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Reg. No: 75-2(W0075-02)
Waterford Co.Co. Tranmore Waste Disposal Site
Article 14(2)(b)(ii) reply rec. 24 March 2006
Original



more file
recd 24 March 2006

Our Ref: MDR0349Lt0033
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Date: 24th March 2006

Mr Paddy Nolan
Programme Manager
Office of Licensing & Guidance,
Environmental Protection Agency,
PO Box 3000
Johnstown Castle Estate,
County Wexford.

Re: Tramore Landfill Waste Licence 75-1 - Article 12 Request for Additional Information

Dear Mr Nolan,

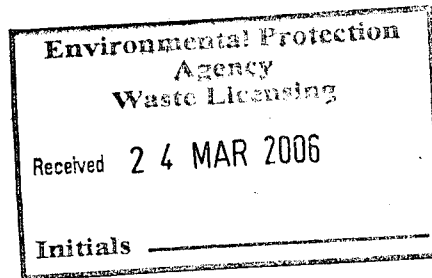
We refer to the above and the Agency's correspondence dated the 21st March 2005 and the 24th February 2006 and hereby provide on behalf of Waterford Co. Co. a report, which outlines the additional information in response to Article 12.

We trust this is in order, however please do not hesitate to contact the undersigned should you have any queries.

Yours sincerely,

Cathriona Cahill
For & on behalf of RPS Consulting Engineers

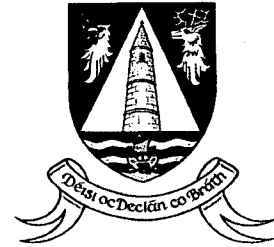
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CC/cc

Encl.

cc: Mr Paul Daly, Senior Engineer, Waterford County Council.
Mr Tom Longan, Facility Manager, Waterford County Council

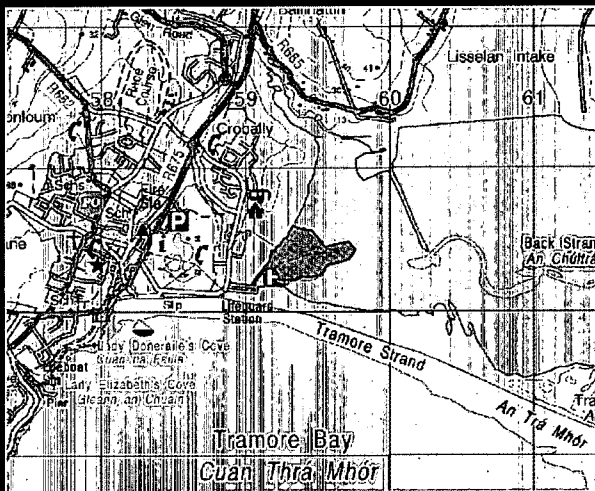


Waterford County Council
Comhairle Chontae Phortlairge

Environmental Protection
Agency
Waste Licensing

Received 24 MAR 2006

Initials _____



TRAMORE WASTE DISPOSAL FACILITY

REVIEW OF WASTE LICENCE 75-1

March 2006

RPS



Response to EPA Article 12 Request for Additional Information

DOCUMENT CONTROL SHEET

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Project Title	Tramore Landfill Design & Remediation					
Document Title	Response to EPA Article 12 Request for Additional Information					
Document No.	MDR0349Rp0007F01					
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Consulting Engineers

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BACKGROUND TO ARTICLE 12 REQUEST

Waterford County Council have been requested by the EPA (correspondence dated the 21st March 2004) to supply additional information under an Article 12 request of the Waste Licensing (Regulations) 2004, in respect of a review of Waste Licence No. 75-1 for the Tramore Waste Disposal Site in Tramore, Co. Waterford. The following report provides information to answer each individual question raised within the Article 12 request.

