



DOC17/352035-02, EF16/2461

Department of Planning and Environment  
GPO BOX 39  
SYDNEY NSW 2001

Attention: lauren.evans@planning.nsw.gov.au

Dear Ms Evans

**HUNTER VALLEY OPERATIONS SOUTH MP 06\_0261 MOD 5  
RESPONSE TO SUBMISSIONS**

I refer to your email dated 15 June 2017 regarding Hunter Valley Operations South Modification 5 (MP 06\_0261 Mod 5) and the document titled *"Hunter Valley Operations South – Modification 5 Response to Submissions Prepared for HV Operations Pty Ltd"* dated June 2017 and prepared by EMM ("RTS")

The EPA provided an initial assessment of the proposal to Department of Planning and Environment ("DPE") on 17 March 2017. The EPA has reviewed the RTS and provides comments in Attachment 1.

**Recommended Conditions of Approval**

We have reviewed the RTS, and determined that, should development consent be granted, the EPA would be able to issue a notice of variation to Environment Protection Licence 656 ("the Licence") in accordance with Section 58 of the *Protection of Environment Operations Act 1997* ("POEO Act") to include the revised recommended conditions of approval in the Licence.

However, we have not provided any recommended conditions to address air quality as the EPA still requires additional information regarding air quality impact assessment. This issue is addressed in Attachment 1.

Recommended Conditions of Approval are provided at Attachment 2. The Recommended Conditions of Approval relate to the development, as proposed in the document titled *"Hunter Valley Operations South – Modification 5 Environmental Assessment Prepared for HV Operations Pty Ltd"* dated February 2017 and prepared by EMM ("the EA") and the RTS. If the Department of Planning and Environment ("DPE") grant consent for this proposal these conditions should be incorporated in the consent. Mandatory conditions within the existing licence are not repeated in Attachment 2.

In the event that the development is modified either by the applicant prior to the granting of consent or as a result of a condition proposed to be attached to the consent, it will be necessary to consult with the EPA about the changes before consent is issued. This will enable the EPA to determine whether a recommended condition of approval needs to be modified in the light of the changes.

If you require any further information regarding this matter please contact Natasha Ryan on (02) 4908 6833.

Yours sincerely

*Scrivener* 14/7/2017

**REBECCA SCRIVENER**  
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**Environment Protection Authority**

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Encl: Attachment 1: EPA review of RTS  
Attachment 2: Recommended Conditions of Approval

**ATTACHMENT 1**

**ENVIRONMENT PROTECTION AUTHORITY – REVIEW OF RESPONSE TO SUBMISSIONS  
MP 06\_0261 MOD 5  
HV OPERATIONS PTY LTD**

The EPA has undertaken an assessment of the document titled *Hunter Valley Operations South – Modification 5 Response to Submissions Prepared for HV Operations Pty Ltd* dated June 2017 and prepared by EMM ("RTS")

The following comments are provided to Department of Planning and Environment ("DPE") in determination of the project proposal.

**SURFACE WATER MANAGEMENT REVIEW**

The EPA met with the proponent to discuss water management issues, has reviewed the RTS and is satisfied that issues in regard to water management can be dealt with within the proponents' current Environment Protection Licence. The proponent has advised the EPA that they will manage sediment dam water by pumping it back to the mine water system if it does not comply with section 120 of the *Protection of the Environment Operations Act 1997* and electrical conductivity is greater than 400  $\mu\text{S}/\text{cm}$ .

The EPA recognises that the proponent has not addressed the issues of environmental assessment of water discharges from sediment dams in this current modification. The EPA understands these assessments were undertaken in the original environmental impact assessment process.

The EPA has issued two Penalty Notices in the last six months for discharges that have polluted receiving waters with salinity, sediment and metals.

