ATTACHMENT A.I

Non-Technical Summary

Attachment A.l NON TECHNICAL SUMMARY

Nature of the Facility

Corranure Landfill is located within the townlands of Corranure and Lismagretty adjacent to the Cavan-Cootehill Road (R188). Oxigen Environmental Ltd. are now operating the active Cells 3 and 4 under a Concession Agreement while Cavan County Council are responsible for the remediated Cells 0, 1 and 2 and have applied for a Waste Licence Review Application for this new arrangement.

1.1.1 Class or Classes of Activities as specified in the Third Schedule of the Act

The landfill is closed and no longer accepting waste but Classes 1 and 5 are still applicable relating to past activities under this Waste Licence Review Application. Class 1 of the Third Schedule relates to "deposit of waste on, in or under land (including landfill)". The principal activity on site is Class 5 under the Third Schedule relates to "a specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment." Cell 0 is applicable to Class 1 and Cells 1 and 2 are applicable to Class 5.

1.1.2 Nature of Emissions from Corranure Landfill

Emissions from the landfill are: leachate, landfill gas and surface water runoff. The position with regard to each of the above emissions is summarised below:

1.1.2.1 Leachate

Leachate is generated at landfills as a result of percolation of water and other liquids through the waste mass. The downward movement of the resultant liquid through the landfill results in different solid and liquid contaminants being leached out of the waste. The volume of leachate generated depends upon precipitation, the volume of surface water channelled away from the waste surface, the moisture absorbed and released by the waste and evapotranspiration.

Cavan County Council has taken responsibility for the leachate management of Cells 0, 1 and 2. Cells 1 and 2 are fully lined with a composite liner and a leachate collection system. In Cells 1 and 2, leachate is collected in a network of slotted pipes laid in the base of each cell and draining to a leachate collection chamber constructed at the lowest point of each cell. 9 no. leachate abstraction wells are operational in Cell 0 and Cell 1 and an interceptor drain also collects leachate from the perimeter of Cell 0. All leachate generated on site is pumped into a leachate inlet pumping chamber. Leachate is pumped from this chamber into the leachate storage tank. From there, leachate is pumped through a rising main to Cavan Wastewater Treatment Plant. The leachate storage tank and the existing leachate lagoon provide a combined capacity for leachate storage of 1,801 m^3.

1.1.2.2 Landfill Gas

Landfill gas is primarily composed of methane, carbon dioxide and water vapour. Landfill gas generation occurs mainly as a result of anaerobic waste biodegradation. The process of methane production only occurs once the available oxygen supply within the waste is depleted, resulting in the processes of hydrolisation, acetogenesis and methanogenesis. Some of the factors upon which successful landfill gas generation relies are: the type of waste deposited, the amount of processing and grading the waste undergoes prior to placement, the capping technique deployed, the degree of compaction, the type of daily cover applied and the moisture content of the waste.

There are 9 no. gas extraction wells in Cell 0 and 13 no. in Cell 1. A further 13 no. gas extraction wells were installed in Cell 2 between March and May 2007. There are also three horizontal wells in Cell 2 which are connected to the gas collection system. All landfill gas wells are connected to an enclosed ground flare which has a -capacity of 1,500 m^3/hr and is operating at approximately 750-800m^3/hr serving Cells 0, 1 and 2.

An assessment is being carried out to determine the quality of the gas generated and to investigate whether the quantities of landfill gas would remain high enough to justify gas utilisation in the medium to long term. Gas utilisation would also need to be feasible in economic terms.

1.1.2.3 Surface Water Runoff Emissions

There are two surface water emission points on site, SWl and SW2. SWl drains the hardstanding concrete area around the Civic Amenity Site, the main access road, Cell 0 and Cell 1 and channels this runoff to the Corranure Stream. SW2 drains from the area surrounding Cell 1 to the Lismagratty stream. The wheelwash and waste quarantine area drains to the leachate Treatment and abatement methods for surface water runoff on site include oil/petrol interceptors,silt traps, open drains, filter drains, stone filter beds and settling ponds.

1.1.3 Environmental Impacts

The impacts of the closed landfill on the surrounding environment relate to groundwater, surface water and ecology.

1.1.3.1 Surface Water Impacts

Surface water in the region of the landfill facility includes two streams; the Lismagratty Stream running north of the facility and the Corranure Stream running south west of the facility. Both streams are tributaries of the Analee River which flows into Lough Oughter forming part ofthe Upper and Lower Lough Erne system. Corranure Stream is classified as a high local value fishing stream on the basis of having good potential salmonid nursery habitats. However in 2003 electrofishing was carried out on this stream and no salmonid species of fish were noted.

Four surface water sampling locations (Kl, K2, K3, K4) on Corranure Stream and one surface water sampling location (A2) on the Lismagratty Stream were chemically analysed on a quarterly basis in 2007 and parameters which require to be analysed on an annual basis are monitored during the fourth quarter.

