



Mannering Colliery Monthly Website Report

Site:	Mannering Colliery
Department:	Technical Services
Report Title:	Monthly Environmental Report – July 2020
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Manning Colliery Monthly Environmental Report

Summary

Environmental monitoring results are presented in this report for monitoring undertaken during the period of July 2020.

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 (EPL) publicly available;
- Condition 10 & 13, 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 (Sydney Basin – North Coast Groundwater Source) for 450 unit shares (megalitres).

This report provides environmental monitoring data from Manning Colliery for the period 1st to 31st July 2020.

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 monthly 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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Scope

This report presents the results from the various environmental monitoring programs undertaken for Manning 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 **July 2020**

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

ALS – Water Analysis Report **July 2020**

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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.

July 2020			
EPL	191		
Licensee	Great Southern Energy Pty Ltd		
Premises	Manning Colliery		
Period	01-Jul-20	to	31-Jul-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)
Wednesday, 1 July 2020	7.8	1	<5
Thursday, 2 July 2020			
Friday, 3 July 2020			
Saturday, 4 July 2020			
Sunday, 5 July 2020			
Monday, 6 July 2020	7.9	1	<5
Tuesday, 7 July 2020			
Wednesday, 8 July 2020			
Thursday, 9 July 2020			
Friday, 10 July 2020			
Saturday, 11 July 2020			
Sunday, 12 July 2020			
Monday, 13 July 2020			
Tuesday, 14 July 2020			
Wednesday, 15 July 2020	7.8	1	<5
Thursday, 16 July 2020			
Friday, 17 July 2020			
Saturday, 18 July 2020			
Sunday, 19 July 2020			
Monday, 20 July 2020			
Tuesday, 21 July 2020	7.7	10	<5

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Wednesday, 22 July 2020			
Thursday, 23 July 2020			
Friday, 24 July 2020			
Saturday, 25 July 2020			
Sunday, 26 July 2020			
Monday, 27 July 2020			
Tuesday, 28 July 2020			
Wednesday, 29 July 2020			
Thursday, 30 July 2020	7.8	45	<5
Friday, 31 July 2020			

Average	7.8	11.6	<5
Minimum	7.7	1.0	<5
Maximum	7.9	45.0	<5

The water quality analytical results during the reporting period did not exceed the water quality criteria imposed at the site.

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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Client sample ID			LDP001
Client sampling date / time				21-Jul-2020 11:00	
Compound	CAS Number	LOR	Unit	ES2024988-001	
					Result
EA010P: Conductivity by PC Titrator					
Electrical Conductivity @ 25°C	----	1	µS/cm	25400	
ED040F: Dissolved Major Anions					
Sulfur as S	63705-05-5	1	mg/L	156	
Silicon as SiO2	14464-46-1	0.1	mg/L	14.0	
ED093T: Total Major Cations					
Calcium	7440-70-2	1	mg/L	205	
Magnesium	7439-95-4	1	mg/L	312	
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	<1	
Manganese	7439-96-5	1	µg/L	50	
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	<5	
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	3	
Beryllium	7440-41-7	1	µg/L	<1	
Barium	7440-39-3	1	µg/L	222	
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	
Lithium	7439-93-2	1	µg/L	664	
Molybdenum	7439-98-7	1	µg/L	5	
Nickel	7440-02-0	1	µg/L	5	
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	<5	
Boron	7440-42-8	50	µg/L	390	
Iron	7439-89-6	50	µg/L	100	
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	1.13	
EK067G: Total Phosphorus as P by Discrete Analyser					
Total Phosphorus as P	----	0.01	mg/L	0.07	

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Water – Volume

Monthly water volumes at Manning Colliery are summarised below.

