



Our Reference: Vince Lopardi

1 August 1996

Mr Daryl Casey  
 General Manager Mining, Yallourn  
 Yallourn Energy Ltd  
 P O BOX 444  
 MOE 3825

Dear Mr Casey

**GROUNDWATER LICENCE NO. 2007403**

Please find enclosed a copy of your Groundwater Licence no. 2007403 which was issued by the Minister for Natural Resources, Geoff Coleman on 25 March 1996. The original licence document has already been sent to you.

Condition 6 of the licence states that the annual fee (as at the date of issue) is \$19,300.00. This amount is now due and we would be grateful to receive your cheque, at your earliest convenience so our records can be finalised. Please quote Statement No. 9003611 when making your payment.

Accounts for 1996/97 are due to be sent out in September. Prior to this occurring would you please advise whether you would prefer to pay in instalments.

If you have any queries in relation to this matter please do not hesitate to contact Vince Lopardi, Diversions Supervisor on (051) 39 3113.

Yours sincerely

for IAN WILSON  
 CHIEF EXECUTIVE

yenergy.l

# WATER ACT 1989

## Section 51

### GROUNDWATER LICENCE No 2007403 (Licence to take and use groundwater)

#### Objective

The objective of this licence is to allow the efficient depressurising of the Yallourn open cut mine whilst minimising adverse impacts on the Gippsland Groundwater Basin.

#### Definitions

In this licence-

“Mining Licence” means a mining licence issued under the provisions of the *Electricity Industry Act 1993*.

“Approved work plan” means the mining licence work plan applicable to Mining Licence No 5003.

“Regional monitoring program” means the monitoring program described in Part B of the approved work plan.

“Rehabilitation plan” means a rehabilitation plan approved under the provisions of the *Electricity Industry Act 1993*.

#### Preamble

The extraction of groundwater for the purpose of achieving safe and stable conditions in the Yallourn open cut mine is authorised under this Groundwater Licence issued by the Minister responsible for the *Water Act, 1989*. The administration of the licence may be delegated by the Minister to the Gippsland and Southern Rural Water Authority

The extraction of groundwater at mine sites in the Latrobe Valley results in a regional cone of depression of the groundwater and in ground subsidence.

The monitoring and reporting of regional groundwater and land level trends is to be carried out by the licensee as part of the approved work plan under the Mining Licence.

The Minister or his delegate may set annual charges under this licence to recover the costs incurred in:

- ensuring compliance with licence conditions;
- assessing and reviewing the regional monitoring program; and
- managing and administering the licence.

#### Licence Authorisation

Yallourn Energy Limited of PO Box 444 MOE 3825 is authorised to take and use groundwater subject to the following conditions:

1. This licence is valid for a period of thirty years from 1 September 1995
2. The licensee is authorised to take and use groundwater to facilitate mining for coal and generation of electrical energy and purposes incidental thereto.
3. The licensee is authorised to extract groundwater from the aquifers at quantities and during the times specified in the First Schedule or on application by the licensee such other quantities and during such other times as from time to time approved by the Minister or his delegate.
4. The licensee may vary the maximum monthly rate of extraction from any particular aquifer or the maximum annual volume to be extracted from any particular aquifer provided that the total monthly rate of extraction and the total annual volume from all aquifers is not exceeded and shall report at monthly intervals such variations as they occur to the Minister or his delegate.
5. The licensee may only take and use groundwater under this licence on the land with respect to which the licensee holds a mining licence for the Yallourn Energy mine.
6. Annual fee at date of issue \$19,300.
7. The licensee shall pay annual charges for the forthcoming year due under the licence in quarterly installments or on an annual basis as agreed between the licensee and the Minister or his delegate.
8. The licensee shall meter all groundwater extractions and shall keep an accurate record of the quantity of groundwater taken or used under this licence and allow the Minister or his delegate to inspect this record during normal business hours and to provide a copy of such record to the Minister or his delegate within seven days of a notice given by post to the licensee at the address contained in this licence.
9. The licensee shall provide to the Minister or his delegate annually details of the location of each bore from which groundwater is extracted under this licence.
10. By the issue of this licence the Minister or his delegate in no way accepts any liability for injury to any party arising as a consequence of any adverse effects that may be deemed to have been caused by the extraction of groundwater under the licence.
11. The licensee shall compensate any person whose existing authorised use of water is adversely and materially affected by the taking of water under this licence. The compensation may be either financial or may be constituted by the making available of, or granting access to, water. If the licensee is unable to or unwilling to make compensation by the making available of or granting access to water in the quantities previously enjoyed by the person so affected then the amount of financial compensation payable

shall be that as determined by a Valuer nominated by the President of the Victorian Division of The Australian Institute of Valuers and Land Economists (Inc)

12. The licensee shall undertake a regional monitoring program of the nature scope and extent as that previously undertaken by the State Electricity Commission of Victoria as detailed in the approved work plan and the information is to be provided on request to the Minister or his delegate and as required under the work plan.
13. All information obtained from the regional monitoring program belongs to the generation companies, the State Electricity Commission of Victoria and the Minister jointly.
14. The licensee must maintain the existing data bases, and undertake additional work that may be required from time to time by the Minister or his delegate to maintain the effectiveness of the regional monitoring program.
15. If the licensee fails to provide the information required under condition 12 the Minister or his delegate may undertake any necessary work to obtain the information and recover the costs of such work from the licensee.
16. The regional monitoring program and any remedial measures must be incorporated in the approved work plan and the rehabilitation plan to the satisfaction of the Minister or his delegate.
17. The licensee shall comply with the provisions in its mining licence, approved work plan and the rehabilitation plan dealing with the regional monitoring program and remedial action.



