

**HUNTER VALLEY**  
OPERATIONS

**ENVIRONMENT  
PROTECTION LICENCE 640  
MONITORING DATA -  
FEBRUARY 2024**

**DOCUMENT NUMBER**

HVOOC-1797567310-4920

**STATUS**

Approved

**VERSION**

1.0

**EFFECTIVE**

26/04/2024

**REVIEW**

[Planned Review Date]

**OWNER**

Superintendent - Environment and Community



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## 1 | OVERVIEW

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

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

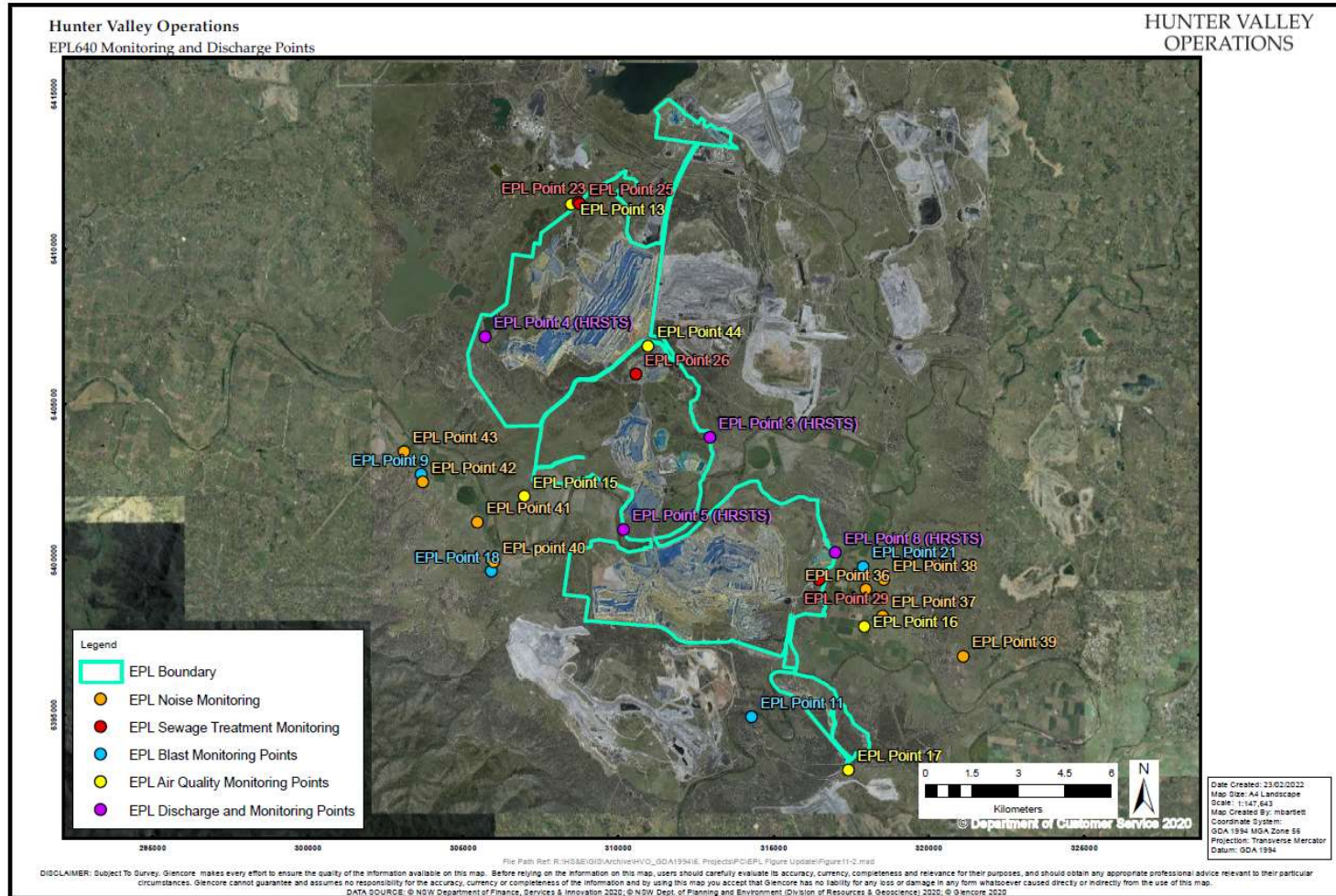


Figure 1: EPL 640 Monitoring Location

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### 3 | AIR QUALITY

**Date Last Sampled:** 28/02/2024

**Date Obtained:** 27/03/2024

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)
1/02/2024	µg/m <sup>3</sup>	Continuous	34.8	24.2	*	24.6	47.2
2/02/2024	µg/m <sup>3</sup>		46.4	41.7	41.9	35.0	59.9
3/02/2024	µg/m <sup>3</sup>		47.2	41.8	52.5	36.4	41.1
4/02/2024	µg/m <sup>3</sup>		39.7	61.8	69.5	44.6	112.7
5/02/2024	µg/m <sup>3</sup>		46.2	40.2	56.0	44.0	119.1
6/02/2024	µg/m <sup>3</sup>		24.2	20.0	15.0	18.1	39.6
7/02/2024	µg/m <sup>3</sup>		10.9	10.1	8.5	14.8	14.4
8/02/2024	µg/m <sup>3</sup>		22.2	15.2	13.1	20.7	17.3
9/02/2024	µg/m <sup>3</sup>		31.6	23.2	15.1	22.0	30.5
10/02/2024	µg/m <sup>3</sup>		23.3	15.1	14.6	24.2	21.5
11/02/2024	µg/m <sup>3</sup>		30.0	25.1	20.2	29.3	33.8
12/02/2024	µg/m <sup>3</sup>		32.3	27.8	13.4	19.1	34.0
13/02/2024	µg/m <sup>3</sup>		25.3	20.9	14.5	23.0	51.4
14/02/2024	µg/m <sup>3</sup>		27.8	18.2	17.9	22.9	78.7
15/02/2024	µg/m <sup>3</sup>		17.2	9.4	10.2	15.3	16.0

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## MONITORING DATA - FEBRUARY 2024

16/02/2024	µg/m <sup>3</sup>		24.3	20.4	10.2	16.3	23.2
17/02/2024	µg/m <sup>3</sup>		31.7	21.4	21.6	38.3	42.9
18/02/2024	µg/m <sup>3</sup>		28.4	27.9	23.9	34.8	60.1
