

Hunter Valley Operations

Monthly Environmental Report July 2017

Coal & Allied Operations Pty Ltd

ABN 16 000 023 656

Lemington Road, Ravensworth via Singleton NSW 2330 Australia

PO Box 315 Singleton NSW 2330 Australia

Telephone +61 2 6570 0300 Facsimile +61 2 6570 0399

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Revision History

Version No.	Person Responsible	Document Status	Date
1.0	Environmental Graduate	Draft	23/08/2017
1.0	Environmental Advisor	Final	04/10/2017

Table 9: Meteorological Data - HVO Corporate Meteorological Station – July 2017

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1.0 INTRODUCTION

This report has been compiled to provide a monthly summary of environmental monitoring results for Hunter Valley Operations (HVO). This report includes all monitoring data collected for the period 1st July to 31st July 2017.

2.0 AIR QUALITY

2.1 Meteorological Monitoring

HVO maintains two meteorological stations; 'Corporate' and 'Cheshunt' (Refer to Figure 4: Air Quality Monitoring Location Plan).

2.1.1 Rainfall

Rainfall for the period is summarised in Table 1, the 2017 trend and historical trend are shown in Figure 1.

Table 1: Monthly Rainfall HVO

2017	Monthly Rainfall (mm)	Cumulative Rainfall (mm)
July	4.2	343.4

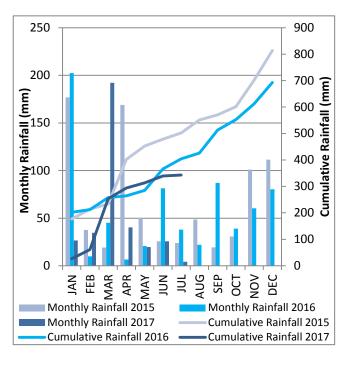


Figure 1: Year to Date Rainfall Summary 2017

2.1.2 Wind Speed and Direction

North-Westerly winds were dominant during July as shown in Figure 2 (HVO Corporate) and Figure 3 (HVO Cheshunt).

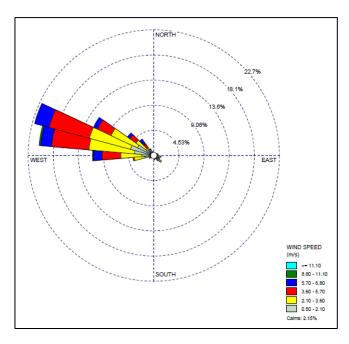


Figure 2: HVO Corporate Wind Rose - July 2017

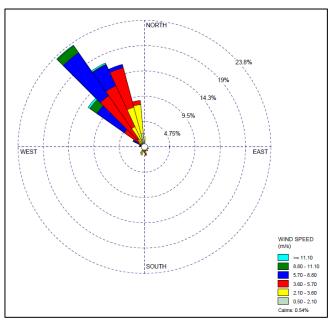


Figure 3: HVO Cheshunt Wind Rose – July 2017



Figure 4: Air Quality Monitoring Location Plan

2.2 Depositional Dust

To monitor regional air quality, HVO operates and maintains a network of nine depositional dust gauges, situated on private and mine owned land surrounding HVO.

Figure 5 displays insoluble solids results from depositional dust gauges during the reporting period compared against the year-to-date average and the annual impact assessment criteria.

During the reporting period the DL30 monitor recorded a monthly result above the long term impact assessment criteria of $4.0~g/m^2$ per month. There is no evidence to suggest that the DL30 result was contaminated. Accordingly, this result will be included in the annual average calculation.

The field notes associated with the DL14 result confirms the presence of insects, vegetation and bird droppings. As such the result is considered contaminated and will be excluded from calculation of the annual average.

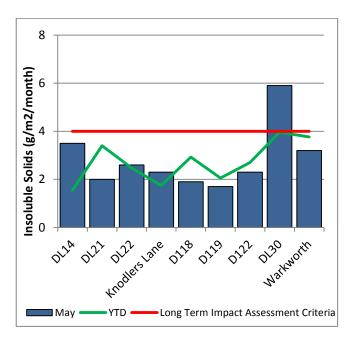


Figure 5: Depositional Dust Results - July 2017

2.3 Suspended Particulates

Suspended particulates are measured by a network of High Volume Air Samplers (HVAS) measuring Total Suspended Particulates (TSP) and Particulate Matter $<10\mu m$ (PM₁₀). The location of these monitors can be found in Figure 4. Each HVAS was run for 24 hours on a

six-day cycle in accordance with EPA requirements with the exception of the Warkworth HVAS, which failed to run on 5 July due to an instrument fault..