**GEOFF COLEMAN**  
**MINISTER FOR NATURAL RESOURCES**

Date *25-3-96*

## FIRST SCHEDULE

Year	Haunted Hill Gravels Aquifer		Morwell Formation Aquifer		Total Annual Volume ML
	Rate of extraction ML/Month	Annual Volume ML	Rate of extraction ML/Month	Annual Volume ML	
1996	31.5	378.4	39.4	473.0	851
1997	42.1	504.6	78.8	946.1	1451
1998	42.1	504.6	118.3	1419.1	1924
1999	42.1	504.6	118.3	1419.1	1924
2000	63.1	756.9	157.7	1892.2	2649
2001	63.1	756.9	157.7	1892.2	2649
2002	52.6	630.7	157.7	1892.2	2523
2003	45.6	547.5	182.5	2190.0	2738
2004	45.6	547.5	182.5	2190.0	2738
2005	45.6	547.5	182.5	2190.0	2738
2006	53.2	638.8	182.5	2190.0	2829
2007	54.8	657.0	188.6	2263.0	2920
2008	60.8	730.0	188.6	2263.0	2993
2009	60.8	730.0	194.7	2336.0	3066
2010	76.0	912.5	194.7	2336.0	3249
2011	76.0	912.5	194.7	2336.0	3249
2012	76.0	912.5	194.7	2336.0	3249
2013	91.3	1095.0	194.7	2336.0	3431
2014	91.3	1095.0	197.7	2372.5	3468
2015	91.3	1095.0	197.7	2372.5	3468
2016	76.0	912.5	197.7	2372.5	3285
2017	76.0	912.5	182.5	2190.0	3103
2018	76.0	912.5	182.5	2190.0	3103
2019	60.8	730.0	167.3	2007.5	2738
2020	60.8	730.0	167.3	2007.5	2738
2021	45.6	547.5	152.1	1825.0	2373
2022	45.6	547.5	152.1	1825.0	2373
2023	45.6	547.5	136.9	1642.5	2190
2024	30.4	365.0	121.7	1460.0	1825
2025	0.0	0.0	106.5	1277.5	1278

**Attachment 2.**  
**Yallourn Mine Alliance**  
**Bore Numbers**  
**2004/05**

This bore list is an updated version of the list provided in Attachment A, as recorded annually for the Latrobe Valley Regional Monitoring Program.

***Source:***

Regional Ground Water Committee

Latrobe Valley Regional Groundwater and Land Level Annual Monitoring Report.

**Attachment 2.**  
**Yallourn Mine Alliance**  
**Bore Numbers**  
**2004/05**

PARISHNUMBER	BORENUMBER	INSTRUMENTID	JOBID	READINGTIME	WLTC
33647	445	v03	8505	08/12/2004	8125
33647	445	v04	8505	08/12/2004	6457
33647	445	v05	8505	08/12/2004	6532
33647	445	v06	8505	08/12/2004	5461
33647	445	v08	8505	08/12/2004	5456
33647	445	v09	8505	08/12/2004	6714
33647	445	v10	8505	08/12/2004	6042
33020	3056	s01	8505	08/12/2004	
33647	454	s01	8505	08/12/2004	23.4
33647	485	s01	8505	08/12/2004	81.4
33647	494	v09	8505	08/12/2004	7377
33457	323	s01	8505	08/12/2004	63.1
33457	324	s01	8505	08/12/2004	7.2
33457	325	s01	8505	08/12/2004	
33457	330	s01	8505	08/12/2004	56
33457	340	v04	8505	08/12/2004	4145
33457	340	v05	8505	08/12/2004	4894
33457	340	v06	8505	08/12/2004	5180
33457	340	v07	8505	08/12/2004	4125
33457	340	v12	8505	08/12/2004	5096
33457	340	v14	8505	08/12/2004	6951
33457	340	v16	8505	08/12/2004	7986
33457	340	v17	8505	08/12/2004	1555
33457	343	s01	8505	08/12/2004	32.8
33457	344	v01	8505	08/12/2004	5334
33457	344	v02	8505	08/12/2004	5072
33457	344	v03	8505	08/12/2004	6827
33457	344	v04	8505	08/12/2004	6605
32431	93	s01	8505	08/12/2004	90.4
32431	94	s01	8505	08/12/2004	121.3
32431	96	s01	8505	08/12/2004	122.5
32431	97	s01	8505	08/12/2004	69.6
33627	32	s01	8505	08/12/2004	13.4
33627	34	s01	8505	08/12/2004	45.8
33627	36	s01	8505	08/12/2004	24.9
33627	37	s01	8505	08/12/2004	5.9
33627	38	s01	8505	08/12/2004	
33604	165	v01	8505	08/12/2004	6981
33604	167	s01	8505	08/12/2004	139
33604	176	s01	8505	08/12/2004	78.6
33604	198	s01	8505	08/12/2004	73.4

PARISHNUMBER	BORENUMBER	INSTRUMENTID	JOBID	READINGTIME	WLTC
33604	205	s01	8505	08/12/2004	79.8
33604	212	s01	8505	08/12/2004	35.5
32762	177	s01	8505	08/12/2004	106.7
32762	188	s01	8505	08/12/2004	107.7
32762	189	s01	8505	08/12/2004	108.1
32762	196	s01	8505	08/12/2004	104.5
32762	204	s01	8505	08/12/2004	
32762	207	s01	8505	08/12/2004	86.3
32762	220	s01	8505	08/12/2004	
32668	46	s01	8505	08/12/2004	47.7
32668	54	s01	8505	08/12/2004	35.5
32668	66	s01	8505	08/12/2004	0.6
33502	51	s01	8505	08/12/2004	174.8
33830	197	s01	8505	08/12/2004	22.3
33841	47	s01	8505	08/12/2004	15.5
33841	52	s01	8505	08/12/2004	13.3
32508	56	s01	8505	08/12/2004	19.3
32508	58	s01	8505	08/12/2004	4.3
32508	341	s01	8505	08/12/2004	8.8
33626	24	s01	8505	08/12/2004	34.9
33626	25	s01	8505	08/12/2004	83.3
32271	11	s01	8505	08/12/2004	
33909	7	s01	8505	08/12/2004	36.4
32183	195	s01	8505	16/06/2004	24.2
32183	196	s01	8505	15/06/2004	5.8
33020	1967	s01	8505	15/06/2004	44.4
33020	1979	s01	8505	15/06/2004	43.1
33020	2268	s01	8505	15/06/2004	11.7
33020	2269	s01	8505	15/06/2004	3.9
33020	2310	s01	8505	15/06/2004	25.4
33020	2472	s01	8505	15/06/2004	14.3
33020	2676	s01	8505	15/06/2004	18.4
33020	2678	s01	8505	15/06/2004	39.1
33020	2809	v02	8505	15/06/2004	5687
33020	2809	v03	8505	15/06/2004	5943
33020	2809	v04	8505	15/06/2004	6388
33020	2809	v06	8505	15/06/2004	6655
33020	2809	v07	8505	15/06/2004	7297
33020	2809	v08	8505	15/06/2004	7604
33020	2809	v09	8505	15/06/2004	8138
33020	2809	v10	8505	15/06/2004	7281
33020	2809	v12	8505	15/06/2004	6028
33020	2809	v13	8505	15/06/2004	6946
33020	2809	v14	8505	15/06/2004	6243
33020	2810	v04	8505	15/06/2004	5308
33020	2810	v05	8505	15/06/2004	6039
33020	2810	v07	8505	15/06/2004	6491
33020	2810	v09	8505	15/06/2004	7276



