This report has been cleared by the Programme Manager for submission to ~~Board~~/OCLR Director
Signed: [signature] Dated: 21/01/08

Approved [signature] 24/1/08

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

LICENSING UNIT MEMORANDUM

TO:	DR PADRAIC LARKIN, DIRECTOR
C.C:	Mr Paddy Nolan, Programme Manager
FROM:	Ms Ewa Babiarczyk, Inspector
DATE:	21st January 2008
RE:	Technical Amendment to Licence Register Number W0049-02, held by Bord na Móna Energy Limited, Clonbullogue Ash Repository, Cloncreen Bog, Clonbullogue, Co. Offaly.

1. Introduction

Bord na Móna Energy Limited was granted a waste licence (Reg. No. W0049-01) on the 20th April 2000. The licence was amended on 28th October 2005. The licence was reviewed and a revised licence (Reg. No. W0049-02) was granted on the 2nd October 2006. The licence was granted for Class 3.1: '*Deposit on, in or under land (including landfill)*'.

Bord na Móna Energy Limited submitted a request to the Agency dated 10th September 2007 for a technical amendment to the licence. Further information relating to this request was received by the Agency on the 15th November 2007.

2. Technical Amendment

This Technical Amendment is set out in three parts.

Firstly, and the main purpose of this memorandum, is the applicant's request to amend details of the licence relating to *Schedule B2: Emissions to Water*, Note 2, specifically:

(a) The extension of the pH range from 6–9 to 6–10 at the discharge from the leachate lagoon to the West-East drain.

(b) Cessation of the requirement to allow emissions from the leachate lagoon only when 100 dilutions of effluent is available in the West-East drain.

In addition, and having regard to experiences to dates, this Technical Amendment takes the opportunity (Parts II and III) to rationalise and clarify other water and ambient monitoring requirements specified in the licence.

<u>PART I</u>

(a) The extension of the pH range from 6–9 to 6–10 at the discharge from the leachate lagoon to the West-East drain.

The leachate is a result of rain water falling on the peat-ash stored in the lagoon. The letter submitted to the Agency dated 10th September 2007, stated that in order to

empty the leachate lagoon, the licensee currently must ensure that the leachate pH is between 6 and 9.

The request to amend the pH range from 6–9 to 6–10 at the discharge from the leachate lagoon to the drain is sensible considering that at the point where the W-E drain enters the river (a further c.2 km downstream from the lagoon discharge), the pH values did not exceed 9, even though the pH in the lagoon was above 10 during the discharge events. Furthermore, the drain, which is man-made and which services the dewatering and silt-pond discharges from the operational Cloncreen bog, is naturally acidic so the leachate liquid with alkaline pH will be buffered and the impact of the proposed change would not be environmentally significant as evident by measurements of pH along the course of the drain to the Figile River. Also, the W-E drain is not a sensitive water body and is not used for domestic or agricultural supply purposes.

(b) Cessation of the requirement to allow emissions from the leachate lagoon only when 100 dilutions of effluent is available in the West-East drain.

The West-East drain, that services Cloncreen bog and enters the Figile River, is approximately 2 km long and about 2 m deep with steep machine cut sides.

The licensee has informed the Agency that the drain has never had the capacity for 100 dilutions of the effluent from the repository. The flow rates in the drain are normally between 10 l/s and 20 l/s and are entirely controlled by storm water run-off from the bog. The 100 dilutions is intended to protect the Figile River, however the requirement was attached to the landfill discharge to the drain which is perhaps not the most practical. Monitoring data produced by the operators indicate that there is a minimum of 100 dilutions of the landfill discharge component of the drain flow as it discharges to the Figile itself.

