Monthly Website Report

| SITE: | Mannering Colliery | |
|-----------------|---|--|
| Department: | Technical Services | |
| REPORT TITLE: | Monthly Environmental Report – March 2019 | |
| Prepared by: | Chris Armit | |
| Report Date: | 9/04/2019 | |
| Distribution: | Mannering Colliery and Delta Coal Website | |

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Mannering Colliery Monthly Environmental Report

Summary

Monitoring was undertaken in March 2019 with all results in compliance with the required limits.

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.

This monthly report is to satisfy the requirements of;

- section 66(6) of the Protection of the Environmental 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 Mannering Colliery for the period 1 March 2019 to 31 March 2019.

Environmental monitoring data is collected as required under Environment Protection Licence 191 (EPL 191).

Details of the Mannering Colliery and EPL 191 are provided below.

| Mannering Colliery Information | | |
|--------------------------------|--|--|
| Premises name | Mannering Colliery | |
| Address | Rutleys Road, Doyalson, NSW, 2262 | |
| Licensee | Great Southern Energy | |
| EPL# | 191 | |
| EPL location | http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=5078 1&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.

Mannering Colliery Monthly Environmental Report

Scope

This report presents the results from the various environmental monitoring 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 Project Approval) to determine compliance.

Monitoring results presented include;

- Water quality;
- Water volume;
- · Air quality;and
- Weather data

Definitions

°C – degrees celsius

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

kL - kilolitres

mg/L - Milligrams per litre

mm - millimetre

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 - March 2019

Steel River Testing – Water Analysis Report – March 2019

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Monitoring Results

Water – Quality

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

| | March 2019 | | |
|-------------------------------|--|--------|----------------|
| EPL | 191 | | |
| Licensee | LakeCoal Pty Ltd | | |
| Premises | Mannering Colliery | | |
| Period | 01-Mar-19 | to | 31-Mar-19 |
| Location | LDP001 (EPA ID # 1) | | 01-1-101-10 |
| | , , | | |
| Date sampled | Weekly Defended at the | | |
| Date reported | Refer report date | | |
| Monitoring requirement | Weekly | | |
| pH limit | 6.5 - 8.5 | | |
| TSS limit (mg/L) | 50 | | |
| Dil and grease limit (mg/L) | | | |
| Exceedance (Yes/No) | No | | |
| ∀ ater Quality Results | | | |
| | Τ | TSS | Oil and grease |
| Date | pН | (mg/L) | (mg/L) |
| Friday, 1 March 2019 | | | |
| Saturday, 2 March 2019 | | | |
| Sunday, 3 March 2019 | | | |
| Monday, 4 March 2019 | | | |
| Tuesday, 5 February 2019 | | | |
| Wednesday, 6 March 2019 | | | |
| Thursday, 7 March 2019 | 8.2 | 5 | <5 |
| Friday, 8 March 2019 | | | |
| Saturday, 9 March 2019 | | | |
| Sunday, 10 March 2019 | | | |
| Monday, 11 March 2019 | | | |
| Tuesday, 12 March 2019 | 8 | 1 | <5 |
| Wednesday, 13 March 2019 | | | |
| Thursday, 14 March 2019 | | | |
| Friday, 15 March 2019 | | | |
| Saturday, 16 March 2019 | | | |
| Sunday, 17 March 2019 | | | |
| Monday, 18 March 2019 | | | |
| Tuesday, 19 March 2019 | | | |
| Wednesday, 20 March 2019 | | | |
| Thursday, 21 March 2019 | | | |
| Friday, 22 March 2019 | 8.2 | 5 | <5 |
| Saturday, 23 March 2019 | | | |
| Sunday, 24 March 2019 | | | |
| Monday, 25 March 2019 | | | |
| Tuesday, 26 March 2019 | | | |
| Wednesday, 27 March 2019 | | | |
| Thursday, 28 March 2019 | 7.9 | 12 | <5 |
| Friday, 29 March 2019 | | | 1,* |
| Saturday, 30 March 2019 | | | |
| Sunday, 31 March 2019 | | | |
| Average | 8.1 | 5.8 | <5 |
| Misinin | 7.9 | 1.0 | <5 |
| Maximum | 8.2 | 12.0 | <5 |

