

Challenger Mines Pty Ltd

**Environment Protection Licence 10265
Monthly and Quarterly Monitoring Data
Summary**

September 2017

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1. INTRODUCTION

Environmental Protection Licence (**EPL**) holders are required under the *Protection of the Environment Operations Act 1997* to make publicly available their monitoring results for those parameters specified in the EPL. This document has been prepared to satisfy this requirement.

Challenger Mines operations are conducted in accordance with EPL 10265. The licence details are as follows:

License Holder: Challenger Mines Pty Limited

Licence Number: 10265

Premises: Challenger Mines
33 Ryans Road
Adelong 2729

Access to Licence: <http://www.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=10265&id=10265&option=licence&searchrange=licence&range=POEOlicence&prp=no&status=Issued>

Monitoring Locations: See main text and **Appendix A**

This document provides a summary of environmental monitoring data sampled as prescribed by EPL 10265 for March 2017 (**Reporting Period**). Monitoring data provided is as follows:

- Air quality
- Surface water, including discharge mine water, conductivity, total suspended solids.

Monitoring Data Collected: Sept 2017

2. AIR QUALITY

Under EPL 10265 CMPL is required to undertake dust monitoring at EPA Monitoring Points 11,12,13,14, and 15 (**Appendix A**)

2.1 Dust

Pollutant:	Total Solid Particles
Unit of measure:	Grams per square metre per month
Monitoring location:	See Table 1 and Appendix A .
Monitoring frequency required by licence:	Monthly

Table 1. Dust Monitoring Summary

		Description	EPL 11	EPL 12	EPL 13	EPL 14	EPL 15
		Sample Date	11/09/2017	11/09/2017	11/09/2017	11/09/2017	11/09/2017
	Units		Result	Result	Result	Result	Result
Sampling Period in Days	days		30	30	30	30	30
Total Insoluble Solids	mg		10	10	170	11	75
Total Insoluble Solids Per Sampling Period	g/m ² /30 days		0.6	0.6	9.5	0.6	4.2

3. SURFACE WATER

Under EPL 10265 CMPL is required to undertake surface water monitoring at EPA Monitoring Points 3,4,5, and 6 (**Appendix A**).

Pollutant:	Various see Table 2
Unit of measure:	See Table 2
Monitoring location:	See Table2 and Appendix A .
Monitoring frequency required by licence:	Quarterly and weekly at EPL 3 during discharge

Table 2 Surface Water Monitoring Summary

		Location	EPL 6 Caledonia Ck Receiving Point	EPL 3 Goodwin Dam Spillway	EPL 4 Goodwin Dam Sample Point	EPL 5 Challenger Dam
		Sample Date	05/09/17	05/09/17	05/09/17	05/09/17
Analyte Name	Units	EPL Limit	Result	Result	Result	Result
pH**	No unit	6-8.5	7.5	8.7	8.7	7.9
Conductivity @ 25 C	µS/cm	800	400	430	450	540
Fluoride	mg/L	2	0.32	0.30	0.32	0.49
Sulphate, SO4	mg/L	N/A	64	160	150	180
Biochemical Oxygen Demand (BOD5)	mg/L	30	<5	<5	<5	<5
Total Cyanide	mg/L	N/A	<0.004	<0.004	<0.004	<0.004
Oil and Grease	mg/L	10	<5	<5	<5	<5
Chemical Oxygen Demand	mg/L	N/A	15	19	16	11
Total Suspended Solids Dried at 103-105°C	mg/L	50	<5	<5	<5	<5
Anionic Surfactants as MBAS (Calc. as LAS MW 288)	mg/L	N/A	<0.1	<0.1	0.1	0.1
Total Aluminium	mg/L	5	0.046	0.029	0.020	0.038
Total Arsenic	mg/L	0.5	<0.001	<0.001	<0.001	<0.001
Total Cadmium	mg/L	0.01	<0.0001	<0.0001	<0.0001	<0.0001
Total Chromium	mg/L	1	<0.001	<0.001	<0.001	<0.001
Total Cobalt	mg/L	1	<0.001	<0.001	<0.001	<0.001
Total Copper	mg/L	0.4	0.002	<0.001	<0.001	0.001
Total Lead	mg/L	0.1	<0.001	<0.001	<0.001	<0.001
Total Manganese	mg/L	N/A	0.005	0.006	0.005	0.006
Total Molybdenum	mg/L	0.15	0.003	0.001	0.005	0.002
Total Nickel	mg/L	1	<0.001	<0.001	<0.001	<0.001
Total Selenium	mg/L	0.02	<0.001	<0.001	<0.001	<0.001
Total Zinc	mg/L	20	0.005	<0.005	0.005	<0.005
Total Mercury	mg/L	0.002	<0.0001	<0.0001	<0.0001	<0.0001

4. Ground Water

Under EPL 10265 CMPL is required to undertake ground water monitoring at EPA Monitoring Points 7,8,9 and 10 (**Appendix A**).

Pollutant:	Various see Table 3
Unit of measure:	See Table 3
Monitoring location:	See Table3 and Appendix A .
Monitoring frequency required by licence:	Quarterly

Goundwater bores 7,8 and 9 were dry this quarter. EPL 10 had water at ground surface level and was sampled results are tabled below.

Table 3 Ground Water Monitoring Results for EPL 10

Analyte Name	Units	Result
TRH C10-C14	µg/L	<50
TRH C15-C28	µg/L	<200
TRH C29-C36	µg/L	<200
TRH C37-C40	µg/L	<200
TRH >C10-C16 (F2)	µg/L	<60
TRH >C16-C34 (F3)	µg/L	<500
TRH >C34-C40 (F4)	µg/L	<500
TRH C10-C36	µg/L	<450
TRH C10-C40	µg/L	<650
TRH >C10-C16 (F2) - Naphthalene	µg/L	<60
Total Dissolved Solids Dried at 175-185°C	mg/L	210
pH**	pH Units	6.4
Anionic Surfactants as MBAS (Calc. as LAS MW 288)	mg/L	<0.1
Total Cyanide	mg/L	<0.004
Chloride	mg/L	4.2
Sulfate, SO ₄	mg/L	75
Total Alkalinity as CaCO ₃	mg/L	53
Calcium, Ca	mg/L	18
Magnesium, Mg	mg/L	13
Sodium, Na	mg/L	16
Potassium, K	mg/L	0.4
Total Copper	µg/L	2

Appendix A

EPL monitoring Locations for Dust, Groundwater and Surface Waters

EPL SAMPLING LOCATIONS FOR WATER AND DUST MONITORING

