



PORT KEMBLA COAL TERMINAL LTD.



Licencee:	Port Kembla Coal Terminal Limited
Environment Protection Licence:	1625
Licence URL:	http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=106587&SYSUID=1&LICID=1625
Location:	Port Kembla Road, Port Kembla Inner Harbour, Wollongong
Postal Address:	PO Box 823, Wollongong East 2502

PORT KEMBLA COAL TERMINAL DUST & WEATHER MONITOR LOCATIONS

16th October 2015



EPL No.	PKCT No.	Dust Monitor Location Description
1	P1	25m south of Bulk Products Berth (BPB)
2	P2	40m south of Bulk Products Berth stockyard
3	P3	40m east of Bulk Products Berth stockyard
4	P4	40m east Coal Berth stockyard
5	P5	Northern Pond (Pond No.1)
6	P6	40m west Coal Berth stockyard
7	P7	250m west of Coal Berth stockyard
8	P8	PKCT north truckwash
9	P9	Wollongong Wastewater Treatment Plant
15	P10	North of PKCT Planning Office
17	P11	Entry Gate to BlueScope Ro Ro (Berth 109)
12	R1	157 Church Street (two gauges)
19	R2	Vikings Oval, Wollongong (two gauges)
TBA	R3	Links Seaside Apartments
20	C1	Continuous Dust Monitor 1
21	C2	Continuous Dust Monitor 2

- # refer PKCT Environment Protection Licence(EPL) No. 1625 (EPA ID No.)
- Dust Gauges- Environment Protection Licence monitoring sites
Sites denoted "P": industrial; "R": residential
- Continuous Dust Monitor Sites- additional
- (a) BlueScope High Volume Sampler & dust gauge
(b) PKCT EPL Monitoring Site R2 (2 gauges)
- Weather stations
 - (a) at each continuous dust monitor site ●
 - (b) PKCT Main Control Room ●



