



Centennial Coal



Environment Protection Licence 3607

December 2017

Environmental Monitoring Data

Springvale Colliery



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Abbreviations

Abbreviation	Description
DG	Dust Gauge
EC	Electrical Conductivity
EPL	Environment Protection Licence
kL	kilolitre
L	litre
LDP	Licensed Discharge Point
Mg	milligrams
ML	Megalitre
TSS	Total Suspended Solids
uS or μ S	microsiemens

1 Introduction

This report summarises the environmental monitoring results for Springvale Colliery for December 2017. The locations of the Licensed Discharge Points (LDPs) are shown in Appendix 1. Monitoring results for LDP006 and LDP007 are reported separately from this report.

A variation was made to EPL 3607 in December 2014 to align the mining scale with MOD 4 of the Development Consent which allows production of coal up to 4.5 million tonnes. The EPL was further varied on the 26th of February 2016 to align with SSD5594 commitments. The EPL was varied again on the 28th of June 2017 to align with MOD2 to SSD5594.

The EPL for Springvale is available on the NSW Environment Protection Authority web site www.environment.nsw.gov.au. The direct link is shown below.

<http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=32604&SYSUID=1&LICID=3607>

Additional information about Springvale Colliery is available on the Centennial Coal Website www.centennialcoal.com.au.

2 Weather

A summary of rainfall data recorded at the Springvale meteorological monitoring station is shown in Table 1 below.

Table 1. Weather Summary

Month	Total Rainfall (mm)	Minimum Temperature (°C) @ 2m	Maximum Temperature (°C) @ 2m
December 2016	72.2	3.65	32.2
January 2017	25.8	10.4	37.27
February 2017	15.6	2.07	39.81
March 2017	141.8	6.19	28.68
April 2017	20.0	- 1.48	21.07
May 2017	23.6	- 4.63	17.98
June 2017	28.2	- 6.64	15.35
July 2017	12.6	- 9.73	19.13
August 2017	37.0	- 5.77	19.13
September 2017	2.0	- 6.26	28.51
October 2017	81.2	- 1.95	27.03
November 2017	23.0	0.59	27.43
December 2017	97.6	7.32	32.91

3 Air Quality Monitoring

The air quality monitoring results for the monthly reporting period are summarised in Table 2 and a 12 month comparison of dust results is displayed in Figure 1.

3.1 Depositional Dust

Table 2. Depositional Dust

Data Published:	12/01/2018		Licensee:		Springvale Coal Pty Limited	
Data Sampled:	Exposure period 02/11/2017 to 04/12/2017		Address:		Castlereagh Hwy, Lidsdale	
Data Obtained:	12/01/2018		EPL No.		3607	
Sampling Point	Monitoring frequency	Pollutant	Measurement	Limit	Units	Exceedence (yes/no)
SV_D1	Monthly	Insoluble Solids	1.1	NA	g/m ²	no
SV_D2	Monthly	Insoluble Solids	0.3	NA	g/m ²	no

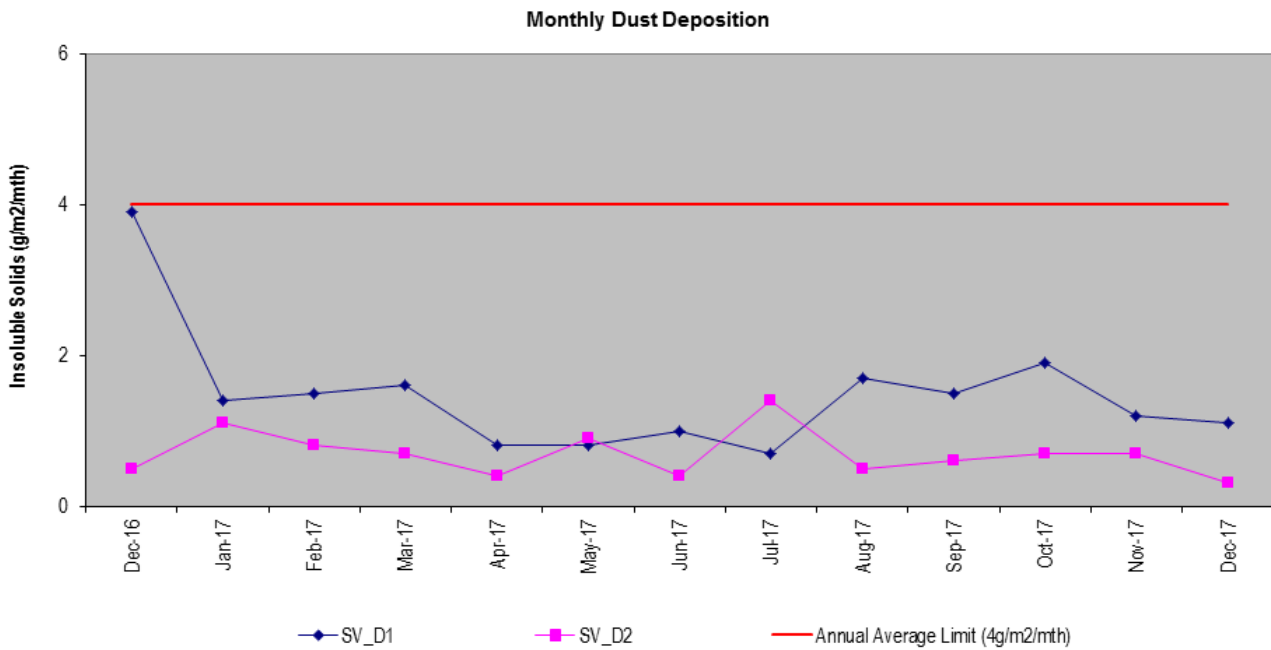


Figure 1: 12 Month Summary of Dust Results

4 Surface Water Quality

A summary of monitoring data for LDP001 and LDP009 is provided in Table 3 below.

There were no discharges from LDP004, LDP005, and LDP10 during the month.