Because of the lack of appropriate environmental assessment and the poor regulatory history of the proponent, the EPA recommends that water quality monitoring be undertaken during sediment dam discharge which includes assessment of discharge water quality, receiving water quality upstream and downstream. Samples should be analysed for, but is not limited to, total suspended solids, turbidity, electrical conductivity, total dissolved solids, pH and individual metals.

**NOISE AND BLASTING IMPACT ASSESSMENT REVIEW**

The proponent's RTS adequately addressed the EPA's noise comments on the exhibited assessment.

The RTS showed that the industrial noise policy low frequency penalty would not apply at receiver locations that are close to the site, but would apply at further receivers. This would mean that receivers further away could receive acquisition rights, but closer receivers would not, even though the closer receivers would experience higher noise levels.

The EPA concurs that the DEFRA-based approach proposed in the RTS is appropriate for this project and advises that any project approval should adopt DEFRA<sup>1</sup>-based criteria for low frequency noise, and corrections to measured noise levels.

The EPA recommends any project approval, if issued, should require that a correction be applied to any measured noise level, before comparison to limits, where the  $L_{Ceq} - L_{Aeq}$  exceeds 15 dB and:

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<sup>1</sup> Department of Environment, Food and Rural Affairs (UK): Moorhouse A, Waddington D and Adams M 2011, Procedure for the assessment of low frequency noise complaints. DEFRA (Contract No. NANR45, Revision 1), DEFRA (Contract No. NANR45, Revision 1), London.

- where any of the 1/3 octave noise levels exceeds the threshold level in Table A by up to 5dB: 2 dBA is added to the measured A weighted level in the evening and night periods.
- where any of the 1/3 octave noise levels exceeds the threshold level in Table A by more than 5dB: 5 dBA is added to the measured A weighted level in the evening and night periods, and 2 dBA is added in the daytime period.

**Table A : One-third octave low frequency noise thresholds**

Centre frequency (Hz)	10	12.5	16	20	25	31.5	40	50	63	80	100	125	160
L <sub>Ze</sub> (15min) threshold level (dB)	92	89	86	77	69	61	54	50	50	48	48	46	44

This requirement is consistent with current science, and is included in the recommended conditions (**Attachment 2**).

## **AIR QUALITY IMPACT ASSESSMENT REVIEW**

In our submission dated 17 March 2017, the EPA identified eight issues that required further information in the Air Quality Impact Assessment for the proposal.

The RTS addresses six of the eight issues as listed below. The two issues that remain unresolved relate to the assessment of efficacy of proposed and potential additional mitigation measures. Depending on the outcomes of these assessments, the EPA would recommend conditions requiring the implementation of reactive alternate mitigation measures to ensure surrounding residents are not impacted by the proposed modification.

### **1 Calendar year 2014**

Detailed analysis has been provided showing that 2014 is a reasonably representative year (RTS, pp87-92). The EPA is satisfied this issue has been satisfactorily addressed.

### **2 Accounting for current operations**

The RTS (p93) clarifies the approach taken to representing current operation in the dispersion modelling. Mine operating data for 2014 was used to guide the emissions estimates. These data were chosen to match the meteorology used. The EPA is satisfied this issue has been satisfactorily addressed.

### **3 Explanation for reduction in “background” in figures 6-5 and 6-6**

The RTS (p93) advises the reduction in concentration arises from differing impacts between ‘current’ and ‘future’ operations. These orange bar segments complement the yellow bar segments (‘incremental change’) and explains figures 6.5 and 6.6. The EPA is satisfied this issue has been satisfactorily addressed.

### **4 Provide label for receptor 471 in figure 6-4**

A label has been provided in a revised figure 5-15 (RTS, p94). The EPA is satisfied this issue has been satisfactorily addressed.

### **5 Provide cumulative assessment for receptor 471**

Cumulative assessment for receptor 471 is set out in RTS, pp95-98 as tables 5-8 to 5-12. Analysis shows that the proposed modification does not result in any additional days exceeding the impact assessment criterion for either 24-hour PM<sub>2.5</sub> or 24-hour PM<sub>10</sub>. The EPA is satisfied this issue has been satisfactorily addressed.

