



DOC20/741867-14

Ms Mandana Mazaheri  
Principal Planning Officer  
Resources Assessments  
Department of Planning, Industry and Environment

Via: Major Projects planning portal

16 October 2020

Dear Ms Mazaheri

**REGIS – MCPHILLAMY GOLD PROJECT – SSD-9505  
EPA comment on RtS and Amendment Report**

Thank you for the request for advice from Public Authority Consultation (PAE-9196074), requesting a review by the NSW Environment Protection Authority (EPA) of the Response to Submissions (RtS) and Amendment Report prepared for the proposed McPhillamys Gold Project.

The EPA has reviewed the relevant sections and appendices of the RtS submissions report and the McPhillamys Gold Project Amendment Report, both prepared by EMM Consulting Pty Limited, with a summary of comments and recommendations contained in the attached submission.

If you have any questions regarding this matter, please contact Mr Andrew Helms at the Regional South (Bathurst) Office of the EPA on 6333 3800 or via e-mail at [central.west@epa.nsw.gov.au](mailto:central.west@epa.nsw.gov.au)

Yours sincerely

A handwritten signature in black ink, appearing to read 'M Rizzuto', is positioned above the printed name.

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## NSW Environment Protection Authority (EPA) Submission on RtS Submissions Report and Amendment Report for proposed McPhillamys Gold Project (Application SSD-9505)

Public Authority Consultation (PAE-9196074)  
16 October 2020

### **Air Quality:**

The EPA has reviewed the following documents:

- McPhillamys Gold Project, Submissions Report, EMM Consulting Pty Limited, reference J180395 RP#9, 3 September 2020.
- McPhillamys Gold Project, Amendment Report, EMM Consulting Pty Limited, reference J180395 RP10, 3 September 2020 (the revised EIS).
- Revised Air Quality and Greenhouse Gas Assessment, prepared by EMM Consulting Pty Limited, August 2020 (the revised AQIA);
- Revised Surface Water Assessment - Mine Development, prepared by hec Hydro Engineering & Consulting Pty Ltd., 31 August 2020.
- McPhillamys Gold Project – Response to NSW EPA submission - Air Quality, EMM Consulting Pty Ltd., March 2020 (the initial response to submissions).

#### **1. Matters to be addressed prior to determination**

##### **a. No additional controls are proposed to address predicted large increments**

Changes made to the project development design have generally resulted in a reduction of particulate matter emissions from the proposed mining operations. For instance, the largest predicted 24-hour average PM<sub>10</sub> project-only concentrations decreased from 29.6 µg/m<sup>3</sup> to 22.9 µg/m<sup>3</sup> and there are no longer predicted additional exceedances of the EPA's impact assessment criteria due to the proposed operations. However, it should be noted that modelling results still predict large increments at various sensitive receptors. The 24-hour average PM<sub>10</sub> predicted concentrations for the year with highest material extraction and largest haulage distances (year 6) range from 2.5 µg/m<sup>3</sup> to 22.9 µg/m<sup>3</sup>.

Receptors with the largest predicted 24-hour average PM<sub>10</sub> concentration increments are those located to the south of the project (R15 to R50), closer to the pit and rock waste emplacement areas. Modelling predictions for this pollutant and averaging period at these receptors range between 6.7 and 29.6 µg/m<sup>3</sup>, with the largest predicted concentration at the newly incorporated receptor R28a.

It is stated in the *initial response to submissions* that “*The best practice review presented in the AQIA demonstrated that for all significant project particulate matter emission sources, the associated control measures proposed by Regis is consistent with best practice measures wherever practicable to do so*”. This seems to indicate that there are no further significant practicable controls that could be implemented to minimise emissions of air pollutants or reduce any future impacts from the proposed operations once operational. This includes additional feasible mitigation measures that could be implemented if dust issues occur after the project is operational.