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EPL MONITORING SITES- INDUSTRIAL			Calendar Year 2018												Annual average: grams per square metre/month					
			MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MIN	MEAN	MAX	rolling 12 month average	PKCT assessment criteria
EPL No.	Location Gauge Number	analysis: grams/square metre/month																		
1	P1 25m South BPB Coal Berth	Insoluble Solids	2.8	4.3	1.8	3.1	2.9	3.7	4.1	2.8	2.8	1.2	3.8	3.0	12	1.2	3.0	4.3	3.0	15.0
		Ash	1.6	1.8	1.1	1.9	1.6	2.5	3.1	1.8	1.9	0.6	2.6	1.9	12	0.6	1.9	3.1		
2	P2 40m South of BPB Stockyard	Insoluble Solids	2.2	2.9	2.8	1.3	2.3	4.8	2.9	5.7	2.3	2.1	4.4	2.4	12	1.3	3.0	5.7	3.0	15.0
		Ash	1.4	1.7	1.3	2.4	1.5	3.4	2.4	4.4	1.6	1.2	2.6	1.4	12	1.2	2.1	4.4		
3	P3 40m East of BPB Stockyard	Insoluble Solids	6.1	3.9	5.6	7.2	3.3	24.9	29.3	12.4	6.0	2.6	6.4	2.2	12	2.2	9.7	29.3	9.7	15.0
		Ash	4.5	2.4	2.2	2.6	6.2	18.0	21.7	3.4	4.0	1.7	4.6	1.5	12	1.5	6.6	21.7		
4	P4 40m East Coal Berth Stockyard	Insoluble Solids	2.6	3.0	5.6	23.1	10.6	7.8	7.2	137.0	4.8	3.2	12.3	2.8	12	2.6	18.3	137.0	18.3	15.0
		Ash	1.2	1.5	2.2	4.1	1.1	3.4	3.2	1.2	1.7	1.5	2.9	1.5	12	1.1	2.1	4.1		
5	P5 Northern Pond (No.1)	Insoluble Solids	7.2	5.8	4.8	3.5	2.7	4.3	2.7	3.4	5.6	3.3	7.3	3.4	12	2.7	4.5	7.3	4.5	15.0
		Ash	1.8	2.0	1.9	1.2	1.1	2.1	1.2	1.2	3.6	1.4	3.0	1.6	12	1.1	1.8	3.6		
6	P6 40m West Coal Berth Stockyard	Insoluble Solids	8.1	8.1	6.0	3.8	2.0	6.6	4.8	3.6	3.9	4.0	4.3	1.8	12	1.5	2.7	5.4	2.7	12.0
		Ash	3.4	3.7	3.2	2.1	1.2	4.4	3.2	2.0	4.5	1.6	2.6	1.1	11	2.0	5.7	9.9	5.7	15.0
7	P7 260m West No.2 Coalberth	Insoluble Solids	4.7	4.4	2.8	1.7	0.8	2.2	1.6	1.6	5.4	2.4	2.9	1.1	12	0.8	2.8	5.4	2.8	12.0
		Ash	1.9	4.7	3.1	3.7	1.4	4.5	1.8	2.5	4.9	4.4	10.1	6.2	12	1.4	4.1	10.1	4.1	15.0
8	P8 PKCT North Truckwash	Insoluble Solids	1.2	3.0	2.0	0.6	1.1	3.5	1.5	1.8	1.0	2.9	8.2	4.9	12	0.6	2.6	8.2	8.2	15.0
		Ash	0.7	1.7	1.1	3.1	0.3	1.0	0.3	0.7	3.9	1.5	1.8	1.3	12	0.3	1.5	3.9	1.5	12.0
9	P9 Wollongong Wastewater TP.	Insoluble Solids	7.0	4.1	7.7	15.6	16.7	19.8	30.8	33.1	16.0	5.0	26.9	7.8	12	4.1	15.9	33.1	15.9	15.0
		Ash	2.4	1.6	2.3	3.7	2.7	5.2	5.4	5.6	12.6	1.4	7.6	2.4	12	1.4	4.4	12.6		
15	P10 North of PKCT Planning Office	Insoluble Solids	4.6	2.5	5.4	11.9	14.0	14.6	25.4	27.5	3.4	3.6	19.3	5.4	12	2.5	11.5	27.5	11.5	12.0
		Ash	2.4	2.8	2.6	2.6	1.4	3.0	2.0	1.8	0.9	2.6	3.7	2.2	12	0.9	2.3	3.7	2.3	6.0
17	P11 Entry Gate BlueScope RO,RO Berth (103)	Insoluble Solids	1.0	1.5	1.3	1.3	0.5	1.8	0.9	0.6	0.4	1.1	2.0	1.2	12	0.4	1.1	2.0	2.0	4.0
		Ash	1.4	1.3	1.3	1.3	0.9	1.2	1.1	1.2	0.5	1.5	1.7	1.0	12	0.5	1.2	1.7	1.2	4.0
		Insoluble Solids	7.6	6.4	6.9	6.0	6.0	11.2	6.3	6.5	7.8	6.7	11.5	6.1	12	6.0	7.4	11.5	7.4	15.0
		Ash	2.9	2.9	3.4	3.3	3.1	6.1	3.7	3.5	4.9	2.9	4.5	3.0	12	2.9	3.7	6.1		
		Insoluble Solids	4.7	3.5	3.5	2.7	2.9	5.1	2.6	3.0	2.9	3.8	7.0	3.1	12	2.6	3.7	7.0	3.7	12.0
		Ash	3.4	3.7	3.4	3.0	0.9	5.7	1.3	1.4	2.6	2.9	5.1	4.3	12	0.9	3.1	5.7	3.1	6.0
		Insoluble Solids	2.6	3.0	2.6	2.3	0.6	4.3	1.0	1.0	0.6	2.3	4.0	3.2	12	0.6	2.3	4.3		
		Combustible Matter	0.8	0.7	0.8	0.7	0.3	1.4	0.3	0.4	2.0	0.6	1.1	1.1	12	0.3	0.9	2.0	0.9	4.0

