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20 July 2020

James Wearne
Group Manager Approvals
Centennial Coal
100 Miller Road
Fassifern NSW 2283

Re: J200173 - Lidsdale Siding Modification 3 - Response to additional EPA submission re: noise

Dear James,

The NSW Environment Protection Authority (EPA) provided comments on the *Lidsdale Siding Modification 3 – Response to additional EPA submission re: noise* prepared by EMM Consulting Pty Limited (EMM) and dated 19 June 2020. This letter provides a summary of the EPA's comments and EMM's (EMM's) response to those comments.

The EPA has requested the following information:

> In order to understand the difference between using one or two meteorological corrections in a calculation, the EPA requests provision of the following information:
>
> 1) CONCAWE prediction under neutral conditions (using only CONCAWE algorithms for all attenuation, no ISO9613-2);
>
> 2) ISO9613-2 prediction (no meteorological corrections);
>
> 3) CONCAWE prediction under noise enhancing conditions (using only CONCAWE algorithms for all attenuation, no ISO9613-2); and
>
> 4) ISO9613-2 + CONCAWE K4 prediction under noise enhancing conditions (ISO9613-2 with the CONCAWE K4 meteorological correction).

EMM response

The request for additional information was discussed by relevant stakeholders at a teleconference on Monday 13 July 2020 attended by representatives of Centennial, EMM, EPA and DPIE. This letter aims to capture the outcomes of that discussion and provide additional information to enable appropriate and achievable noise limits to be established.

In relation to the EPA request, item numbers 2 and 4 have been previously provided in the EMM letter report dated 19 June 2020 (refer Table 1).

Additional modelling under the conditions described in items 1 and 3 has not been undertaken. Presenting another set of modelled results would add little value because there is limited ability to validate any modelled results given the limited rail activity that has occurred at the site in recent years. However, it is expected that results for modelling under these conditions (i.e. using only Concawe algorithms) would be negligibly different to results already presented (ie ±2 dB). This is supported by Table 1 where the differences in the results between ISO9613 and ISO9613 with CONCAWE is only zero to 3 dB.

Table 1 Calculated noise levels

Assessment location	Description	Calculated daytime noise levels $L_{Aeq,15\ minute}$, dB		Consent/EPL daytime limits $L_{Aeq,15\ minute}$, dB	PNTL $L_{Aeq,15\ minute}$, dB
		2) ISO9613-2	4) ISO9613-2 + Concawe K4		
R1	Lot 2 Main Street, Wallerawang	50	52	50	68
R2	Black Gold Cabins, Main Street, Wallerawang	48	50	46	58
R3	"Killarney", Brays Lane, Wallerawang	48	51	47	40
R4	"Fairview", Brays Lane, Wallerawang	42	45	43	40
R5	Duncan Street, Lidsdale	39	42	46	40
R6	Old Castlereagh Highway, Lidsdale	<30	<30	43	40
R7	Royal Hotel Main Street, Wallerawang	44	47	41	58
R8	Cnr Heel Street & Cripps Avenue, Wallerawang	43	46	40	40
R9	Cnr Cripps Avenue & Pindari Place, Wallerawang	40	43	39	40
R10	Brays Lane South, Wallerawang	43	45	45	40
R11	"Tara", Brays Lane, Wallerawang	41	44	45	40
R12	Brays Lane Corner, Wallerawang	40	43	43	40
R13	St John the Evangelist Church 140 Main Street, Wallerawang	51	52	n/a	48
Validation point	Approx. 25 m from rail line.	60	60	n/a	n/a

Note: Calculated noise levels rounded to the nearest whole number.

To gain a greater understanding of how these modelled levels compare to previously measured data a detailed review of historical noise compliance monitoring results was undertaken. Given the limited activity at the site, there are many rounds of compliance monitoring where noise from site was inaudible. Dozer and locomotive noise from Lidsdale Siding was audible during the majority of daytime operator attended noise surveys during six rounds of monitoring between September 2019 and March 2020. Results from those occasions when Lidsdale Siding operations were audible are summarised in Table 2 together with the modelling results under conditions consistent with EPA request Item 2 (ie ISO9613-2). This set of modelling results provides the most conservative output of noise modelling undertaken to date.

Table 2 Monitoring summary and comparison to modelled levels and noise limits

Location ID	Location details	Predicted level 2) ISO9613-2	Consent/EPL limit	PNTL	Historically measured levels[1]		Predicted compared to highest measured	Predicted compared to consent/EPL limit	Predicted compared to PNTL
					Range of measured $L_{Aeq(15min)}$	Typical maximum site noise levels			
R1	Lot 2 Main Street, Wallerawang	50	50	68	31-43	42-66	+7	0	-18
R2	Black Gold Cabins Main St, Wallerawang	48	46	58	30-43	44-53	+3	2	-10
R3	"Killarney", Brays Lane, Wallerawang	48	47	40	30-47	35-58	+1	1	8
R4	"Fairview", Brays Lane, Wallerawang	42	43	40	30-40	41-48	+2	-1	2
R5	Duncan Street, Lidsdale	39	46	40	35	39-51	+4	-7	-1
R6	Old Castlereagh Hwy, Lidsdale	<30	43	40	IA	n/a	IA	-13	-10
R7	Royal Hotel Main St, Wallerawang	44	41	58	39	36-39	+5	3	-14
R8	Cnr Heel Street & Cripps Ave, Wallerawang	43	40	40	27-35	Train passby 44-57	+8	3	3
R9	Cnr Cripps Avenue & Pindari Pl, Wallerawang	40	39	40	34	Dozer 34-38	+6	1	0
R10	Brays Lane South, Wallerawang	43	45	40	35	33-44	+8	-2	3
R11	"Tara", Brays Lane, Wallerawang	41	45	40	34	Loco 33-35, dozer 40-47	+6	-4	1
R12	Brays Lane Corner, Wallerawang	40	43	40	35-36	38-51	+4	-3	0
R13	St John the Evangelist Church 140 Main St, Wallerawang	51	n/a	48		Not measured		No limit	3

1. As reported in monthly noise reports.

Comparison of predicted levels to the results of operator-attended noise compliance surveys indicates that the model is generally over-predicting at all assessment locations (by +1 to +8 dB). However, it should be noted this is based on limited noise data and it could not be confirmed what activities were occurring on site during each survey. Predicted levels are within the measured maximum noise level range for all assessment locations.