Although the proponent has committed to the installation of real-time monitoring to supplement mitigation measures and inform reactive management practices, the EPA reiterates that failing to implement and achieve in practice the high proposed emission reduction levels (e.g.

chemical suppression, watering, re-vegetating) incorporated in the emissions inventory calculation will increase the risk of adverse air quality impacts due to the proposed operations.

The EPA recommends that DPIE requires the proponent to confirm that all feasible and reasonable mitigation measures have been incorporated into the design of project, particularly noting the issue around the availability of water for wet suppression of those sources with which the amended AQIA assumes a reduction factor with the application of wet suppression control (refer to item c).

#### **b. Assessment of potential impacts of metals requires clarification and justification**

Section 6.5 and Appendix B of the revised AQIA provides information on the assessment approach for assessing potential impacts of metals and metalloids. Based on the information presented in the revised AQIA, the EPA understands that potential impacts have been assessed based on:

- Consideration of metal concentrations for varying source types, with reference to the 90<sup>th</sup> percentile metal concentrations from data obtained to inform the assessment approach.
- The derivation of a single weighted average scaling factor for each material type (metal contributions) to total suspended particulate (TSP) emissions.
- The application of the derived single weighted average scaling factor to predicted 1-hour average TSP ground level concentrations at the site boundary and sensitive receptors.

Based on the EPA's interpretation of the methodology applied, the use of a single weighted average scaling factor has the potential to underpredict (or overpredict for that matter) potential contributions from individual sources (or source groups) as a single scaling factor may not take into account the specific contribution from sources due to their proximity to the premises boundary or sensitive receptors.

In addition, whilst it is stated in the revised AQIA that the "*the use of the 90th percentile concentration is adopted to increase the level of conservatism in the modelling*", the following should be noted:

- I. the sampling reports have not been provided.
- II. no detailed data distribution analysis of the measured metal concentrations supporting this statement has been provided.
- III. no detailed discussion regarding the representativeness of the adopted metal concentrations is provided. It is unclear how the adopted metal concentrations compare against the maximum measured concentrations.
- IV. the information exhibited in Table B.8 in the amended AQIA shows notable increments between the median and the 90<sup>th</sup> percentile of the concentrations for ore and waste rock.

The EPA recommends that DPIE requires the proponent to provide further information to demonstrate that the methodology for assessing metal/metalloid impacts represents a reasonable worst-case scenario. In providing further information, consideration should be given to:

- A summary table of the metal and metalloid analytical results for each metal/metalloid and source types, including:
  - The number of samples
  - The minimum, average, median and maximum concentrations
- A summary of the activities included in each group source by material type.
- A detailed data distribution analysis to justify the selected metal and metalloid concentrations for the calculation of expected emissions.
- Further analysis demonstrating the use of a single weighted average scaling factor (for each material type) is adequately representative of potential impacts, and does not underpredict the potential impacts

- Example calculations, including individual source contributions to predicted TSP ground level concentrations and subsequent estimate of metal contributions from individual sources.
- Sensitivity analysis on the implications of adopting a single scaling factor on the outcomes of the impact assessment.

### **c. Dust management measures**

Whilst the emissions from dozer operations at the waste rock area, front-end loader (FEL) rehandle operations on the ROM pad and wind erosion from the ROM pad include a 50% emission reduction factor (i.e. watering), it is unclear if the water required for these operations has been included in the expected dust suppression water demand. Information provided in Section 3.2.2.5 in Appendix G of the Amendment Report, refers to haul road dust suppression demand only. Failing to implement the proposed watering controls means that emissions from these sources will be double the exhibited emissions.

Water availability for dust suppression purposes is of particular interest for operations undertaken at the waste rock area, as the largest increments are predicted at those receptors closest to the south of the project boundary (i.e. pit and waste rock placement operations).

The EPA recommends that DPIE requires the proponent to confirm that the design of the project has adequately accounted for the water demand associated with the implementation of the mitigation measures adopted in the revised AQIA. This includes the application of the proposed wet suppression mitigation measures for dozer and FEL operations, and wind erosion from the ROM pad.

