

BORD NA MÓNA

BORD NA MÓNA ENERGY LIMITED
Mountdillon Group, C/O Mountdillon Works,
Lanesboro,
Co Longford, Ireland

Annual Environmental Report

March 2004



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1.0 Introduction

1.1 I.P.C. Licence No. 504

1.2 Name and Location of Site

Name Bord na Mona Energy Limited

Full Address Mountdillon Group
C/o Mountdillon Works
Lanesboro
Co Longford

Telephone No. 043 21117 Fax No 043 21259

National Grid Reference No. E204720 N268880

1.3 Brief Description of Activities

Mountdillon group of bogs is situated in Counties Longford Roscommon, and Westmeath.

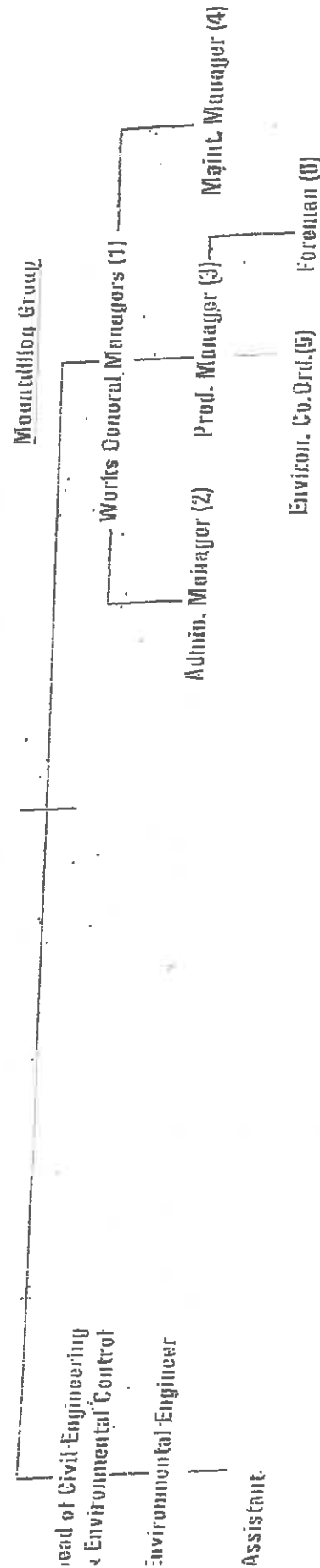
This group of bogs drain into the upper Shannon Catchment. Gross working hectares for Mountdillon is 4,950 and it is a completely milled peat operation.

Our sole customer is the E.S.B. Mountdillon is divided into 10 working areas namely Lough Bannow, Derryadd, Derryarogue, Knappoge, Begnagh, Clooneeny, Derrycolumb, Derryshannoge, Cloontuskert, Cloonshannagh, Derrymoylin, Mt/Dillon, Derrycashel, and Eddera. Cuil na gCun and Milkernagh

Bord na Mona Energy Limited

Environmental Responsibilities

Chief Executive



1. Overall Environmental Responsibility
2. Records and Complaints Register
3. All Production related issues (silt, dust, noise, waste, code of practice)
4. Machine maintenance, stores, workshops, yards, waste
5. Monitoring maintenance records
6. Silt settlement pond maintenance, codes of practice, peat loading, tea centres

1.4 Environmental Management of the Company

1.5 Environmental Policy



BORD NA MÓNA ENERGY LIMITED Environmental Policy Statement

Bord Na Mona Energy Limited is a commercial semi-state body with responsibility to develop Ireland's peat resources in the national interest.

Bord Na Mona Energy Limited is committed to gather and make available information on all aspects of its environmental impact and to help improve understanding among the public generally of its role and of the importance of Irish peatlands.

Bord Na Mona Energy Limited recognises the importance of peatland conservation.

Bord Na Mona Energy Limited will leave behind all areas it owns as either an economically or socially integrated resource of high environmental value.

Bord Na Mona Energy Limited seeks to conduct all aspects of its business in an environmentally sensitive manner.

Bord Na Mona Energy Limited will establish an environmental management system specifically addressing the following impacts:

- Discharges to water
- Emissions to atmosphere
- Waste disposal
- Use of natural resources
- Noise, vibration, odour, dust and visual effects
- Natural environmental and eco-system

The environmental management system will be monitored, maintained and continually improved.

A system of regular environmental audits will be put in place.

Bord Na Mona Energy Limited will continue research and development(R&D) into all aspects of its environmental impact

This statement is published and is available at all locations within the section and its contents are brought to the attention of all employees.

2.0 Summary Information

2.1 Emissions to Water Summary

2.1.1 Silt Pond Emissions

Monitoring and sampling from agreed discharge points are carried out quarterly in the form of grab samples. Samples were taken each quarter from each of the agreed outlets in accordance with the regular sampling programme. The results of the analyses of these samples are presented below in Tables 1A – 1G.

Bord na Mona
Group : Mt/dillon
IPC Licence No.:
504

Emissions to water summary

TABLE 1A

Silt Pond No: BH 64 SW No. SW 55 Reporting Period (Jan-Dec 2003) Quarterly Monitoring					
Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	Emission Limit Value (mg/l)
pH units	8.0	6.8	No flow	7.5	~
Flow (L/sec)	397	0.35		158	~
Suspended Solids (mg/l)	<5	48		<5	35mg/l
Total Solids (mg/l)	290	110		260	~
Total Phosphorus (mg/l)	0.07	0.26		<0.05	~
Ammonia (mg/l)	0.8	0.5		<0.06	~
Colour (Pt Co units)	111	332		112	~
COD (mg/l)	47	183		61	~

Bord na Mona**Group :****IPC Licence No.:** 504**Emissions to water summary****TABLE 1B**

Silt Pond No: CY 70 SW No. SW61 Reporting Period (Jan-Dec 2003) Quarterly Monitoring					
Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	Emission Limit Value (mg/l)
pH units	7.1	7.2	No flow	7.7	~
Flow (L/sec)	55.6	22		No flow	~
Suspended Solids (mg/l)	11	10		22	35mg/l
Total Solids (mg/l)	242	138		268	~
Total Phosphorus (mg/l)	0.33	0.10		0.05	~
Ammonia (mg/l)	1.1	0.7		0.15	~
Colour (Pt Co units)	259	300		128	~
COD (mg/l)	108	95		88	~

Bord na Mona**Group :Mt/dillon****IPC Licence No.:** 504**Emissions to water summary****TABLE 1C**

Silt Pond No: CA 38 SW No. SW 29 Reporting Period (Jan-Dec 2003) Quarterly Monitoring					
Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	Emission Limit Value (mg/l)
pH units	7.2	7.8	No flow	7.6	~
Flow (L/sec)	375	141.3		159	~
Suspended Solids (mg/l)	87	<5		28	35mg/l
Total Solids (mg/l)	226	368		302	~
Total Phosphorus (mg/l)	0.12	<0.05		<0.05	~
Ammonia (mg/l)	1.3	<0.2		0.22	~
Colour (Pt Co units)	246	147		147	~
COD (mg/l)	64	62		104	~