Non compliances were recorded in 2007 at K2 and K3 on the Corranure Stream in relation to Ammonia, BaD, COD, Chloride, Suspended Solids and Conductivity.

In October 2007 a detailed biological assessment was undertaken on watercourses in the vicinity of Corranure Landfill. Macroinvertebrate surveys were carried out at 10 no. sites; 5 no. (AI – A5) on the Corranure Stream and 5 no. (Bl – B5) on the Lismagratty Stream. The monitoring sites Al and Bl could not sampled as these locations were dry. Overall in comparison with the biological assessment carried out in 2006 there has been no change on the Lismagratty stream with a Q3 rating at monitoring sites B2-B5. On the Corranure Stream there was no change at monitoring site A2 (Q2 rating). There was an improvement in the water quality at site A3 from a rating of Q2 to Q3, seriously polluted to moderately polluted. Monitoring sites A4 and A5 have shown a decrease in water quality from a rating of Q2-3 and Q3 to Q2.

In 2008 to date (1st, 2nd and 3rd quarters) non compliances were recorded at K2 and K4 on the Corranure Stream for Suspended Solids. The standard limit for Suspended Solids is 35 mg/l and on two occasions at K2 (85 mg/l and 166 mg/l) and on one occasion at K4 (144 mg/l) non compliances were recorded. A2 on the Lismagratty Stream was also non compliant with Suspended Solids on one occasion at a level of 65 mg/I. SWl and SW2 discharge points were also over the standard limit for Suspended Solids on one occasion with levels of 152 mg/l and 132 mg/I. These non compliances for suspended solids were probably due to high rainfall. The only other non compliances for Surface Water were recorded at A2 for BaD with a concentration of 7 mg/l and SWl for Ammonia with a concentration of 0.38 mgll which are both slightly higher than the standard limits (5 mgll and 0.2 mg/l). Improvement/remedial works at the landfill were carried out in 2007 and as a result in 2008 significant improvements in the quality of the Surface Water is evident.

1.1.3.2 Groundwater Impacts

A hydrogeological investigation was carried out in and around the landfill in 2003 and demonstrated that the risk of pollution to the groundwater within the area of the landfilllies within zones R2[1] of the Geological Survey of Ireland's (GSI) classification for groundwater protection. This means that in terms of groundwater protection, landfills are acceptable in the area although engineering measures are likely to be necessary to provide adequate protection to the groundwater.

There are three groundwater monitoring points located within the vicinity of the landfill, namely GW01, GW04 and GW05. Groundwater flow occurs in a north-northwesterly direction. GW01 is upgradient and GW04 and GW05 are downgradient of the landfill.

In summary for 2007, all groundwater monitoring locations recorded in relation to Coliforms and Chloride. GW01 also showed elevated levels of Iron.

Groundwater is also monitored in private wells within 500m of the landfill. In 2007 with the exception of elevated levels of coliforms at some of the locations and some locally high concentrations in Chloride, the quality of the water met the criteria as outlined in the European Communities (Drinking Water) (No. 2) Regulations, 2007.

In 2008 to date (1st, 2nd and 3rd quarters) non compliances were recorded at GWOl on two occasions and at GW04 on one occasion for Chloride with levels of 111 mg/l and 33 mg/l and 121 mg/l respectively. The standard limit for Chloride is 30 mgll. All other parameters were under the required limits.

1.1.3.3 Ecological Impacts

In 2003 an ecological assessment of the lands surrounding Corranure Landfill was carried out by Roger Goodwillie & Associates on behalf of Cavan County Council as part of the EIS that accompanied the previous Waste Licence Review Application. No habitats of significant importance were identified surrounding the landfill and the nearest designated site is Drumkeen House Woodland, proposed Natural Heritage Area (PNHA) which is located 2.9km from Corranure Landfill. Lough Oughter which is designated as a Special Area of Conservation (SAC), Natural Heritage Area (NHA) and Special Protection Area (SPA) is located 3.6km from the landfill.

1.1.4 Monitoring and Sampling Arrangements

The current monitoring programme for the site is in accordance with the conditions of the current Waste Licence W0077-02. A future monitoring programme is proposed as part of this Waste Licence Review Application.

1.1.5 Closure, Restoration and Aftercare Measures

A Closure, Restoration and Aftercare Management Plan is in place at the landfil1.

Cavan County Council will comply with existing and proposed emission standards conditioned by the EPA for the landfill. Control and monitoring procedures are adhered to

under the current waste licence which will prevent as far as practicable any environmental pollution. The facility is employing the best available technology to reduce emissions from the facility as far as practicable including operation in accordance with the existing licence conditions. The site is owned and operated by Cavan County Council which has competent and trained persons managing the landfill facility. The applicant Cavan County Council is in a position to meet any financial commitments or liabilities arising from the activity.