



OFFICE OF LICENSING & GUIDANCE

INSPECTORS REPORT ON A LICENCE APPLICATION

To:	DIRECTORS	
From:	Dr Tom McLoughlin	- LICENSING UNIT
Date:	13 th January 2005	
RE:	Application for a Waste license, from McGill Environmental Systems (Ireland) Ltd. Licence Register Number 195-1	

Application Details

Type of facility:	Non-Hazardous Materials Recovery Facility
Class(es) of Activity (P = principal activity):	3 rd Schedule: 6 & 13 4 th Schedule: 2 (P) & 13
Quantity of waste managed per annum:	20,800 t
Classes of Waste:	Industrial and sewage biosolids, separated household and catering waste and other non-hazardous biodegradable material.
Location of facility:	Ballynalurgan, Kilmainhamwood, Kells Co Meath.
Licence application received:	6/10/2003
Third Party submissions:	19 to date
EIS Required:	Yes
Article 14 Notices sent:	2 nd & 4 th June 2004
Article 14 compliance date:	17 th June 2004
Article 16 Notices sent:	11 th June 2004
Article 16 Compliance date:	25 th June 2004
Site Inspection:	28/10/03 Site notice compliant

1. Facility

McGill Environmental Systems (Ireland) Ltd have applied to operate a compost facility inside a proposed purpose built factory building. The address of the proposed facility is, Ballynalurgan, Kilmainhamwood, Kells, Co Meath. The facility will be built in a field which is bordered on all sides by a traditional earthen bank topped with a variety of trees and shrubs, except for the northern boundary which borders on open ditch where the water flows from west to east. The next nearest residence is located approximately 500 metres to the Northeast of the development. The applicant proposes to accept a total of 20,800 tonnes per annum of non-hazardous waste for composting including industrial and sewage biosolids, separated household and catering waste and other non-hazardous biodegradable material. This application is similar to a previous application from the company which was licensed by the Agency in February 2004 at Coom, Carrignavar, Glenville, Co. Cork. (Register No. 180-1)

This recommended decision (RD) allows waste acceptance and handling during the following hours:

- Between 8 a.m. and 6 p.m. Monday to Friday and between 8 a.m. and 1.00 p.m. on Saturday.

The above hours of acceptance and handling were applied for by the company and in my opinion are reasonable taking on board any potential nuisance that might be caused to the nearest receptor sites (dwelling houses) if the hours of acceptance were increased.

There will be 4 full time operators at the facility and the facility will be provided with administrative support from the Cork office. See condition 2.1.1 of RD.

It should be noted that in October 2004, the Department of Agriculture and Food (DAF) issued Guidelines and an application form to potential applicants with regard to Veterinary Approvals for composting and biogas plants which transform animal by-products including Category 3 animal by-products (catering waste). The applicant will have to have regard to this legislation for the composting and the end disposal of such waste in accordance with the DAF guidelines. This aspect is referred to under Conditions No 1 of the RD. While the DAF remit covers the potential adverse effects caused to animal health (spread of animal diseases) from the composting of catering waste the Agency must have regard for other potential environmental concerns, e.g, odours and noise.

2. Operational Description

All waste handling, acceptance and processing will be carried out within the enclosed facility building. There will be a total of 22 composting bays within the building. Each bay will be 6.096m x 12.192m. Waste Handling, acceptance and processing is carried out in the enclosed building. The gross floor space of the composting facility will be 3359.88m². The incoming biosolids will be mixed with inert dry amendment (sawdust) and finished compost then placed in the bays. There will be an aeration fan behind each composting bay, to blow air up through the pile, and control temperature. The process will be automated through a control panel. There will be two extraction fans taking air from the building through the biofiltration system. There will be an amendment storage area situated to the rear of the preparation area. Sawdust and chopped straw will be stored in this section prior to use. All incoming biosolids will be delivered to the facility in covered containers. The delivery trucks will tip their

loads off the ramp into the acceptance area within the building. All biosolids will be mixed with dry amendments in the preparation area, prior to being placed in the composting bays.

