





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
PKCT EPA Public Register	https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=1625&id=1625&option=licence&searchrange=general⦥=POEO
	licence&prp=no&status=Issued
Location:	Port Kembla Road, Port Kembla Inner Harbour, Wollongong
Postal Address:	PO Box 823, Wollongong East 2502

Environment Protection Licence 1625 Monthly Report: December 2019





#### PORT KEMBLA COAL TERMINAL **DUST & WEATHER MONITOR LOCATIONS**

16<sup>th</sup> 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)
ТВА	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







El	PL MONITORING	SITES- INDUSTRIAL					Ca	lendar	Year 20	)19										
	Monthly Analysis MONTH		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOY	DEC					Annual average: gran	ns per square metre, month
EPL No.	Location Gauge Number	analysis: grams/square metre.month													Samples collected	MIN	MEAN	MAX	rolling 12 month average	PKCT assessment oriteria
1	P1	Insoluble Solids	5.1	7.1	4.2	3.0	5.9	6.8	2.5	5.8	3.8	4.6	4.8	2.2	12	2.2	4.7	7.1	4.7	15.0
	25m South	Ash	3.6	5.5	2.9	1.8	4.1	4.0	1.7	4.2	2.9	3.0	3.5	0.1	12	0.1	3.1	5.5		
	BPB Coal Berth	Combustible Matter	1.5	1.6	1.3	1.2	1.8	2.8	0.8	1.6	0.9	1.6	1.3	0.1	12	0.1	1.4	2.8	1.4	12.0
2	P2	Insoluble Solids	2.0	4.7	3.1	1.7	1.4	4.2	0.7	2.5	7.8	3.5	3.5	1.3	12	0.7	3.0	7.8	3.0	15.0
	40m South of	Ash	1.2	2.8	2.0	0.6	0.8	3.0	0.5	1.9	4.4	2.4	2.4	0.9	12	0.5	1.9	4.4		
		Combustible Matter	0.8	1.9	1.1	1.1	0.6	1.2	0.2	0.6	3.4	1.1	1.1	0.4	12	0.2	1.1	3.4	1.1	12.0
3	P3	Insoluble Solids	2.2	3.0	6.6	3.6	7.4	15.1	6.9	12.7	12.8	7.0	9.7	3.6	12	2.2	7.6	15.1	7.6	15.0
	40m East of	Ash	1.5	1.9	4.1	2.3	5.1	11.5	4.9	8.7	9.9	4.9	7.2	0.8	12	0.8	5.2	11.5		
	BPB Stockyard	Combustible Matter	0.7	1.1	2.5	1.3	2.3	3.6	2.0	4.0	2.9	2.1	2.5	2.8	12	0.7	2.3	4.0	2.3	12.0
4		Insoluble Solids	2.5	3.5	3.7	3.1	4.6	7.1	4.5	9.9	6.3	6.4	8.6	4.8	12	2.5	5.4	9.9	5.4	15.0
	40m East Coal Berth	Ash	1.5	1.9	2.1	1.4	1.9	4.1	1.9	3.7	2.5	2.6	3.1	2.4	12	1.4	2.4	4.1		
	Stockyard	Combustible Matter	1.0	1.6	1.6	1.7	2.7	3.0	2.6	6.2	3.8	3.8	5.5	2.4	12	1.0	3.0	6.2	3.0	12.0
