

Monthly Monitoring Data



Environmental Protection Licence Number: 12693

Licensee: Newcastle Coal Infrastructure Group Pty Ltd, Locked Bag 6003, Hunter Region Mail Centre NSW 2310

Premises: Newcastle Coal Infrastructure Group, Cormorant Road, Kooragang NSW 2304

Date Published: 1st August 2017 (Discharge Quality and Ambient Water Monitoring published 12th July)

Depositional Dust Monitoring

Sample Period: 6th June 2016 – 5th July 2017

Date Obtained: 21st July 2017

Units of Measure: grams per square metre per month (g/m²/month)

Frequency: Monthly

	Monitoring Point 7 - DG3 (Kooragang Island)	Monitoring Point 8 - DG4 (Mayfield Sport Rec Club)	Monitoring Point 9 - DG5 (Mayfield West)	Monitoring Point 10 - DG6 (Sandgate)
Depositional Dust	2.1	0.4	1.0	0.4

High Volume Air Sampling

Units of measure: micrograms per cubic metre (µg/m³)

Frequency: Weekly

	Monitoring Point 14 - HVAS 1 (Steel River) (Obtained 21 st July 2017)		Monitoring Point 15 - HVAS 2 (Crebert Street) (Obtained 21 st July 2017)	
	TSP	PM10	TSP	PM10
5-Jun	37	17	38	21
11-Jun	13	6	13	7
17-Jun	28	12	25	13
23-Jun	41	20	41	20
29-Jun	16	8	12	7

NB. Sample period is a 24 hour period on each of the above dates | TSP = Total Suspended Particulates | PM10 = Particulate Matter <10 microns

Groundwater Sampling Point 1**Sample Date:** 6th June 2017**Units of Measure:** pH units; milligrams per litre (mg/L); microSiemens per centimetre ($\mu\text{S}/\text{cm}$); micrograms per litre ($\mu\text{g}/\text{L}$)

Pollutant	Units of Measure	Frequency	Recorded Value
pH	pH units	Every 6 Months	7.30
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	13600
Cobalt	mg/L	Every 6 Months	<0.001
Copper	mg/L	Every 6 Months	<0.001
Manganese	mg/L	Every 6 Months	0.24
Nickel	mg/L	Every 6 Months	<0.001
Zinc	mg/L	Every 6 Months	<0.005
Iron	mg/L	Every 6 Months	<0.05
Magnesium	mg/L	Every 6 Months	120
Sodium	mg/L	Every 6 Months	2130
Potassium	mg/L	Every 6 Months	117
Total PAHs	$\mu\text{g}/\text{L}$	Every 6 Months	<0.5
TPH C6-9 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<20
TPH C10-14 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<50
TPH C15-28 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<100
TPH C29-36 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<50
Benzene	$\mu\text{g}/\text{L}$	Every 6 Months	<1
Toluene	$\mu\text{g}/\text{L}$	Every 6 Months	<2
Ethyl Benzene	$\mu\text{g}/\text{L}$	Every 6 Months	<2
m+p Xylene	$\mu\text{g}/\text{L}$	Every 6 Months	<2
o Xylene	$\mu\text{g}/\text{L}$	Every 6 Months	<2
Cyanide (free)	$\mu\text{g}/\text{L}$	Every 6 Months	<4
Cyanide (total)	$\mu\text{g}/\text{L}$	Every 6 Months	<4
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	1500
Phenol	$\mu\text{g}/\text{L}$	Every 6 Months	<1



Groundwater Sampling Point 20**Sample Date:** 6th June 2017**Units of Measure:** pH units; microSiemens per centimetre ($\mu\text{S}/\text{cm}$), micrograms per litre ($\mu\text{g}/\text{L}$).

Pollutant	Units of Measure	Frequency	Recorded Value	EP Licence Trigger Level	Exceedance (yes/no)
pH	pH units	Every 6 Months	7.03	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	24900	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	2820	N/A	N/A
Benzene	$\mu\text{g}/\text{L}$	Every 6 Months	<1	700	No
Ethyl Benzene	$\mu\text{g}/\text{L}$	Every 6 Months	<2	5	No
m+p Xylene	$\mu\text{g}/\text{L}$	Every 6 Months	<2	75	No
o Xylene	$\mu\text{g}/\text{L}$	Every 6 Months	<2	350	No
Cyanide (free)	$\mu\text{g}/\text{L}$	Every 6 Months	<4	4	No
Cyanide (total)	$\mu\text{g}/\text{L}$	Every 6 Months	<4	81.1	No
Phenol	$\mu\text{g}/\text{L}$	Every 6 Months	<1	400	No
Toluene	$\mu\text{g}/\text{L}$	Every 6 Months	<2	180	No
Total PAHs	$\mu\text{g}/\text{L}$	Every 6 Months	<0.5	1	No
TPH C6-9 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<20	20	No
TPH C10-14 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<50	50	No
TPH C15-28 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<100	100	No
TPH C29-36 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<50	50	No

Note: If trigger level is exceeded, actions listed in Condition E1.2 of EPL12693 are to be followed. These actions include notifying the EPA and resampling the location to confirm the elevated concentration.



Groundwater Sampling Point 21**Sample Date:** 6th June 2017**Units of Measure:** pH units; microSiemens per centimetre ($\mu\text{S}/\text{cm}$), micrograms per litre ($\mu\text{g}/\text{L}$).