## **Surface Water:**

The EPA has reviewed the following documents:

- McPhillamys Gold Project, Submissions Report, EMM Consulting Pty Limited, reference J180395 RP#9, 3 September 2020.
- McPhillamys Gold Project, Amendment Report, dated 3 September 2020, EMM Consulting Pty Limited, reference J180395 RP10, 3 September 2020.

### **1. Matters to be addressed prior to determination**

The EPA is satisfied that its information requirements have been addressed by the proponent in the RtS and Amendment Report. No further information regarding surface water management is required by the EPA prior to the project being determined.

### **2. Matters to be addressed with conditions**

#### **a. Construction sediment basins**

The EPA requested that the Applicant provide (DOC19/782673-37):

*'a qualitative assessment of, and mitigations measures to avoid, the potential impacts of construction phase discharges to the downstream environment'*

The Project proposes the use of two sediment basins during the construction stage that would be designed consistent with *Managing Urban Stormwater: Soils and Construction Vol 1* (Landcom, 2004) and *Volume 2E Mines and Quarries* (DECC, 2008) for an 85<sup>th</sup> percentile 5-day rainfall event. Appendix G (Surface Water Assessment) of the Response to Submissions

(RtS) states that the tailings storage facility runoff water management facility (TSF runoff WMF) would be used as a sediment basin during the construction stage. The proposed sediment basin capacities are:

- TSF runoff WMF – 25.8ML
- temporary sediment basin – 11.7ML

Appendix G (Revised Surface Water Assessment) of the RtS states that the TSF runoff WMF has been sized greater than the Landcom (2004) and DECC (2008) minimum requirement of 21.1ML. The Project construction water demand was determined to be approximately 2.2ML/day which would be sourced from groundwater bores and runoff collected from the sediment basins. Appendix G of the RtS states that the spill frequency of the sediment basins would be consistent with Landcom (2004) and DECC (2008) of 4-6 spills/year.

The RtS did not provide details of the rainfall events where managed overflows are expected to occur. However, Appendix G of the RtS states that the Site runoff WMF will be the main water storage facility during the construction stage with a capacity of 528ML. The TSF runoff WMF will be sized to 25.8ML and the RtS states that once the water volume reaches 18.1ML the TSF runoff WMF will pump out to the Site runoff WMF. The RtS did not provide details on the pump out or dewatering conditions of the temporary sediment basin. However, if discharges occur, it would be direct to the receiving waterway – Belubula River.

The headwaters of the Belubula River are classified as an uncontrolled stream and the RtS states that the receiving waterway is an intermittent stream that ponds between rainfall events.

The RtS states that the operations phase is expected to commence at the beginning of Year 2 (month 13). Once the operations phase commences, the TSF runoff WMF and temporary sediment basin would then function as collection basins for contaminated runoff which would then be reused onsite for ore processing. The Environmental Impact Statement (EIS) and RtS states that the Project will be a nil discharge site during the operations phase.

The RtS did not identify the environmental values of the receiving waterway or demonstrate that the proposed mitigation measures would maintain or improve the environmental values of the receiving waterway for construction phase discharges. However, the EPA has considered the design capacities of the water management facilities, water transfer conditions, the receiving waterway and erosion and sediment control measures, in particular:

1. measures will be implemented to avoid discharges and minimise water pollution, including stormwater reuse for dust suppression onsite, the proposed conditions for pumped water transfer between water storage facilities and the sizing of water storage facilities;
2. the Project will operate in a water deficit during the construction stage;
3. proposed erosion and sediment controls will consistent with *Managing Urban Stormwater: Soils and Construction, Vol 2E Mines and Quarries* (DECC, 2008); and
4. if discharges are unavoidable, they would be relatively short term (less than 13 months) and the receiving environment is an intermittent uncontrolled stream.

The EPA considers that there are minimal risks to the environmental values of receiving waters during the construction phase and that any residual water pollution risks can be appropriately managed through standard management and mitigation practices and relevant licence conditions.

