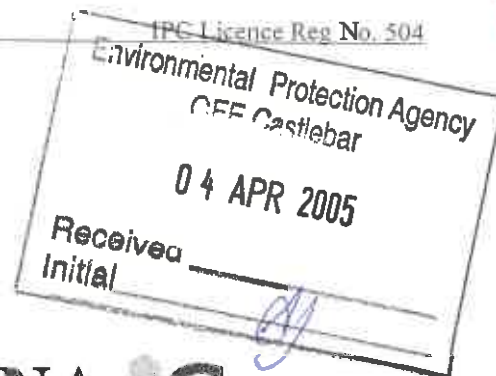


Bord na Mona Energy Ltd



BORD NA MÓNA 

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

Annual Environmental Report

March 2005.

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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

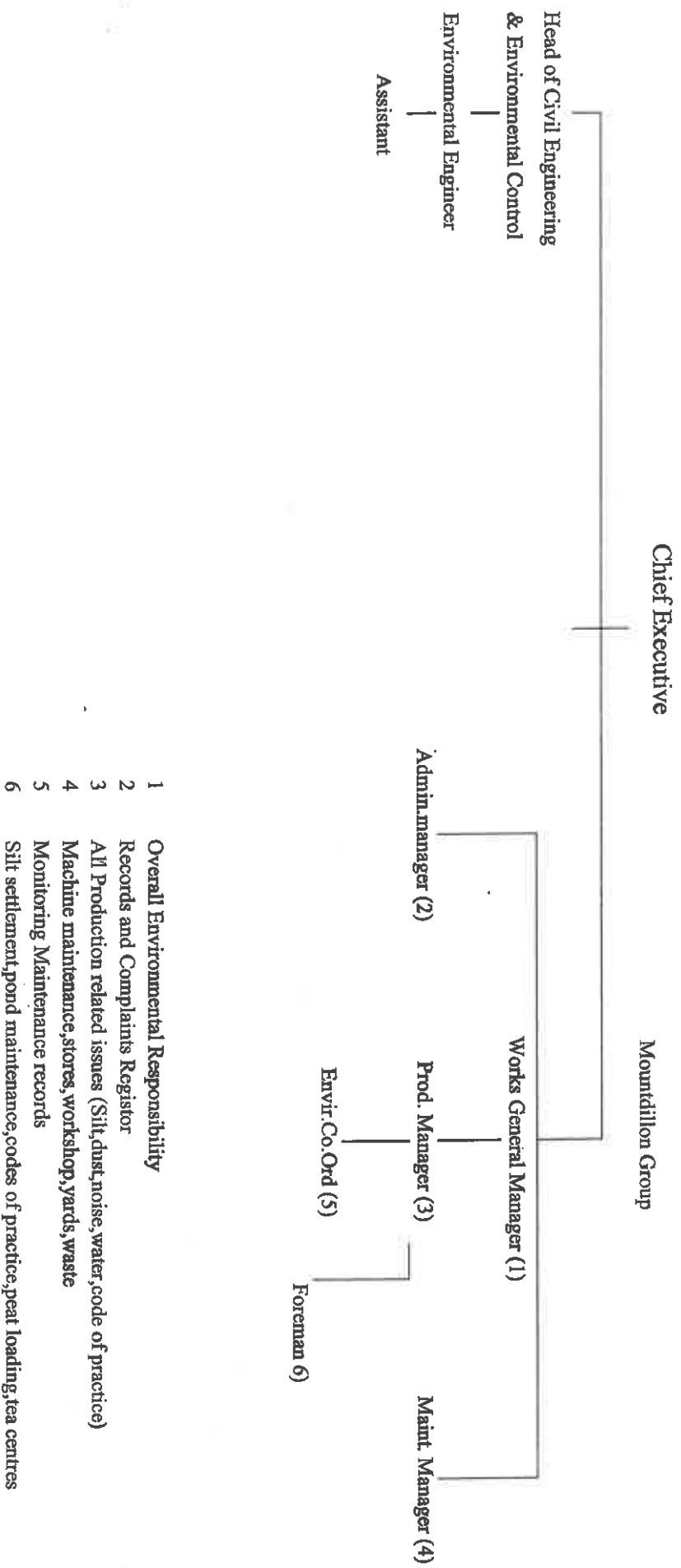
Mountdillon group of bogs is situated in Counties Longford Roscommon, and Westmeath.

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

1.4 Environmental Management of the Company

Bord Na Mona Energy Limited
Environmental Responsibilities



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

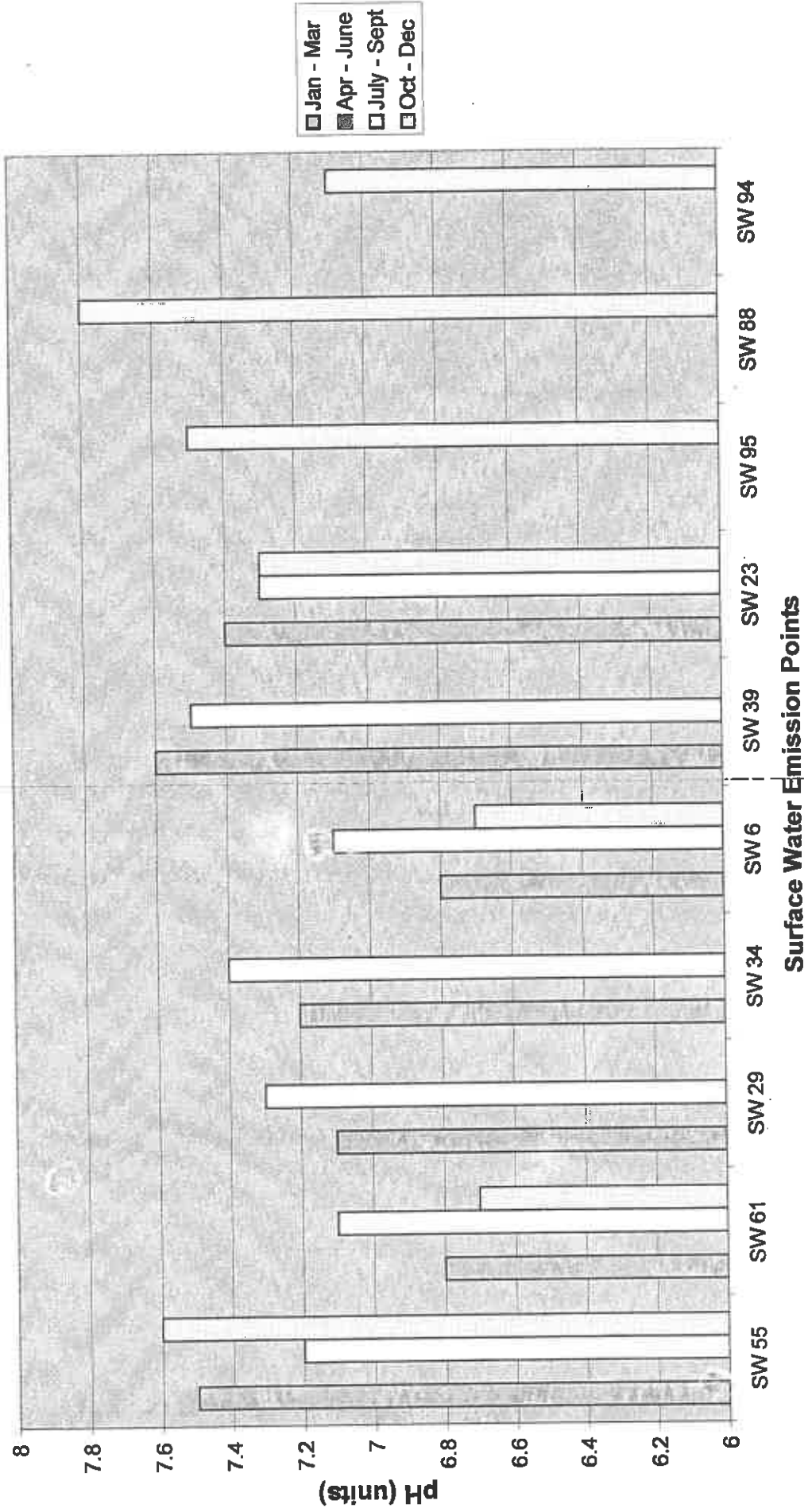
2.1 Emissions to Water Summary

2.1.1 Silt Pond Emissions

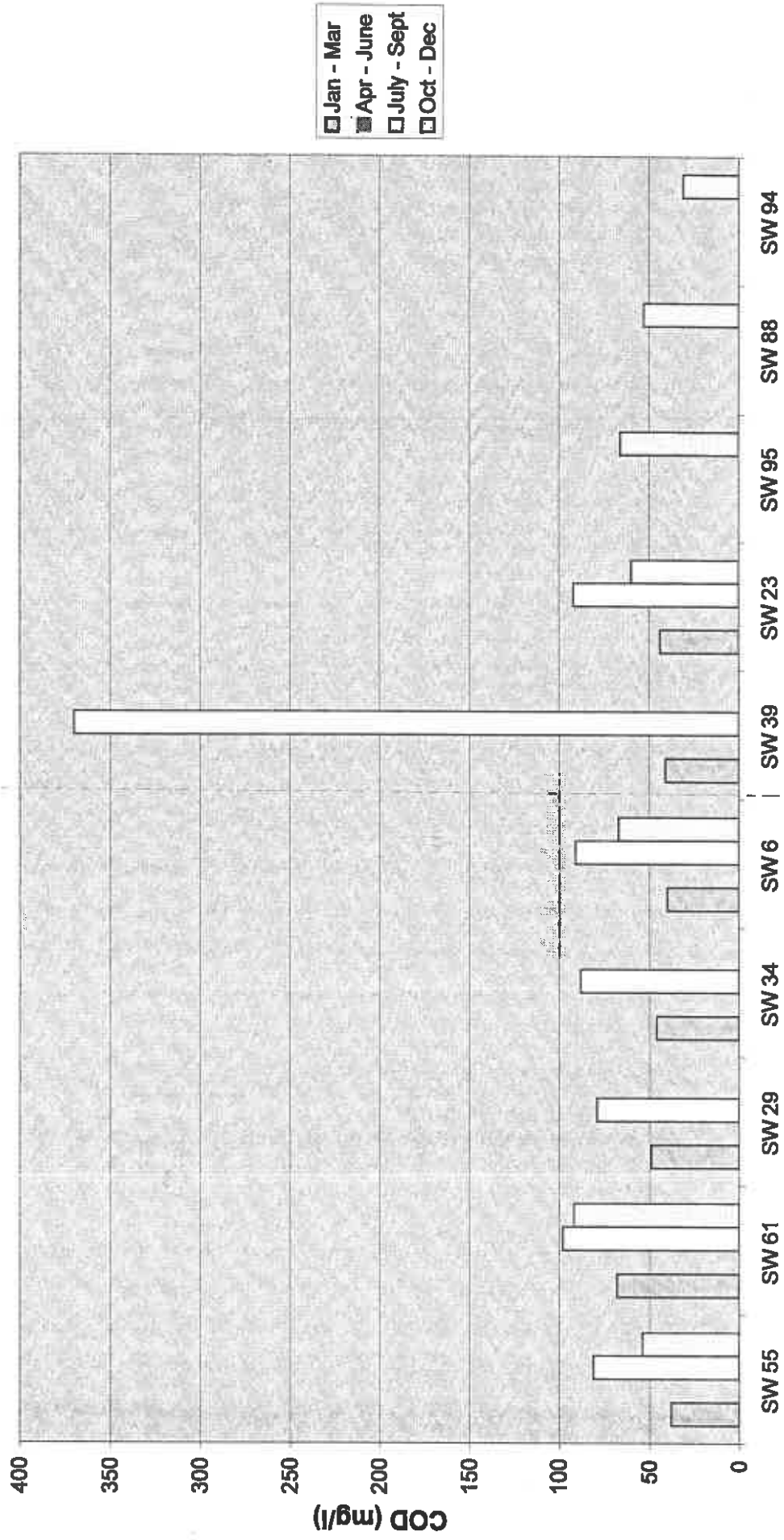
Monitoring and sampling from agreed discharge points are carried out quarterly in the form of grab samples. Samples were taken each quarter from each of the agreed outlets in accordance with the regular sampling programme. The results of the analyses of these samples are presented below in Tables 1A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