**Bord na Mona
Group :Mt/dillon
IPC Licence No.:**

504

Emissions to water summary

TABLE 1D

Silt Pond No: CA 43 SW No. SW 34 Reporting Period (Jan-Dec 2003) Quarterly Monitoring					
Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	Emission Limit Value (mg/l)
pH units	7.4	7.6	7.4	7.2	~
Flow (L/sec)	381	106	0.35	357	~
Suspended Solids (mg/l)	<5	<5	10	18	35mg/l
Total Solids (mg/l)	232	270	250	188	~
Total Phosphorus (mg/l)	0.12	<0.05	0.06	0.07	~
Ammonia (mg/l)	1.1	<0.2	1.83	0.19	~
Colour (Pt Co units)	123	194	158	147	~
COD (mg/l)	53	61	87	85	~

**Bord na Mona
Group :Mt/dillon
IPC Licence No.:**

504

Emissions to water summary

TABLE 1E

Silt Pond No: CH 7 SW No. SW 6 Reporting Period (Jan-Dec 2003) Quarterly Monitoring					
Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	Emission Limit Value (mg/l)
pH units	7.4	6.9	6.7	6.9	~
Flow (L/sec)	No flow	No flow	4.7	39.7	~
Suspended Solids (mg/l)	35	11	<5	29	35mg/l
Total Solids (mg/l)	218	106	238	186	~
Total Phosphorus (mg/l)	0.12	0.05	0.05	0.05	~
Ammonia (mg/l)	0.8	0.3	0.39	0.48	~
Colour (Pt Co units)	191	266	313	169	~
COD (mg/l)	126	83	99	105	~

**Bord na Mona
Group :Mt/dillon**

IPC Licence No.: 504

Emissions to water summary

TABLE 1F

Silt Pond No: DR 48 SW No. SW 39 Reporting Period (Jan-Dec 2003) Quarterly Monitoring					
Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	Emission Limit Value (mg/l)
pH units	7.8	7.4	7.9	7.3	~
Flow (L/sec)	18.6	No flow	106	424	~
Suspended Solids (mg/l)	10	<5	5	10	35mg/l
Total Solids (mg/l)	296	268	264	210	~
Total Phosphorus (mg/l)	0.05	0.12	0.2	<0.05	~
Ammonia (mg/l)	0.8	0.6	0.86	0.36	~
Colour (Pt Co units)	145	136	62	163	~
COD (mg/l)	58	60	37	96	~

**Bord na Mona
Group :Mt/dillon**

IPC Licence No.: 504

Emissions to water summary

TABLE 1G

Silt Pond No: GN 30 SW No. SW 23 Reporting Period (Jan-Dec 2003) Quarterly Monitoring					
Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	Emission Limit Value (mg/l)
pH units	7.0	7.5	No flow	7.1	~
Flow (L/sec)	198	No flow	No flow	47.7	~
Suspended Solids (mg/l)	30	<5	No flow	<5	35mg/l
Total Solids (mg/l)	170	130	No flow	156	~
Total Phosphorus (mg/l)	0.13	0.05	No flow	<0.05	~
Ammonia (mg/l)	<0.2	<0.2	No flow	0.25	~
Colour (Pt Co units)	197	207	No flow	173	~
COD (mg/l)	85	67	No flow	78	~

2.1.2 Yard Discharges

		Reporting Period: January -- December 2003												
		COD (mg/l)												
	Surface Water Emission pt	January	February	March	April	May	June	July	August	September	October	November	December	Emission Limit Value
	SWE-1 w/shop	72	No run off	56	No run off	20	73	38	72	38	No run off	54	32	N/A
	SWE-2 w/shop	62	No run off	43	No run off	12	25	43	28	<10	No run off	12	30	"
	SWE-1 yard	29	No run off	48	No run off	55	44	68	No run off	No run off	No run off	No run off	85	"
	SWE-2 yard	24		32		102	94	No run off	No run off	No run off	No run off	91	No run off	"
	SWE-1 p/stat *	No run off	No run off	No run off	No run off	No run off	No run off	No run off	No run off	No run off	No run off	No run off	No run off	"
	SWE-1 (Cuil na Gcun)	39	No run off	58	No run off	47	48	No run off	44	52	No run off	11	55	"

All of the yard run-off in the Mountdillon Group have oil interceptors installed at the works. Condition 9.1.8 calls for all surface water discharges to be fitted with an oil-interceptor within 12 mths of the date of licence. Results of which are included in the monthly monitoring programme, and reported on quarterly

* No run off due to refueling area totally roofed

2.1.3

Composite Sampler Report

The Composite Sampler has been operational since May 2001. It has been visited on a weekly basis since, and the samples have been removed and returned to Bord na Mona's Laboratory in accordance to sampling protocol. On the few occasions samples have not been recorded it has been due to one of the following : 1. No Flow 2. Power failure 3. Pond frozen. The Composite sampler has been relocated to Lough Bannow bog silt pond no.LW4 (SW76) IN June 2003 and the agency notified

The following are the parameters to be monitored .

Parameter	Monitoring Frequency	Location of analysis
pH (pH units)	Weekly	Laboratory
Flow (l/s)	Daily	On-site
Suspended Solids (mg/l)	Daily	Laboratory
Total Solids (mg/l)	Daily	Laboratory
Total Phosphorus as p (mg/l)	Weekly	Laboratory
Ammonia as N (mg/l)	Weekly	Laboratory
Colour (hazen units)	Weekly	Laboratory
COD (mg/l)	Weekly	Laboratory

See results in appendix 1

2.1.4 Non compliance

DATE	Non - Compliance	Cause	Corrective – Action
JAN 03 – DEC 03	No Non compliance		

2.2 Emissions to Air

2.2.1 Dust Monitoring Locations Programme

Emission Point	DATE	Parameter	Average Emission (mg/m ³ /day)	Emission Limit Value
DM-01	20/06/03 – 20/07/03	Dust	75	(350mg/m ³ /Day)
DM-02	20/06/03 – 20/07/03	Dust	109	(350mg/m ³ /Day)

Emission Point	DATE	Parameter	Average Emission (mg/m ³ /day)	Emission Limit Value
DM-01	21/07/03 – 21/08/03	Dust	111	(350mg/m ³ /Day)
DM-02	21/07/03 – 21/08/03	Dust	67	(350mg/m ³ /Day)

Emission Point	DATE	Parameter	Average Emission (mg/m ³ /day)	Emission Limit Value
DM-01	21/08/03 – 21/09/03	Dust	89	(350mg/m ³ /Day)
DM-02	21/08/03 – 21/09/03	Dust	22	(350mg/m ³ /Day)

2.2.2 Non compliance

DATE	Non - Compliance	Cause	Corrective – Action
Jun 03 – Sept 03	No Non compliance		

2.3 Waste Arisings**2.3.1 Hazardous Waste**

BORD NA MÓNA

BORD NA MÓNA ENERGY LIMITED

Waste Management Record (Hazardous)**Group :** BORD NA MÓNA **IPC Licence no. :** 504**Works :** MOUNTDILLON

