
MEMORANDUM

DATE: 25 November 1999
TO: Each Board Member
FROM: Marc Kierans
RE: Bord na Mona Energy Limited (Mountdillion Group) - Application for IPC licence

Application Details	
Applicant:	Bord na Mona Energy Limited, Boora, Leabeg, Tullamore, Co. Offaly.
Location of Activity :	Mountdillion Works, Lanesboro, Co. Longford.
Reg. No.:	504.
Class of activity:	1.4 - The extraction of peat in the course of business which involves an area exceeding 50 hectares.
License application received:	9 June 1999.
Notices under article 11(2)(b)(ii) issued:	6 July 1999.
Information under article 11(2)(b)(ii) received:	5 August 1999, 12 October 1999.
Site Visit :	19 November 1999.

Company Profile & Operational Information:

Bord na Mona Energy Limited applied to the Agency for a licence for activities which fall under Class 1.4 of the First Schedule of the EPA Act 1992. These activities are involved in the harvesting of peat for use as a fuel in nearby power station (ESB Lanesbrough), or alternatively used in horticultural peat production. This memo and associated proposed determination referred to herein relates to an assessment of the IPC application made by the Mountdillion Group.

The Mountdillion Group consists of a group of bogs; (Mountdillion and Cuil na gCon). These bogs lie either side of the Shannon, north of Lough Ree and are divided between counties Longford and Roscommon.

Peat harvesting at the Moundillion Group essentially involves milled peat and horticultural peat production. Prior to development work starting on the bogs, the area is surveyed and drained to suit the subsequent production system. Milled peat production consists of 4 steps (i) milling (ii) harrowing (iii) ridging and (iv) harvesting.

Production operations at the Moundillion Group are weather dependent and occur between May and September inclusive and can be of 15 hours duration per day, 7 days per week. The Moundillion Group currently employs 166 permanent and 110 seasonal workers.

Emissions to Atmosphere:

There are no significant point source emissions to atmosphere at the Moundillion Group. The principal fugitive emission to atmosphere at the Bord na Mona sites is that of dust. Due to the expansive nature of the sites and their similarity in terms of production activity, dust monitoring was undertaken using the BS 1747, Part 5, Dust Directional Gauge method at two sites (Allen & Boora Groups) and the results were considered to be representative of emissions occurring at all of the sites.

In general, the levels of dust recorded were low with elevated levels being only recorded adjacent to the tippler units where the peat is off-loaded from a railway wagon onto a conveyor belt for transportation. However, even though the applicant contends that *'particulate fallout will occur over a short distance and migration from the site will be negligible'* monitoring results taken during the harvesting season show considerable increases in dust deposition at certain perimeter sites. The proposed determination requires that the licensee will, under Condition 5.3, undertake an assessment to identify and (where applicable) monitor for dust deposition. The applicant has adopted codes of practice for dust control and this should further help to minimise fugitive dust emissions (also included as a project to be addressed under the EMP) from peat harvesting operations and these are included as Condition 5.5.

There are two boilers on site at the two works areas which burn 'brickeens' or reject peat briquettes. The boilers provide central heating for offices and works buildings on site and are only operational for the winter months. Their efficiency is required to be tested annually and reported in the AER.

Emissions to water:

The primary emissions to water associated with peat harvesting are discharges arising from the bog surface water drainage channels. Drainage of the bogs is necessary to reduce the moisture content of the bogs to an acceptable level (95% to 90%) and the drainage network also provides collection of surface water run-off. Drains are typically located every 15 metres (1.2m depth) and these field drains feed into piped outfalls. Prior to discharge to the ultimate receiving water body, they typically undergo treatment in silt settlement/sedimentation ponds. The primary function of the silt sedimentation ponds is the removal of suspended solids and, provided they are regularly and

effectively desludged, the silt ponds are a cost effective means of significantly reducing suspended solids in surface water discharges.

The applicant identified a total of 93 emissions from silt ponds within the Mountdillion Group and these emissions ultimately discharge to the following rivers: Camlin River, Fallan River, Feorish River, Leherly River, Shannon River and Royal Canal.

