



Manning Colliery Monthly Website Report

Site:	Manning Colliery
Department:	Technical Services
Report Title:	Monthly Environmental Website Report - February 2020
Prepared by:	Nena Lane-Kirwan
Report Date:	12 March 2020
Distribution:	Delta Coal website

Table of Contents

Summary	3
Introduction	3
Scope	4
Definitions	4
References	4
Monitoring Results	5
Water – Quality	5
Water – Volume.....	7
Air Quality.....	8
Rolling annual average depositional dust results	8
Weather Data	9

Report

Mannering Colliery Monthly Environmental Report

Summary

Environmental monitoring results are presented in this report for monitoring undertaken during February 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 29 February 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	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.

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

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

kL – kilolitre;

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 **February 2020**

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

Report

Mannering Colliery Monthly Environmental Report

Monitoring Results

Water – Quality

Weekly water quality results for discharge point LDP001 are presented below. Monitoring of these parameters have reverted to weekly as per EPL PRP requirements.

February 2020			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Mannering Colliery		
Period	01-Feb-20	to	29-Feb-20
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)
Saturday, 1 February 2020			
Sunday, 2 February 2020			
Monday, 3 February 2020	7.8	4	<5
Tuesday, 4 February 2020			
Wednesday, 5 February 2020			
Thursday, 6 February 2020			
Friday, 7 February 2020			
Saturday, 8 February 2020			
Sunday, 9 February 2020			
Monday, 10 February 2020			
Tuesday, 11 February 2020	7.5	3	<5
Wednesday, 12 February 2020			
Thursday, 13 February 2020			
Friday, 14 February 2020			
Saturday, 15 February 2020			
Sunday, 16 February 2020			
Monday, 17 February 2020			
Tuesday, 18 February 2020			
Wednesday, 19 February 2020			
Thursday, 20 February 2020			
Friday, 21 February 2020			
Saturday, 22 February 2020	7.6	1	<5
Sunday, 23 February 2020			
Monday, 24 February 2020	7.8	4	<5
Tuesday, 25 February 2020			
Wednesday, 26 February 2020			
Thursday, 27 February 2020			
Friday, 28 February 2020			
Saturday, 29 February 2020			
Average	7.7	3.0	<5
Minimum	7.5	1.0	<5
Maximum	7.8	4.0	<5

There were no exceedances of water quality criteria during the reporting period.

Report

Mannering Colliery Monthly Environmental Report

Monthly water quality results, primarily metals, at LDP001 are presented below for February 2020.

Sub-Matrix: WATER (Matrix: WATER)		Client sample ID		Mannering LDP01
		Client sampling date / time		21-Feb-2020 00:00
Compound	CAS Number	LOR	Unit	ES2006172-001
				Result
EA010P: Conductivity by PC Titrator				
Electrical Conductivity @ 25°C	----	1	µS/cm	23900
ED040F: Dissolved Major Anions				
Sulfur as S	63705-05-5	1	mg/L	128
Silicon as SiO ₂	14464-46-1	0.1	mg/L	11.6
ED093T: Total Major Cations				
Calcium	7440-70-2	1	mg/L	210
Magnesium	7439-95-4	1	mg/L	268
Potassium	7440-09-7	1	mg/L	34
EG020F: Dissolved Metals by ICP-MS				
Aluminium	7429-90-5	0.01	mg/L	<0.01
Arsenic	7440-38-2	0.001	mg/L	0.002
Beryllium	7440-41-7	0.001	mg/L	<0.001
Cadmium	7440-43-9	0.0001	mg/L	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001
Manganese	7439-96-5	0.001	mg/L	0.045
Molybdenum	7439-98-7	0.001	mg/L	0.006
Nickel	7440-02-0	0.001	mg/L	0.003
Selenium	7782-49-2	0.01	mg/L	<0.01
Silver	7440-22-4	0.001	mg/L	<0.001
Vanadium	7440-62-2	0.01	mg/L	<0.01
Zinc	7440-66-6	0.005	mg/L	0.007
EG020T: Total Metals by ICP-MS				
Aluminium	7429-90-5	0.01	mg/L	0.05
Antimony	7440-36-0	0.001	mg/L	0.003
Arsenic	7440-38-2	0.001	mg/L	0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001
Barium	7440-39-3	0.001	mg/L	0.251
Cadmium	7440-43-9	0.0001	mg/L	<0.0001
Chromium	7440-47-3	0.001	mg/L	0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001
Copper	7440-50-8	0.001	mg/L	0.002
EG020T: Total Metals by ICP-MS - Continued				
Lead	7439-92-1	0.001	mg/L	<0.001
Lithium	7439-93-2	0.001	mg/L	0.580
Molybdenum	7439-98-7	0.001	mg/L	0.010
Nickel	7440-02-0	0.001	mg/L	0.003
Selenium	7782-49-2	0.01	mg/L	<0.01
Silver	7440-22-4	0.001	mg/L	0.002
Tin	7440-31-5	0.001	mg/L	<0.001
Titanium	7440-32-6	0.01	mg/L	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01
Zinc	7440-66-6	0.005	mg/L	<0.005
Boron	7440-42-8	0.05	mg/L	0.35
Iron	7439-89-6	0.05	mg/L	0.10
EG035F: Dissolved Mercury by FIMS				
Mercury	7439-97-6	0.0001	mg/L	<0.0001
EG035T: Total Recoverable Mercury by FIMS				
Mercury	7439-97-6	0.0001	mg/L	<0.0001
EK055G: Ammonia as N by Discrete Analyser				
Ammonia as N	7664-41-7	0.01	mg/L	1.17
EK067G: Total Phosphorus as P by Discrete Analyser				
Total Phosphorus as P	----	0.01	mg/L	0.29

Report

Mannering Colliery Monthly Environmental Report

Water – Volume

Monthly water volumes at Mannering Colliery are summarised below.

