

Port Kembla Milling – Environmental Monitoring Data

Last Updated: 20 Nov 2020

AIR MONITORING REQUIREMENTS

Port Kembla Milling is required to monitor its emissions to air from its main mill filter stack on an annual basis. EPL No. 20101 provides a licence limit of 20mg/m³ for total solid particulates (TSP) and the NSW Protection of the Environment Operations (Clean Air) Regulation 2010 provides Group 6 emissions limits for Nitrogen Oxides and Type 1 and Type 2 substances in aggregate.

Stack testing at Port Kembla Milling is undertaken when the plant is milling cement and slag and the results in both of these production modes are presented below.

Parameter	Unit	Limit	2020		2019		2018		2017	
			Slag Mode	Cement Mode	Slag Mode	Cement Mode	Slag Mode	Cement Mode	Slag Mode	Cement Mode
Velocity	m/s		11.7	4.94	8.89	7.4	8.6	6.5	8.5	7.5
Dry Stack Flow Rate	m ³ /min		3,737	1,628	2,826	2,446	2,717	2,200	2,823	2,568
Temperature	°C		101	104	97.5	105	96.6	97.5	99.5	99.6
Total Solid Particulates	mg/m ³	20	4.5	12.7	2.11	7.40	2.19	1.02	2.8	3.15
SO ₂	mg/m ³		5.22	3.40	2.86	2.86	2.86	2.86	2.86	2.86
NO ₂	mg/m ³	350	2.79	8.76	1.56	5.89	2.05	2.79	2.8	6.29
CO	mg/m ³		2.49	1.25	1.56	72.9	1.52	1.25	29.7	1.25
Type 1 and Type 2 substances in aggregate	mg/m ³	1.0	0.0370	0.101	0.078	0.047	0.034	0.047	0.017	0.019

** NM – Not measured

NOISE MONITORING REQUIREMENTS

Port Kembla Milling (PKM) is required to monitor noise levels at three specified locations on an annual basis. These locations have been identified within this report as R1, R2 and R3. EPL No. 20101 provides for noise limits at each of these monitoring locations. Results for the noise monitoring conducted by Port Kembla Milling for the last four years has been presented below for Day, Evening and Night periods.

Noise measurement results – Day Time

Location	Limit LA_{eq} dB(A)	Aug 2020	Comments	Aug 2019	Comments	Sept 2018	Comments	July 2017	Comments
R1	40	40	15minute criteria 40dB(A), industrial sources including train engine hum at 53 dB(A) during the whole measurement. PKM was inaudible and estimated as less than 40 dB(A).	35	15minute criteria 40dB(A), industrial sources approximately 45-50 dB(A). PKM was inaudible and estimated as less than 35 dB(A).	40	15minute criteria 40dB(A), industrial sources approximately 50-55 dB(A). PKM was inaudible and estimated as less than 40 dB(A).	40	Steady noise from passing vehicles, 55-81 dB(A). Industrial sources approximately 50-55 dB(A) PKM noise was inaudible and estimated as 40 dB(A).
R2	37	30	15minute criteria 37dB(A), industrial sources approximately 42-43 dB(A). PKM was inaudible and estimated as less than 30 dB(A).	32	15minute criteria 37 dB(A), industrial sources approximately 42-45 dB(A). PKM was inaudible and estimated as less than 32 dB(A).	36	15minute criteria 37 dB(A), industrial sources approximately 40-45 dB(A). PKM was inaudible and estimated as less than 36 dB(A).	36	Industrial sources are audible, approximately 46-50 dB(A). PKM was inaudible and estimated as 36 dB(A).
R3	35	30	15minute 37 dB(A), industrial sources approximately 40 dB(A). PKM was inaudible and estimated as less than 30 dB(A).	30	15minute 37 dB(A), industrial sources approximately 40-42 dB(A). PKM was inaudible and estimated as less than 30 dB(A).	35	15minute 37 dB(A), industrial sources approximately 42-46 dB(A). PKM was inaudible and estimated as less than 35 dB(A).	35	Sources are industry, distant traffic, community noise, birds, and aircraft. Industrial sources approximately 44-46dBA. PKM was inaudible and estimated as 35 dB(A).

Note: The 2016 & 2017 data has been updated as the raw data figures were previously reported.