An examination of a select number of the discharges during the off-peak peat harvesting season suggested that the quality of these discharges (with the exception of elevated ammonia levels) was for the most part good. Typical characteristic ranges were: BOD 2-10 mg/l; TSS 1-150 mg/l; COD 10-250 mg/l; Nitrate (as N) 0.2-10 mg/l; Ammonical-N 0.2-10 mg/l and Orthophosphate <0.5 mg/l. Further information was provided by the applicant on the typical discharges during the harvesting season, which are as follows : BOD 2-10 mg/l; TSS 1-500 mg/l; COD 10-500 mg/l; Nitrate (as N) 0.2-10 mg/l; Ammonical-N 0.2-10 mg/l and Orthophosphate <0.5 mg/l.

The whole bog lies within the Upper Shannon Catchment (Hydrometric Region No. 26). The 1997 EPA biological survey assigns a Q3 rating to stations along the River Camlin it also shows the biological quality of the River Fallan to be Q 3-4. Stations along the River Feorish were assigned Q3 ratings (1996 survey) but it was noted that the '*river is impacted by peat bog workings*'.

It is considered that proper maintenance/control and upgrading of the current operational practices at the various peat harvesting sites within the Mountdillion Group should result in improvement in discharges to receiving waters. Condition 6.7 of the proposed determination requires the applicant to ensure that all silt sedimentation ponds are well maintained and desludged on a regular basis. The applicant is required under Condition 6.9 to prepare a program of upgrading for all operational sedimentation ponds and this should further help to minimise suspended solids discharges.

Surface water run-off from hardstanding areas at the works are typically channeled via a drainage network and to the adjacent peatlands and this ultimately discharges to the receiving water body. Machine washings arising from the washing of machines may in some cases drain via an interceptor tank and to the adjacent peatlands drainage system.

Waste Management:

The primary hazardous wastes which require disposal/recovery by hazardous waste contractors are waste oils, oil filters, still bottoms, batteries and anti-freeze, waste contractors have been specified in application.

Non-hazardous wastes generated include scrap metal and polythene which are recycled and domestic waste which is sent to landfill. Silt from the silt sedimentation ponds is spread on bog adjacent to the silt pond treatment units and the applicant has been asked under the EMP to look options for recovery. Screenings, which consists of bog wood and stones that are 'screened' out of the milled peat and ash from the on-site boilers are disposed of in on-site land fill.

Groundwater:

Because of large tracts of land involved, a generic desk based study of the geology/hydrogeology of the entire Moundillion Group area of interest was submitted as part of the application. In summary, this study assigned a tentative groundwater resource protection code to the general area of the Moundillion Group of Rf, LI and PI tending from east to west (moderate to poor aquifer generally unproductive except in local zones, moderate to low vulnerability to contamination). However, it concludes that the vulnerability rating may vary locally dependent on local/site specific ground conditions.

The primary risks to groundwater are from the storage and transfer of diesel and oil. Fuelling of the bog development and production machines takes place by one of three methods: (i) from permanently fixed fuel tanks (ii) mobile rail fuelling/service units or (iii) mobile tractor fuelling service units. The proposed determination requires the applicant to ensure that all permanent fuel oil storage tanks are bunded within 12 months of date of grant of the licence while the applicant is required to submit the results of integrity testing of all bunds as part of the AER. The issue of effective bunding and containment of the mobile fuelling units is included as an item to be addressed as part of the EMP.

In addition further to overground oil storage, there are two underground fuel storage tanks at the Moundillion works. These tanks are to be replaced with overground units as part of the site's EMP.

Domestic sewage which emanates from toilet facilities serving the individual works or tea centers receives primary treatment in a septic tank and the effluent from these units are discharged to ground. Septic tanks and interceptors are required to be inspected and cleaned as necessary.

Noise:

No noise complaints have been received by the Agency with respect to operations associated with this application. The most dominant noise source associated with peat harvesting is rail movement while noise emissions also arise from the milling/harvesting operations. A baseline noise survey was conducted at two of the Bord na Mona Groups (Allen & Boora) and these were stated as being representative of noise emissions from all of the sites. The studies concluded that noise levels resulting from activities at the sites are unlikely to have any significant impact on the local environment. This was confirmed by noise monitoring undertaken during the peat harvesting season, with the exception of the movement of peat at night by train and wagons (rakes) to the power station. These events occur at most, twice in one night. The noise condition in the proposed determination will limit noise emissions from activities at the sites to daytime 55 $L_{eq}dBA$ and night time 45 $L_{eq}dBA$ at noise sensitive locations.

Submissions:

There were no submissions received on the Moundillion group.

Recommendations:

That the Board approve the proposed determination as submitted.

Signed

Marc Kierans

Inspector