

# HUNTER VALLEY OPERATIONS

## ENVIRONMENT PROTECTION LICENCE 640 MONITORING DATA - JULY 2024

**DOCUMENT NUMBER**

HVOOC-1797567310-5017

**STATUS**

Approved

**VERSION**

1.0

**EFFECTIVE**

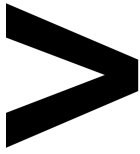
24/09/2024

**REVIEW**

[Planned Review Date]

**OWNER**

Superintendent - Environment and Community



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## 1 | OVERVIEW

<b>Environmental Protection Licence Number:</b>	640
<b>Licence Holder:</b>	HV Operations Pty Ltd (HVO)
<b>Address of Premises:</b>	Hunter Valley Operations, Lemington Road, Singleton, NSW, 2330
<b>Licence Holder Postal Address:</b>	PO Box 315, Singleton, NSW, 2330
<b>EPA Public Register Link:</b>	<a href="https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=640&amp;id=640&amp;option=licence&amp;searchrange=licence&amp;range=POEO%20licence&amp;prp=no&amp;status=Issued">https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=640&amp;id=640&amp;option=licence&amp;searchrange=licence&amp;range=POEO%20licence&amp;prp=no&amp;status=Issued</a>

The locations of each sampling or monitoring point number identified in EPL 640 are displayed in Figure 1.

## 2 | DEFINITIONS

Abbreviation	Explanation
DNR	Data Not Received
mm/s	Millimetres per Second
dB	Decibels
g/m <sup>2</sup> /month	Grams per Metre Square per Month
µg/m <sup>3</sup>	Micrograms per Cubic Meter of Air
µS/cm	Microsiemens per Centimetre
pH	A measure of the acidity or alkalinity of a solution
mg/L	Milligrams per Litre
NTU	Nephelometric Turbidity Units
ML/day	Megalitres per Day (1ML = 1,000,000L)
KL/day	Kilolitres per Day
PM10	Particulate Matter of 10 Microns in diameter or smaller
HVAS	High Volume Air Sampler
TEOM	Tapered Element Oscillating Microbalance
TSP	Total Suspended Particles
TSS	Total Suspended Solids
t	tonnes
YTD	Year To Date - rolling 12-month average

