorotoluene                    |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
| Annual                               | MW1 | 4-chlorotoluene                    |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
| Annual                               | MW1 | 1,3,5-trimethylbenzene             |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
| Annual                               | MW1 | Tert Butyl Benzene                 |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
| Annual                               | MW1 | 1,2,4-trimethylbenzene             |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
| Annual                               | MW1 | sec-butylbenzene                   |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
| Annual                               | MW1 | p-Isopropyltoluene                 |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
| Annual                               | MW1 | N Butyl Benzene                    |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
| Annual                               | MW1 | 1,2-dibromo-3-chloropropane        |         | Annual   | <2   | <2   | ug/l   |  |    | no     |
| Annual                               | MW1 | 1,2,3-trichlorobenzene             |         | Annual   | <0.5 | <0.5 | ug/l   |  |    | no     |
|                                      |     |                                    |         |          |      |      | SELECT |  |    | SELECT |

| Groundwater/Soil monitoring template                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  | Lic No:                                                                                                                                                                                                                                                                                                                                                                              | W0068-03 | Year | 2013 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------|------|
| <p>*please note exceedance of generic assessment criteria (GAC) such as a Groundwater Threshold Value (GTV) or an Interim Guideline Value (IGV) or an upward trend in results for a substance indicates that further interpretation of monitoring results is required. In addition to completing the above table, please complete the Groundwater Monitoring Guideline Template Report at the link provided and submit separately through ALDER as a licensee return or as otherwise instructed by the EPA.</p> |  | <p><a href="#">Groundwater monitoring template</a></p>                                                                                                                                                                                                                                                                                                                               |          |      |      |
| <p>More information on the use of soil and groundwater standards/ generic assessment criteria (GAC) and risk assessment tools is available in the EPA published guidance (see the link in G31)</p>                                                                                                                                                                                                                                                                                                              |  | <p><a href="#">Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites (EPA 2013).</a></p>                                                                                                                                                                                                                                                             |          |      |      |
| <p>**Depending on location of the site and proximity to other sensitive receptors alternative Receptor based Water Quality standards should be used in addition to the GTV e.g. if the site is close to surface water compare to Surface Water Environmental Quality Standards (SWEQS), If the site is close to a drinking water supply compare results to the Drinking Water Standards (DWS)</p>                                                                                                               |  | <p> <a href="#">Groundwater</a> <a href="#">Drinking water</a><br/> <a href="#">Surface</a> <a href="#">regulations</a> <a href="#">(private supply)</a> <a href="#">Drinking water (public</a> <a href="#">Interim Guideline</a><br/> <a href="#">water EQS</a> <a href="#">GTV's</a> <a href="#">standards</a> <a href="#">supply) standards</a> <a href="#">Values (IGV)</a> </p> |          |      |      |

**Table 3: Soil results**

| Date of sampling | Sample location reference | Parameter/ Substance | Methodology | Monitoring frequency | Maximum Concentration | Average Concentration | unit   |
|------------------|---------------------------|----------------------|-------------|----------------------|-----------------------|-----------------------|--------|
|                  |                           |                      |             |                      |                       |                       | SELECT |
|                  |                           |                      |             |                      |                       |                       | SELECT |

Where additional detail is required please enter it here in 200 words or less

[Click here to access EPA guidance on Environmental Liabilities and Financial provision](#)

|    |                                                                               | Commentary        |                  |
|----|-------------------------------------------------------------------------------|-------------------|------------------|
| 1  | ELRA initial agreement status                                                 | SELECT            | Site Operational |
| 2  | ELRA review status                                                            | SELECT            |                  |
| 3  | Amount of Financial Provision cover required as determined by the latest ELRA | Specify           |                  |
| 4  | Financial Provision for ELRA status                                           | SELECT            |                  |
| 5  | Financial Provision for ELRA - amount of cover                                | Specify           |                  |
| 6  | Financial Provision for ELRA - type                                           | SELECT            |                  |
| 7  | Financial provision for ELRA expiry date                                      | Enter expiry date |                  |
| 8  | Closure plan initial agreement status                                         | SELECT            |                  |
| 9  | Closure plan review status                                                    | SELECT            |                  |
| 10 | Financial Provision for Closure status                                        | SELECT            |                  |
| 11 | Financial Provision for Closure - amount of cover                             | Specify           |                  |
| 12 | Financial Provision for Closure - type                                        | SELECT            |                  |
| 13 | Financial provision for Closure expiry date                                   | Enter expiry date |                  |