5	P5	Insoluble Solids	6.5	9.2	5.9	2.4	1.2	7.4	2.4	7.3	6.3	7.9	10.5	5.2	12	1.2	6.0	10.5	6.0	15.0
	Northern Pond	Ash	2.6	3.0	2.3	1.1	0.4	3.3	0.9	3.4	2.5	3.5	4.2	2.2	12	0.4	2.5	4.2		
	(No.1)	Combustible Matter	3.6	6.2	3.6	1.3	0.8	4.1	1.5	3.9	3.8	4.4	6.3	3.0	12	0.8	3.5	6.3	3.5	12.0
- 6	P6	Insoluble Solids	2.9	5.6	6.2	6.3	4.3	10.8	12.1	7.3	5.2	7.7	9.5	5.5	12	2.9	7.0	12.1	7.0	15.0
	40m West Coal Berth	Ash	1.5	3.0	2.8	3.6	2.8	7.0	7.1	3.6	2.1	4.0	5.5	2.8	12	1.5	3.8	7.1		
	Stockyard	Combustible Matter	1.4	2.6	3.4	2.7	1.5	3.8	5.0	3.7	3.1	3.7	4.0	2.7	12	1.4	3.1	5.0	3.1	12.0
7	P7	Insoluble Solids	3.2	3.9	5.2	1.6	2.2	5.5	1.4	2.8	3.8	4.5	3.2	3.5	12	1.4	3.4	5.5	3.4	15.0
	260m West No.2	Ash	1.9	3.0	3.5	0.9	1.7	4.0	1.0	1.7	2.4	2.4	2.0	2.4	12	0.9	2.2	4.0		
	Coalberth	Combustible Matter	1.3	0.9	1.7	0.7	0.5	1.5	0.4	1.1	1.4	2.1	1.2	1.1	12	0.4	1.2	2.1	1.2	12.0
8	P8	Insoluble Solids	4.9	9.6	8.6	5.3	70.1	18.5	17.4	53.0	25.4	24.8	25.0	7.5	12	4.9	22.5	70.1	22.5	15.0
	PKCT North	Ash	2.2	2.6	2.9	1.7	32.7	6.9	5.7	11.3	4.9	5.1	5.1	2.0	12	1.7	6.9	32.7		
	Truckwash	Combustible Matter	2.7	7.0	5.7	3.6	37.4	11.6	11.7	41.7	20.5	19.7	19.9	5.5	12	2.7	15.6	41.7	15.6	12.0
9	P9	Insoluble Solids	3.4	2.2	1.8	1.2	4.5	3.3	0.6	2.8	2.9	4.9	3.7	2.3	12	0.6	2.8	4.9	2.8	6.0
	Wollongong	Ash	1.9	1.3	1.1	0.5	2.1	1.9	0.4	1.3	1.4	1.9	2.2	1.3	12	0.4	1.4	2.2		
	Wastewater TP.	Combustible Matter	1.5	0.9	0.7	0.7	2.4	1.4	0.2	1.5	1.5	3.0	1.5	1.0	12	0.2	1.4	3.0	1.4	4.0
15	P10	Insoluble Solids	7.6	9.5	9.4	4.7	4.3	11.2	4.7	9.8	5.4	10.0	9.9	10.2	12	4.3	8.1	11.2	8.1	15.0
	North of PKCT	Ash	3.4	3.7	4.5	2.6	2.4	7.2	2.4	5.1	2.8	4.4	4.2	4.8	12	2.4	4.0	7.2		
	Planning Office	Combustible Matter	4.2	5.8	4.9	2.1	1.9	4.0	2.3	4.7	2.6	5.6	5.7	5.4	12	1.9	4.1	5.8	4.1	12.0
17	P11	Insoluble Solids	4.3	4.8	3.9	3.5	4.5	5.8	1.6	4.9	2.8	3.9	3.1	2.7	12	1.6	3.8	5.8	3.8	6.0
	Entry Gate BlueScope	Ash	3.2	3.5	3.0	2.8	3.5	4.8	1.2	3.7	2.3	3.0	2.5	2.1	12	1.2	3.0	4.8		
	RO.RO Berth (109)	Combustible Matter	1.1	1.3	0.9	0.7	1.0	1.0	0.4	1.2	0.5	0.9	0.6	0.6	12	0.4	0.9	1.3	0.9	4.0