If the project is approved the EPA recommends that DPIE include the standard conditions relating to water pollution “*Unless an EPL authorises otherwise, the Proponent shall comply with section 120 of the POEO Act*”.

## **b. Potential downstream impacts of clean water dams**

The EPA requested that the Applicant provide (DOC19/782673-37):

*‘details of how dewatering of the clean water dams will be managed to avoid and minimise potential downstream impacts’*

The revised EIS and RtS states that clean water would be diverted around the Project site via a series of diversion channels, dams, pumps and pipelines, with the clean runoff collected in one of three clean water dams (CWF1-3). The proposed volumes of the clean water dams are:

- CWF1 – 506ML
- CWF2 – 22ML
- CWF3 – 3ML

The RtS utilised the GoldSim water balance model to determine the rainfall events where managed overflows would occur. The RtS states that based on recorded rainfall events from 1889 to 2019, the GoldSim model determined that the proposed size and pump out system would result in no managed overflows.

Appendix G of the RtS states that CWF3 will pump out to CWF2. CWF1 and CWF2 will discharge to a stilling basin adjacent to the Belubula River during or after a rainfall event. The RtS states that the use of the stilling basin would mitigate the impact of suspended solids downstream. The Belubula River is an uncontrolled stream at the point of discharge and the RtS states that the receiving environment is an intermittent stream that ponds between rainfall events.

It is unclear what the expected frequency and volume of controlled discharges from the stilling basin to the receiving waterway are. It should be noted that it is the responsibility of licensees to identify all pollutants present in a discharge that pose a risk of non-trivial harm to human health or the environment. Where the premises discharges a pollutant that is not regulated by a licence, the licence holder may not have a defence against a pollution of waters offence.

Given the sizing of the clean water dams, the EPA considers that there is minimal risk to the environmental values of the receiving waters and any residual risks can be managed through standard management and mitigation measures.

As part of the licensing process, should the project be approved, the proponent should provide the frequency and volumes of discharges and the likely concentrations and loads of any pollutants at non-trivial levels.

## **3. Minor matters**

### **a. Guideline values adopted for the water quality assessment**

The EPA requested that the Applicant (DOC19/782673-37):

*‘1) use the relevant Australian and New Zealand Guidelines for Fresh and Marine Water Quality guideline values for slightly to moderately disturbed ecosystems  
2) adopt interim working levels for toxicants where no moderate or high reliability guideline value is available’*

Table 8 of Appendix G summaries the surface water quality sampling data of the receiving waterways. The existing condition of the receiving waterways are characterised against the relevant *Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2018)* guideline values for slightly to moderately disturbed ecosystems and, where applicable, the interim working levels for toxicants.

The EPA has no further information requirements in relation to this matter.

## **Groundwater:**

The EPA has reviewed the following documents:

- McPhillamys Gold Project, Submissions Report, EMM Consulting Pty Limited, reference J180395 RP#9, 3 September 2020.
- McPhillamys Gold Project, Amendment Report, EMM Consulting Pty Limited, reference J180395 RP10, 3 September 2020.
- Appendix F: Response to DPIE – Hazards Queries for the McPhillamys Mine Proposal Tailings disposal options, McPhillamys Gold Project, prepared by Atomic DG Consultants, August 2020.
- Appendix G: Tailings disposal options, McPhillamys Gold Project, prepared by Regis Resources, unknown date.
- Submission for: McPhillamys Gold Project – Environment Protection Authority – EPA Response to Major Project, prepared by NSW EPA, October 2019.
- Amendments: Appendix H: Groundwater Assessment Addendum – Mine Development, prepared by EMM, August 2020.
- Amendments: Appendix D: Tailings Storage Facility – design review and response to submissions, prepared by ATC Williams, August 2020.

### **1. Matters to be addressed prior to determination**

The EPA is satisfied that its information requirements have been largely addressed by the proponent in the RtS and Amendment Report. No further information regarding the potential impacts on groundwater is required by the EPA prior to the project being determined.