- 1) As required by Article 12(1)(f), specify all classes of activity concerned with the facility, in accordance with the Third and Fourth Schedule of the Waste Management Acts, 1996 and 2003. State the principal activity and provide a summary description of each class of activity applied for. Note that the use of compost as a soil conditioner is a waste recovery activity, covered under Class 10 of the fourth Schedule, and not a waste disposal activity under Class 6 of the Third Schedule.

RESPONSE TO QUESTION 1

The classes of activity relevant to the green waste composting facility are identified and described below. Note that the proposed facility is a recovery facility where green waste will be recycled into compost products. These classes of activity are supplementary to the classes of activity that have previously been specified for the general application of the landfill facility and civic amenity area.

Waste Management Acts 1996 to 2003			
THIRD SCHEDULE Waste Disposal Activities	Y/N	FOURTH SCHEDULE Waste Recovery Activities	Y/N
1. Deposit on, in or under land (including landfill).		1. Solvent reclamation or regeneration.	
2. Land treatment, including biodegradation of liquid or sludge discards in soils.		2. Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes).	P
3. Deep injection of the soil, including injection of pumpable discards into wells, salt domes or naturally occurring repositories.		3. Recycling or reclamation of metals and metal compounds.	
4. Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons.		4. Recycling or reclamation of other inorganic materials.	
5. Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment.		5. Regeneration of acids or bases.	
6. Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 5 or paragraphs 7 to 10 of this Schedule.		6. Recovery of components used for pollution abatement.	
7. Physico-chemical treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 5 or paragraphs 8 to 10 of this Schedule (including evaporation, drying and calcination).		7. Recovery of components from catalysts.	
8. Incineration on land or at sea.		8. Oil re-refining or other re-uses of oil.	
9. Permanent storage, including emplacement of containers in a mine.		9. Use of any waste principally as a fuel or other means to generate energy.	
10. Release of waste into a water body (including a seabed insertion).		10. The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system.	Y
11. Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.		11. Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.	Y
12. Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.		12. Exchange of waste for submission to any activity referred to in a preceding paragraph of this Schedule.	Y
13. Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.		13. Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.	Y

loaded into an auger mixer where the material is blended prior to being placed on the aerated slab. The auger mixer (brand name - Orgamix) is also operated using a PTO shaft on the back of a Zetor tractor. The chipper and the Orgamix machinery will not emit significant noise emissions. The main sources of noise during the chipping and blending process will be emitted from the Zetor tractor. Noise monitoring will be conducted on site and noise emission limits for Day dB(A) LAeq(30 minutes) - 55 and Night dB(A) LAeq(30 minutes) - 45 will not be exceeded.

- 4) Provide information for the purpose of enabling the Agency to make a determination in relation to the matters specified in paragraphs (a) to (g) of section 40(4) of the Act [Article 12 (1)(j)]

RESPONSE TO QUESTION 4

Compliance with the statutory requirements as set out in Section 40(4) of the Waste Management Act 1996-2003 in relation to the Tramore Composting Facility are given in the table below.

Article 40(4):	Note:
(a) Emissions shall not contravene standards or emission limit values	There will be no significant environmental emissions emitted from the facility. Environmental monitoring for dust, bioaerosols and noise will be carried out at the site to confirm that no statutory limits will be breached.
(b) Activity will not cause environmental pollution (bb) landfill – is not relevant	The facility has been designed to ensure there will be minimal environmental impact from operating this facility. This has been discussed in the Review of the Waste Licence and this report under the response to Question 6. Environmental monitoring at the site has been proposed in the response to Question 6 below. Monitoring reports will also be submitted regularly to the EPA.
(c) Application of Best Available Technology	<p>The technology chosen for this site is state of the art technology for green waste composting. The alternative would be to use simple windrow composting or anaerobic digestion. Windrow composting will not offer as much control over the process compared to the specially constructed aerated piles and biofilter system.</p> <p>Anaerobic digestion is not very conducive to green waste treatment and the required scale, cost and complexity of this system is not a feasible alternative for this facility.</p> <p>The use of the biofilter and constant supply of oxygen to the proposed system represents the best technology to ensure that the process runs efficiently and without significantly impacting on the environment.</p> <p>The composting process is continuously monitored and controlled by the use of a computerised system which monitors oxygen and temperature levels within the piles.</p> <p>Material that has not undergone full composting will be recycled back into the process to serve as a bulking material and as an inoculant, which will minimise material being sent off site for further recycling or disposal.</p>

Condition 3.8 (Weighbridge) & Condition 3.9 (Wheel Cleaning) of the current licence (75-1).