2.3.1 HVAS PM₁₀ Results

Figure 6 shows individual PM_{10} results at each monitoring station against the short term impact assessment criteria of $50 \mu g/m^3$.

On 5/07/2017 the Knodlers Lane HVAS PM_{10} unit recorded a result of of $65~\mu g/m^3$, which is greater than the short term (24hr) PM_{10} impact assessment criteria.

Investigation indicates that the Knodlers Lane HVAS failed to collect a valid sample on the 5^{th} July due to local livestock activity impacting the monitor. There were significant differences between the PM_{10} results recorded at Knodlers Lane and Masion Dieu on 5^{th} July 2017, with Maison Dieu recording a 24 hour PM_{10} value of 17 $\mu g/m^3$. This is considered unusual given that both locations would have likely been downwind of HVO for much of the day and are relatively close to each other (approximately 2km apart). A horse and cattle feeding area was located nearby to the monitor on the day of the exceedance and has since been relocated to reduce the impact of livestock activity on future monitoring results.

On 23/07/2017 the Long Point HVAS PM_{10} unit recorded a result of 71 $\mu g/m^3$ which is greater than the short term (24hr) PM_{10} impact assessment criteria.

Investigation determined that the Long Point HVAS was likely influenced by localised dust sources. The wind direction data indicates that the Long Point monitor was downwind of HVO, however the Knodlers Lane HVAS located between HVO and the Long Point HVAS recorded a significantly lower result of 45 $\mu g/m^3$ on the same day. As the Long Point HVAS monitor is significantly further downwind of HVO, it is unlikely that HVO could have been the primary significant contributor to the level recorded at Long Point without having had a larger impact at the closer interceding Knodlers Lane monitor. HVO's maximum contribution at Long Point is estimated to be less than 33.6 $\mu g/m^3$, or less than 47% of the measured result.

On 29/07/2017 two HVAS PM_{10} units recorded results which were greater than the short term (24hr) PM_{10}

impact assessment criteria; Long Point (60 $\mu g/m^3$) and Glider Club (58 $\mu g/m^3$).

Investigation determined that HVO's maximum contribution at Long Point is estimated to be less than $33.3~\mu g/m^3$, or less than 56% of the measured result. Accordingly, no further action is required (as per approved Air Quality Monitoring Programme).

The Hunter Valley Gliding Club was operating on the 29^{th} July 2017. While the impact of Gliding Club activities on the day is unable to be quantified with the available data, it is likely that the Club's activities would have contributed to the PM_{10} levels recorded at the Glider Club HVAS on this day. Investigation determined that HVO's and the Hunter Valley Gliding Club's contribution combined would not have been more than 85% of the measured result, or $49.3~\mu g/m^3$. The Hunter Valley Gliding Club and the Department of Planning & Environment were notified of this result.

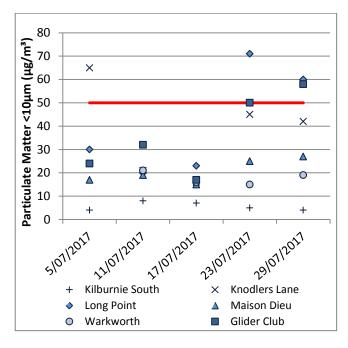


Figure 6: Individual PM₁₀ Results – July 2017

Figure 7 shows the annual average PM₁₀ results.

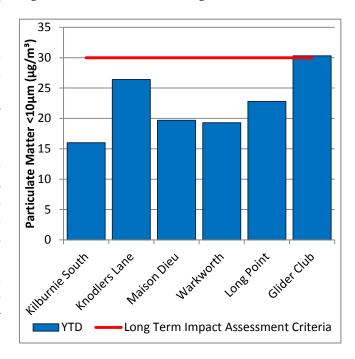


Figure 7: Year To Date Average PM₁₀ – July 2017

2.3.2 TSP Results

Figure 8 shows the annual average TSP results compared against the long term impact assessment criteria of 90 $\mu g/m^3.$

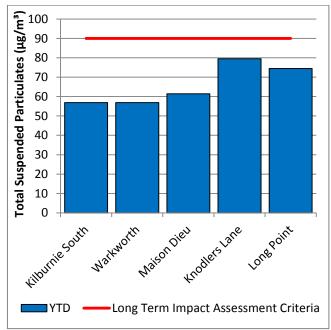


Figure 8: Year To Date Average Total Suspended Particulates - July 2017

2.3.3 Real Time PM₁₀ Results

Hunter Valley Operations maintains a network of real time PM_{10} monitors. The real time air quality monitoring stations continuously log information and transmit data to a central database, generating alarms when particulate matter levels exceed internal trigger limits. Results from real time PM_{10} monitoring are used as a reactive measure to guide mining operations to ensure compliance with the relevant conditions of the project approval.