PARISHNUMBER	BORENUMBER	INSTRUMENTID	JOBID	READINGTIME	WLTC
33020	2810	v10	8505	15/06/2004	7332
33020	2883	v01	8505	15/06/2004	7366
33020	2883	v02	8505	15/06/2004	8080
33647	433	s01	8505	15/06/2004	6.1
33647	445	v03	8505	15/06/2004	8128
33647	445	v04	8505	15/06/2004	6487
33647	445	v05	8505	15/06/2004	6549
33647	445	v09	8505	15/06/2004	6719
33647	445	v10	8505	15/06/2004	6051
33647	454	s01	8505	15/06/2004	23.6
33647	485	s01	8505	15/06/2004	82
33647	493	v01	8505	15/06/2004	5371
33647	493	v02	8505	15/06/2004	6414
33647	493	v03	8505	15/06/2004	6323
33647	493	v04	8505	15/06/2004	7528
33647	494	v09	8505	15/06/2004	7379
33457	323	s01	8505	15/06/2004	63.4
33457	324	s01	8505	15/06/2004	7.8
33457	325	s01	8505	15/06/2004	
33457	330	s01	8505	15/06/2004	56.3
33457	340	v01	8505	15/06/2004	4622
33457	340	v03	8505	15/06/2004	4550
33457	340	v04	8505	15/06/2004	4152
33457	340	v05	8505	15/06/2004	4902
33457	340	v06	8505	15/06/2004	5189
33457	340	v07	8505	15/06/2004	4134
33457	340	v11	8505	15/06/2004	6335
33457	340	v12	8505	15/06/2004	5100
33457	340	v14	8505	15/06/2004	6958
33457	340	v16	8505	15/06/2004	7989
33457	340	v17	8505	15/06/2004	1559
33457	343	s01	8505	15/06/2004	33.2
33457	344	v01	8505	15/06/2004	5339
33457	344	v02	8505	15/06/2004	5077
33457	344	v03	8505	15/06/2004	6838
33457	344	v04	8505	15/06/2004	6613
32431	93	s01	8505	15/06/2004	106.9
32431	94	s01	8505	15/06/2004	122.5
32431	96	s01	8505	15/06/2004	123
32431	97	s01	8505	15/06/2004	69.3
33627	32	s01	8505	15/06/2004	13.5
33627	34	s01	8505	15/06/2004	45.2
33627	36	s01	8505	15/06/2004	25.6
33627	37	s01	8505	15/06/2004	6.1
33627	38	s01	8505	15/06/2004	
33627	42	s01	8505	15/06/2004	9.8
33627	43	s01	8505	15/06/2004	3.8
33627	44	s01	8505	15/06/2004	1

PARISHNUMBER	BORENUMBER	INSTRUMENTID	JOBID	READINGTIME	WLTC
33604	165	v01	8505	15/06/2004	6990
33604	176	s01	8505	15/06/2004	78.7
33604	198	s01	8505	15/06/2004	73.5
33604	205	s01	8505	15/06/2004	80.3
33604	212	s01	8505	15/06/2004	35.6
32762	177	s01	8505	15/06/2004	107.1
32762	188	s01	8505	15/06/2004	108.1
32762	189	s01	8505	15/06/2004	108.7
32762	196	s01	8505	15/06/2004	120.7
32762	204	s01	8505	15/06/2004	
32762	207	s01	8505	15/06/2004	86.3
32762	220	s01	8505	15/06/2004	
32762	221	s01	8505	15/06/2004	132.3
32668	46	s01	8505	15/06/2004	47.8
32668	54	s01	8505	15/06/2004	36.1
32668	66	s01	8505	15/06/2004	0.6
33502	51	s01	8505	15/06/2004	175.4
33830	197	s01	8505	15/06/2004	22.4
33841	47	s01	8505	15/06/2004	15.7
33841	52	s01	8505	15/06/2004	13.8
32508	56	s01	8505	15/06/2004	20
32508	58	s01	8505	15/06/2004	5.1
32508	341	s01	8505	15/06/2004	9.4
33626	24	s01	8505	15/06/2004	35.2
33626	25	s01	8505	15/06/2004	84.1
32271	11	s01	8505	15/06/2004	
33909	7	s01	8505	15/06/2004	37
33072	3054	s01	8505	16/07/2004	34.98
33072	3190	v04	8505	16/07/2004	6869
33072	3190	v05	8505	16/07/2004	5659
33072	3190	v06	8505	16/07/2004	3365
33072	3190	v07	8505	16/07/2004	6518
33072	3190	v08	8505	16/07/2004	5920
33072	3190	v09	8505	16/07/2004	5912
33273	3263	s01	8505	16/07/2004	35.27
33273	3270	s01	8505	16/07/2004	19.28
33273	3271	s01	8505	16/07/2004	9.94
33273	3288	s01	8505	16/07/2004	19.47
33273	3369	v01	8505	16/07/2004	7940
33273	3567	s01	8505	16/07/2004	45.48
33273	3570	s01	8505	16/07/2004	73.56
33273	3607	s01	8505	16/07/2004	55.42
33273	3615	s01	8505	16/07/2004	23.15
33273	3694	s01	8505	16/07/2004	8.66
33273	3780	v01	8505	16/07/2004	8148
32749	1095	s01	8505	16/07/2004	57.98
32749	1320	s01	8505	16/07/2004	42.73
32749	1333	s01	8505	16/07/2004	36.48