## **6 Identify all non-mine owned receptors for which one or more additional exceedences of cumulative impact assessment criteria are assessed**

Table 5.13 in RTS (p98) lists the fifteen non-mine receptors assessed as experiencing one or more additional exceedence days and how many days for each of stage 2 and stage 3. The EPA is satisfied this issue has been satisfactorily addressed.

## **7 Assessment of the efficacy of proposed mitigation measures**

The RTS indicates that best practice management techniques are (and by implication will be) used to minimise emissions of dust from operations at the mine (p99). This meets one of the requirements set out in the 'Approved Methods Modelling'.

It is then stated that HVO South use meteorological forecasts to assist in planning mine operations and to support the reactive air quality management system, and that protocols required by planning consents will be implemented.

The RTS has stated the intended approach to mitigating the assessed additional exceedences of 24-hour impact assessment criteria. There is no analysis indicating the effectiveness of the planning and reactive management systems. In particular, there is no direct estimate of the ability of the system to mitigate the assessed additional exceedence days.

Section 7.7 of the Approved Methods Modelling requires that where impact assessment criteria are exceeded, additional mitigation measures must be assessed until compliance is achieved. To meet this requirement, evidence needs to be provided that the proposed management actions remove the additional exceedences of impact assessment criteria.

### ***Additional information required***

The EPA requires assessment showing that the proposed reactive management successfully identifies the additional exceedences and reduces emissions sufficiently that the exceedences do not occur.

## **8 Assessment of the efficacy of additional mitigation measures (if necessary)**

*Note:* This issue is closely linked to issue 7 above. As set out in section 7.7 of the Approved Methods, additional mitigation measures are needed where assessment shows impact assessment criteria will not be met. This issue is to demonstrate that the additional measures chosen (if necessary) achieve the desired environmental performance.

The RTS sets out information regarding operation of the real-time air quality management system over the past three years, 2014-2016 (p100). The information provided shows that the system influences mine operation.

It is stated that *"the contribution to these elevated levels due to HVO was assessed in each instance, and it was found the mine was not the predominant contributor"*. The contribution of HVO operations has not been provided to establish this claim.

It is then argued that as the current system is effective, it is reasonable to expect it *"to continue to be effective at preventing these potential additional cumulative impacts"*.

It is clear that the real-time air quality management system is used. The performance of the system has not been shown. As set out above, to meet the requirements set out in section 7.7 of the Approved Methods Modelling, assessment is needed showing that operation of the reactive management system removes the additional exceedence days occurring without it.

**ATTACHMENT 2**

**ENVIRONMENT PROTECTION AUTHORITY – RECOMMENDED CONDITIONS OF APPROVAL  
WITHOUT AIR QUALITY CONDITIONS  
MP 06\_0261 MOD 5  
HV OPERATIONS PTY LTD**

The EPA has undertaken an assessment of the documents titled "*Hunter Valley Operations South – Modification 5 Environmental Assessment Prepared for HV Operations Pty Ltd*" dated February 2017 and prepared by EMM ("the EA") and "*Hunter Valley Operations South – Modification 5 Response to Submissions Prepared for HV Operations Pty Ltd*" dated June 2017 and prepared by EMM ("RTS").

**SURFACE WATER**

The EPA recommends the following conditions of approval:

1. The proponent must comply with section 120 of the *Protection of the Environment Operations Act 1997*
2. The proponent must only discharge saline water at an authorised environment protection licence discharge point in accordance with the Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002.
3. The proponent must sample and analyse all discharges from sediment dams and mine dams during discharge, including upstream and downstream from the location into which the dam water is discharged, for total suspended solids, total solids, turbidity, electrical conductivity, total dissolved solids, pH and a range of individual metals.

**NOISE AND BLASTING****Limit Conditions**

- L6.1** Noise generated at the premises must not exceed the noise limits in the table below. The locations referred to in the table below are indicated by Table A.1 of the noise and vibration study for the project (EMM 2017).

