



# Monthly Website Report

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<b>Site:</b>	<b>Mannering Colliery</b>
<b>Department:</b>	<b>Technical Services</b>
<b>Report Title:</b>	<b>Monthly Environmental Website Report - April 2019</b>
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# Report

## Manning Colliery Monthly Environmental Report

### Summary

Monitoring was undertaken in April 2019. There was one exceedance for EPL 191 for Total Suspended Solids (TSS).

### Introduction

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

Manning 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 publically available and;
- Condition 7 & 10, schedule 5, of Development Approval 06\_0311 (as modified) to provide details of monitoring results and environmental performance.

This report provides environmental monitoring data from Manning Colliery for the period 1 April to 30 April 2019.

Details of the Manning Colliery EPL 191 are provided below.

Manning Colliery Information	
Premises name	Manning Colliery
Address	Rutleys 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 Manning Colliery and maintain a transparent and accountable reporting system.

# Report

## Manning Colliery Monthly Environmental Report

### Scope

This report presents the results from the various environmental monitoring programs undertaken for Manning Colliery.

Results are presented for each specific month and annual data, averages and trends in data are shown to where relevant.

Where applicable, the results of the monitoring programs are compared with the relevant criteria (from the EPL or Development Consent) to determine 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– kilolitres

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

mg/L – milligrams per litre

µg/L – micrograms per litre

µS/cm – microSiemens per centimetre

### References

Project Approval 06\_0311 (as modified)

Environment Protection Licence 191 (Licence version date: 12 May 2017)

Steel River Testing - Dust Deposition Report **April 2019**

# Report

## Manning Colliery Monthly Environmental Report

Steel River Testing- Water Analysis Report **April 2019**

### Monitoring Results

Water – Quality

Water Quality Results (reverted to weekly as per EPL  
PRP requirements)

April 2019			
<b>EPL</b>	191		
<b>Licensee</b>	LakeCoal Pty Ltd		
<b>Premises</b>	Manning Colliery		
<b>Period</b>	01-Apr-19	to	30-Apr-19
<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>	Yes		
<b>Water Quality Results</b>			
<b>Date</b>	<b>pH</b>	<b>TSS (mg/L)</b>	<b>Oil and grease (mg/L)</b>
Monday, 1 April 2019			
Tuesday, 2 April 2019	7.6	80	<5
Wednesday, 3 April 2019			
Thursday, 4 April 2019			
Friday, 5 April 2019	7.6	10	0
Saturday, 6 April 2019			
Sunday, 7 April 2019			
Monday, 8 April 2019			
Tuesday, 9 April 2019			
Wednesday, 10 April 2019	7.8	3	<5
Thursday, 11 April 2019			
Friday, 12 April 2019			
Saturday, 13 April 2019			
Sunday, 14 April 2019			
Monday, 15 April 2019			
Tuesday, 16 April 2019			
Wednesday, 17 April 2019			
Thursday, 18 April 2019	7.7	13	<5
Friday, 19 April 2019			
Saturday, 20 April 2019			
Sunday, 21 April 2019			
Monday, 22 April 2019			
Tuesday, 23 April 2019			
Wednesday, 24 April 2019			
Thursday, 25 April 2019			
Friday, 26 April 2019	7.7	3	<5
Saturday, 27 April 2019			
Sunday, 28 April 2019			
Monday, 29 April 2019			
Tuesday, 30 April 2019			
<b>Average</b>	7.7	21.8	<5
<b>Minimum</b>	7.6	3.0	<5
<b>Maximum</b>	7.8	80.0	<5

There was one exceedance of water quality criteria during the month. This occurred on the 2 April 2019. There was another test on the 5 April, as a follow-up to TSS levels.

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## Manning Colliery Monthly Environmental Report