Table 3. Surface Water Quality - December 2017

Date Published:	12/01/2018	Licensee:	Springvale Coal Pty Ltd				
Data Sampled:	December 2017	Address:	Castlereagh Highway, Lidsdale				
Date Obtained:	12/01/2018	EPL No:	3607				
LDP001							
	Frequency required	100th Percentile Limit	Unit of Measure	5/12/2017	12/12/2017	19/12/2017	27/12/2017
Oil and Grease	monthly	10	mg/L	<5			
pH	weekly	6.5-9.0	pH	8.6	7.2	8.5	7.2
Total Suspended Solids	monthly	30	mg/L	5			
EC	weekly	Monitoring requirement only	uS/cm	1054	1037	1004	1036
Manganese Filterable	monthly	Monitoring requirement only	mg/L	0.016			
Iron Filterable	monthly	Monitoring requirement only	mg/L	<0.05			
LDP009							
	Frequency required	100th Percentile Limit	Unit of Measure	5/12/2017	12/12/2017	19/12/2017	27/12/2017
pH	weekly	6.5-9.0	pH	8.00	7.7	8.1	7.2
EC	weekly	1200	uS/cm	1203	1244	1251	1238
Turbidity	weekly	50	NTU	3.2	3.0	0.8	2.3
TSS	weekly	50	mg/L	<5	14	15	12
Aluminium (filt)	weekly	0.45	mg/L	0.03	0.03	0.01	0.02
Arsenic (filt)	weekly	0.024	mg/L	0.01	0.021	0.008	0.011
Copper (filt)	weekly	0.007	mg/L	<0.001	<0.001	<0.001	<0.001
Manganese (filt)	weekly	1.7	mg/L	0.003	0.004	0.003	0.012
Nickel (filt)	weekly	0.047	mg/L	<0.001	0.002	0.002	0.002
Zinc (filt)	weekly	0.05	mg/L	0.014	0.007	0.01	0.008
Boron (filt)	weekly	0.37	mg/L	0.07	0.08	0.07	0.08
Iron (filt)	weekly	0.40	mg/L	<0.05	0.06	<0.05	<0.05
Fluoride	weekly	1.80	mg/L	1.4	1.3	1.3	1.6
Oil and Grease	weekly	10.00	mg/L	<5	<5	<5	<5

Results are presented graphically to show a comparison with historic data trends in the following pages.

During the reporting period four EC exceedances were recorded at LDP009. The recorded results were 1203uS/cm, 1244uS/cm, 1251uS/cm and 1238uS/cm against the EPL limit of 1200uS/cm. Elevated EC is caused by increased exposure of mine water make with goaf material. Various specialist assessments have been undertaken as part of the Springvale Mine Extension Project which conclude that there are no adverse impacts from elevated EC levels. Centennial is currently undertaking a holistic review of water management activities within the Western Region with the objective of meeting the agreed requirements of the Springvale Mine Extension Project.