During dry months or when the flow is backed –up there is no measured flow

pH

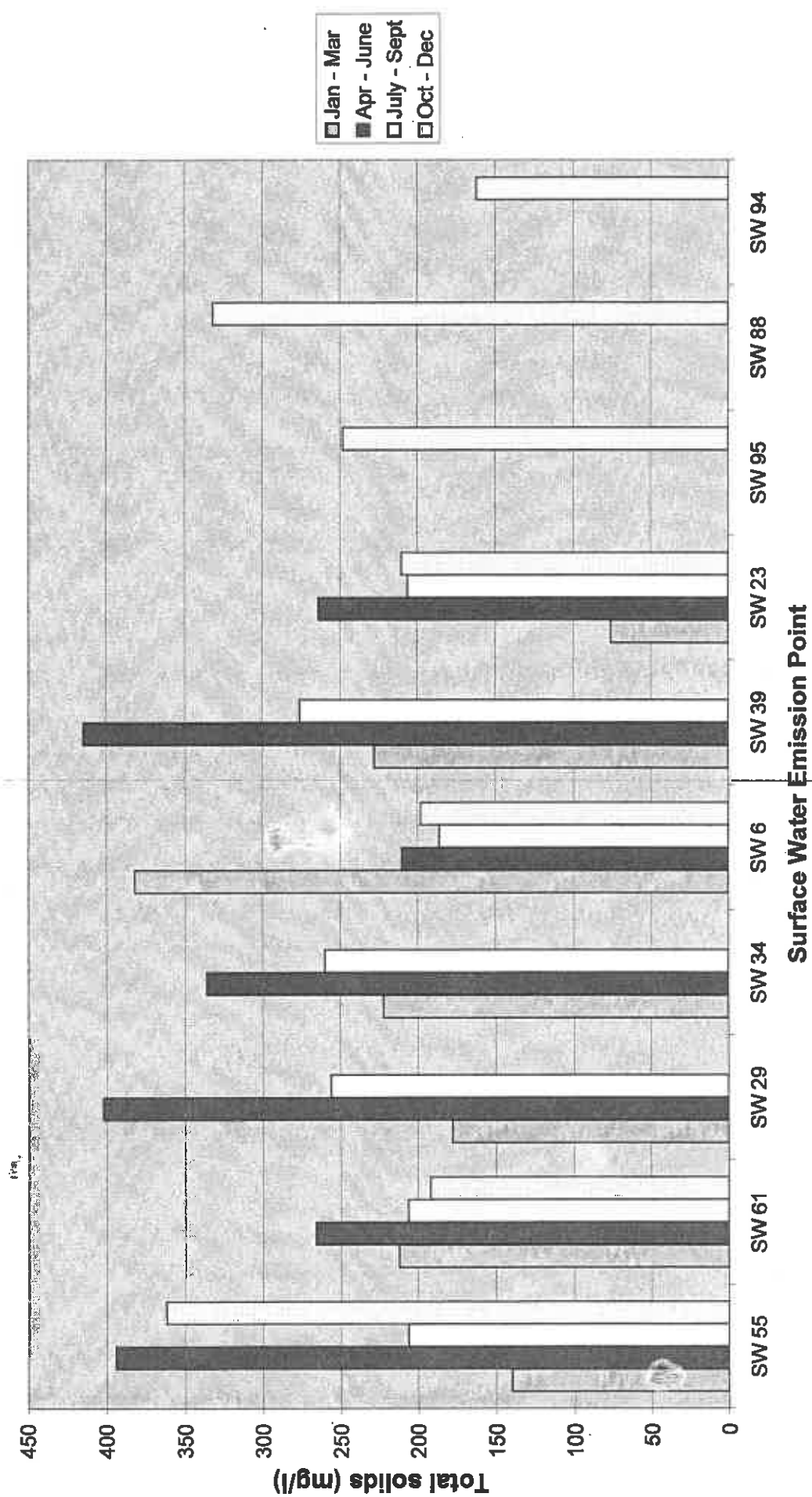


COD

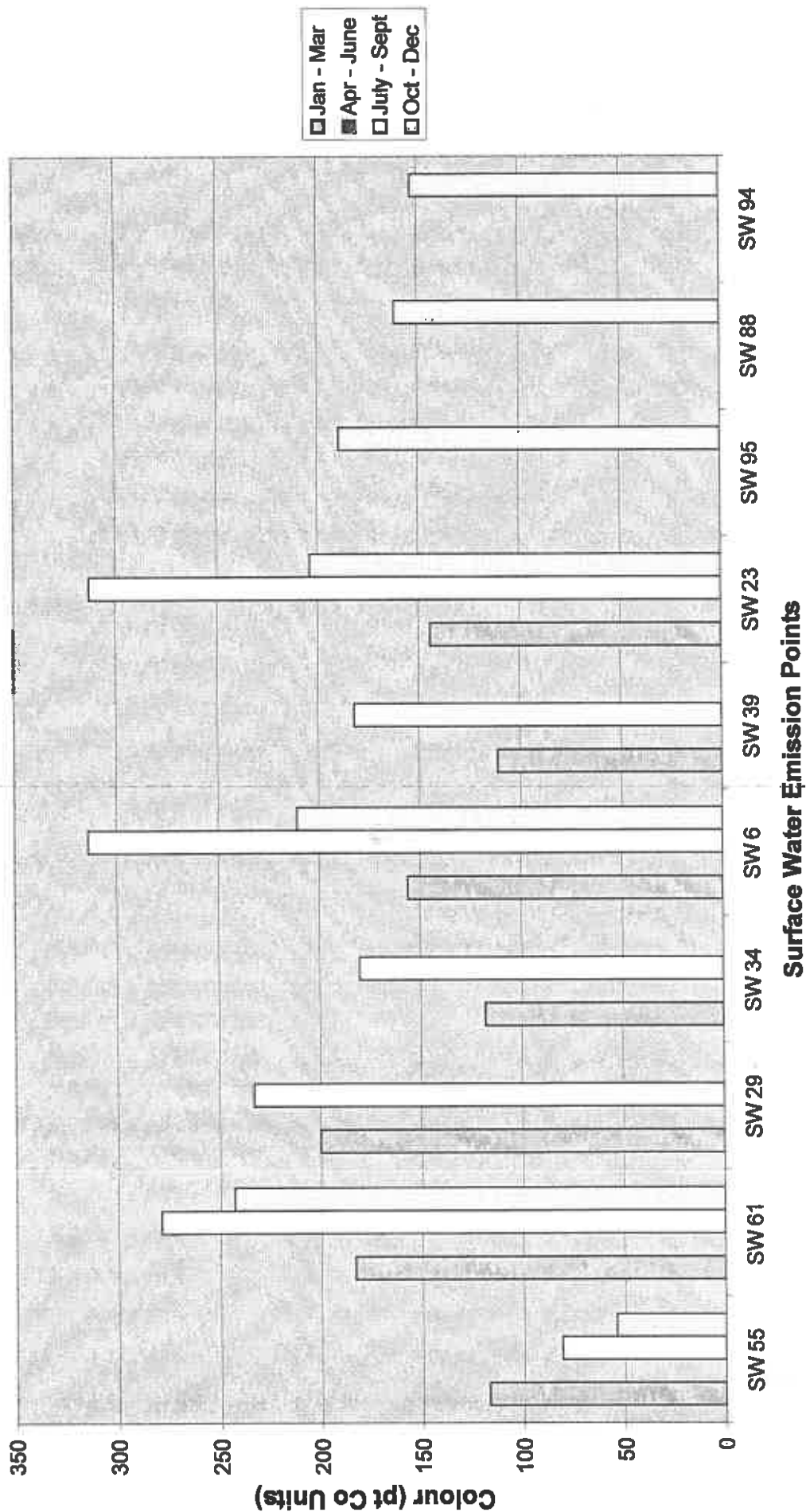


Surface Water Emission Points

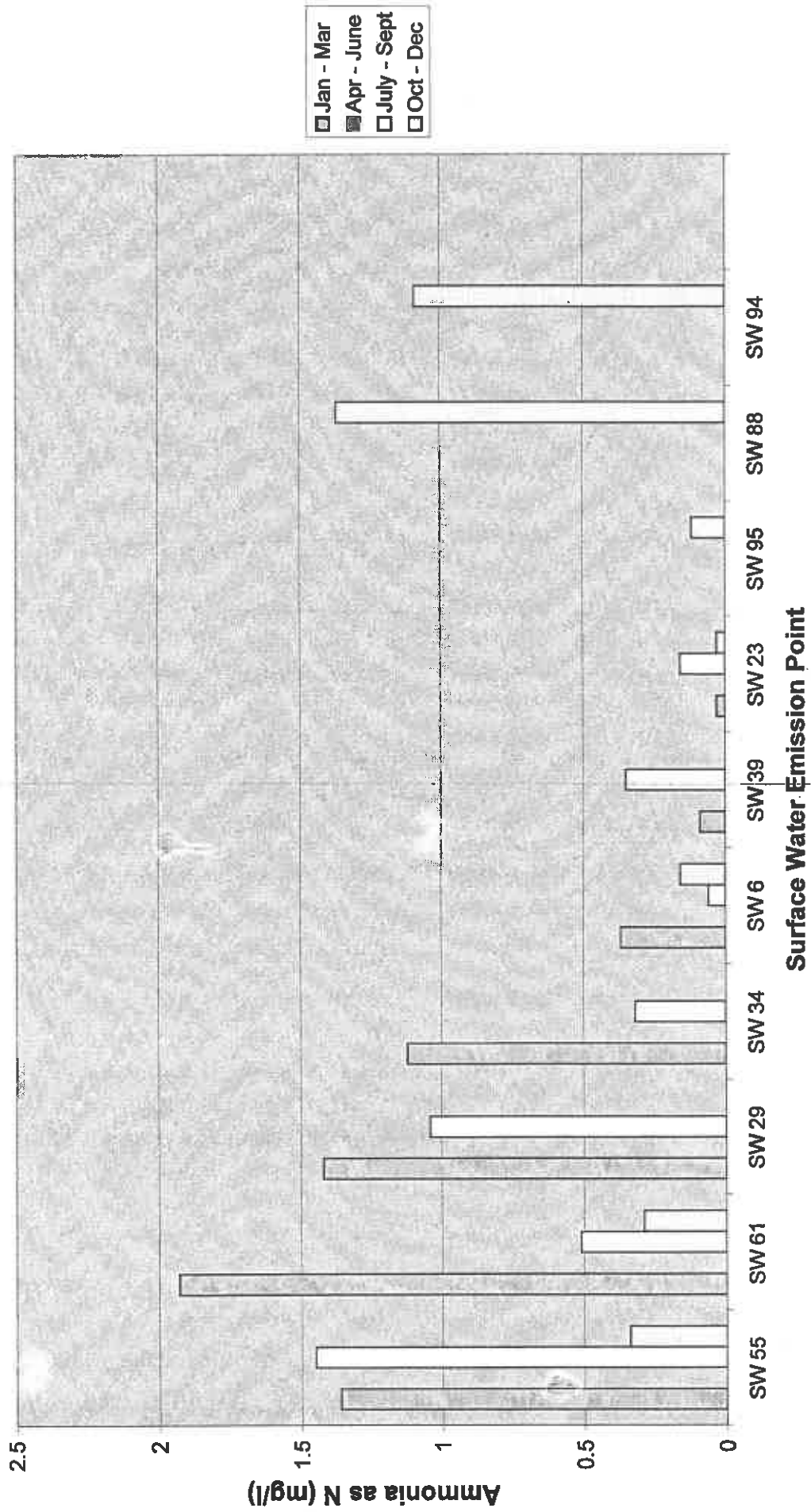
Total Solids



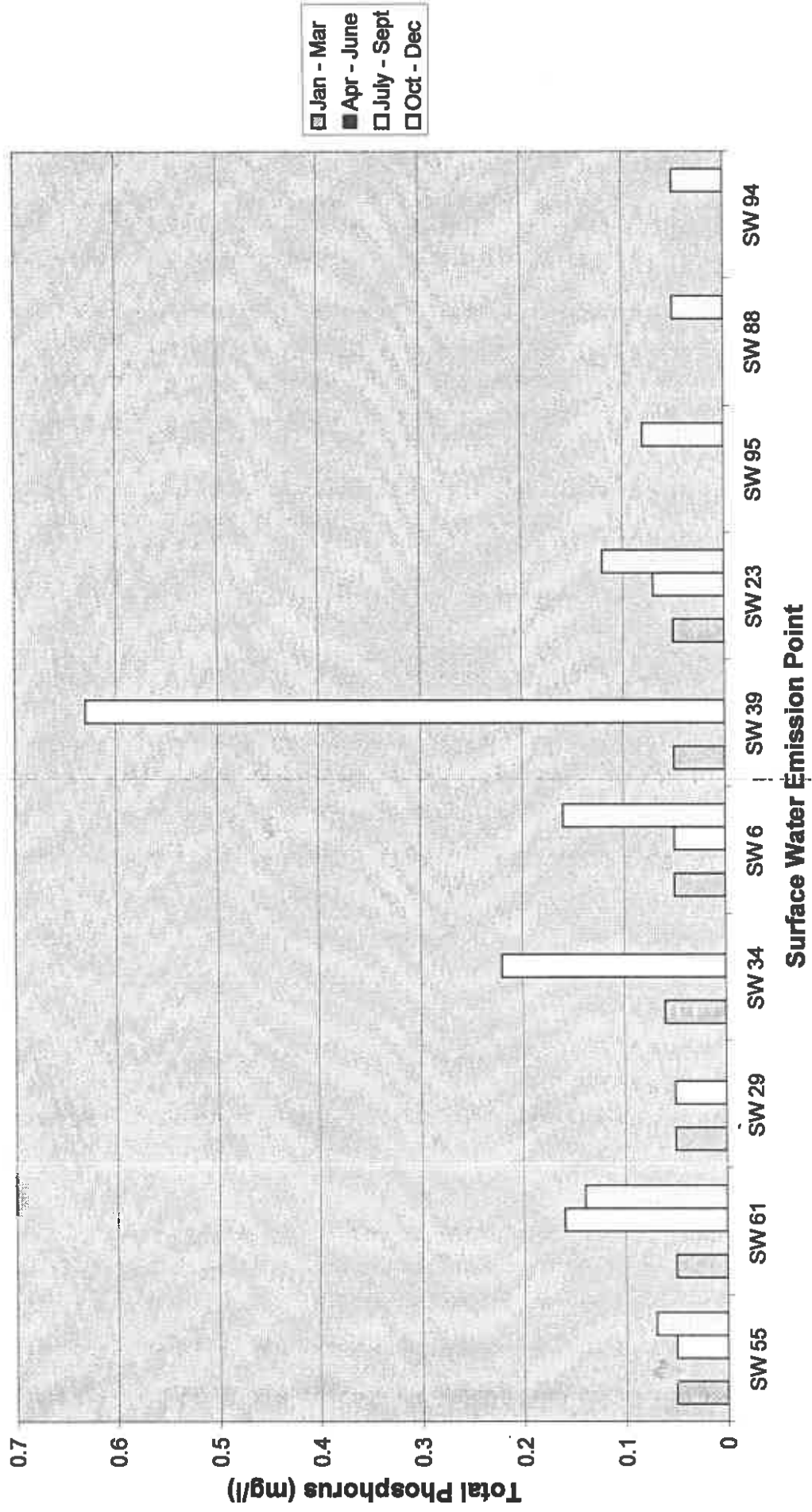
Colour



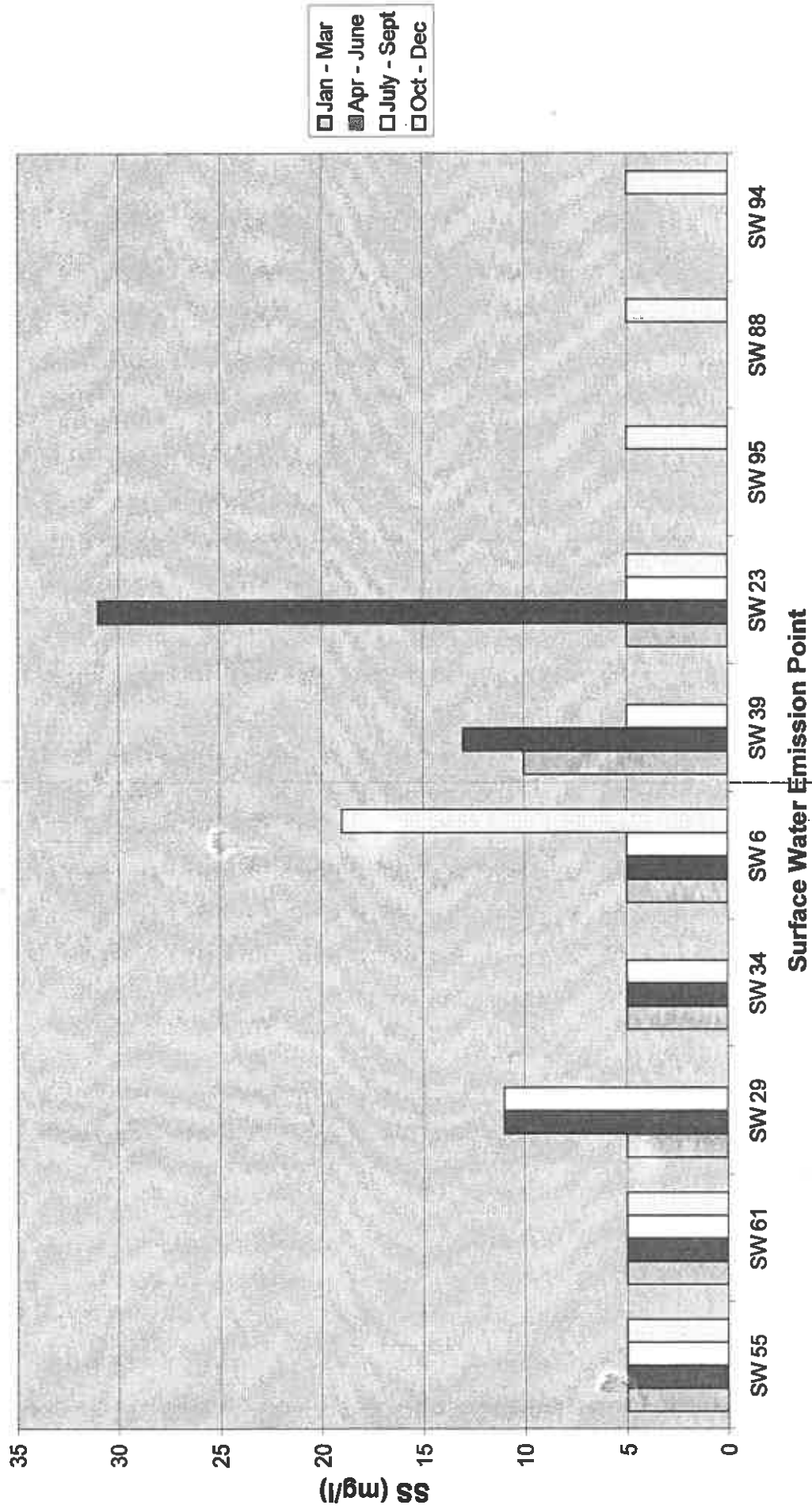
Ammonia



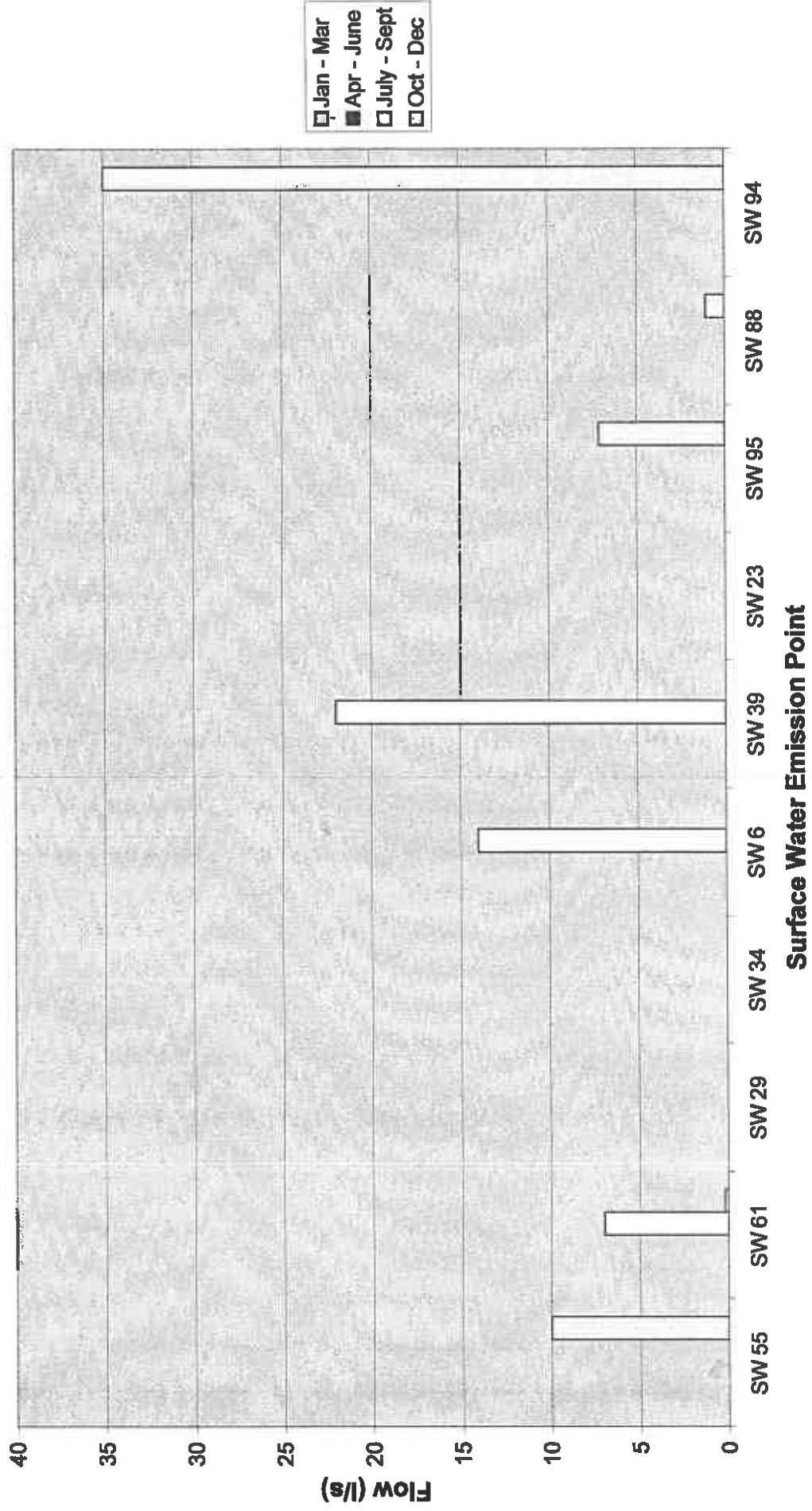
Total Phosphorus



Suspended Solids



Flow



2.1.2 Yard Discharges

Reporting Period: January – December 2004												
Surface Water Emission pt.	COD (mg/l)											
	January	February	March	April	May	June	July	August	September	October	November	December
SWE-1 w/shop	33	15	34	14	No run off	20.	20	39	No run off	146	58	N/A
SWE-2 w/shop	32	31	52	76	No run off	No run off	No run off	63	No run off	51	94	"
SWE-1 yard	32	No run off	36	No run off	No run off	No run off	No run off	No run off	No run off	126	No run off	"
SWE-2 yard	30	No run off	60	28	No run off	85	85	75	No run off	109	54	"
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	"
SWE-1 (Cuil na Geun)	47	36	62	88	No run off	No run off	14	No run off	No run off	54	38	"

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 14 – JAN 21	1 Non Compliance	Ditching during wet weather	Presonell instructed during subsequent training sessions

2.2 Emissions to Air

2.2.1 Dust Monitoring Locations Programme

Emission Point	DATE	Parameter	Average Emission (mg/m ² /day)	Emission Limit Value
DM-01	21/06/04 – 21/07/04	Dust	206	(350mg/m ² /Day)
DM-02	10/06/04 – 12/07/04	Dust	371	(350mg/m ² /Day)

Emission Point	DATE	Parameter	Average Emission (mg/m ² /day)	Emission Limit Value
DM-01	22/07/04 – 24/08/04	Dust	412	(350mg/m ² /Day)
DM-02	12/07/04 – 12/08/04	Dust	56	(350mg/m ² /Day)

Emission Point	DATE	Parameter	Average Emission (mg/m ² /day)	Emission Limit Value
DM-01	24/08/04 – 23/09/04	Dust	149	(350mg/m ² /Day)