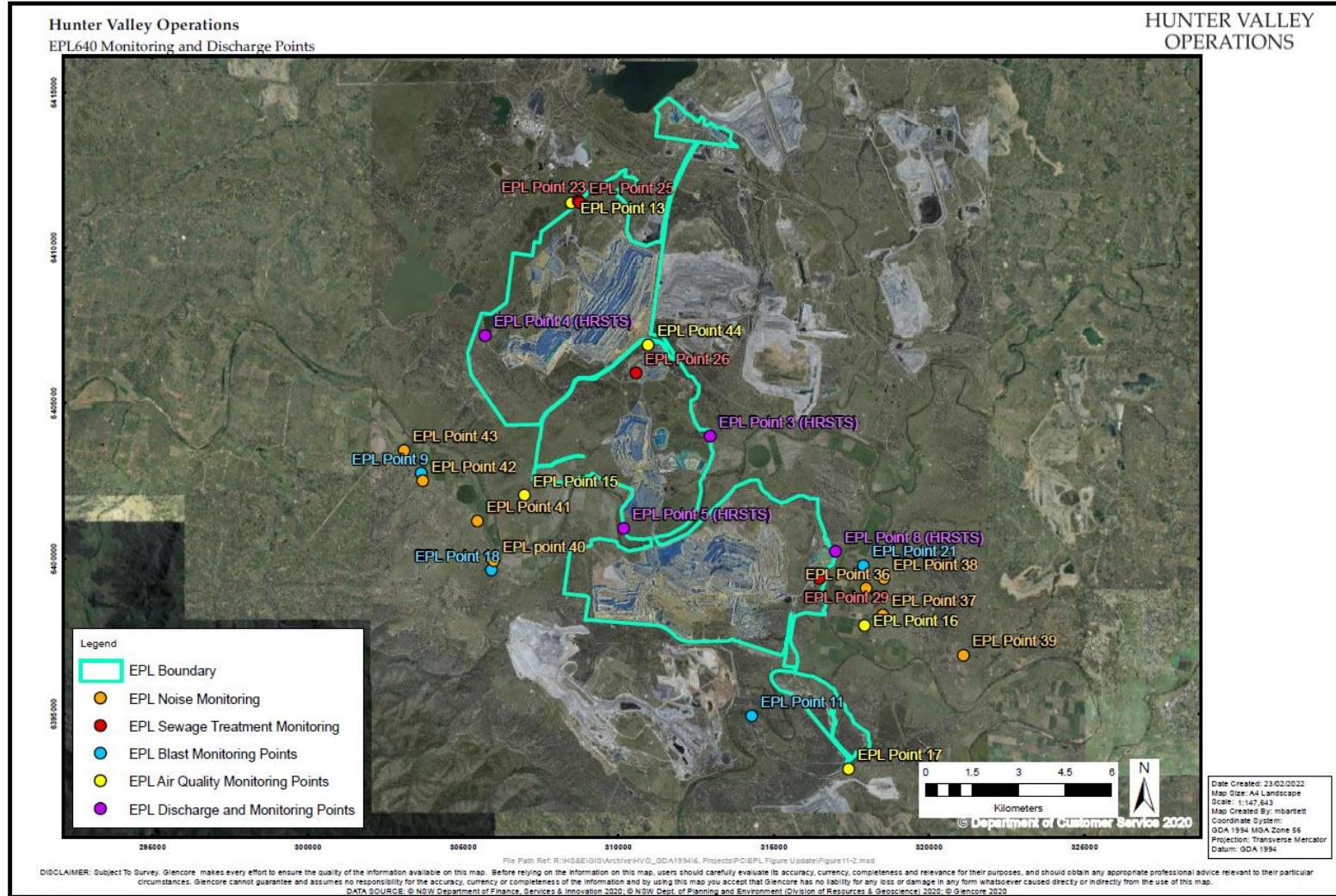
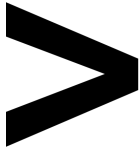


Figure 1: EPL 640 Monitoring Location

### 3 | AIR QUALITY

Date Last Sampled: 31/07/2024

Date Obtained: 20/08/2024

Table 1 - Particulate Matter Monitoring (<10µm)

Date	Unit of Measure	Monitoring Frequency & Capture	Monitoring Point				
			EPL ID 13 (Howick)	EPL ID 15 (Wandewoi)	EPL ID 16 (Knodlers Lane)	EPL ID 17 (Golden Highway)	EPL ID 44 (West Pit)
1/07/2024	µg/m <sup>3</sup>	Continuous	14.5	10.6	11.5	19.5	11.9
2/07/2024	µg/m <sup>3</sup>		11.8	9.0	8.8	14.5	13.7
3/07/2024	µg/m <sup>3</sup>		18.2	9.3	11.1	19.9	15.2
4/07/2024	µg/m <sup>3</sup>		27.0	12.1	14.7	23.3	21.4
5/07/2024	µg/m <sup>3</sup>		17.7	16.0	13.6	22.8	41.0
6/07/2024	µg/m <sup>3</sup>		17.8	13.9	9.0	14.9	14.6
7/07/2024	µg/m <sup>3</sup>		15.0	15.8	7.4	15.3	32.6
8/07/2024	µg/m <sup>3</sup>		15.6	11.9	6.7	10.5	12.8
9/07/2024	µg/m <sup>3</sup>		7.6	7.5	7.1	11.4	19.2
10/07/2024	µg/m <sup>3</sup>		7.8	4.6	9.0	7.8	20.4
11/07/2024	µg/m <sup>3</sup>		12.9	4.9	11.8	20.1	38.5
12/07/2024	µg/m <sup>3</sup>		16.4	4.9	17.0	20.0	34.8
13/07/2024	µg/m <sup>3</sup>		13.9	5.6	12.5	11.5	38.4
14/07/2024	µg/m <sup>3</sup>		11.9	5.2	9.9	8.1	51.7
15/07/2024	µg/m <sup>3</sup>		8.8	5.3	10.4	7.2	54.2
16/07/2024	µg/m <sup>3</sup>		12.1	7.5	12.1	10.9	83.3

