

## February 2013 Air Quality Summary Report

**Licence Number: 13336**

**Licensee: Barangaroo Delivery Authority**

**Licensee Address: Lvl 21, 201 Kent Street, Sydney**

**Sampling period: 1-28 February 2013**

**Date provided to Licensee: 21 March 2013**

**Date published: 25 March 2013**

# February 2013 Air Quality Summary Report

## Barangaroo South

This report has been compiled to summarise results of air quality monitoring at Barangaroo South in February 2013 in accordance with [EPL number 13336](#). This data is for samples taken from 1 to 28 February 2013. The data was provided to the Barangaroo Delivery Authority (the Licencee) on 21 March 2013.

Lend Lease conducts continuous air quality monitoring at Barangaroo South to measure air quality and assist the construction team implement appropriate environmental controls on site.

Air quality monitoring is carried out in accordance with all relevant authority and statutory requirements. Monitoring parameters include lead, metallic compounds, polycyclic aromatic hydrocarbons, total solid particles, particulate matter less than 10 microns (PM10), and volatile organic compounds.

## Location of ambient air quality monitors

Ambient air quality monitoring devices are located at four locations around the site as shown below:



*Approximate locations of air monitoring equipment*

These locations correspond to the following licenced monitoring locations:

- Northern: EPL Point 5
- Eastern: EPL Point 8
- Southern: EPL Point 13
- Water Treatment Plant Air Quality: EPL Point 17
- SISCO Air Quality: EPL Point 18 (close to EPL Point 8)

EPL Points 14, 15 & 16 have not been monitored to date, as they are associated with works that have not commenced.

## Monitoring results

During February 2013 all of the air parameters were within guideline levels. Construction activities were undertaken in accordance with relevant management plans. General controls implemented during this reporting period included:

- Water cart spraying and road sweeping.
- Covering loads and stockpiles as appropriate.
- Housekeeping to keep exposed areas to a minimum.
- Ongoing monitoring of the air and odour quality.

The total suspended particles annual rolling average is below the annual goal.

## Metallic Compounds (including Lead)

Date	Monitoring Location	Concentration ( $\mu\text{g}/\text{m}^3$ )							
		Arsenic	Cadmium	Chromium	Copper	Nickel	Zinc	Lead	Mercury
2 Feb 2013	EPL point 5	0.00015	0.00015	0.0043	0.0097	0.0021	0.0356	0.0072	0.00025
	EPL point 8	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
	EPL point 13	No Sample*							
8 Feb 2013	EPL point 5	0.0004	0.00015	0.0044	0.0196	0.0211	0.0627	0.0076	0.00025
	EPL point 8	0.0005	0.00015	0.0057	0.0253	0.0123	0.0838	0.0106	0.00025
	EPL point 13	0.0005	0.00015	0.0061	0.0191	0.0083	0.0599	0.0106	0.00025
14 Feb 2013	EPL point 5	0.0011	0.00015	0.0065	0.0297	0.0068	0.0602	0.0062	0.00025
	EPL point 8	0.0007	0.00015	0.0045	0.0231	0.0066	0.0409	0.0048	0.00025
	EPL point 13	0.0008	0.00015	0.0044	0.0178	0.0043	0.0397	0.0122	0.00025
20 Feb 2013	EPL point 5	0.0005	0.00015	0.0036	0.0164	0.0027	0.0391	0.008	0.00025
	EPL point 8	0.0007	0.00015	0.0055	0.0248	0.0031	0.0737	0.0096	0.00025
	EPL point 13	0.0003	0.00015	0.0042	0.0156	0.0022	0.0443	0.0056	0.00025
26 Feb 2013	EPL point 5	0.0003	0.00015	0.01	0.0182	0.0279	0.0444	0.0148	0.00025
	EPL point 8	0.0006	0.00015	0.0159	0.0326	0.035	0.129	0.0158	0.00025
	EPL point 13	0.0004	0.00015	0.0183	0.0148	0.0217	0.0498	0.0077	0.00025
EPL Point 5 Annual Avg		-	-	-	-	-	-	0.014	-
EPL Point 8 Annual Avg		-	-	-	-	-	-	0.010	-
EPL Point 13 Annual Avg		-	-	-	-	-	-	0.007	-
<b>1 Hour Average Criteria (indicative purposes)</b>		<b>0.09</b>	<b>0.018</b>	<b>0.09</b>	<b>18</b>	<b>0.18</b>	<b>90</b>	-	<b>0.18</b>
<b>No. of 1 hr Exceedences</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	-	<b>0</b>
<b>Annual Average Criteria</b>		-	-	-	-	-	-	<b>0.5</b>	-

\* Note: power issue affected sample for EPL Point 13.