PARISHNUMBER	BORENUMBER	INSTRUMENTID	JOBID	READINGTIME	WLTC
32749	1348	s01	8505	16/07/2004	143.98
32749	1502	s01	8505	16/07/2004	20
32749	1631	v02	8505	16/07/2004	6055
32749	1631	v03	8505	16/07/2004	6464
32749	1631	v04	8505	16/07/2004	6835
32749	1631	v05	8505	16/07/2004	6338
32749	1631	v06	8505	16/07/2004	5393
32749	1632	s01	8505	16/07/2004	10.35
32749	1691	v02	8505	16/07/2004	6829
32749	1691	v03	8505	16/07/2004	6241
32749	1691	v04	8505	16/07/2004	4260
32749	1719	s01	8505	16/07/2004	33.41
32749	1726	s01	8505	16/07/2004	132.18
33993	122	s01	8505	16/07/2004	98.2
33993	135	s01	8505	16/07/2004	35.25
33993	152	s01	8505	16/07/2004	60.83
33273	3726	s01	8505	13/07/2004	
33273	3787	s01	8505	13/07/2004	
33273	3789	s01	8505	13/07/2004	
33273	3799	s01	8505	13/07/2004	70.14
33962	34	s01	8505	13/07/2004	11.96
33962	43	s01	8505	13/07/2004	
33962	49	s01	8505	13/07/2004	
33962	55	s01	8505	13/07/2004	
33072	3054	s01	8505	05/01/2005	35.23
33072	3190	v04	8505	05/01/2005	6883
33072	3190	v05	8505	05/01/2005	5672
33072	3190	v06	8505	05/01/2005	3159
33072	3190	v07	8505	05/01/2005	6517
33072	3190	v08	8505	05/01/2005	5928
33072	3190	v09	8505	05/01/2005	5923
33273	3263	s01	8505	05/01/2005	35.3
33273	3270	s01	8505	05/01/2005	19.52
33273	3271	s01	8505	05/01/2005	9.33
33273	3288	s01	8505	05/01/2005	19.68
33273	3369	v01	8505	05/01/2005	7945
33273	3567	s01	8505	05/01/2005	45.48
33273	3570	s01	8505	05/01/2005	73.63
33273	3607	s01	8505	05/01/2005	74.5
33273	3615	s01	8505	05/01/2005	23.29
33273	3694	s01	8505	05/01/2005	8.12
33273	3780	v01	8505	05/01/2005	8157
32749	1095	s01	8505	05/01/2005	57.99
32749	1320	s01	8505	05/01/2005	42.3
32749	1333	s01	8505	05/01/2005	36.84
32749	1348	s01	8505	05/01/2005	144.3
32749	1502	s01	8505	05/01/2005	19.38
32749	1631	v02	8505	05/01/2005	6061

PARISHNUMBER	BORENUMBER	INSTRUMENTID	JOBID	READINGTIME	WLTC
32749	1631	v03	8505	05/01/2005	6471
32749	1631	v04	8505	05/01/2005	6842
32749	1631	v05	8505	05/01/2005	6322
32749	1631	v06	8505	05/01/2005	5390
32749	1632	s01	8505	05/01/2005	10.3
32749	1691	v02	8505	05/01/2005	6840
32749	1691	v03	8505	05/01/2005	6247
32749	1691	v04	8505	05/01/2005	4438
32749	1719	s01	8505	05/01/2005	33.4
32749	1726	s01	8505	05/01/2005	136.4
33993	122	s01	8505	05/01/2005	98.43
33993	135	s01	8505	05/01/2005	34.19
33993	152	s01	8505	05/01/2005	61.66
33273	3799	s01	8505	04/01/2005	70.12
33962	34	s01	8505	04/01/2005	11.78
33273	3726	s01	8505	04/01/2005	
33273	3787	s01	8505	04/01/2005	
33273	3788	s01	8505	04/01/2005	
33273	3789	s01	8505	04/01/2005	
33962	43	s01	8505	04/01/2005	
33962	49	s01	8505	04/01/2005	
33962	55	s01	8505	04/01/2005	
32183	195	s01	8505	10/12/2004	24.5
32183	196	s01	8505	10/12/2004	3.9
33020	1967	s01	8505	10/12/2004	44.5
33020	1979	s01	8505	10/12/2004	41.7
33020	2268	s01	8505	10/12/2004	11.8
33020	2269	s01	8505	10/12/2004	4
33020	2310	s01	8505	10/12/2004	25.4
33020	2472	s01	8505	10/12/2004	13.9
33020	2676	s01	8505	10/12/2004	18.6
33020	2678	s01	8505	10/12/2004	39.6
33020	2809	v02	8505	10/12/2004	5690
33020	2809	v03	8505	10/12/2004	5950
33020	2809	v04	8505	10/12/2004	6393
33020	2809	v06	8505	10/12/2004	6657
33020	2809	v07	8505	10/12/2004	7302
33020	2809	v08	8505	10/12/2004	7604
33020	2809	v09	8505	10/12/2004	8138
33020	2809	v10	8505	10/12/2004	7280
33020	2809	v12	8505	10/12/2004	6027
33020	2809	v13	8505	10/12/2004	6947
33020	2809	v14	8505	10/12/2004	6242
33020	2810	v04	8505	10/12/2004	5322
33020	2810	v05	8505	10/12/2004	6052
33020	2810	v07	8505	10/12/2004	6498
33020	2810	v09	8505	10/12/2004	7281
33020	2810	v10	8505	10/12/2004	7337