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	•			MONTHLY REPORT: COMMENTARY ON RESULTS
ote 1: there are no EPL air qua SAMPLE PERIOD	lity limits in the EPL for industrial m  Date Sampled	onitoring sites. Historical informa Date Results Obtained	ation provides baseline da Date Published	ta and assessment criteria has been adopted to assess against actual results to facilitate performance improvement.  COMMENTARY ON RESULTS
January 2019	04/02/2019	22/02/2019	25/02/2019	Two sites marginally outside rolling annual average assessment criteria for insoluble solids, "P4" and "P8". Site "P4" is outside the criteria as a result of a single abnormal reading in August 2018, likely associated with nearby earthworks. Site "P8", located near the truckwash is marginally outside the criteria as a result of a few readings across the last 12 months. There have been some recent dust mitigation strategies installed at the truckwash to reduce dust levels in this location.
February 2019	04/03/2019	01/04/2019	01/04/2019	Two sites marginally outside rolling annual average assessment criteria for insoluble solids, "P4" and "P8". Site "P4" is outside the criteria as a result of a single abnormal reading in August 2018 likely associated with nearby earthworks. Site "P8", located near the truckwash is marginally outside the criteria as a result of a few readings across the last 12 months. There have been some recent dust mitigation strategies installed at the truckwash to reduce dust levels in this location.
March 2019	02/04/2019	17/04/2019	17/04/2019	Two sites marginally outside rolling annual average assessment criteria for insoluble solids, "P4" and "P8". Site "P4" is outside the criteria as a result of a single abnormal reading in August 2018 likely associated with nearby earthworks. Site "P8", located near the truckwash is marginally outside the criteria as a result of a few readings across the last 12 months. There have been some recent dust mitigation strategies installed at the truckwash to reduce dust levels in this location.
April 2019	02/05/2019	16/05/2019	17/05/2019	Two sites marginally outside rolling annual average assessment criteria for insoluble solids, "P4" and "P8". Site "P4" is outside the criteria as a result of a single abnormal reading in August 2018 likely associated with nearby earthworks. Site "P8", located near the truckwash is marginally outside the criteria as a result of a few readings across the last 12 months. There have been some recent dust mitigation strategies installed at the truckwash to reduce dust levels in this location.
May 2019	03/06/2019	13/06/2019	18/06/2019	Two sites marginally outside rolling annual average assessment criteria for insoluble solids, "P4" and "P8". Site "P4" is outside the criteria as a result of a single abnormal reading in August 2018 likely associated with nearby earthworks. Site "P8", located near the truckwash is marginally outside the criteria as a result of a few readings across the last 12 months. There have been some recent dust mitigation strategies installed at the truckwash to reduce dust levels in this location.
June 2019	05/07/2019	16/07/2019	17/07/2019	Two sites, "P4" and "P8" marginally outside rolling annual average assessment criteria for insoluble solids and combustible matter (Site "P8" only). Site "P4" is outside the criteria as a result of a single abnormal reading in August 2018, likely associated with nearby earthworks. Site "P8", located near the truckwash is marginally outside the criteria as a result of a few readings across the last 12 months. There have been some recent dust mitigation strategies installed at the truckwash to reduce dust levels in this location. Note: Values entered into "May" column last month were annual average values. The May values have been updated to monthly values in this report.
July 2019	02/08/2019	21/08/2019	22/08/2019	Two sites, "P4" and "P8" marginally outside rolling annual average assessment criteria for insoluble solids and combustible matter (Site "P8" only). Site "P4" is outside the criteria as a result of a single abnormal reading in August 2018, likely associated with nearby earthworks. Site "P8", located near the truckwash is marginally outside the criteria as a result of a few readings across the last 12 months. There have been some recent dust mitigation strategies installed at the truckwash to reduce dust levels in this location.
August 2019	03/09/2019	30/09/2019	02/10/2019	One site, "P8" marginally outside rolling annual average assessment criteria for insoluble solids and combustible matter. Site "P8", located near the truckwash is marginally outside the criteria a result of a few readings across the last 12 months. There have been some recent dust mitigation strategies installed at the truckwash to reduce dust levels in this location.
September 2019	03/10/2019	28/10/2019	30/10/2019	One site, "P8" marginally outside rolling annual average assessment criteria for insoluble solids and combustible matter. Site "P8", located near the truckwash is marginally outside the criteria a result of a few readings across the last 12 months. There have been some recent dust mitigation strategies installed at the truckwash to reduce dust levels in this location.
October 2019	04/11/2019	18/11/2019	19/11/2019	One site, "P8" marginally outside rolling annual average assessment criteria for insoluble solids and combustible matter. Site "P8", located near the truckwash is marginally outside the criteria aresult of a few readings across the last 12 months. There have been some recent dust mitigation strategies installed at the truckwash to reduce dust levels in this location.
November 2019	05/12/2019	24/12/2019	24/12/2019	One site, "P8" marginally outside rolling annual average assessment criteria for insoluble solids and combustible matter. Site "P8", located near the truckwash is marginally outside the criteria aresult of a few readings across the last 12 months. There have been some recent dust mitigation strategies installed at the truckwash to reduce dust levels in this location.
December 2019	06/01/2020	23/01/2020	28/01/2020	One site, "P8" marginally outside rolling annual average assessment criteria for insoluble solids and combustible matter. Site "P8", located near the truckwash is marginally outside the criteria a a result of a few readings across the last 12 months. There have been some recent dust mitigation strategies installed at the truckwash to reduce dust levels in this location. December particulate levels were very low compared to previous months.