Results for real time dust sampling are shown in Figure 9 including the daily 24 hour average PM_{10} result and the 24 hour YTD PM_{10} average. There was one result recorded which exceeded the short term (24hr) criteria in the approvals. A measurement of 73.1 $\mu g/m^3$ was recorded at the Knodlers Lane TEOM location on the 30th July 2017.

An investigation was undertaken to assess air quality and meteorological conditions on the day and to assess the maximum potential HVO contribution to the measured result. The investigation determined that HVO's maximum potential contribution to the measured level at

Knodlers Lane is estimated to be less than 42 $\mu g/m^3$, or less than 60% of the measured result on the day.

Data was not available on 26th July 2017 (Knodlers Lane) due to a power outage.

2.3.4 Real Time Alarms for Air Quality

During July, the real time monitoring system generated 58 automated air quality related alarms. 31 alarms were related to adverse weather conditions and 27 alarms related to PM_{10} .

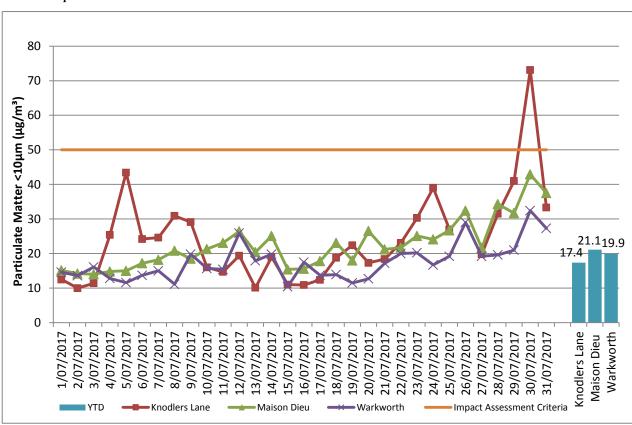


Figure 9: Real Time PM_{10} 24hr average and YTD Average – July 2017

3.0 WATER QUALITY

HVO maintains a network of surface water and groundwater monitoring sites.

3.1.1 Surface Water

Surface water courses are sampled on a quarterly sampling regime. Water quality is evaluated through the parameters of pH, Electrical Conductivity (EC) and Total Suspended Solids (TSS).

Results of monitoring on Site Dams and the Hunter River as well as other natural tributaries are provided on a quarterly basis, results will appear in the September 2017 report.

3.1.2 Site Water Use

Under water allocation licences issued by the NSWDPI WaterHVO is permitted to extract water from the Hunter River. During the reporting period, HVO did not extract any water from the Hunter River.

3.1.3 HRSTS Discharge

HVO participates in the Hunter River Salinity Trading Scheme (HRSTS), allowing discharge from licensed discharge points Dam 11N (to Farrell's Creek), Lake James (to the Hunter River) and Parnell's Dam (to Parnell's Creek). Discharges can only take place subject to HRSTS regulations.

During the reporting period no water was discharged under the HRSTS.

3.2.1 Groundwater Monitoring Results

Groundwater monitoring is undertaken on a quarterly basis in accordance with the HVO Water Management Plan and Ground Water Monitoring Programme. Results of groundwater monitoring are reported quarterly and as such will be reported in the September 2017 monthly report.

4.0 BLAST MONITORING

HVO have a network of five blast monitoring units. These are located at nearby privately owned residences and function as regulatory compliance monitors. The location of these monitors can be found in Figure 15.

During July, 20 blasts were initiated at HVO. Figure 10 through to Figure 14 show the blast monitoring results for the reporting period against the impact assessment criteria. The criteria are summarised in Table 2.

Table 2: Blasting Limits

Airblast Overpressure (dB(L))	Comments
115	5% of the total number of blasts in a 12 month period
120	0%
Ground Vibration (mm/s)	Comments
5	5% of the total number of blasts in a 12 month period
10	0%

During the reporting period there were no exceedances of the airblast overpressure or ground vibration criteria.

