

MEMO

TO: Board of Directors **FROM:** Ted Nealon
CC: **DATE:** 8 December 1999
SUBJECT : Ballyguyroe Landfill Site - Technical Committee Report on Objections to Proposed Decision - Reg. No. 2-1

Application details

Event	Issue Date(s)	Reminder(s)	Response Date(s)
Application received	30/4/97		
Article 14(2)(b)(i)			
Article 14 (2) (b) (ii)	17/10/97		3/4/98
Article 14 (2) (a)	30/4/98		
Article 16	16/6/98, 14/10/98		18/8/98, 28/10/98, 10/11/98, 31/3/99
Proposed decision	14/9/99		
Objections received	8/10/99, 11/10/99		
Article 25(1) - Circulation of Objections	21/10/99		
Article 25(2) - Submissions on Objections	15/11/99, 17/11/99		

The inspector for this application is Dr. Duncan Laurence.

Objections received

Objection by Applicant One
Objection by third party/parties One
Submission in relation to Objections Two

The applicant, Cork County Council, and the Kildorrery Anti-Dump Group stated grounds for objection in respect of the proposed decision on Ballyguyroe Landfill Site. Both parties subsequently made submissions on each others objections. A Technical Committee was established to consider the objection.

The Technical Committee

The Technical Committee comprised of:

Ted Nealon (Chairperson)
Eamonn Merriman, Inspector
Margaret Keegan, Inspector

This is the Technical Committee's report. The objection is dealt with below.

Objection 1 ; Cork County Council

Ground 1: Objection to Conditions 4.18.1(a).

Cork County Council state that due to the size and remaining lifetime of the landfill, it may be uneconomical to utilise landfill gas for energy production. They request that Condition 4.18.1(a) be amended to require the submission of a feasibility study rather than a proposal on the utilisation of landfill gas as an energy source.

A submission by the Kildorrery Anti-Dump Group (KADG) on this objection agrees with the councils proposed amendment to this condition.

Technical Committee's Evaluation

The part of the condition objected to is as follows:

4.18. Landfill Gas Management:

4.18.1. Within six months of the date of grant of this licence, a proposal shall be submitted to the Agency for:

**(a) active collection and utilisation of landfill gas as an energy resource;
and**

(b) the active collection and flaring of landfill gas.

The TC notes that landfill gas utilisation is site specific and depends on various factors. The Technical committee (TC) note that a proposal on the utilisation of landfill gas for energy production can argue the case that energy production is not a viable option at this facility. Therefore the TC proposes no change to Condition 4.18.1(a). However, the TC notes that this condition, as drafted in the Proposed Decision, simply requires that a proposal be submitted to the Agency. The TC considers that any proposal submitted under this condition should be for the agreement of the Agency.

Recommendation

Condition 4.18.1: Within six months of the date of grant of this licence, a feasibility proposal shall be submitted to the Agency for its agreement for:

Condition 4.18.1(a): No change.

Condition 4.18.1(b): No change.

Objection 2 ; Kildorrery Anti-Dump Group

This objection is set out in a covering letter from the chairperson of the KADG and two attached reports by Mr. David Ball and by Patrick Johnston Associates Ltd.

Ground 1: Objection to Conditions 2, 4, 5, 8, 9 and 10.

The objector states the submission/commencement periods required for certain reports/actions, as required through the condition objected to, are too long. They suggest that the timescales for specified conditions be compressed because (a) the facility is near completion; (b) there is a need for the control of the activities governed by these conditions as soon as possible; (c) much of the information required by these conditions should already be available to the licensee; and, (d) the Agency may take some time to agree proposals submitted by the licensee, and therefore proposals should be submitted as soon as possible in order to expedite

resolution, including consultation, prior to the cessation of landfilling. The objector suggests new, shorter submission periods for specified conditions
A submission by Cork County Council on this objection rejects any alteration to the timescales within the Proposed Decision on the basis that a reduction in these time limits, as suggested by the KADG, would be unachievable due to the workload involved.