DM-02	12/08/04 – 16/09/04	Dust	35	(350mg/m ² /Day)

2.2.2 Non compliance

DATE	Non - Compliance	Cause	Corrective – Action
Jun 03 – Sept 03	2	Dry weather and High Winds	See ref. 0005 and 0006

The Agency has been notified see Ref. 0005 and 0006

2.3 Waste Arisings**2.3.1 Hazardous Waste****BORD NA MÓNA**

BORD NA MÓNA ENERGY LIMITED

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

WASTE DESCRIPTION	EWC CODE	TONNES	NAME OF CONTRACTOR	NAME OF PERSON ULTIMATELY RESPONSIBLE	DESTINATION	DATE
17.5 Bins oil filters	13601	2.73	ATLAS Oil Ltd	ATLAS Oil Ltd	Oil recycled	Jan-Dec 04
Waste oil	13.50.03	10.85	ATLAS Oil Ltd	ATLAS Oil Ltd	Oil recycled	21/04/04
Waste oil	13.50.03	9.0	ATLAS Oil Ltd	ATLAS Oil Ltd	Oil recycled	09/12/04
Lead Acid Batteries	16.06.01	8.644	Returnbatt Ltd.	Returnbatt Ltd.	HJ Enthoven England.	Jan-Dec 04
Ni Cad Batteries	16.06.02	0.713	Returnbatt Ltd.	Returnbatt Ltd.	Snarm. France	Jan-Dec 04
Primary Batteries	16.06.03	0.021	Returnbatt Ltd.	Returnbatt Ltd.	Accerac Germany	Jan-Dec 04

WASTE DESCRIPTION	EW C CODE	TONNES	NAME OF CONTRACTOR	NAME OF PERSON ULTIMATELY RESPONSIBLE	DESTINATION	DATE

DETAILS OF ANY REJECTED CONSIGNMENTS						
None to date						

2.4 Energy and Water Consumption

2.4.1 Energy Consumption

Fuel	Megawatt / HRS	Volume cu/mts	Tonnes
JAN – Dec 2004			
Diesel / Heating Oil	10880	1110.9	
Petrol	39.31	4.35	
Electricity	1299		
Peat Biquettes	653.5		130.7

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

2.5.1 Incidents

There were no incidents reported in mountdillon in 2004

2.5.2. Complaints

Environmental Complaints	
Complaints received	4
Complaints requiring corrective action	
Categories of complaint	
Odour	
Noise	
Water	
Air	4
Procedural	
Miscellaneous	

These have been reported to the E.P.A.

3.0 Management of the Activity

3.1 Environmental Management Programme Report 200

Environmental Management Programme Report 200	