July 2020	
EPL	191
Licensee	Great Southern Energy 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
01/07/2020	kL	808
02/07/2020	kL	936
03/07/2020	kL	0
04/07/2020	kL	115
05/07/2020	kL	1390
06/07/2020	kL	2047
07/07/2020	kL	1238
08/07/2020	kL	1030
09/07/2020	kL	593
10/07/2020	kL	0
11/07/2020	kL	452
12/07/2020	kL	1240
13/07/2020	kL	1011
14/07/2020	kL	1898
15/07/2020	kL	672
16/07/2020	kL	1276
17/07/2020	kL	104
18/07/2020	kL	0
19/07/2020	kL	1166
20/07/2020	kL	1509
21/07/2020	kL	721
22/07/2020	kL	952
23/07/2020	kL	889
24/07/2020	kL	667
25/07/2020	kL	735
26/07/2020	kL	1680
27/07/2020	kL	1531
28/07/2020	kL	1332
29/07/2020	kL	376
30/07/2020	kL	1138
31/07/2020	kL	140

Average	kL	892
Minimum	kL	0
Maximum	kL	2047

The daily water volumes at LDP001 during July 2020 were below the relevant limit.

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Water – Groundwater Discharge

Groundwater discharged from underground workings to the MC Pollution Control Dams within the surface operational area has been detailed below. Delta Coal notes that MC does not have calibrated volume sensors on underground piping, as such, discharge from LDP001 is utilised to estimate groundwater extraction. Manning Colliery operates Water Access License permitting the extraction of 450 megalitres per financial year.

MC Groundwater Pumped to Surface Totals FY2019-2020		
Date (month)	Groundwater Discharge (ML)	Groundwater Discharge (ML YTD)
July 2020	26.83	26.83
August 2020		
September 2020		
October 2020		
November 2020		
December 2020		
January 2021		
February 2021		
March 2021		
April 2021		
May 2021		
June 2021		

Air Quality

Monthly depositional dust results are shown below.

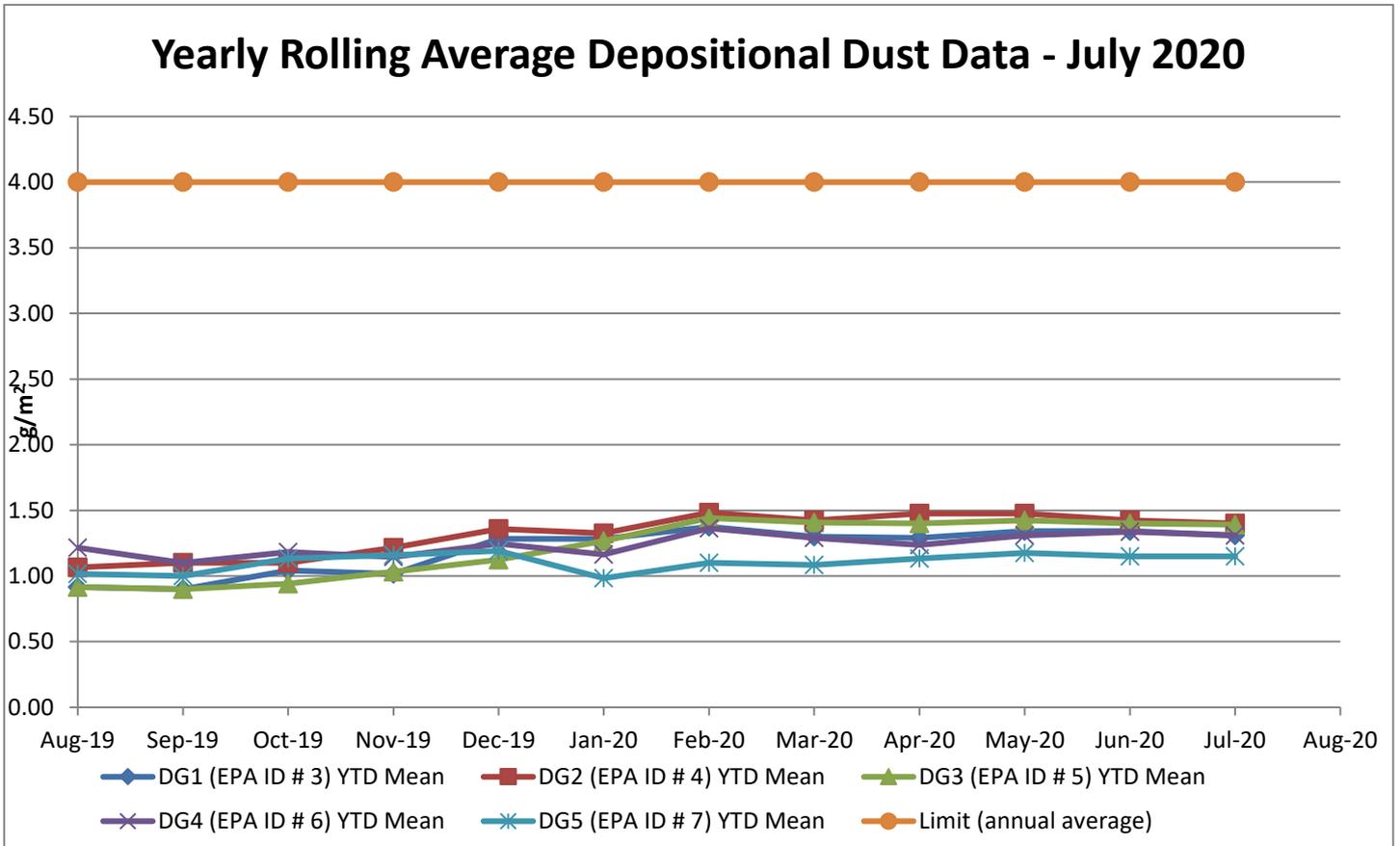
July 2020			
EPL		191	
Limit		Max. total deposited dust level	4g/m ² /month
		Max. increase in deposited dust level	2g/m ² /month
	Sampling Date	05/06/2020	to 07/07/2020
EPA ID no.	Site	Insoluble Matter (g/m ² /month)	
3	DG001	0.2	
4	DG002	0.1	
5	DG003	0.2	
6	DG004	0.3	
7	DG005	0.4	
Notes:			