4.1 Blast Monitoring Results

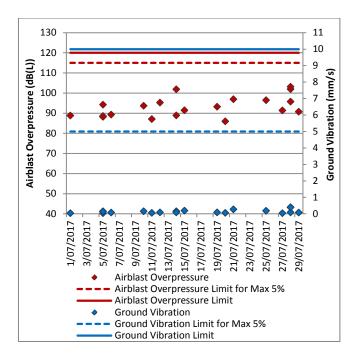


Figure 10: Moses Crossing Blast Monitoring Results – July 2017

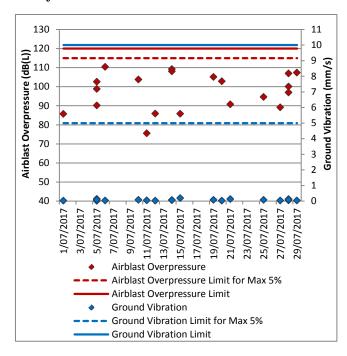


Figure 11: Jerrys Plains Blast Monitoring Results – July 2017

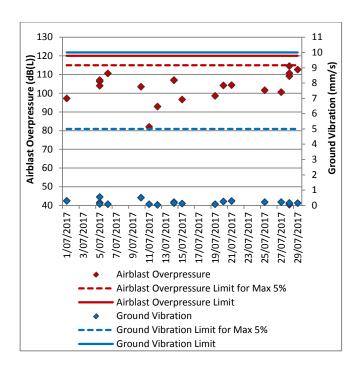


Figure 12: Maison Dieu Blast Monitoring Results – July 2017

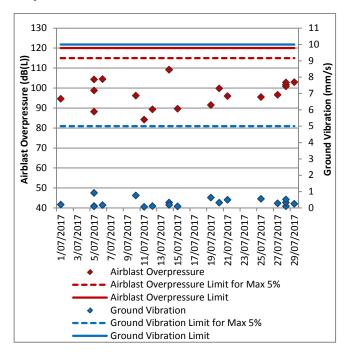


Figure 13: Warkworth Blast Monitoring Results - July 2017

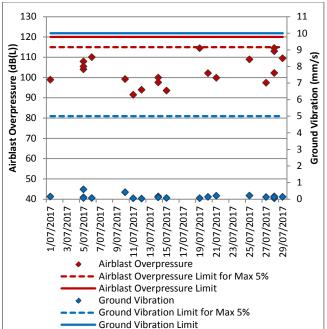


Figure 14: Knodlers Lane Blast Monitoring Results – July 2017



Figure 15: Blast Monitoring Location Plan

5.0 NOISE

Routine attended noise monitoring is carried out at defined locations around HVO as described in the HVO Noise Monitoring Programme. The purpose of the noise surveys is to quantify and describe the acoustic environment around the site and compare results with specified limits. Unattended monitoring (real time noise monitoring) also occurs at five sites surrounding HVO. The attended noise monitoring locations are displayed in Figure 16.

5.1 Attended Noise Monitoring Results

Attended monitoring was conducted at receiver locations surrounding HVO on the nights of 6th and 11th of July 2017. Monitoring results are detailed in Table 3 to Table 8.

Activities from HVO complied with the relevant development consent noise limits during the July 2017 survey at all monitoring locations, except for Maison Dieu.

During an initial measurement at Maison Dieu at 21:33 on 6 July 2017, a continuum from the HVO South Pit Area consisting mostly of engine noise, generated a site only L_{Aeq} of 41 dB. The exceedance procedure was initiated and a remeasure carried out at 22:49. This resulted in a site only L_{Aeq} of 32 dB, which is 5 dB below relevant HVO South Pit Area impact assessment criterion. It was later established that criteria were applicable during the initial measurement, however, were notapplicable during the remeasure due to wind speed conditions. A follow up measurement was scheduled to occur within one week.

The follow up measurement was carried out on 11 July 2017. HVO was inaudible during this measurement, and no further action was required.

The results where reported to the Department of Planning & Environment.

Table 3: LAeq, 15 minute HVO South - Impact Assessment Criteria - July 2017

Location	Date and Time	Wind Speed (m/s) ⁵	VTG ⁵	Criterion dB	Criterion Applies? ^{1,6}	HVO South L _{Aeq} dB ^{2,4}	Exceedance ³
Knodlers Lane	6/07/2017 21:00	2.2	-1	37	Yes	37	Nil
Maison Dieu	6/07/2017 21:33	1.8	-1	37	Yes	41	4
Maison Dieu ⁷	6/07/2017 22:49	3	-1	37	No	32	NA
Maison Dieu ⁸	11/07/2017 21:21	0.5	3	37	No	IA	NA
Shearers Lane	6/07/2017 23:17	2.5	-1	41	Yes	38	Nil
Kilburnie South	6/07/2017 23:08	2.5	-1	36	Yes	NM	Nil
Jerrys Plains Village	6/07/2017 22:05	2.2	-1	35	Yes	IA	Nil
Jerrys Plains East	6/07/2017 21:16	1.9	-1	35	Yes	IA	Nil
Long Point Road	6/07/2017 21:00	1.5	0.5	35	Yes	IA	Nil
HVGC	6/07/2017 23:49	2.1	-1	55	Yes	47	Nil