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EP	EPL MONITORING SITES- RESIDENTIAL						. (	<u>Çalenda</u>	r Year 2	019					Mo	nthly An	alysis		annual average: grams per	
	MONTH			JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					DEC					square metre.month						
EPL No.	Location Gauge Number	Analysis: grams/square metre.month													No. samples collected	MIN	MEAN	MAX	rolling 12 month average	PKCT assessment criteria
12	R1	Insoluble Solids	1.9	1.9	1.8	0.7	0.2	0.6	0.2	0.8	0.4	1.5	1.2	0.8	12	0.2	1.0	1.9	1.0	4.0
	157 Church St	Ash	1.3	1.1	1.3	0.4	0.1	0.5	0.1	0.1	0.3	1.1	8.0	0.5	12	0.1	0.6	1.3		
	Wollongong	Combustible Matter	0.6	8.0	0.5	0.3	0.3	0.1	0.1	0.3	0.1	0.4	0.4	0.3	12	0.1	0.4	0.8	0.4	2.0
19	R2	Insoluble Solids	2.3	1.7	1.8	0.6	0.2	0.9	1.5	0.8	0.7	3.8	2.5	2.4	12	0.2	1.6	3.8	1.6	4.0
	Vikings Oval	Ash	1.5	1.1	1.1	0.4	0.1	0.6	1.4	0.5	0.4	1.5	1.5	1.5	12	0.1	1.0	1.5		
	Wollongong	Combustible Matter	0.8	0.6	0.7	0.2	0.1	0.3	0.1	0.3	0.3	2.3	1.0	0.9	12	0.1	0.6	2.3	0.6	2.0
TBA	R3	Insoluble Solids	2.4	2.4	1.7	2.0	0.4	1.3	0.5	0.5	0.6	1.4	1.8	1.3	12	0.4	1.4	2.4	1.4	4.0
	Ross Street	Ash	1.8	1.8	1.3	0.9	0.2	0.9	0.3	0.5	0.4	1.0	1.3	1.0	12	0.2	1.0	1.8		
	Wollongong	Combustible Matter	0.6	0.6	0.4	1.1	0.2	0.4	0.2	<0.1	0.2	0.4	0.5	0.3	11	0.2	0.4	1.1	0.4	2.0
						MO	NTHLY I	REPORT:	COMME	NTARY (	ON RESU	LTS								
Note 1	: Assessment criter	ria is based on an EPA guideline of a	nnual av	erage of	4 grams p	er square	metre per	month for	residential	areas. PK	CT has add	pted a leve	el of 2 gram	ns per squa	re metre for c	ombusti	ble mat	ter for a	ssessment pur	poses.
SA	MPLE PERIOD	Date Sampled	Date R	esults O	btained	Da	ate Publis	hed	COMME	ITARY										
	January 2019	04/02/2019	2	2/02/201	9		25/02/201	9	All sites	vithin ass	essment o	riteria.								
F	ebruary 2019	04/03/2019	0	1/04/201	9		01/04/201	9	All sites	vithin asse	essment c	riteria.								
	March 2019	02/04/2019	1	7/04/201	9		17/04/201	9	All sites	vithin asse	essment o	riteria.								
	April 2019	02/05/2019	1	6/05/201	9		17/05/201	9	All sites	vithin asse	essment o	riteria.								
	May 2019	03/06/2019	1	3/06/201	9		18/06/201	9	All sites	vithin ass	essment o	riteria.								
	June 2019	05/07/2019	1	6/07/201	9		17/07/201	9	All sites within assessment criteria in June. Note: Values entered into "May" column last month were annual average values. The May values have been updated to monthly values in this report.											
	July 2019	02/08/2019	2	21/08/201	9		22/08/201	9	All sites within assessment criteria.											
	August 2019	03/09/2019	3	0/09/201	9		02/10/201	9	All sites within assessment criteria.											
Se	eptember 2019	03/10/2019	2	8/10/201	9		30/10/201	9	All sites within assessment criteria.											
(	October 2019	04/11/2019	1	8/11/201	9		19/11/201	9	All sites within assessment criteria. Abnormally high deposited dust levels at Site "R2" during October were verified as primarily insect remains (75%) followed by copper sludge (10%) and dirt (10%). Coal was assessed as 5% of sample.											
N	lovember 2019	05/12/2019	2	24/12/201	9		24/12/201	9	All sites	vithin asse	essment d	riteria.								•
D	ecember 2019	06/01/2020	2	23/01/202	0		28/01/202	0	All sites within assessment criteria.											