|                                                                                     |  |         |          |      |      |
|-------------------------------------------------------------------------------------|--|---------|----------|------|------|
| <b>Environmental Management Programme/Continuous Improvement Programme template</b> |  | Lic No: | W0068-03 | Year | 2013 |
|-------------------------------------------------------------------------------------|--|---------|----------|------|------|

| Highlighted cells contain dropdown menu click to view |                                                                                                                                                                   | Additional Information                                                                                                     |
|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 1                                                     | Do you maintain an Environmental Mangement System (EMS) for the site. If yes, please detail in additional information                                             | Yes<br>2008. It includes sections on Use of manual, Site location and description, Types of waste accepted and procedures, |
| 2                                                     | Does the EMS reference the most significant environmental aspects and associated impacts on-site                                                                  | Yes                                                                                                                        |
| 3                                                     | Does the EMS maintain an Environmental Management Programme (EMP) as required in accordance with the licence requirements                                         | Yes                                                                                                                        |
| 4                                                     | Do you maintain an environmental documentation/communication system to inform the public on environmental performance of the facility, as required by the licence | Yes                                                                                                                        |

#### Environmental Management Programme (EMP) report

| Objective Category                 | Target                                              | Status (% completed) | How target was progressed                                                                    | Responsibility          | Intermediate outcomes                        |
|------------------------------------|-----------------------------------------------------|----------------------|----------------------------------------------------------------------------------------------|-------------------------|----------------------------------------------|
| Reduction of emissions to Air      | 10% Reduction in Odour Complaints                   | 100                  | Improvement of gas extraction system and operational controls                                | Site Staff              | Less complaints                              |
| Materials Handling/Storage/Bunding | Improve annual recycling rate by 5%                 | 80                   | Improvement of Civic Amenity Site layout and improved maintenance of existing infrastructure | Site Staff & Management | Installation of infrastructure               |
| Additional improvements            | Improve Site Security                               | 90                   | Liasing with Security Company and An Gardaí Síochana to deter would-be intruders             | Site Staff & Management | Improved Environmental Management Practices  |
| Additional improvements            | To control environmental nuisances at the facility  | 90                   | Reduction of waste intake, improved site practises                                           | Site Staff & Management | Increased compliance with licence conditions |
| Groundwater protection             | Improve annual environmental parameters at the site | 70                   | Improvement of site practise to ensure minimal interaction with surrounding environment      | Site Staff              | Increased compliance with licence conditions |

## Noise monitoring summary report

Lic No: W0068-03      Year: 2013

1 Was noise monitoring a licence requirement for the AER period?

Yes

If yes please fill in table N1 noise summary below

2 Was noise monitoring carried out using the EPA Guidance note, including completion of the "Checklist for noise measurement report" included in the guidance note as table 6?

[Noise  
Guidance  
note NG4](#)

Yes

3 Does your site have a noise reduction plan

No

4 When was the noise reduction plan last updated?

N/A

5 Have there been changes relevant to site noise emissions (e.g. plant or operational changes) since the last noise survey?

No

**Table N1: Noise monitoring summary**

| Date of monitoring | Time period | Noise location (on site) | Noise sensitive location -NSL (if applicable) | LA <sub>eq</sub> | LA <sub>90</sub> | LA <sub>10</sub> | LA <sub>max</sub> | Tonal or Impulsive noise* (Y/N) | If tonal /impulsive noise was identified was 5dB penalty applied? | Comments (ex. main noise sources on site, & extraneous noise ex. road traffic)                                                                                                                                      | Is site compliant with noise limits (day/evening/night)? |
|--------------------|-------------|--------------------------|-----------------------------------------------|------------------|------------------|------------------|-------------------|---------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| 09/10/2013         | 30min       | N1                       |                                               | 47.8             | 44.9             | 49.8             | 70.1              | No                              | SELECT                                                            | No facility emissions audible. N25 traffic to NW and N continuously audible and dominant. Rustling vegetation locally. No other noise apart from bird song/calls and aircraft.                                      | Yes                                                      |
| 09/10/2013         | 30min       | N2                       |                                               | 51.6             | 48.7             | 53.8             | 69.7              | No                              |                                                                   | No facility emissions audible. N25 traffic to NW and N continuously audible and dominant. No other noise apart from bird song/calls and aircraft.                                                                   | Yes                                                      |
| 09/10/2013         | 30min       | N3                       |                                               | 46.1             | 41.3             | 47.2             | 65                | No                              |                                                                   | Gas flare plant emissions audible at low level. Continuous emissions also slightly audible from offsite waste management facility. Distant traffic continuously audible and dominant. Bird song/calls and aircraft. | Yes                                                      |