Table 4: LAeq, 15 minute HVO South - Land Acquisition Criteria - July 2017

Location	Date and Time	Wind Speed (m/s) ⁵	VTG ⁵	Criterion dB	Criterion Applies? ^{1,6}	HVO South L _{Aeq} dB ^{2,4}	Exceedance ³
Knodlers Lane	6/07/2017 21:00	2.2	-1	41	Yes	37	Nil
Maison Dieu	6/07/2017 21:33	1.8	-1	41	Yes	41	Nil
Maison Dieu ⁷	6/07/2017 22:49	3	-1	41	No	32	NA

Maison Dieu ⁸	11/07/2017 21:21	0.5	3	41	No	IA	NA
Shearers Lane	6/07/2017 23:17	2.5	-1	41	Yes	38	Nil
Kilburnie South	6/07/2017 23:08	2.5	-1	41	Yes	NM	Nil
Jerrys Plains Village	6/07/2017 22:05	2.2	-1	40	Yes	IA	Nil
Jerrys Plains East	6/07/2017 21:16	1.9	-1	40	Yes	IA	Nil
Long Point Road	6/07/2017 21:00	1.5	0.5	40	Yes	IA	Nil
HVGC	6/07/2017 23:49	2.1	-1	NA	NA	47	NA

Table 5: LA1, 1minute HVO South - Impact Assessment Criteria - July 2017

Location	Date and Time	Wind Speed (m/s) ⁵	VTG ⁵	Criterion dB	Criterion Applies? ^{1,6}	HVO South L _{A1, 1min} dB ^{2,4}	Exceedance ³
Knodlers Lane	6/07/2017 21:00	2.2	-1	45	Yes	44	Nil
Maison Dieu	6/07/2017 21:33	1.8	-1	45	Yes	45	Nil
Maison Dieu ⁷	6/07/2017 22:49	3	-1	45	No	39	NA
Maison Dieu ⁸	11/07/2017 21:21	0.5	3	45	No	IA	NA
Shearers Lane	6/07/2017 23:17	2.5	-1	45	Yes	45	Nil
Kilburnie South	6/07/2017 23:08	2.5	-1	45	Yes	NM	Nil
Jerrys Plains Village	6/07/2017 22:05	2.2	-1	45	Yes	IA	Nil
Jerrys Plains East	6/07/2017 21:16	1.9	-1	45	Yes	IA	Nil
Long Point Road	6/07/2017 21:00	1.5	0.5	45	Yes	IA	Nil
HVGC	6/07/2017 23:49	2.1	-1	NA	NA	55	NA

Notes

Table 6: LAeq, 15minute HVO North – Impact Assessment Criteria – July 2017

Location	Date and Time	Wind Speed (m/s) ⁵	VTG ⁵	Criterion dB	Criterion Applies? ^{1,6}	HVO North L _{Aeq} dB ^{2,4}	Exceedance ³
Knodlers Lane	6/07/2017 21:00	2.2	-1	35	Yes	NM	Nil
Maison Dieu	6/07/2017 21:33	1.8	-1	35	Yes	NM	Nil
Maison Dieu ⁷	6/07/2017 22:49	3	-1	35	Yes	NM	NA
Maison Dieu ⁸	11/07/2017 21:21	0.5	3	35	Yes	IA	NA
Shearers Lane	6/07/2017 23:17	2.5	-1	35	Yes	NM	Nil
Kilburnie South	6/07/2017 23:08	2.5	-1	39	Yes	NM	Nil
Jerrys Plains Village	6/07/2017 22:05	2.2	-1	36	Yes	<25	Nil
Jerrys Plains East	6/07/2017 21:16	1.9	-1	39	Yes	<25	Nil

^{1.} Noise emission limits apply for winds up to 3 metres per second (at a height of 10m), or vertical temperature gradients of up to 3 degrees/100m and wind speeds of up to 2 m/s (at a height of 10m);

2. Estimated or measured L_{Aeq, 15minute} dB attributed to HVO South Pit Area;

3. NA in exceedance column means atmospheric conditions outside specified in approval and so criterion is not applicable;

4. Bolded results in red indicate exceedance of criteria;

Bollead results in real malicate exceedance of criteria;
 Atmospheric data is sourced from the HVO Corporate weather station using logged met data;
 Criterion may or may not apply due to rounding of meteorological data values
 Remeasure; and
 Follow up measurement