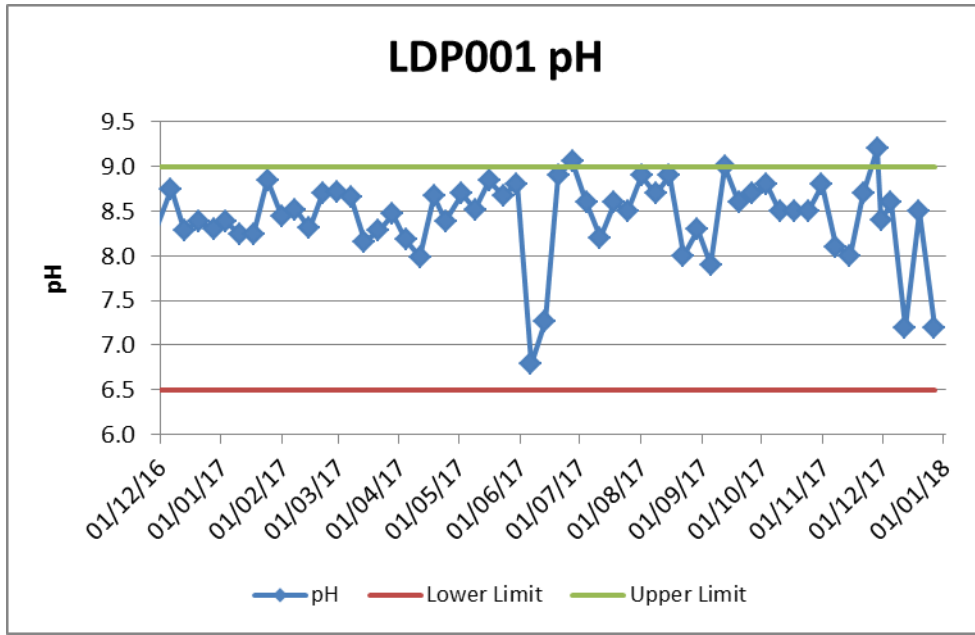


Figure 2: LDP001 pH 12 month summary

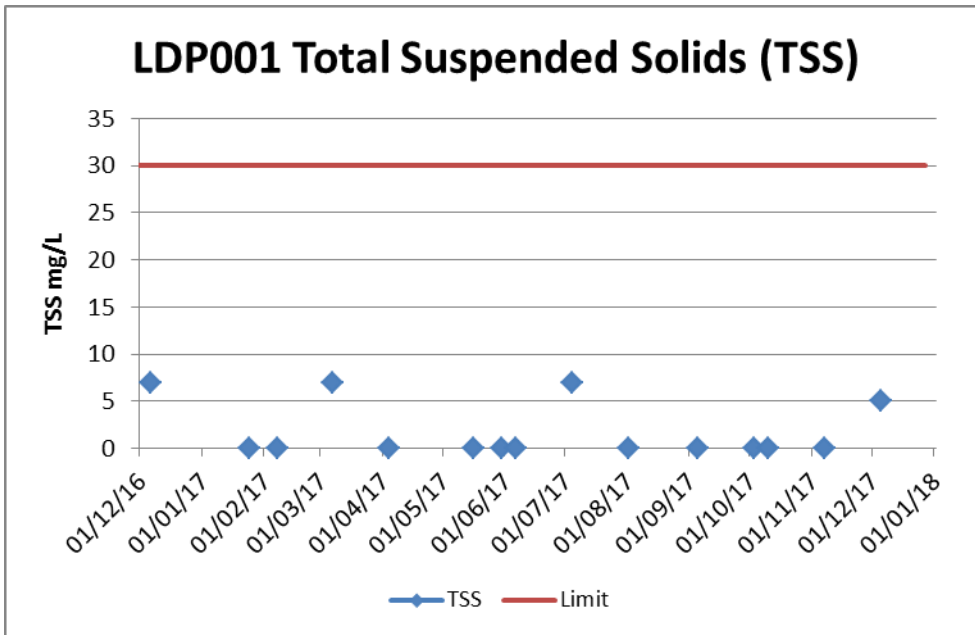


Figure 3: LDP001 TSS 12 month summary

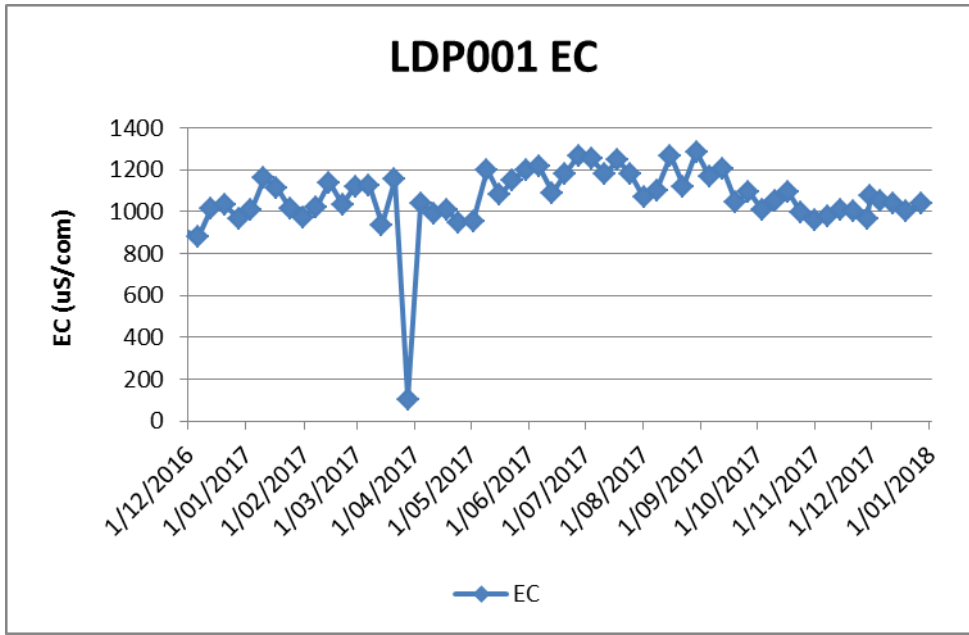


Figure 4: LDP001 EC 12 month summary

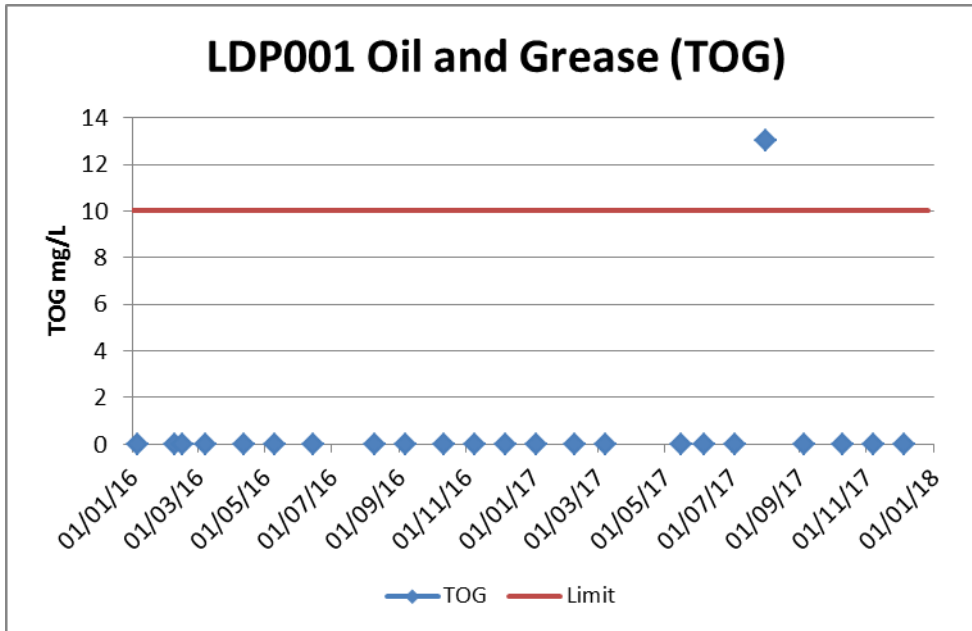


Figure 5: LDP001 TOG 12 month summary

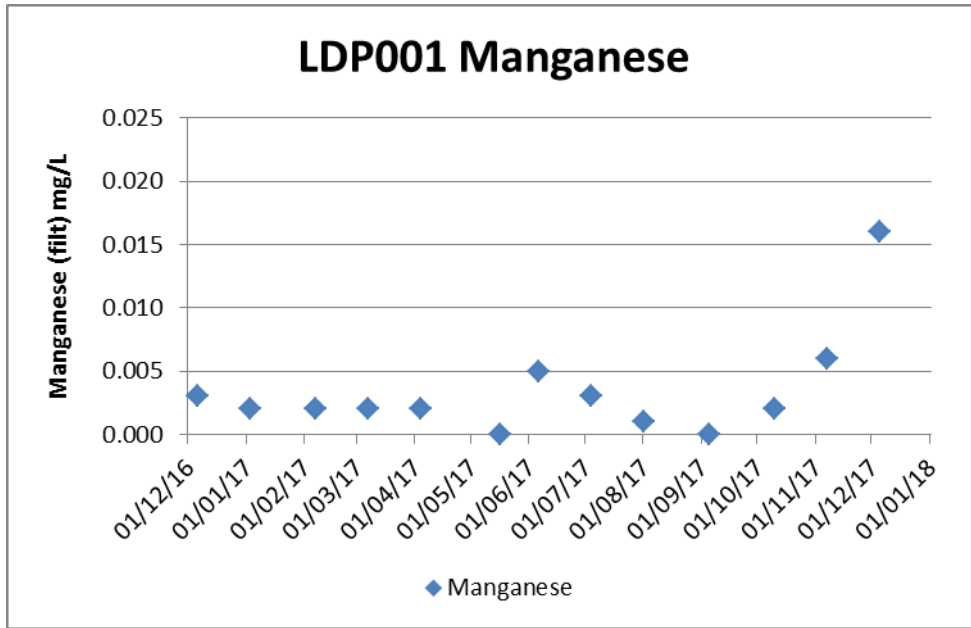


Figure 6: LDP001 Manganese 12 month summary

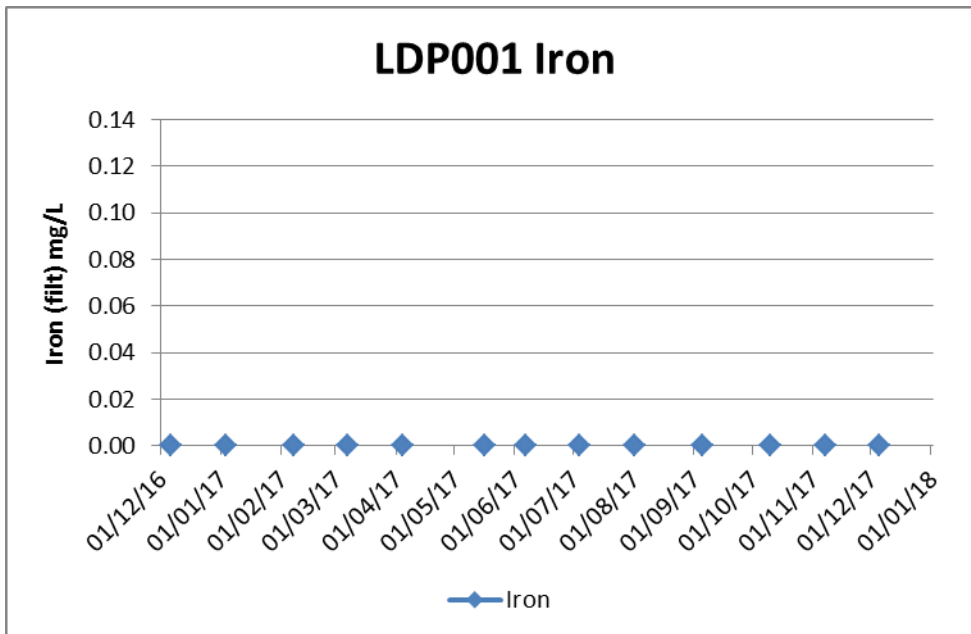


Figure 7: LDP001 Iron 12 month summary

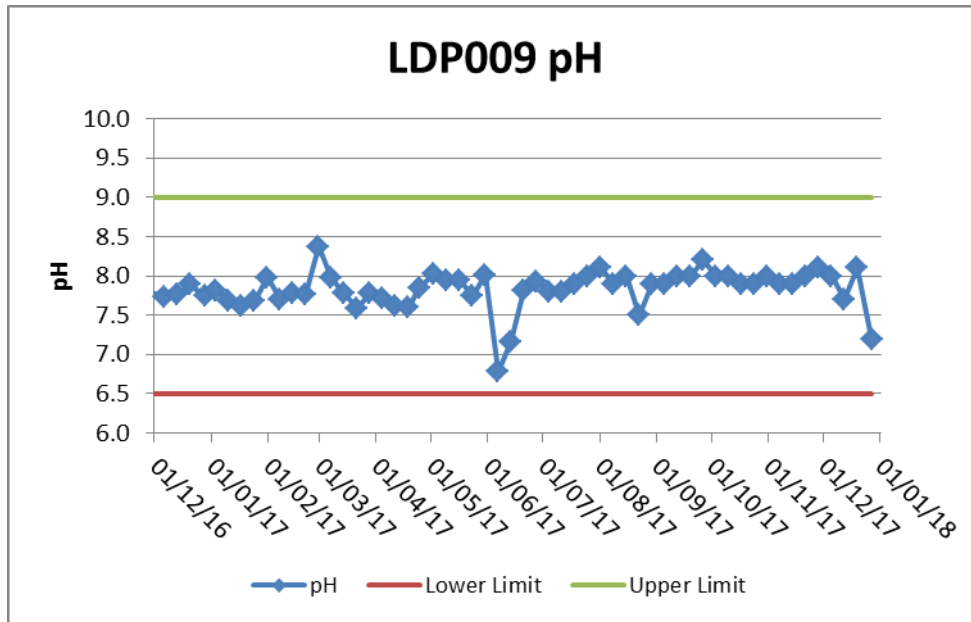


