

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: 5th February 2013

Depositional Dust Monitoring

Sample Period: 7th December June 2012 – 7th January 2013

Date Obtained: 31st January 2013

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	10.8*	5.5	1.5	3.7

*High concentration associated with contaminated sample (bird droppings)

High Volume Air Sampling

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

Frequency: Weekly

	Monitoring Point 14 - HVAS 1 (Steel River) (Obtained 22 nd January 2013)		Monitoring Point 15 - HVAS 2 (Mayfield Sport Rec Club) (Obtained 22 nd January 2013)	
	TSP	PM10	TSP	PM10
4-Dec	38	16	49	20
10-Dec	21	7	62	11
16-Dec	42	23	140	54
22-Dec	45	18	69	28
28-Dec	44	23	75	33

*Data not yet available

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:** 11th December 2012**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	7.6
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	9930
Cobalt	mg/L	Every 6 Months	<0.001
Copper	mg/L	Every 6 Months	<0.001
Manganese	mg/L	Every 6 Months	0.204
Nickel	mg/L	Every 6 Months	<0.001
Zinc	mg/L	Every 6 Months	<0.02
Iron	mg/L	Every 6 Months	<0.05
Magnesium	mg/L	Every 6 Months	114
Sodium	mg/L	Every 6 Months	2210
Potassium	mg/L	Every 6 Months	132
Total PAHs	$\mu\text{g}/\text{L}$	Every 6 Months	<0.5
C6-9 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<20
C10-14 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<50
C15-28 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<100
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	<0.004
Cyanide (total)	$\mu\text{g}/\text{L}$	Every 6 Months	<0.004
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	<0.78
Phenol	$\mu\text{g}/\text{L}$	Every 6 Months	<1



Groundwater Sampling Point 20**Sample Date:** 11th December 2012**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	7.5	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	9120	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	2.9	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	<0.004	4	No
Cyanide (total)	$\mu\text{g}/\text{L}$	Every 6 Months	<0.004	81.1	No
Phenol	$\mu\text{g}/\text{L}$	Every 6 Months	<1	400	No
Toluene	$\mu\text{g}/\text{L}$	Every 6 Months	<5	180	No
Total PAHs	$\mu\text{g}/\text{L}$	Every 6 Months	<0.5	1	No
C6-9 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<20	20	No
C10-14 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<50	50	No
C15-28 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<100	100	No
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:** 11th December 2012**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	7.6	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	11890	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	2.42	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	<0.004	4	No
Cyanide (total)	$\mu\text{g}/\text{L}$	Every 6 Months	0.007	21.8	No
Phenol	$\mu\text{g}/\text{L}$	Every 6 Months	<1	400	No
Toluene	$\mu\text{g}/\text{L}$	Every 6 Months	<5	180	No
Total PAHs	$\mu\text{g}/\text{L}$	Every 6 Months	<0.5	1.1	No
C6-9 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<20	20	No
C10-14 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<50	50	No
C15-28 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<100	100	No
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:** 11th December 2012**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	7.5	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	995	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	0.39	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	<0.004	4	No
Cyanide (total)	$\mu\text{g}/\text{L}$	Every 6 Months	<0.004	16.6	No
Phenol	$\mu\text{g}/\text{L}$	Every 6 Months	<2	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
C6-9 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<20	20	No
C10-14 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<50	50	No
C15-28 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<100	100	No
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:** 11th December 2012**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	7.4	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	12000	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	6.11	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	<0.004	4	No
Cyanide (total)	$\mu\text{g}/\text{L}$	Every 6 Months	<0.004	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
C6-9 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<20	20	No
C10-14 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<50	50	No
C15-28 Fraction	$\mu\text{g}/\text{L}$	Every 6 Months	<100	100	No
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.

