

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 2014

Depositional Dust Monitoring

Sample Period: 2nd June – 2nd July 2014

Date Obtained: 9th July 2014

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	3.6	4.0	0.9	1.8

* Results due to adjacent construction works not related to NCIG

High Volume Air Sampling

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

Frequency: Weekly

	Monitoring Point 14 - HVAS 1 (Steel River) (Obtained 24 th July 2014)		Monitoring Point 15 - HVAS 2 (Mayfield Sport Rec Club) (Obtained 9 th July 2014)	
	TSP	PM10	TSP	PM10
3-Jun	26	8	47	13
9-Jun	16	9	21	8
15-Jun	22	7	38	8
21-Jun	34	16	36	18
27-Jun	44	20	82	15

* Results due to adjacent construction works not related to NCIG

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 1Sample Date: 6th June 2014Units 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	11160
Cobalt	mg/L	Every 6 Months	<0.001
Copper	mg/L	Every 6 Months	<0.001
Manganese	mg/L	Every 6 Months	0.004
Nickel	mg/L	Every 6 Months	<0.001
Zinc	mg/L	Every 6 Months	0.022
Iron	mg/L	Every 6 Months	<0.05
Magnesium	mg/L	Every 6 Months	115
Sodium	mg/L	Every 6 Months	2220
Potassium	mg/L	Every 6 Months	130
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	20
Phenol	$\mu\text{g}/\text{L}$	Every 6 Months	<1



Groundwater Sampling Point 20**Sample Date:** 6th June 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	7390	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	100	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 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	7.32	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	7790	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	1300	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	<1	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 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	7.24	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	1016	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	140	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 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	6.74	N/A	N/A
Conductivity	$\mu\text{S}/\text{cm}$	Every 6 Months	15240	N/A	N/A
Ammonia	$\mu\text{g}/\text{L}$	Every 6 Months	5560	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	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.

