

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: 23rd February 2017

Depositional Dust Monitoring

Sample Period: 2nd December 2016 – 2nd January 2017

Date Obtained: 31st January 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	2.7	1.6	1.4	2.0

High Volume Air Sampling

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

Frequency: Weekly

	Monitoring Point 14 - HVAS 1 (Steel River) (Obtained 31 st January 2017)		Monitoring Point 15 - HVAS 2 (Mayfield Sport Rec Club) (Obtained 31 st January 2017)	
	TSP	PM10	TSP	PM10
1-Dec	61	24	64	29
7-Dec	28	13	34	21
13-Dec	58	22	85	38
19-Dec	46	19	44	20
25-Dec	37	12	46	24
31-Dec	50	28	64	41

Groundwater Sampling Point 1**Sample Date:** 5th December 2016**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	7.09
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	12000
Cobalt	mg/L	Every 6 Months	<0.001
Copper	mg/L	Every 6 Months	<0.001
Manganese	mg/L	Every 6 Months	0.232
Nickel	mg/L	Every 6 Months	0.002
Zinc	mg/L	Every 6 Months	0.167
Iron	mg/L	Every 6 Months	<0.05
Magnesium	mg/L	Every 6 Months	128
Sodium	mg/L	Every 6 Months	2070
Potassium	mg/L	Every 6 Months	119
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	1400
Phenol	$\mu\text{g}/\text{L}$	Every 6 Months	<1



Groundwater Sampling Point 20**Sample Date:** 5th December 2016**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	6.39	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	3200	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:** 5th December 2016**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	7.26	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	6330	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	2100	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:** 5th December 2016**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	6.81	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	980	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	360	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:** 5th December 2016**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	7.26	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	13500	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	5300	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.

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