### **2. Matters to be addressed with conditions**

#### **a. Management Plans**

The RtS has satisfactorily addressed the major groundwater concerns the EPA had from a review of the original EIS. The potential for harm to groundwaters is reduced and outstanding matters can be conditioned by DPIE should the project be approved.

The EPA recommends that the proponent prepare and provide an updated Water Management Plan, Groundwater Monitoring and Management Program (including Trigger Action Response Plans, Mitigation Measures Plans, and ongoing updates to baseline monitoring data) to DPIE and the EPA for review prior to the commencement of construction and operation of the project. The updated plans must include the details of constructed seepage monitoring bores proposed around the Tailings Storage Facility, their monitoring frequency, and the proposed suite of water quality analytes that are to be sampled.

### **3. Minor matters**

#### **a. Tailings Storage Facility design, liner options and spatial distribution**

The EPA requested that the proponent:

*“... revise the assessment(s) to provide further information regarding the TSF design, liner options and spatial distribution and the prevention of seepage to the underlying strata”.*

The EPA understands the equivalence proposed by the applicant in matching or bettering the permeability rate of  $1 \times 10^{-9}$  m/s used as an acceptable standard in the EPA's solid waste

guidelines (2016). In this case, the description and evidence does support the case for the alternative design to be accepted.

However, a review of liner details presented in supporting TSF documents reveal that the mapping of suitable clays (plate 8) do not match the mapped areas requiring lining (plate 9). Particularly in the north west, where changes to the mining expanse differ from that proposed in the EIS.

Details regarding the amount of suitable clay borrowed from the storage area to be imported into areas of the TSF where it is needed is varied. Will the importing of clays reduce the thickness and suitability of the area from where they are borrowed from the TSF floor.

Geosynthetic Clay Liners (GCL) are proposed where the natural clays has been mapped as unsuitable. Details regarding the patchworking of different liner materials across the TSF is limited, particularly along the locations where GCL – suitable clay boundaries are defined. Further, there are conflicting values of the proportion of GCL used across the TSF (6% - seepage assessment discussion vs 30% - page 26 of independent expert technical review).

The proponent should clarify these matters.

#### **b. Tailings Storage Facility – liner installation testing regime**

The EPA requested that the proponent:

*“... revise the assessment(s) to provide more detailed information regarding the acceptance testing regime that will be implemented to ensure the liner has been installed correctly and without material error and will meet the proposed seepage prevention specifications for all options”.*

The assurance argued in the RtS conflicts with the recommendation initially sought. The EPA is seeking stringent checks and balances to ensure that the receiving and surrounding environment is not polluted by the proposed mining activities. Minimising risks as far as practicable, especially with the patchworking of non-uniform lining options, should be detailed and credibly ensured, to warrant that the potential for pollution is negated.

Seepage prevention, with the details provided in the EIS, is required to ensure that no losses from tailings permeate into adjacent strata, creating a change in the environment. The proponent is required to not cause a change in environment which can be identified as pollution by the *Protection of Environment Operations Act 1997*.

The proponent should address these matters in the relevant management plans should the project be approved.

### **Noise:**

The EPA has reviewed the following documents with respect to potential noise impacts associated with the project:

- McPhillamys Gold Project, Submissions Report, EMM Consulting Pty Limited, reference J180395 RP#9, 3 September 2020.
- McPhillamys Gold Project, Amendment Report, EMM Consulting Pty Limited, reference J180395 RP10, 3 September 2020.
- Revised Noise and Vibration Impact Assessment – Mine Development, Muller Acoustic Consulting Pty Ltd, reference MAC170434RP2V2, 25 August 2020 (Mine RNVA).



- Revised Noise and Vibration Impact Assessment – Pipeline Development, 2020, Muller Acoustic Consulting Pty Ltd, reference MAC180742RP2V2, 25 August 2020 (Pipeline RNVIA).