February 2019	
EPL	191
Licensee	LakeCoal Pty Ltd
Premises	Mannering Colliery
Date Sampled	Daily
Date Reported	Refer report date
Discharge volum	4000 kilolitres per day
Sampling Point	LDP001 (EPA ID # 1)

Day	Unit	Volume
01/02/2020	kL	1615
02/02/2020	kL	1638
03/02/2020	kL	2420
04/02/2020	kL	1265
05/02/2020	kL	1002
06/02/2020	kL	906
07/02/2020	kL	1571
08/02/2020	kL	1868
09/02/2020	kL	2260
10/02/2020	kL	484
11/02/2020	kL	1679
12/02/2020	kL	1575
13/02/2020	kL	743
14/02/2020	kL	0
15/02/2020	kL	0
16/02/2020	kL	0
17/02/2020	kL	711
18/02/2020	kL	1350
19/02/2020	kL	86
20/02/2020	kL	595
21/02/2020	kL	1404
22/02/2020	kL	472
23/02/2020	kL	9
24/02/2020	kL	1279
25/02/2020	kL	1528
26/02/2020	kL	1594
27/02/2020	kL	802
28/02/2020	kL	1347
29/02/2020	kL	420

Average	kL	1056
Minimum	kL	0
Maximum	kL	2420

There were no exceedances of the volumetric limits at LDP001 during the reporting period.

Report

Mannering Colliery Monthly Environmental Report

Air Quality

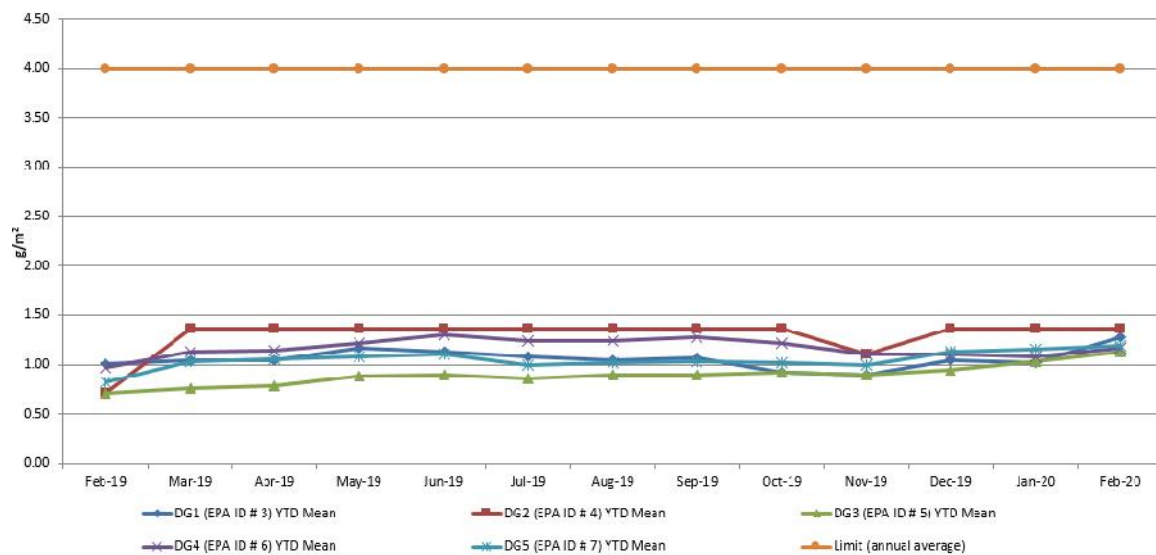
Monthly depositional dust results are shown below.

February 2020			
EPL		191	
Limit	Max. total deposited dust level		4g/m ² /month
	Max. increase in deposited dust level		2g/m ² /month
Sampling		06/01/2020 to 06/02/2020	
EPA ID no.	Site	Insoluble Matter (g/m2/month)	
3	DDG001	1.9	
4	DDG002	2.6	
5	DDG003	3.0	
6	DDG004	3.3	
7	DDG005	2.2	
Notes:			

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

Rolling annual average depositional dust results

Yearly Rolling Average Depositional Dust Data



Report

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	06/03/2020		
Month	Total Rainfall/Month mm	Min Temp	Max Temp
Jan-20	28.2	18	43.7
Feb-20	350.2	15.7	37
Mar-20			
Apr-20			
May-20			
Jun-20			
Jul-20			
Aug-20			
Sep-20			
Oct-20			
Nov-20			
Dec-20			