WASTE DESCRIPTION	EWC CODE	TONNES	NAME OF CONTRACTOR	NAME OF PERSON ULTIMATELY RESPONSIBLE	DESTINATION	DATE
5 Bins oil filters	13601	0.78	ATLAS Oil Ltd	ATLAS Oil Ltd	Oil recycled	16/05/03
4 Bins oil filters	13.06.01	0.156	ATLAS Oil Ltd	ATLAS Oil Ltd	Oil recycled	15/07/03
2 Bins oil filters	13.06.01	0.312	ATLAS Oil Ltd	ATLAS Oil Ltd	Oil recycled	10/10/03
Waste oil	13.50.03	11.2	ATLAS Oil Ltd	ATLAS Oil Ltd	Oil recycled	28/02/03
Waste oil	13.50.03	3.5	ATLAS Oil Ltd	ATLAS Oil Ltd	Oil recycled	12/05/03
Waste oil	13.50.03	7.8	ATLAS Oil Ltd	ATLAS Oil Ltd	Oil recycled	26/08/03
General Waste	20.01.00	12.07	Mulleady,s		Ballinasloe Landfill	Jan-Dec 03
Gas Discharge Lamps	20.01.21	.053	Irish Lamp Recycling	Irish Lamp Recycling	Kildare	

WASTE DESCRIPTION	EWC CODE	TONNES	NAME OF CONTRACTOR	NAME OF PERSON ULTIMATELY RESPONSIBLE	DESTINATION	DATE
Lead Acid Batteries	16.06.01	3.84	Retumbatt Ltd.	Retumbatt Ltd.	HJ Enthoven ENG.	Jan-Dec 03

DETAILS OF ANY REJECTED CONSIGNMENTS

None to date

2.3.2 Non-Hazardous Waste



BORD NA MONA ENERGY LIMITED

Waste Management Record (NON Hazardous)

Group : BORD NA MONA **IPC Licence no. :** 504

Works : MOUNTDILLON

[illegible]

* = Tonnes dry weight

2.4 Energy and Water Consumption

2.4.1 Energy Consumption

Fuel	Megawatt / HRS	Volume cu/mts	Tonnes
JAN – Dec 2003			
Diesel	12,066	1232	
Petrol	36.66	4.054	
Electricity	1431		
Heating Oil	724	72.56	
Peat Biquettes	903		180.68

2.4.2

The only water used in Mountdillon is in teacentres, workshops and office's and is negligible

2.5 Environmental Incidents and Complaints

Environmental Complaints	Number of complaints
Complaints received	1
Complaints requiring corrective action	
Categories of complaint	
Odour	
Noise	
Water	
Air	1
Procedural	
Miscellaneous	

This has been reported to the E.P.A.

3.0 Management of the Activity

3.1 Environmental Management Programme Report 2003

Project	Environmental Management Programme Report 2003
Project 1. Reduction of fugitive dust emissions.	Training Training was provided for all personnel during 2002, and will be repeated in 2004. This will be in the form of a Cleaner Production Video, which is currently in production. This video deals with all dust related production issues and identifies good practice and codes of practice for peat production in Dust Sensitive Locations (DSL's). Headland Peat Headland peat is another potential source of dust generation from bog production traffic. This was address by the introduction of a pilot production unit, involving a dedicated unit for the collection of headland peat in the Boora Group of Bogs (IPC 500). This unit, made up of one same field harvester and 4/5 tractor and haku trailers units was in operation in the Boora group during 2003. Its main function was to gather all headland peat from the different units as often as possible, so as to reduce the volumes of loose peat dry peat that can cause dust problems. It has proved successful, and it is proposed to extend this programme in 2004. Hydraulic harrows Plans for the fabrication of hydraulically operated harrows were completed in 2003, and an order was placed for 8 harrows for the 2004 production season.

Project 2. Minimisation of Suspended Solids	Various projects are currently underway to address these issues. As already discussed the Cleaner Production Video examines bad production methods that can lead to waste peat entering the drainage system and subsequently the silt pond network. These can occur during bog maintenance, milling, harrowing, ridging, harvesting and loading. The video highlights these practices and demonstrates improvements that can be achieved through better driving and operation. Other projects such as the hydraulic harrows and the collection of the headland peat are also related to cleaner production which will have a positive impact on waste minimisation and the reduction of waste peat that can potentially find its way into drainage network.
Project 3. Effective spill/leak management of mobile fuelling tanks	The individual works must comment here, regarding re-fuelling locations, switching from stationary tanks to mobile, procedures employed, etc. that was carried out in 2003. Read what you said would be done in the EMP. If the project is finished, then say so.
Project 4. Re-use of silt pond waste	No work has been carried out on this project to-date. It was proposed to monitor a silt pond constructed on the headland at Giltown, in the Kilberry group of Bogs. Its close proximity to the production fields and stockpiles made it suitable for potentially reusing the waste peat excavated from the silt pond. This project will be examined again in 2004.
Project 5. Collection, storage and re-use of polythene.	Polythene for recycling has been collected from around the production areas, and stockpiled at a hard surface for baling/collection. A new mechanical method of stripping piles and rolling the polythene on a spool was developed and contracts for fabrication of 20 units externally, was agreed. This will produce a more compact and cleaner method of removing and transporting the polythene to a storage area. Polythene baled and loose has sent for recycling to various contractors and records of these are kept on file at the associated works. (see 2.3 Waste Arising). In total, approximately 1500 tonnes have been baled & collected, 700-800 tonnes of this recycled into pellets.

3.2 Environmental Management Programme Proposal for 2004

Project	Environmental Management Programme for 2004
Project 1. Reduction of fugitive dust emissions.	Continue with the completion of the Cleaner Production Video for 2004. A two day internal audit will be conducted on site and will include an assessment of dust protection measures in place at Dust Sensitive Locations Project works for 2004 includes: Hydraulic Harrows Eight Hydraulic Harrows have been fabricated in 2004, specifically for Dust Sensitive Locations. These hydraulic harrows will allow the spoons to be lifted when not on the production fields. This will assist in reducing dust generation by the following: 1. Less harrowing of headlands and passways, will reduce the suspension of dust particles 2. The headland peat will not be broken down and dried as much from harrowing, which will reduce the volumes that may become suspended. 3. It will also leave it a better condition for subsequent collection by the proposed headland peat units. It is proposed to have these 8 new hydraulic harrows in operation by the 2004 production season. There is a 5 year policy in BNM to fabricate an additional 40 hydraulic harrows, which will include some for the 2005 production season. The total cost of this proposed work is circa €650,000 over the 5 years and will represent 15% of the total no. of harrows in operation. Headland Peat Collection Following the success of the headland collection trials in Boora in 2003, a machine design for mass manufacture was agreed and tendered outside BNM for manufacture. These units are planned for mid production season in Derrygreagh, Mountdillon, Boora, Blackwater, Derryfadda & Littleton. In addition to these machines, 26 Tractor and Haku trailer units will be employed to transport the peat from the headland to the Haku piles, at an over all cost of €1.7 million. All of the above modifications/new methods of production will be assessed, throughout the production year, to measure their performance and identify any potential improvements. The EMP will be updated on a regular basis to reflect these assessments.