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Mannering Colliery Monthly Environmental Report

Water – Volume

| | March 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 |
| 01/03/2019 | kL | |
| 02/03/2019 | kL | 11 |
| 03/03/2019 | kL | 100 |
| 04/03/2019 | kL | 157 |
| 05/03/2019 | kL | 155 |
| 06/03/2019 | kL | 177 |
| 07/03/2019 | kL | |
| 08/03/2019 | kL | |
| 09/03/2019 | | |
| 0010012010 | kL | |
| 10/03/2019 | kL | |
| 11/03/2019 | kL | |
| 12/03/2019 | kL | |
| 13/03/2019 | kL | |
| 14/03/2019 | kL | |
| 15/03/2019 | kL | |
| 16/03/2019 | kL | |
| 17/03/2019 | kL | 94 |
| 18/03/2019 | kL | 8 |
| 19/03/2019 | kL | 28 |
| 20/03/2019 | kL | |
| 21/03/2019 | kL | 45 |
| 22/03/2019 | kL | |
| 23/03/2019 | kL | |
| 24/03/2019 | kL | |
| 25/03/2019 | kL | 34 |
| 26/03/2019 | kL | |
| 27/03/2019 | kL | |
| 28/03/2019 | kL | |
| 29/03/2019 | kL | |
| 30/03/2019 | kL | 21 |
| 31/03/2019 | kl | 3 |
| Average | kL | 270 |
| Minimim | kL | 0 |
| Maximum | kL | 1773 |

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Air Quality

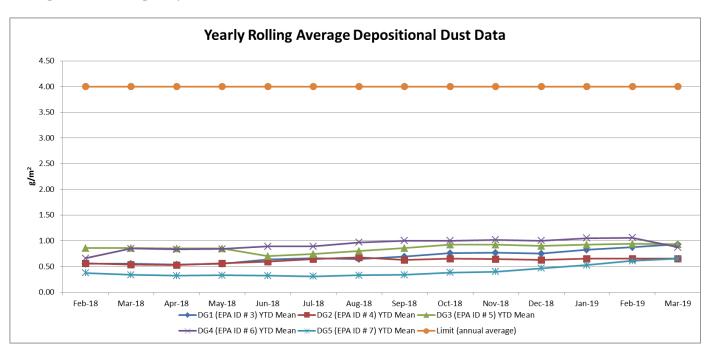
Monthly depositional dust results

| March 2019 | | | |
|----------------|--------------------|----|-----------|
| EPL | 191 | | |
| Licensee | LakeCoal Pty Ltd | | |
| Premises | Mannering Colliery | | |
| Date Sampled | 08-Mar-19 | to | 11-Mar-19 |
| Date Obtained | 15-Mar-19 | | |
| Date Reported | Refer report date | | |
| Sampling Point | As per site below | | |

| Site | Insoluble Matter (g/m2/month) | |
|------------------|-------------------------------|--|
| DG1 (EPA ID # 3) | 1.8 | |
| DG2 (EPA ID # 4) | 1.3 | |
| DG3 (EPA ID # 5) | 1.7 | |
| DG4 (EPA ID # 6) | 1.6 | |
| DG5 (EPA ID # 7) | 1.4 | |

Notes

Rolling annual average depositional dust results



⁻ For site locations refer to Air Quality Management Plan

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Weather

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

| Monthly Weather Data | | | |
|----------------------|------------------------------|----------|----------|
| 2019 | | | |
| EPL | 191 | | |
| Licensee | Delta Coal Pty Ltd | | |
| Premises | Mannering Colliery | | |
| Location | W1 (on-site weather station) | | |
| Date published | Refer report date | | |
| Date sampled | Daily | | |
| Date obtained | 09/04/2019 | | |
| 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 |
| | 353.2 | 51.4 | 114.1 |