### Water – Quality

#### Analytical Results

Sub-Matrix: <b>WATER</b> (Matrix: <b>WATER</b> )		Client sample ID			<b>LDP001</b>
Client sampling date / time				16-Apr-2019 13:00	
Compound	CAS Number	LOR	Unit	<b>ES1911802-001</b>	
					Result
<b>EA010P: Conductivity by PC Titrator</b>					
Electrical Conductivity @ 25°C	----	1	µS/cm	<b>27500</b>	
<b>ED040F: Dissolved Major Anions</b>					
Sulfur as S	63705-05-5	1	mg/L	<b>162</b>	
Silicon as SiO <sub>2</sub>	14464-46-1	0.1	mg/L	<b>13.1</b>	
<b>ED093T: Total Major Cations</b>					
Calcium	7440-70-2	1	mg/L	<b>236</b>	
Magnesium	7439-95-4	1	mg/L	<b>310</b>	
Potassium	7440-09-7	1	mg/L	<b>39</b>	
<b>EG020F: Dissolved Metals by ICP-MS</b>					
Aluminium	7429-90-5	10	µg/L	<100	
Arsenic	7440-38-2	1	µg/L	<10	
Beryllium	7440-41-7	1	µg/L	<10	
Cadmium	7440-43-9	0.1	µg/L	<1.0	
Chromium	7440-47-3	1	µg/L	<10	
Cobalt	7440-48-4	1	µg/L	<10	
Copper	7440-50-8	1	µg/L	<10	
Lead	7439-92-1	1	µg/L	<10	
Manganese	7439-96-5	1	µg/L	<b>74</b>	
Molybdenum	7439-98-7	1	µg/L	<b>14</b>	
Nickel	7440-02-0	1	µg/L	<10	
Selenium	7782-49-2	10	µg/L	<100	
Silver	7440-22-4	1	µg/L	<10	
Vanadium	7440-62-2	10	µg/L	<100	
Zinc	7440-66-6	5	µg/L	<50	
<b>EG020T: Total Metals by ICP-MS</b>					
Aluminium	7429-90-5	10	µg/L	<100	
Antimony	7440-36-0	1	µg/L	<10	
Arsenic	7440-38-2	1	µg/L	<10	
Beryllium	7440-41-7	1	µg/L	<10	
Barium	7440-39-3	1	µg/L	<b>356</b>	
Cadmium	7440-43-9	0.1	µg/L	<1.0	
Chromium	7440-47-3	1	µg/L	<10	
Cobalt	7440-48-4	1	µg/L	<10	
Copper	7440-50-8	1	µg/L	<10	
<b>EG020T: Total Metals by ICP-MS - Continued</b>					
Lead	7439-92-1	1	µg/L	<10	
Lithium	7439-93-2	1	µg/L	<b>670</b>	
Molybdenum	7439-98-7	1	µg/L	<b>15</b>	
Nickel	7440-02-0	1	µg/L	<10	
Selenium	7782-49-2	10	µg/L	<100	
Silver	7440-22-4	1	µg/L	<10	
Tin	7440-31-5	1	µg/L	<10	
Titanium	7440-32-6	10	µg/L	<100	
Vanadium	7440-62-2	10	µg/L	<100	
Zinc	7440-66-6	5	µg/L	<52	
Boron	7440-42-8	50	µg/L	<b>390</b>	
Iron	7439-89-6	50	µg/L	<b>400</b>	
<b>EG035F: Dissolved Mercury by FIMS</b>					
Mercury	7439-97-6	0.1	µg/L	<0.1	
<b>EG035T: Total Recoverable Mercury by FIMS</b>					
Mercury	7439-97-6	0.1	µg/L	<0.1	
<b>EK055G: Ammonia as N by Discrete Analyser</b>					
Ammonia as N	7664-41-7	0.01	mg/L	<b>1.01</b>	
<b>EK067G: Total Phosphorus as P by Discrete Analyser</b>					
Total Phosphorus as P	----	0.01	mg/L	<b>0.03</b>	

# Report

## Manning Colliery Monthly Environmental Report

### Water – Volume

April 2019		
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
01/04/2019	kL	277
02/04/2019	kL	745
03/04/2019	kL	12
04/04/2019	kL	0
05/04/2019	kL	988
06/04/2019	kL	0
07/04/2019	kL	0
08/04/2019	kL	1186
09/04/2019	kL	1186
10/04/2019	kL	2217
11/04/2019	kL	1668
12/04/2019	kL	1522
13/04/2019	kL	1574
14/04/2019	kL	1225
15/04/2019	kL	0
16/04/2019	kL	968
17/04/2019	kL	1285
18/04/2019	kL	525
19/04/2019	kL	688
20/04/2019	kL	1616
21/04/2019	kL	1318
22/04/2019	kL	1537
23/04/2019	kL	774
24/04/2019	kL	1369
25/04/2019	kL	1309
26/04/2019	kL	609
27/04/2019	kL	1580
28/04/2019	kL	1246
29/04/2019	kL	1284
30/04/2019	kL	1583
Average	kL	1010
Minimum	kL	0
Maximum	kL	2217

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

# Report

## Manning Colliery Monthly Environmental Report

### Air Quality

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#### Monthly depositional dust results