PARISHNUMBER	BORENUMBER	INSTRUMENTID	JOBID	READINGTIME	WLTC
33020	2883	v01	8505	10/12/2004	7365
33020	2883	v02	8505	10/12/2004	8084
33647	433	s01	8505	10/12/2004	6.1
33647	445	v03	8505	10/12/2004	8132
33647	445	v04	8505	10/12/2004	6512
33647	445	v05	8505	10/12/2004	6561
33647	445	v06	8505	10/12/2004	5460
33647	445	v08	8505	10/12/2004	5459
33647	445	v09	8505	10/12/2004	6722
33647	445	v10	8505	10/12/2004	6059
33647	489	v03	8505	10/12/2004	8063
33647	489	v04	8505	10/12/2004	6587
33647	489	v05	8505	10/12/2004	7712
33647	489	v06	8505	10/12/2004	7342
33647	493	v01	8505	10/12/2004	5371
33647	493	v02	8505	10/12/2004	6412
33647	493	v03	8505	10/12/2004	6320
33647	493	v04	8505	10/12/2004	7524
33647	494	v09	8505	10/12/2004	7383
33457	323	s01	8505	10/12/2004	63.7
33457	324	s01	8505	10/12/2004	8
33457	325	s01	8505	10/12/2004	
33457	330	s01	8505	10/12/2004	56.5
33457	340	v03	8505	10/12/2004	4686
33457	340	v04	8505	10/12/2004	4162
33457	340	v05	8505	10/12/2004	4901
33457	340	v06	8505	10/12/2004	5201
33457	340	v12	8505	10/12/2004	5103
33457	340	v14	8505	10/12/2004	6959
33457	340	v16	8505	10/12/2004	7986
33457	340	v17	8505	10/12/2004	1557
33457	343	s01	8505	10/12/2004	33.4
33457	344	v01	8505	10/12/2004	5344
33457	344	v02	8505	10/12/2004	5078
33457	344	v03	8505	10/12/2004	6846
33457	344	v04	8505	10/12/2004	6622
32431	93	s01	8505	10/12/2004	107.4
32431	94	s01	8505	10/12/2004	122.4
32431	96	s01	8505	10/12/2004	123.6
32431	97	s01	8505	10/12/2004	69.9
33627	32	s01	8505	10/12/2004	13.7
33627	34	s01	8505	10/12/2004	46.9
33627	36	s01	8505	10/12/2004	26.2
33627	37	s01	8505	10/12/2004	8.4
33627	42	s01	8505	10/12/2004	9.6
33627	43	s01	8505	10/12/2004	3.6
33627	44	s01	8505	10/12/2004	0.9
33604	165	v01	8505	10/12/2004	7009

PARISHNUMBER	BORENUMBER	INSTRUMENTID	JOBID	READINGTIME	WLTC
33604	198	s01	8505	10/12/2004	73.6
33604	205	s01	8505	10/12/2004	79.5
33604	212	s01	8505	10/12/2004	35.5
32762	177	s01	8505	10/12/2004	107.5
32762	188	s01	8505	10/12/2004	108.5
32762	189	s01	8505	10/12/2004	109
32762	196	s01	8505	10/12/2004	116.8
32762	207	s01	8505	10/12/2004	68.3
32762	220	s01	8505	10/12/2004	
32762	221	s01	8505	10/12/2004	133.1
32668	46	s01	8505	10/12/2004	47.7
32668	54	s01	8505	10/12/2004	36.7
32668	66	s01	8505	10/12/2004	0.6
33502	51	s01	8505	10/12/2004	176
33830	197	s01	8505	10/12/2004	22.4
33841	47	s01	8505	10/12/2004	15.8
33841	52	s01	8505	10/12/2004	143
32508	56	s01	8505	10/12/2004	20
32508	58	s01	8505	10/12/2004	5.3
32508	341	s01	8505	10/12/2004	9.8
33626	24	s01	8505	10/12/2004	35.5
33626	25	s01	8505	10/12/2004	84.9
32271	11	s01	8505	10/12/2004	
33909	7	s01	8505	10/12/2004	37.7
33020	2204	s01	3111590	03/06/2004	19.5
33020	2477	s01	3111590	03/06/2004	78.2
33020	3298	v01	3111590	03/06/2004	5245
33020	3298	v02	3111590	03/06/2004	5781
33020	3298	v04	3111590	03/06/2004	6961
33647	426	s01	3111590	03/06/2004	25.5
33647	442	s01	3111590	03/06/2004	19
33647	487	s01	3111590	03/06/2004	34.5
33647	495	s01	3111590	03/06/2004	48
33647	496	v02	3111590	03/06/2004	7578
33647	496	v01	3111590	03/06/2004	7536
33647	496	v03	3111590	03/06/2004	9119
33647	496	v04	3111590	03/06/2004	9009
33647	496	v05	3111590	03/06/2004	9433

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**REGIONAL MONITORING PROGRAM  
LATROBE VALLEY OPEN CUT COAL MINES**

**PREAMBLE**

These requirements are to form part of the Approved Work Plan for each of the three open cut coal mines at Morwell, Yallourn and Loy Yang under the provisions of the Mineral Resources Development Act 1990. They outline the obligations and requirements in respect to monitoring and predicting changes in regional groundwater levels and land levels associated with groundwater extraction from the mines.

Over the past 20 or so years the SECV has undertaken an extensive range of groundwater studies and investigations in the Latrobe Valley. Most importantly the work includes a regional groundwater monitoring network, regional land level surveys, and modelling to predict future changes in both groundwater levels and land levels as a result of mining operations. These programs continue to be, carried out by Yallourn Energy Ltd., Hazelwood Power Corporation Ltd. and Loy Yang Power Ltd. The purpose of this attachment is to ensure the continuation of these regional monitoring and assessment programs.

The requirements specified in this attachment are directed at:

- . maintaining an appropriate regional monitoring and assessment program;
- . providing a mechanism to cooperatively adjust and refine the regional program to take account of:
  - results generated by the program;
  - changes in mining and depressurising activity;
  - emerging regional issues associated with depressurising activities;
  - advances in technology; and
- . maintaining a cost effective program.

**REGIONAL MONITORING PROGRAM**

1. A regional monitoring program will be undertaken to record and predict changes in groundwater levels and land levels. The program shall include:-
  - . Groundwater Monitoring;
  - . Groundwater Modelling;
  - . Land Level Surveying; and
  - . Land Level Modelling.
2. For the purposes of this attachment, the region that shall be observed comprises the area bounded by the coordinates (AMG 436000E, 5742000N and 4250000E, 5754000N and 447000E, 5785500N and 521000E, 5801000N and 521000E, 5766000N and 476000E, 5754000N and 450000E, 5753000N) as shown in the attached plan.

Yallourn Mine Work Plan, Part B (Environmental Monitoring)  
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3. A groundwater monitoring network will be maintained in the region. Sufficient data will be collected to reliably monitor and predict regional groundwater levels and trends. Databases will be maintained to store and retrieve data related to these activities.
4. The bores included in the regional groundwater monitoring network together with the monitoring frequency are listed in Table A.
5. Standing water levels shall be measured according to standard operating procedures.
6. All data shall be verified before submitting for storage. Measurements shall be checked against previous measurements for that bore to detect anomalies such as:
  - incorrect recording of data;
  - the casing has collapsed or become perforated;
  - the screen or slots have become blocked.
7. The occurrence and cause of data anomalies shall be recorded and procedures instituted to prevent their recurrence.
8. Preventative maintenance shall be carried out to all surface fittings, bores shall be kept secure from illegal use, vandalism or contamination.
9. The structural condition of the bores shall be verified to ascertain if:-
  - the casing has collapsed or become perforated;
  - the screen or slots have become blocked.
10. All damaged or malfunctioning bores shall be repaired, substituted or replaced.
11. All unwanted damaged or failed bores shall be decommissioned.