## **1. Matters to be addressed prior to determination**

### **a. Operational noise assessment**

The RNVIA does not contain a sleep disturbance assessment for mining operations. This is a requirement of the NPfI and must be included for all activities that occur during the night period. DPIE may wish to request a sleep disturbance assessment is completed for the mine prior to determination.

The EPA sets noise limits under the meteorological conditions required by the NPfI and in the case of the RNVIA, some limits marginally exceed the Project Noise Trigger Levels (PNTLs), based on levels predicted in the RNVIA. The EPA notes that daytime predictions may have been undertaken using meteorological conditions that do not satisfy the NPfI's standard meteorological conditions. This represents a compliance risk for the proponent because noise predictions may underestimate the impact. The EPA also notes that the RNVIA has not addressed DPIE's comments relating to assessment of adverse meteorological conditions. DPIE may wish to resolve this prior to determination.

The predicted noise levels in the mine RNVIA are above the PNTLs in some cases. Where this occurs, the NPfI requires that all reasonable and feasible mitigation is applied prior to the assessment of residual impacts. Whilst the noise levels have changed as a result of additional changes made between the EIS and the mine RNVIA, and include mitigation measures not considered in the EIS, it is not clear from the mine RNVIA if all reasonable and feasible mitigation has been applied to the project. DPIE may wish to clarify with the proponent that the predicted noise levels currently presented in the mine RNVIA include all reasonable and feasible mitigation prior to determination. For example, justification for the inclusion or exclusion of mitigation measures using a format like that in Table 3.1 of the NPfI.

The predicted noise levels in Tables 37, 38 and 39 of the mine RNVIA are contingent on certain activities only taking place at specific locations during the day period as described in Chapter 6.6. If the project is approved, DPIE may wish to reflect limits to activities and locations during specific time periods as described in Chapter 6.6 in the approval conditions.

### **b. Working hours (Pipeline RVNIA)**

The construction assessment has assessed all activities during standard and out of hours working times. However, there does not appear to be any justification for out of hours works, aside from where there may be some locations where there is the possibility that, for example, a road occupancy licence would be required. The pipeline RNVIA does not nominate the locations where out of hours work is required and justified, therefore it is not possible for the EPA or the community to understand where out of hours works are being applied for.

DPIE may wish to seek clarification on any proposed out of hours works times and locations with appropriate justification prior to determination.

### **c. Background noise levels and noise catchments (Pipeline RNVIA)**

Previous EPA comments requested that the noise catchments and RBLs were revised based on appropriate acoustic considerations. However, it appears that this has not been appropriately addressed. For example, the Angus Place catchment has used one noise measurement location NM5 on Noon Street, Blackmans Flat to characterise the noise environment for all receivers in this "catchment." However, Noon Street is less than 100m from the Castlereagh Highway yet the majority of receivers in the catchment are significantly further away from the highway, in the order of hundreds of metres. It is not clear why this

monitoring location was considered representative of receivers much further from the road, especially when other recent assessments for resources projects in the area have used the NPfL minimum RBLs.

DPIE may wish to seek clarification that representative background noise levels have been applied to all receivers potentially affected by the project.

#### **d. Maximum noise level assessment (Pipeline RNVIA)**

For the maximum noise level assessment, a sound power level (SWL) of  $L_{\max}$  115 dBA has been used. However, in Table 15 many of the  $L_{\text{eq},15\text{min}}$  SWLs are within 2 dB of this and the “Water Tank” source for underboring and the 30t Excavator with impact hammer have an SWL  $L_{\text{eq},15\text{min}}$  of 116 dBA and 120 dBA respectively. It does not appear reasonable that the maximum noise level would be either below or very close to the  $L_{\text{eq},15\text{min}}$  level. In practice an  $L_{\max}$  would never be below the  $L_{\text{eq},15\text{min}}$  when measured over the same period.

DPIE should consider seeking clarity on the maximum noise level impacts to assess sleep disturbance from construction prior to determination.