Project 2. Minimisation of Suspended Solids	Work on this project is also covered by the Cleaner Production Video. Once completed it will be presented as part of the 2004 training programme and will target all production staff in all of the IPC Licence areas. It will cover all areas of production and will identify cleaner production methods aimed at reducing the generation of waste peat. All of the projects for 2004, covered under Project 1, will also have a positive effect on the minimisation of suspended solids, as it will allow for the collection of more loose peat on the headlands that would previously have been unsuitable as fuel peat.
Project 3. Effective spill/leak management of mobile fuelling tanks	The individual works must comment here, regarding re-fuelling locations, switching from stationary tanks to mobile, procedures employed, etc that will be carried out in 2004. Read what you said would be done in the EMP. If the project is finished, then say so.
Project 4. Re-use of silt pond waste	A silt pond has been constructed, on the headland at Giltown Bog in the Kilberry Group of Bogs, where trials will be carried out to examine the potential for re-using the silt waste from the silt pond as the main product, or as a by-product. This project was due to commence in 2002, but failed to do so, due to the weather conditions during the 2002 production season.
Project 5. Collection, storage and re-use of polythene.	Collection of polythene is on-going. This is mainly the back-log of polythene. There are currently 20 of the new polythene strippers being manufactured and are currently being delivered. All of the strippers will be delivered by the end of April, and will be assigned to the different locations within BNM. An additional 3 - 4 will also be fabricated by the late 04, early 05' this will bring to 25 the no in operation. There are currently three potential contractors that could take the waste polythene for recycling. All involve shredding, washing and either baling or pelletising the polythene and BNM are currently assessing each contractor to assess their suitability, environmental compliance etc. Once the back-log has been recycled, and BNM have all of the strippers in place, the day to day recycling of the polythene removed each year will be more efficient.

3.2 Environmental Expenditure

Expenditure Related to the Operation of the Mountdillon IPC Licence During the Period JAN 2003 – DEC 2003	
Description	Cost Euros
Capital Costs	
Plant	
Labour	157,275
Materials	93,984
Overheads (ESB, Phones, Consumables)	6,000
External Environmental Consultancy	
EPA Fees	8,149
Monitoring Cost	5,182
Total	270,590

N.B. materials include monitoring costs

4.0 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

The surface water discharge monitoring location programme has been submitted and accepted by the Agency in July 2000. A Proposal to change three sampling locations will be submitted to the Agency in 2004. Monitoring will be carried out at these locations in the forthcoming year.

4.2 Bunding Programme

POWER STATION

Tanks have been Bunded at the power station and a service pit installed. A concrete spill area has been installed at the refuelling area. The work was carried out by an external Contractor namely, VERSTONE.

MOUNTDILLON YARD

New floor and sealing of existing bund carried out to required specifications by Verstone Construction.

MAIN WORKSHOP MOUNTDILLON

Complete new bunding for all Diesel, Oil, and Derv, Tanks at the main Workshop. Work has been carried out to required specifications. Pipework has also been completed. New Derv Oil Tank fitted inside Bunding, all connecting Pipework is complete. Underground Petrol Tank Tested to required specifications by Irish Truck and Tank precision Testing.

4.3 Boiler Combustion Efficiency

Boiler at the main workshop has been tested by Boiler Services Allenstown Broadway Co Wexford on 29/07/03 with efficiency levels of 88.6% to 87.4%

4.4 Resource Consumption Summary

There was a total of 854,334 tonnes of peat produced and 588,996 tonnes of peat sold to Lanesboro Power station during the reporting period Jan – Dec 03

4.5 Report on de – silting Programme

De-silting Report
JAN – Dec
2003

Area Cleaned	No of Cleanings			
	0	1	2	3
1			100%	
2			100%	
3			100%	
4		100%		
5			100%	
6			100%	
7			100%	
8			100%	
9			100%	
10			100%	

1 = Lough Bannow 2 = Derryadd 3 = D/aroge Cloonbony 4 = Knappoge 5 = Begnagh Clooneeny 6 = D/colum 7 = D/shannoge 8 = Cloontuskert Cloonadra 9 = Cloonshannagh D/moylin 10 = Mt/dillon D/cashel

AREA	O/FALL	NETT	STORAGE		% COVER	REQ COVERAGE			NAME
			RECQ	PROV.		SQ-MTS	POND	PONDS	
L/BANNOW	DERRYSHANOGUE DERRYOGHILL ARDS	137	1370	3517.5	1370.0	0	9 mts wide		LW 1
		420	4200	6492.0	4200.0	0			LW 2
		150	1500	1596.0	1500.0	0			LW 4
		150	1500	2574.0	1500.0	0			LW3+LW5
D/ADD	CORLEA 1 CORLEA 2 CLOONFORE CLOONFIUGH	100	1000	1350.0	1000.0	0			D.D 1.5@6
		400	4000	4829.0	4000.0	0			D.D 2
		188	1880	2295.0	1880.0	0			D.D 3+4
		489	4690	5182.0	4690.0	0			KE 2
D/AROGUE	KILLASHEE + WOODLAWN GRILLAGH 3 D/SHANOGUE	185	1850	2508.0	1850.0	0			DD4+DR1+10+6
		500	5000	6932.0	5000.0	0			DS 7+DD 7
		320	3200	3247.5	3200.0	0			D.R 4,3+8
		100	1000	1078.5	1000.0	0			DR.2+6
CLOONBONY	CASEYS RHATTIGANS DUGGAN'S	100	1000	3210.0	1000.0	0			D.R 1+6
		406	4060	6010.5	4060.0	0			C.B 1,2,4
		600	6000	6804.5	6000.0	0			CB 3
		65	650	612.0	612.0	25	3	1	KN 1
KNAPPOGE	CLOONDRA CLOONARD EXT COX'S	200	2000	1956.0	1956.0	29	3	1	KN 2
		62	620	675.0	620.0	0			KN 4
		200	2000	2169.0	2000.0	0			B.H 1
		80	800	1327.5	800.0	0			B.H 5+BH 4
BEGNAGH	RINN CLOONMORE FALLON	150	1500	1488.5	1488.5	21	2	1	BH 2,3,4.
		280	2800	4063.5	2800.0	0			C.N 1,2
		180	1800	3016.5	1800.0	0			C.N 3
		50	500	697.5	500.0	0			C.N 4,5
CLOONEENY	BALLYMIN 2 BALLYMIN 1 HEGARTYS	158	1580	3052.5	1580.0	0			C.N 6
		100	1000	1200.0	1000.0	0			C.N 7,8
		159	1590	2407.5	1590.0	0			C.N 10
		45	450	728.0	450.0	0			C.N 9
D/COLUMB DO DO	CLANCYS D/GOWNA D/MACAR + STH RIVER	40	400	754.5	400.0	0			D.C1
		80	800	957.0	800.0	0			D.C 2,3 +
		0			0.0	#DIV/0!			4,5+9
		625	6250	6312.0	6250.0	0			D.C 6,7,8
DERRYSHANOGUE	D/LOUGH TUREEN DERRYGLASH NEWPARK	350	3500	3570.0	3500.0	0			D.S 3
		150	1500	1620.0	1500.0	0			D.S 4
		69	690	684.0	684.0	0			D.S 1,2,5
		475	4750	7791.0	4750.0	4	0	1	D.S 6
	NEWPARK D/SHANOGUE	137	1370	1680.0	1370.0	0			D.S 7.
		147	1470	2047.5	1470.0	0			

Mountdillon Group, Annual Environmental Report 2003

4.6 Bog Development and Operational Programme

There are two bogs under development in the Mountdillon group of bogs namely Milkernagh and Cuil na gCun. Milkernagh bog produced 2100tonnes of milled peat in the year 2003,production will continue for the year 2004.This bog is covered by adequately sized silt ponds and are cleaned twice a year,these silt ponds are included in the quarterly grab sampling by the E.P.A.