|            |       |    |  |      |      |      |      |     |    |                                                                                                                                                                                                                               |     |
|------------|-------|----|--|------|------|------|------|-----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|            |       |    |  |      |      |      |      | Yes | No | Noise audible from sporadic vehicle movements through gate and into CAS. Distant road traffic and emissions from vents at adjacent waste management facility audible at continuously low level. Bird song/calls and aircraft. | Yes |
| 09/10/2013 | 30min | N4 |  | 47.9 | 44.7 | 49.8 | 68   |     |    |                                                                                                                                                                                                                               |     |
|            |       |    |  |      |      |      |      | No  |    | No facility emissions audible and no emissions audible other than N25 traffic                                                                                                                                                 | Yes |
| 09/10/2013 | 30min | S1 |  | 48.3 | 49.2 | 49.9 | 63.7 |     |    |                                                                                                                                                                                                                               |     |
|            |       |    |  |      |      |      |      | No  |    | No emissions audible from site. Continuous road traffic to SW, W and NW dominant. Occasional vehicle movements on access road to site dominant when present. Bird song/calls and aircraft.                                    | Yes |
| 09/10/2013 | 30min | S2 |  | 48.6 | 50.8 | 51.2 | 64.9 |     |    |                                                                                                                                                                                                                               |     |

\*Please ensure that a tonal analysis has been carried out as per guidance note NG4. These records must be maintained onsite for future inspection

If noise limits exceeded as a result of noise attributed to site activities, please choose the corrective action from the following options?

SELECT

|                                                                                |
|--------------------------------------------------------------------------------|
| ** please explain the reason for not taking action/resolution of noise issues? |
| Site fully compliant with WL noise Regulations                                 |

## Resource Usage/Energy efficiency summary

Lic No:

W0068-03

Year

2013

## Additional information

- 1 When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below
- 2 Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information
- 3 Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information

|                     |  |
|---------------------|--|
| Enter date of audit |  |
| No                  |  |
| SELECT              |  |

| Table R1 Energy usage on site            |               |              |                                                        |                                                      |
|------------------------------------------|---------------|--------------|--------------------------------------------------------|------------------------------------------------------|
| Energy Use                               | Previous year | Current year | Production +/- % compared to previous reporting year** | Energy Consumption +/- % vs overall site production* |
| Total Energy Used (MWHrs)                | 166.686       | 94.214       | -43%                                                   |                                                      |
| Total Energy Generated (MWHrs)           | 0             | 0            |                                                        |                                                      |
| Total Renewable Energy Generated (MWHrs) | 0             | 0            |                                                        |                                                      |
| Electricity Consumption (MWHrs)          | 166.686       | 94.216       | -43%                                                   |                                                      |
| Fossil Fuels Consumption:                |               |              |                                                        |                                                      |
| Heavy Fuel Oil (m3)                      | 0.25          | 0.2          | -20.00%                                                |                                                      |
| Light Fuel Oil (m3)                      | 20            | 18           | -10%                                                   |                                                      |
| Natural gas (m3)                         | 0             | 0            | 0                                                      |                                                      |
| Coal/Solid fuel (metric tonnes)          |               |              |                                                        |                                                      |
| Peat (metric tonnes)                     |               |              |                                                        |                                                      |
| Renewable Biomass                        |               |              |                                                        |                                                      |
| Renewable energy generated on site       |               |              |                                                        |                                                      |

\* where consumption of energy can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.

\*\* where site production information is available please enter percentage increase or decrease compared to previous year

| Table R2 Water usage on site |                                      |                                     |                                                        |                                                      | Water Emissions                                            | Water Consumption                                                          |                        |
|------------------------------|--------------------------------------|-------------------------------------|--------------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------------|------------------------|
| Water use                    | Water extracted Previous year m3/yr. | Water extracted Current year m3/yr. | Production +/- % compared to previous reporting year** | Energy Consumption +/- % vs overall site production* | Volume Discharged back to environment(m <sup>3</sup> /yr): | Volume used i.e not discharged to environment e.g. released as steam m3/yr | Unaccounted for Water: |
| Groundwater                  |                                      |                                     |                                                        |                                                      |                                                            |                                                                            |                        |
| Surface water                |                                      |                                     |                                                        |                                                      |                                                            |                                                                            |                        |
| Public supply                | 214                                  | 204                                 | -5%                                                    | N/A                                                  | 204                                                        | N/A                                                                        |                        |
| Recycled water               |                                      |                                     |                                                        |                                                      |                                                            |                                                                            |                        |
| Total                        | 214                                  | 204                                 | -5%                                                    |                                                      | 204                                                        |                                                                            |                        |

\* where consumption of water can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.

