

FURTHER INFORMATION REQUEST ON WASTE LICENCE REVIEW AT DERRYCLURE LANDFILL - LICENCE REGISTER NO. W0029-04

OFFALY COUNTY COUNCIL

ORIGINAL

FEBRUARY 2010





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COPY

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REVISION CONTROL TABLE

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Rev Nr.	Descr	iption of Changes	Prepared by	Checked by	Approved by	Date
0	Issue to Client		COC/EBT	SM.	BG A	02/02/10
Client	Client: Offaly County Council its Petitor Pull Product Council					
Keywords: landfill, further information, waste licence review, environmental monitor		ronmental monitori	ing			

Abstract: This report was prepared following a further information request by the Environmental

Protection Agency (EPA). This report details the replies to the Article 14 compliance

requirements as requested by the EPA.

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1. INTRODUCTION

This report is being prepared in response to a request for information by the Environmental Protection Agency (EPA) on the 22 December 2009, under Article 14(2)(b)(ii) of the Waste Management (Licensing) Regulations. Fehily Timoney & Co. (FTC) had previously prepared and submitted a waste licence review application for the intensification of waste acceptance at Derryclure Landfill, from 40,000 tonnes to 100,000 tonnes of waste per annum. This requested information is additional to the waste licence review application and this response should be read in conjunction that report.

The objective of this report is to answer the queries raised by the EPA (See EPA Letter in Appendix 1). The approach taken is that each of the EPA requested information is outlined and answered in turn.

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2. INFROMATION REQUESTS AND REPLIES

2.1 Task 1: Submit an updated map showing all proposed environmental monitoring locations; this map shall also the indicate location of the leachate storage lagoon and the gas flare.

A revised map showing the proposed monitoring locations to be monitored under the waste licence review W0029-04 is provided in Appendix 2.

There are a number of existing monitoring sites that are no longer actively monitored (as seen in Section 2.4 of this report) and these monitoring locations have been removed from the proposed monitoring location map (CE07-286-007 Rev C).

The proposed additional landfill gas wells along the perimeter of the new cells have been renamed from the original version of this map (CE07-286-007 Rev B) for clarity and start at GP31 onwards.

This map updates CE07-286-007 Rev B of the waste licence review application, illustrating indicative monitoring locations. As the site of the develops, the location and establishment of the second points will be agreed with the Agency through the SEW process.

The locations of the locator

The locations of the leachate lagoon and the gas flare on site is outlined on this drawing (CE07-286-007 Rev C). The monitoring points for the leachate lagoon and the gas flare have also been added to this map revision.

2.2 Task 2: Provide details on the status of the proposed gas utilisation technology.

Pending the grant of the intensification of waste acceptance at the landfill facility, details of gas utilisation technology is on hold. Following a decision on this proposal, a feasibility study on the potential for gas utilisation at the facility will be undertaken and this will be submitted to the Agency.

2.3 Task 3: Please verify the total void space (m³) of the landfill over the entire life of the facility.

In the EIS submitted with the waste licence review application, it was estimated that there is approximately 954,000 tonnes of landfill capacity if the landfill is developed to the full extent allowable under the current waste licence.

In calculating the tonnage capacity of the landfill, a waste density of 0.8 tonnes/m³ was taken as an average figure. Waste densities can range between 0.6 - 1 tonnes/m³. Also, an estimated 10% of the void space in each cell will be taken up by daily cover. Therefore, this portion was subtracted from the total void space to estimate the total tonnage of waste that may be accepted at the landfill.

Therefore, the total void space at the landfill (waste and daily cover) is approximately 1,325,000 m³.

2.4 Task 4: Clarify the precise location of all monitoring points on-site, also indicate the type of monitoring location, i.e. leachate, surface water, etc., whether the sites are actively being monitored that applies to the individual monitoring location.

Table 2.1 overleaf lists all the existing monitoring points' on site and provides the GPS location for each point. A map (Figure 2.6 Rev A) of the existing monitoring locations is also provided in Appendix 3.

The monitoring media (i.e. leachate, surface water, groundwater, etc.) being sampled at each point are listed in Table 2.1. Monitoring points that are decommissioned are shaded grey in the table.