An operator will wash the rear of the container and truck wheels before they leave the building. The main door will be steel cladded. This will be secure and locked at all times outside of facility opening hours.

3. Use of Resources

The facility has included details on raw material and energy consumption as follows: Diesel fuel oil 35, 427 litres per annum. The facility will be served by mains electricity with a 175 kW loading power required for lighting, blowers and extraction fans for the site. Regarding water usage, 41,332 litres will be used annually which will be taken from an existing well on the site.

4. Emissions

4.1 Air

Odour

The applicant has stated that odour emissions from the facility will be controlled by the enclosed nature of the process and the provision of biofilters where odourous emissions are expected. All waste processing will be required to be carried out indoors and all process air from these areas will be extracted and biofiltered.

Subjective odour assessments at the biofilter outlet will be required on a daily basis.

Bioaerosols

The composting of biodegradable waste involves a microbiological process where microbes (for example, bacteria and fungi) proliferate and grow by using the nutrients in the compost for food. High total viable cell counts (TVCC) are reached during the process and the microbial cells can be aerosolised (i.e. become airborne), particularly, during mechanical agitation of the composting material. This gives rise to the term 'bioaerosol'.

I wish to point out that at his facility the composting will be carried out indoors, also the air that will be extracted from the composting building will be biofiltered. Therefore, the risk to human health from bioaerosols is vanishingly low for persons outside the building.

The Agency suggested that the company carry out background monitoring bioaerosols levels at the site. The results of this study will give an indication of the background levels of AF which can then be compared to the results of the bi-annual monitoring requirements of this fungus in accordance with Schedule D.6.

There is a condition in the RD that will require that this study is completed before commencement of the operation-Condition 8.10.

Also, air monitoring outside the facility will be required on a biannual basis as per Schedule E.3, in particular, in relation to monitoring for *Aspergillus fumigatus*.

The HSA will be notified of the proposed decision in due course having regard to functions with regard to safety at work legislation etc.

Dust

The applicant has stated that there will be no significant dust emissions from this facility and that Agency emission levels for dust will be met.

Dust monitoring will be required as per Schedule E.3 of the recommended RD.

4.2 Emissions to Sewer

The office waste water / sewage will be treated in a wastewater treatment plant such as the Bison extended aeration process, or in a similar system such as the Klargester Biocycle system. Biocycle systems are designed to accept crude domestic sewage and produce an effluent of suitable quality for discharge to a watercourse or soakway system. The system uses colonies of live natural micro-organisms to break down the pollutants in the sewage. The systems are reliable, efficient and environmentally safe. They are easily installed and simple to maintain. The systems are quiet and odour free, and the below ground installation minimises visual impact complies with specification for single houses.

4.3 Emissions to Surface Waters

No leachate or runoff will be generated from the composting process and therefore no discharge to surface water. Rain falling on the hardstanding area and the facility roof will constitute clean runoff. A soak pit will be constructed adjacent to the facility. The site is located within the catchment of an unnamed stream that drains into Newcastle Lough-1 km to the SW. The facility is located in the catchment of the river Dee, a valuable salmonid fishery according to a submission by the Eastern Regional Fisheries Board.

There will be no direct discharges to surface water but surface water quality will be analysed on an annual basis both upstream and downstream of the confluence of the unnamed stream that drains into the Newcastle Lough. The applicant does not consider it necessary to provide a holding tank for runoff/contaminated water. Nonetheless Condition 9.4 requires a holding tank/interceptor to be put in place as a contingency measure.

4.4 Emissions to ground/groundwater:

No direct emission to groundwater is allowed (Condition 6.4).

The only indirect discharge to groundwater will be (a) clean roof runoff which will be diverted into a soakpit. Drain covers will be available on the site, so that in the event of a hydrocarbon leak, the drains leading to soakpit can be sealed off.

Three groundwater monitoring boreholes will be installed and they will be monitored on an annual basis.

The site will be covered in impermeable hardstanding (Condition 3.5). The RD requires that all bunds and hardstanding surfaces shall be inspected quarterly for damage and structural soundness (Condition 3.12).