	SETTLEMENT LAGOON OVERFLOW: ENVIRONMENT PROTECTION LICENCE MONITORING: POINT 16											
Environment P	rotection Licer			ality parameter	EPL Limit (100 percentile)							
	ing: water qual			pH	monitoring only							
Frequency: dai	-	•	total sus	pended solids	less than 50							
				rams per litre)	not visible							
			, ,	total suspended								
Sample Date	Date Results	Date Published	pH	solids	oil/ grease	Commentary on Results						
	Obtained		(pH units)	(milligrams per litre)	(milligrams per litre)	,						
06/01/2019	22/02/2019	25/02/2019	7.8	8	not visible	EPL compliant						
09/01/2019	22/02/2019	25/02/2019	8.8	9	not visible	EPL compliant						
10/01/2019	22/02/2019	25/02/2019	8.1	<5	not visible	EPL compliant						
11/01/2019	22/02/2019	25/02/2019	7.8	<5	not visible	EPL compliant						
12/01/2019	22/02/2019	25/02/2019	7.7	<5	not visible	EPL compliant						
15/01/2019	22/02/2019	25/02/2019	8.4	<5	not visible	EPL compliant						
23/01/2019	22/02/2019	25/02/2019	9.9	7	not visible	EPL compliant						
31/01/2019	22/02/2019	25/02/2019	8.3	9	not visible	EPL compliant						
05/02/2019	01/04/2019	01/04/2019	9.5	17	not visible	EPL compliant						
06/02/2019	01/04/2019	01/04/2019	9.4	10	not visible	EPL compliant						
07/02/2019	01/04/2019	01/04/2019	9.7	21	not visible	EPL compliant						
09/02/2019	01/04/2019	01/04/2019	8.2	12	not visible	EPL compliant						
10/02/2019	01/04/2019	01/04/2019	7.9	12	not visible	EPL compliant						
11/02/2019	01/04/2019	01/04/2019	8.7	6	not visible	EPL compliant						
13/02/2019	01/04/2019	01/04/2019	9.0	5	not visible	EPL compliant						
22/02/2019	01/04/2019	01/04/2019	9.4	15	not visible	EPL compliant						
28/02/2019	01/04/2019	01/04/2019	9.9	22	not visible	EPL compliant						
05/03/2019	17/04/2019	17/04/2019	9.9	15	not visible	EPL compliant						
06/03/2019	17/04/2019	17/04/2019	10.1	11	not visible	EPL compliant						
07/03/2019	17/04/2019	17/04/2019	9.8	9	not visible	EPL compliant						
08/03/2019	17/04/2019	17/04/2019	9.6	7	not visible	EPL compliant						
12/03/2019	17/04/2019	17/04/2019	9.8	17	not visible	EPL compliant						
14/03/2019	17/04/2019	17/04/2019	9.6	22	not visible	EPL compliant						
13/03/2019	17/04/2019	17/04/2019	9.5	11	not visible	EPL compliant						
10/00/2010	1110-112010	1110412010	0.0		THE VISIBLE	TSS exceeded EPL limit. Significant, high intensity, short duration rainfall						
15/03/2019	17/04/2019	17/04/2019	8.2	84	not visible	event occurred at the time of the overflow. PKCT's dosing systems were						
10/00/2010	1110412010	1770-472010	0.2	٠.	THE VISIBLE	operational across the event. Exceedance has been reported to EPA.						
18/03/2019	17/04/2019	17/04/2019	7.9	12	not visible	EPL compliant						
19/03/2019	17/04/2019	17/04/2019	7.0	12	not visible	EPL compliant						
20/03/2019	17/04/2019	17/04/2019	7.6	14	not visible	EPL compliant						
21/03/2019	17/04/2019	17/04/2019	7.6	7	not visible	EPL compliant						
22/03/2019	17/04/2019	17/04/2019	7.7	, <5	not visible	EPL compliant						
23/03/2019	17/04/2019	17/04/2019	7.4	√5 <5	not visible	EPL compliant						
28/03/2019	17/04/2019	17/04/2019	7.8	<5	not visible	EPL compliant						
30/03/2019	17/04/2019	17/04/2019	7.6	8	not visible	EPL compliant						
31/03/2019	17/04/2019	17/04/2019	7.9	7	not visible	EPL compliant						
	ned" refers to th		1.5	'	Hot visible	Li E compilant						