#### **e. Noise mitigation and management (Pipeline RNVIA)**

Chapter 8.4.1 of the pipeline RNVIA has used the Transport for NSW Construction Noise [and Vibration] Strategy to assign additional mitigation measures. The EPA notes that the Transport for NSW (TfNSW) Strategy is a document specifically tailored for TfNSW projects and is not a requirement of the Secretary Environmental Assessment Requirements (SEARs). The SEARs required the ICNG to be used to assess construction noise impacts and identify feasible and reasonable mitigation. Furthermore, the intention of the TfNSW additional mitigation measures is that they are only applied after all reasonable and feasible mitigation has been applied, not instead of.

Table 23 of the pipeline RNVIA sets out “standard, and additional Level 1 and Level 2 mitigation.” The categorisation of these measures implies that measures in Level 1 and 2 should be progressively applied, once “Standard” measures have been applied. However, the Interim Construction Noise Guidelines (ICNG) requires that all reasonable and feasible measures are applied to the project to minimise noise. Where a mitigation measure is deemed reasonable and feasible it should be applied to the project, in accordance with the ICNG. The proponent’s categorisation in Table 23 should not be used as an impediment to mitigation being applied.

For example, an “additional” measure in Level 1 is to notify of out of hours (OOH) works. However Table 2 of the ICNG states that where noise levels are above the noise management level outside of standard hours, the proponent should negotiate with the community. Notification of works to the community should not be viewed as an “additional” mitigation measure and should be applied as set out in the ICNG.

DPIE may wish to satisfy themselves that appropriate safeguards and management measures will be applied to minimise construction noise prior to determination.

## **2. Matters to be addressed with conditions**

### **a. Sound Power Levels**

The proponent has committed to using equipment with specific sound power levels. If the project is approved, the EPA recommends that these commitments are reflected in the planning conditions.

## **b. Mine construction noise and vibration assessment**

The impacts from construction are contingent on specific activities being carried out at specific times over a limited period of 6 months as described in Chapter 6 of the mine RNVA. In Chapter 6.2 there is a list of construction activities to be completed in the first 6 months during standard construction hours. However, in the event that these activities are not completed in the first 6 months, it is unclear how this will be managed as it may not be appropriate for the noise limits to change to the 24/7 operational limits. If the project is approved, DPIE should carefully consider how they will write conditions to ensure the durations committed to are able to be met and appropriately enforced.

Chapter 6.2.1 of the mine RNVA states that some out of hours works are required, however the proposed working times and justifications for activities to be undertaken outside of standard hours are not included. A broad timeframe for out of hours works is listed for activities as Monday to Friday 6pm to 10pm, Saturdays 7am to 8am and 1pm to 10pm and Sundays or Public Holidays 8am to 6pm. This has been described as “Out of Hours Period 1” in the mine RNVA. However, there is no “Out of Hours Period 1” defined in the Interim Construction Noise Guideline and the times described cover different day and evening periods. Day and evening periods have different RBLs and therefore would have different noise management levels (NMLs).

Furthermore, whilst the noise predictions in Table 34 show that they would be below the noise management level during the evening period, in order to provide conditions in a licence (if approved), specific timeframes and justifications for each activity would need to be supplied.

## **c. Pipeline construction road traffic noise assessment**

The pipeline RNVA states that the “US EPA road traffic calculation” has been used. Previous EPA comments have requested a reference for this method. Correspondence with the proponent indicated that the methods used in the previous EIS used a calculation method which converts  $L_{max}$  vehicle passbys to  $L_{Aeq,T}$  noise levels and that aspects from the CRTN method had been mixed in with it. No further justification or demonstration that the method used was appropriate was provided. As a result, it is not clear if the road traffic noise calculations in the report can be relied upon.

However, the EPA expects that where the construction vehicles are not on local roads, the Road Noise Policy trigger levels are unlikely to be exceeded as a result of 30 truck movements per day. The potential for impacts from construction vehicles should be managed and form part of any construction noise and vibration management plan prepared for the project (and required by a planning condition if the project is approved).