- b) *Provide details of the restoration of the landfill with reference to Condition 4.1 of the current licence (75-1)*

RESPONSE TO QUESTION 5

Conditions 3.7, 3.8 & 3.9

The Waste Inspection & Quarantine Area constructed in accordance with Condition 3.7, has recently been dismantled, as it was located on the waste body, which is to be capped in the coming months. It is proposed to construct a Waste Quarantine Area within the composting facility as shown on DG0301A01. Waste inspection will be conducted prior to tipping the green waste in the covered waste reception area. The weighbridge and wheel-wash (Conditions 3.8 & 3.9) are located in the reception area as shown on DG0301A01.

Condition 3.12

The 'Proposal for Final Capping & Landfill Gas Management' in accordance with Condition 3.2 was submitted to the Agency on the 4th October 2005. The Agency agreed the proposals for the installation of a gas extraction system and flare on the 24th October 2005 (ref.75-1/GEN18DS). It is expected that this project will go to Tender during April and construction works including the installation of gas wells and the supply of a gas flare which will commence in the Summer 2006. It is proposed that the gas extraction system will be installed in two phases to facilitate the capping of the site.

Condition 3.11

A report into the 'Saline Intrusion Investigation' at Tramore Landfill was submitted to the Agency on the 9th March 2006. The report assessed the relationship between the levels in the leachate boreholes (recorded every half hour during July to September 2005 by data loggers) and the tidal variation in the back strand. Results indicated that there was no apparent correlation between leachate levels at boreholes located in the centre and to the north of the landfill, however a clear correlation was apparent at wells located at the edge of the landfill and adjacent to the seashore. It recommended that the gas extraction system facilitate the installation of a leachate pumping system particularly in those wells located away from the edge of the landfill. In this regard, a proposal in accordance with Condition 3.2 will be submitted to the Agency in the coming weeks.

Condition 4.1

The 'Proposal for Final Capping & Landfill Gas Management' in accordance with Condition 3.2 was submitted to the Agency on the 4th October 2005. The Agency responded to the proposal on the 24th October 2005 (ref.75-1/GEN18DS) and requested additional information regarding the capping design, the final contours and the surface water drainage. Subsequently a meeting was held on the 16th December with the Licensee, RPS Consulting Engineers and the Agency to discuss these issues.

Additional information regarding the surface water drainage and capping design was submitted to the Agency on the 9th February 2006. The Agency also requested that a visual impact assessment of the final profile be undertaken and submitted to the Agency. A topographical survey of the site has now been completed and a report on the visual impact assessment of the final profile will be submitted to the Agency in the coming weeks.

Tenders have been received and assessed for the capping of the landfill and it is anticipated that a contract will be awarded during April with construction works starting in May 2006.

Surface Water / Groundwater Monitoring

All rainwater from the covered waste reception area will flow into a soak pit where it will naturally infiltrate through the ground. As this run-off will only consist of rain water no monitoring for groundwater is proposed.

All leachate produced on site will be directed to a leachate collection tank where it will be either (a) recirculated over the piles or transported off site for treatment. Therefore all run-off and leachate will be appropriately managed and will not impact on the environment. There are no rivers or streams close to the facility, however surface water is monitored at various points in accordance with the current Waste Licence (75-1).

Compost Quality Monitoring

The quality of the compost products produced at the site will be analysed on a monthly basis and according to the requirements set within the revised waste licence.