MONTHLY REPORT: COMMENTARY ON RESULTS

SAMPLE PERIOD	Date Sampled	Date Results Obtained	Date Published	COMMENTARY ON RESULTS
January 2018	02/02/2018	19/02/2018	19/02/2018	One Site "P4" marginally outside annual average assessment criteria for insoluble solids and combustible matter. January dust levels were low. Annual average remains outside criteria as a result of some high monthly readings earlier in the 12 month averaging period.
February 2018	02/03/2018	26/03/2018	27/03/2018	One Site "P4" marginally outside annual average assessment criteria for insoluble solids and combustible matter. February dust levels were low. Annual average remains outside criteria as a result of some high monthly readings earlier in the 12 month averaging period.
March 2018	03/04/2018	18/04/2018	18/04/2018	One Site "P4" marginally outside annual average assessment criteria for insoluble solids. March dust levels were low. Annual average remains outside criteria as a result of some high monthly readings earlier in the 12 month averaging period.
April 2018	01/05/2018	18/05/2018	21/05/2018	One Site "P4" marginally outside annual average assessment criteria for insoluble solids. April dust levels were moderate and likely influenced by periods of strong westerly winds. Annual average remains outside criteria as a result of some high monthly readings earlier in the 12 month averaging period.
May 2018	01/06/2018	19/06/2018	19/06/2018	One Site "P4" marginally outside annual average assessment criteria for insoluble solids. May dust levels were moderate and likely influenced by periods of strong westerly winds. Annual average remains outside criteria as a result of some high monthly readings earlier in the 12 month averaging period.
June 2018	02/07/2018	16/07/2018	16/07/2018	One Site "P4" marginally outside annual average assessment criteria for insoluble solids. June dust levels were moderate and likely influenced by periods of strong westerly winds. Annual average remains outside criteria as a result of some high monthly readings earlier in the 12 month averaging period.
July 2018	02/08/2018	22/08/2018	28/08/2018	All Sites within assessment criteria
August 2018	03/09/2018	21/09/2018	21/09/2018	One Site "P4" marginally outside annual average assessment criteria for insoluble solids. Strong westerly winds during August likely to have influenced results.
September 2018	03/10/2018	23/10/2018	23/10/2018	One Site "P4" marginally outside annual average assessment criteria for insoluble solids in September. September's dust levels at Site P4 were low. The high annual average is influenced by a single high measurement recorded in August 2018.
October 2018	02/11/2018	29/11/2018	30/11/2018	One Site "P4" marginally outside annual average assessment criteria for insoluble solids in October. October's dust levels at Site P4 were low. The high annual average is influenced by a single high measurement recorded in August 2018.
November 2018	04/12/2018	16/12/2018	19/12/2018	Two sites marginally outside annual average assessment criteria for insoluble solids, "P4" and "P8". Site P6 gauge was blown over during strong wind event, sample bottle broken.
December 2018	04/01/2019	16/01/2019	16/01/2019	Two sites marginally outside annual average assessment criteria for insoluble solids, "P4" and "P8".



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EPL MONITORING SITES- RESIDENTIAL			Calendar Year 2018												annual average: grams per square metre.month					
MONTH			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	No. samples collected	MIN	MEAN	MAX	rolling 12 month average	PKCT assessment criteria
EPL No.	Location Gauge Number	Analysis: grams/square metre.month																		
12	R1	Insoluble Solids	1.0	1.1	1.2	1.2	0.1	0.7	0.2	0.6	0.8	0.7	1.5	1.0	12	0.1	0.8	1.5	0.8	4.0
	157 Church St	Ash	0.7	0.8	0.7	0.9	0.1	0.6	0.2	0.4	0.3	0.4	1.0	0.6	12	0.1	0.6	1.0		
	Wollongong	Combustible Matter	0.3	0.3	0.5	0.3	<0.1	0.1	<0.1	0.2	0.5	0.3	0.5	0.4	10	0.1	0.3	0.5		
19	R2	Insoluble Solids	2.2	1.2	2.1	1.1	0.1	0.7	0.3	0.6	0.8	0.7	1.6	1.1	12	0.1	1.0	2.2	1.0	4.0
	Vikings Oval	Ash	1.3	0.8	1.0	0.7	0.1	0.5	0.2	0.4	0.4	0.2	1.0	0.4	12	0.1	0.6	1.3		
	Wollongong	Combustible Matter	0.9	0.4	1.1	0.4	<0.1	0.2	0.1	0.2	0.4	0.5	0.6	0.7	11	0.1	0.5	1.1		
TBA	R3	Insoluble Solids	0.8	1.4	1.4	1.0	0.5	0.9	0.5	0.7	0.6	0.6	1.8	1.2	12	0.5	1.0	1.8	1.0	4.0
	Ross Street	Ash	0.5	1.0	0.8	0.7	0.4	0.7	0.3	0.4	0.2	0.5	1.3	0.4	12	0.2	0.6	1.3		
	Wollongong	Combustible Matter	0.3	0.4	0.6	0.3	0.1	0.2	0.2	0.3	0.4	0.1	0.5	0.8	12	0.1	0.4	0.8		