Long Point Road	6/07/2017 21:00	1.5	0.5	35	Yes	IA	Nil
HVGC	6/07/2017 23:49	2.1	-1	NA	NA	NM	NA

Table 7: LAeq,15minute HVO North - Land Acquisition Criteria – July 2017

Location	Date and Time	Wind Speed (m/s) ⁵	VTG ⁵	Criterion dB	Criterion Applies? ^{1,6}	HVO North L _{Aeq} dB ^{2,4}	Exceedance ³
Knodlers Lane	6/07/2017 21:00	2.2	-1	41	Yes	NM	Nil
Maison Dieu	6/07/2017 21:33	1.8	-1	41	Yes	NM	Nil
Maison Dieu ⁷	6/07/2017 22:49	3	-1	41	Yes	NM	NA
Maison Dieu ⁸	11/07/2017 21:21	0.5	3	41	Yes	IA	NA
Shearers Lane	6/07/2017 23:17	2.5	-1	41	Yes	NM	Nil
Kilburnie South	6/07/2017 23:08	2.5	-1	41	Yes	NM	Nil
Jerrys Plains Village	6/07/2017 22:05	2.2	-1	41	Yes	<25	Nil
Jerrys Plains East	6/07/2017 21:16	1.9	-1	41	Yes	<25	Nil
Long Point Road	6/07/2017 21:00	1.5	0.5	41	Yes	IA	Nil
HVGC	6/07/2017 23:49	2.1	-1	NA	NA	NM	NA

Table 8: LA1, 1Minute HVO North - Impact Assessment Criteria – July 2017

Location	Date and Time	Wind Speed (m/s) ⁵	VTG ⁵	Criterion dB	Criterion Applies? ^{1,6}	HVO North L _{A1, 1min} dB ^{2,4}	Exceedance ³
Knodlers Lane	6/07/2017 21:00	2.2	-1	46	Yes	NM	Nil
Maison Dieu	6/07/2017 21:33	1.8	-1	46	Yes	NM	Nil
Maison Dieu ⁷	6/07/2017 22:49	3	-1	46	Yes	NM	NA
Maison Dieu ⁸	11/07/2017 21:21	0.5	3	46	Yes	IA	NA
Shearers Lane	6/07/2017 23:17	2.5	-1	46	Yes	NM	Nil
Kilburnie South	6/07/2017 23:08	2.5	-1	46	Yes	NM	Nil
Jerrys Plains Village	6/07/2017 22:05	2.2	-1	46	Yes	<25	Nil
Jerrys Plains East	6/07/2017 21:16	1.9	-1	46	Yes	<25	Nil
Long Point Road	6/07/2017 21:00	1.5	0.5	46	Yes	IA	Nil
HVGC	6/07/2017 23:49	2.1	-1	NA	NA	NM	NA

Notes

5.2 INP Low Frequency Assessment

Notes

1. Noise emission limits apply for winds up to 3 metres per second (at a height of 10m), or vertical temperature gradients of up to 3 degrees/100m and wind speeds of up to 2 m/s (at a height of 10m);

2. Estimated or measured Laeq.15minute dB attributed to HVO North Area;

3. NA in exceedance column means atmospheric conditions outside specified in approval and so criterion is not applicable;

4. Bolded results in red indicate exceedance of criteria;

5. Atmospheric data is sourced from the HVO Corporate weather station using logged met data;

6. Criterion may or may not apply due to rounding of meteorological data values

7. Remeasure; and

8. Follow up measurement

In accordance with the requirements of the Industrial Noise Policy (INP), the low frequency modification factor has been applied where appropriate. It should be noted that the Industrial Noise Policy does not give guidance on the application of the penalty where more than one target source is audible. The L_{Ceq} levels reported above are "Total", or "Total mine noise" at best, and cannot be attributed accurately to a single mine. Accordingly, where the INP criteria for the application of the Low Frequency penalty is triggered, the penalty has been applied to the dominant mine noise source. Resulting L_{Aeq} noise levels exceed the HVO South impact assessment criteria at Knodlers Lane, Maison Dieu and Shearers Lane by 5dB, 9dB and 2dB respectively due to the application of a 5 dB penalty to the site only L_{Aeq} .

HVO reports these measurements so as to ensure full disclosure, however it remains HVO's position that the prescribed methodology is unsuitable when applied to receptors at large distances from mine noise sources due to the nature of noise attenuation. Excess attenuation of noise with distance is greater for high frequency noise than it is for low frequency noise. At significant distance from a noise source (such as private residences from HVO) this often results in large differentials between LAeq and LCeq. The NSW Industrial Noise Policy requires the penalty to be applied in these instances, irrespective of actual low frequency affectation. As such, HVO does not consider these instances to constitute non-compliance with the conditions of approval. The results have been reported to the Department of Planning and Environment.