19/02/2024	µg/m <sup>3</sup>		17.3	17.1	12.1	17.6	*
20/02/2024	µg/m <sup>3</sup>		17.3	13.5	12.1	15.2	25.1
21/02/2024	µg/m <sup>3</sup>		22.7	16.2	13.9	17.9	22.0
22/02/2024	µg/m <sup>3</sup>		29.0	30.1	26.2	30.9	35.5
23/02/2024	µg/m <sup>3</sup>		27.1	*	27.1	24.4	58.1
24/02/2024	µg/m <sup>3</sup>		15.4	*	14.9	19.2	20.7
25/02/2024	µg/m <sup>3</sup>		24.8	*	21.2	24.1	22.5
26/02/2024	µg/m <sup>3</sup>		30.8	35.7	30.7	32.3	53.5
27/02/2024	µg/m <sup>3</sup>		22.8	20.8	20.5	26.8	25.7
28/02/2024	µg/m <sup>3</sup>		35.7	29.8	28.6	22.9	33.4
29/02/2024	µg/m <sup>3</sup>		30.2	21.2	25.9	27.2	47.0
Monthly Meaningful Data							
February	µg/m <sup>3</sup>	Minimum	10.9	9.4	8.5	14.8	14.4
	µg/m <sup>3</sup>	Mean	28.2	25.0	23.3	25.6	42.2
	µg/m <sup>3</sup>	Maximum	47.2	61.8	69.5	44.6	119.1
	µg/m <sup>3</sup>	Median	27.8	21.3	19.1	24.1	34.0

\* Less than 75% data capture

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## 4 | SURFACE WATER MONITORING DATA

No discharges under the HRSTS occurred during February.

*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:** 26/02/2024

**Date Obtained:** 26/03/2024

*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
WN49UAA01A_WN49UAP01A	2/02/2024 13:53	dB(L)	All blasts 100%	115	120	95.07	84.68	88.59	91.80
M1T109501A_M1T311004A	3/02/2024 13:34	dB(L)		115	120	100.31	103.86	107.46	97.96
WS49LAL04A	5/02/2024 13:48	dB(L)		115	120	93.09	85.30	95.05	88.89
WN47BAF03A	6/02/2024 13:02	dB(L)		115	120	81.57	82.22	94.28	87.14
WN49UAA01B	6/02/2024 13:04	dB(L)		115	120	84.22	88.07	90.66	82.54
P125WK1002A	10/02/2024 15:21	dB(L)		115	120	112.26	104.22	110.11	92.62
P10136P01D	13/02/2024 13:32	dB(L)		115	120	94.48	82.14	93.25	93.84
P10103604A	13/02/2024 13:34	dB(L)		115	120	91.41	83.39	100.25	89.97
WS49MPG01A	16/02/2024 16:14	dB(L)		115	120	108.80	103.54	107.47	91.23
WS49LEC06A_WS49LEC07A	16/02/2024 16:15	dB(L)		115	120	108.26	100.92	107.27	84.71