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

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Rolling annual average depositional dust results



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Weather Data

A summary of weather data recorded by a meteorological monitoring station at the adjacent Manning Colliery is presented below for the year to date. (EPA ID no. 26).

Monthly Weather Data			
Licensee	Great Southern Energy Pty Ltd		
Location	Manning Colliery Meteorological station		
Date published	Refer report date		
Date sampled	Daily		
Date obtained	06/08/2020		
Month	Total Rainfall/Month mm	Min Temp	Max Temp
Jan-20	28	18	44
Feb-20	350	16	37
Mar-20	159	12	38
Apr-20	46	9	28
May-20	88	5	27
Jun-20	67.6	4.5	22.7
Jul-20	232.8	3.7	23.3

Variable	July	Total	Valid
A/C Temp	100%	8928	8928
A1	100%	8928	8928
A1_Scaled	100%	8928	8928
Bypass Flow	100%	8928	8928
Cap Temp	100%	8928	8928
Case Temp	100%	8928	8928
Config	100%	8928	8928
Dew Point	100%	8928	8928
Dig-In	100%	8928	8928
Dig-Latch	100%	8928	8928
ESN	100%	8928	8928
Filter Freq	100%	8928	8928
Filter Load	100%	8928	8928
Humidity	100%	8928	8928
MC	100%	8928	8928
MC 12Hr	100%	8928	8928
MC 1Hr	100%	8928	8928
MC 24Hr	100%	8928	8928
MC 30min	100%	8928	8928
MC 8Hr	100%	8928	8928
MC Total	100%	8928	8928
Mobile Signal	100%	8928	8928
Noise	100%	8928	8928
PM10 Flow	100%	8928	8928
Pressure	100%	8928	8928
Site	0.0%	8928	0
Temperature	100%	8928	8928
Tube Temp	100%	8928	8928
Vac Pressure	100%	8928	8928
Volts	100%	8928	8928