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.





		SETTI I	MENT LAGO	ON OVEREI OV∙ EN	VIRONMENT PROTECTION LIC	ENCE MONITORING: POINT 16
Environment	Protection Lic			ality parameter	EPL Limit (100 percentile)	LIGE HOMEON CONTROL
Type of Monitori				pH	monitoring only	1
Frequency: dail	y grab sample w	hen discharging	total su:	spended solids	less than 50	
			(millig	rams per litre)	not visible	
Sample Date	Date Results Obtained	Date Published	pH (pH units)	total suspended solids (milligrams per litre)	oil/ grease (milligrams per litre)	Commentary on Results
04/04/2019	16/05/2019	17/05/2019	9.7	6	not visible	EPL compliant
05/04/2019	16/05/2019	17/05/2019	8.2	6	not visible	EPL compliant
23/04/2019	16/05/2019	17/05/2019	10.2	29	not visible	EPL compliant
24/04/2019	16/05/2019	17/05/2019	10.5	19	not visible	EPL compliant
25/04/2019	16/05/2019	17/05/2019	10.0	16	not visible	EPL compliant
01/05/2019	13/06/2019	18/06/2019	9.4	48	not visible	EPL compliant
02/05/2019	13/06/2019	18/06/2019	10.1	28	not visible	EPL compliant
03/05/2019	13/06/2019	18/06/2019	9.8	14	not visible	EPL compliant
05/05/2019	13/06/2019	18/06/2019	9.6	17	not visible	EPL compliant
07/05/2019	13/06/2019	18/06/2019	9.8	20	not visible	EPL compliant
09/05/2019	13/06/2019	18/06/2019	9.5	13	not visible	EPL compliant
14/05/2019	13/06/2019	18/06/2019	10.3	28	not visible	EPL compliant
15/05/2019	13/06/2019	18/06/2019	10.2	28	not visible	EPL compliant
28/05/2019	13/06/2019	18/06/2019	10.0	27	not visible	EPL compliant
04/06/2019	16/07/2019	17/07/2019	10.0	36	not visible	EPL compliant
05/06/2019	16/07/2019	17/07/2019	7.9	97	not visible	TSS exceeded EPL limit. PKCT's dosing systems were operational across the event. Exceedance has been reported to EPA.
07/06/2019	16/07/2019	17/07/2019	7.6	40	not visible	EPL compliant
08/06/2019	16/07/2019	17/07/2019	7.5	44	not visible	EPL compliant
13/06/2019	16/07/2019	17/07/2019	7.9	11	not visible	EPL compliant
16/06/2019	16/07/2019	17/07/2019	7.1	<5	not visible	EPL compliant
18/06/2019	16/07/2019	17/07/2019	7.4	26	not visible	EPL compliant
24/06/2019	16/07/2019	17/07/2019	7.5	29	not visible	EPL compliant
30/06/2019	16/07/2019	17/07/2019	7.4	6	not visible	EPL compliant
04/07/2019	21/08/2019	22/08/2019	8.0	<5	not visible	EPL compliant
06/07/2019	21/08/2019	22/08/2019	7.5	9	not visible	EPL compliant
07/07/2019	21/08/2019	22/08/2019	7.6	7	not visible	EPL compliant
08/07/2019	21/08/2019	22/08/2019	7.6	6	not visible	EPL compliant
15/07/2019	21/08/2019	22/08/2019	8.3	5	not visible	EPL compliant
23/07/2019	21/08/2019	22/08/2019	10.0	9	not visible	EPL compliant
24/07/2019	21/08/2019	22/08/2019	9.9	9	not visible	EPL compliant
25/07/2019	21/08/2019	22/08/2019	9.9	7	not visible	EPL compliant
26/07/2019	21/08/2019	22/08/2019	9.9	8	not visible	EPL compliant