\*\* where site production information is available please enter percentage increase or decrease compared to previous year

| Table R3 Waste Stream Summary |       |          |              |          |       |
|-------------------------------|-------|----------|--------------|----------|-------|
|                               | Total | Landfill | Incineration | Recycled | Other |
| Hazardous (Tonnes)            |       |          |              |          |       |
| Non-Hazardous (Tonnes)        |       |          |              |          |       |

**Resource Usage/Energy efficiency summary** Lic No: W0068-03 Year 2013

| Table R4: Energy Audit finding recommendations |                 |                                  |                    |                            |                     |                |                 |                     |
|------------------------------------------------|-----------------|----------------------------------|--------------------|----------------------------|---------------------|----------------|-----------------|---------------------|
| Date of audit                                  | Recommendations | Description of Measures proposed | Origin of measures | Predicted energy savings % | Implementation date | Responsibility | Completion date | Status and comments |
|                                                |                 |                                  | SELECT             |                            |                     |                |                 |                     |
|                                                |                 |                                  | SELECT             |                            |                     |                |                 |                     |
|                                                |                 |                                  | SELECT             |                            |                     |                |                 |                     |

Table R5: Power Generation: Where power is generated onsite (e.g. power generation facilities/food and drink industry)please complete the following information

|                                           | Unit ID | Unit ID | Unit ID | Unit ID | Station Total |
|-------------------------------------------|---------|---------|---------|---------|---------------|
| Technology                                |         |         |         |         |               |
| Primary Fuel                              |         |         |         |         |               |
| Thermal Efficiency                        |         |         |         |         |               |
| Unit Date of Commission                   |         |         |         |         |               |
| Total Starts for year                     |         |         |         |         |               |
| Total Running Time                        |         |         |         |         |               |
| Total Electricity Generated (GWH)         |         |         |         |         |               |
| House Load (GWH)                          |         |         |         |         |               |
| KWH per Litre of Process Water            |         |         |         |         |               |
| KWH per Litre of Total Water used on Site |         |         |         |         |               |



| Complaints and Incidents summary template |  | Lic No: | W0068-03 | Year | 2013 |
|-------------------------------------------|--|---------|----------|------|------|
| Total number of incidents previous year   |  |         |          |      |      |
| % reduction/increase                      |  |         |          |      |      |

|                                                                                                                         |                     |                                    |
|-------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------|
| <b>WASTE SUMMARY</b>                                                                                                    | Lic No: W0068-03    | Year: 2013                         |
| <b>SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES</b> | PRTR facility logon | dropdown list click to see options |

**SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS**

| POLLUTANT    |                                        | RELEASES TO AIR |                |                                                            | Please enter all quantities in this section in KGs |                   |                        |                      |
|--------------|----------------------------------------|-----------------|----------------|------------------------------------------------------------|----------------------------------------------------|-------------------|------------------------|----------------------|
| No. Annex II | Name                                   | M/C/E           | METHOD         |                                                            | Emission Point 1                                   | QUANTITY          |                        |                      |
|              |                                        |                 | Method Code    | Designation or Description                                 |                                                    | T (Total) KG/Year | A (Accidental) KG/Year | F (Fugitive) KG/Year |
| 01           | Methane (CH4)                          | M               | OTH            | Measured through analysis of flue gas emissions monitoring | 0.0                                                | 203755.0          | 0.0                    | 203755.0             |
| 03           | Carbon dioxide (CO2)                   | M               | ISO 12039:2001 | Measured through analysis of flue gas emissions monitoring | 0.0                                                | 1769598.0         | 0.0                    | 1769598.0            |
| 02           | Carbon monoxide (CO)                   | M               | ISO 12039:2001 | Measured through analysis of flue gas emissions monitoring | 0.0                                                | 61.24             | 0.0                    | 61.24                |
| 07           | Non-methane volatile organic compounds | M               | EN 13649:2001  | Measured through analysis of flue gas emissions monitoring | 0.0                                                | 9.58              | 0.0                    | 9.58                 |
| 08           | Nitrogen oxides (NOx/NO2)              | M               | EN 14792:2005  | Measured through analysis of flue gas emissions monitoring | 0.0                                                | 365.75            | 0.0                    | 365.75               |
| 11           | Sulphur oxides (SOx/SO2)               | M               | EN 14791:2005  | Measured through analysis of flue gas emissions monitoring | 0.0                                                | 340.77            | 0.0                    | 340.77               |

\* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

**SECTION B : REMAINING PRTR POLLUTANTS**

| POLLUTANT    |      | RELEASES TO AIR |             |                            | Please enter all quantities in this section in KGs |                   |                        |                      |
|--------------|------|-----------------|-------------|----------------------------|----------------------------------------------------|-------------------|------------------------|----------------------|
| No. Annex II | Name | M/C/E           | METHOD      |                            | Emission Point 1                                   | QUANTITY          |                        |                      |
|              |      |                 | Method Code | Designation or Description |                                                    | T (Total) KG/Year | A (Accidental) KG/Year | F (Fugitive) KG/Year |
|              |      |                 |             |                            |                                                    | 0.0               | 0.0                    | 0.0                  |

\* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

**SECTION C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)**

| POLLUTANT     |      | RELEASES TO AIR |             |                            | Please enter all quantities in this section in KGs |                   |                        |                      |
|---------------|------|-----------------|-------------|----------------------------|----------------------------------------------------|-------------------|------------------------|----------------------|
| Pollutant No. | Name | M/C/E           | METHOD      |                            | Emission Point 1                                   | QUANTITY          |                        |                      |
|               |      |                 | Method Code | Designation or Description |                                                    | T (Total) KG/Year | A (Accidental) KG/Year | F (Fugitive) KG/Year |
|               |      |                 |             |                            |                                                    | 0.0               | 0.0                    | 0.0                  |

\* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

**Additional Data Requested from Landfill operators**

As the part of the waste transfer or treatment contract operators are requested to provide summary data on landfill gas (Methane)

|                                                                                              |                  |   |     |                                                                             |                                 |
|----------------------------------------------------------------------------------------------|------------------|---|-----|-----------------------------------------------------------------------------|---------------------------------|
| Landfill:<br>Please enter summary data on the quantities of methane flared and / or utilised | Youghal Landfill |   |     |                                                                             |                                 |
|                                                                                              |                  |   |     |                                                                             |                                 |
|                                                                                              |                  |   |     |                                                                             |                                 |
|                                                                                              |                  |   |     |                                                                             |                                 |
|                                                                                              |                  |   |     |                                                                             |                                 |
| Total estimated methane generation (as per site model)                                       | 1191229.0        | C | OTH | GasSim Model                                                                | N/A                             |
| Methane flared                                                                               | 987474.0         | M | OTH | Measured through analysis of flue gas emissions monitoring                  | 1380.0 (Total Flaring Capacity) |
| Methane utilised in engine/s                                                                 | 0.0              |   |     |                                                                             | 0.0 (Total Utilising Capacity)  |
| Net methane emission (as reported in Section A above)                                        | 203755.0         | C | OTH | Measured through analysis of flue gas emissions monitoring and GasSim Model | N/A                             |