**Groundwater Modelling**

12. Groundwater modelling of the region shall be performed to assist in predicting the effects of mine depressurising on regional groundwater levels.
13. Reports and results of modelling runs shall contain the predictions, previous predictions and actual values for groundwater extractions and potentiometric levels of groundwater.

**Land Level Surveying**

14. Land Level Surveys of the region shall be undertaken to determine the extent of land subsidence associated with mine depressurising.
15. Survey intervals and reports of survey results shall be carried out at no greater than 5 year intervals and more frequently where significant subsidence is being recorded. The next program will be



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completed by the year 1996.

16. Surveys will undertaken to not less than third order accuracy.

### Land Level Modelling

17. Land level modelling of the region shall be performed to assist in predicting the effects of groundwater depressurisation on land subsidence.

### ARRANGEMENTS FOR MANAGING THE PROGRAM

18. The conduct of the monitoring, modelling and reporting is to be reviewed by the Regional Monitoring Committee having representatives of Yallourn Energy Pty Ltd, Hazelwood Power Corporation, Loy Yang Power, Department of Agriculture, Energy and Minerals and the Minister responsible for the *Water Act* or his delegate. The Committee may make recommendations to the Minister responsible for the *Water Act* or his delegate to amend the regional program in order to:

. maintain and/or enhance the regional monitoring and assessment program; and

. to adjust and refine the regional program to take account of:

- results generated by the program;
- changes in mining and depressurising activity;
- emerging regional issues associated with depressurising activities; and
- advances in technology.

. maintain a cost effective program.

19. The program shall be consistent with the programs previously carried out by the State Electricity Commission of Victoria to determine the impacts of dewatering/depressurisation both on site and regionally must be maintained to the satisfaction of the Inspector and the Minister responsible for the *Water Act* or his delegate.

### REPORTING

20. The licensee shall ensure that results of the regional monitoring program are reported to the Minister responsible for the *Water Act* or his delegate and the Environmental Review Committee annually and at whatever times required by the Groundwater Licence.

21. An annual report shall be prepared each year by September detailing:

- a. the monitoring activity undertaken in the past year
- b. any amendments to the monitoring network
- c. any issues arising from the monitoring results including significant variations to predicted trends

22. The annual report shall be made available to members of the public upon request.

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23. A comprehensive review shall occur at not less than at 5 yearly intervals, or more frequently if circumstances change or as deemed necessary by the Regional Monitoring Committee.
24. The comprehensive review shall include:
  - a. detailed analysis of measured regional groundwater levels and trends;
  - b. detailed analysis of measured regional land subsidence and trends;
  - c. contour maps of regional potentiometric surface levels for the main aquifers;
  - d. contour maps of regional land subsidence;
  - e. results from groundwater and land subsidence models;
  - f. based on the modelling, detailed predictions of future regional groundwater and land level trends;
  - g. any issues arising from the monitoring results including significant variations to previously predicted trends;
  - h. recommendations to amend and enhance the regional monitoring program;
  - i. where necessary, recommendations to manage regional issues resulting from mine depressurisation.
25. The licensee shall ensure that results of the comprehensive review are reported to the Minister responsible for the *Water Act* or his delegate.
26. The next review will be completed in 1996/97.

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TABLE A

SEC Bore_id	Inter Seam-Id	Seam-Id	Aquifer	Easting	Northing	Transducer (m)	Monitored front	Interval Screen To (m)	Readings per year
51967	s01		Traralgon	470938	5770583		569.5	591.5	3
51979	s01		Traralgon	471063	5770578				3
52179	s02	bst	Buwal	459746	5760120		204	231	6
52204	s01	s219	Traralgon	465327	5762997		357	360	3
52310	s01		Morwell	469683	5772517		320	333	3
52472	w01		Morwell	466958	5769637		466.1	479	3
52477	s01		Traralgon	460442	5763006		171	177	3
52594	w01	s207	Traralgon	462932	5760496		110.7	123.8	3
52676	s01	s207	Traralgon	464241	5773325		672.5	692	3
52678	s01	s000	Basement	469681	5772509		694	694	3
52809	v01		Morwell	471137	5770563	449.8			3
52809	v02		Morwell	471137	5770563	430			3
52809	v03		Morwell	471137	5770563	405.3			3
52809	v04		Morwell	471137	5770563	392.6			3
52809	v05		Morwell	471137	5770563	350.1			3
52809	v06		Morwell	471137	5770563	319.9			3
52809	v07		Morwell	471137	5770563	289.7			3
52809	v08		Morwell	471137	5770563	255.7			3
52809	v09		Morwell	471137	5770563	245			3
52809	v10		Morwell	471137	5770563	230.8			3
52809	v11		Morwell	471137	5770563	205.1			3
52809	v12		Morwell	471137	5770563	180.1			3
52809	v13		Morwell	471137	5770563	149.9			3
52809	v14		Morwell	471137	5770563	125.2			3
52810	v04		Morwell	471153	5770560	595.3			3
52810	v05		Morwell	471153	5770560	587.3			3
52810	v06		Morwell	471153	5770560	580.3			3
52810	v07		Morwell	471153	5770560	543.8			3
52810	v08		Morwell	471153	5770560	507.8			3
52810	v09		Morwell	471153	5770560	480.3			3
52810	v10		Morwell	471153	5770560	458.3			3
52883	v01	s1000	Overburden	471070	5770575	69.8			3
52883	v02	s1000	Overburden	471070	5770575	36			3
52984	w01	s207	Traralgon	466677	5767549		350	353	3
52985	s01	s602	Morwell	466670	5767552		98	101	3
53038	w03	s304	Morwell	462234	5769287		327.2	0	3
53038	v01	s219	Traralgon	462234	5769287	414			3
53038	v02	s301s	Morwell	462234	5769287	387			3
53055	w01	s304	Morwell				384.5	387.5	3
53075	v01	s304	Morwell	463193	5768355	227.8			3
53075	v02	s408	Morwell	463193	5768355	177.8			3
53118	v01	s214	Traralgon	462399	5770406	542.6			3
53118	v02	s219	Traralgon	462399	5770406	523			3
53118	v03	s219	Traralgon	462399	5770406	508.7			3
53118	v04	s219	Traralgon	462399	5770406	499			3
53118	v05	s304	Morwell	462399	5770406	438.2			3
53118	v06	s306	Morwell	462399	5770406	454.4			3
53118	v07	s306	Morwell	462399	5770406	429.6			3
53118	v08	s402	Morwell	462399	5770406	413.3			3
53118	v09	s407	Morwell	462399	5770406	407.1			3
53118	v10	s500	Morwell	462399	5770406	399.6			3
53118	v11	s501	Morwell	462399	5770406	378.8			3
53118	v12	s600u	Morwell	462399	5770406	348.4			3
53118	v13	s700	Morwell	462399	5770406	336.7			3
53118	v14	s700	Morwell	462399	5770406	329			3
53118	v15	s700	Morwell	462399	5770406	303.2			3
53118	v16	s700	Morwell	462399	5770406	289			3
53118	v17	s701	Morwell	462399	5770406	263.1			3
53118	v18	s701	Morwell	462399	5770406	229.2			3
53118	v19	s800	Morwell	462399	5770406	208.4			3
53118	v20	s800	Morwell	462399	5770406	179			3
53119	v01	s801	Morwell	462411	5770403	136			3
53119	v02	s801	Morwell	462411	5770403	121.6			3