Figure 8: LDP009 pH 12 month summary

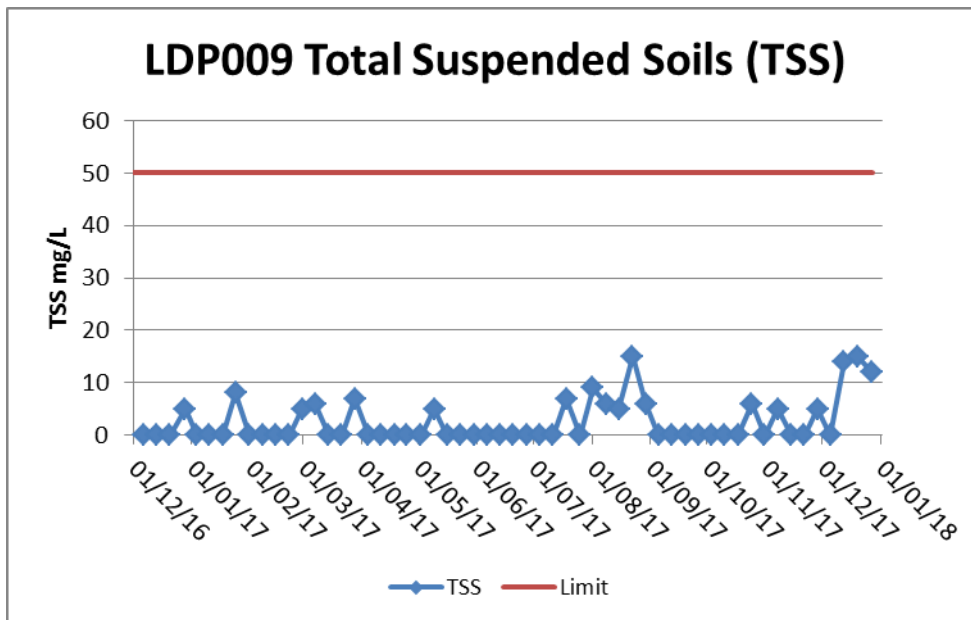


Figure 9: LDP009 TSS 12 month summary

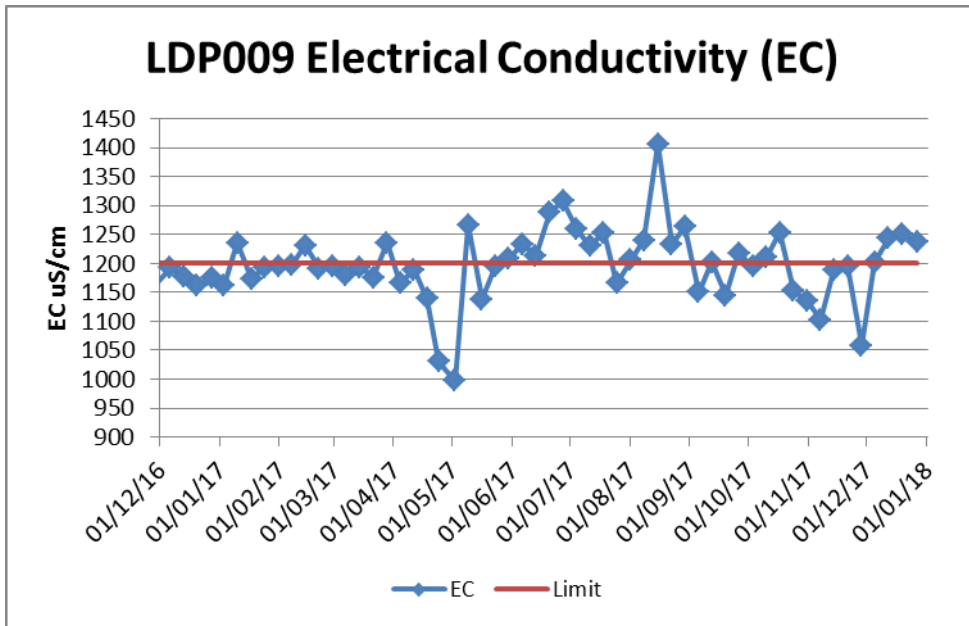


Figure 10: LDP009 EC 12 month summary

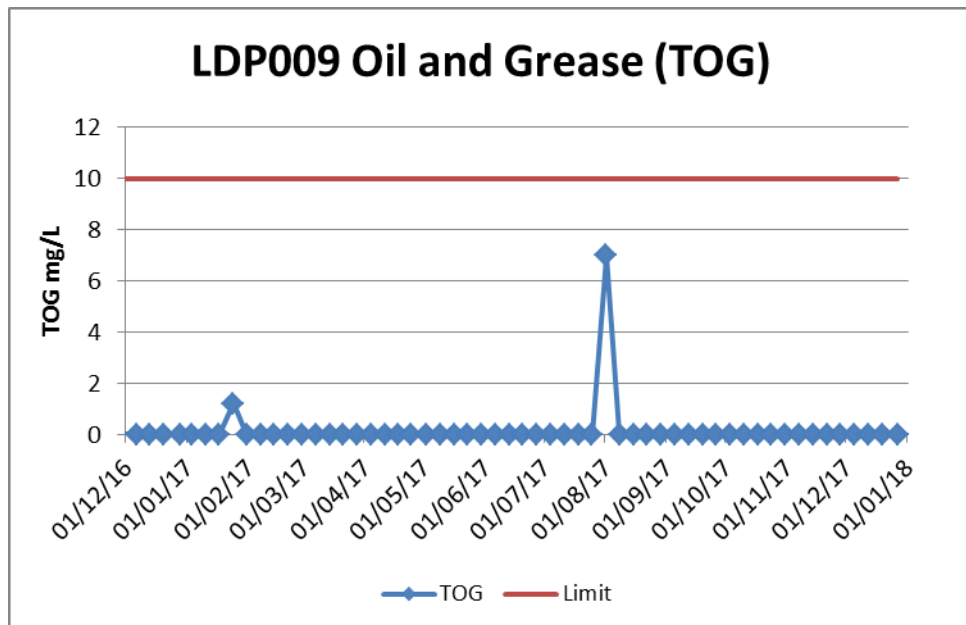


Figure 11: LDP009 TOG 12 month summary

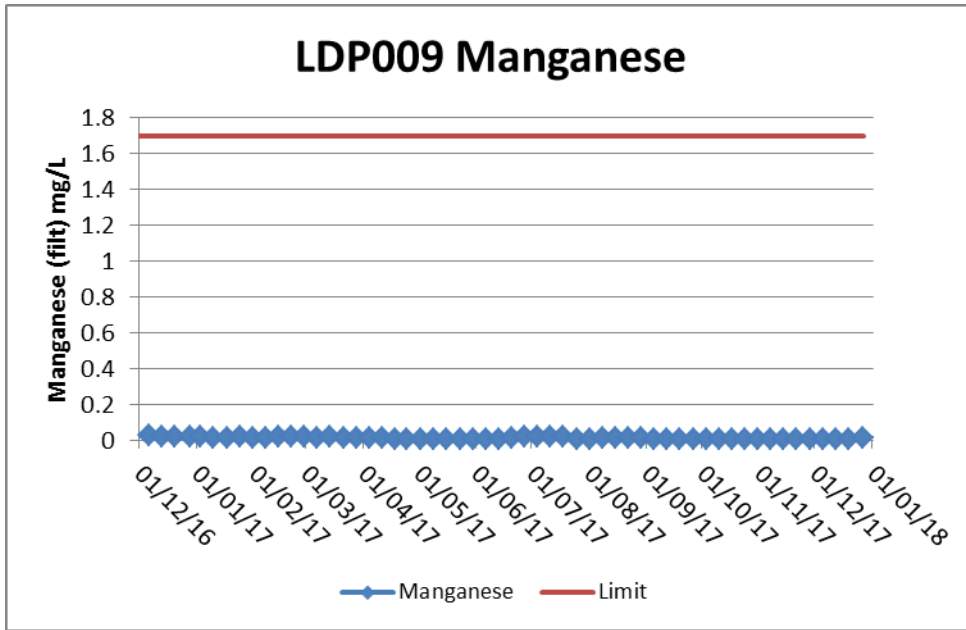


Figure 12: LDP009 Manganese 12 month summary

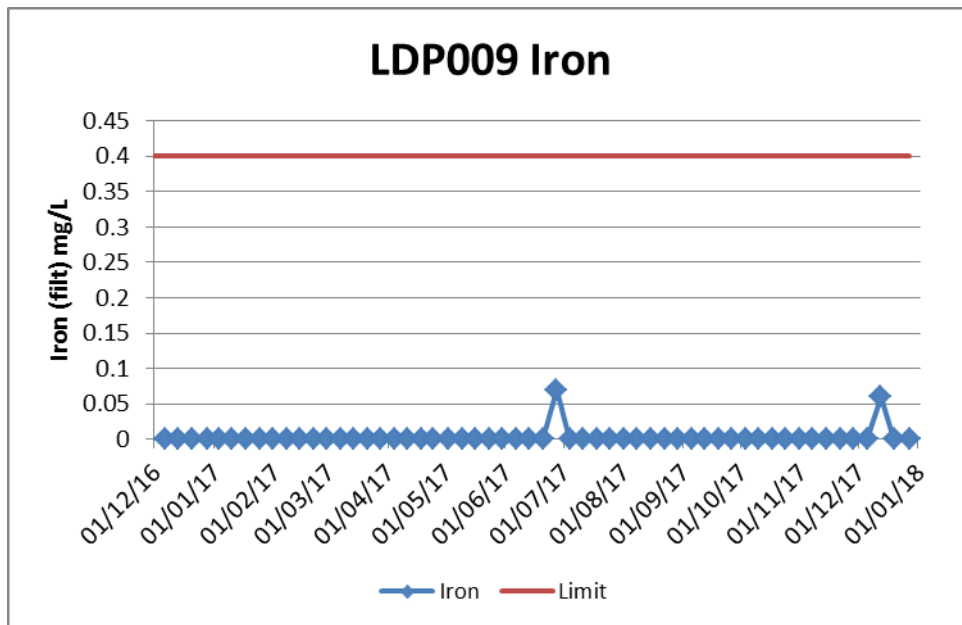


Figure 13: LDP009 Iron 12 month summary

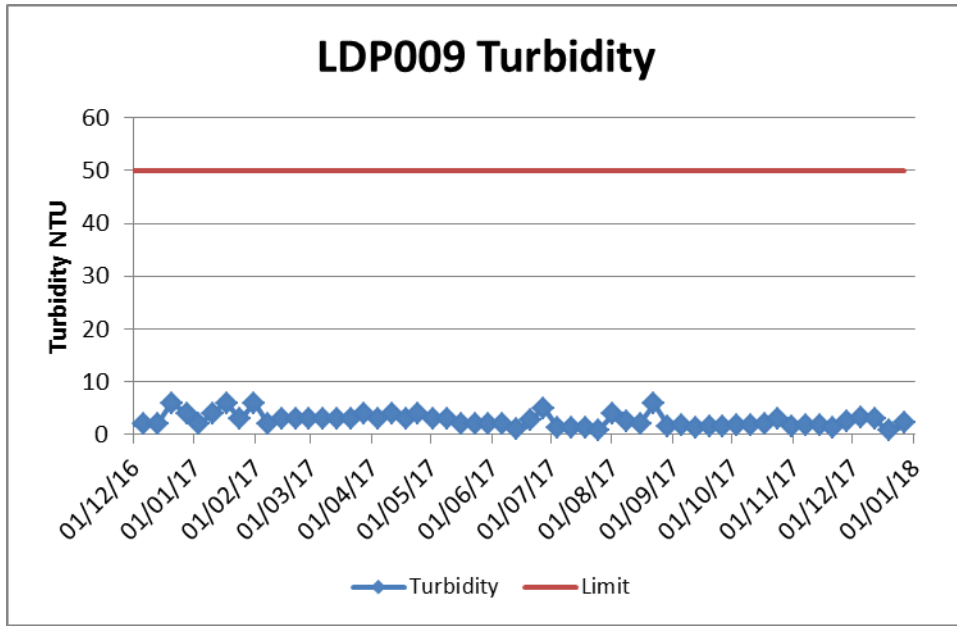


Figure 14: LDP009 Turbidity 12 month summary