Project	
Project 1. Reduction of fugitive dust emissions.	Training Training in Mountdillon was provided for all personnel during 2004, and will be repeated in 2005. This will be in the form of a Cleaner Production Video, This video was completed in May 2004, and covers all aspects of the I.P.C. licence, and in particular, cleaner production methods, good and bad practice, pollution prevention and codes of practice. A quiz on the contents of the video and items relating to the target audience, accompanies the 1 hour training session. An internal audit of all I.P.C. licenced sites also occurred during May and June of 2004 Headland Peat BNM recently took delivery of 4 new mechanical bin harvesters. These were manufactured in Finland, and are currently been modified in Ireland. These types of harvesters are specifically for use in lifting dry peat from headlands at DSL's and will be engaged alone in tackling dust sensitive areas in each licence, for 2005 production season. In addition two Headland Harvester Units were in operation. These units operated in Boora and Mountdillon in 2004, and will continue to operate in these areas. In total, these 6 units will operate specifically at DSL in Peco bogs, and will be assessed during 2005 season as to their effectiveness at reducing headland peat and reducing incidents of dust generation. The total expenditure on the additional bin harvesters, hydraulic harrows and pollyrollers (project 5) for the 2004 season is 670,600, which is 400,000 above what was budgeted. Hydraulic harrows As was proposed for 2004 8 newly fabricated hydraulic harrows were purchased and distributed to DSL's within the 9 IPC licenced sites, these have proved successful in reducing dust generation. In Mountdillon Two were used in Edera Bog and one in Derryadd Bog it is proposed to install one extra hydraulic harrow in Cloonshannagh Bog in 2005