Development will continue in Cuil na gCun bog for the year 2004.Adequately sized silt ponds have been constructed.

4.7 Bog rehabilitation progress report

There has been no Bog Rehabilitation carried out in the Midlands other than Oweninny and Boor,

4.7 Silt pond upgrade programme

The Silt pond up – grade programme was submitted 30 November 2000.

Stage 1 of Silt Pond upgrade programme (100% effluent treatment)

Stage 2 (100% design standard)

Where possible pipes have been installed in order to increase the control over the discharges

Stage 3 (Pipe and weir installation)

A programme of installing weirs or sluice gates has commenced. To date 11 weirs or sluice gates have been fitted on pond numbers DS3 (SW79) DS5 (SW83) DS6 (SW84) BH5 (SW55) DD1 (SW68) DC10 (SW93) in the mountdillon area, it is planned to install 12 more in the forthcoming year

5.0 Summary

Summary

With regard to environmental compliance at the Mountdillon Group of Bogs, there were no exceedences in the quarterly grab sampling of the ponds in the Surface Water Discharge Monitoring Location Programme. There were no non-compliances in relation to the Composite Sampler during the operation period of Jan to the end of December. Mountdillon received one complaint in relation to dust monitoring in Edera bog this has been reported to the Agency in sept 2003

The staff awareness through training and involvement in the operation of the licence has also improved immensely. A full programme of training and awareness has been conducted at the works and has targeted all personnel ie. office, workshop, transport and production.

Bord na Mona Energy Ltd are represented on the Management Group of both the Shannon River and Eastern River Basin District Management Systems, set up under the Water Framework Directive, and on the Steering Group of the Catchment Management on the River Barrow.

Bord na Mona Energy Ltd would like to take this opportunity to advise the Environmental Protection Agency of its continued commitment to improving its environmental performance by adopting cleaner production methods and improving its environmental protection measures.

Appendix (i)

Composite Sampler Results

January 2003	pH	COD mg/l	Ammonia as N mg/l	Parameters			Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l								
											Phosphorus mg/l	Solids mg/l		
1	6.7	91	0.2	0.05	13	136	276	14826460	1349.21	2.97	0.74	192.74	2016.40	
2	-	-	-	-	-	-	-	5624323						
3	-	-	-	-	-	-	-	2716130						
4	-	-	-	-	-	-	-	491623						
5	-	-	-	-	-	-	-	97005						
6	-	-	-	-	-	-	-	3249						
7	-	-	-	-	-	-	-	5953						
8	6.9	79	0.6	0.05	5	195	268	17040	1.35	0.01	0.00	0.09	3.32	
9	-	-	-	-	-	-	-	32118						
10	-	-	-	-	-	-	-	48997						
11	-	-	-	-	-	-	-	48997						
12	-	-	-	-	-	-	-	48997						
13	-	-	-	-	-	-	-	48997						
14	-	-	-	-	-	-	-	231252						
15	7.3	73	0.2	0.05	6	252	274	85313	0.68	0.00	0.00	0.06	2.36	
16	-	-	-	-	17	292	-	9364				0.21	3.66	
17	-	-	-	-	5	IS	-	12522				23.24		
18	-	-	-	-	5	148	-	4648085				13.85	409.95	
19	-	-	-	-	10	150	-	2769902				24.80	371.93	
20	-	-	-	-	6	138	-	2479522				58.41	1343.44	
21	-	-	-	-	6	152	-	9735092				38.12	965.64	
22	8.2	73	1.1	0.08	10	74	291	6352902				2.58	19.09	
23	-	-	-	-	6	IS	-	258032	18.84	0.28	0.02	0.07		
24	-	-	-	-	11	126	-	11935				0.39	4.48	
25	-	-	-	-	16	IS	-	35529				13.91		
26	-	-	-	-	IS	IS	-	869063						
27	-	-	-	-	IS	IS	-	53959						
28	-	-	-	-	5	112	-	11529						
29	7.3	78	0.8	0.05	5	108	318	840537						
30	-	-	-	-	30	132	-	8503479	663.27	6.80	0.43	42.52	918.38	
31	-	-	-	-	17	IS	-	5712440				171.37	754.04	
								905330				15.39		

Bord Na Mona Energy Ltd, Mountdillon Group, Lanesboro, Co Longford
Composite Sampler Results

Month	pH	COD mg/l	Ammonia N mg/l	Parameters	Total Phosphoru mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily total (litres)	COD Kg/Day	Ammonia Kg/Day	Daily Totals	Total Phosphoru Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
February 2003															
1	-	-	-	-	-	5	140	-	506556					2.53	70.92
2	-	-	-	-	-	11	IS	-	1623020					17.85	
3	-	-	-	-	-	10	170	-	5386081					53.86	915.63
4	-	-	-	-	-	IS	134	-	2063404						
5	7.3	86	1.1	0.09	17	150	218	-	537685	46.24	0.59	0.05	9.14		276.50
6	-	-	-	-	10	IS	-	-	159238					1.59	80.65
7	-	-	-	-	-	-	-	-	30829						
8	-	-	-	-	-	-	-	-	228641						
9	-	-	-	-	-	-	-	-	38938						
10	-	-	-	-	-	8	IS	-	1544679		0.00				
11	-	-	-	-	7	IS	-	-	487987				12.36		
12	-	-	-	-	-	-	-	-	7792				3.42		
13	-	-	-	-	-	-	-	-	277						
14	-	-	-	-	-	-	-	-	1049						
15	7.3	73	0.2	0.05	6	252	274	-	1011	0.07	0.00	0.00	0.01		0.25
16	-	-	-	-	-	-	-	-	946						
17	-	-	-	-	-	-	-	-	828						
18	-	-	-	-	-	-	-	-	972						
19	-	-	-	-	-	-	-	-	1088						
20	-	-	-	-	-	-	-	-	972						
21	-	-	-	-	-	-	-	-	798						
22	-	-	-	-	-	-	-	-	793						
23	-	-	-	-	-	-	-	-	706						
24	-	-	-	-	-	-	-	-	734						
25	-	-	-	-	-	-	-	-	688						
26	-	-	-	-	-	-	-	-	701						
27	6.1	95	1.2	0.17	5	114	425	-	681	0.06	0.00	0.00	0.00		0.08
28	-	-	-	-	-	-	-	-	5606118						
29	-	-	-	-	-	-	-	-							
30	-	-	-	-	-	-	-	-							
31	-	-	-	-	-	-	-	-							

Bord Na Mona Energy Ltd, Mountdillon Group, Lanesboro, Co Longford
Composite Sampler Results