It is not envisaged that any run-off will enter the local groundwaters; however as a precautionary measure groundwater boreholes were installed at the boundary locations of the new site. The applicant proposes to carry out groundwater monitoring annually at specified monitoring locations.

4.5 Wastes Generated:

The applicant proposes to accept a total of 20,800 tonnes per annum (400 tonnes per week from the North East region and surrounding counties) of non-hazardous biodegradable waste for composting including the following:

- Household waste collected by or on behalf of the Local Authority
- Household waste delivered to civic waste facilities and other bring facilities
- Other household and commercial waste
- Sewage sludges
- Industrial sludges

The tonnage referred to above does not include the tonnage of what the applicant refers to as 'inert amendments' i.e. materials such as sawdust, straw etc. which is purchased for the purpose of being used in the composting process.

Arrangements for off-site disposal or recovery

Regarding the disposal of the finished material the applicant has stated that the outlets for the finished product will diversify when the process is up and running as they hope to have alternative end uses which they are currently researching. They state that they currently cannot keep up with the demand for the compost from local tillage farmers in the Cork region. They also claim that the completed compost will be a Class 1 product in accordance with the EU 'draft' Working document on Biological Treatment of Waste.

4.6 Noise:

Approximately 13-15 extra vehicles will be using the road which is <1% of the total traffic. MES traffic is not expected to have a significant impact on the infrastructure or amenity value of the area. The operation of blower and extract fans and machinery at the site which is completely enclosed will not be audible at the site boundary.

Condition 8 and Schedule D set the requirements for noise monitoring. The noise emission limit values to be measured at any noise sensitive location are set in Schedule C.

4.7 Nuisance

Potential nuisances at the facility are controlled by Condition 7 of the RD.

5. Landscaping

The site is located in a forestry location. Trees in the centre of the forestry will be removed, leaving trees to the North and South to screen the building and boundary ditches to the East and West. The existing trees are well established and in a few years time there will be complete cover.

6. Cultural Heritage, Habitats & Protected Species

There are no objects of archaeological, architectural or historical importance on the site at Ballynalurgan, or in the fields surrounding the site. There are a number of important sites in the area but the facility will have no impact on them.

7. Waste Management, Air Quality and Water Quality Management Plans

The draft Waste Management Plan for the North East region is to provide a framework for the management of non-hazardous wastes in the regions over a five year period in accordance with national and EU legislation/policy.

The plan identifies action plans some of which relate to the separate collection of biowaste, treatment of separately collected biowaste and minimising the amount of waste for disposal although it does not refer specifically to this facility or company.

8. Environmental Impact Statement

I have examined and assessed the EIS and am satisfied that it complies with the EIA and Waste Licensing Regulations.

9. Compliance with Directives/Regulations

In relation to the Groundwater Directive, the facility will not have any direct emission to groundwater.

Sludge Regulations

Where compost produced contains sewage sludge the requirements of the Sewage Sludge Regulations apply. These Regulations require the supplier of sludge for use in agriculture to liaise with the local authority as each Local Authority is required to maintain a 'sludge register' which must contain details of the quantity of sludge produced and supplied for use within their functional area, as well as details of the composition and treatment of the sludge and details of where it will be used.

10. Submissions

Nineteen (19) valid submissions were received in relation to this application.

- a). Submission No 1 from Mr & Mrs Clarke, Kilmainhamwood, Kells, Co. Meath

There concerns included:

- (i) Smells during transportation
- (ii) Water quality and wild life
- (iii) That the site maps submitted with the planning application omitted a number of houses
- (iv) There is already a gypsum and a college protein industry

Comment:

There are no effluent discharges from the activity. The RD requires that surface water and groundwater quality will be monitored on an annual basis and that the material will be transported in a fashion that will not result in nuisance. A revised site map was furnished by the applicant. The last point raised is a matter for the planning authorities.