Project 2. Minimisation of Suspended Solids	This project is on-going and is primarily one of training for all production personnel, and is covered in the Cleaner Production Video, as in Project 1 (Training).
Project 3. Effective spill/leak management of mobile fuelling tanks	All of BNM's production bogs now have locations highlighted as being suitable for re-fuelling on the bog, and this is being brought to the attention of all personnel. These locations have been chosen having due regard to location of water courses and drains.
Project 4. Re-use of silt pond waste	There are over 850 silt ponds in operation in the 9 IPC Licensed BNM bogs. These are located in low areas on the bog perimeters, due to drainage requirements. All of these ponds are excavated into the mineral layer, and as a result of this, all silt removed from the ponds have high levels of grit, stones etc. All of these make the peat unsuitable for combustion purposes. In addition, over 95% of the silt excavated is water, which would require it to be spread out on the bog to be allowed to dry to the required moisture content. Given the small volumes of silt excavated, it is therefore not feasible to reuse this silt pond waste.
Project 5. Collection, storage and re-use of polythene.	Polythene collection is ongoing in BNM, and volumes collected and recycled are recorded in the Non-hazardous Waste records in the AER. The 25 new polystrippers proposed in last years EMP, were delivered in 04' and are currently being used to strip polythene from stockpiles. This new system now produces a roll of polythene which is cleaner, easier to handle, and consequently more attractive for recycling. All bogs now have a hard standing area, where the rolls of polythene are stored for collection and subsequent recycling. In addition to this, procedures have been put in-place, and are highlighted during training, about best practice for stripping, collection and storage. 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.

Project 6. Condition 2.2.2 (v) <i>Provision of measures to protect dust sensitive areas.</i>	All DSL's have been identified within BNM group. A programme of tree planting was undertaken in Mountdillon bogs in 2004, in total 1290 trees were planted in dust sensitive areas. These trees were planted in raised or mounded areas.
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3.1 Environmental Management Programme Proposal for 2005

ENVIRONMENTAL MANAGEMENT PROGRAMME PROPOSAL FOR 2005	
Project	
Project 1. Reduction of fugitive dust emissions.	Training Continue with the training programme for 2005. 15 Training sessions have already taken place at 6 of the IPC Licensed works, since January 05' This has targeted management and production personnel (teamleaders) and will be extended to include all seasonal staff to be engaged this year. It is targeted to have all production personnel trained by the commencement of production for 2005. Headland Peat The 6 new headland peat harvester units will be deployed for the 2005 production season. These units are a mixture of the bin harvester system (4 units) and the same field harvester (2 units), and will be operated in dust sensitive locations. The bin harvester units, while having been experimented with previously in BNM, are a relatively new technology in BNM's modern day operations, and so will be monitored closely over the coming season to assess their performance. All trials, observations and tests will be monitored and recorded by the EMP system as to their effectiveness and suitability. Hydraulic harrows 14 new hydraulic harrows have been made over 04/05 and will be in operation between now and the end of 2005. In line with BNM's policy to fabricate 40 hydraulic harrows over 5 years, this current no. brings the total to-date to 22 in operation by the end of 05' This is well ahead of what was planned in the 2004 EMP proposal. In addition, 3 new units are budgeted for fabrication by the end of 05. When completed, all DSL's will be equipped with a hydraulic harrow.
Project 2. Minimisation of Suspended Solids	This project is on-going and is primarily one of training for all production personnel, and is covered in the Cleaner Production Video, as in Project 1 (Training). It will also include inspections at a number of production units during the 05 production season, to assess compliance with the good practice and codes of practice developed by BNM and communicated through the training programmes and the video.

Project 3. Effective spill/leak management of mobile fuelling tanks	As reported in the 2004 EMP report, all areas have designated areas for re-fuelling. This project is therefore completed. Compliance with the original requirements of this project will however be checked through the inspections as highlighted in project 2 above. Specific training has also been provided for oil spill management and clean-up, as part of the management of oil spill kits and procedures etc. and will continue to be facilitated during 2005.
Project 4. Re-use of silt pond waste	This project is also not feasible, as highlighted in the 2004 report, but will be reviewed where necessary, if a use (other than fuel use) emerges.
Project 5. Collection, storage and re-use of polythene.	Banner recycling are currently taking BNM's rolled and loose polythene, for recycling to their permitted yards in Co.Clare. Two additional interested parties are also being investigated, one locally in Co Kildare and a potential recycler in Belgium who may be in a position to reuse the polythene to process pellets to be used in the manufacture of new polythene to be used by BNM. An additional order for 22 polyrollers have been placed, to be delivered by the end of March, so that all bog units will have a roller for stripping piles. This will put an end to loose polythene gathering around the bog.
Project 6. Condition 2.2.2 (v) <i>Provision of measures to protect dust sensitive areas.</i>	This project is on-going. All dust sensitive locations will have bergerhoff dust gauges installed for the 2005 season. The tree planting programme will continue for 2005

3.2 Environmental Expenditure

Expenditure Related to the Operation of the Mountdillon IPC Licence During the Period JAN 2004 – DEC 2004	
Description	Cost Euros
Capital Costs	
Plant	
Labour	124895
Materials	34991
Overheads (ESB, Phones, Consumables)	6000
External Environmental Consultancy	
EPA Fees	8773
Monitoring Cost	8307.64
Total	182966.64

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. Three sampling locations have been changed in 2004 and the Agency notified. Monitoring will be carried out at these locations in the forthcoming year. The three new ponds are DS 3, SW 94, DC 1, SW 88 and LB 3, SW 95.

See results in 2.1.1

4.2 Bunding Programme

Recently installed tanks have been Bunded at the power station and a service pit installed. A concrete spill area has been installed at the refuelling area. All yards and depots are now fully bunded.

4.3 Boiler Combustion Efficiency

Boiler at the main workshop has been tested by Boiler Services Allenstown Broadway Co Wexford on 13/12/04 with efficiency levels of 87.4% to 88.1%.

4.4 Resource Consumption Summary

There was a total of 867,875 tonnes of peat produced and 218,419 tonnes of peat sold to Lanesboro Power station during the reporting period Jan – Dec 04.

4.5 Report on de – silting Programme

De-silting Report

JAN – Dec

2004

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

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 22824 tonnes of milled peat in the year 2004, production will continue for the year 2005. 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 2005. Adequately sized silt ponds have been constructed.

The results have been included in the Appendix ii

4.7 Bog rehabilitation progress report

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

4.8 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)

Pipes have been installed in order to increase the control over the discharges

Stage 3 (Pipe and weir installation)

All silt ponds in mountdillon area have been fitted with pipes on inlet and outlet.

A programme of installing weirs or sluice gates has commenced. To date 7 weirs or sluice gates have been fitted on pond numbers DS3 (SW79) DS5 (SW83) DS6 (SW84) BH5 (SW55) DD1 (SW68) DC10 (SW93) DC5(SW91) LB3(SW95) MN2(SW19) GN4(SW23) CH1(SW6)

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 was one non compliance see 2.1.4 in relation to the Composite Sampler during the operation period of Jan to the end of December. Mountdillon received four complaint in relation to dust monitoring these have been reported to the Agency

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)

Bord Na Mona Energy Ltd, Mountdillon Group, Lanesboro, Co Longford

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids		Colour Pt Co	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
January 2004				Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l						Total Phosphorus Kg/Day			
1	-	-	-	-	5	372	-	-	44652				0.22	16.61	
2	-	-	-	-	5	260	-	-	46102				0.23	11.99	
3	-	-	-	-	17	272	-	-	52472				0.89	14.27	
4	-	-	-	-	-	-	-	-	44689						
5	-	-	-	-	5	272	-	-	69160				0.35	18.81	
6	-	-	-	-	5	270	-	-	65653				0.33	17.73	
7	8	43	0.52	0.05	5	352	76	-	57956	2.49	0.03	0.00	0.29	20.40	
8	-	-	-	-	23	256	-	-	3640933				83.74	932.08	
9	-	-	-	-	15	240	-	-	8650917				129.76	2076.22	
10	-	-	-	-	7	192	-	-	8606194				60.24	1652.39	
11	-	-	-	-	8	220	-	-	402986				3.22	88.66	
12	-	-	-	-	18	227	-	-	3880083				69.84	880.78	
13	-	-	-	-	8	188	-	-	8960968				71.69	1684.66	
14	7.3	62	0.74	0.05	8	185	94	-	8887410	551.02	6.58	0.44	71.10	1644.17	
15					48	140			8769371				420.93	1227.71	
16	-	-	-	-	68	190	-	-	8150739				554.25	1548.64	
17	-	-	-	-	66	216	-	-	8863228				584.97	1914.46	
18	-	-	-	-	63	196	-	-	6834762				430.59	1339.61	
19	-	-	-	-	38	192	-	-	3857576				146.59	740.65	
20	-	-	-	-	71	298	-	-	4935613				350.43	1470.81	
21	7.3	73	0.65	0.05	61	322	74	-	2072210	151.27	1.35	0.10	126.40	667.25	
22									3756540						
23	-	-	-	-			-	-	6650985						
24	-	-	-	-			-	-	6650985						
25	-	-	-	-			-	-	6650985						
26	-	-	-	-			-	-	6650985						
27	-	-	-	-			-	-	6650985						
28	-	-	-	-			-	-	6650985						
29									6650985						
30	-	-	-	-			-	-	6650985						
31	-	-	-	-			-	-	6650985						