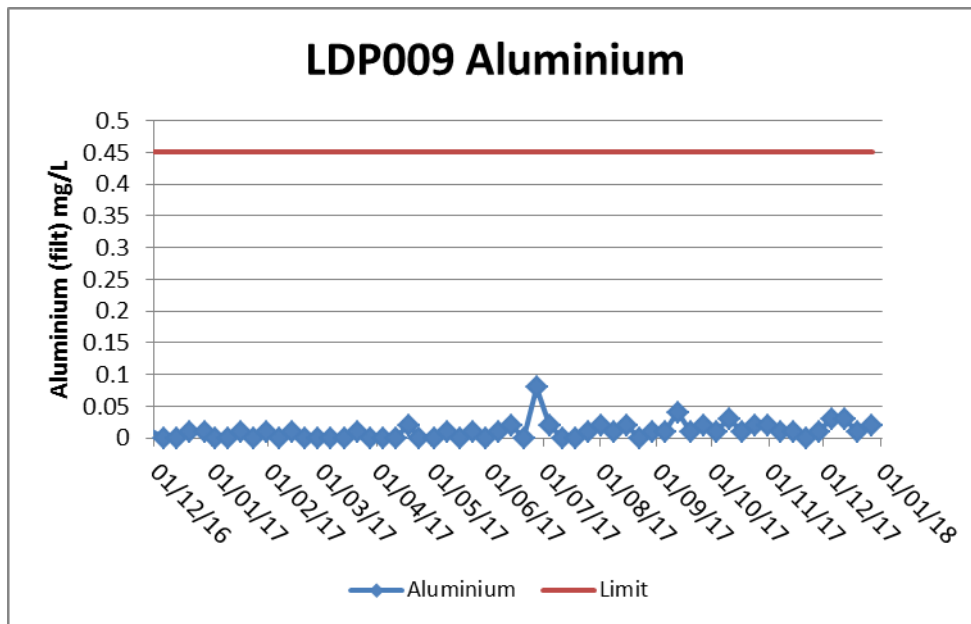


Figure 15: LDP009 Aluminium 12 month summary

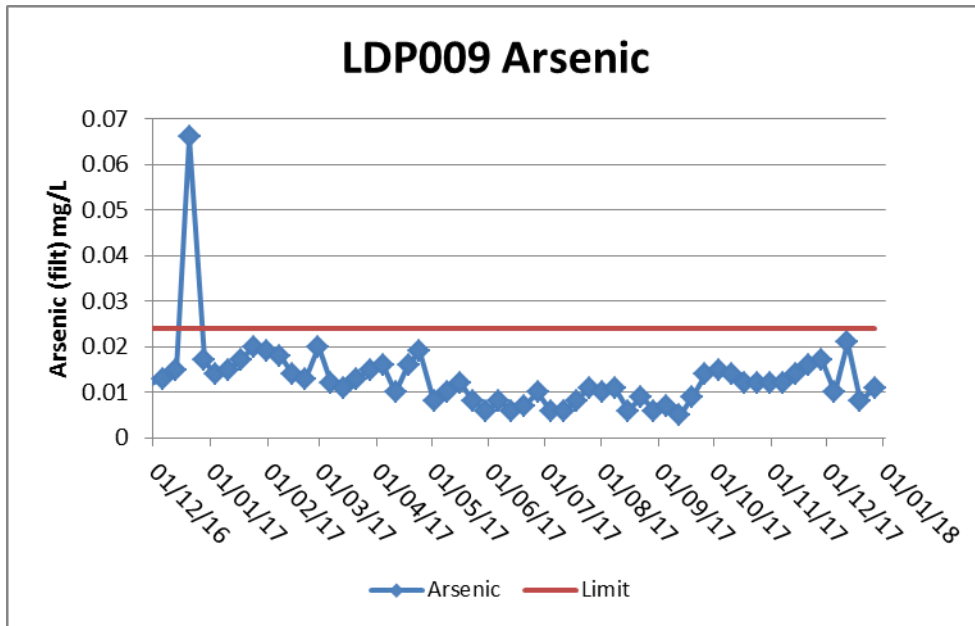


Figure 16: LDP009 Arsenic 12 month summary

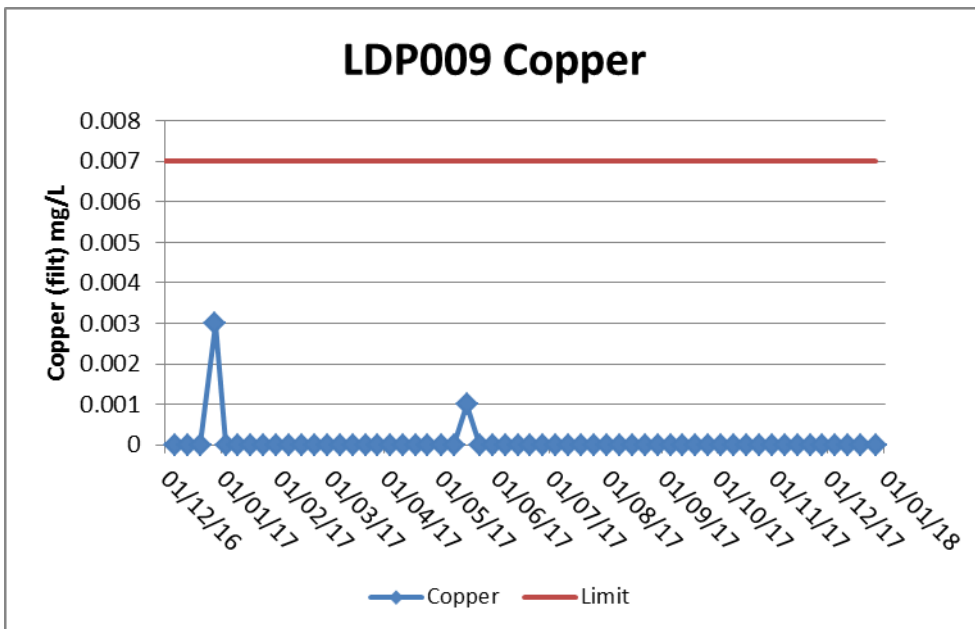


Figure 17: LDP009 Copper 12 month summary

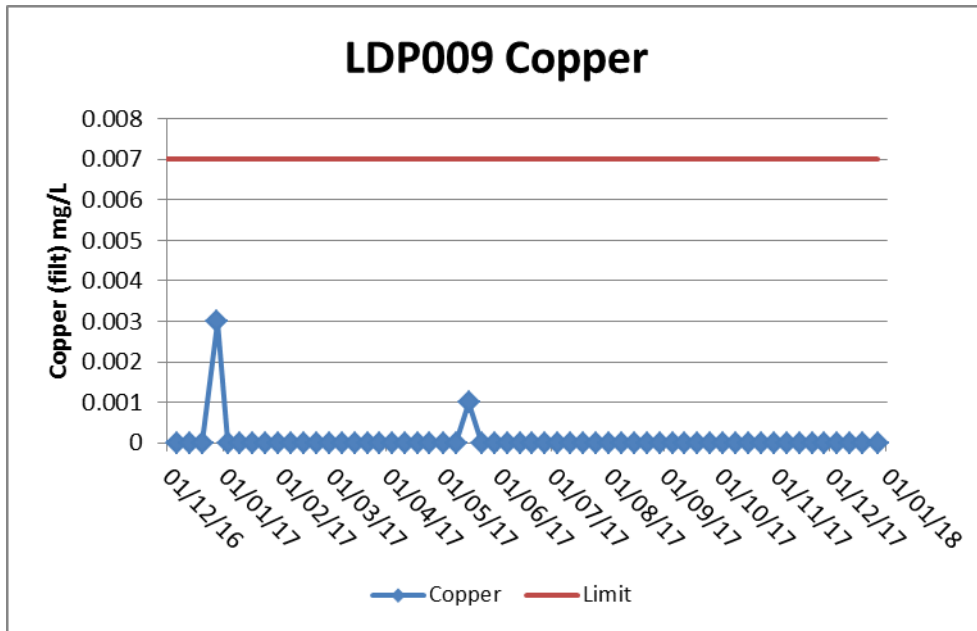


Figure 18: LDP009 Nickel 12 month summary

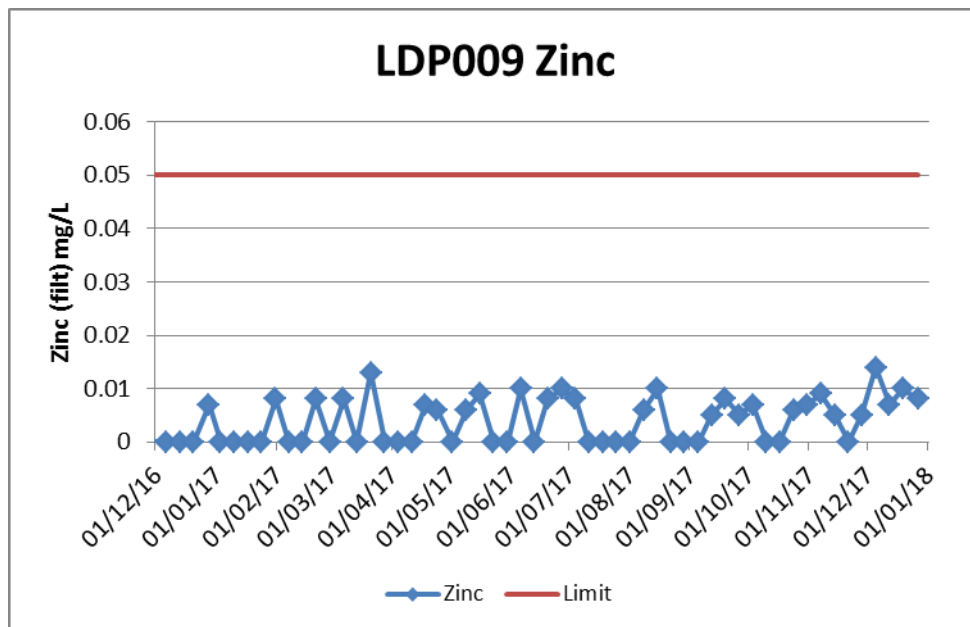


Figure 19: LDP009 Zinc 12 month summary

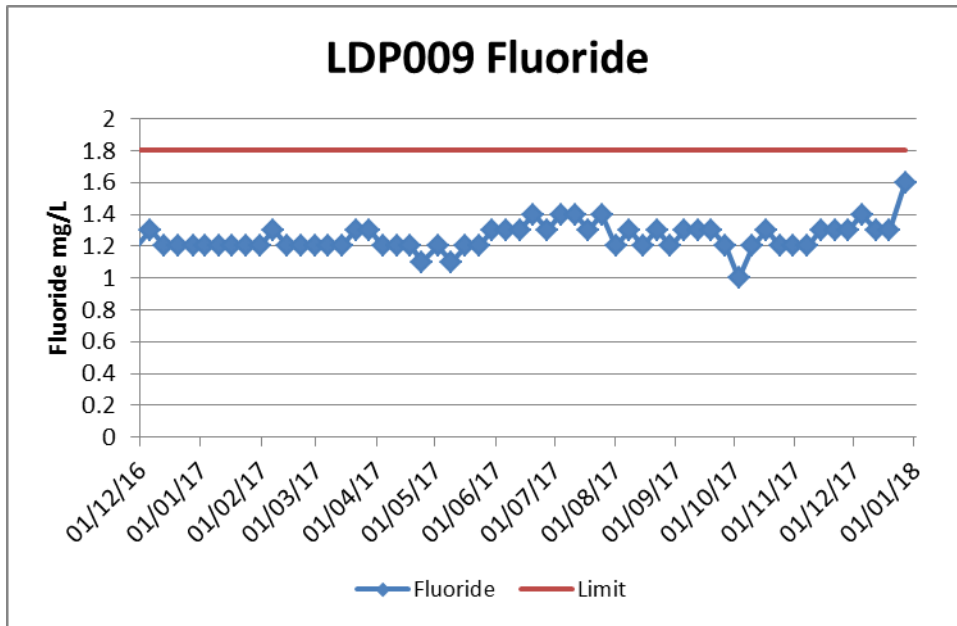


Figure 20: LDP009 Fluoride 12 month summary

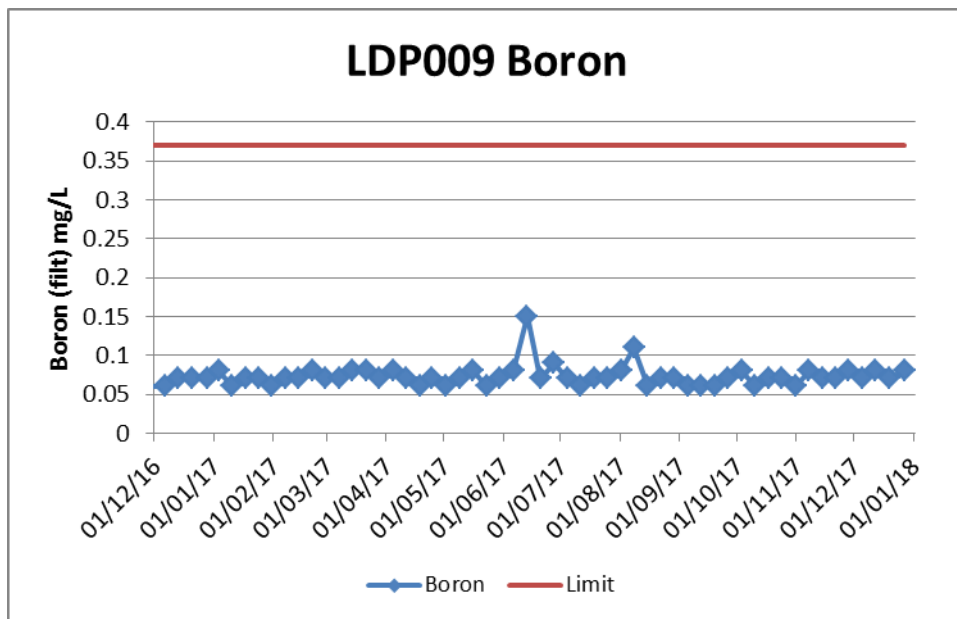


