



Monthly Website Report

Site:	Manning Colliery
Department:	Technical Services
Report Title:	Monthly Environmental Website Report - May 2019
Prepared by:	Nena Lane-Kirwan and Chris Armit
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Monthly Website Report

Mannering Colliery Monthly Environmental Report

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Manning Colliery Monthly Environmental Report

Summary

Monitoring was undertaken in May 2019.

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.
- An Environment Protection Licence (191) issued under the Protection of the Environment Operations Act, 1997.
- A Water Access Licence 20AL217059 (WAL40461), Aquifer (450 megalitres)

This report provides environmental monitoring data from Manning Colliery for the period 1 May to 31 May 2019.

Details of the Manning Colliery EPL 191 are provided below.

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

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.

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Mannering Colliery Monthly Environmental Report

Scope

This report presents the results from the various environmental monitoring programs undertaken for Mannering 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/m²/month – grams per square metre per month

kL– kilolitres

L_{Aeq}–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: 1 April 2019)

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

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

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Monitoring Results

Water – Quality

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

May 2019			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Mannering Colliery		
Period	01-May-19	to	31-May-19
Location	LDP001 (EPA ID # 1)		
Date sampled	Weekly		
Date reported	Refer report date		
Monitoring requirement	Weekly		
pH limit	6.5 - 8.5		
TSS limit (mg/L)	50		
Oil and grease limit (mg/L)	10		
Exceedance (Yes/No)	No		
Water Quality Results			
Date	pH	TSS (mg/L)	Oil and grease (mg/L)
Wednesday, 1 May 2019	7.7	3	<5
Thursday, 2 May 2019			
Friday, 3 May 2019			
Saturday, 4 May 2019			
Sunday, 5 May 2019			
Monday, 6 May 2019			
Tuesday, 7 May 2019			
Wednesday, 8 May 2019	8.0	10	<5
Thursday, 9 May 2019			
Friday, 10 May 2019			
Saturday, 11 May 2019			
Sunday, 12 May 2019			
Monday, 13 May 2019			
Tuesday, 14 May 2019			
Wednesday, 15 May 2019			
Thursday, 16 May 2019	7.8	9	<5
Friday, 17 May 2019			
Saturday, 18 May 2019			
Sunday, 19 May 2019			
Monday, 20 May 2019			
Tuesday, 21 May 2019	7.7	5	<5
Wednesday, 22 May 2019			
Thursday, 23 May 2019			
Friday, 24 May 2019			
Saturday, 25 May 2019			
Sunday, 26 May 2019			
Monday, 27 May 2019			
Tuesday, 28 May 2019			
Wednesday, 29 May 2019	7.7	4	<5
Thursday, 30 May 2019			
Friday, 31 May 2019			
Average	7.8	6.2	<5
Minimum	7.7	3.0	<5
Maximum	8.0	10.0	<5

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

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Water – Quality

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Client sample ID		LDP001
		Client sampling date / time		21-May-2019 13:25
Compound	CAS Number	LOR	Unit	ES1915361-001
				Result
EA010P: Conductivity by PC Titrator				
Electrical Conductivity @ 25°C	----	1	µS/cm	27300
ED040F: Dissolved Major Anions				
Sulfur as S	63705-05-5	1	mg/L	136
Silicon as SiO ₂	14464-46-1	0.1	mg/L	13.1
ED093T: Total Major Cations				
Calcium	7440-70-2	1	mg/L	268
Magnesium	7439-95-4	1	mg/L	297
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	35
Molybdenum	7439-98-7	1	µg/L	17
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	25
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	266
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	9
EG020T: Total Metals by ICP-MS - Continued				
Lead	7439-92-1	1	µg/L	<1
Lithium	7439-93-2	1	µg/L	648
Molybdenum	7439-98-7	1	µg/L	20
Nickel	7440-02-0	1	µg/L	4
Selenium	7782-49-2	10	µg/L	<10
Silver	7440-22-4	1	µg/L	<1
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	24
Boron	7440-42-8	50	µg/L	440
Iron	7439-89-6	50	µg/L	240
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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Water – Volume