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	Flow Daily Total (litres)	COD Kg/Day	ammonia Kg/Day	Daily Totals		
				Total Phosphoru mg/l	Suspended Solids mg/l	Total Solids mg/l					Total Phosphoru Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
February 2004													
1	-	-	-	-	9	262	-	6650885				59.86	1742.56
2	-	-	-	-	8	278	-	8840567				70.72	2457.68
3	7.7	88	0.04	0.05	22	226	114	11693850	1029.06	0.47	0.58	257.26	2642.81
4	-	-	-	-	-	-	-	14430890					
5					5	222		13986590				69.93	3105.02
6	-	-	-	-	5	216	-	4294365				21.47	927.58
7	-	-	-	-	5	100	-	2376518				11.88	237.65
8	-	-	-	-	5	126	-	2376518				11.88	299.44
9	-	-	-	-	5	346	-	2376518				11.88	822.28
10					5	362		2376518				11.88	860.30
11	7.9	55	0.04	0.08	8	250	-80	2301993	126.61	0.09	0.18	18.42	575.50
12	-	-	-	-	5	358	-	2121852				10.61	759.62
13	-	-	-	-	5	320	-	1998337				9.99	639.47
14	-	-	-	-	5	352	-	1892198				9.46	666.05
15	-	-	-	-	5	376	-	1804278				9.02	678.41
16	-	-	-	-	5	344	-	1747604				8.74	601.18
17	-	-	-	-	5	350	-	1164657				5.82	407.63
18	-	-	-	-	-	-	-	19657					
19	-	-	-	-	5	358	-	2137292				10.69	765.15
20	-	-	-	-			-	1453718					
21								1287165					
22	-	-	-	-	5	324	-	1146948				5.73	371.61
23	-	-	-	-	-	-	-	1048106					
24	-	-	-	-	-	-	-	847796					
25	7.8	60	1.23	0.05	10	340	53	5747	0.34	0.01	0.00	0.06	1.95
26	-	-	-	-	-	-	-	1638554					
27	-	-	-	-	-	-	-	450070					
28	-	-	-	-			-	11487					
29	-	-	-	-	-	-	-	7401					
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		Colour Pt Co units	Flow Daily total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Total Solids Kg/Day
				Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l				Total Phosphorus Kg/Day	Suspended Solids Kg/Day	
March 2004												
1	-	-	-	-	-	-	1822265					
2	-	-	-	-	-	-	880819					
3	7.7	22	0.02	0.05	5	356	781330	17.19	0.02	0.04	3.91	278.15
4	-	-	-	-	-	-	2060653					
5							4390157					
6	-	-	-	-	-	-	4390157					
7	-	-	-	-	-	-	4390157					
8	-	-	-	-	5	330	4390157				21.95	1448.75
9	-	-	-	-	12	342	4390157				52.68	1501.43
10	7.6	90	0.06	0.05	5	332	2418954	217.71	0.15	0.12	12.09	803.09
11	-	-	-	-	-	-	488809					
12	-	-	-	-	-	-	1231023					
13							43100					
14	-	-	-	-	-	-	35470					
15	-	-	-	-	-	-	4477256					
16	-	-	-	-	-	-	2571916					
17	-	-	-	-	-	-	3025279					
18	-	-	-	-	-	-	5267376					
19	-	-	-	-	-	-	5267376					
20	-	-	-	-	-	-	5267376					
21	-	-	-	-	-	-	5267376					
22	-	-	-	-	-	-	5267376					
23	-	-	-	-	-	-	5267376					
24	-	-	-	-	-	-	5267376					
25	-	-	-	-	-	-	5267376					
26	-	-	-	-	-	-	5267376					
27	-	-	-	-	-	-	5267376					
28	-	-	-	-	-	-	5267376					
29	-	-	-	-	-	-	5267376					
30	-	-	-	-	5	332	3384640				16.92	1123.70
31	8.2	55	2.01	0.05	5	394	734204	40.38	1.48	0.04	3.67	289.28

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	Flow Daily total (litres)	COD Kg/Day	ammonia N Kg/Day	Daily Totals		
				Total phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l					Total phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
April 2004													
1	-	-	-	-	5	366	-	1079687				5.40	395.17
2	-	-	-	-	5	348	-	942620				4.71	328.03
3	-	-	-	-	5	344	-	1240203				6.20	426.63
4	-	-	-	-	5	362	-	1195439				5.98	432.75
5	-	-	-	-	5	362	-	480383				2.40	173.90
6	-	-	-	-	5	350	-	1239200				6.20	433.72
7	8.1	39	1	0.05	5	378	79	523576	20.42	0.52	0.03	2.62	197.91
8	-	-	-	-	5	264	-	933779				4.67	246.52
9	-	-	-	-	5	346	-	493939				2.47	170.90
10	-	-	-	-	-	-	-	18111					
11	-	-	-	-	-	-	-	10550					
12	-	-	-	-	-	-	-	8730					
13	-	-	-	-	5	224	-	1586834				7.93	355.45
14	7.7	41	1.47	0.05	13	154	81	348247	14.28	0.51	0.02	4.53	53.63
15	-	-	-	-	8	252	-	2049294				16.39	516.42
16	-	-	-	-	5	286	-	1173519				5.87	335.63
17	-	-	-	-	12	232	-	2078375				24.94	482.18
18	-	-	-	-	5	302	-	2042378				10.21	616.80
19	-	-	-	-	6	144	-	1369428				8.22	197.20
20	8	62	0.14	0.17	17	316	84	1640345	101.70	0.23	0.28	27.89	518.35
21	-	-	-	-	-	-	-	1954886					
22	-	-	-	-	-	-	-	1954886					
23	-	-	-	-	-	-	-	1954886					
24	-	-	-	-	-	-	-	1954886					
25	-	-	-	-	-	-	-	1954886					
26	-	-	-	-	-	-	-	1954886					
27	-	-	-	-	-	-	-	1571288					
28	-	-	-	-	-	-	-	917136					
29	-	-	-	-	-	-	-	917136					
30	-	-	-	-	-	-	-	917136					
31	-	-	-	-	-	-	-	917136					

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	Flow Daily Total (litres)	COD Kg/Day	ammonia Kg/Day	Daily Totals	
				Total phosphoru mg/l	Suspended Solids mg/l	Total Solids mg/l					Total phosphoru Kg/Day	Suspended Solids Kg/Day
May 2004												
1	-	-	-	-	-	-	-	917136				
2	-	-	-	-	-	-	-	917136				
3	-	-	-	-	-	-	-	917136				
4	-	-	-	-	-	-	-	917136				
5	-	-	-	-	-	-	-	917136				
6	-	-	-	-	5	238	-	1290417			6.45	
7					5	176		1316276			6.58	231.66
8	-	-	-	-	5	276	-	904568			4.52	249.66
9	-	-	-	-	5	248	-	711310			3.56	176.40
10	-	-	-	-	5	240	-	369794			1.85	88.75
11	-	-	-	-	-	-	-	0				
12	7.8	55	0.08	0.05	5	346	119	0	0.00	0.00	0.00	0.00
13	-	-	-	-	-	-	-	0				
14	-	-	-	-	5	364	-	1615703			8.08	588.12
15	-	-	-	-	5	350	-	459138			2.30	160.70
16	-	-	-	-	5	382	-	244957			1.22	93.57
17	-	-	-	-	5	328	-	356			0.00	0.12
18	7.8	70	0.04	0.05	5	446	110	436978			2.18	194.89
19	-	-	-	-			-	206020				
20	-	-	-	-			-	1900				
21								0				
22	-	-	-	-			-	0				
23	-	-	-	-			-	473878				
24	-	-	-	-	-	-	-	1191				
25	-	-	-	-	-	-	-	631485				
26	-	-	-	-	-	-	-	336074				
27	-	-	-	-	9	368	-	170148			1.53	62.61
28								17416				
29	-	-	-	-			-	0				
30								0				
31	-	-	-	-	5	330	-	490529				

Bord Na Mona Energy Ltd, Mountdillon Pump, 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 phosphoru mg/l	Suspended Solids mg/l	Total Solids mg/l					Total phosphoru Kg/Day	Suspended Solids Kg/Day
June 2004												
1	-	-	-	-	5	348	-	161177				
2	-	-	-	-	-	-	-	137712				
3	7.7	75	0.14	0.05	5	418	120	241979	18.15	0.03	0.01	1.21
4								228646				101.15
5	-	-	-	-			-	876029				
6	-	-	-	-			-	1144109				
7	-	-	-	-	-	-	-	1144109				
8	-	-	-	-	-	-	-	1144109				
9	8	60	0.31	0.05	7	402	104	1144109				
10	-	-	-	-			-	1144109				
11								1144109				
12	-	-	-	-	-	-	-	1144109				
13	-	-	-	-	-	-	-	1144109				
14	-	-	-	-	-	-	-	1144109				
15	-	-	-	-	-	-	-	1144109				
16	-	-	-	-	-	-	-	1144109				
17	-	-	-	-	-	-	-	1144109				
18	-	-	-	-	-	-	-	1144109				
19	-	-	-	-	-	-	-	1144109				
20	-	-	-	-	-	-	-	1144109				
21	-	-	-	-	-	-	-	1144109				
22	-	-	-	-	-	-	-	1144109				
23	-	-	-	-	-	-	-	1144109				
24	7.6	70	1.21	0.05	5	246	138	1144109	80.09	1.38	0.06	5.72
25	-	-	-	-	-	-	-	1144109				281.45
26	-	-	-	-	-	-	-	1144109				
27	-	-	-	-	-	-	-	1144109				
28	-	-	-	-	-	-	-	1144109				
29	-	-	-	-	-	-	-	1144109				
30	-	-	-	-	-	-	-	1144109				
31	-	-	-	-	-	-	-	1144109				

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		Total Solids mg/l		Colour Pt Co		Flow Daily		COD Kg/Day		Ammonia as Kg/Day		Daily Totals		Total Solids Kg/Day		
July 2004																												
1	7.8	44	0.88	0.05	5	70	80												1144109									
2																			1144109									
3	-	-	-	-			-												1144109									
4	-	-	-	-			-												1144109									
5	-	-	-	-			-												1144109									
6	-	-	-	-			-												1144109									
7	-	-	-	-			-												1144109									
8	7.7	41	0.23	0.06	5	289	71												1144109						5.72		330.65	
9																			1144109									
10	-	-	-	-			-												1144109									
11	-	-	-	-			-												1144109									
12	-	-	-	-			-												1144109									
13	-	-	-	-			-												1144109									
14	-	-	-	-			-												1144109									
15	7.8	47	0.72	0.05	5	207	64												1144109						5.72		236.83	
16																			1144109									
17	-	-	-	-			-												1144109									
18	-	-	-	-			-												1144109			3023.79						
19	-	-	-	-			-												1144109									
20	-	-	-	-			-												1144109									
21	-	-	-	-			-												1144109									
22	7.8	29	0.95	0.08	5	260	94												1144109						5.72		297.47	
23					5	340													638068						3.19		216.94	
24	-	-	-	-	5	350	-												298636						1.50		104.87	
25	-	-	-	-	5	310	-												225203						1.13		69.81	
26	-	-	-	-	5	322	-												270062						1.35		86.96	
27	-	-	-	-	5	314	-												182788						0.91		57.40	
28	8.1	50	0.98	0.05	5	318	35												261384						1.31		83.12	
29	-	-	-	-	9	360	-												304889						2.74		109.76	
30					5	326													214911						1.07		70.06	
31	-	-	-	-		332	-												293912						1.47		97.58	