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TABLE A

SEC Bore_id	Inter Seam-id	Seam-id	Aquifer	Easting	Northing	Transducer (m)	Monitored Interval from	Screen To (m)	Readings per year
53119	v03	s900	Morwell	462411	5770403	118.4			3
53119	v04	s900i	Morwell	462411	5770403	110.7			3
53119	v05	s900	Morwell	462411	5770403	90			3
53298	v01	s000	Basement	459683	5761763	224.8			3
53298	v02	s000	Basement	459683	5761763	184.4			3
53298	v03	s120	Basalt	459683	5761763	170.1			3
53298	v04	s120	Basalt	459683	5761763	138.2			3
53299	v01	s120	Basalt	459684	5761767	110			3
53299	v02	s207	Traralgon	459684	5761767	79.7			3
53299	v03	s207	Traralgon	459684	5761767	52.3			3
53299	v04	s1000	Overburden	459684	5761767	27.5			3
53352	v01	s000	Basement	460222	5764647	417.5			3
53352	v02	s000	Basement	460222	5764647	382.5			3
53353	s09	s500	Morwell	460216	5764636		40.2	43.2	3
53353	v01	s120	Basalt	460216	5764636	317.9			3
53353	v02	s120	Basalt	460216	5764636	280			3
53353	v03	s213	Traralgon	460216	5764636	236			3
53353	v04	s219	Traralgon	460216	5764636	213.7			3
53353	v05	s301a	Morwell	460216	5764636	181.4			3
53353	v06	s304	Morwell	460216	5764636	138.2			3
53353	v07	s306	Morwell	460216	5764636	87.2			3
53353	v08	s403	Morwell	460216	5764636	70			3
80445	v01	s304	Morwell	458006	5769795	579.9			3
80445	v02	s408	Morwell	458006	5769795	549.7			3
80445	v03	s500	Morwell	458006	5769795	525			3
80489	v01	s214	Traralgon	457978	5766531	589.5			3
80489	v02	s214	Traralgon	457978	5766531	589.5			3
80489	v03	s216	Traralgon	457978	5766531	576.6			3
80489	v04	s219	Traralgon	457978	5766531	568			3
80489	v05	s301a	Morwell	457978	5766531	532			3
80489	v06	s301s	Morwell	457978	5766531	517.7			3
80490	v01	s216	Traralgon	458524	5766257	329.7			3
80490	v01	s214	Traralgon	458524	5766257	341.4			3
80490	v03	s216	Traralgon	458524	5766257	329.7			3
80490	v04	s219	Traralgon	458524	5766257	320.9			3
80490	v05	s301a	Morwell	458524	5766257	287.1			3
80490	v06	s303a	Morwell	458524	5766257	256.6			3
80490	v07	s306	Morwell	458524	5766257	229.3			3
80490	v08	s306	Morwell	458524	5766257	214.6			3
80490	v09	s413	Morwell	458524	5766257	189.2			3
80491	v01	s207	Traralgon	460202	5768587	524.4			3
80491	v02	s207	Traralgon	460202	5768587	524.4			3
80491	v03	s214	Traralgon	460202	5768587	500.6			3
80491	v04	s215	Traralgon	460202	5768587	484.3			3
80491	v05	s219	Traralgon	460202	5768587	470			3
80491	v06	s306	Morwell	460202	5768587	416.5			3
80491	v07	s409	Morwell	460202	5768587	399.2			3
80491	v08	s501	Morwell	460202	5768587	365.3			3
80491	v09	s601	Morwell	460202	5768587	311.8			3
80491	v10	s701	Morwell	460202	5768587	225.6			3
80491	v11	s801	Morwell	460202	5768587	124.3			3
80491	v12	s900	Morwell	460202	5768587	81.8			3
80495	s01	s120	Basalt	458454	5761926		236	239	3
80496	s06	s1000	Overburden	458455	5761927		4.5	6	3
80496	v01	s207	Traralgon	458455	5761927	132.8			3
80496	v02	s219	Traralgon	458455	5761927	110			3
80496	v03	s301s	Morwell	458455	5761927	82.6			3
80496	v04	s1000	Overburden	458455	5761927	52.1			3
80496	v05	s1000	Overburden	458455	5761927	26.5			3
90323	s01	m2	Morwell	485442	5772772		211	214	6
90324	s01	m1b	Morwell	476082	5775537		377	384	6
90325	s01	m1b	Morwell	485681	5776745		344.5	351	6
90330	s01	m2c	Morwell	471964	5767940		478	481	6
90335	s01	m1b	Morwell	480370	5775990		398	401	6
90335	s02	m1b	Morwell	480370	5775990		385	388	6
90339	s01	t2	Traralgon	475590	5772706		632.5	652	6