It is our opinion that noise modelling should represent a likely upper-end operational and meteorological scenario thereby predicting the typically worst-case noise emissions from sites at nearby noise-sensitive receptors. Doing anything to the contrary risks setting regulatory noise limits that sites could struggle to achieve.

It is noted that PNTLs at some assessment locations are significantly different compared to current consent and EPL noise limits. This is primarily due to the updated methodology provided in the NPfI for establishing PNTLs (eg receiver classifications).

The EPA has also confirmed it is satisfied that all reasonable and feasible mitigation measures have been applied.

It is important to consider each project or site on a case by case basis. For this facility, adopting the higher of the predicted ISO 9613 or the existing Consent/EPL limits for each location is considered the minimum that should be adopted. Consideration should also be given to the PNTL at each assessment location and, hence, the likelihood of disturbance from site noise emissions. This approach would reduce some of the risk of establishing limits that may not be achieved at some locations. Recommended revised operational noise limits are provided in Table 3 together with a reasoning where noise limits are recommended to change from existing limits.

Table 3 Recommended noise limits

Assessment location	Description	Calculated daytime noise levels $L_{Aeq,15\ minute}$, dB 2) ISO9613-2 (no met correction)	Current Consent/ EPL daytime limits $L_{Aeq,15\ minute}$, dB	PNTL $L_{Aeq,15\ minute}$, dB	Proposed noise limit	Reasoning for proposed noise limit
R1	Lot 2 Main St, Wallerawang	50	50	68	68	Equal to both the current consent limit and predicted noise level and well below the PNTL determined at this isolated residence in an industrial zoning.
R2	Black Gold Cabins, Main St, Wallerawang	48	46	58	48	Equal to the predicted noise emission and well below the PNTL
R3	"Killarney", Brays Lane, Wallerawang	48	47	40	48	A 1 dB modification to the consent is negligible in noise terms to a receptor, but will significantly reduce the risk of regulator exceedance
R4	"Fairview", Brays Lane, Wallerawang	42	43	40	43	Equal to the current consent limit and predicted level is comparable
R5	Duncan Street, Lidsdale	39	46	40	46	No change to the current consent limit
R6	Old Castlereagh Highway, Lidsdale	<30	43	40	43	No change to the current consent limit
R7	Royal Hotel Main St, Wallerawang	44	41	58	44	Equal to the predicted noise emission and well below the PNTL
R8	Cnr Heel Street & Cripps Ave, Wallerawang	43	40	40	43	Equal to the predicted noise emission and all feasible and reasonable measures applied as acknowledged by EPA.
R9	Cnr Cripps Avenue & Pindari Pl, Wallerawang	40	39	40	40	Equal to both the predicted noise level and PNTL
R10	Brays Lane South, Wallerawang	43	45	40	45	No change to the current consent limit
R11	"Tara", Brays Lane, Wallerawang	41	45	40	45	No change to the current consent limit
R12	Brays Lane Corner, Wallerawang	40	43	40	43	No change to the current consent limit

Centennial will continue to undertake noise compliance monitoring in order to determine compliance with the established noise limits and to assist in validating any future noise modelling exercise for the site. For this to occur effectively, monitoring will be scheduled to ensure typical operations are occurring at the site. Centennial also propose to continue the self-imposed operational hours restrictions and, as such, the site is proposed to be used for rail loading and unloading activity during the daytime period only.

The site does not have a history of noise complaints. Except for an isolated complaint in 2016 (regarding noise from a train horn), no other noise complaints have been received since the facility was upgraded in 2014.

The relevance of the application of the Voluntary Land Acquisition and Mitigation Policy (VLAMP) (DPE 2018) was also raised during the teleconference on 13 July 2020. Page 17 of the VLAMP states the following regarding the application of voluntary mitigation and voluntary land acquisition:

> A consent authority can apply voluntary mitigation and voluntary land acquisition rights to reduce:
>
> - operational noise impacts of a development on privately owned land; and
>
> - rail noise impacts of a development on privately owned land near a non-network rail line (private rail line), that is on, or exclusively servicing and industrial site (see Appendix 3 of the RING);
>
> But not:
>
> - construction noise impacts, as these impacts are shorter term and can be controlled;
>
> - noise impacts on the public road or rail network; or
>
> - modifications of existing developments with legacy noise issues, where the modification would have beneficial or negligible noise impacts[13].
>
> [13]Noise issues for existing premises may be addressed through site-specific pollution reduction programs under the Protection of the Environment Operations Act 1997.

Of most interest is the last point above relating to the relative noise impact of the proposed operation compared to the existing development. The noise impacts from the proposed modification are predicted to be at least the same (if not better) compared to current approved operational noise emissions at all assessment locations. Hence, voluntary mitigation and voluntary land acquisition criteria from VLAMP would not apply at this site.

We trust the preceding meets your current requirements. If you have any questions or require any further information, please contact the undersigned on 0447 715 900 or via email.

Yours sincerely

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Review: Najah Ishac 17/07/2020