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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
P125WK1002B	17/02/2024 13:24	dB(L)	All Blasts 100%	115	120	98.55	90.80	98.43	91.73
P210N15P01B	17/02/2024 13:26	dB(L)		115	120	100.31	85.75	92.76	100.46
P10104401A_P10136P01E	20/02/2024 13:13	dB(L)		115	120	100.94	88.94	104.30	89.45
WS49LAL05A_WS49LEB09A	26/02/2024 13:04	dB(L)		115	120	91.13	79.16	87.08	85.19
P209B5P03A_P21000001A	26/02/2024 15:00	dB(L)		115	120	92.87	83.64	93.59	95.21
Monthly Meaningful Data									
February		dB(L)	Minimum	115	120	81.57	79.16	87.08	82.54
		dB(L)	Mean	115	120	97.17	90.21	98.35	90.54
		dB(L)	Maximum	115	120	112.26	104.22	110.11	100.46
		dB(L)	Median	115	120	96.81	86.91	96.74	90.60

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*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
WN49UAA01A_WN49UAP01A	2/02/2024 13:53	mm/s	All Blasts 100%	5	10	0.28	0.21	0.23	0.19
M1T109501A_M1T311004A	3/02/2024 13:34	mm/s		5	10	0.15	0.22	0.08	0.07
WS49LAL04A	5/02/2024 13:48	mm/s		5	10	0.08	0.03	0.06	0.32
WN47BAF03A	6/02/2024 13:02	mm/s		5	10	0.08	0.02	0.03	0.07
WN49UAA01B	6/02/2024 13:04	mm/s		5	10	0.13	0.13	0.16	0.12
P125WK1002A	10/02/2024 15:21	mm/s		5	10	0.10	0.03	0.06	0.11
P10136P01D	13/02/2024 13:32	mm/s		5	10	0.13	0.09	0.14	0.12
P10103604A	13/02/2024 13:34	mm/s		5	10	0.16	0.09	0.12	0.23
WS49MPG01A	16/02/2024 16:14	mm/s		5	10	0.08	0.04	0.06	0.24
WS49LEC06A_WS49LEC07A	16/02/2024 16:15	mm/s		5	10	0.10	0.09	0.10	0.08
P125WK1002B	17/02/2024 13:24	mm/s		5	10	0.08	0.03	0.07	0.13
P210N15P01B	17/02/2024 13:26	mm/s		5	10	0.12	0.06	0.19	0.46
P10104401A_P10136P01E	20/02/2024 13:13	mm/s		5	10	0.16	0.07	0.10	0.26
WS49LAL05A_WS49LEB09A	26/02/2024 13:04	mm/s		5	10	0.09	0.07	0.07	0.15

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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
P209B5P03A_P21000001A	26/02/2024 15:00	mm/s		5	10	0.20	0.10	0.42	0.80
Monthly Meaningful Data									
February	mm/s	Minimum		5	10	0.08	0.02	0.03	0.07
	mm/s	Mean		5	10	0.12	0.08	0.11	0.18
	mm/s	Maximum		5	10	0.28	0.22	0.23	0.46
	mm/s	Median		5	10	0.11	0.07	0.09	0.14

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## **6 | SEWAGE TREATMENT PLANT MONITORING DATA**

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

## 7 | NOISE MONITORING DATA

**Date Sampled:** 12/02/2024

**Date Obtained:** 7/03/2024

Table 6 – Night  $L_{Aeq,15minute}$  and  $L_{A1,1minute}$  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>			$L_{Aeq,15minute}$	$L_{A1,1min}$	$L_{Aeq,15minute}$ <sup>2</sup>	$L_{A1,1min}$	$L_{Aeq,15minute}$	$L_{A1,1min}$
Shearers Lane	12/02/2024 21:00	2	122	D	No	41	46	IA	IA	Nil	Nil
Knodlers Lane	12/02/2024 21:39	2.3	119	E	No	40	46	IA	IA	Nil	Nil
Maison Dieu	12/02/2024 21:19	2.6	119	D	No	39	46	IA	IA	Nil	Nil
Long Point (Dights Crossing)	12/02/2024 22:27	2.5	162	D	No	37	46	IA	IA	Nil	Nil
Kilburnie South	12/02/2024 23:55	2.8	164	D	No	39	46	28	33	Nil	Nil
Jerrys Plains East	12/02/2024 23:32	1.6	148	E	No	39	46	<25	31	Nil	Nil
Jerrys Plains Village	12/02/2024 21:39	2.3	119	E	No	40	46	27	28	Nil	Nil
Jerrys Plains West	12/02/2024 21:09	2.6	119	D	No	40	46	27	31	Nil	Nil

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

2. Site-only  $L_{Aeq,15minute}$ , includes modifying factor penalties if applicable.

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

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