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	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
August 2004												
1	-	-	-	-	5	310	170516				0.85	52.86
2	-	-	-	-	5	310	183075				0.92	56.75
3	-	-	-	-	5	IS	105685				0.53	
4	8.2	43	1.11	0.05	5	346	306012				1.53	105.88
5	-	-	-	-	5	214	225872				1.13	48.34
6							25477					
7	-	-	-	-			5					
8	-	-	-	-	5	290	23				0.00	0.01
9	-	-	-	-	5	302	609881				3.05	184.18
10	7.9	44	0.8	0.05	5	298	11651				0.06	3.47
11	-	-	-	-			592893					
12	-	-	-	-	5	310	629907				3.15	195.27
13					5	280	684096				3.42	191.55
14	-	-	-	-	8	296	963				0.01	0.29
15	-	-	-	-	5	276	554973				2.77	153.17
16	-	-	-	-	5	308	483876				2.42	149.03
17	-	-	-	-			3551					
18	7.8	47	0.09	0.06	12	194	0				0.00	0.00
19	-	-	-	-	10	304	1053105				10.53	320.14
20							130630				0.00	0.00
21	-	-	-	-			974					
22	-	-	-	-	11	306	569155				6.26	174.16
23	-	-	-	-	5	228	1577284				7.89	359.62
24	-	-	-	-	12	238	1556452				18.68	370.44
25	7.9	60	0.7	0.05	5	266	718317				3.59	191.07
26	-	-	-	-	5	270	622161				3.11	167.98
27					5	296	758276				3.79	224.45
28	-	-	-	-	5	286	637522				3.19	182.33
29	-	-	-	-	5	278	37902				0.19	10.54
30							689936					
31	-	-	-	-	5	260	629436				3.15	163.65

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 Phosphoru Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
September 2004				Total Phosphoru mg/l	Suspended Solids mg/l	Total Solids mg/l						
1	7.7	36	0.02	0.05	5	334	338572				1.69	113.08
2	-	-	-	-	22	306	662946				14.58	202.86
3	-	-	-	-	5	274	430614				2.15	117.99
4	-	-	-	-	5	296	372139				1.86	110.15
5	-	-	-	-	5	294	260378				1.30	76.55
6	-	-	-	-	13	278	259973				3.38	72.27
7	-	-	-	-	9	305	224966				2.02	68.61
8	8.4	25	0.83	0.05	17	293	204920				3.48	60.04
9	-	-	-	-	5	340	214546				1.07	72.95
10	-	-	-	-	10	336	178313				1.78	59.91
11	-	-	-	-	26	304	222002				5.77	67.49
12	-	-	-	-	5	262	21524				0.11	5.64
13	8	67	0.82	0.05	5	274	33166				0.17	9.09
14	-	-	-	-	-	-	3483015				-	-
15	-	-	-	-	-	-	1159908				-	-
16	-	-	-	-	15	245	1405764				21.09	-
17	-	-	-	-	7	220	883902				6.19	194.46
18	-	-	-	-	-	-	2304829				0.00	0.00
19	-	-	-	-	-	-	1197476				-	-
20	-	-	-	-	-	-	2878094				-	-
21	-	-	-	-	-	-	1027507				-	-
22	7.7	45	0.59	0.05	5	224	1007690				5.04	225.72
23	-	-	-	-	-	-	597246				-	-
24	-	-	-	-	-	-	504032				-	-
25	-	-	-	-	-	-	504032				-	-
26	-	-	-	-	-	-	504032				-	-
27	-	-	-	-	-	-	504032				-	-
28	-	-	-	-	-	-	504032				-	-
29	-	-	-	-	-	-	504032				-	-
30	-	-	-	-	22	280	643786				14.16	180.26
31	-	-	-	-	-	-	-				-	-

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 phosphoru mg/l	Suspended Solids mg/l	Total Solids mg/l					Total phosphoru Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
October 2004													
1	-	-	-	-	46	280	280	679203				31.24	190.18
2	-	-	-	-	70	138	138	1740796				121.86	240.23
3	-	-	-	-	48	162	162	2449328				117.57	396.79
4	-	-	-	-	8	202	202	8714693				69.72	1760.37
5	-	-	-	-	12		-	4672690				56.07	
6	-	-	-	-	12	213	213	2178881				26.15	464.10
7	-	-	-	-	10	304	-	1393459				13.93	423.61
8					5	326		1393459				6.97	454.27
9	-	-	-	-	5	344	-	1393459				6.97	479.35
10	-	-	-	-	6	352	-	1393459				8.36	490.50
11	-	-	-	-	6	336	-	1393459				8.36	468.20
12	-	-	-	-	5	346	-	1393459				6.97	482.14
13	8.06	34	0.87	0.05	5	338	78	1393459	47.38	1.21	0.07	6.97	470.99
14	-	-	-	-	5	298	-	1393459				6.97	415.25
15					5	312		1393459				6.97	434.76
16	-	-	-	-	6	319	-	1393459				8.36	444.51
17	-	-	-	-	5	326	-	777389				3.89	253.43
18	-	-	-	-	10	310	-	706372				7.06	218.98
19	-	-	-	-	5	314	-	818964				4.09	257.15
20	7.6	10	0.99	0.05	5	292	72	988945	9.89	0.98	0.05	4.94	288.77
21	-	-	-	-	5	175	-	6467012				32.34	1131.73
22					5	102		2529224				12.65	257.98
23	-	-	-	-	5	50	-	6483512				32.42	324.18
24	-	-	-	-	5	146	-	6941094				34.71	1013.40
25	-	-	-	-	5	218	-	3103325				15.52	676.52
26	-	-	-	-	5	360	-	1935593				9.68	696.81
27	8	102	0.58	0.05	5	306	126	1993881	203.38	1.16	0.10	9.97	610.13
28	-	-	-	-	8	292	-	4771567				38.17	1393.30
29					10	248		7827629				78.28	1941.25
30	-	-	-	-	IS	332	-	10234					3.40
31	-	-	-	-	IS	IS	-	7142					