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Suspended Solids mg/l	Colour Pt Co units	Flow Daily total (litres)	COD Kg/Day	Ammonia as N Kg/Day	Daily Totals		Total Solids Kg/Day
March 2003				Total Phosphorus mg/l								Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
1	-	-	-	-	-	21	230	-	12094510				253.98	2781.74
2	-	-	-	-	-	20	164	-	5896185				117.92	966.97
3	-	-	-	-	-	12	IS	-	165019				1.98	
4	-	-	-	-	-	8	126	-	2264150				18.11	285.28
5	7.3	83	1.1	0.07	-	10	134	293	1799105	149.33	1.98	0.13	17.99	241.08
6	-	-	-	-	-	-	-	-	204445					
7	-	-	-	-	-	-	-	-	1127950					
8	-	-	-	-	-	10	172	-	6116780				61.17	1052.09
9	-	-	-	-	-	18	180	-	5608923				100.96	1009.61
10	-	-	-	-	-	20	320	-	9682292				193.65	3098.33
11	-	-	-	-	-	50	224	-	6658649				332.93	1491.54
12	-	-	-	-	-	34	298	-	832576				28.31	248.11
13	7.5	90	1.1	0.1	-	20	IS	295	17794	1.60	0.02	0.00	0.36	
14	-	-	-	-	-	-	-	-	877					
15	-	-	-	-	-	-	-	-	774					
16	-	-	-	-	-	-	-	-	777					
17	-	-	-	-	-	-	-	-	765					
18	-	-	-	-	-	-	-	-	925					
19	-	-	-	-	-	-	-	-	787					
20	-	-	-	-	-	-	-	-	669					
21	-	-	-	-	-	-	-	-	898					
22	-	-	-	-	-	-	-	-	682					
23	-	-	-	-	-	-	-	-	727					
24	-	-	-	-	-	-	-	-	670					
25	-	-	-	-	-	-	-	-	598					
26	-	-	-	-	-	-	-	-	658					
27	-	-	-	-	-	-	-	-	619					
28	-	-	-	-	-	-	-	-	702					
29	-	-	-	-	-	-	-	-	641					
30	-	-	-	-	-	-	-	-	598					
31	-	-	-	-	-	-	-	-	681					

Composite Sampler Results

[illegible]

Bord Na Mona Energy Ltd, Mountfalcon Group, Lanesboro, Co Longford
Composite Sampler Results

Month	pH	COD mg/l	mmonia a N mg/l	Parameters			Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	mmonia a Kg/Day	Daily Totals		Total Solids Kg/Day
				Total Phosphoru mg/l	Suspended Solids mg/l	Total Solids mg/l					Total Phosphoru Kg/Day	Suspended Solids Kg/Day	
May 2003													
1	-	-	-	-	8	262	-	2405902					
2	-	-	-	-	-	-	-	107685				19.25	630.35
3	-	-	-	-	-	-	-	71					
4	-	-	-	-	-	-	-	192177					
5	-	-	-	-	-	-	-	747794					
6	-	-	-	-	5	84	-	221679					
7	7.5	IS	0.52	-	IS	IS	-	3641					
8	-	-	-	0.07	5	202	307	517		0.00		3.74	62.81
9	-	-	-	-	-	-	-	510			0.00	0.02	0.74
10	-	-	-	-	-	-	-	474					
11	-	-	-	-	-	-	-	489					
12	-	-	-	-	-	-	-	502					
13	-	-	-	-	-	-	-	470					
14	-	-	-	-	-	-	-	454					
15	-	-	-	-	-	-	-	441					
16	-	-	-	-	-	-	-	334					
17	-	-	-	-	-	-	-	337					
18	-	-	-	-	-	-	-	29547					
19	-	-	-	-	7	180	-	192055				0.21	5.32
20	7	110	0.03	-	5	148	-	4679353				0.96	33.80
21	-	-	-	0.05	14	176	299	8913496	980.48	0.27	0.45	23.40	692.54
22	-	-	-	-	5	142	-	6981170				124.79	1568.78
23	-	-	-	-	5	186	-	2438751				34.91	991.33
24	-	-	-	-	-	-	-	17443				12.19	453.61
25	-	-	-	-	-	-	-	209					
26	-	-	-	-	-	-	-	207					
27	-	-	-	-	-	-	-	128					
28	7.2	87	1.1	-	-	-	-	138					
29	-	-	-	0.11	5	200	334	98	0.01	0.00	0.00	0.00	0.03
30	-	-	-	-	-	-	-	71					
31	-	-	-	-	-	-	-	49					

Bord Na Mona Energy Ltd, Mountdillon Group, Lanesboro, Co Longford
Composite Sampler Results

Month	pH	COD mg/l	Ammonia-n mg/l	Parameters	Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily total (litres)	COD Kg/Day	Ammonia-n Kg/Day	Daily Totals	Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
June 2003															
1	-	-	-		-	-	-	-	83						
2	-	-	-		-	-	-	-	114						
3	-	-	-		-	5	110	-	2423048						
4	7.4	94	0.4		0.06	8	136	344	3309175	311.06	1.32	0.20	12.12	26.47	266.54
5	-	-	-		-	15	IS	-	296849					4.45	450.05
6	-	-	-		-	8	IS	-	149005					1.19	
7	-	-	-		-	-	-	-	93						
8	-	-	-		-	-	-	-	111						
9	-	-	-		-	12	106	-	17806						
10	-	-	-		-	18	114	-	10664410					0.21	1.89
11	7.4	93	0.2		0.05	5	136	338	3946682	367.04	0.79	0.20	191.96	1215.74	
12	-	-	-		-	-	-	-	111613					19.73	536.75
13	-	-	-		-	-	-	-	61						
14	-	-	-		-	-	-	-	57						
15	-	-	-		-	-	-	-	40						
16	-	-	-		-	-	-	-	41						
17	-	-	-		-	-	-	-	42						
18	-	-	-		-	-	-	-	41						
19	-	-	-		-	5	356	-	62					0.00	0.02
20	-	-	-		-	-	-	-	66						
21	-	-	-		-	-	-	-	47						
22	-	-	-		-	-	-	-	36						
23	-	-	-		-	-	-	-	848163						
24	-	-	-		-	-	-	-	848163						
25	-	-	-		-	-	-	-	848163						
26	-	-	-		-	-	-	-	848163						
27	7.2	83	0.3		0.08	5	166	307	848163	70.40	0.25	0.07	4.24	140.80	
28	-	-	-		-	-	-	-	848163						
29	-	-	-		-	-	-	-	817041						
30	-	-	-		-	-	-	-	787805						
31	-	-	-		-	5	360	-	682536					3.41	245.71
						-	-	-	1324164						

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Composite Sampler Results

Month	pH	COD mg/l	Parameters				Colour Pt Co units	Flow Daily total (litres)	Daily Totals				
August 2003			mmonia a N mg/l	Phosphoru mg/l	Suspended Solids mg/l	Total Solids mg/l			mmonia a Kg/Day	Phosphoru Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day	
1	-	-	-	-	6	322	-	625383				3.75	201.37
2	-	-	-	-	6	288	-	522636				3.14	150.52
3	-	-	-	-	10	298	-	473810				4.74	141.20
4	-	-	-	-	5	264	-	426334				2.13	112.55
5	-	-	-	-	11	318	-	325226				3.58	103.42
6	8	44	1.29	0.07	5	325	64	229152	0.30	0.02		1.15	74.47
7	-	-	-	-	27	290	-	77536				2.09	22.49
8	-	-	-	-	23	314	-	233040				5.36	73.17
9	-	-	-	-	6	168	-	396450				2.38	66.60
10	-	-	-	-	23	312	-	314943				7.24	98.26
11	-	-	-	-	14	342	-	178793				2.50	61.15
12	-	-	-	-	5	238	-	229011				1.15	54.50
13	8	41	1.06	0.05	8	338	73	260502	0.28	0.01		2.08	88.05
14	-	-	-	-	17	342	-	145154				2.47	49.64
15	-	-	-	-	5	324	-	138741				0.69	44.95
16	-	-	-	-	29	IS	-	128592				3.73	
17	-	-	-	-	13	378	-	137916				1.79	52.13
18	-	-	-	-	14	348	-	183631				2.57	63.90
19	-	-	-	-	8	382	-	152831				1.22	58.38
20	8.1	47	1.53	0.05	9	380	70	180044	0.28	0.01		1.62	68.42
21	-	-	-	-	23	292	-	215293				4.95	62.87
22	-	-	-	-	18	343	-	237984				4.28	81.63
23	-	-	-	-	13	328	-	250434				3.26	82.14
24	-	-	-	-	20	338	-	213603				4.27	72.20
25	-	-	-	-	8	344	-	225089				1.80	77.43
26	-	-	-	-	5	332	-	218019				1.09	72.38
27	8	34	1.34	0.05	6	379	72	215565	0.29	0.01		1.29	81.70
28	-	-	-	-	-	-	-	255316					
29	-	-	-	-	-	-	-	258872					
30	-	-	-	-	-	-	-	258872					
31	-	-	-	-	-	-	-	258872					