The following is the explanation for the decommissioned monitoring points:

- GP 11 replaced by GP 20
- GP 12 replaced by GP 30
- GP 16 no longer in existence under cap in original cell
- GP 23 located in the middle of a deep peat area – monitoring has been discontinued on H&S grounds due to the nature of the soils.
- SW 1 Following capping work, all flow from this flank is diverted through SW 9
- SW 13 as per SW1 above, all flow diverted through SW 8
- SW 14 as per GP 23 above
- LE 01 in place, however not sampled *
- LE 03 well blocked, no longer in use
- LE 04 in place, however not sampled *

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- LE 05 damaged and covered over during capping works
- LE 06 in place, however not sampled *
- * Note: It was agreed with the EPA that only one well was required to be monitored. LE 02 is monitored as this point.

The relevant schedule number from the current waste licence is also referenced in Table 2.1.

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Table 2.1: Existing Monitoring Points – location, type, actively monitored and relevant waste licence schedule

Environmental Media	Description under Schedule D of Licence (W0029-02) : Monitoring	Monitoring Point Name	GPS Co- ordinate		Actively Monitored (Yes/No)	Relevant Schedule under W0029-
			X	Υ	(103/100)	02
		GP-01	235577	220308	Yes	Schedule D
		GP-03	235359	220370	Yes	Schedule D
		GP-05	235306	220581	Yes	Schedule D
	Landfill gas station in/in proximity to waste	GP-08	235219	220739	Yes	Schedule D
		GP-09	235260	220480	Yes	Schedule D
		GP-13	235470	220465	Yes	Schedule D
		GP-14	235433	220330	Yes	Schedule D
		GP-15	235301	220308	Yes	Schedule D
		GP-11	235422	220131	No- Monitoring now undertaken at GP20	Schedule D
Landfill Gas	Perimeter Wells Forty Consent of conf	GP-12	. 235354	220780	No- Monitoring now undertaken at GP30	Schedule D
		GP-16 SOF	ور 235282	220490	No - no longer exists	_
		iGP 17	235283	220403	Yes	Schedule D
		GP-18	235408	220279	Yes	Schedule D
		1 227	235413	220277	Yes	Schedule D
		GP-20	235422	220137	Yes	Schedule D
		GP-23	235628	220286	No	Schedule D
		GP-25	235652	220527	Yes	Schedule D
		GP-26	235638	220681	Yes	Schedule D
		GP-27	235630	220771	Yes	Schedule D
		GP-28	235624	220820	Yes	Schedule D
		GP-29	235482	220790	Yes	Schedule D
		GP-30	235352	220775	Yes	Schedule D
	Flare	A-1	235323	220698	Yes	Schedule D
Dust	Dust Deposition Stations	DM-02			Yes - moved location towards the western site	
			235294	220327	boundary	Schedule D
		DM-04	235249	220742	Yes	Schedule D
		DM-05	235632	220796	Yes	Schedule D
		DM-07	235418	220137	Yes	Schedule D
Noise	Noise Stations	N2	235346	220284	Yes	Schedule D
		N3	235248	220746	Yes	Schedule D
		N6	235418	220132	Yes	Schedule D

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Environmental Media	Description under Schedule D of Licence (W0029-02) : Monitoring	Monitoring Point Name	GPS Co- ordinate		Actively Monitored (Yes/No)	Relevant Schedule under W0029-
	Monitoring	NO	X	Υ		02
		N8	235632	220803	Yes	Schedule D
		SW1	235261	220438	No	Schedule D
	5	SW7	235079	220270	Yes	Schedule D
	Discharge Locations	SW8 SW9	235163	220386	Yes	Schedule D
		SW9 SW10	235138	220468	Yes	-
Surface Water		30010	235108	220554	Yes	-
		SW11	234844	220568	Yes	Schedule D
	1 upstream location	SW12	235342	220825	Yes	Schedule D
		SW13	235281	220380	No	-
		SW14	235612	220361	No	-
		MW-01D	235574	220305	Yes	Schedule D
		MW01S	235574	220305	Yes	-
		MW-05S	235260	220484	Yes	-
		MW-05D	235261	220488	Yes	Schedule D
		MW-08S	235229	220742	Yes	Schedule D
		MW-08D	235225	220740	Yes	-
		MW-08B	235821	220739	Yes	Schedule D
Groundwater		BH-01S	235289	220263	Yes	Schedule D
		BH-01D	235289	220263	Yes	Schedule D
	3 other locations	BH-02Site	235173	220287	Yes	Schedule D
		BH-Q2D	235176	220288	Yes	Schedule D
		© BH-03D	235486	220783	Yes	Schedule D
		BH-03S	235486	220783	Yes	Schedule D
		BH-04S	235609	220638	Yes	Schedule D
	at of	BH-04D	235609	220638	Yes	Schedule D
	Consent of core	LE-01	235337	220415	No	Schedule D
		LE-02	235466	220405	Yes	Schedule D
		LE-03	235445	220567	No	Schedule D
		LE-04	235400	220582	No	Schedule D
Leachate		LE-05	235369	220501	No	Schedule D
		LE-06	235322	220629	No	Schedule D
	2 locations per lined cell	LE-07	235374	220691	Yes	Schedule D
	2 locations per linea cell	LE-08	235602	220691	Yes	Schedule D
	Leachate Storage Structure	LE-09	235307	220714	Yes	Schedule D