Figure 21: LDP009 Boron 12 month summary

5 Water Volume

Table 4. Licensed Discharge Points - Water Volume

Data Published:		12/01/2018		Licensee:		Springvale Coal Pty Limited	
Data Sampled:		Dec-17		Address:		Castlereagh Hwy, Lidsdale	
Data Obtained:		12/01/2018		EPL No.		3607	
Discharge Point	Unit	Licence Monitoring Frequency	Frequency Measured	Min. Value (kL)	Max. Value (kL)	Volume Limit (kL)	Exceedence (yes/no)
LDP001	kL	Daily	Daily	5	1708	10000	no
LDP002	kL	Daily	Daily	0	0	#	n/a
LDP004	kL	Daily during discharge	Daily	No discharge	No discharge	15000	no
LDP005	kL	Daily during discharge	Daily	No discharge	No discharge	15000	no
LDP009	kL	Daily during discharge	Daily	18278	26265	30000	no
LDP010	kL	Daily during discharge	Daily	No discharge	No discharge	#	n/a

No volume discharge limits apply.

6 Noise Monitoring

Noise monitoring was conducted during the reporting period. Results will be reported in the January Monitoring Report.

7 Complaints

No complaints were received during the reporting period. A 12 month summary of complaints is presented in Figure 22.

