



Port Kembla Milling – Environmental Monitoring Data

Last Updated: 8 January 2019

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	May 2018		July 2017		October 2016		August 2015	
			Slag Mode	Cement Mode	Slag Mode	Cement Mode	Slag Mode	Cement Mode	Slag Mode	Cement Mode
Velocity	m/s		8.6	6.5	8.5	7.5	9.3	7.8	14	7.4
Dry Stack Flow Rate	m ³ /min		2,717	2,200	2,823	2,568	2,923	2,629	4,780	2,550
Temperature	°C		96.6	97.5	99.5	99.6	96	101	98	98
Total Solid Particulates	mg/m ³	20	2.19	1.02	2.8	3.15	2.4	2.7	3.0	1.2
SO ₂	mg/m ³		2.86	2.86	2.86	2.86	2.86	2.86	**	**
NO ₂	mg/m ³	350	2.05	2.79	2.8	6.29	6.5	6.1	5.4	6.0
CO	mg/m ³		1.52	1.25	29.7	1.25	1.25	1.25	**	**
Type 1 and Type 2 substances in aggregate	mg/m ³	1.0	0.034	0.047	0.017	0.019	0.012	0.037	0.0021	0.0018

** 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)	Sept 2018	Comments	July 2017	Comments	May 2016	Comments	May 2015	Comments
R1	40	40	15minute criteria 40dB(A), industrial sources approximately 50-55 dB(A). PKM was inaudible and estimated as less than 40 dB(A).	61	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).	63	PKM noise not audible. Steady state noise from Bluescope Steel 50-53dBA, traffic noise from Five Islands Road and Wentworth Ave dominate 65-70dBA. Freight train moving during measurement.	61	Noise levels influenced by traffic on Five Islands Rd. Locomotive pass by peak up to 73dB. Industry noise audible in background at 54-56dBA.
R2	37	36	15minute criteria 37 dB(A), industrial sources approximately 40-45 dB(A). PKM was inaudible and estimated as less than 36 dB(A).	56	Industrial sources are audible, approximately 46-50 dB(A). PKM was inaudible and estimated as 36 dB(A).	53	Distant traffic and industry noise 47-50dBA dominant.	52	Birds audible with peak at 57dBA. Vehicles passing 60-65dBA 1-2 per minute. Industry 48-51 dBA in background.
R3	35	35	15minute 37 dB(A), industrial sources approximately 42-46 dB(A). PKM was inaudible and estimated as less than 35 dB(A).	55	Sources are industry, distant traffic, community noise, birds, and aircraft. Industrial sources approximately 44-46dBA. PKM was inaudible and estimated as 35 dB(A).	56	PKM noise faintly audible 38-39dBA when no local noise sources. Local traffic influencing average noise level.	57	Industry dominant in background at 48-50dBA. Vehicles passing by peak up to 82dB.

Noise measurement results – Evening Time

Location	Limit LA _{eq} dB(A)	Sept 2018	Comments	July 2017	Comments	May 2016	Comments	May 2015	Comments
R1	40	36	15minute criteria 40dB(A), industrial sources approximately 47-50 dB(A). PKM was inaudible and estimated as less than 36 dB(A).	57	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).	57	PKM noise not audible. Steady state noise from Bluescope Steel 40-52dBA. Traffic noise dominant 65-70dBA.	56	Industry audible 46-48dB. Cars passing by peaks at 75dB, 2-3 cars passing per minute.
R2	37	30	15minute criteria 37 dB(A), industrial sources approximately 40-42 dB(A). PKM was inaudible and estimated as less than 30 dB(A).	58	Steady noise from nearby passing traffic. Industrial sources approximately 40-44dBA. PKM was inaudible and estimated as 30 dB(A).	47	PKM noise not audible. Distant traffic and industrial noise 43-46dBA.	45	Industrial noise 41-44dB. Cars, trees rustling, crickets influencing LAeq, LA10 and LAmx.
R3	35	31	15minute criteria 37 dB(A), industrial sources approximately 40-44 dB(A). PKM was inaudible and estimated as 31 dB(A)	54	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).	50	PKM noise not audible. Distant traffic and industrial noise dominant 47-49dBA.	44	Industry dominant in background at 43-45dB. Consistent dog barking through measurement at 50-54dB. High pitch reversing alarms audible.

Noise measurement results – Night Time

Location	Limit LA _{eq} dB(A)	Sept 2018	Comments	July 2017	Comments	May 2016	Comments	May 2015	Comments
R1	40	34	15minute criteria 40 dB(A), industrial sources approximately 44-48 dB(A). PKM was inaudible and estimated as 34 dB(A).	50	Multiple sources from industrial area. Industrial sources approximately 44-46 dB(A). PKM was inaudible and estimated as 34 dB(A).	56	PKM noise not audible. Steady state noise from Bluescope Steel 49-54dBA, traffic noise dominant 65-70dBA. Cargo train pass by. High frequency continuous noise from Bluescope Steel present.	57	Industry audible 51-53dB. Cars passing by peaks to 65dB. Trees rustling from wind influenced LAeq, LA10 and LAmx.
R2	37	33	15minute criteria 37 dB(A), industrial sources approximately 43-46 dB(A) PKM was inaudible and estimated as 33 dB(A).	43	Multiple sources from industrial area. Industrial sources approximately 43-46 dB(A). PKM was inaudible and estimated as 33 dB(A).	46	Distant traffic and industry noise dominant. 42-46dBA.	46	Industrial noise 44-46dB. Other industry audible including reversing alarms. LA1 not from PKM but from extraneous sources.
R3	35	36	15minute criteria 37 dB(A), industrial sources approximately 46-47 dB(A) PKM was faintly audible and estimated as 36 dB(A).	46	Industrial sources contributing to steady state of 41-43dBA. PKM was inaudible and estimated as 31 dB(A).	46	PKM noise not audible. Distant traffic and industrial noise dominant 43-45dBA.	50	Industry noise dominant in background at 48-51dB. Consistent dog barking 52-53dB. Vehicles and trees rustling from wind influenced LAeq, LA10 and LAmx.

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 are presented below.

Date	pH
5/12/14	11.4
27/1/15	8.0
17/4/15	9.7
19/6/15	9.9
25/8/15	10.5
4/11/15	10.0
5/1/16	10.7
26/2/18	10.6
22/3/18	11.0
5/10/18	10.0

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.