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TABLE A

SEC Bore_id	Intror Seam-id	Seam-id	Aquifer	Easting	Northing	Transducer (m)	Monitored Interval from	Screen To (m)	Readings per year
40195	s01	m2s	Morwell	453719	5776453		456	459	12
40195	s02	m2s	Morwell	453719	5776453		449.5	452.5	12
40196	s01	m1b	Morwell	455344	5775761		331	334	12
40196	s02	m1b	Morwell	455344	5775761		309	315	12
10942	s01	m2	Morwell	451332	5773687				12
12034	s01	m2	Morwell	444974	5767679		297	301.9	3
12758	s01	m1b	Morwell	445713	5769485		250.5	263.5	12
13054	s01	m1b	Morwell	451007	5774117		324.5	344	12
13101	s01	m1a	Morwell	450630	5767792		606	613	12
13190	v01	m1b	Morwell	452103	5771191	460.4			12
13190	v02	m1b	Morwell	452103	5771191	439.6			12
13190	v03	m1b	Morwell	452103	5771191	412.3			12
13190	v04	m1a	Morwell	452103	5771191	385			12
13190	v05	m1aco	Morwell	452103	5771191	370.8			12
13190	v06	m1aco	Morwell	452103	5771191	358.2			12
13190	v07	m1aint	Morwell	452103	5771191	345.5			12
13190	v08	m1aint	Morwell	452103	5771191	327.2			12
13190	v09	m1aco	Morwell	452103	5771191	310			12
13282	v01	m1b	Morwell	448077	5769985	248.7			12
13282	v02	m1b	Morwell	448077	5769985	244.2			12
13282	v03	m1b	Morwell	448077	5769985	225.2			12
13282	v04	m1bco	Morwell	448077	5769985	210.2			12
13282	v05	m1bco	Morwell	448077	5769985	180.7			12
13282	v06	m1b	Morwell	448077	5769985	166.2			12
13282	v07	m1a	Morwell	448077	5769985	151.7			12
13282	v08	m1a	Morwell	448077	5769985	130.8			12
13282	v09	m1aco	Morwell	448077	5769985	109.7			12
13282	v10	yc	Yallourn	448077	5769985	84.7			12
22491	s01	m1a	Morwell	442511	5764494		87.5	89	12
23263	s01	m1a3	Morwell	441274	5764838		94.2	93.9	12
23263	s02	m1a2	Morwell	441274	5764838		91.1	91.4	12
23263	s03	m1a1	Morwell	441274	5764838		84.6	85.6	12
23270	s01	m1a3	Morwell	440655	5764395		45.7	46.3	12
23288	s01	m1a1	Morwell	440736	5763142		46.9	48.5	12
23369	s01	m1a1	Morwell	441501	5767590		143	144	12
23567	s01	a	Morwell	439942	5767338		124	130	12
23570	s01	bas	Haslemont	441817	5763673		181	187	12
23607	s01	m2a	Morwell	439335	5766552		83.6	90.1	12
23615	s01	a	Morwell	439463	5764961		59.1	66.1	12
23694	s01	m2a	Morwell	440805	5763039		65.6	66.6	12
23780	s01	m2a	Morwell	441500	5767578		187.5	194	12
24358	s01	m1a	Morwell	441178	5768165		164	170	12
24651	s01	b	Morwell	441440	5767969		170	173	12
24652	s01	a	Morwell	441526	5768866		192.5	195.5	12
61095	s01	m2	Morwell	443589	5763301		29.6	100.8	12
61320	s01	e	Morwell	446532	5761657		427.9	434	12
61333	s01	t1	Traralgon	450387	5764284		587.3	593.6	12
61348	s01	t1	Traralgon	449953	5762271		550.4	557.4	12
61502	s01	m1a	Morwell	443795	5759833		339	345	12
61502	s02	m1a	Morwell	443795	5759833		339	340.4	12
61631	v01	m1bco	Morwell	450379	5764307	294.4			12
61631	v02	m1bco	Morwell	450379	5764307	281.7			12
61631	v03	m1a	Morwell	450379	5764307	272.4			12
61631	v04	m1a	Morwell	450379	5764307	262.2			12
61631	v05	m1a	Morwell	450379	5764307	252			12
61631	v06	m1aco	Morwell	450379	5764307	234.8			12
61632	s01	t	Traralgon	450378	5764292		635.5	647.5	12
61691	v02	m1	Morwell	447142	5758626	386.4			12
61691	v03	m2	Morwell	447142	5758626	361.7			12
61691	v04	m1	Morwell	447142	5758626	301.6			12
61691	v05	Overburden	Morwell	447142	5758626	222.1			12
61719	s01	m2s	Morwell	449912	5759871		309	306	12
61726	s01	m2s	Morwell	448784	5757198		321	347	12
120122	s01	m2A	Morwell	442762	5756708		291	297.5	12
120122	s02	m2A	Morwell	442762	5756708		280	287	12
120135	s01	m2A	Morwell	440668	5756479		320	323	12

Yallourn Mine Work Plan, Part B (Environmental Monitoring)  
ATTACHMENT A

TABLE A

SEC Bore_id	Inter Seam-id	Seam-id	Aquifer	Easting	Northing	Transducer (m)	Monitored Interval from	Screen To (m)	Readings per year
120141	p01	ob	Overburden	442169	5756799				12
120141	p02	ys	Yallourn	442169	5756799				12
120141	p03	ys	Yallourn	442169	5756799				12
120141	p04	m1bco	Morwell	442169	5756799				12
120141	p05	m1bco	Morwell	442169	5756799				12
120141	p06	m1a	Morwell	442169	5756799				12
120152	s01		Traralgon	000000			32.4	638.4	12
23726	s01	m2	Morwell	438701	5773468		85	194	12
23787	s01	m1a3	Morwell	438151	5773869		09.1	215.1	12
23788	s01	m2	Morwell	436100	5775669		96.5	98	12
23789	s01	m2	Morwell	437084	5774827		158.5	164.5	12
23799	s01	u	Morwell	439674	5772504		211.5	214.5	12
230034	s01	m2	Morwell	433329	5777233		52	55	12
230043	s01	m2	Morwell	430147	5776203		144	156	12
230049	s01	m2	Morwell				210	219	12
230055	s01	m2	Morwell				176	180	12