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

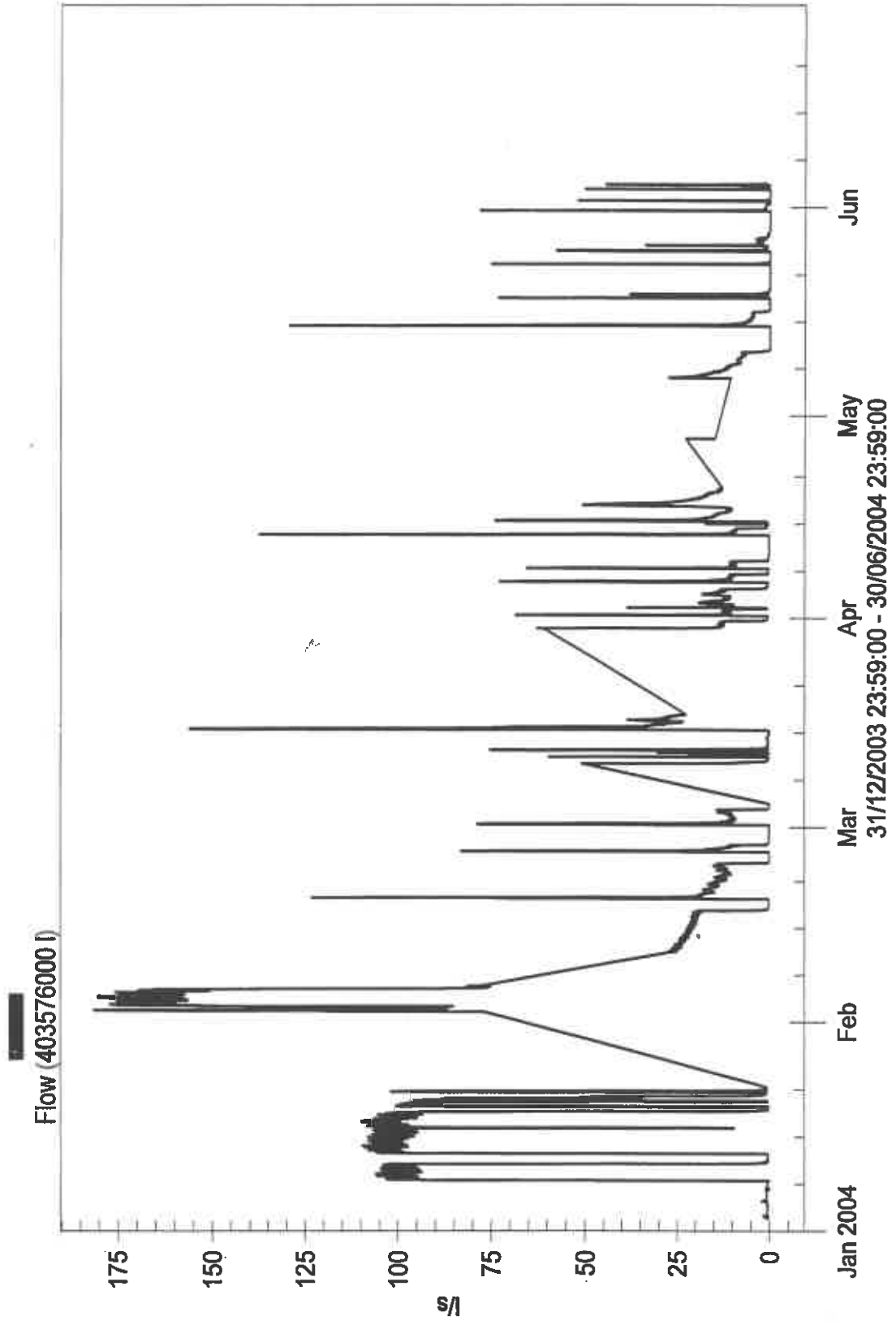
Month	pH	COD mg/l	ammonia N mg/l	Parameters			Colour Pt Co	Flow Daily total (litres)	COD Kg/Day	ammonia Kg/Day	Daily Totals		
				Total mg/l	Suspended Solids mg/l	Total Solids mg/l					Total phosphoru Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
November 2004													
1	-	-	-	-	6	394	-	5651735				33.91	2226.78
2	-	-	-	-	6	368	-	1624926				9.75	597.97
3	8	10	0.72	0.05	5	386	110	1433233	14.33	1.03	0.07	7.17	553.23
4	-	-	-	-	5	408	-	1145473				5.73	467.35
5					6	411		677559				4.07	278.48
6	-	-	-	-	6	420	-	1142948				6.86	480.04
7	-	-	-	-	5	416	-	589017				2.85	236.71
8	-	-	-	-	5	396	-	1133479				5.67	448.86
9	-	-	-	-	10	374	-	610353				6.10	228.27
10	7.8	86	0.35	0.2	8	450	117	833015	71.64	0.29	0.17	6.66	374.86
11	-	-	-	-			-	2134					
12								0					
13	-	-	-	-	9	324	-	0				0.00	0.00
14	-	-	-	-	6	304	-	1970938				11.83	599.17
15	-	-	-	-	6	334	-	570				0.00	0.19
16	-	-	-	-	-	-	-	0					
17	-	-	-	-	-	-	-	1969407					
18	-	-	-	-	12	153	-	3596470				43.16	550.26
19	-	-	-	-	6	172	-	2360537				14.16	406.01
20	-	-	-	-	5	188	-	5322372				26.61	1000.61
21	-	-	-	-	10	212	-	6512929				65.13	1380.74
22	-	-	-	-	15	258	-	6281779				94.23	1620.70
23	-	-	-	-	11	222	-	2343963				25.78	520.36
24	7.2	65	1.46	0.12	31	284	178	2983975	193.96	4.36	0.36	92.50	847.45
25	-	-	-	-	10	434	-	5101				0.05	2.21
26					6	414		1915586				11.49	793.05
27	-	-	-	-			-	89281					
28	-	-	-	-			-	129381					
29	-	-	-	-	5	326	-	4432705				22.16	1445.06
30	-	-	-	-	6	328	-	2837368				17.02	930.66
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 Kg/Day	Daily Totals		Total Solids Kg/Day
				Phosphorus mg/l	Total mg/l							Total phosphoru Kg/Day	Suspended Solids Kg/Day	
December 2004														
1	7.6	74	0.21	0.05	0.05	442	5	137	1507298	111.54	0.32	0.08	7.54	666.23
2	-	-	-	-	-	-	-	-	683665	-	-	-	-	-
3	-	-	-	-	-	-	-	-	4962	-	-	-	-	-
4	-	-	-	-	-	-	-	-	2132481	-	-	-	-	-
5	-	-	-	-	-	-	-	-	55204	-	-	-	-	-
6	-	-	-	-	-	-	-	-	2749861	-	-	-	-	-
7	-	-	-	-	-	-	-	-	84004	-	-	-	-	-
8	-	-	-	-	-	-	-	-	2648010	-	-	-	-	-
9	-	-	-	-	-	50	5	-	1223246	-	-	-	6.12	61.16
10	-	-	-	-	-	-	-	-	9816	-	-	-	-	-
11	-	-	-	-	-	292	5	-	128310	-	-	-	0.64	37.47
12	-	-	-	-	-	-	-	-	1733640	-	-	-	-	-
13	-	-	-	-	-	140	5	-	1177009	-	-	-	5.89	164.78
14	-	-	-	-	-	50	6	-	701923	-	-	-	4.21	35.10
15	8.1	32	1.19	0.05	0.05	57	5	101	1539444	49.26	1.83	0.08	7.70	87.75
16	-	-	-	-	-	-	-	-	2225739	-	-	-	-	-
17	-	-	-	-	-	-	-	-	2831457	-	-	-	-	-
18	-	-	-	-	-	-	-	-	2596103	-	-	-	-	-
19	-	-	-	-	-	-	-	-	3919206	-	-	-	-	-
20	-	-	-	-	-	-	-	-	3791145	-	-	-	-	-
21	-	-	-	-	-	-	-	-	3791145	-	-	-	-	-
22	7.8	73	0.88	0.05	0.05	74	17	148	3791145	276.75	3.34	0.19	64.45	280.54
23	-	-	-	-	-	-	-	-	3410290	-	-	-	-	-
24	-	-	-	-	-	-	-	-	1752656	-	-	-	-	-
25	-	-	-	-	-	-	-	-	1442016	-	-	-	-	-
26	-	-	-	-	-	-	-	-	1442016	-	-	-	-	-
27	-	-	-	-	-	-	-	-	1442016	-	-	-	-	-
28	-	-	-	-	-	-	-	-	1442016	-	-	-	-	-
29	-	-	-	-	-	-	-	-	1442016	-	-	-	-	-
30	-	-	-	-	-	-	-	-	1442016	-	-	-	-	-
31	8	28	0.89	0.05	0.05	320	11	132	762065	21.34	0.68	0.04	8.38	243.86

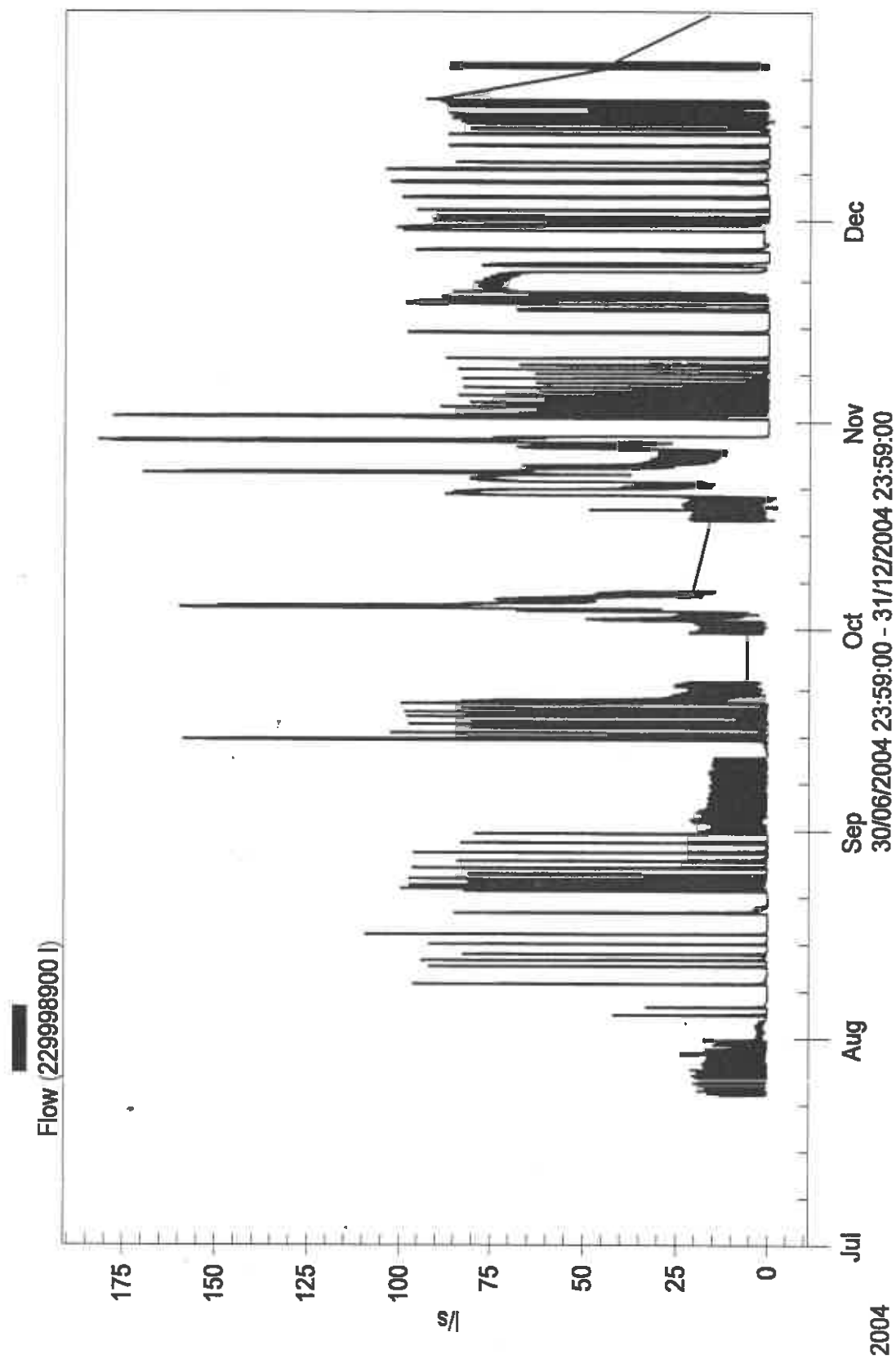
Mountdillon Composite Sampler

Lough Bannow



Mountdillon Composite Sampler

Lough Bannow



Appendix (ii)

Area	Pond	Month											
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
9 Greenhouse	CT 4	3/4	3/4	3/4	CR	CR	CR	CR	CR	CR	CR	CR	CR
	CT 5	3/4	3/4	3/4	CR	CR	CR	CR	CR	CR	CR	CR	CR
	CT 6	1/4	3/4	3/4	CR	CR	CR	CR	CR	CR	CR	CR	CR
	CH 1	CR	1/4	1/2	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/2
	CH 2	CR	CR	1/4	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/2
	CH 3	CR	CR	1/4	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/2
	CH 4	CR	CR	1/4	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/2
	CH 5	CR	CR	1/4	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/2
	CH 6	CR	1/4	1/2	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/2
	CH 7	CR	1/4	1/2	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/2
	CH 8	CR	1/4	1/2	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/2
	CH 9	CR	1/4	1/2	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/2
	CH 10	CR	1/4	1/2	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/2
	CH 11	CR	1/4	1/2	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/2
10 Milkhouse	DN 1	CR	1/4	1/2	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/2
	DN 2	CR	1/4	1/2	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/2
	DN 3	CR	1/4	1/2	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/2
	DN 4	CR	1/4	1/2	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/2
	DN 5	CR	1/4	1/2	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/2
	DL 1	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	DL 2	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	DL 3	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	DL 4	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	DL 5	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	DL 6	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	GN 1	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	GN 2	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	GN 3	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
11 Bedding	GN 4	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	GN 5	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	GN 6	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	MN 1	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	MN 2	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	MN 3	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	MN 4	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	MN 5	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	MN 6	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	ED 1	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	ED 2	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	ED 3	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	ED 4	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	ED 5	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
	ED 6	1/4	1/2	1/2	3/4	3/4	3/4	3/4	1/2	1/2	1/2	1/2	1/2
Milkhouse	MN 1	CR	CR	1/4	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/4	1/4