Please enter all quantities on this sheet in Tonnes

| WASTE SUMMARY        |                     |           |                            |                                                                   |                           |                  |             |                       |                                                                                                                                      |                                                                                                |                                                                                                |                                                                                                |
|----------------------|---------------------|-----------|----------------------------|-------------------------------------------------------------------|---------------------------|------------------|-------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
|                      |                     |           |                            |                                                                   |                           | Lic No: W0068-03 |             | Year: 2013            |                                                                                                                                      |                                                                                                |                                                                                                |                                                                                                |
| Transfer Destination | European Waste Code | Hazardous | Quantity (Tonnes per Year) | Description of Waste                                              | Waste Treatment Operation | Method Used      |             | Location of Treatment | Haz Waste : Name and Licence/Permit No of Next Destination Facility<br>Non Haz Waste: Name and Licence/Permit No of Recover/Disposer | Haz Waste : Address of Next Destination Facility<br>Non Haz Waste: Address of Recover/Disposer | Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY) | Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY) |
|                      |                     |           |                            |                                                                   |                           | M/C/E            | Method Used |                       |                                                                                                                                      |                                                                                                |                                                                                                |                                                                                                |
| Within the Country   | 13 02 05            | Yes       | 3.22                       | mineral-based non-chlorinated engine, gear and lubricating oils   | R9                        | M                | Weighed     | Offsite in Ireland    | Enva Ltd,W0184-01                                                                                                                    | Clonminam Industrial Estate,Portlaoise ,Co Laois,,Ireland                                      | Enva Ltd,W0184-01,Clonminam Industrial Estate,Portlaoise, Co Laois,,Ireland                    | Clonminam Industrial Estate,Portlaoise, Co Laois,,Ireland                                      |
| Within the Country   | 15 01 01            | No        | 65.9                       | paper and cardboard packaging                                     | R3                        | M                | Weighed     | Offsite in Ireland    | Greenstar Ltd,W0136-01                                                                                                               | Sarsfield Court Industrial Estate,Glanmire, Cork,,Ireland                                      |                                                                                                |                                                                                                |
| Within the Country   | 15 01 02            | No        | 20.08                      | plastic packaging                                                 | R5                        | M                | Weighed     | Offsite in Ireland    | Green Dragon Recycling,CK/09/0629/01                                                                                                 | Corbally North,Glanmire, Cork,,Ireland                                                         |                                                                                                |                                                                                                |
| Within the Country   | 15 01 04            | No        | 3.3                        | metallic packaging                                                | R4                        | M                | Weighed     | Offsite in Ireland    | Green Dragon Recycling,CK/09/0629/01                                                                                                 | Corbally North,Glanmire, Cork,,Ireland                                                         |                                                                                                |                                                                                                |
| Within the Country   | 15 01 07            | No        | 45.68                      | glass packaging                                                   | R5                        | M                | Weighed     | Offsite in Ireland    | Mr. Binman,W0061-01                                                                                                                  | Luddenmore,Grange,Kilmalock,Co Limerick,Ireland                                                |                                                                                                |                                                                                                |
| Within the Country   | 16 06 01            | Yes       | 1.5                        | lead batteries                                                    | R4                        | M                | Weighed     | Offsite in Ireland    | KMK Metals Ltd,W0133-03                                                                                                              | Cappinacur Industrial Estate,Tullamore ,Co Offlay,,Ireland                                     | KMK Metals Ltd,W0133-03,Cappinacur Industrial Estate,Tullamore, Co Offlay,,Ireland             | Cappinacur Industrial Estate,Tullamore, Co Offlay,,Ireland                                     |
| Within the Country   | 19 07 03            | No        | 3784.6                     | landfill leachate other than those mentioned in 19 07 02          | D8                        | M                | Weighed     | Offsite in Ireland    | Cork County Council,.                                                                                                                | Carrigtohill Wastewater Treatment Plant,Tullagreen, Carrigtohill ,Co Cork,Ireland              |                                                                                                |                                                                                                |
| Within the Country   | 20 01 01            | No        | 102.32                     | paper and cardboard                                               | R3                        | M                | Weighed     | Offsite in Ireland    | Greenstar Ltd,W0136-01                                                                                                               | Sarsfield Court Industrial Estate,Glanmire, Cork,,Ireland                                      |                                                                                                |                                                                                                |
| Within the Country   | 20 01 02            | No        | 6.98                       | glass                                                             | R5                        | M                | Weighed     | Offsite in Ireland    | MSM Recycling,W0079-01                                                                                                               | 41-42 Cookstown Industrial Estate,Tallaght,Dublin,D 24,Ireland                                 |                                                                                                |                                                                                                |
| Within the Country   | 20 01 11            | No        | 11.72                      | textiles                                                          | R5                        | M                | Weighed     | Offsite in Ireland    | Textile Recycling Ltd,WCP-DC-08-1225-01                                                                                              | Glen Abbey Business Park,Tallaght,Dublin,D24,Ireland                                           |                                                                                                |                                                                                                |
| Within the Country   | 20 01 27            | Yes       | 5.4                        | paint, inks, adhesives and resins containing dangerous substances | R1                        | M                | Weighed     | Offsite in Ireland    | Enva Ltd,W0184-01                                                                                                                    | Clonminam Industrial Estate,Portlaoise ,Co Laois,,Ireland                                      | Enva Ltd,W0184-01,Clonminam Industrial Estate,Portlaoise, Co Laois,,Ireland                    | Clonminam Industrial Estate,Portlaoise, Co Laois,,Ireland                                      |

|                      |  |         |          |      |      |
|----------------------|--|---------|----------|------|------|
| <b>WASTE SUMMARY</b> |  | Lic No: | W0068-03 | Year | 2013 |
|----------------------|--|---------|----------|------|------|

