



Environmental Protection Agency,
Office of Climate
Licensing and Resource Use,
P.O Box 3000,
Johnstown Castle Estate,
Co- Wexford.

Unshinagh,
Ballyhaise,
Co. Cavan

21/06/2009

Re; Application by Oxigen Environmental Ltd., for a licence to operate an Integrated Waste Management Facility at Lismagratty and Corranure Townlands, Cootehill Road, Cavan, Co.Cavan.

Your reference : W0248/01

Dear Sir/Madam,

The Cavan Better Waste Management Group wish to make the following submission in regard to the proposed Integrated Waste Management Facility, mentioned above.

As residents in the immediate and surrounding areas, and as representatives of the local community we put in writing our main concerns and points of objection .

Yours Faithfully

Geraldine T. Smith
Geraldine Tierney Smith
(Secretary, Cavan Better Waste Management)

Cavan Better Waste Management Group

We refer to the reports, lechate management plan, EPA licence for non-hazardous waste, health report 2003

The Health Report on the Extension of Corranure Landfill Corranure, Co. Cavan, Ireland by Dieter Schrenk MD PhD, Professor of Toxicology University of Kaiserslautern Food Chemistry and Environmental Toxicology Kaiserslautern, Germany carried out in 2003 is outdated, vague and does not give any reassurance to people on whether or not the facility is harmful to health and does not reflect the current size of the facility and it's proposed plans to extend the facility with a MBT plant.

- **There should be more up to date reports from a wider spectrum of professionals regarding all aspects of the implications of such a facility has on the people's health. This information should be independent, consistent and readily available for people to obtain.**

In the 2003 health report, it is evident that the Corranure stream was contaminated from the existing unlined landfill. The report says that the surface water quality does not allow the direct use of the water as drinking water. The groundwater quality in this report has shown that some private wells have had contamination and an alternative source of water had to be installed.

- **This report was in 2003, which is out of date. There should be constant monitoring of both surface and ground water in the surrounding areas of the landfill facility. Again this information should be independent, consistent and readily available for people to obtain.**

There is nothing in the report to suggest that the odours being emitted are not harmful to human health. This is a major area of concern for the people in the surrounding area as the odours generated has become ever more prevalent in recent years with some people even feeling nausea from the odours. The report claims that "all leachate will be pumped to the rising main and transferred to the wastewater treatment plant at Cavan. This will have no impact on health quality of the population living in the vicinity of the landfill or on the environment."

Question:

However is all the leachate being collected from the landfill and how is this being monitored?

<http://www.epa.ie/terminalfour/wasteApril/waste-view-filter.jsp?regno=W0248-01&filter=b&docfilter=go>

EIS Appendices 12-17

Health Report on the Extension of Corranure Landfill Corranure, Co. Cavan, Ireland by Dieter Schrenk MD PhD, Professor of Toxicology University of Kaiserslautern Food Chemistry and Environmental Toxicology Kaiserslautern, Germany. 2003

Under the leachate management plan it states that:

The objectives of the leachate control system are as follows:

- To reduce the potential for seepage out of the landfill through the sides or the base by exploiting weaknesses in the liner or by flow through its matrix,
- To maintain low leachate head to prevent leachate rising to such an extent that it can spill over and cause uncontrolled pollution to surface water, and
- To minimise the interaction between the leachate and the liner to prevent groundwater contamination.

Questions:

1. How are these objectives being carried out?
2. Is there a system in place that can accurately assess if there is seepage out of the landfill through the sides or by the base?

- **These are standard objectives that a leachate management plan should have but there is no reassuring control system in place to see if the management plan is carried out effectively.**

3. What happens if problems arise at the waste disposal facility where the leachate is being pumped?
4. Is there an alternative outlet for this leachate if the facility incurs any problems?

<http://www.epa.ie/terminalfour/wasteApril/waste-view-filter.jsp?regno=W0248-01&filter=b&docfilter=go>

EIS Appendices 12-17

Corranure landfill waste licence No. W0077-02 section 3: leachate control system

Under the leachate-monitoring programme, the table below shows the monitoring frequency with 13 of the parameters being only checked annually, 1 parameter once off, 1 parameter quarterly and 1 parameter only being continuously monitored.

- **This is unacceptable.**

Table 5.1: Leachate Monitoring Programme

Parameter	Monitoring Frequency
Visual Inspection/Odour	Quarterly
Leachate level	Continuous
Ammoniacal Nitrogen	Annually
BOD	Annually
COD	Annually
Chloride	Annually
Electrical Conductivity	Annually
pH	Annually
Metals/non metals	Annually
Cyanide (total)	Annually
Flouride	Annually
List I/II organics	Once off
Mercury	Annually
Sulphate	Annually
Total P/orthophosphate	Annually
Total Oxidised Nitrogen	Annually

*Where there is evident gross contamination by leachate, additional samples will be required.