Technical Committee's Evaluation

The specific conditions objected to are listed in the Recommendations table below. The TC notes that the preparation of many of these proposals may involve consultants, a factor which would mitigate against shorter submission periods. The TC notes that the proposals required by these conditions are site specific. Other than Conditions 4.7 and 5.4, the TC considers the submission periods detailed in this objection to be reasonable. The TC suggests that Condition 4.7, which requires the submission of a proposal for a waste quarantine area within six months, be altered to a three month submission period. The TC notes that the waste acceptance documentation required by Condition 5.4 has been agreed by the Agency (subject to any proposal yet to be submitted to the Agency for its agreement), and that consequently the licensee should employ this documentation within one month of the grant of licence.

Recommendations

<p><i>Condition 2.1.1:</i> No change</p> <p><i>Condition 2.2.1:</i> No change</p> <p><i>Condition 2.3.1:</i> No change</p> <p><i>Condition 2.4.1:</i> No change</p> <p><i>Condition 2.5.1:</i> No change</p> <p><i>Condition 2.6.:</i> No change</p> <p><i>Condition 2.7.1</i> No change</p> <p><i>Condition 4.7:</i> Replace this condition with the following wording: <i>Within three months of the date of grant of this licence a proposal shall be submitted to the Agency for its agreement in respect of the location and specification of a waste quarantine area. The design of this area shall be such that it is constructed of concrete, is located at a suitable distance from Cell 7 and the site offices, is arranged in a manner which ensures that contaminated water will not cause pollution of the surrounding ground or any watercourse and shall be suitable for the temporary storage of wastes delivered at the facility which are rejected under Condition 5 as being unauthorised by this licence.</i></p> <p><i>Condition 4.13.1:</i> No change</p> <p><i>Condition 5.4:</i> Replace this condition with the following wording: <i>The checking of types of wastes accepted at the facility shall be carried out in accordance with the procedures set out in items 1 to 4 and 6 of Attachment F.2 "Waste Acceptance Procedures" of the application and dated April 29 1997. Within one month of the date of grant of this licence and subject to any proposal submitted to the Agency for agreement, all wastes accepted at the facility shall be documented in accordance with the forms entitled "Loads Information Form", "Load Inspection" and "Waste Transfer Document" as contained in the attachment referred to in this condition.</i></p> <p><i>Condition 8.2:</i> No change</p> <p><i>Condition 9.2:</i> No change</p> <p><i>Condition 9.4:</i> No change</p> <p><i>Condition 9.6:</i> No change</p> <p><i>Condition 10.1:</i> No change</p>

Ground 2: Objection to Schedule H

The objector claims that the provision in Schedule H for the acceptance of industrial waste (3,900 tonnes per annum) is in conflict with a 1997 High Court agreement between the objector and Cork County Council. This agreement restricts the council to accepting “domestic waste and dry commercial and inert waste” only. The objector claims that the Agency should not licence the acceptance of a waste type that the Council is legally bound to refuse.

Technical Committee’s Evaluation

The part of the schedule objected to is highlighted below:

Schedule H: Waste Types

Subject to any requirements of this licence, the following waste types and quantities may be accepted at the facility:

WASTE TYPE	MAXIMUM QUANTITY PER ANNUM (tonnes)
<i>Household</i>	18,000
<i>Commercial</i>	8,100
Industrial	3,900

The TC agree that the High Court agreement should be adhered to at this facility.

Recommendation

Schedule H: Replace the word “Industrial” by “**Inert**”.

Ground 3: Objection to Condition 9.4.

The objector contends that the requirement in Condition 9.4 to monitor all private wells within 500 metres of the facility is inadequate because: (a) the condition will in practice only require the monitoring of one upgradient well; (b) cells 1 to 6 are unlined and leachate levels have historically been periodically higher than groundwater levels; (c) the overburden contains zones of higher permeability; and, (d) leachate has inevitably leaked out of the landfill. The KADG request that the monitoring of potable supplies be extended to embrace eight wells (PW1 to PW8), a recently constructed borehole in Mr. J. Geary’s land and one group water scheme so as to generate confidence in the consumers of these water supplies.