03/08/2019	30/09/2019	02/10/2019	10.2	14	not visible	EPL compliant
06/08/2019	30/09/2019	02/10/2019	10.2	14	not visible	EPL compliant
08/08/2019	30/09/2019	02/10/2019	10.2	16	not visible	EPL compliant
12/08/2019	30/09/2019	02/10/2019	10.0	18	not visible	EPL compliant
27/08/2019	30/09/2019	02/10/2019	9.5	14	not visible	EPL compliant
30/08/2019	30/09/2019	02/10/2019	8.7	96	not visible	TSS exceeded EPL limit. PKCT's dosing systems were operational across the event. Exceedance has been reported to EPA. Investigations underway.
31/08/2019	30/09/2019	02/10/2019	7.9	14	not visible	EPL compliant
"Date Publishe	ed" refers to this					

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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nuironment	Protection Lie			ality parameter	EPL Limit (100 percentile)	ITORING: Licenced Discharge POINT 16		
	ng: waterqualit		water qu	pH	monitoring only	1		
requency: daily grab sample when discharging			total su:	spended solids	less than 50	1		
			(mg/L)					
			0	il/ grease	not visible			
Sample Date	Date Results Obtained	Date Published	pH (pH units)	total suspended solids (milligrams per litre)	oil/ grease (milligrams per litre)	Commentary on Results		
04/09/2019	28/10/2019	30/10/2019	8.0	<5	not visible	EPL compliant		
19/09/2019	28/10/2019	30/10/219	7.4	43.5	not visible	EPL Compliant. Note - two samples were taken during the overflow on the 19th. One sample recorded TSS of 50mg/L, the other was 37mg/L. Both samples were at or below EPL limit. Average of two values has been taken fo reporting purposes.		
17/09/2019	28/10/2019	30/10/2019	9.4	7.0	not visible	EPL compliant		
18/09/2019	28/10/2019	30/10/2019	9.3	12.0	not visible	EPL compliant		
19/09/2019	28/10/2019	30/10/2019	7.4	41.0	not visible	EPL compliant		
20/09/2019	28/10/2019	30/10/2019	7.4	28.0	not visible	EPL compliant		
24/09/2019	28/10/2019	30/10/2019	7.5	<5	not visible	EPL compliant		
25/09/2019	28/10/2019	30/10/2019	7.6	<5	not visible	EPL compliant		
27/09/2019	28/10/2019	30/10/2019	7.7	<5	not visible	EPL compliant		
30/09/2019	28/10/2019	30/10/2019	7.8	6	not visible	EPL compliant		
02/10/2019	18/11/2019	19/11/2019	8.6	9	not visible	EPL compliant		
09/10/2019	18/11/2019	19/11/2019	9.6	14	not visible	EPL compliant		
11/10/2019	18/11/2019	19/11/2019	7.8	12	not visible	EPL compliant		
17/10/2019	18/11/2019	19/11/2019	8.4	9	not visible	EPL compliant		
18/10/2019	18/11/2019	19/11/2019	8.0	9	not visible	EPL compliant		
01/11/2019	24/12/2019	24/12/2019	10.0	12	not visible	EPL compliant		
11/11/2019	24/12/2019	24/12/2019	10.2	20	not visible	EPL compliant		
12/11/2019	24/12/2019	24/12/2019	10.0	24	not visible	EPL compliant		
					ows from LDP16 in December 2019			
				1.0010	on o meeting and a meeting a meeting and a m			