<http://www.epa.ie/terminalfour/wasteApril/waste-view-filter.jsp?regno=W0248-01&filter=b&docfilter=go>

EIS Appendices 12-17

Corranure landfill waste licence No. W0077-02 section 5: monitoring

Under the EPA waste licence "Landfill for non-hazardous waste" it states "The licensee must manage and operate the facility to ensure that the activities do not cause environmental pollution."

A. We refer to the report from RPS (Corranure Landfill Gas Management – Preliminary Landfill Gas Utilisation Feasibility Study)

The report notes that landfilling will cease at Corranure Landfill in 2013 (section 2, Page 2). This statement is confusing and we would like further clarification on the proposed closure of the landfill.

The report was published in 2006 and uses various assumptions. The report is out of date, extremely brief, therefore we are unable to fully assess this particular element of the submission.

- **A more detailed Landfill Gas Utilisation Feasibility Study is required in order for us to accurately assess the proposal.**

B. We refer to the 'Operations Plan 2007' (Corranure Landfill)

We refer to the following objectives in section 1.2 of the above report:

Objective no.2 Landfill Gas Emissions: *To reduce landfill gas emissions on site by May 2006.*

The landfill gas emissions from Corranure landfill have greatly increased over the last 3 years. Please refer to numerous EPA Site Inspection Reports and its most recent report dated 27th May 2009 (ref: 77-0209SI47KR) where it states there was a strong landfill gas odour observed during their inspection.

- **The information contained in this section is misleading.**

Objective no.4 Provision of Training: *Provide Appropriate training to all staff on any matters arising out of work on the site – Target Date: 2006.*

- **The report notes that no suitable training was identified.**
- **The staff on site are unqualified and incapable of managing the facility.**

Please refer to numerous EPA Site Inspection Reports and its most recent report dated 27th May 2009 (ref: 77-0209SI47KR) where it states that the management at the facility are not suitably qualified.

- **Again the information in this report is misleading and incorrect.**

Objective no.5 Increase Capacity of Landfill: Complete the construction of cell no.3 by September 2006.

Cell no.3 is still active and being filled by Oxigen.

Please refer to numerous EPA Site Inspection Report and its most recent report dated 27th May 2009 (ref: 77-0209SI47KR).

Note: We are seriously confused about the above findings, therefore further clarification is required on this matter.

C. We refer to section 1.3 of the above report (Environmental Management Plan) - 2 -

-We refer to point 1.3.2 where it states that the operator of the facility is Cavan County Council. I wish to advise that the operator is Oxigen and not Cavan County Council.

-We refer to point 1.3.7.4 Security Gates and Fencing. We wish to advise that the site to the rear and part side boundaries is not fully fenced. The site is open to the rear and part side boundaries except for part hedge rows which are in extremely poor condition.

-We refer to point 1.3.7.12 Surface Water Management System. We wish to advise that there are no surface water monitoring points on the Lismagratty and Corranure Streams.

- **Again the information provided is misleading.**

-We refer to point 1.3.81 Description of Operations - The reports states that Cavan County Council operates the facility. This is not the case as the facility is operated by Oxigen.

D. We refer to section 1.3.8.3 Measures for the control of Environmental Nuisances

Birds:

There is continuous flocks of birds visible on the landfill and surrounding areas and this was previously pointed out to the EPA.

Odours:

Odours from the landfill have been an ongoing problem, where the procedures in this section of the report have not being adhered to. This issues has been noted in numerous EPA site inspection reports.

Litter:

The problem with loose litter blowing around the facility is ongoing. The public roads and lands either side of the landfill for over 2 KM are polluted with rubbish etc.

- **Again this issue has been documented in numerous EPA site inspection reports.**

1.3.8.6 Equipment to be utilised: The list of equipment operational on the site is incorrect to that noted in the above section of the report. There are a number of large track machines, dump trucks etc which generate excess noise levels.

Appendix 1 (Management Structure at Corranure Landfill)

- **The information contained in this document is out dated and needs to be updated.**

Appendix 2 (Location Map & Amendments to Waste Licence)

The map shown on this appendix 2 is unclear and not to scale.