- 7) *State the quantities of leachate/liquid waste from the composting facility and arrangements for off-site treatment/disposal, including the destination [Article 12(1)(0)].*

RESPONSE TO QUESTION 7

Composting processes are moisture hungry processes due to the bio-drying effect of microbes working within piles to breakdown waste. Therefore, it is common practice at composting facilities to recirculate all leachate and run-off from the facility back over the windrows.

At the Tramore site all leachate and run-off will be collected from the concrete area and stored in a leachate collection tank. It will be periodically recirculated back over the piles as it is important to maintain optimum moisture conditions for microbes to flourish. There is also a contingency in place to allow for leachate to be moved off-site. If this situation arises, leachate initially will be sent to the wastewater treatment plant in Dungarvan for treatment. Once the wastewater treatment plant located in Tramore becomes operational (expected date end of 2007) the leachate will then be sent to this location for treatment.

Based on the mean monthly rainfall data for Rosslare the maximum leachate production from the composting facility will occur in November. In this month it is estimated that 54.3m³ of leachate is produced, giving a daily production rate of 1.8m³. In total it is estimated that 490m³ of leachate will be produced per annum. This estimation is highly conservative, as it does not take into account the high absorptive capacity of the maturing compost in the windrows where the leachate and run-off will be recirculated or the normal evaporation potential. Additionally run-off from the roof of enclosed reception area will be directed to a soak pit and not mixed with rain water/ leachate for storage in the tank.

The volume of the leachate storage tank on site is approximately 400m³, which will be sufficient for storing leachate/ run-off from the site.

- 8) *Describe the proposed measures for the closure, restoration, remediation or aftercare of the facility concerned, after the cessation of waste activities. Submit an updated restoration plan for the facility [Article 12(1)(q)].*

with the second Schedule of the Regulations. Note that you have provided a fee of €5,000 for landfill disposal only and have failed to provide the €6,000 fee for recovery of waste.

RESPONSE TO QUESTION 10

Following discussions with a Senior Waste Inspector (from the EPA) it is our understanding that recovery waste operations are now not subject to a waste recovery fee. This issue was raised again with a Programme Manager in the EPA, but no response has been received at the time of printing of this report.

11) *Provide details of any impacts on the existing waste licence conditions and justification for any proposed changes to the existing conditions (i.e. proposed changes, which are required in order to be consistent and facilitate the proposed activities at the facility).*

RESPONSE TO QUESTION 11

If this review is successful and the composting plant is licensed under a revised EPA Waste Licence for the entire facility, there will be implications for the existing Waste Licence in terms of the following:

- It should be noted that, as the acceptance of waste for the landfill ceased at the site in 2005, the total quantities of waste being accepted at the site, even allowing for the green waste composting will be drastically reduced.
- The Environmental Management System for the site will have to be updated to include the green waste composting facility.
- The Annual Environment Report (AER) will also include reporting on the green waste composting facility.
- The Safety Statement for the entire site will need to be updated and sent to the EPA.
- Bund and tank integrity assessment for the composting facility site will be submitted every three years.
- Additional monitoring and monitoring locations will be required at the site. Monitoring programmes and locations have been given in response to Question 6.
- All monitoring reports for the facility will be submitted to the EPA within ten days of obtaining results.
- This Restoration & Aftercare Plan will be revised to include for the restoration of the composting area

Within the Current Waste Licence (75-1) condition 11.3 requires that Council submit proposals for the contribution of the facility to the achievement of targets for the reduction of biodegradable waste sent to landfill, as specified in the EU Landfill Directive. Waterford County Council are determined to reduce the amount of biodegradable waste sent to landfill in County Waterford which is in line with EU, National and Regional Policy and the proposed green waste composting facility at Tramore will contribute to a reduction of up to 1,000 tonnes per annum of biodegradable waste from landfill.

APPENDIX A

**Monitoring Locations for the
Green Waste Composting Facility**

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