Technical Committee’s Evaluation

The condition objected to is as follows:

9.4 Within three months of the date of grant of this licence, a proposal for the inclusion of all private wells within 500m of the facility in the monitoring programme set out in Schedule F shall be submitted to the Agency for its agreement.

The TC notes that PW8 is upgradient of the landfill and Condition 9.4 may require its monitoring as it is approximately 500 metres from the landfill. The TC note that PW1 to PW7 range from 1 to 2.5 kilometres from the facility. The TC note that based on the direction of groundwater flow, PW1 and PW2 should not be effected by leachate leakage to groundwater in any event. The TC note that if Mr. Geary’s well is within 500 metres of the landfill, then Condition 9.4 would require its monitoring. The TC note that the group water scheme is already the subject of monitoring by way of High Court agreement and that it is located three kilometres downgradient of the facility.

The TC note that leachate levels within the waste will be controlled by Condition 4.17.3. The TC note that Schedule F, Table F.4.3 requires the monitoring of seven on-site downgradient boreholes, with a recommendation by the TC for an additional borehole (see Ground 7a). The TC note that both the overburden and bedrock are monitored by these boreholes. The TC note that Table F.4.6 requires monthly monitoring of these boreholes. The TC consider that this monitoring regime coupled with Condition 9.4, will allow for adequate warning of leachate migration so that appropriate action can be taken.

Recommendation

Condition 9.4: No change.

Ground 4: Objection to Conditions 4.17.3.

The objector points out that Cell 6 is not lined and that the wording of this condition should be corrected.

Technical Committee's Evaluation

The part of the condition objected to is as follows:

4.17.3 Leachate levels in Cells 6 and 7 shall not exceed a level of 1.0m over the HDPE liner at any point. In respect of Cells 1 to 5 and unless otherwise instructed by the Agency, a leachate level in excess of three metres above the depth of base of the cell at any monitoring point shall be regarded as an incident and notified to the Agency in the manner set out in Condition 3.

The TC notes that Cell 6 is not lined.

Recommendation

Condition 4.17.3: Leachate levels shall not exceed a level of 1.0 metres above (a) the HDPE liner in Cell 7, and (b) the invert levels in Cell 6 as shown in Drawing D.3.1 (entitled "Plan & Sections as Constructed"; revision of 1 April 1997). In respect of Cells 1 to 5 and unless otherwise instructed by the Agency, a leachate level in excess of three metres above the depth of base of the cell at any monitoring point shall be regarded as an incident and notified to the Agency in the manner set out in Condition 3

Ground 5a: Objection to Schedule G, Table G.4

The KADG state the emission limit value of 240 mg/l for suspended solids discharges from the facility to the Farahy River is inadequate for the protection of this salmonid river. They also state that it is contrary to the High Court agreement (see Ground 2) which required Cork County Council to provide for "effective silt control". They state that the maximum acceptable level of suspended solids in the Farahy River is 25 mg/l. They argue that this standard will be breached if the flow in the Farahy River is less than ten times that of the discharge. They consider that a dilution factor of ten should therefore be incorporated into Table G.4.

Technical Committee's Evaluation

The TC notes that the ELV in Table G.4 applies to two discharges to the Farahy River, namely from the North Drain and the South Stream. The TC notes that the European Communities (Quality of Salmonid Waters) Regulations 1988 (SI 293 of 1988) sets a

standard of 25 mg/l for suspended solids in salmonid waters in designated rivers. The TC notes that while the Farahy River is not designated as a salmonid river under these Regulations, it is desirable to achieve this target in order to protect fisheries. The standard relates to an average concentration over a 12 month period. The parent directive also allows for derogations in the case of exceptional weather. In the context of this facility, exceptional weather might be interpreted as heavy rainfall which results in flood conditions in catchment watercourses. Therefore the TC proposes that the ELV set forth in Table G.4 be augmented by a requirement to only discharge when there are more than ten dilutions available in the receiving waters. The TC notes that, based on catchment area, the Farahy River should normally have a flow approximately ten times greater than the discharge. The TC note that Condition 7.2 allows for a six month period before compliance with the ELV set forth in Table G.4 is required (see also Ground 10). The TC notes that while Condition 4.19.2 facilitates the submission of proposals to achieve this ELV, a proposal should be formally be requested. This proposal will, in addition to treatment of the surface water discharges, also address the control and monitoring mechanisms required by the recommendation below. The TC also acknowledges that modification may be subsequently required to the treatment of suspended solids, and that Schedule E would require the submission of any such proposal by the licensee for the Agency's agreement.