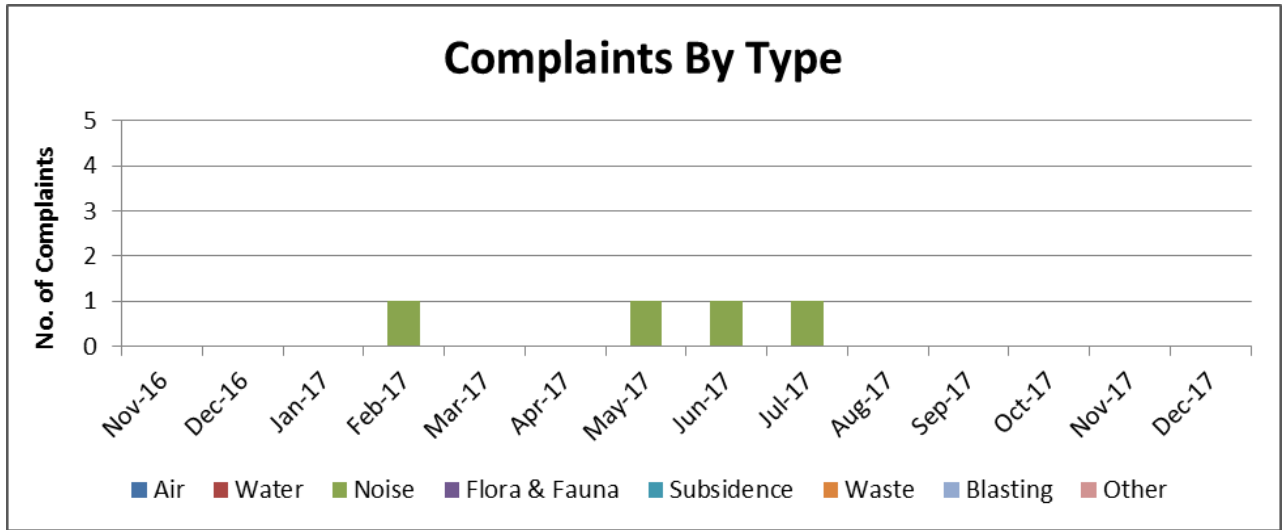


Figure 22: 12 month Complaints Summary

8 Correction Log

No corrections have been made to previous monthly reports.

Appendix A EPL Environmental Monitoring Location



licensed Discharge Point
 dust Deposition Gauge

NOTES:

DATE	10-05-2013
DRAWN BY	Jim Macpherson
CHECKED BY	S:\Starving\Z_Plans
APPROVED BY	Tony Nolan
SCALE	1:30000

SPRINGVALE MINE	
Springvale Licensed Discharge Points	



Centennial Coal

Springvale Coal Pty Ltd
P O Box 198
Wallerawang NSW 2845
www.centennialcoal.com.au