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2.5 Task 5 Provide a copy of all alterations/amendments agreed to the licence with the Office of Environmental Enforcement (OEE) since the date of grant of the Licence Reg. No. W0029-02.

There have been a number of alterations and amendments to the current licence that have been agreed with the Agency. These amendments are listed below and copies of the variation agreement letters are included in Appendix 4.

- Technical Amendment A initiated by the EPA on the 20th October 2005 to include conditions on Resource and Energy Efficiency, Accident Prevention and Emergency Response and Restoration and Aftercare.
- Removal of Condition 3.13.5 of the licence which involved the removal of dissolved methane for leachate prior to its removal offsite. As stated in Specified Engineering Works Report – No. 3 for the Installation of Leachate Management Infrastructure submitted to the Agency in March 2006, this would only be necessary if leachate was disposed of to a public sewer.

At a meeting in Quarter 3, 2006 between offely County Council, EPA (Michael Henry and Caoimhin Nolan) and our consultants Fehily Timoney & Co, it was agreed that there was no requirement for methane stripping based on the fact that the leachate was transported directly to Tullamore WWTP for treatment. This was also included in Council correspondence to the Agency dated 19 October 2006. A copy of this correspondence is included in Appendix 4.

For the present, and for the foreseeable future, leachate will be tankered off site directly to Tullamore Wastewater Treatment Plant.

 Amendment to Condition 3.12 Landfill Lining to allow the use of calcareous material in the leachate drainage layer within the landfill lining at Derryclure Landfill Extension. A copy of Agency correspondence in relation to this is included in Appendix 4. The following are extracts from the Council's submission to the EPA in relation to the Proposed Decision WL 29-03;

Condition 3.2.1 & Schedule B

The definition of 'Specified' Engineering Works (SEW)' contained in Schedule B and the requirements of condition 3.2.1 is onerous and does not allow the flexibility required to modify works at construction stage as and when on-site problems are encountered. This condition may therefore delay works to an unnecessary degree and result in unnecessary costs.

We request that this condition is amended to allow an appropriate degree of flexibility to vary construction details to reflect on-site construction difficulties.

Condition 4.2.

We respectively request that this is amended to read:-

"The final height of the facility, following allowable settlement of the final capping, shall be 94m OD Malin".

Condition 5.2.12 (10)

Fis not feasible to store on-site samples of waste for a period of up to two months.

We request that you amend/ omit this requirement.

Condition 12.1.1.

The annual contribution of €20,148.00 does not reflect the current economic constraints within which Local Authorities now operate in and in particular the universal decline in landfill income across both the public and private sectors.

We request a minimum of a 20% reduction in the annual fee until such time as the economy recovers.

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Appendix 1

Copy of EPA Letter for Request for Information

Copy of EPA Letter for Request





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Ceanncheathrú, Bosca Poist 3000 Eastát Chaisleán Bhaile Sheáin

David Hogan

Senior Engineer Environment

Offaly County Council

Aras an Chontae

Charleville Road

Tullamore

Co. Offaly

W0029-04/Art14(2)(b)(ii)BH

22 December 2009

Re: Notice in accordance with Article 14(2)(b)(ii) of the Waste Management (Licensing) Regulations

Dear Mr. Hogan,

I am to refer to the above referenced application for a waste licence relating to a facility at Derryclure, Tullamore, Co. Offaly. Having examined the documentation submitted, I am to advise that the Agency is of the view that the documentation does not comply with Article 12 of the Waste Management (Cicensing) Regulations.

