Port Kembla Milling – Environmental Monitoring Data

Last Updated: 18th April 2024

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	2023		2022		2021		2020	
			Slag Mode	Cement Mode	Slag Mode	Cement Mode	Slag Mode	Cement Mode	Slag Mode	Cement Mode
Velocity	m/s		8.2	7.15	4.8	6.17	8.11	8.11	11.7	4.94
Dry Stack Flow Rate	m^3/min		2617	2285	1575	2050	2,688	2,760	3,737	1,628
Temperature	°C		95.9	99.8	93.5	91	96	99	101	104
Total Solid Particulates	mg/m^3	20	<1.19	<1.82	<1.52	<1.3	<1.13	<1.1	4.5	12.7
SO_2	mg/m^3		<2.86	<2.86	<2.86	<2.86	<2.86	<2.86	5.22	3.40
NO_2	mg/m^3	350	5.33	24.44	3.67	19.55	3.35	6.98	2.79	8.76
CO	mg/m^3		15.5	63.7	41.16	43.08	20	46.8	2.49	1.25
Type 1 and Type 2 substances in aggregate	mg/m^3	1.0	0.0087	0.02	0.031	0.013	0.0102	0.0098	0.0370	0.101

** 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)	2023	Comments	2022	Comments	2021	Comments	2020	Comments
R1	40	<32	PKM inaudible and indistinguishable from industrial hum observed at that location.	<40	Mill inaudible and indistinguishable from industrial hum observed at that location.	40	15minute criteria 40dB(A), industrial sources and movements at approx. 51 – 60 dB(A) during the whole measurement. PKM was inaudible and estimated as less than 40 dB(A).	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).
R2	37	<33	PKM inaudible, typical neighbourhood ambience, including local road and traffic noise.	<34	Mill inaudible and indistinguishable from industrial hum observed at that location.	33	15minute criteria 37dB(A), industrial sources approximately 44-46 dB(A). PKM was inaudible and estimated as less than 33 dB(A).	30	15minute criteria 37dB(A), industrial sources approximately 42-43 dB(A). PKM was inaudible and estimated as less than 30 dB(A).
R3	35	<31	PKM inaudible, typical neighbourhood ambience, including local road and traffic noise, distant lawn mowing.	<34	Mill inaudible and indistinguishable from industrial hum observed at that location.	34	15minute criteria 35dB(A), industrial sources approximately 44-52 dB(A). PKM was inaudible and estimated as less than 34 dB(A).	30	15minute 37 dB(A), industrial sources approximately 40 dB(A). PKM was inaudible and estimated as less than 30 dB(A).

Noise measurement results – Evening Time

Location	Limit LA_{eq} dB(A)	2023	Comments	2022	Comments	2021	Comments	2020	Comments
R1	40	<32	PKM inaudible and indistinguishable from industrial hum observed at that location.	<40	Mill inaudible and indistinguishable from industrial hum observed at that location.	40	15minute criteria 40dB(A), industrial sources and movements at approx. 50 – 58 dB(A) during the whole measurement. PKM was inaudible and estimated as less than 40 dB(A).	40	15minute criteria 40dB(A), industrial sources approximately 48 dB(A). PKM was inaudible and estimated as less than 40 dB(A).
R2	37	<33	PKM inaudible, typical neighbourhood ambience, including local road and traffic noise, cicada noise, birdsong, and dog barking.	<35	Mill inaudible and indistinguishable from industrial hum observed at that location.	37	15minute criteria 37 dB(A), industrial sources including BlueScope approx. less than 50 dB(A). PKM was inaudible and estimated as less than 37 dB(A).	32	15minute criteria 37 dB(A), industrial sources approximately 43 dB(A). PKM was inaudible and estimated as less than 32 dB(A).
R3	35	<31	PKM inaudible, typical neighbourhood ambience, including dominant cicada noise, low local traffic noise and one aircraft pass-by event.	<34	Mill inaudible and indistinguishable from industrial hum observed at that location	35	15minute criteria 35 dB(A), no industrial sources were observed during the whole measurement. PKM was inaudible and estimated as less than 35 dB(A).	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 L_{A90}, with other industrial sites dominant, and estimated as less than 30 dB(A).

Noise measurement results – Night Time

Location	Limit LA $_{eq}$ dB(A)	2023	Comments	2022	Comments	2021	Comments	2020	Comments
R1	40	<32	PKM inaudible and indistinguishable from industrial hum observed at that location.	<35	Mill inaudible and indistinguishable from industrial hum observed at that location	35	15minute criteria 40dB(A), industrial sources and movements at approx. 45 – 48 dB(A). PKM was inaudible and estimated as less than 35 dB(A).	38	15minute criteria 40 dB(A), industrial sources approximately 48-56 dB(A). PKM was inaudible and estimated at less than 38 dB(A).
R2	37	<33	PKM inaudible, typical neighbourhood ambience, including local road and traffic noise, cicada noise, distant security alarm, birdsong, and dog barking. Aircraft pass-by event.	<34	Mill inaudible and indistinguishable from industrial hum observed at that location	31	15minute criteria 37 dB(A), industrial sources including BlueScope approx. less than 40 dB(A). PKM was inaudible and estimated as less than 31 dB(A).	36	15minute criteria 37 dB(A), industrial sources approximately 45-49 dB(A). PKM was inaudible and estimated at less than 36 dB(A).
R3	35	<31	PKM inaudible, typical neighbourhood ambience, including dominant cicada noise, distant security alarm, low local traffic and one aircraft pass-by event.	<34	Mill inaudible and indistinguishable from industrial hum observed at that location	32	15minute criteria 35 dB(A), industrial sources including BlueScope approx. 42-43 dB(A). PKM was inaudible and estimated as less than 32 dB(A).	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).

- Note – following a review of data in 2021, the night-time LA eq dB(A) 15minute criteria for R3 was amended to 35dB(A).

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	Date	pH
09/02/20	9.0	09/02/23	7.90
27/07/20	8.7	14/03/23	9.4
10/08/20	7.04	05/04/24	8.7
22/03/21	7.92		
06/05/21	7.41		
23/2/22	8.7		
02/03/22	7.8		
09/03/22	8.4		
29/03/22	8.4		
07/04/22	7.07		
03/07/22	8.9		
29/09/22	8.3		
06/10/22	7.96		
21/10/22	8.2		
24/10/22	8.4		