Recommendation

Schedule G, Table G.4: Add the following line above Table G.4:
Time of Emission: Only when 10 dilutions of effluent are available in the receiving waters.
Condition 4.19: The following is to be appended to this condition:
4.19.4 Within two months of the date of grant of this licence, the licensee shall submit a proposal to the Agency for its agreement on the achievement of the emission limits and controls set forth in Schedule G, Table G.4 within the time frame specified in Condition 7.2.

Ground 5b: Objection to Condition 9.7.

The KADG state that three months is excessively long for the submission of the proposal and grid references required through Condition 9.7.

Technical Committee's Evaluation

The part of the condition objected to is as follows:

- 9.7 ***Within three months of the date of grant of this licence:***
- (a) *a proposal shall be submitted to the Agency for its agreement on the location and construction of permanent sampling points for discharges from the North Drain and South Stream at a location between the silt ponds and the River Farahy; and*
 - (b) *the 12-digit grid references indicated as "to be submitted" in Schedule F of this licence shall be submitted.*

The TC notes that Table G.4 of Schedule G requires the monitoring of the two discharges to the Farahy River at existing sampling stations, namely SS2 and SS5, until new locations are provided as agreed through Condition 9.7. The TC considers three months for the preparation and submission of this proposal reasonable.

Recommendation

Condition 9.7: No Change.

Ground 6: Objection to Condition 9.9.

The KADG state that borehole 96-7s, which is critical to the monitoring of any leachate leakage from Cell 5, appears not to have been operable since shortly after construction. The KADG state Condition 9.9 should be amended to include a provision for the reinstatement of borehole 96-7s within one month of the grant of this licence, and that this borehole should contain a slotted screen adjacent to a sandy layer which commences at 17.5 metres below ground level.

In a submission by Cork County Council on this objection, the council acknowledge that this borehole was damaged by construction works in 1997. They state that this borehole will be reinstated in accordance with Table F.4.3 of Schedule F.

Technical Committee's Evaluation

The TC notes that Table F.4.3 of Schedule F requires a groundwater monitoring borehole at the 96-7s station. The TC notes that groundwater monitoring systems are listed as Specified Engineering Works in Schedule E. Thus the design and location of screened intervals within the borehole will have to be agreed by the Agency prior to installation. The TC notes that Condition 9.8 requires environmental monitoring, as required by this licence, to commence within two months of the grant of this licence. The TC considers that a two month period for the submission of a borehole proposal for agreement by the Agency and the subsequent installation of this borehole is reasonable.

Recommendation

<i>Condition 9.9: No Change</i>

Ground 7a: Objection to Table F.4.3.

The KADG argue that leachate levels have not been controlled adequately in the past. They suggest that, other than Cell 7 which is lined, all the cells are situated on overburden of variable permeability. They assert that the extent of leachate migration has not been determined despite their submission of a report which they claim demonstrated a plume of higher electrical conductivity stretching downgradient from the landfill towards the Farahy River.

The KADG state that the Proposed Determination has insufficient groundwater monitoring boreholes to assess the historical problem of leachate leakage and to gain early warnings of any further leachate leaks. They suggest the inclusion of the artesian Borehole No. 5 as well as the insertion of six new boreholes.

In a submission by Cork County Council on this objection, the council state that the groundwater monitoring locations in the Proposed Determination are more than sufficient to monitor the landfill.