May 2019	
EPL	191
Licensee	LakeCoal Pty Ltd
Premises	Mannering 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
01/05/2019	kL	2698
02/05/2019	kL	751
03/05/2019	kL	869
04/05/2019	kL	1529
05/05/2019	kL	1545
06/05/2019	kL	1538
07/05/2019	kL	1632
08/05/2019	kL	1087
09/05/2019	kL	1543
10/05/2019	kL	1573
11/05/2019	kL	377
12/05/2019	kL	0
13/05/2019	kL	27
14/05/2019	kL	1572
15/05/2019	kL	1379
16/05/2019	kL	665
17/05/2019	kL	1622
18/05/2019	kL	991
19/05/2019	kL	1229
20/05/2019	kL	1600
21/05/2019	kL	1597
22/05/2019	kL	1608
23/05/2019	kL	1609
24/05/2019	kL	1602
25/05/2019	kL	968
26/05/2019	kL	1495
27/05/2019	kL	1662
28/05/2019	kL	2853
29/05/2019	kL	1240
30/05/2019	kL	972
31/05/2019	kl	4
Average	kL	1285
Minimum	kL	0
Maximum	kL	2853

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

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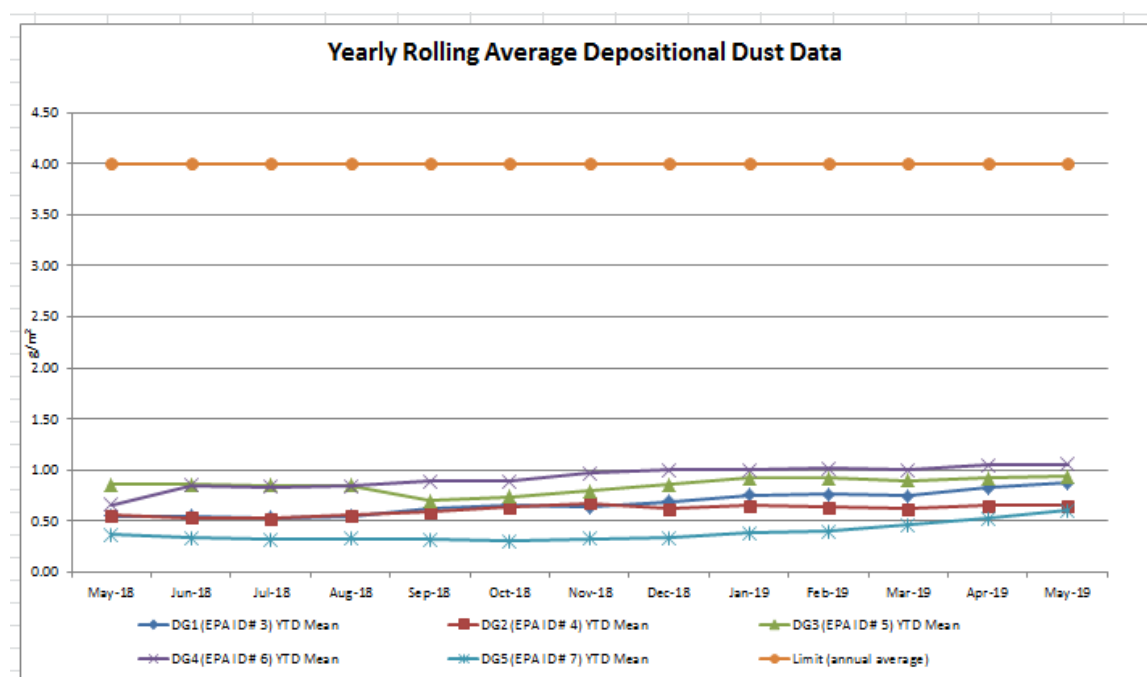
Air Quality

Monthly depositional dust results

May 2019	
EPL	191
Licensee	LakeCoal Pty Ltd
Premises	Mannering Colliery
Date Sampled	10-Apr-19 to 10-May-19
Date Obtained	17-May-19
Date Reported	Refer report date
Sampling Point	As per site below
Site	Insoluble Matter (g/m ² /month)
DG1 (EPA ID # 3)	0.2
DG2 (EPA ID # 4)	0.7
DG3 (EPA ID # 5)	0.3
DG4 (EPA ID # 6)	0.3
DG5 (EPA ID # 7)	0.3
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.

Rolling annual average depositional dust results



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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	Lake Coal Pty Ltd		
Premises	Mannering Colliery		
Location	W1 (on-site weather station)		
Date published	Refer report date		
Date sampled	Daily		
Date obtained			
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	11	3.9	26.3
Jun-19			
Jul-19			
Aug-19			
Sep-19			
Oct-19			
Nov-19			
Dec-19			