Bord Na Mona Energy Ltd, Mountdillon Group, Lanesboro, Co Longford
Composite Sampler Results

Month	pH	COD mg/l	ammonia N mg/l	Parameters			Colour Pt Co units	Flow Daily total (litres)	COD Kg/Day	ammonia Kg/Day	Daily Totals	
				Total mg/l	Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l				Total Phosphorus Kg/Day	Suspended Solids Kg/Day
September 2003												
1	-	-	-	-	-	-	-	258872				
2	-	-	-	-	-	-	-	258872				
3	-	-	-	-	-	-	-	258872				
4	-	-	-	-	-	-	-	258872				
5	-	-	-	-	-	175	310	258872				
6	-	-	-	-	-	5	312	223795			45.30	80.25
7	-	-	-	-	-	5	308	200925			1.12	69.82
8	-	-	-	-	-	5	320	315786			1.00	61.88
9	-	-	-	-	-	5	306	211866			1.58	101.05
10	-	-	-	-	-	5	292	222359			1.06	64.83
11	8	41	1.5	0.05	6	6	306	325972	13.36	0.49	0.02	1.11
12	-	-	-	-	-	5	306	365263			1.96	99.75
13	-	-	-	-	-	10	248	254149			1.83	111.77
14	-	-	-	-	-	5	320	275900			2.54	63.03
15	-	-	-	-	-	5	300	307162			1.38	88.29
16	-	-	-	-	-	24	302	212717			1.54	92.15
17	8.1	41	1.6	0.05	9	9	IS	169145			5.11	64.24
18	-	-	-	-	5	5	344	176349	7.23	0.28	0.01	1.52
19	-	-	-	-	12	12	318	150721			0.88	60.66
20	-	-	-	-	5	5	302	98297			1.81	47.93
21	-	-	-	-	5	5	286	98297			0.49	29.69
22	-	-	-	-	5	5	202	98297			0.49	28.11
23	-	-	-	-	5	5	250	98297			0.49	19.86
24	8.3	48	1.45	0.05	6	6	234	98297			0.49	24.57
25	-	-	-	-	5	5	286	293770	14.10	0.43	0.01	0.59
26	-	-	-	-	-	-	-	292854			1.47	84.02
27	-	-	-	-	-	-	-	32681				
28	-	-	-	-	-	-	-	6144				
29	-	-	-	-	-	-	-	1750				
30	-	-	-	-	-	-	-	2771				
31	-	-	-	-	-	-	-	6241				

Composite Sampler Results

Month	Parameters			Parameters			Parameters			Parameters			Parameters			Parameters		
	pH	COD mg/l	mmonia N mg/l	Total Phosphoru mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily total (litres)	COD Kg/Day	mmonia Kg/Day	Total Phosphoru Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day					
October 2003																		
1	-	-	-	-	-	-	-	1022										
2	-	-	-	-	8	276	-	0					0.00					
3	-	-	-	-	5	262	-	1754608					8.77					
4	-	-	-	-	5	222	-	362508					1.81					
5	-	-	-	-	-	-	-	14886					80.48					
6	-	-	-	-	5	248	-	949310										
7	-	-	-	-	5	278	-	632993										
8	8.5	57	1.3	0.05	8	283	-	593020	33.80	0.77	0.03		235.43					
9	-	-	-	-	5	198	74	479215					175.97					
10	-	-	-	-	16	238	-	354412					167.82					
11	-	-	-	-	5	298	-	411972					94.88					
12	-	-	-	-	5	260	-	349235					84.35					
13	-	-	-	-	5	266	-	285822					122.77					
14	-	-	-	-	5	278	-	253569					90.80					
15	8.2	42	1.55	0.05	5	250	56	250393	10.52	0.39	0.01		76.03					
16	-	-	-	-	8	338	-	260611					70.49					
17	-	-	-	-	5	256	-	258115					62.60					
18	-	-	-	-	5	334	-	170872					88.09					
19	-	-	-	-	5	344	-	284708					66.08					
20	-	-	-	-	5	324	-	277485					57.07					
21	-	-	-	-	5	350	-	165024					97.94					
22	8.4	57	9.5	0.05	7	342	48	290404	16.55	2.76	0.01		89.91					
23	-	-	-	-	4	326	-	171888					57.76					
24	-	-	-	-	15	386	-	279230					99.32					
25	-	-	-	-	4	340	-	66645					56.04					
26	-	-	-	-	12	350	-	296315					107.78					
27	-	-	-	-	23	332	-	204471					22.66					
28	-	-	-	-	19	353	-	407454					103.71					
29	7.9	46	2.6	0.05	6	330	47	395371	18.19	1.03	0.02		67.88					
30	-	-	-	-	5	168	-	1564803					143.83					
31	-	-	-	-	5	186	-	4201607					130.47					
													262.89					
													781.50					