You are therefore requested, in accordance with Article 14(2)(b)(ii) of the regulations, to take the steps and supply the information detailed below:

ARTICLE 12 COMPLIANCE REQUIREMENTS

- O Submit an updated map showing all proposed environmental monitoring locations; this map shall also indicate the location of the leachate storage lagoon and the gas flare.
- o Provide details on the status of the proposed gas utilisation technology.
- O Please verify the total void space (m³) of the landfill over the entire life of the facility.
- O Clarify the precise location of all monitoring points on-site, also indicate the type of monitoring location, i.e., leachate, surface water, etc., whether the sites are actively being monitored and the Schedule under W0029-02 that applies to the individual monitoring location.

Provide a copy of all alterations/amendments agreed to the licence with the Office of Environmental Enforcement (OEE) since the date of grant of licence Reg. No. W0029-02.

Please supply the information in the form of one signed original plus two copies in hardcopy format within five weeks of the date of this notice. In addition submit two copies in electronic searchable format on a CD-ROM to the Agency. The e-file should be saved as a 'pdf' file, read only status.

Please note that the application's register number is W0029-04. Please direct all correspondence in relation to this matter to the Licensing Unit, Office of Licensing & Guidance, Environmental Protection Agency, Headquarters, PO Box 3000, Johnstown Castle Estate, County Wexford quoting the register number.