## **3. Minor matters**

### **a. Rating background levels (operational)**

Chapter 4.1.1 states “considering EPA comments, the historic data is seven years old and has been excluded.” The EPA’s comments did not recommend exclusion of this previously measured data, so it is not clear why it has been excluded. However, the proponent has excluded it and used the minimum permissible rating background levels (RBLs) in the Noise Policy for Industry (NPfI).

The EPA does not object to use of the minimum RBLs in lieu of measured data in this case and has reviewed the noise monitoring information in Appendix B for the Noise Monitoring Terminal in Kings Plain. It appears that NPfI procedures for processing noise monitoring data have not been followed, for example all data 21 December 2016 could potentially all be excluded as it is in a school holiday period. There are multiple examples where the wind speed is above 5m/s and the period has not been excluded.

The EPA found around seven day and 14 evening periods that potentially could be excluded due to wind speeds being greater than 5m/s between Friday 18 November and Tuesday 20 December using the graphs in Appendix B. This is in addition to the 54 day, evening and night periods undertaken in the school holiday period from 21 December 2016.

However, it appears that when the erroneous data is removed, the RBL level is the same as reported in Table 12. Therefore the RBLs for the Kings Plain stated in the mine RNVIA can continue to be used.

#### **b. Operational mine road traffic noise assessment**

Chapter 6.10 of the mine RNVIA states that the road traffic noise calculation in the EIS was calculated using the “United States Federal Highway Agency (US FHWA) noise prediction method.” However, this is not consistent with the EIS noise impact assessment which stated in Chapter 6.4 that the “US Environmental Protection Agency road traffic noise calculation” was used. These are two different methods and are not equivalent.

Furthermore in Chapter 6.10 of the mine RNVIA states that the EPA requested that the CRTN noise model was used. This is incorrect. The EPA requested clarification and demonstration that the method used in the EIS was appropriate given that the method was not referenced and used without appropriate justification.

The EPA does not endorse any particular method, it is the proponent’s responsibility to justify any calculation method used is appropriate.

#### **c. Time Periods (Pipeline RNVIA)**

Table 3 of the pipeline RNVIA has categorised various time periods as standard construction hours, “Out of Hours Period 1” and “Out of Hours Period 2.” Not only are these categorisations inconsistent with the Interim Construction Noise Guideline (ICNG), they also include both day and evening periods. This means that the noise management level (NML) is not the same for all periods contained within “Out of Hours Period 1.” The rest of the assessment has used these categorisations and has treated “Out of Hours Period 1” to have the same NML, which is not the case. For example, Table 9 defines the noise management levels applied for each catchment. However because “Out of Hours Period 1” includes both day and evening periods, with different RBLs, the NMLs in this table do not reflect what management level would apply at all times of “Out of Hours Period 1.” Similarly, “Out of Hours Period 2” contains both evening and night periods, which may have different RBLs and therefore the NML is not consistent over the time when “Out of Hours Period 2” has been defined.

DPIE should take into account if they are satisfied with this departure from the ICNG, and that appropriate noise management levels have been applied during the applicable time period prior to determination.

#### **d. Vibration assessment (Pipeline RNVIA)**

Chapter 3.4 of the pipeline RNVIA states that in the Transport for NSW (TfNSW) construction noise [and vibration] strategy, the safe working distance for human comfort from a large vibratory roller is 25m. This is inconsistent with Table 20 of the 2019 version of the TfNSW Construction Noise and Vibration Strategy, which states the minimum distance to achieve the human comfort vibration target is 100m for vibratory rollers 7 tonnes and above. If there is potential for human comfort vibration impacts to occur within 100m of the works, then it is not clear if the report’s conclusion that impacts would be “negligible” would still apply. Appropriate vibration mitigation should be applied to the project to ensure it can meet the requirements for vibration impacts.