

APPENDIX F
EPA CORRESPONDENCE
(RE. LANDFILL GAS FLARE)

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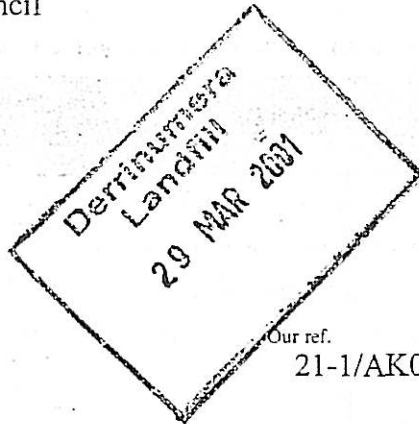


An Ghníomhaireacht um Chaomhnú Comhshaoil

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Date
28/03/01

Our ref.
21-1/AK07

Your ref.

Dear Secretary

I refer to the information which was received by the Agency on 16/02/01, 21/03/01 and 28/03/01 in relation to the proposed landfill gas flare at the Derrinumerá Landfill facility. The proposal for flaring of landfill gas (Condition 4.22.1) is agreed subject to the items listed below:

- The flare shall be of an enclosed type design.
- The location of the flare as shown on Drawing No. 002034/11/612 is to the satisfaction of the Agency.
- The minimum discharge height above ground should be 6.15m.
- Noise from the flare must be controlled such that it does not cause a nuisance.
- After installation noise monitoring must be carried out to demonstrate that the noise emission limits specified in Schedule G.1 are being achieved.
- The flare must be capable of achieving the following Emission Limit Values.

Emission Limit Values for Landfill Gas Flare at Derrinumerá Landfill (21-1)

Parameter	Emission Limit Value ^{Note 2}
Nitrogen oxides as (NO ₂)	150mg/m ³
CO	50mg/m ³
Particulates	130 mg/m ³
TA Luft Organics Class I ^{Note 1}	20 mg/m ³ (at mass flows > 0.1 kg/hr)
TA Luft Organics Class II ^{Note 1}	100 mg/m ³ (at mass flows > 2 kg/hr)
TA Luft Organics Class III ^{Note 1}	150 mg/m ³ (at mass flows > 3kg/hr)
Hydrogen Chloride	50 mg/m ³ (at mass flows > 0.3 kg/h)
Hydrogen Fluoride	5 mg/m ³ (at mass flows > 0.05 kg/h)
Hydrocarbons	10 mg/m ³

Note 1: In addition to the above individual limits, the sum of the concentrations of Class I, II and III shall not exceed the Class III limits.

Note 2: Dry gas referenced to 3% oxygen by volume.

- g) Monitoring of the flare must be carried out as specified in the Table below. A report on the monitoring carried out must be submitted to the Agency on an annual basis.

Landfill Gas Flare Monitoring Frequency and Technique

Parameter ^{Note 1}	Frequency	Analysis ^{Note 2/3} Method / Technique ^{Note 2/3}
Inlet		
Methane (CH ₄) % v/v	Continuous ^{Note 4}	Infrared analyser/flame ionisation detector
Carbon dioxide (CO ₂) %v/v	Continuous ^{Note 4}	Infrared analyser
Oxygen (O ₂) %v/v	Continuous ^{Note 4}	Electrochemical Cell
Outlet		
Volumetric Flow rate	Biannually	Pitot Tube Method
SO ₂	Biannually	Flue gas analyser
NO _x	Biannually	Flue gas analyser
CO	Continuous	Flue gas analyser
Particulates	Annually	Isokinetic/Gravimetric
TA Luft Class I, II, III organics	Annually	Adsorption/Desorption /GC /GCMS ^(Note 5)
Hydrocarbons	Annually	Adsorption/Desorption /GC /GCFID ^(Note 5)
Hydrochloric acid	Annually	Impinger / Ion Chromatography
Hydrogen fluoride	Annually	Impinger / Ion Chromatography

Note 1: Monitoring locations to be installed and agreed prior to the commissioning of the enclosed Flare Unit

Note 2: All monitoring equipment used should be intrinsically safe.

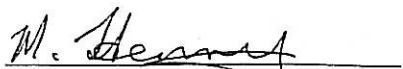
Note 3: Or other methods agreed in advance with the Agency.

Note 4: As specified in the information received by the Agency on 21/03/01.

Note 5: Test methods should be capable of detecting acetonitrile, dichloromethane, tetrachlorethylene and vinyl chloride as a minimum.

If you have any further queries, please contact Dr. Michael Henry at the Castlebar Regional Inspectorate.

Yours sincerely



Dr. Michael Henry
Environmental Management and Planning

cc. Mr. Joe Beirne, Co. Engineer; Mr. Kevin Cooke, Landfill Manager