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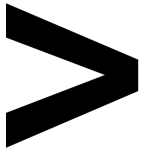
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# REPORT | ENVIRONMENT PROTECTION LICENCE 640

## MONITORING DATA - JULY 2024

17/07/2024	µg/m <sup>3</sup>		11.0	4.6	8.0	6.8	60.7
18/07/2024	µg/m <sup>3</sup>		12.3	6.5	12.6	14.2	62.0
19/07/2024	µg/m <sup>3</sup>		19.1	6.2	17.3	19.5	95.2
20/07/2024	µg/m <sup>3</sup>		22.5	13.7	32.2	27.2	132.9
21/07/2024	µg/m <sup>3</sup>		20.0	14.4	23.9	20.5	80.5
22/07/2024	µg/m <sup>3</sup>		16.5	10.3	19.5	28.8	*
23/07/2024	µg/m <sup>3</sup>		15.0	9.7	18.1	22.4	*
24/07/2024	µg/m <sup>3</sup>		22.0	11.0	20.9	25.7	89.6
25/07/2024	µg/m <sup>3</sup>		24.1	18.0	30.9	36.0	155.5
26/07/2024	µg/m <sup>3</sup>		14.5	9.4	13.2	29.2	49.2
27/07/2024	µg/m <sup>3</sup>		19.0	12.1	13.6	50.0	35.2
28/07/2024	µg/m <sup>3</sup>		6.3	4.2	7.8	8.1	56.4
29/07/2024	µg/m <sup>3</sup>		11.3	6.1	11.3	20.8	42.8
30/07/2024	µg/m <sup>3</sup>		17.1	7.5	16.7	41.1	53.4
31/07/2024	µg/m <sup>3</sup>		21.0	10.5	16.7	26.6	45.8
<b>Monthly Meaningful Data</b>							
<b>July</b>	µg/m <sup>3</sup>	<b>Minimum</b>	6.3	4.2	6.7	6.8	11.9
	µg/m <sup>3</sup>	<b>Mean</b>	15.5	9.3	14.0	19.8	50.4
	µg/m <sup>3</sup>	<b>Maximum</b>	27.0	18.0	32.2	50.0	155.5
	µg/m <sup>3</sup>	<b>Median</b>	15.0	9.3	12.5	19.9	42.8

\* Less than 75% data capture



**4 | SURFACE WATER MONITORING DATA**

No discharges under the HRSTS occurred during July.

*Table 2 - HRSTS Discharge Monitoring*

Discharge Point	Pollutant	Unit of Measure	Licence Limits	No. Samples Required by Licence	No. Samples Collected and Analysed
EPL ID 3 (Dam 11N)	pH	pH	6.5-9.5	0	0
	Total Suspended Solids	Milligrams per Litre	120	0	0
EPL ID 4 (Dam 9W)	pH	pH	6.5-9.5	0	0
	Total Suspended Solids	Milligrams per Litre	120	0	0
EPL ID 8 (Dam 15S)	pH	pH	6.5-9.5	0	0
	Total Suspended Solids	Milligrams per Litre	120	0	0