MONTHLY REPORT: COMMENTARY ON RESULTS

Note 1: Assessment criteria is based on an EPA guideline of annual average of 4 grams per square metre per month for residential areas. PKCT has adopted a level of 2 grams per square metre for combustible matter for assessment purposes.

SAMPLE PERIOD	Date Sampled	Date Results Obtained	Date Published	COMMENTARY
January 2018	02/02/2018	19/02/2018	19/02/2018	All sites within assessment criteria.
February 2018	02/03/2018	26/03/2018	27/03/2018	All sites within assessment criteria.
March 2018	03/04/2018	18/04/2018	18/04/2018	All sites within assessment criteria.
April 2018	01/05/2018	18/05/2018	21/05/2018	All sites within assessment criteria.
May 2018	01/06/2018	19/06/2018	19/06/2018	All sites within assessment criteria.
June 2018	02/07/2018	16/07/2018	16/07/2018	All sites within assessment criteria.
July 2018	02/08/2018	22/08/2018	28/08/2018	All sites within assessment criteria.
August 2018	03/09/2018	21/09/2018	21/09/2018	All sites within assessment criteria.
September 2018	03/10/2018	23/10/2018	23/10/2018	All sites within assessment criteria.
October 2018	02/11/2018	29/11/2018	30/11/2018	All sites within assessment criteria.
November 2018	04/12/2018	18/12/2018	19/12/2018	All sites within assessment criteria.
December 2018	04/01/2019	16/01/2019	16/01/2019	All sites within assessment criteria.



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SETTLEMENT LAGOON OVERFLOW: ENVIRONMENT PROTECTION LICENCE MONITORING: POINT 16