Noise measurement results – Evening Time

Location	Limit LA _{eq} dB(A)	Aug 2020	Comments	Aug 2019	Comments	Sept 2018	Comments	July 2017	Comments
R1	40	40	15minute criteria 40dB(A), industrial sources approximately 48 dB(A). PKM was inaudible and estimated as less than 40 dB(A).	37	15minute criteria 40dB(A), industrial sources approximately 52-53 dB(A). PKM was inaudible and estimated as less than 37 dB(A).	36	15minute criteria 40dB(A), industrial sources approximately 47-50 dB(A). PKM was inaudible and estimated as less than 36 dB(A).	36	Steady noise from nearby passing traffic. Train audible for nearby industrial site. Industrial sources approximately 46-50 dB(A). PKM was inaudible and estimated as 36 dB(A).
R2	37	32	15minute criteria 37 dB(A), industrial sources approximately 43 dB(A). PKM was inaudible and estimated as less than 32 dB(A).	36	15minute criteria 37 dB(A), industrial sources approximately 45-46 dB(A). PKM was inaudible and estimated as less than 36 dB(A).	30	15minute criteria 37 dB(A), industrial sources approximately 40-42 dB(A). PKM was inaudible and estimated as less than 30 dB(A).	36	Steady noise from nearby passing traffic. Industrial sources approximately 40-44dB(A). PKM was inaudible and estimated as 30 dB(A).
R3	35	30	15minute criteria 37 dB(A), industrial sources approximately 44-48 dB(A). Background noise was influenced by cicadas. PKM was faintly audible but not contributing to measured LA90, with other industrial sites dominant, and estimated as less than 30 dB(A)	35	15minute criteria 37 dB(A), industrial sources approximately 45-47 dB(A). PKM was inaudible and estimated as 35 dB(A)	31	15minute criteria 37 dB(A), industrial sources approximately 40-44 dB(A). PKM was inaudible and estimated as 31 dB(A)	31	Multiple industrial sources contributing to background noise. Distant traffic audible. Industrial sources approximately 40-42 dB(A). PKM was inaudible and estimated as 31 dB(A).

Note: The 2016 & 2017 data has been updated as the raw data figures were previously reported.

Noise measurement results – Night Time

Location	Limit LA _{eq} dB(A)	Aug 2020	Comments	Aug 2019	Comments	Sept 2018	Comments	July 2017	Comments
R1	40	38	15minute criteria 40 dB(A), industrial sources approximately 48-56 dB(A). PKM was inaudible and estimated at less than 38 dB(A).	37	15minute criteria 40 dB(A), industrial sources approximately 53 dB(A). PKM was faintly audible and estimated as less than 37 dB(A).	34	15minute criteria 40 dB(A), industrial sources approximately 44-48 dB(A). PKM was inaudible and estimated as 34 dB(A).	34	Multiple sources from industrial area. Industrial sources approximately 44-46 dB(A). PKM was inaudible and estimated as 34 dB(A).
R2	37	36	15minute criteria 37 dB(A), industrial sources approximately 45-49 dB(A). PKM was inaudible and estimated at less than 36 dB(A).	37	15minute criteria 37 dB(A), industrial sources approximately 45-47 dB(A) PKM was faintly audible and estimated as 37 dB(A).	33	15minute criteria 37 dB(A), industrial sources approximately 43-46 dB(A) PKM was inaudible and estimated as 33 dB(A).	33	Multiple sources from industrial area. Industrial sources approximately 43-46 dB(A). PKM was inaudible and estimated as 33 dB(A).
R3	37	33	15minute criteria 37 dB(A), industrial sources approximately 46-49 dB(A) PKM was faintly audible at 160HZ at 33 dB(A) with other industrial sites contributing 45-46 dB(A).	37	15minute criteria 37 dB(A), industrial sources approximately 45-46 dB(A) PKM was faintly audible and estimated as 37 dB(A).	36	15minute criteria 37 dB(A), industrial sources approximately 46-47 dB(A) PKM was faintly audible and estimated as 36 dB(A).	31	Industrial sources contributing to steady state of 41-43dBA. PKM was inaudible and estimated as 31 dB(A).

Note: The 2016 & 2017 data has been updated as the raw data figures were previously reported.

WATER MONITORING REQUIREMENTS

Port Kembla Milling monitors the quality of the stormwater discharge when there is outflow from the bioretention basin. It is not always possible to collect a water sample from the bio-retention basin and following rainfall events as there may be not enough runoff generated to physically obtain a sample.

EPL No. 20101 requires the stormwater discharge to be monitored for pH. There is no limit specified for pH of stormwater discharge within EPL No. 20101.

Results of stormwater quality monitoring that has been undertaken over the past 4 years are presented below.

Date	pH
5/1/16	10.7
26/2/18	10.6
22/3/18	11.0
5/10/18	10.0
19/3/19	9.2
09/02/20	9.0
27/07/20	8.7
10/08/20	7.04

Sampling during 2016 and 2017 was impacted by damage incurred to the bioretention outlet due to a king tide June 2016. The bioretention outlet was repaired and reinstated as functional for sampling July 2017.