### 5 | BLAST MONITORING DATA

**Date Last Sampled:** 31/07/2024

**Date Obtained:** 15/08/2024

*Table 3 – Blast Monitoring (Air Blast Overpressure)*

Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Monitoring Point			
				95% of Blasts	100% of Blasts	Moses Crossing EPL ID 18	Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	Warkworth EPL ID 11
P210WK607A	1/07/2024 14:05	dB(L)	All blasts 100%	115	120	95.23	94.08	*	99.86
WS49UPG04D_WS49LPP01A	2/07/2024 17:05	dB(L)		115	120	95.61	90.88	85.91	84.10
WS49LED07A_WS49LDP03A	2/07/2024 17:06	dB(L)		115	120	100.16	96.53	84.39	93.99
WN49ULD01B	4/07/2024 13:08	dB(L)		115	120	104.88	98.34	99.21	87.77
P210N2003B	10/07/2024 14:11	dB(L)		115	120	93.31	97.49	109.56	109.91
P210WK607B	10/07/2024 14:12	dB(L)		115	120	91.93	104.34	105.81	113.69
WS49LED06B	16/07/2024 13:09	dB(L)		115	120	102.32	106.96	114.92	100.69
P125N1001C_P125N10P04A	17/07/2024 15:52	dB(L)		115	120	98.09	95.43	105.58	100.53
P101MA302A_P101N1001A	18/07/2024 13:06	dB(L)		115	120	101.37	104.78	105.17	107.06
WN49UAA04A	19/07/2024 13:47	dB(L)		115	120	82.97	108.63	98.29	91.91
WS49LAL06B	19/07/2024 13:56	dB(L)		115	120	90.63	112.28	103.73	105.45

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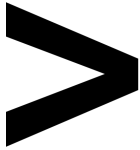
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Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Monitoring Point			
				95% of Blasts	100% of Blasts	Moses Crossing EPL ID 18	Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	Warkworth EPL ID 11
M1T712002A	22/07/2024 13:12	dB(L)	All Blasts 100%	115	120	93.90	98.93	102.95	88.58
P210N2003C	23/07/2024 11:23	dB(L)		115	120	89.57	90.25	103.71	104.84
WS49LEC10A	24/07/2024 13:30	dB(L)		115	120	96.62	92.87	102.51	98.00
P125W6P02A	25/07/2024 13:04	dB(L)		115	120	111.80	109.69	113.88	110.65
WS49LAL08A	26/07/2024 11:19	dB(L)		115	120	92.32	96.72	98.90	92.08
P101N1001B	26/07/2024 13:10	dB(L)		115	120	98.77	97.23	107.10	97.16
WN49LAA04A, WS49MPG02A	31/07/2024 13:22	dB(L)		115	120	102.20	90.48	102.96	87.77
Monthly Meaningful Data									
July	dB(L)	Minimum	115	120	82.97	90.25	84.39	84.10	
	dB(L)	Mean	115	120	96.76	99.22	102.62	98.56	
	dB(L)	Maximum	115	120	111.80	112.28	114.92	113.69	
	dB(L)	Median	115	120	96.12	97.36	103.71	98.93	

*\*No data recorded due to memory card failure*

*Table 4 – Blast Monitoring (Ground Vibration)*

Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits			Monitoring Point		
				95% of Blasts	100% of Blasts	Moses Crossing EPL ID 18	Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	Warkworth EPL ID 11
P210WK607A	1/07/2024 14:05	mm/s	All Blasts 100%	5	10	0.10	0.03	*	0.36
WS49UPG04D_WS49LPP01A	2/07/2024 17:05	mm/s		5	10	0.09	0.04	0.09	0.06
WS49LED07A_WS49LDP03A	2/07/2024 17:06	mm/s		5	10	0.13	0.05	0.10	0.96
WN49ULD01B	4/07/2024 13:08	mm/s		5	10	0.12	0.14	0.08	0.12
P210N2003B	10/07/2024 14:11	mm/s		5	10	0.13	0.05	0.56	1.09
P210WK607B	10/07/2024 14:12	mm/s		5	10	0.12	0.04	0.17	0.47
WS49LED06B	16/07/2024 13:09	mm/s		5	10	0.12	0.04	0.06	0.82
P125N1001C_P125N10P04A	17/07/2024 15:52	mm/s		5	10	0.34	0.12	0.27	0.87
P101MA302A_P101N1001A	18/07/2024 13:06	mm/s		5	10	0.26	0.13	0.14	0.51
WN49UAA04A	19/07/2024 13:47	mm/s		5	10	0.09	0.05	0.05	0.15
WS49LAL06B	19/07/2024 13:56	mm/s		5	10	0.10	0.05	0.06	0.13
M1T712002A	22/07/2024 13:12	mm/s		5	10	0.10	0.09	0.05	0.17
P210N2003C	23/07/2024 11:23	mm/s		5	10	0.14	0.04	0.36	0.67
WS49LEC10A	24/07/2024 13:30	mm/s		5	10	0.11	0.08	0.11	0.13