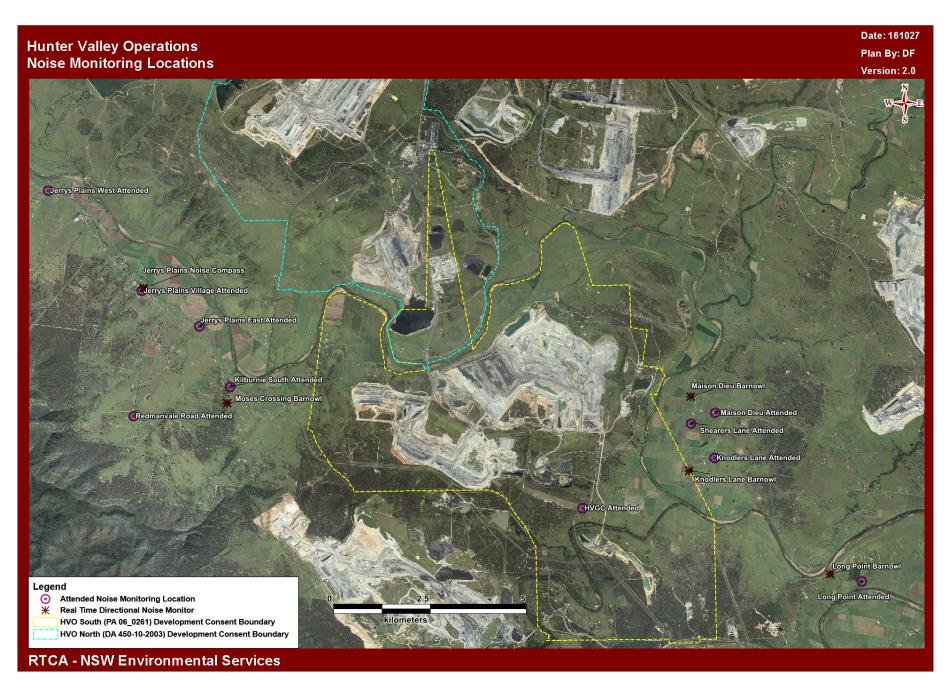


Figure 16: Noise Monitoring Location Plan

5.2 Real Time Noise Monitoring

HVO utilises a network of real-time directional noise monitors to manage noise impacts on a continuous basis. Noise alarms are in place at five monitoring locations (Knodlers Lane, Maison Dieu, Jerrys Plains, Moses Crossing, and Long Point), which alert HVO staff to elevated noise levels likely to be attributable to HVO. Noise alarms are investigated and responded to with the appropriate level of operational modification. Changes in response to a noise alarm can include replacing equipment with quieter (noise attenuated) units, changing or relocating tasks, and shutting down equipment.

HVO's Planning approvals stipulate noise criteria which must be met during the life of the development(s). The approvals however do not stipulate requirements or give guidance on noise affectation, or the frequency of any elevated noise event which would constitute noise affectation. Page 6 of the NSW Industrial Noise Policy (INP) comments that criteria "seek to restrict the risk of people being highly annoyed to less than 10 percent, and to meet this for at least 90 percent of the time".

For the purposes of assessing the effectiveness of the noise management system, HVO applies a similar approach with regard to the frequency of any elevated noise event. It should be noted that this assessment does not compliment or conflict with attended noise monitoring detailed in Section 6.1, and that real time monitoring data includes non-mine noise sources such as dogs, cows, or more commonly, road traffic.

6.0 OPERATIONAL DOWNTIME

During July, a total of 632.3 hours of equipment downtime was logged in response to real time monitoring and visual inspections for environmental reasons such as dust, noise and meteorological conditions. Operational downtime by equipment type is shown in Figure 17.

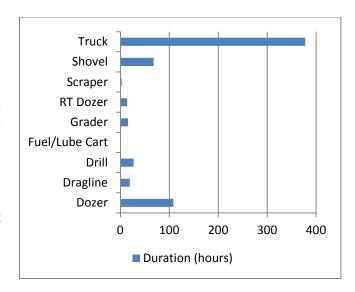


Figure 17: Operational Downtime by Equipment Type – July 2017

7.0 REHABILITATION

During July, 35.7 Ha of land was released, 3.5 Ha of land was bulk shaped, 9.9 Ha of land was topsoiled and 17.5 Ha of land was composted. Year to date progress can be viewed in Figure 18.