		NOISE LIMITS dB(A)			
Locality	Location	Day	Evening	Night	
		L <sub>Aeq</sub> (15min)	L <sub>Aeq</sub> (15min)	L <sub>Aeq</sub> (15min)	L <sub>A1</sub> (1min)
160, 161, 162, 261	Maison Dieu	41	41	41	45
120, 121, 122, 124, 163, 256, 258, 260, 309	Maison Dieu, Jerrys Plains (Smith)	40	40	40	45
123, 244, 245, 246, 247, 307, 308, 310, 312, 463	Maison Dieu, Jerrys Plains Road	39	39	39	45
311, 317	Jerrys Plains Road	38	38	38	45

127, 434, 436	Maison Dieu, Jerrys Plains Road	37	37	37	45
321	Jerrys Plains Road	36	36	36	45
All other residences	Any residential sensitive receiver not included above and not subject to a negotiated agreement	35	35	35	45

**L6.2** For the purpose of condition L6.1:

- Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sunday and Public Holidays.
- Evening is defined as the period 6pm to 10pm.
- Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sunday and Public Holidays.

**L6.3** The noise limits set out in condition L6.1 apply under all meteorological conditions except for the following:

- Wind speeds greater than 3 metres/second at 10 metres above ground level; or
- Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
- Stability category G temperature inversion conditions.

**<Insert point number into conditions L6.4 and M7.2>**

**L6.4** For the purposes of condition L6.3:

- Data recorded by the meteorological station identified as EPA Identification Point <?> must be used to determine meteorological conditions ; and
- Temperature inversion conditions (stability category) are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the NSW Industrial Noise Policy.

**L6.5** To determine compliance:

- with the  $L_{eq}(15 \text{ minute})$  noise limits in condition L6.1, the noise measurement equipment must be located:
  - approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or
  - within 30 metres of a dwelling façade, but not closer than 3m, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable
  - within approximately 50 metres of the boundary of a National Park or a Nature Reserve.
- with the  $L_{A1}(1 \text{ minute})$  noise limits in condition L6.1, the noise measurement equipment must be located within 1 metre of a dwelling façade.
- with the noise limits in condition L6.1, the noise measurement equipment must be located:
  - at the most affected point at a location where there is no dwelling at the location; or
  - at the most affected point within an area at a location prescribed by conditions L6.5(a) or L6.5(b).

- L6.6** A non-compliance of condition L6.1 will still occur where noise generated from the premises in excess of the appropriate limit is measured:
- at a location other than an area prescribed by conditions L6.5(a) and L6.5(b); and/or
  - at a point other than the most affected point at a location.
- L6.7** For the purposes of determining the noise generated at the premises: the modification factors, except for low-frequency noise, in Section 4 of the NSW Industrial Noise Policy must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.
- L6.8** For the purpose of determining the noise generated at the premises, a correction must be applied to any measured noise level, before comparison to limits, where the  $L_{Ceq} - L_{Aeq}$  exceeds 15 dB and:
- where any of the 1/3 octave noise levels in the table below are exceeded by up to 5dB, a 2 dBA positive adjustment to measured A weighted levels applies in the evening and night periods.
  - where any of the 1/3 octave noise levels in Table A are exceeded by more than 5dB, a 5 dBA positive adjustment to measured A weighted levels applies for the evening and night periods, and a 2 dBA positive adjustment applies for the daytime period.