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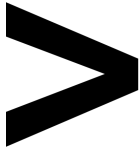
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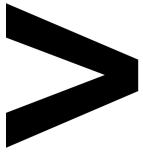
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Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits			Monitoring Point		
				95% of Blasts	100% of Blasts	Moses Crossing EPL ID 18	Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	Warkworth EPL ID 11
P125W6P02A	25/07/2024 13:04	mm/s		5	10	0.15	0.05	0.09	0.18
WS49LAL08A	26/07/2024 11:19	mm/s		5	10	0.10	0.05	0.07	0.16
P101N1001B	26/07/2024 13:10	mm/s		5	10	0.29	0.08	0.22	0.51
WN49LAA04A, WS49MPG02A	31/07/2024 13:22	mm/s		5	10	0.15	0.11	0.13	0.09
Monthly Meaningful Data									
July	mm/s	Minimum	5	10	0.09	0.03	0.05	0.06	
	mm/s	Mean	5	10	0.15	0.07	0.15	0.41	
	mm/s	Maximum	5	10	0.34	0.14	0.56	1.09	
	mm/s	Median	5	10	0.12	0.05	0.10	0.27	

*\*No data recorded due to memory card failure*



## 6 | SEWAGE TREATMENT PLANT MONITORING DATA

Sewage treatment plant monitoring results are provided on a quarterly basis. Results will be provided in the September 2024 report.

### 7 | NOISE MONITORING DATA

**Date Sampled:** 22/07/2024

**Date Obtained:** 30/07/2024

Table 6 – Night LAeq,15minute and 1minute Generated by HVO Against EPL Criteria

Location	Start date and time	Wind		Stability class	Very enhancing? <sup>1</sup>	EPL limits, dB <sup>1</sup>		HVO levels, dB		Exceedances, dB	
		Speed m/s	Direction <sup>3</sup>			L <sub>Aeq,15minute</sub>	L <sub>A1,1min</sub>	L <sub>Aeq,15minute</sub> <sup>2</sup>	L <sub>A1,1min</sub>	L <sub>Aeq,15minute</sub>	L <sub>A1,1min</sub>
Shearers Lane	22/07/2024 21:00	3.7	310	E	Yes	41	46	33	37	Nil	Nil
Knodlers Lane	22/07/2024 21:45	2.2	282	F	Yes	45	51	<30	30	Nil	Nil
Maison Dieu	22/07/2024 21:21	3.7	302	E	Yes	41	51	30	32	Nil	Nil
Long Point (Dights Crossing)	22/07/2024 22:38	3.5	302	E	Yes	42	51	27	30	Nil	Nil
Kilburnie South	22/07/2024 23:09	4.6	311	E	Yes	44	51	27	28	Nil	Nil
Jerrys Plains East	22/07/2024 22:48	3.5	302	E	Yes	55	51	28	30	Nil	Nil
Jerrys Plains Village	22/07/2024 21:19	3.7	302	E	Yes	45	51	IA	IA	Nil	Nil
Jerrys Plains West	22/07/2024 21:00	3.7	310	E	Yes	45	51	IA	IA	Nil	Nil

Notes: 1. Noise limits are adjusted by +5 dB during 'very noise-enhancing meteorological conditions' in accordance with the NPfI.

2. Site-only LAeq,15minute, includes modifying factor penalties if applicable.

3. Degrees magnetic north, "-" indicates calm conditions.

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