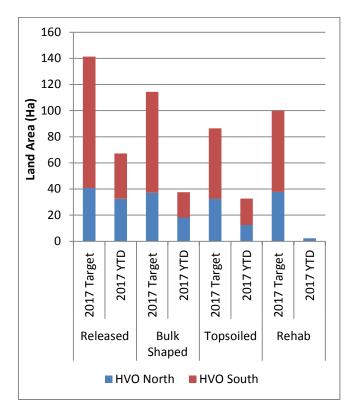


Figure 18: Rehabilitation YTD - July 2017

8.0 COMPLAINTS

No complaints were received during the reporting period. Details of complaints received YTD are shown in Figure 19 below.

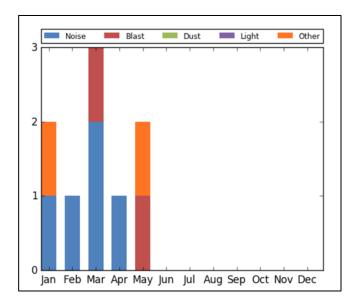


Figure 19: Complaints Graph – July 2017

9.0 ENVIRONMENTAL INCIDENTS

During the reporting period there were no reportable environmental incidents.

Appendix A: Meteorological Data

Table 9: Meteorological Data - HVO Corporate Meteorological Station – July 2017

Date	Air Temperature Maximum (°C)	Air Temperature Minimum (°C)	Relative Humidity Maximum (%)	Relative Humidity Minimum (%)	Solar Radiation Maximum (W/Sq. M)	Wind Direction Average (°)	Wind Speed Average (m/sec)	Rainfall(mm)
1/07/2017	14.6	-0.8	100.0	42.2	523	224.5	1.2	0.0
2/07/2017	17.2	-1.0	100.0	33.0	522	236.4	1.4	0.0
3/07/2017	17.7	0.3	100.0	44.4	781	240.8	1.7	0.0
4/07/2017	20.2	8.0	89.9	18.1	531	282.9	5.2	0.2
5/07/2017	18.3	8.1	58.2	29.3	522	281.0	4.0	0.0
6/07/2017	18.7	3.1	77.8	24.5	526	283.2	3.5	0.0
7/07/2017	18.5	1.5	87.9	26.2	560	274.6	3.0	0.0
8/07/2017	16.7	4.0	64.4	32.0	569	280.7	3.7	0.0
9/07/2017	16.5	2.3	80.8	30.4	525	283.5	3.5	0.0
10/07/2017	16.1	1.9	81.7	34.1	625	284.6	2.5	0.0
11/07/2017	16.2	1.4	87.3	37.3	682	213.2	1.6	0.0
12/07/2017	14.6	5.7	94.6	59.2	662	169.9	1.2	0.0
13/07/2017	17.1	1.9	100.0	45.1	834	190.6	1.1	0.0
14/07/2017	20.2	1.4	99.0	39.8	686	279.6	3.1	1.4
15/07/2017	16.1	6.9	95.4	55.6	741	273.2	2.3	0.2
16/07/2017	18.1	4.1	100.0	37.7	552	176.0	1.1	0.0
17/07/2017	18.6	2.6	100.0	41.5	763	240.5	1.5	0.0
18/07/2017	22.4	5.0	90.5	30.6	545	288.7	4.4	1.2
19/07/2017	14.7	8.7	75.5	39.5	557	288.5	4.9	0.2
20/07/2017	16.8	3.7	83.3	22.4	876	288.5	4.9	0.2
21/07/2017	16.7	2.0	76.9	34.6	594	225.0	2.0	0.0
22/07/2017	17.5	0.3	89.9	21.2	587	280.2	2.5	0.0
23/07/2017	19.3	4.1	60.7	14.0	575	299.2	4.8	0.0
24/07/2017	20.0	5.9	54.9	23.8	599	289.7	3.7	0.0
25/07/2017	19.6	2.5	77.4	25.5	593	288.9	3.3	0.0
26/07/2017	21.2	10.8	55.6	21.3	584	280.3	5.3	0.0
27/07/2017	21.6	2.9	86.0	18.1	607	242.1	3.4	0.0
28/07/2017	20.6	3.1	85.4	10.4	890	268.3	3.6	0.0
29/07/2017	20.2	1.5	68.9	10.1	628	290.5	3.1	0.0
30/07/2017	24.4	8.3	40.3	11.6	831	269.2	3.5	0.0
31/07/2017	18.0	7.5	85.3	28.5	371	209.9	2.7	1.0

[&]quot;-" Indicates that data was not available due to technical issues.