- **A new map to a relative scale should be provided in order for us to assess this section of the application.**

Appendix 3 (Waste Acceptance Procedure)

- **The waste acceptance procedure is not being adhered to at Corranure Landfill.**

Please refer to EPA Site Inspection Report and its most recent report dated 27th May 2009 (ref: 77-0209SI47KR).

- **The waste acceptance procedure was not being adhered to on this date.**

Appendix 4 (Location Map for Environmental Monitoring Points)

- **The information on these maps is not clear for us to fully assess the application, therefore revised maps are required.**

Appendix 5 (Environmental Incident Report Form).

A recent fire at the facility (track machine went on fire). Given the close proximity to untreated waste we have serious concerns with regard to the condition of the machines on site.

- **For a track machine to suddenly develop a fire this is extremely worrying.**
- **Were the EPA notified about this incident?**

Project Drawings:

The drawings submitted with this application are of poor quality, difficult to view and are lacking in specification and detail.

- **A more detailed drawing submission is required in order us to assess this application.**

Road Structure:

The public road structure to the facility is of poor quality and has allowed previous flooding to occur. The increased volume of landfill trucks to the site over the last year has contributed to the deterioration of the public road.

At present there are delays experienced on the public road either side of the facility due to increase traffic to the facility.

- **This is of serious concern to us and in the interests of health and safety the proposal contained in this application should be refused.**

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In reference to the main application page 113 -164

1. All details to this application are out of date the most recent being in 2003. There needs to be an up to date and detailed application by Oxigen, which this one is not.
2. Oxigen and Cavan County Council cannot be trusted to be self regulating, regarding polluting of rivers, ground water, running the landfill site to an acceptable standard, the amount of waste being dumped and the type of waste being dumped. As shown once again in the Site Inspection Report dated 25 May 2009. There needs to be an outside body monitoring the site on a daily basis.
3. Oxigen is constantly breaking EPA rules. How do we know that toxic/hazardous waste is not entering the site?
4. What checks are there that recycled material are not being sent to land fill. Now the price for metal etc has fallen?
5. What daily checks on the amount of waste entering the landfill. It can not be left to Cavan county council or Oxigen.
6. The local population is vulnerable to the health effects of proposed development if managed badly, which it is.
7. The main hazardous emissions are traffic emissions, landfill gases, lechate and windblown particles. Primary air pollutant particles are Lead oxide of nitrogen, carbon monoxide and VOC.
8. The Cavan waste treatment plant will not be able to deal with the volumn of Leachate created if planning permission for the 100 acres is give. What is Oxigen's plans to deal with it?
9. Oxigen seem incapable even at this stage to run the landfill properly. This is at a time when they are looking for planning permission and are under the close scrutiny of the EPA. What will it be like if they receive planning permission and the pressure is off?
10. The tipping area should be covered every night, but is not.
11. The wheel wash should be used every time a lorry leaves the site, but is not.
12. If Oxigen receive planning permission from the EPA and manages the site extremely poorly, which is the most likely outcome no matter how many time they are inspected. Do we take legal action against both the EPA and Oxigen?

13. Flora and Fauna

14. The environment needs to be strictly monitored during construction to prevent contamination of streams, ground water and flora and fauna from fuel, oil and concrete etc.

15. Once each cell is completed a comprehensive landscaping programme of planting native species of trees etc needs to be implemented. But the company who under takes this operation needs to know which species will not damage the final membrane.

16. The habitat restoration should mimic nature.

17. Water

18. There needs to be weekly not twice or three times a year monitoring of all ground water, streams and silt for chemicals and heavy metals etc.

19. The course of the rivers flowing through Corrunure landfill are as follows:

20. Corranure River and Cavan River run in to CoalPit and Derrygid Lake, then on to the Annalee River from there into the Erne River and finally into the Upper and Lower Erne.

21. There is a high possibility that a major spill/leakage from the land fill if it got into the streams could eventually pollute the Upper and Lower Erne Lakes. As stated in the recent report, Oxigen are not even capable of dealing with ground water flooding.

22. What is Oxigen's plans for containing a major leak of Lechate, etc into water ways, so there is not a major environmental disaster?

23. There needs to be monitoring on the height restriction of each cell.

24. The road to Corranure landfill. The dimensions and quality is not good enough to take the anticipated volume of traffic should Oxigen receive planning permission.

25. The ring fort is an important heritage site, and is only 60m from the proposed Biological Waste Treatment Plant. This needs further investigation.

26. The Landfill has significantly reduced property prices in the area. And it is impossible to sell the property if the landfill is visible from that property.