Environment Protection Licence: 1625 Type of Monitoring: water quality Frequency: daily grab sample when			water quality parameter		EPL Limit (100 percentile)	Commentary on Results
Sample Date	Date Results Obtained	Date Published	pH (pH units)	total suspended solids (milligrams per litre)	monitoring only less than 50 not visible	
02/09/2017	20/11/2017	20/11/2017	7.0	17	not visible	September's results were accidentally omitted from last months report. Data EPL compliant EPL compliant EPL compliant EPL compliant
06/11/2017	20/11/2017	20/11/2017	9.5	31	not visible	
08/11/2017	20/11/2017	20/11/2017	9.0	26	not visible	
20/11/2017	15/12/2017	15/12/2017	8.4	20	not visible	
No overflows from LDP16 in December 17						
10/01/2018	19/02/2018	19/02/2018	8.0	<5	not visible	EPL compliant
14/01/2018	19/02/2018	19/02/2018	7.7	16	not visible	EPL compliant
20/02/2018	26/03/2018	27/03/2018	8.9	21	not visible	EPL compliant
25/02/2018	26/03/2018	27/03/2018	9.1	34	not visible	EPL Compliant. Note - two samples were inadvertently taken during the overflow on the 25th. One sample recorded TSS of 54, the other was 14. Average of two values has been taken for reporting purposes.
26/02/2018	26/03/2018	27/03/2018	8.8	31	not visible	EPL compliant
21/03/2018	18/04/2018	18/04/2018	9.0	11	not visible	EPL compliant
22/03/2018	18/04/2018	18/04/2018	8.8	6	not visible	EPL compliant
No overflows from LDP16 in April 18 No overflows from LDP16 in May 18						
06/06/2018	16/07/2018	16/07/2018	8.2	<5	not visible	EPL compliant
19/06/2018	16/07/2018	16/07/2018	8.1	6	not visible	EPL compliant
21/06/2018	16/07/2018	16/07/2018	7.8	<5	not visible	EPL compliant
27/06/2018	16/07/2018	16/07/2018	8.5	<5	not visible	EPL compliant
29/06/2018	16/07/2018	16/07/2018	8.4	<5	not visible	EPL compliant
05/07/2018	22/08/2018	28/08/2018	7.7	5	not visible	EPL compliant
No overflows from LDP16 in August 18						
03/09/2018	23/10/2018	23/10/2018	9.8	12	not visible	EPL compliant
04/09/2018	23/10/2018	23/10/2018	9.9	12	not visible	EPL compliant
05/09/2018	23/10/2018	23/10/2018	10.0	16	not visible	EPL compliant
06/09/2018	23/10/2018	23/10/2018	10.2	19	not visible	EPL compliant
07/09/2018	23/10/2018	23/10/2018	10.2	30	not visible	EPL compliant
13/09/2018	23/10/2018	23/10/2018	9.4	10	not visible	EPL compliant
08/09/2018	23/10/2018	23/10/2018	9.3	14	not visible	EPL compliant
20/09/2018	23/10/2018	23/10/2018	9.8	15	not visible	EPL compliant
21/09/2018	23/10/2018	23/10/2018	9.8	12	not visible	EPL compliant
04/10/2018	29/11/2018	30/11/2018	10.0	15	not visible	EPL compliant
05/10/2018	29/11/2018	30/11/2018	9.4	16	not visible	EPL compliant
08/10/2018	29/11/2018	30/11/2018	8.3	6	not visible	EPL compliant
09/10/2018	29/11/2018	30/11/2018	7.9	5	not visible	EPL compliant
10/10/2018	29/11/2018	30/11/2018	7.7	<5	not visible	EPL compliant
11/10/2018	29/11/2018	30/11/2018	7.9	<5	not visible	EPL compliant
15/10/2018	29/11/2018	30/11/2018	9.6	12	not visible	EPL compliant

* "Date Published" refers to this report.

NB TSS (total suspended solids) - under EPL, a TSS water quality limit of 50mg/litre pertains. Exceedance of this limit is permitted when discharge occurs solely as a result of rainfall measured at the premises. For discharge to be considered to occur solely as a result of rainfall, the rainfall must exceed a 5 day rainfall depth value of 90 mm over a consecutive 5 day period.



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PKCT Sedimentation Pond Overflows - EPL 1625

Ponds location/names: TS1 pond: DP22, Central Pond: DP23, Tower 3 pond: DP24, South Pond: DP25, Workshop Pond DP26.

Type of Monitoring: Water quality

Frequency: Daily when discharging

Sample Location	Sample Date	Date Results Obtained	Date Results Published	pH (pH units) Criteria: Monitoring only	Total Suspended Solids (milligrams per litre) Criteria: Monitoring only	Oil/ Grease (milligrams per litre) Criteria: Monitoring only	Commentary on Results
No overflows from any ponds in January 2018							
No overflows from any ponds in February 2018							
No overflows from any ponds in March 2018							
No overflows from any ponds in April 2018							
No overflows from any ponds in May 2018							
No overflows from any ponds in June 2018							
No overflows from any ponds in July 2018							
No overflows from any ponds in August 2018							
No overflows from any ponds in September 2018							
No overflows from any ponds in October 2018							
No overflows from any ponds in November 2018							
No overflows from any ponds in December 2018							

Water Collection System- Aerial View



Nb South, Tower 3, Central, Workshop, North, TS1 pond and C7 pump collect site runoff for transfer to the settlement lagoon for treatment, reuse and harbour discharge.