Centre frequency (Hz)	10	12.5	16	20	25	31.5	40	50	63	80	100	125	160
One-third octave $L_{Zeq}(15min)$ threshold level (dB)	92	89	86	77	69	61	54	50	50	48	48	46	44

### **Blasting Conditions**

#### **Airblast overpressure level**

- L7.1** The airblast overpressure level from blasting operations at the premises must not exceed 120dB (Lin Peak) at any time at any noise sensitive locations. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.
- L7.2** The airblast overpressure level from blasting operations at the premises must not exceed 115dB (Lin Peak) at any noise sensitive locations for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

#### **Ground vibration level**

- L7.3** Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 10mm/sec at any time at any noise sensitive locations. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.
- L7.4** Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 5mm/sec at any noise sensitive locations for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

#### **Blasting hours**

- L7.5** Blasting at the premises may only take place between 9:00am-5:00pm Monday to Friday. Blasting is not permitted on public holidays.



**L7.6** Blasting outside of the hours specified in L7.5 can only take place with the written approval of the EPA.

### **Blast monitoring**

**L7.7** To determine compliance with condition(s) L7.1 to L7.4:

- a) Airblast overpressure and ground vibration levels experienced at the following noise sensitive locations must be measured and recorded for all blasts carried out on the premises:
  - < Enter exact locations - consider ANZEC guidelines. Lot & DP, street address identifiers should be used. These locations can be the same as on the existing licence 640 >
- b) Instrumentation used to measure and record the airblast overpressure and ground vibration levels must meet the requirements of Australian Standard AS 2187.2-2006.

NOTE: A breach of the licence will still occur where airblast overpressure or ground vibration levels from the blasting operations at the premises exceeds the limit specified in conditions L7.1 to L7.4 at any "noise sensitive locations" other than the locations identified in the above condition.

**L7.8** The airblast overpressure and ground vibration levels in conditions L7.1 to L7.4 do not apply at noise sensitive locations that are owned by the licensee or subject to a private agreement, relating to airblast overpressure and ground vibration levels, between the licensee and land owner.

### **Monitoring Conditions**

**<Conditions M7.1 to R4 should be negotiated with the proponent before being added to a project approval or licence>**

**M7.1** The meteorological weather station must be maintained so as to be capable of continuously monitoring the parameters specified in condition M7.2.

**M7.2** For each monitoring point specified in the table below the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns.

**Point <insert point number as listed in table P1.1>**

Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method
Air temperature	°C	Continuous	1 hour	AM-4
Wind direction	°	Continuous	15 minute	AM-2 & AM-4
Wind speed	m/s	Continuous	15 minute	AM-2 & AM-4
Sigma theta	°	Continuous	15 minute	AM-2 & AM-4
Rainfall	mm	Continuous	15 minute	AM-4
Relative humidity	%	Continuous	1 hour	AM-4

## **M8 Requirement to Monitor Noise**

M8.1 To assess compliance with Condition L6.1, attended noise monitoring must be undertaken in accordance with Conditions L6.5 and:

- a) at <locations negotiated between the proponent, Department of Planning and Environment and the Environment Protection Authority>;
- b) occur <Quarterly, bi-annually or annually> in a reporting period;
- c) occur during each day, evening and night period as defined in the NSW Industrial Noise Policy for a minimum of:
  - 1.5 hours during the day;
  - 30 minutes during the evening; and
  - 1 hour during the night.
- d) occur for three consecutive operating days.

## **Reporting Conditions**

### **R4 Noise Monitoring Report**

A noise compliance assessment report must be submitted to the EPA within 30 days of the completion of the <quarterly, bi-annual or yearly> monitoring. The assessment must be prepared by a suitably qualified and experienced acoustical consultant and include:

- a) an assessment of compliance with noise limits presented in Condition L6.1; and
- b) an outline of any management actions taken within the monitoring period to address any exceedences of the limits contained in Condition L6.1.

## **Additions to Definition of Terms of the licence**

- NSW Industrial Noise Policy - the document entitled "New South Wales Industrial Noise Policy" published by the Environment Protection Authority in January 2000.
- Noise – "sound pressure levels" for the purposes of conditions L6.1 to L6.7.

"Noise sensitive locations" includes buildings used as a residence, hospital, school, child care centre, places of public worship and nursing homes. A noise sensitive location includes the land within 30 metres of the building.