|                    |          |    |        |                                                                                                             |     |   |         |                    |                                               |                                                           |
|--------------------|----------|----|--------|-------------------------------------------------------------------------------------------------------------|-----|---|---------|--------------------|-----------------------------------------------|-----------------------------------------------------------|
| Within the Country | 20 01 36 | No | 184.74 | discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35 | R4  | M | Weighed | Offsite in Ireland | KMK Metals Ltd,W0133-03                       | Cappinacur Industrial Estate,Tullamore,Co Offlay,,Ireland |
| Within the Country | 20 01 38 | No | 67.2   | wood other than that mentioned in 20 01 37                                                                  | R13 | M | Weighed | Offsite in Ireland | CTO Environmental Solutions Ltd,CK/09/0068/02 | Rostellan,Midlet on,Co Cork,,Ireland                      |
| Within the Country | 20 01 40 | No | 45.36  | metals                                                                                                      | R4  | M | Weighed | Offsite in Ireland | Pouladuff Dismantlers Ltd,CK(S) 478/07        | Pouladuff Road,Togher,Cork,,Ireland                       |
| Within the Country | 20 02 01 | No | 50.42  | biodegradable waste                                                                                         | R3  | M | Weighed | Offsite in Ireland | Bord na Mona,W0198-01                         | Kilberry,Athy,Co Kildare,Kildare,Ireland                  |

**SECTION B- WASTE ACCEPTED ONTO SITE-TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES**

Additional Information

1 Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting)

No

If yes please enter details in table 1 below

2 Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information

No

3 Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information

No

**Table 1 Details of waste accepted onto your site for recovery, disposal or treatment (do not include wastes generated at your site, as these will have been reported in your PRTR workbook)**

| Licensed annual tonnage limit for your site (total tonnes/annum) | EWC code | Source of waste accepted | Description of waste accepted<br><b>Please enter an accurate and detailed description - which applies to relevant EWC code</b><br><a href="#">European Waste Catalogue EWC codes</a> | Quantity of waste accepted in current reporting year (tonnes) | Quantity of waste accepted in previous reporting year (tonnes) | Reduction/ Increase over previous year +/- % | Reason for reduction/ increase from previous reporting year | Packaging Content (%): only applies if the waste has a packaging component | Disposal/Recovery or treatment operation carried out at your site and the description of this operation | Quantity of waste remaining on site at the end of reporting year (tonnes) | Comments - |
|------------------------------------------------------------------|----------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------|
|                                                                  |          |                          |                                                                                                                                                                                      |                                                               |                                                                |                                              |                                                             |                                                                            |                                                                                                         |                                                                           |            |
|                                                                  |          |                          |                                                                                                                                                                                      |                                                               |                                                                |                                              |                                                             |                                                                            |                                                                                                         |                                                                           |            |
|                                                                  |          |                          |                                                                                                                                                                                      |                                                               |                                                                |                                              |                                                             |                                                                            |                                                                                                         |                                                                           |            |

**SECTION C-TO BE COMPLETED BY ALL WASTE FACILITIES (waste transfer stations, Composters, Material recovery facilities etc) EXCEPT LANDFILL SITES**

4 Is all waste processing infrastructure as required by your licence and approved by the Agency in place? If no please list waste processing infrastructure required onsite

SELECT

5 Is all waste storage infrastructure as required by your licence and approved by the Agency in place? If no please list waste storage infrastructure required on site

SELECT

6 Does your facility have relevant nuisance controls in place?

SELECT

7 Do you have an odour management system in place for your facility? If no why?

SELECT

8 Do you maintain a sludge register on site?

SELECT



|                      |         |          |      |      |
|----------------------|---------|----------|------|------|
| <b>WASTE SUMMARY</b> | Lic No: | W0068-03 | Year | 2013 |
|----------------------|---------|----------|------|------|

**SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY**
**Table 2 Waste type and tonnage-landfill only**

| Waste types permitted for disposal | Authorised/licenced annual intake for disposal (tpa) | Actual intake for disposal in reporting year (tpa) | Remaining licensed capacity at end of reporting year (m3) | Comments                                                                                                                                                         |
|------------------------------------|------------------------------------------------------|----------------------------------------------------|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Household & Commercial             | 128,000                                              | 0                                                  |                                                           | Void Area is almost completely filled. Waste has ceased to be accepted but management of Cork County Council have yet to decide when to fill the remaining void. |
| Industrial non-haz                 | 27,000                                               | 0                                                  | 200                                                       |                                                                                                                                                                  |
| Construction&Demolition Waste      | 5,300                                                | 0                                                  |                                                           |                                                                                                                                                                  |
|                                    |                                                      |                                                    |                                                           |                                                                                                                                                                  |

