



Manning Colliery Monthly Website Report

Site:	Manning Colliery
Department:	Technical Services
Report Title:	Monthly Environmental Website Report - October 2019
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Report

Mannering Colliery Monthly Environmental Report

Summary

Environmental monitoring results are presented in this report for monitoring undertaken in October 2019.

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 October 2019.

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	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 Mannering 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 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/m²/month – grams per square metre per month;

kL – kilolitre;

L_{Aeq} – 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: 1 April 2019)

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

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

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Monitoring Results

Water – Quality

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

October 2019			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Manning Colliery		
Period	01-Oct-19	to	31-Oct-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	Oil and grease
Tuesday, 1 October 2019			
Wednesday, 2 October 2019	7.7	1	<5
Thursday, 3 October 2019			
Friday, 4 October 2019			
Saturday, 5 October 2019			
Sunday, 6 October 2019			
Monday, 7 October 2019			
Tuesday, 8 October 2019			
Wednesday, 9 October 2019	7.8	3	<5
Thursday, 10 October 2019			
Friday, 11 October 2019			
Saturday, 12 October 2019			
Sunday, 13 October 2019			
Monday, 14 October 2019			
Tuesday, 15 October 2019	7.8	3	<5
Wednesday, 16 October 2019			
Thursday, 17 October 2019			
Friday, 18 October 2019			
Saturday, 19 October 2019			
Sunday, 20 October 2019			
Monday, 21 October 2019			
Tuesday, 22 October 2019			
Wednesday, 23 October 2019	7.7	6	<5
Thursday, 24 October 2019			
Friday, 25 October 2019			
Saturday, 26 October 2019			
Sunday, 27 October 2019			
Monday, 28 October 2019			
Tuesday, 29 October 2019			
Wednesday, 30 October 2019	7.7	2	<5
Thursday, 31 October 2019			
Average	7.7	3.0	<5
Minimum	7.7	1.0	<5
Maximum	7.8	6.0	<5

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

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Monthly water quality results, primarily metals, are presented below for October 2019.

Sub-Matrix: WATER (Matrix: WATER)		Client sample ID		LDP001
		Client sampling date / time		15-Oct-2019 12:15
Compound	CAS Number	LOR	Unit	Result
EA010P: Conductivity by PC Titrator				
Electrical Conductivity @ 25°C	----	1	µS/cm	28400
ED040F: Dissolved Major Anions				
Sulfur as S	63705-05-5	1	mg/L	142
Silicon as SiO ₂	14464-46-1	0.1	mg/L	13.2
ED093T: Total Major Cations				
Calcium	7440-70-2	1	mg/L	228
Magnesium	7439-95-4	1	mg/L	323
Potassium	7440-09-7	1	mg/L	41
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	2
Manganese	7439-96-5	1	µg/L	25
Molybdenum	7439-98-7	1	µg/L	5
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	41
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	221
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
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Cobalt	7440-48-4	1	µg/L	<1
Copper	7440-50-8	1	µg/L	<1

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Water – Volume

Monthly water volumes are summarised below.

October 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
01/10/2019	kL	1627
02/10/2019	kL	1033
03/10/2019	kL	391
04/10/2019	kL	0
05/10/2019	kL	0
06/10/2019	kL	1439
07/10/2019	kL	1608
08/10/2019	kL	1345
09/10/2019	kL	1106
10/10/2019	kL	895
11/10/2019	kL	0
12/10/2019	kL	67
13/10/2019	kL	906
14/10/2019	kL	353
15/10/2019	kL	1455
16/10/2019	kL	390
17/10/2019	kL	2434
18/10/2019	kL	2000
19/10/2019	kL	1438
20/10/2019	kL	52
21/10/2019	kL	1276
22/10/2019	kL	1276
23/10/2019	kL	1090
24/10/2019	kL	836
25/10/2019	kL	0
26/10/2019	kL	158
27/10/2019	kL	1570
28/10/2019	kL	1577
29/10/2019	kL	571
30/10/2019	kL	820
31/10/2019	kl	116

Average	kL	898
Minimum	kL	0
Maximum	kL	2434

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

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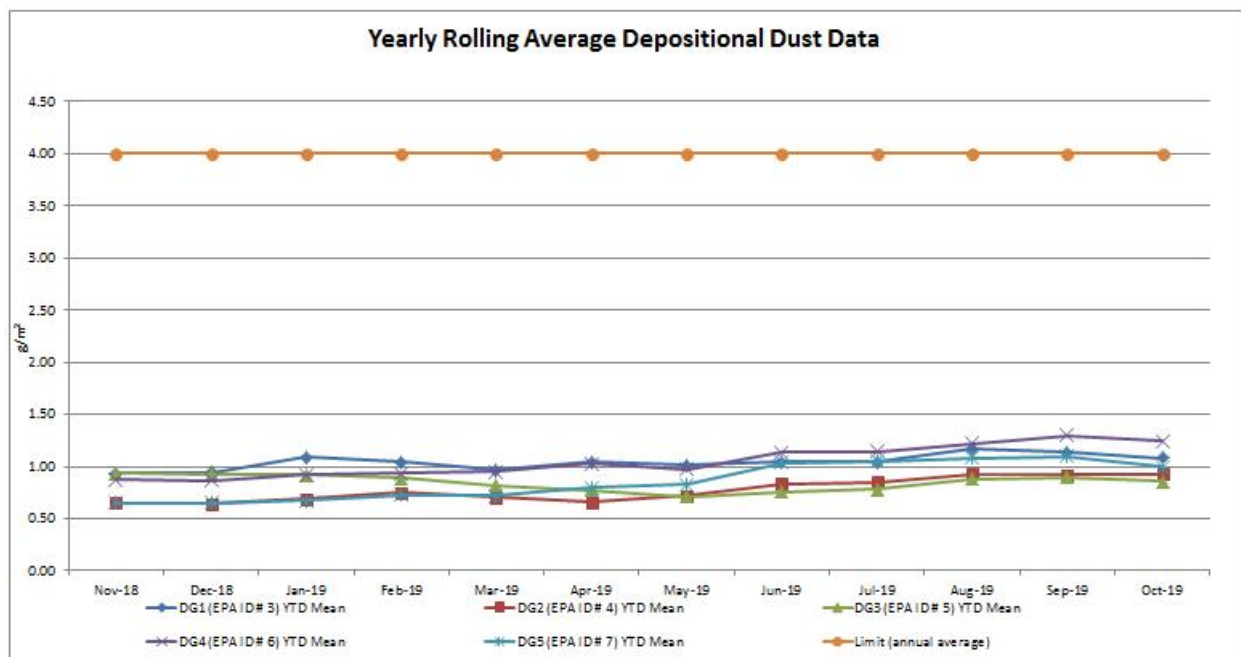
Air Quality

Monthly depositional dust results are shown below.

October 2019	
EPL	191
Limit	4g/m ² /month
Sampling	06/09/2019 to 04/10/2019
Site	Insoluble Matter (g/m ² /month)
DDG001	1.6
DDG002	1.0
DDG003	0.6
DDG004	0.8
DDG005	2.0
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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Weather Data

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

Monthly Weather Data			
2019			
EPL	191		
Licensee	LakeCoal 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	11.0	3.9	26.3
Jun-19	158.8	3.9	25.0
Jul-19	47.2	4.0	23.3
Aug-19	194.0	2.0	25.4
Sep-19	92	5.5	29.6
Oct-19	57	9.1	34.9
Nov-19			
Dec-19			