Yours sincerely,

Inspector

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Appendix 2

Proposed Environmental Monitoring Location Map

.unitoring Location Map CF07-286-007_Rev C

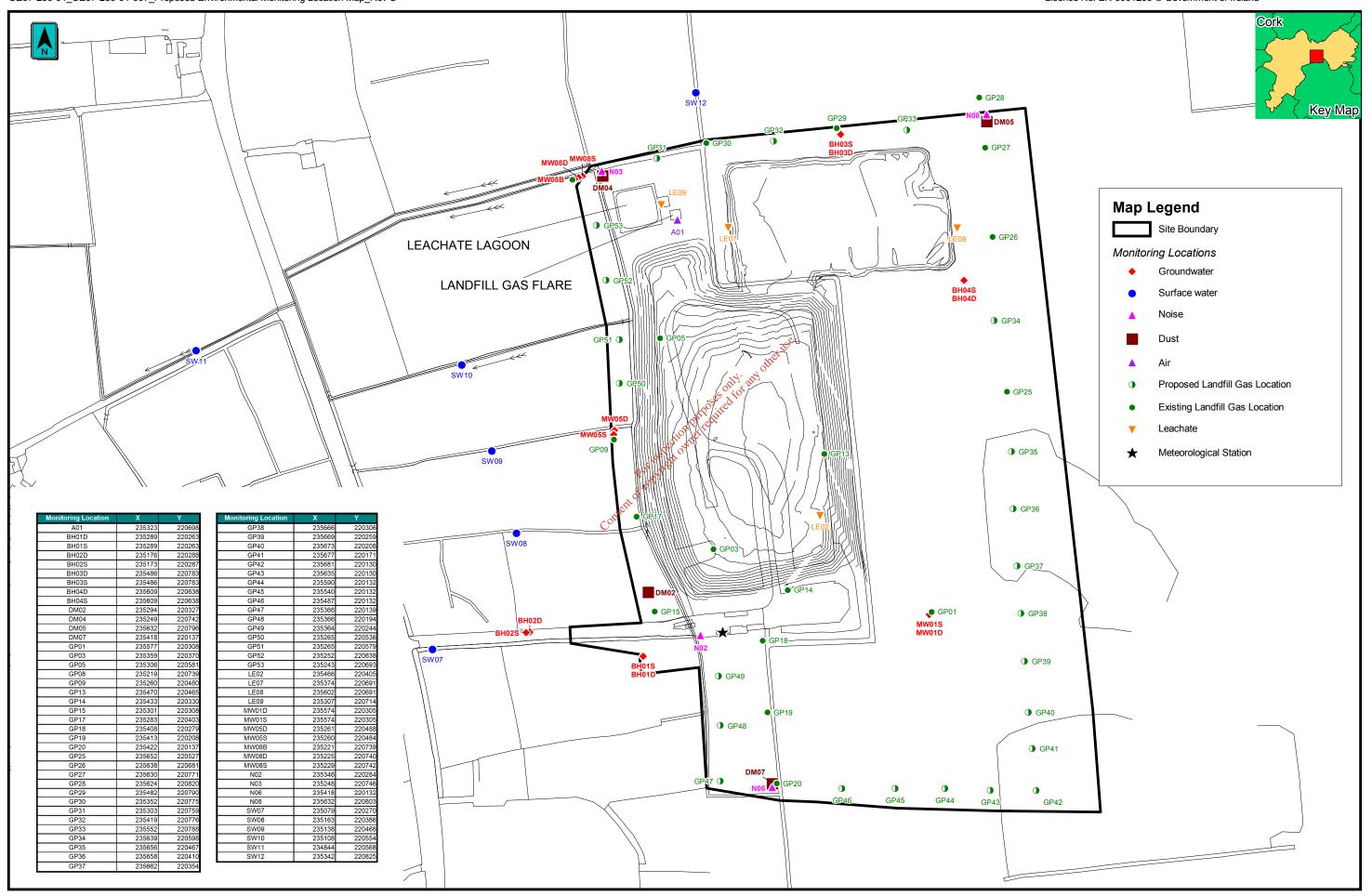








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Appendix 3

Existing Environmental Monitoring Location Map Figure 2.6 Rev B





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Appendix 4

Copy of Alterations/Amendments to the licence that Ot For inspection burder equired for any c have been agreed with the Office of Environmental **Enforcement (OEE)**











Headquarters
P.O. Box 3000
Johnstown Castle Estate
County Wexford
Ireland

AMENDMENT A

TO

WASTE LICENCE

Licence Register Number:	29-2				
Licensee:	Offaly County Council				
Location of Facility:	Derryclure Landfill, Derryclure, Tullamore, County Offaly.				

Reason for the Amendment of Conditions

The Environmental Protection Agency has examined the terms of Waste Licence Reg. No. 29-2 as required by the provisions of Section 76(3)(a) of the Waste Management Acts 1996 to 2003, and determined that the licence can be brought into conformity with the provisions and requirements of Council Directive 96/61/EC by the exercise of the powers conferred by Section 76(4) of the Waste Management Acts 1996 to 2003.

The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of Waste Licence Reg. No. 29-2 granted on the 23/07/2003, as well as any amendments noted herein, any emissions from the activity will comply with and not contravene any of the requirements of Section 40(4) of the Waste Management Acts 1996 to 2003.

Amendment of Conditions

In pursuance of the powers conferred on it by Section 76(4) of the Waste Management Acts 1996 to 2003, the Agency amends Waste Licence Reg. No. 29-2, granted to Offaly County Council, for a facility located at Derryclure, Tullamore. Co. Offaly.

This amendment is limited to the following conditions of Waste Licence Reg. No. 29-2.

R

Amendments

Resource Use and Energy Efficiency

- 2.5 Resource Use and Energy Efficiency
 - 2.5.1 The licensee shall carry out an audit of the energy efficiency of the site within one year of the date of grant of this amendment. The audit shall:-
 - (i) identify all opportunities for energy use reduction and efficiency;
 - (ii) be carried out in accordance with the guidance published by the Agency "Guidance Note on Energy Efficiency Auditing"; and
 - (iii) be repeated at intervals as required by the Agency.

The recommendations of the audit will be incorporated into the Schedule of Environmental Objectives and Targets under Condition 2.3.2.1 above.

- 2.5.2 The licensee shall identify opportunities for reduction in the quantity of water used on site including recycling and reuse initiatives, wherever possible. Reductions in water usage shall be incorporated into the Schedule of Environmental Objectives and Targets.
- 2.5.3 The licensee shall undertake an assessment of the efficiency of use of raw materials in all processes, having particular regard to the reduction in waste generated. The assessment should take account of best international practice for this type of activity. Where improvements are identified, these shall be incorporated into the Schedule of Environmental Objectives and Targets.

