

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: 20th January 2015

Depositional Dust Monitoring

Sample Period: 2nd December 2014 – 2nd January 2015

Date Obtained: 14th January 2015

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	7.6*	1.7	1.0	2.8

* Results due to contamination from insect and 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 6 th March 2015)		Monitoring Point 15 - HVAS 2 (Mayfield Sport Rec Club) (Obtained 14 th January 2015)	
	TSP	PM10	TSP	PM10
6-Dec	35	22	40	20
12-Dec	45	19	49	19
18-Dec	73	*	91	45
24-Dec	46	*	55	32
30-Dec	89	37	94	41

* Instrument fault, no data recorded

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:** 1st December 2014**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	7.2
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	9980
Cobalt	mg/L	Every 6 Months	<0.001
Copper	mg/L	Every 6 Months	<0.001
Manganese	mg/L	Every 6 Months	0.39
Nickel	mg/L	Every 6 Months	<0.001
Zinc	mg/L	Every 6 Months	0.016
Iron	mg/L	Every 6 Months	0.15
Magnesium	mg/L	Every 6 Months	107
Sodium	mg/L	Every 6 Months	2150
Potassium	mg/L	Every 6 Months	128
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	630
Phenol	$\mu\text{g}/\text{L}$	Every 6 Months	<1



Groundwater Sampling Point 20**Sample Date:** 1st December 2014**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	7.41	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	5950	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	3300	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:** 1st December 2014**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	7.47	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	8100	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	2050	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:** 1st December 2014**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	7.48	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	1116	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	350	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:** 1st December 2014**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	7.36	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	13210	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.

