



# Manning Colliery Monthly Website Report

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<b>Site:</b>	<b>Manning Colliery</b>
<b>Department:</b>	<b>Technical Services</b>
<b>Report Title:</b>	<b>Monthly Environmental Website Report - January 2020</b>
<b>Prepared by:</b>	<b>Nena Lane-Kirwan</b>
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# Report

## Mannering Colliery Monthly Environmental Report

### Summary

Environmental monitoring results are presented in this report for monitoring undertaken in January 2020.

### Introduction

Great Southern Energy Pty Ltd (trading as Delta Coal) operates the Mannering Colliery, an underground coal mine at the southern end of Lake Macquarie.

Mannering Colliery operates under the following regulatory instruments;

- Section 66(6) of the *Protection of the Environment Operations Act 1997*, to make monitoring data related to an Environment Protection Licence (EPL) publically available;
- Condition 7 & 10, Schedule 5, of Project Approval 06\_0311 (as modified) to provide details of monitoring results and environmental performance;
- An Environment Protection Licence (EPL 191) issued under the *Protection of the Environment Operations Act 1997*; and
- A Water Access Licence (WAL40461), Aquifer Aquifer (Sydney Basin – North Coast Groundwater Source) for 450 unit shares (megalitres).

This report provides environmental monitoring data from Mannering Colliery for the period 1 to 31 January 2020.

Details of the Mannering Colliery EPL 191 are provided below.

Mannering Colliery Information	
Premises name	Mannering Colliery
Address	Ruttleys Road, Doyalson, NSW, 2262
Licensee	Great Southern Energy Pty Ltd
EPL #	191
EPL location	<a href="http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=50781&amp;SYSUID=1&amp;LICID=191">http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=50781&amp;SYSUID=1&amp;LICID=191</a>

The overall purpose of this report is to keep stakeholders informed of the environmental monitoring results at Mannering Colliery and maintain a transparent and accountable reporting system.

# Report

## Mannering Colliery Monthly Environmental Report

### Scope

This report presents the results from the various environmental monitoring programs undertaken for Mannering Colliery. Results are presented monthly with annual data, averages and trends in data also shown where relevant.

Where applicable, the results of the monitoring programs are compared with the relevant criteria (from the EPL or Project Approval) to assess compliance.

Monitoring results presented include:

- Water – quality;
- Water – volume;
- Air Quality; and
- Weather data.

### Definitions

dB – decibels;

dB(A) – noise level measurement units are decibels (dB). The A-weighting scale is used to approximate human perception of noise;

g/m<sup>2</sup>/month – grams per square metre per month;

kL – kilolitre;

L<sub>Aeq</sub> – the average A-weighted noise energy (in dB) for a measurement period;

ML – megalitre;

mg/L – milligrams per litre;

TSS – total suspended solids;

µg/L – micrograms per litre; and

µS/cm – microSiemens per centimetre.

### References

Project Approval 06\_0311 (as modified)

Environment Protection Licence 191 (Licence version date: 25 November 2019)

Steel River Testing - Dust Deposition Report **January 2020**

Steel River Testing - Water Analysis Report **January 2020**

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## Mannering Colliery Monthly Environmental Report

### Monitoring Results

#### Water – Quality

Weekly water quality results are presented below. Monitoring of these parameters reverted to weekly as per EPL PRP requirements.

January 2020			
<b>EPL</b>	191		
<b>Licensee</b>	LakeCoal Pty Ltd		
<b>Premises</b>	Mannering Colliery		
<b>Period</b>	01-Jan-20	to	31-Jan-20
<b>Location</b>	LDP001 (EPA ID # 1)		
<b>Date sampled</b>	Weekly		
<b>Date reported</b>	Refer report date		
<b>Monitoring requirement</b>	Weekly		
<b>pH limit</b>	6.5 - 8.5		
<b>TSS limit (mg/L)</b>	50		
<b>Oil and grease limit (mg/L)</b>	10		
<b>Exceedance (Yes/No)</b>	No		
Water Quality Results			
Date	pH	TSS (mg/L)	Oil and grease (mg/L)
Wednesday, 1 January 2020			
Thursday, 2 January 2020			
Friday, 3 January 2020			
Saturday, 4 January 2020			
Sunday, 5 January 2020			
Monday, 6 January 2020	7.8	3	<5
Tuesday, 7 January 2020			
Wednesday, 8 January 2020			
Thursday, 9 January 2020			
Friday, 10 January 2020			
Saturday, 11 January 2020			
Sunday, 12 January 2020			
Monday, 13 January 2020			
Tuesday, 14 January 2020	7.6	<1	<5
Wednesday, 15 January 2020			
Thursday, 16 January 2020			
Friday, 17 January 2020			
Saturday, 18 January 2020			
Sunday, 19 January 2020			
Monday, 20 January 2020			
Tuesday, 21 January 2020			
Wednesday, 22 January 2020	7.8	1	<5
Thursday, 23 January 2020			
Friday, 24 January 2020			
Saturday, 25 January 2020			
Sunday, 26 January 2020			
Monday, 27 January 2020			
Tuesday, 28 January 2020			
Wednesday, 29 January 2020			
Thursday, 30 January 2020	7.8	6	<5
Friday, 31 January 2020			
<b>Average</b>	7.8	3.3	<5
<b>Minimum</b>	7.6	1.0	<5
<b>Maximum</b>	7.8	6.0	<5

There were no exceedances of water quality criteria during the month.