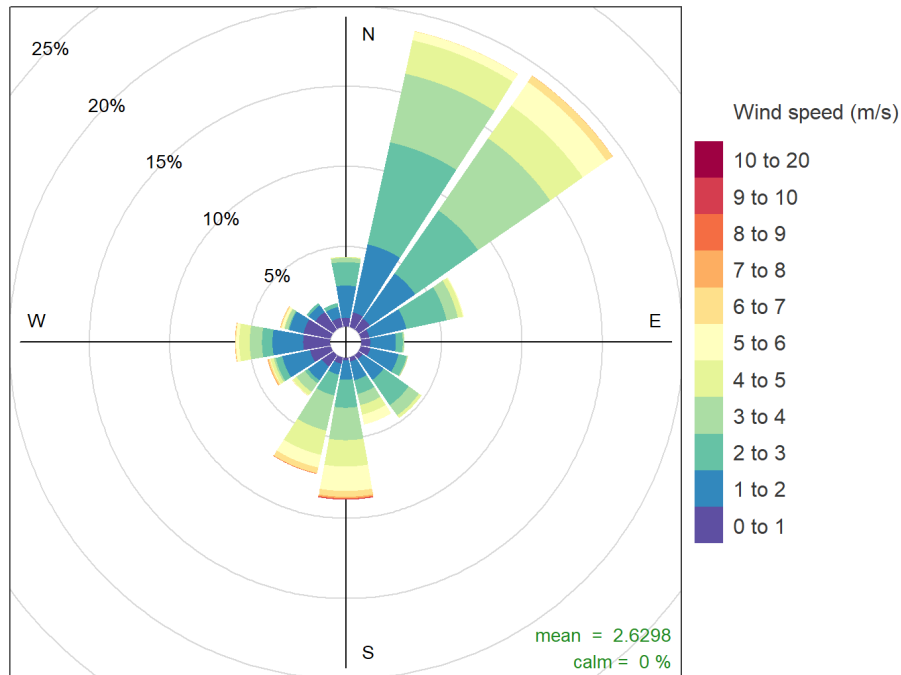


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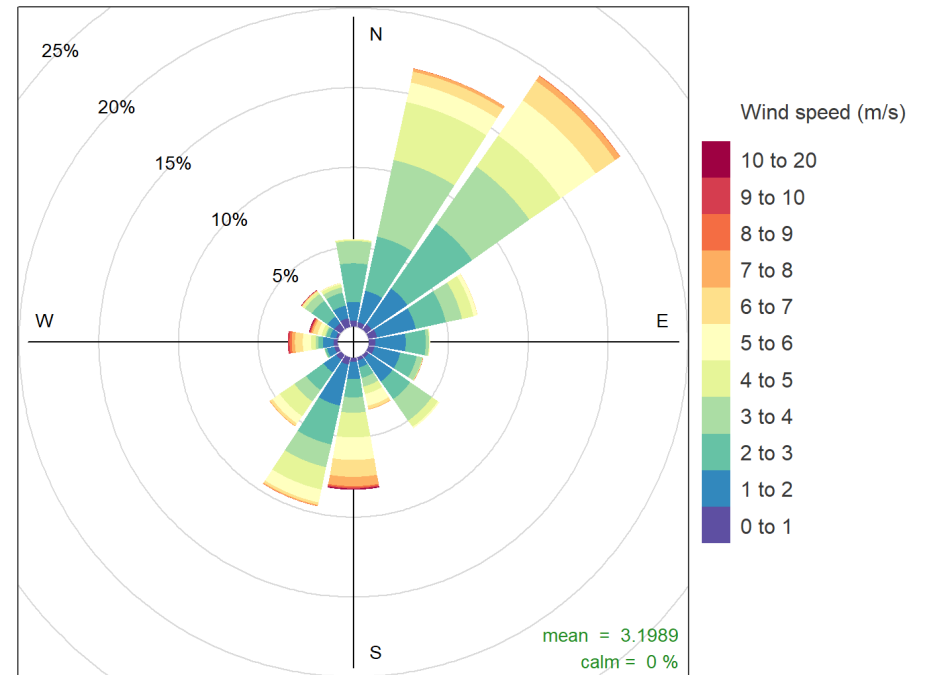
WIND ROSES – December 2018

Northern monitor



Frequency of counts by wind direction (%)

Southern monitor



Frequency of counts by wind direction (%)



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RAINFALL (PKCT site gauge)