To be inserted after Condition 2.4 of the existing licence.

Reason: To provide for the efficient use of resources and energy in all site operations.

Accident Prevention and Emergency Response

- 9.5 The licensee shall, within twelve months of date of this amendment, ensure that a documented Accident Prevention Policy is in place, which will address the hazards on-site, particularly in relation to the prevention of accidents with a possible impact on the environment. This procedure shall be reviewed annually and updated as necessary.
- 9.6 The Emergency Response Procedure shall be reviewed annually and updated as necessary.

To be inserted after Condition 9.4 of the existing licence.

Reason: To provide for the protection of the environment.

Restoration and Aftercare Plan

A final validation report to include a certificate of completion for the Restoration and Aftercare Plan, for all or part of the site as necessary, shall be submitted to the Agency within three months of execution of the plan. The discusse shall carry out such tests, investigations or submit certification, as requested by the Agency, to confirm that there is no continuing risk to the environment.

To be inserted after Condition \$7 of the existing licence.

Reason: To provide for the restoration of the facility.

These amendments should be read in conjunction with Waste Licence Reg. No. 29-2, granted on 23/07/2003.

Sealed by the seal of the Agency on this the 20th day of October 2005

PRESENT when the seal of the Agency

was/affixed hereto:

Padraic Larkin, Director/Authorised Person

Conducide Charma Utth Fhaile

feli: 057 7346800 - Fax: 057 9346868

Website: www.offalyia email: secretar@offalycocole

For the attention of Mr John Gibbons Environmental Protection agency John Moore Road Castlebar Co Mayo

Offaly County Council

Áras an Chontae, Charleville Road, Tullarnore, Co. Offaly,





Licence Register No: W0029-02 Date of Audit: 30/08/2006 Audit Reference No: (29-2) 06 AR02JG

Your ref: WL29-2(06)NONCJG.doc

19th October 2006

Re: Facility: Derryclure Landfill, Tullamore Co Offaly.

Dear Sir.

Outlined below is the response to the Physronmental Protection Agency's site audit of the 30th August 2006.

5.0 Audit Findings

5.1 Audit Non Compliance

Condition 3.13.5 states:

Within twelve months of the date of grant of his licence, the licensee shall provide appropriate infrastructure to allow for the removal of dissolved methane from the leachate prior to its removal off-site.

Methane stripping of the lechate prior to disposal.
 As the council are transporting the leachate to Tullamore Waste Water Treatment Plant by tanker for treatment there is no requirement for methane stripping. This was discussed and agreed at a previous meeting between the council and the Agency and we are now formally requesting a change in the licence condition.

2. Telemetry

Condition 3.19.1 states:

Within twelve months of the date of grant of this licence, a telemetry system shall be installed and maintained at the facility. All facility operations linked

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David Hoga

Derry dur

Office of Environmental Enforcement

Director of Environmental Services Offaly County Council Aras an Chontae Charleville Road Tullamore Co. Offaly Environmental Protection Agency Regional Inspectorate, John Moore Bood Costlebar, County Mayo, Irelandi An Ghrifomhairsacht um Chaomhnú Comhthaoil Clighreacht Réigiúnach, Bóthar Sheán de Mórdha Caishein an Sharraigh, Contae Mhaigh Eo, Éire

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Lo Call: 1890 33 55 99

6th April 2006

WL29-2(06)GEN21CN

Re. Proposed Leachate Drainage Layer at Derryclure Landfill

Dear Director,

I refer to your recent correspondence in relation to the proposed use of rounded stone in the leachate drainage layer of the lined cell being constructed at Derryclure Landfill (WL29-2). The Agency notes that the actual drainage stone being proposed for use has a higher calcium carbonate level than that recommended in the Agency's Landfill Site Design Manual, and based on the information provided, the Agency agrees to the use of this stone, subject to compliance with the Conditions of your waste licence.

Should you have any query regarding this communication, please quote the above reference and contact the undersigned at the EPA Regional Inspectorate, John Moore Road, Castlebar, Co. Mayo.

Yours sincerely,

Mr. Caoimhín Nolan, Inspector Office of Environmental Enforcement OF SERVICES ENVIRONMENT

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WL29-2(06)GEN21CN

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