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## Mannering Colliery Monthly Environmental Report

Monthly water quality results, primarily metals, are presented below for January 2020.

Sub-Matrix: WATER (Matrix: WATER)		Client sample ID		LDP001
Client sampling date / time				22-Jan-2020 09:20
Compound	CAS Number	LOR	Unit	ES2002049-001
				Result
EA010P: Conductivity by PC Titrator				
Electrical Conductivity @ 25°C	----	1	µS/cm	28200
ED040F: Dissolved Major Anions				
Sulfur as S	63705-05-5	1	mg/L	155
Silicon as SiO2	14464-46-1	0.1	mg/L	12.7
ED093T: Total Major Cations				
Calcium	7440-70-2	1	mg/L	247
Magnesium	7439-95-4	1	mg/L	332
Potassium	7440-09-7	1	mg/L	42
EG020F: Dissolved Metals by ICP-MS				
Aluminium	7429-90-5	10	µg/L	<10
Arsenic	7440-38-2	1	µg/L	<1
Beryllium	7440-41-7	1	µg/L	<1
Cadmium	7440-43-9	0.1	µg/L	<0.1
Chromium	7440-47-3	1	µg/L	<1
Cobalt	7440-48-4	1	µg/L	<1
Copper	7440-50-8	1	µg/L	<1
Lead	7439-92-1	1	µg/L	<1
Manganese	7439-96-5	1	µg/L	24
Molybdenum	7439-98-7	1	µg/L	6
Nickel	7440-02-0	1	µg/L	4
Selenium	7782-49-2	10	µg/L	<10
Silver	7440-22-4	1	µg/L	<1
Vanadium	7440-62-2	10	µg/L	<10
Zinc	7440-66-6	5	µg/L	126
EG020T: Total Metals by ICP-MS				
Aluminium	7429-90-5	10	µg/L	<10
Antimony	7440-36-0	1	µg/L	<1
Arsenic	7440-38-2	1	µg/L	<1
Beryllium	7440-41-7	1	µg/L	<1
Barium	7440-39-3	1	µg/L	252
Cadmium	7440-43-9	0.1	µg/L	<0.1
Chromium	7440-47-3	1	µg/L	<1
Cobalt	7440-48-4	1	µg/L	<1
Copper	7440-50-8	1	µg/L	<1
EG020T: Total Metals by ICP-MS - Continued				
Lead	7439-92-1	1	µg/L	<1
Lithium	7439-93-2	1	µg/L	693
Molybdenum	7439-98-7	1	µg/L	8
Nickel	7440-02-0	1	µg/L	5
Selenium	7782-49-2	10	µg/L	<10
Silver	7440-22-4	1	µg/L	2
Tin	7440-31-5	1	µg/L	<1
Titanium	7440-32-6	10	µg/L	<10
Vanadium	7440-62-2	10	µg/L	<10
Zinc	7440-66-6	5	µg/L	<5
Boron	7440-42-8	50	µg/L	540
Iron	7439-89-6	50	µg/L	140
EG035F: Dissolved Mercury by FIMS				
Mercury	7439-97-6	0.1	µg/L	<0.1
EG035T: Total Recoverable Mercury by FIMS				
Mercury	7439-97-6	0.1	µg/L	<0.1
EK055G: Ammonia as N by Discrete Analyser				
Ammonia as N	7664-41-7	0.01	mg/L	0.88
EK067G: Total Phosphorus as P by Discrete Analyser				
Total Phosphorus as P	----	0.01	mg/L	<0.05

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## Manning Colliery Monthly Environmental Report

### Water – Volume

Monthly water volumes are summarised below.

January 2020	
EPL	191
Licensee	LakeCoal Pty Ltd
Premises	Manning Colliery
Date Sampled	Daily
Date Reported	Refer report date
Discharge volume limit	4000 kilolitres per day
Sampling Point	LDP001 (EPA ID # 1)

Day	Unit	Volume
01/01/2020	kL	1209
02/01/2020	kL	1185
03/01/2020	kL	1443
04/01/2020	kL	1597
05/01/2020	kL	295
06/01/2020	kL	901
07/01/2020	kL	1347
08/01/2020	kL	1539
09/01/2020	kL	1030
10/01/2020	kL	8
11/01/2020	kL	0
12/01/2020	kL	0
13/01/2020	kL	1596
14/01/2020	kL	1790
15/01/2020	kL	890
16/01/2020	kL	1006
17/01/2020	kL	0
18/01/2020	kL	0
19/01/2020	kL	16
20/01/2020	kL	1261
21/01/2020	kL	340
22/01/2020	kL	1489
23/01/2020	kL	1257
24/01/2020	kL	10
25/01/2020	kL	271
26/01/2020	kL	0
27/01/2020	kL	1
28/01/2020	kL	0
29/01/2020	kL	1400
30/01/2020	kL	1453
31/01/2020	kL	936

Average	kL	783
Minimum	kL	0
Maximum	kL	1790

There were no exceedances of the volumetric limits at the Licenced Discharge Point during the month.