To reach the requirement of 100 dilutions of effluent in the field drain when the flow rate is 10-20 l/s, only a very small amount of the leachate liquid would have to be discharged from the lagoon. If the leachate liquid was to be diluted with specially provided water, the cost of such a task and the water itself would be very high. The drain is not a sensitive water body. It collects runoff water from the industrial bog harvest area. It stays dry for a lot of the year and there is no domestic or agricultural use of its water. The 95 percentile flow in the recipient Figile River is 350 l/s and the proposed maximum rate of discharge from the lagoon is 3.5 l/s – i.e. 100 dilutions available in ultimate receiving water. Therefore, the request to remove the 100 dilutions requirement in the field drain is reasonable.

PART II

In addition to (a) and (b) in Part I above, the Agency proposes a further amendment to *Schedule B.2* in order to rationalise the specified emission limit locations. The proposal is to remove the emission limit values at the bog storm water discharge points SWR-1 and SWR-2. These points are located upstream in the W-E drain from the place of discharge from the leachate lagoon to the drain. As the Ash Repository does not affect the surface water up the drain from that point, it is sensible to remove the ELV requirements for points SWR-1 and SWR-2 as the licensee cannot be liable for upstream water quality.

In conclusion *Schedule B.2: Emissions to Water* shall be amended so that the only emission reference point in this schedule is L-2, the pH range is extended to read 6-10 and the flow rate is equal to 3.5 l/s, as per the attached recommended Technical Amendment.

PART III

Other clarifications to monitoring schedules are included to reflect experiences and data yielded from the site over recent years. It is proposed to amend the existing licence in the following areas:

- *Condition 6: Control and Monitoring*

  As the leachate is kept in the lagoon and not in a tank, it is proposed to change the wording in the condition 6.1.4 of the licence. The word 'tank' should be replaced with 'lagoon'.

  Furthermore, the lagoon leachate is discharged directly to the West-East drain and not disposed of by tankering off-site in road tankers. This tanker disposal method has not been employed to date for this remote site. Therefore, it is proposed to remove the condition 6.1.5.

- *Schedule C: Control and Monitoring*

  It is proposed to remove the reference to the storm water discharge point SWR-1 in the *Schedule C.2.2: Monitoring of Emissions to Water* and leave only the monitoring of the leachate lagoon discharge in this emissions table. Point SWR-1 is located up the drain from the place of the discharge from the lagoon. As the Ash Repository does not affect the upstream water from the discharge point, it is sensible to remove the requirement to monitor SWR-1 as an emission. Furthermore, it is proposed to add 'flow' to the monitored parameters and remove the requirement to monitor the temperature and nitrate: the latter are not relevant in the case of this discharge.

  In addition, it is proposed to make changes to the *Schedule C.2.3: Monitoring of Storm Water Emission* that refers to the point SWR-2 located upstream in the drain from the place of the discharge from the lagoon. It is proposed to change the schedule title to 'Monitoring of West-East Drain' and specify the following monitoring points: SWR-1, SW4, SW8 and SW7 (current licensee operated environmental monitoring locations positioned along the W-E drain). Furthermore, it is proposed to add 'Suspended Solids' to the monitored parameters and remove the requirement to monitor temperature, nitrogen and conductivity.

  Finally, it is proposed to change the parameters in the section *'Receiving Water Monitoring'* of the *Schedule C.6: Ambient Monitoring*. The Section refers to the points SW5 and SW6 located up- and down-stream in the Figile River from the place of the discharge from the W-E drain to the river (location SW7). It is proposed to monitor for the same parameters as in the proposed Schedule C.2.3: Monitoring of West-East Drain.

3. OEE Consultation

The OEE was consulted in relation to the request for a technical amendment. The OEE had no objections to the request.

4. Compliance with Water Quality Standards

The proposed amendments do not compromise water quality in any designated surface water. The impact evaluation and specified emissions are compatible with the requirements of the Water Framework Directive.

5. Recommendation

I recommend that the licence amendment be approved as set out in the attached Recommended Technical Amendment. Such an amendment does not result in the relevant requirements of Section 83(5) of the EPA Acts, 1992 and 2003 ceasing to be satisfied.

Signed:

pp Stacey Barrett

Ewa Babiarczyk
Inspector
Office of Climate, Licensing & Resource Use