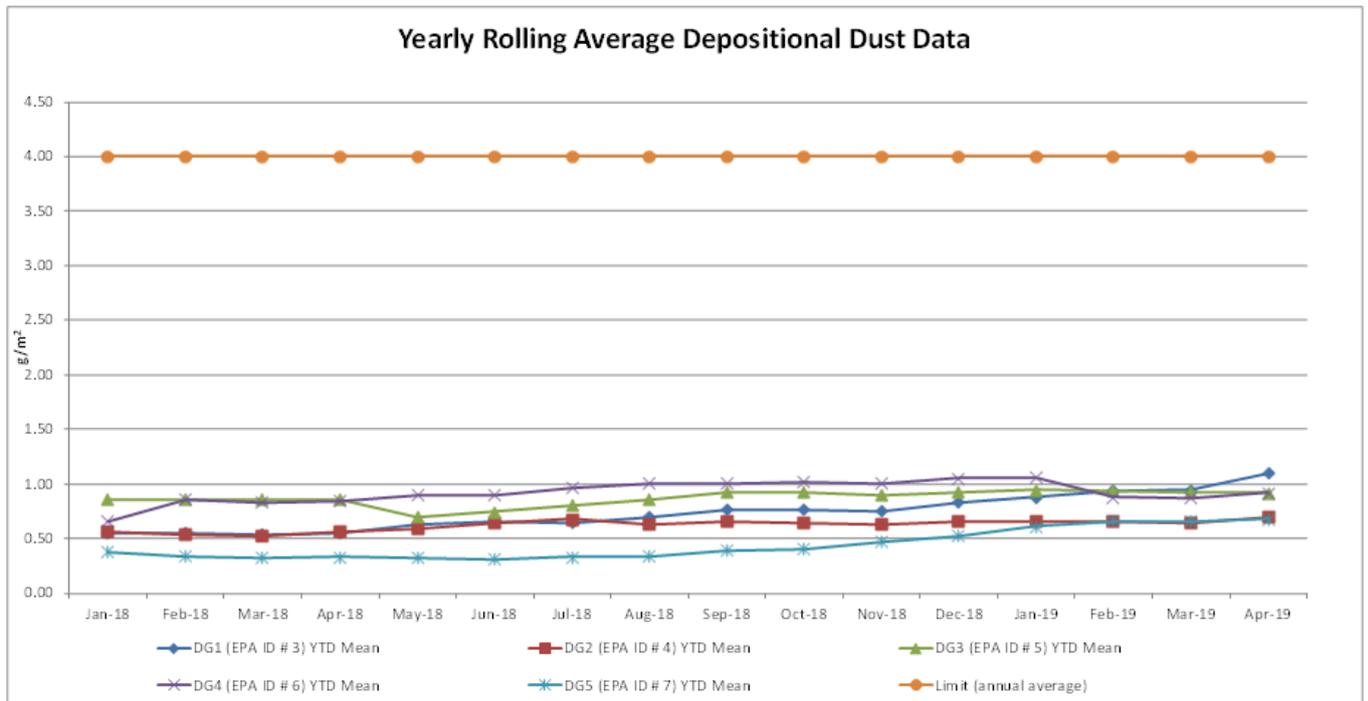
April 2019	
EPL	191
Licensee	LakeCoal Pty Ltd
Premises	Manning Colliery
Date Sampled	11-Mar-19 to 10-Apr-19
Date Obtained	18-Apr-19
Date Reported	Refer report date
Sampling Point	As per site below
Site	Insoluble Matter (g/m <sup>2</sup> /month)
DG1 (EPA ID # 3)	0.7
DG2 (EPA ID # 4)	0.7
DG3 (EPA ID # 5)	0.8
DG4 (EPA ID # 6)	1.6
DG5 (EPA ID # 7)	0.7
Notes: - For site locations refer to Air Quality Management Plan	

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

# Report

## Manning Colliery Monthly Environmental Report

### Rolling annual average depositional dust results



### Weather Data

A summary of weather data recorded by an adjacent site meteorological monitoring station at the Colliery is presented below for the year to date.

Monthly Weather Data			
		2019	
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Manning Colliery		
Location	W1 (on-site weather station)		
Date published	Refer report date		
Date sampled	Daily		
Date obtained	09/05/2019		
Month	Total Rainfall/Month mm	Min Temp	Max Temp
Jan-19	60.6	18.6	39.6
Feb-19	88.6	22.7	37.4
Mar-19	204	10.1	37.1
Apr-19	73.2	8.3	32.8
May-19			
Jun-19			
Jul-19			
Aug-19			
Sep-19			
Oct-19			
Nov-19			
Dec-19			