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## Mannering Colliery Monthly Environmental Report

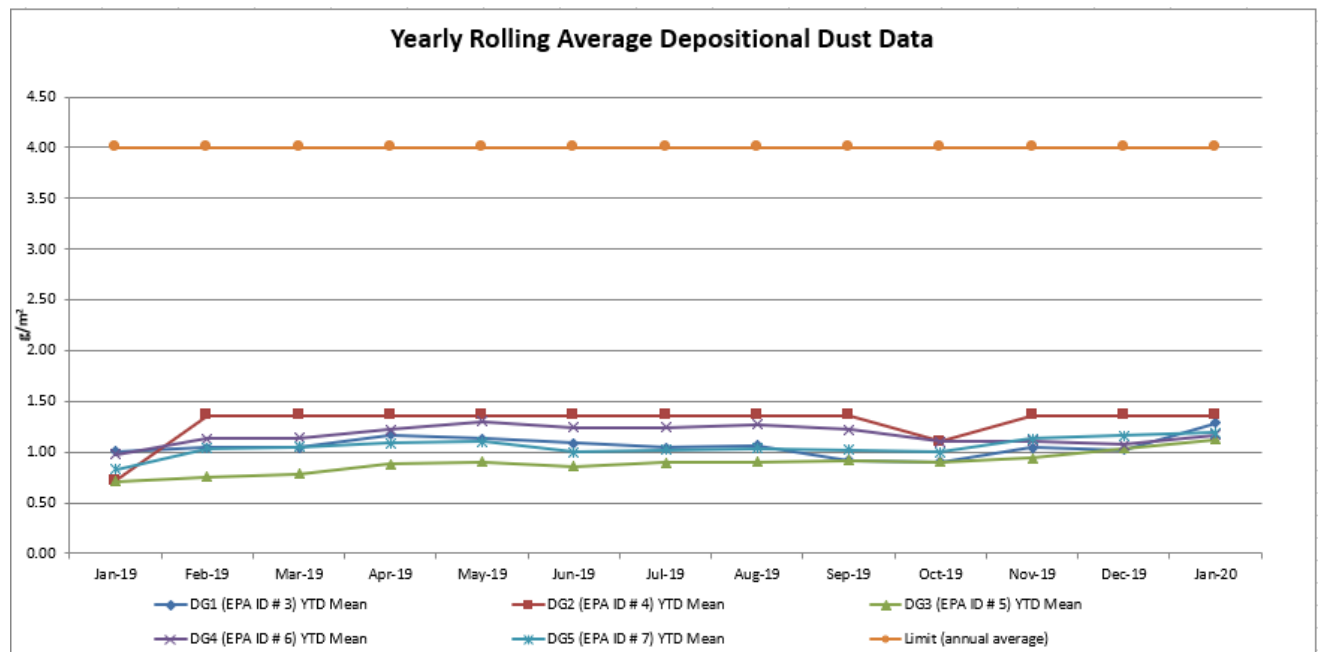
### Air Quality

Monthly depositional dust results are shown below.

January 2020		
EPL	191	
Limit	Max. total deposited dust level	4g/m <sup>2</sup> /month
	Max. increase in deposited dust level	2g/m <sup>2</sup> /month
Sampling Date	05/12/2019 to	06/01/2020
EPA ID no.	Site	Insoluble Matter (g/m <sup>2</sup> /month)
3	DDG001	1.9
4	DDG002	1.9
5	DDG003	3.8
6	DDG004	2.0
7	DDG005	0.9
Notes:		

There were no exceedances of the annual average air quality limits during the reporting period.

### Rolling annual average depositional dust results



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## Mannering Colliery Monthly Environmental Report

### Weather Data

A summary of weather data recorded by the meteorological monitoring station at Mannering Colliery is presented below for the year to date. (EPA ID no. 8)

Monthly Weather Data			
Licensee	Great Southern Energy Pty Ltd		
Location	Mannering Colliery Meteorological station		
Date published	Refer report date		
Date sampled	Daily		
Date obtained	05/02/2019		
Month	Total Rainfall/Month mm	Min Temp	Max Temp
Jan-20	28.2	18	43.7
Feb-20			
Mar-20			
Apr-20			
May-20			
Jun-20			
Jul-20			
Aug-20			
Sep-20			
Oct-20			
Nov-20			
Dec-20			