b). Submissions No 2, 3, 4, 5, & 6 from Mr Farrelly, Ms Clarke, & Ms Lambe, Mr Galligan, Mr & Mrs Fitzgerald, Kilmainhamwood, Kells, Co. Meath raised similar concerns including:

- (i) Emissions
- (ii) No provision for storage place for the finished compost
- (iii) Increased traffic on an already busy road
- (iv) Not zoned for industry
- (v) Object to planning

Comment:

As outlined above the entire composting process will take place indoors on impermeable surfaces and emissions from the activity will be subject to stringent air Emission Limit Values. The last three points raised is a matter for the planning authorities.

c). Submission No 7 from Ballynalurgan action Group

- (i) EIS-they raised issues like alternative locations, raw materials, screen material, monitoring, storage of sludges, landspreading of compost, nutrient content, landspreading bank, flora and fauna
- (ii) Odour monitoring, surface water and groundwater.
- (iii) Traffic

Comment:

The company sent in a revised EIS which addresses the concerns raised. The Agency was satisfied that it had enough information in order to reach a proposed decision and that the EIS complied with the relevant regulations.

Regarding the second concern, it should be noted that compliance with a waste licence would ensure that the proposed activity will not impact on the quality of air and water. The RD includes significant requirements to monitor air, water (both surface and groundwater), odour etc. The third matter is an issue for the Planning authority.

d). Submission No 8 from the Eastern Regional Fisheries Board

- (i). Surface water discharges
- (ii). Migration measures to protect surface water quality during the construction stage of the facility
- (iii). Monitoring surface water and watercourses to ensure protection of the river Dee a valuable salmonid fisheries.

Comment:

No leachate or runoff will be generated from the composting process and therefore no discharge to surface water. Rain falling on the hardstanding area and the facility roof will constitute clean runoff. One soak pit will be constructed adjacent to the facility. The RD requires that surface water and groundwater quality will be monitored on an annual basis.

e). Submission No 9 from Mr P. Britain who raised the following concerns:

- (i). Pollution of the river Dee
- (ii). Made an application to the DEHLG to have the surroundings declared a NHA

Comment:

Refer to comment No 8 above. Regarding the second concern this is a matter for the DEHLG.

f). Submission No 10, 11, 12 & 13 from North Eastern Health Board who requested that the Agency seek further information on a number of issues, for example, provision of potable drinking water for staff, details of compostable sewage and office waste water facility, air/ dust monitoring, control of pests etc.

Comment:

Further information was sought from the applicant on the issues raised by the NE Health Board and the Agency were satisfied with the reply. I wish to point out that all of the queries raised by the Health Board and which are relevant to the licensing process are dealt with via conditions in the RD.

g). Submission No 14 from the Eastern regional Fisheries Board

They are concerned that the issue of storage and final use of the mature compost from the site is not dealt with in the EIS.

Comment:

This aspect has been dealt with adequately in the application.

h). Submissions No 15, 16, 17, 18 and 19 from Mr Donohue (2 submissions), Mr Monaghan (2) and Mr Proudfoot

They are concerned re health effects on their families, what the company proposes to do with the compost, control of odours, spillages that might cause contamination, pollution of the river, value of their property; what happens if the plant or process breaks down

Comment:

All of the concerns are addressed in the application and will be controlled by measures outlined in the RD. Regarding the potential de-valuation of the property, this is a land-use issue, and therefore is a matter for the planning authority.

11. Charges

The RD requires that the applicant shall pay an annual contribution of €7,626.00 (Condition 12.1).

12. Recommendation

I recommend that a licence be granted subject to the conditions set out in the attached RD and for the reasons as drafted.

In making the recommendation for a waste licence I have taken into account all information submitted as part of the application including the Environmental Impact Statement.

I am satisfied, on the basis of the information available, that the waste activity, or activities, licensed hereunder will comply with the requirements of Section 40(4) of the Waste Management Acts, 1996-2003.

Signed

Inspectors name

Procedural Note

In the event that no objections are received to the Proposed Decision on the application, a licence will be granted in accordance with Section 43(1) of the Waste Management Acts 1996-2003.

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