Cavan Better Waste Management Group

Section 9 Part 1

1. The Annalee and Cavan River Last tested in 2000.
2. Fissure flow through bedrock which is the most dominate type of ground water flow. How far can liquids from the landfill travel along these fissures? Can it pollute drinking wells?
3. "Potential detrimental influence of the landfill on the quality of the surface water can not be excluded". Samples only taken quarterly from 2002 to March 2003. Surface water needs to be monitored on a daily basis.
4. Sampling from ground water from January 2002 to March 2003 indicated the presents of Phenols, total faecal coliforms and metals. What metals and chemicals are being detected and what quantities are the above appearing.
5. Oxigen needs to provide up to date submissions. Map 4 from this part of the planning application is missing.

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Continued reference to Oxigen Application Main Report

Ref. Page 4 Section 1.1.1.1

The main aims of the Cavan Development Plan 2003-2009 is to facilitate the economic and social development of Cavan Town.

Question:

How does this application for a 'super dump' within 2 miles of the town fit into this plan?

Ref. Page 6, Sect. 1.23.4.3

It is stated for a Biological Treatment of Biowaste-Annex V, a number of criteria should be considered: *Distance of residential and recreational areas and * Proximity of waterways and water bodies.

In Oxigen's description of the site, pages 24 and 25, the submission claims that there are 12 houses within 500 metres from the landfill boundary.

Question:

How up to date is this?

Does it refer to the present landfill site, when it should refer to the boundary of the proposed site?

Castletara NS, Breifne College, St. Patrick's College, Loreto College, Drumcrave NS, Cavan College of Further Studies are all within 1-2 mile radius of the Corranure site.

***There are thousands of children affected by the smells emitting from this site.**

-As regards waterways and water bodies: The original site was adjacent to a small lake, which is now filled in. Both Lismagraty stream and Corranure stream also run close to the site.

Ref. Page 11 Sect 1.4.3:

Oxigen intend to take a third collection of Biodegradable Waste from Cavan, Longford, Monaghan, Leitrim and Westmeath.

Question:

Is this part of the Waste Management Plan for the North East? Surely the plan is to reduce landfill and why not reduce the landfill tonnage at the Corranure site?

Ref. Page 15 Sect. 1.4.7:

The submission states that some planning permissions restrict facilities to handling only waste that arises in the geographic area covered by the Waste Management Plan. The policy states that each region has to take responsibility for its own waste. Oxigen intend sourcing significant quantities within the North East Region and waste from other contractors outside the region.

Question:

How does this tie in with the proximity principal, with waste coming from outside region?

Ref. Page 18, Sect 1.5:

Oxigen say that studies have shown the new facility will have minimal impact on the local environment and community.

Due to the fact that the volume of traffic to the site will increase considerably if the application is successful, the roads and entrance to the site will result in considerable traffic chaos.

Page 50 Table 2.8 :

Details the opening hours to handle the projected 335,000 tonnes of waste. Waste accepted 6 days a week from 7am to 7pm. MRF 6.30am to 10pm; BTF 6.30am to 10pm.

- ***This increased opening hours is completely unacceptable to the residents of the area.**

Ref. 57 Sect 2.5.7:

Most pictures in the submission show what Oxigen consider a typical facility.

- **This is not acceptable.**

Question:

What should be included is an artist's impression and drawings of the proposed buildings?

Ref. 57 Sect 2.5.7:

Submission states that 97% of Green Bins and 80% of Skips will be recovered or recycled.

Questions:

Why then are Oxigen looking to put 90,000 tonnes of waste to landfill?

We thought the objective was to reduce the amount of waste to landfill?

Ref. Page 65 Sect 2.5.8.8

Oxigen propose to bring separated organic waste from other facilities in Drogheda, Dundalk and Sub-Urban areas surrounding these towns (Laytown, Bettystown, etc.)

Question:

Is there a limit to the quantity of same and are they restricted to these areas?

Ref. Page 72 Sect 2.6.5.4:

Oxigen state that excavation work can cause influx of vermin to the site and to surrounding areas.

With their track record at the site to date, no doubt this will be a major problem.

Ref. Page 79, Sect 2.6.6.10:

Leachate will be, as needed, removed off site by sewer connection to the local waste treatment facility or in emergency (Ref. Page 98 Sect 2.8.10) be tankered to the plant.

As leachate is 60-80% of rainfall (Page 84 Sect 2.7.4) the present procedures will not be able to cater for the increased leachate output.

The submission states (Page 84, Sect 2.7.4) that rainfall in Cavan is 800-100mm a year.

The last samples from the Leachate Tank was taken in July 2007.