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.





	2019 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, Berth 102 DP27.  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	Solids (milligrams per litre) Criteria: Monitoring	Oil/ Grease (milligrams per litre) Criteria: Monitoring only	Commentary on Results					
	No overflows from any satellite ponds in January 2019											
	No overflows from any satellite ponds in February 2019											
DP26 - Workshop Pond	14/03/2019*	25/03/2019	17/04/2019	7.8	9	Not visible	Overflow of the Workshop Pond on the 14th March occurred as a result of a short duration intense rainfall event. There were no pump malfunctions or failures, the pumps could not keep up with the inflow reporting to the pond. *Sample was taken following day due to heavy electrical storms during the evening of overflow, water quality had not changed overnight.					
DP24 - Tower 3 Pond	04/04/2019	15/04/2019	17/05/2019	7.2	67	Not visible	Overflow of the Tower 3 Pond on the 4th April occurred as a result of a short duration intense rainfall event. There were no pump malfunctions or failures, the pumps could not keep up with the inflow reporting to the pond.					
No overflows from any satellite ponds in May 2019												
					s from any satellite pon							
					s from any satellite por							
				No overflows	from any satellite pond							
DP23 - Central Pond	18/09/2019	28/10/2019	30/10/2019	8.2	70		Overflow of the Central Pond on the 18th September. PKCT's primary pump in the Pond had an electrical short during the morning and was removed and sent for repair. PKCT's contingency pump was installed with an equivalent flow rate. Over 60mm of rain fell in two days.					
					from any satellite pond							
					rom any satellite ponds							
				No overflows f	rom any satellite ponds	in December 2019						





#### **PKCT Water Collection System Discharge Points**



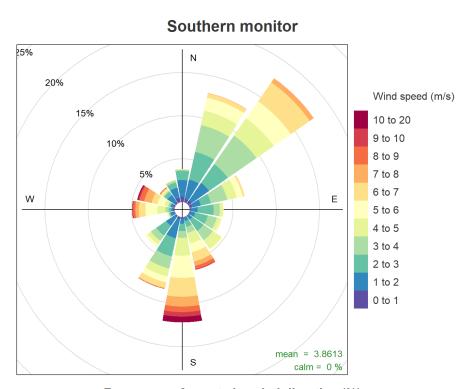




#### **WIND ROSES – December 2019**

#### **Northern monitor** 25% 20% Wind speed (m/s) 10 to 20 9 to 10 8 to 9 7 to 8 6 to 7 Ε W 5 to 6 4 to 5 3 to 4 2 to 3 1 to 2 0 to 1 mean = 3.0752s calm = 0 %

Frequency of counts by wind direction (%)



Frequency of counts by wind direction (%)





#### **RAINFALL (PKCT site gauge)**