Technical Committee's Evaluation

The TC note that BH5 should be included in the groundwater monitoring programme. As discussed in Ground 3, the TC consider that the array of 7 downgradient boreholes specified in Table F.4.3, along with the addition of BH5, is sufficient to provide warning of leachate leakage.

Recommendation

Table F.4.3: Add the following line to Table F.4.3:

BH5	166374	114357
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Ground 7b: Objection to lack of groundwater emission limit values in Schedule G.
Based on the history and design of this landfill, the KADG object to the lack of groundwater emission limit values (ELV's). They suggest that ELV's be equivalent to the monitoring results obtained in the upgradient monitoring borehole, 98-1.

Technical Committee's Evaluation

The TC note that Conditions 7.1 and 7.4 prohibit emissions of environmental significance.

Recommendation

Schedule G: No Change

Ground 8: Objection to Conditions 8.1 and 11.2.1.

Besides the matters of timescales for the submission of reports by the licensee (see Ground 1), Mr. Patrick Johnston, on behalf of the KADG, notes that Condition 11.2.1 contains a reference to a Decommissioning and Aftercare Plan which is required by Condition 8.1. He notes that Condition 8.1 does not refer to a Decommissioning and Aftercare Plan or to a timescale for submission of such a plan, which in any event should be within two months of the date of grant of this licence.

Technical Committee's Evaluation

The TC notes that Condition 11.2.1 should have referred to Condition 8.2 rather than Condition 8.1. The TC also considers that Condition 8.2 should be rewritten both to include a specific reference to a Restoration and Aftercare Plan, and to allow for revision of this plan. The TC considers that a two period would be insufficient for the formulation of a Restoration and Aftercare Plan. The TC feels that a nine month period is appropriate.

Recommendation

Condition 8.1: No change

Condition 11.2.1: Substitute "Condition 8.2" for "Condition 8.1".

In addition the TC recommends the following:

Condition 8.2: Replace the wording as follows;

Within nine months of the date of grant of this licence a Restoration and Aftercare Plan shall be submitted to the Agency for its agreement. The Plan shall contain proposals for the establishment of the nature reserve referred to in Attachment G.1 of the application and dated April 29 1997. It shall also set out proposals for the planting of trees and shrubs, seeding of other areas, details of leachate and gas management/monitoring points (including methods of access), site security measures and any other matter notified in writing by the Agency. The plan shall include a timetable for the commencement and completion of such works, which shall ensure that the commencement of the landscaping of Cells 1 to 4 shall start within eighteen months of the date of grant of this licence. The licensee shall update this plan when required to do so in writing by the Agency and submit any proposed amendments to the Agency for its agreement.

Ground 10: Objection to Condition 7.2.

Mr. Patrick Johnston, on behalf of the KADG, argues that the suspended solids ELV for emissions from the North Drain and the South Stream to the Farahy River should

apply from the date of grant of this licence on the grounds that the licensee has had considerable time to improve its control of these discharges, and that there are no excuses for non-compliance at this stage of the operation.

Technical Committee's Evaluation

The part of the condition objected to is as follows:

7.2 Within six months of the date of grant of this licence, the suspended solids discharges from the North Drain and South Stream shall not exceed the emission limit value referred to in Schedule G.

The TC note that an agreed silt trap is located on the South Stream prior to the discharge, though it may be altered with the consent of the Agency(Condition 4.19.2). The TC note that the applicant, in section H.4.2 of further information supplied to the Agency on 18th August 1998, intended to install a silt trap on the North Drain that autumn. Condition 4.19.3 seeks the as-built drawing and specifications for this trap within three months of the date of grant of this licence. The TC notes that Schedule E lists Surface Water Management Works as Specified Engineering Works. The TC note that monitoring returns for these discharges have indicated that the suspended solids ELV set in Table G.4 is periodically being exceeded at present. The TC consider that a delay in implementing this ELV for six months is necessary for the site operator to make a proposal to meet this ELV and implement it upon agreement by the Agency as recommended in Ground 5.a.

Recommendation

<i>Condition 7.2: No change</i>

Date:

Signed: _____
Ted Nealon, Chairperson Technical Committee