Question:

How often do the leachate tanks be tested?

Surely a report nearly two years old is not adequate assessment of the present situation. The volume of waste to the site has increased dramatically since Oxigen took over.

In reference to appendix 20

Reason: To issue a statement regarding potential risks from leachate and landfill gases.

A. WMT appear to be satisfied with the geology/hydrology of the current landfill site but at no stage in this report is there a mention of the fact that the original landfill i.e Cell 0 was originally Lismagrattagh lough.

Questions:

Are Oxygen not aware of this?

And, if so, would this have any impact on their findings?

B. The one point they have noted, with respect to the current site, is that, in terms of the permeability of the top strata, the permeability of 1×10^{-9} m/s at a thickness of ≥ 1 m is not met by the Council Directive 1999/31/EC but the fact that the thickness of the boulder clay exceeds the requirements by a factor of 10 to 15 compensates to meet this requirement?

**WMT concludes that the main possible route of contamination by landfill gases/leachate is due to improper management of the site. There is "little risk to the environment when using a properly functioning and well maintained system. Operating personnel training is paramount." (Reference EPA report 25/05/09 for breaches with regard to personnel and systems in place).

Recommendations by WMT for reducing the risks

LEACHATE:

Power Supply: back up generator or contractual assurances in order to guarantee the power supply is restored within 12 hrs.

Leachate pumps: All pumps in every cell must be backed up by redundant systems and Oxygen must guarantee that the backup pumps must work at all times. WMT recommend operating the two sets alternately so as the pumps do not remain inoperative for long periods of time.

Fill Level Monitoring: should also be implemented with redundancies.

Additional safeguards: Additional catchment drains can be installed at theoretical exit points for the leachate in case of overflow.

Point to note: WMT point out that if the groundwater monitoring wells are carefully and strategically positioned in and around the landfill site it will ensure that any possible contamination of the groundwater can be caught by analysis of these waters. However it appears from looking at the report as a whole that there is insufficient sampling and testing of these waters currently being carried out on site by Oxygen.

Reference Appendix 19 (Section 6) Conclusions

“Results of chemical analysis on water indicates the presence of pollution of the groundwater and of surface water in the stream flowing into Cavan river.....at this stage the possibility that groundwater pollution could originate from a source other than the waste body cannot be excluded”

- **It is simply not good enough to say that the pollution may or may not be due to operations at the landfill site. By carefully implementing a scientifically sound approach to the positioning of water monitoring wells and a proper sampling and testing system it should be possible to assess the quality of the groundwater at the landfill before it enters the landfill and as this groundwater leaves the landfill towards the streams.**

Perhaps Oxygen prefer not to know for definite if their operation is causing groundwater pollution!

- **It is also not good enough that the BMA report (Appendix 19) relies on outdated data: With reference to the Cavan and Annalee Rivers” “classified as unpolluted (Class 4)” by the EPA on the survey on water quality in Ireland 1998-2000.”**

C. LANDFILL GASES

Again WMT state that the potential risk is “dependant on the quality of the service at the landfill.....

- **Well-trained personnel with the appropriate experience can operate the gas extraction system in such a way that emissions are reduced to a minimum.....**

D. During daily inspection of the landfill particular attention must be paid to the odour emissions and damage to the planting /vegetation which provides evidence of possible leakages or weaknesses.....”

Open landfills are the greatest source of emissions and “ well planned refuse disposal (small disposal areas, rapidly covered on a daily basis) in combination with the installed horizontal gas drainage pipes results in a minimal level of odour emissions. Responsibly operating the open landfill reduces all of the emissions to a minimum”

EPA inspection 25/05/09 reports open landfill not covered over the weekend!!

Well placed gas monitoring systems must be established and, in addition to current daily inspections, regular inspections with a Flame Ionization Detector are proposed.

- All monitoring systems should be alarmed.

Question:

What preventative maintenance/calibration of all vital measuring /monitoring equipment is planned?

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In conclusion

We urge you to bear in mind previous EPA inspection findings with respect to breaches at the Corranure Landfill site: most recently as of the 25/05/09. It is absolutely unacceptable that Oxigen should be considered, let alone granted this new licence, as it is apparent that they are unable, or possibly unwilling to operate this site within the guidelines of their current licence. We are not assured that they would be suitable candidates to run a new MBT plant, the first of its kind in Ireland.

On behalf of the residents residing in the local and immediate areas of the Corranure Landfill site, Cavan Better Waste Management Group recommend that Oxigen be refused on this application in the interest of health and safety. We await your reply.

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