## Total Solid Particles (TSP)

Date	EPL Point 5 ( $\mu\text{g}/\text{m}^3$ )	EPL Point 8 ( $\mu\text{g}/\text{m}^3$ )	EPL Point 13 ( $\mu\text{g}/\text{m}^3$ )
2 February 2013	61.4	36.7	No Sample*
8 February 2013	74.4	84.4	82.0
14 February 2013	32.0	43.9	78.0
20 February 2013	31.9	46.2	27.0
26 February 2013	77.0	164.0	108.0
<b>Annual Average Criteria</b>	<b>90</b>	<b>90</b>	<b>90</b>
<b>Rolling Annual Average</b>	<b>55.0</b>	<b>61.6</b>	<b>47.5</b>
<b>Number of Exceedences</b>	<b>0</b>	<b>0</b>	<b>0</b>

\* Note: power issue affected sample for EPL Point 13.

## PM10

Monitoring Parameter	EPL Point 5 ( $\mu\text{g}/\text{m}^3$ )	EPL Point 8 ( $\mu\text{g}/\text{m}^3$ )	EPL Point 13 ( $\mu\text{g}/\text{m}^3$ )
Average	21.3	18.4	28.3
Minimum (24hr)	6	7	12
Maximum (24hr)	39	30	49
<b>24hr EPA Criteria</b>	<b>50</b>	<b>50</b>	<b>50</b>
<b>Number of 24hr Exceedences</b>	<b>0</b>	<b>0</b>	<b>0</b>

## Polycyclic Aromatic Hydrocarbons (PAH)

Date	EPL Point 5 ( $\text{ng}/\text{m}^3$ )		EPL Point 8 ( $\text{ng}/\text{m}^3$ )		EPL Point 13 ( $\text{ng}/\text{m}^3$ )	
	Total PAH	Benzo(a) pyrene	Total PAH	Benzo(a) pyrene	Total PAH	Benzo(a) pyrene
2 February 2013	0.1	0.1	0.1	0.1	No Sample*	No Sample*
8 February 2013	0.1	0.1	0.1	0.1	0.6	0.1
14 February 2013	0.1	0.1	0.1	0.1	1.69	0.1
20 February 2013	0.1	0.1	0.22	0.1	0.1	0.1
26 February 2013	0.1	0.1	1.97	0.1	0.79	0.1
<b>1 Hour Avg Criteria (PAHs as BaP) (<math>\text{ng}/\text{m}^3</math>)</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>
<b>Number of Exceedences</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

\* Note: power issue affected sample for EPL Point 13.

## Volatile Organic Compounds (VOCs) – Ambient & WTP discharge

Monitoring Parameter	EPL Point				
	5	8	13	17	18
<b>Monitoring Type</b>	<b>Ambient</b>	<b>Ambient</b>	<b>Ambient</b>	<b>WTP emission</b>	<b>SISCO emission</b>
Average (ppm)	0.2	0.8	0.2	2.4	0.1
Minimum (ppm)	0.1	0.0	0.0	0.0	0.0
Maximum (ppm)	11.4	2.4	0.6	3.6	0.8
<b>Limit</b>	<b>No licence limit, monitoring requirement only</b>			<b>20 <math>\text{mg}/\text{m}^3</math> (10.2ppm)</b>	
<b>Number of Exceedences</b>	N/A	N/A	N/A	<b>0</b>	<b>0</b>

## Frequency

Parameter	Frequency	EPL Point				
		5	8	13	17	18
TSP, PAHs, metallic compounds	Monitoring frequency required by licence	24 Hours every 6 days			NA	NA
	No. of samples required by licence	5	5	5	NA	NA
	No. of samples collected & analysed	5	5	4	NA	NA
PM10, VOCs	Monitoring frequency required by licence	Continuous				5/day
	No. of samples required by licence	Continuous	Continuous	Continuous	Continuous	5/day
	No. of samples collected & analysed	Continuous	Continuous	Continuous	Continuous	5/day

Environment Protection Licence number: 13336

Licencee: Barangaroo Delivery Authority, Level 21, AON/Maritime Trade Towers, 201 Kent Street, Sydney, 2000

These results have been made available in accordance with Environment Protection Authority requirements for publishing pollution monitoring data