Composite Sampler Results

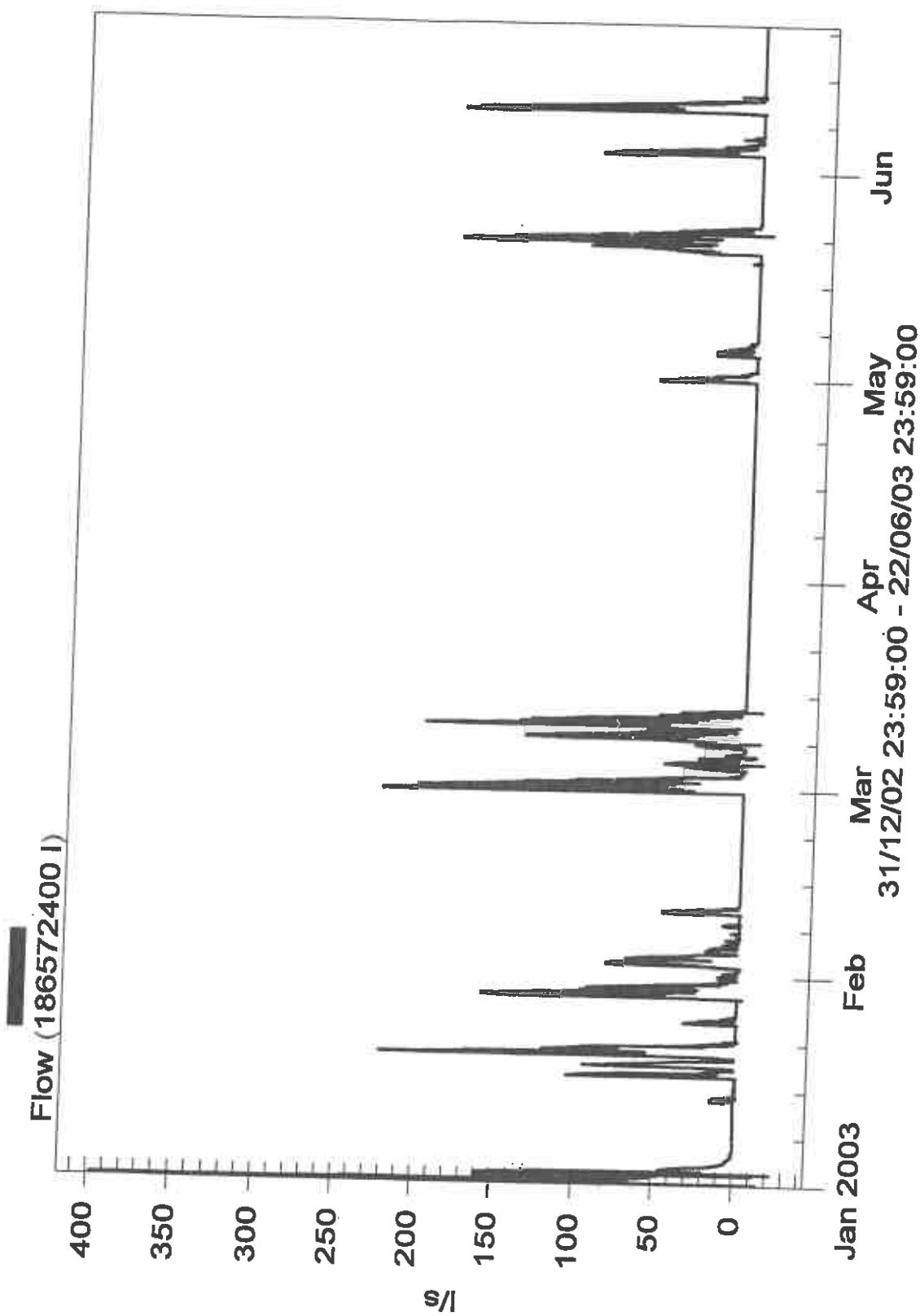
Month	pH	COD mg/l	mmonia a N mg/l	Parameters Total Phosphoru mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily total (litres)	COD Kg/Day	mmonia a Kg/Day	Daily Totals Total Phosphoru Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
November 2003													
1	-	-	-	-	5	236	-	3007366				15.04	709.74
2	-	-	-	-	5	198	-	3664308				18.32	725.53
3	-	-	-	-	5	176	-	2471341				12.36	434.96
4	-	-	-	-	-	-	-	1519603					
5	7.7	54	1.41	0.05	5	241	79	1129145	60.97	1.59	0.06	5.65	272.12
6	-	-	-	-	5	306	-	906190				4.53	277.29
7	-	-	-	-	7	296	-	652766				4.57	193.22
8	-	-	-	-	5	306	-	569222				2.85	174.18
9	-	-	-	-	5	324	-	497323				2.49	161.13
10	-	-	-	-	5	324	-	484378				2.42	156.94
11	-	-	-	-	5	328	-	2040598				10.20	669.32
12	7.5	64	1.16	0.05	8	284	102	5338238	341.65	6.19	0.27	42.71	1516.06
13	-	-	-	-	-	-	-	2681303					
14	-	-	-	-	-	-	-	3186777					
15	-	-	-	-	-	-	-	3186777					
16	-	-	-	-	-	-	-	3186777					
17	-	-	-	-	-	-	-	3186777					
18	-	-	-	-	-	-	-	2637556					
19	-	-	-	-	-	-	-	4491382					
20	-	-	-	-	5	208	-	4998054				24.99	1039.60
21	-	-	-	-	5	184	-	3844172				19.22	707.33
22	-	-	-	-	-	-	-	55852					
23	-	-	-	-	-	-	-	36553					
24	-	-	-	-	-	-	-	29952					
25	-	-	-	-	5	184	-	2410615					
26	7.9	42	1.34	0.05	5	200	84	3138014	131.80	4.20	0.16	12.05	443.55
27	-	-	-	-	5	284	-	1354813				15.69	627.60
28	-	-	-	-	5	278	-	1692685				6.77	384.77
29	-	-	-	-	5	256	-	134595				8.46	470.57
30	-	-	-	-	8	332	-	63386				0.67	34.46
31	-	-	-	-	-	-	-					0.51	21.04

Bord Na Mona Energy Ltd, Mounttallion Group, Lanesboro, Co Longford
Composite Sampler Results

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters	Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia Kg/Day	Total Phosphorus Kg/Day	Suspended Solids Kg/Day
December 2003													
1	-	-	-	-	-	12	185	-	4942713				59.31
2	-	-	-	-	-	15	212	-	8891842				133.38
3	7.8	10	1.16	0.05	12	12	184	93	8577464	85.77	9.95	0.43	102.93
4	-	-	-	-	5	5	278	-	2844057				14.22
5	-	-	-	-	5	5	312	-	1921102				9.61
6	-	-	-	-	5	5	262	-	1697474				8.49
7	-	-	-	-	5	5	328	-	1476149				7.38
8	-	-	-	-	5	5	336	-	1066682				5.33
9	-	-	-	-	5	5	294	-	8996				0.04
10	7.6	82	0.94	0.05	22	22	187	121	2055887	168.58	1.93	0.10	45.23
11	-	-	-	-	22	22	248	-	5496285				120.92
12	-	-	-	-	9	9	244	-	5359521				48.24
13	-	-	-	-	18	18	296	-	5037587				90.68
14	-	-	-	-	5	5	348	-	2883902				14.42
15	-	-	-	-	5	5	272	-	2220627				11.10
16	-	-	-	-	5	5	344	-	2046951				10.23
17	7.8	50	0.94	0.05	5	5	222	110	1809255	90.46	1.70	0.09	9.05
18	-	-	-	-	-	-	-	-	1641096				
19	-	-	-	-	-	-	-	-	1074028				
20	-	-	-	-	-	-	-	-	69226				
21	-	-	-	-	-	-	-	-	33245				
22	-	-	-	-	-	-	-	-	3971858				
23	-	-	-	-	-	-	-	-	2781168				
24	-	-	-	-	-	-	-	-	858891				
25	-	-	-	-	-	-	-	-	2035072				
26	-	-	-	-	-	-	-	-	36968				
27	-	-	-	-	-	-	-	-	34980				
28	-	-	-	-	-	-	-	-	61965				
29	-	-	-	-	-	-	-	-	69688				
30	-	-	-	-	-	-	-	-	70585				
31	-	-	-	-	-	-	-	-	758207				

Derrymoylin (DN4/5) Composite Sampler

01/01/03 to 22/06/03



Lough Bannow (LB 85) Composite Sampler

22/06/03 to 31/12/03