Pollutant	Units of Measure	Frequency	Recorded Value	EP Licence Trigger Level	Exceedance (yes/no)
pH	pH units	Every 6 Months	7.68	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	6890	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	800	N/A	N/A
Benzene	$\mu\text{g}/\text{L}$	Every 6 Months	<1	700	No
Ethyl Benzene	$\mu\text{g}/\text{L}$	Every 6 Months	<2	5	No
m+p Xylene	$\mu\text{g}/\text{L}$	Every 6 Months	<2	75	No
o Xylene	$\mu\text{g}/\text{L}$	Every 6 Months	<2	350	No
Cyanide (free)	$\mu\text{g}/\text{L}$	Every 6 Months	<4	4	No
Cyanide (total)	$\mu\text{g}/\text{L}$	Every 6 Months	<4	21.8	No
Phenol	$\mu\text{g}/\text{L}$	Every 6 Months	<1	400	No
Toluene	$\mu\text{g}/\text{L}$	Every 6 Months	<2	180	No
Total PAHs	$\mu\text{g}/\text{L}$	Every 6 Months	<0.5	1.1	No
TPH C6-9 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<20	20	No
TPH C10-14 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<50	50	No
TPH C15-28 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<100	100	No
TPH C29-36 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<50	50	No

Note: If trigger level is exceeded, actions listed in Condition E1.2 of EPL12693 are to be followed. These actions include notifying the EPA and resampling the location to confirm the elevated concentration.



Groundwater Sampling Point 22**Sample Date:** 6th June 2017**Units of Measure:** pH units; microSiemens per centimetre ($\mu\text{S}/\text{cm}$), micrograms per litre ($\mu\text{g}/\text{L}$).

Pollutant	Units of Measure	Frequency	Recorded Value	EP Licence Trigger Level	Exceedance (Yes/No)
pH	pH units	Every 6 Months	7.27	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	1120	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	60	N/A	N/A
Benzene	$\mu\text{g}/\text{L}$	Every 6 Months	<1	700	No
Ethyl Benzene	$\mu\text{g}/\text{L}$	Every 6 Months	<2	5	No
m+p Xylene	$\mu\text{g}/\text{L}$	Every 6 Months	<2	75	No
o Xylene	$\mu\text{g}/\text{L}$	Every 6 Months	<2	350	No
Cyanide (free)	$\mu\text{g}/\text{L}$	Every 6 Months	<4	4	No
Cyanide (total)	$\mu\text{g}/\text{L}$	Every 6 Months	<4	16.6	No
Phenol	$\mu\text{g}/\text{L}$	Every 6 Months	<1	400	No
Toluene	$\mu\text{g}/\text{L}$	Every 6 Months	<2	180	No
Total PAHs	$\mu\text{g}/\text{L}$	Every 6 Months	<0.5	2.2	No
TPH C6-9 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<20	20	No
TPH C10-14 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<50	50	No
TPH C15-28 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<100	100	No
TPH C29-36 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<50	50	No

Note: If trigger level is exceeded, actions listed in Condition E1.2 of EPL12693 are to be followed. These actions include notifying the EPA and resampling the location to confirm the elevated concentration.



Groundwater Sampling Point 23**Sample Date:** 6th June 2017**Units of Measure:** pH units; milligrams per litre (mg/L); microSiemens per centimetre ($\mu\text{S}/\text{cm}$), micrograms per litre ($\mu\text{g}/\text{L}$).

Pollutant	Units of Measure	Frequency	Recorded Value	EP Licence Trigger Level	Exceedance (Yes/No)
pH	pH units	Every 6 Months	7.61	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	14400	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	5830	N/A	N/A
Benzene	$\mu\text{g}/\text{L}$	Every 6 Months	<1	700	No
Ethyl Benzene	$\mu\text{g}/\text{L}$	Every 6 Months	<2	5	No
m+p Xylene	$\mu\text{g}/\text{L}$	Every 6 Months	<2	75	No
o Xylene	$\mu\text{g}/\text{L}$	Every 6 Months	<2	350	No
Cyanide (free)	$\mu\text{g}/\text{L}$	Every 6 Months	<4	4	No
Cyanide (total)	$\mu\text{g}/\text{L}$	Every 6 Months	<4	75.6	No
Phenol	$\mu\text{g}/\text{L}$	Every 6 Months	<1	400	No
Toluene	$\mu\text{g}/\text{L}$	Every 6 Months	<2	180	No
Total PAHs	$\mu\text{g}/\text{L}$	Every 6 Months	<0.5	1.5	No
TPH C6-9 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<20	20	No
TPH C10-14 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<50	50	No
TPH C15-28 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<100	100	No
TPH C29-36 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<50	50	No

Note: If trigger level is exceeded, actions listed in Condition E1.2 of EPL12693 are to be followed. These actions include notifying the EPA and resampling the location to confirm the elevated concentration.



Discharge Quality Monitoring – Point 34**Sample Date:** 11th June 2017**Results Received:** 4th July 2017**Units of Measure:** pH units; milligrams per litre (mg/L)

Pollutant	Units of Measure	Frequency	Recorded Value
Oil and Grease	mg/L	monthly during discharge	<5
pH	pH units	monthly during discharge	8.25
Total Suspended Solids	mg/L	monthly during discharge	42

Ambient Water Monitoring – Point 35**Sample Date:** 11th June 2017**Results Received:** 4th July 2017**Units of Measure:** pH units; milligrams per litre (mg/L)

Pollutant	Units of Measure	Frequency	Recorded Value
Oil and Grease	mg/L	Special Frequency 2*	<5
pH	pH units	Special Frequency 2*	7.63
Total Suspended Solids	mg/L	Special Frequency 2*	9

* Special Frequency 2 refers to the collection of samples on an outgoing/ebb tide when monitoring is required at Point 34