**Table 3 General information-Landfill only**

| Area ID | Date landfilling commenced | Date landfilling ceased  | Currently landfilling | Private or Public Operated | Inert or non-hazardous | Predicted date to cease landfilling | Licence permits asbestos | Is there a separate cell for asbestos? | Accepted asbestos in reporting year | Total disposal area occupied by waste | Lined disposal area occupied by waste | Unlined area |
|---------|----------------------------|--------------------------|-----------------------|----------------------------|------------------------|-------------------------------------|--------------------------|----------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|--------------|
|         |                            |                          |                       |                            |                        |                                     |                          |                                        |                                     | m2                                    | m2                                    | m2           |
| Cell 9  | Dec-08                     | Temporary Cease Feb 2012 | Yes                   | Public                     | Non Hazardous          | 2015                                | No                       | No                                     | No                                  | 80000                                 | 40000                                 | 40000        |

|                      |                  |            |
|----------------------|------------------|------------|
| <b>WASTE SUMMARY</b> | Lic No: W0068-03 | Year: 2013 |
|----------------------|------------------|------------|

**Table 4 Environmental monitoring-landfill only** [Landfill Manual-Monitoring Standards](#)

| Was meteorological monitoring in compliance with Landfill Directive (LD) standard in reporting year + | Was leachate monitored in compliance with LD standard in reporting year | Was Landfill Gas monitored in compliance with LD standard in reporting year | Was SW monitored in compliance with LD standard in reporting year | Have GW trigger levels been established | Were emission limit values agreed with the Agency (ELVs) | Was topography of the site surveyed in reporting year | Has the statement under S53(A)(5) of WMA been submitted in reporting year | Comments                                                         |
|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------|----------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------|
| Yes                                                                                                   | Yes                                                                     | Yes                                                                         | Yes                                                               | Yes                                     | Yes                                                      | Yes                                                   | Yes                                                                       | All license conditions being met under current monitoring regime |

-> please refer to Landfill Manual linked above for relevant Landfill Directive monitoring standards

**Table 5 Capping-Landfill only**

| Area uncapped* | Area with temporary cap | Area with final cap to LD Standard m2 ha, a | Area capped other | Area with waste that should be permanently capped to date under licence | What materials are used in the cap                                                                                  | Comments |
|----------------|-------------------------|---------------------------------------------|-------------------|-------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|----------|
| SELECT UNIT    | SELECT UNIT             |                                             |                   |                                                                         |                                                                                                                     |          |
| 0              | 17,000 square metres    | 81,800 square metres                        | 0                 | 0                                                                       | 1mm HDPE welded liner, geotextile drainage layer and protection barrier covered with 1m of suitable, screened soil. |          |

\*please note this includes daily cover area

**Table 6 Leachate-Landfill only**

9 Is leachate from your site treated in a Waste Water Treatment Plant?

|     |
|-----|
| Yes |
| No  |

10 Is leachate released to surface water? If yes please complete leachate mass load information below

| Volume of leachate in reporting year(m3) | Leachate (BOD) mass load (kg/annum) | Leachate (COD) mass load (kg/annum) | Leachate (NH4) mass load (kg/annum) | Leachate (Chloride) mass load kg/annum | Leachate treatment on-site | Specify type of leachate treatment                                              | Comments                                                                                                                                  |
|------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|----------------------------------------|----------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| 3784.6                                   | 84.02                               | 769.4                               | 45.79                               | 6413                                   | No                         | Wastewater Treatment Plant with Mixing tank, Oxidation ditch & Settlement tanks | Values lower than previous years due to reduced quantity of leachate taken off-site and a reduction in parameter results in the leachate. |

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

**Table 7 Landfill Gas-Landfill only**

| Gas Captured&Treated by LFG System m3 | Power generated (MW / KWh) | Used on-site or to national grid | Was surface emissions monitoring performed during the reporting year? | Comments                                                                                                                                                                                                                                   |
|---------------------------------------|----------------------------|----------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 987474 kg CH4/Annum                   | 0                          | 0                                | Yes                                                                   | Gas captured figure is Annual Methane burn-off in kg/annum. Areas of elevated VOC's are identified by the surveys and are attended to by site staff. Well heads and flanked areas are repaired to improve gas system coverage at the site. |







Comments on  
liner type

---

liner with

