

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: 10th July 2013

Depositional Dust Monitoring

Sample Period: 31st May 2013- 2nd July 2013

Date Obtained: 5th July 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	1.1	0.5	1.1	1.5

High Volume Air Sampling

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

Frequency: Weekly

	Monitoring Point 14 - HVAS 1 (Steel River) (date not yet available)		Monitoring Point 15 - HVAS 2 (Mayfield Sport Rec Club) (Obtained 4 th July 2013)	
	TSP	PM10	TSP	PM10
2-Jun	18	10	16	8
8-Jun	*	*	27	11
12-Jun	27	16	-	-
14-Jun	29	12	22	7
20-Jun	25	11	19	11
26-Jun	31	18	26	15

*Did not run, programme error. Catch-up day 12/6/13

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:** 13th June 2013**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	7.8
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	11410
Cobalt	mg/L	Every 6 Months	<0.001
Copper	mg/L	Every 6 Months	<0.004
Manganese	mg/L	Every 6 Months	0.03
Nickel	mg/L	Every 6 Months	0.002
Zinc	mg/L	Every 6 Months	0.046
Iron	mg/L	Every 6 Months	<0.05
Magnesium	mg/L	Every 6 Months	151
Sodium	mg/L	Every 6 Months	2800
Potassium	mg/L	Every 6 Months	173
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	50
Phenol	$\mu\text{g}/\text{L}$	Every 6 Months	<1



Groundwater Sampling Point 20Sample Date: 13th June 2013Units 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	7560	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	3580	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:** 13th June 2013**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	8960	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	1610	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: 13th June 2013

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	7.3	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	859	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	0.11	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	<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	130	50	Yes
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: EPL trigger level for TPH C10-14 Fraction exceeded. Appropriate re-testing was conducted as below in accordance with EPL conditions.

Pollutant	Units of Measure	Recorded Value	EP Licence Trigger Level	Exceedance (yes/no)
TPH C6-9 Fraction	$\mu\text{g}/\text{L}$	<20	20	No
TPH C10-14 Fraction	$\mu\text{g}/\text{L}$	<50	50	No
TPH C15-28 Fraction	$\mu\text{g}/\text{L}$	<100	100	No
TPH C29-36 Fraction	$\mu\text{g}/\text{L}$	<50	50	No

No further action is required as re-testing showed no exceedances.



Groundwater Sampling Point 23**Sample Date:** 13th June 2013**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	17250	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	5360	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.

