

HUNTER VALLEY
OPERATIONS

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

DOCUMENT NUMBER

HVOOC-1797567310-5155

STATUS

Approved

VERSION

1.0

EFFECTIVE

10/02/2025

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 ² /month	Grams per Metre Square per Month
µg/m ³	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

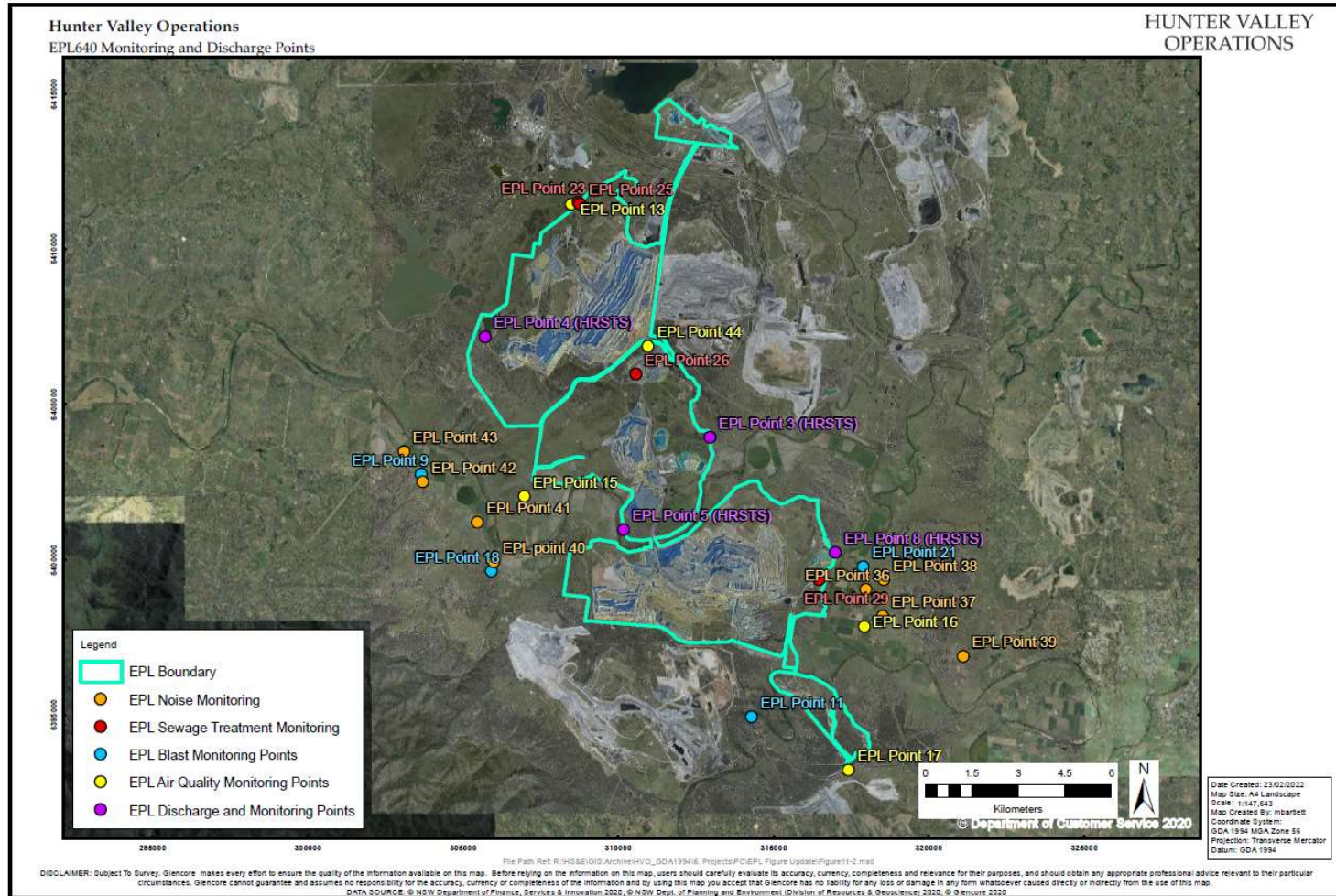


Figure 1: EPL 640 Monitoring Location

3 | AIR QUALITY

Date Last Sampled: 31/12/2024

Date Obtained: 22/02/2025

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)
1/12/2024	µg/m ³	Continuous	16.0	18.1	15.1	23.1	44.1
2/12/2024	µg/m ³		34.9	23.1	21.4	28.0	80.6
3/12/2024	µg/m ³		28.5	16.0	24.7	35.5	86.2
4/12/2024	µg/m ³		27.5	20.5	22.2	21.1	33.1
5/12/2024	µg/m ³		29.1	19.7	18.8	13.6	25.1
6/12/2024	µg/m ³		28.5	20.6	28.6	36.6	70.9
7/12/2024	µg/m ³		23.7	13.0	31.4	26.1	143
8/12/2024	µg/m ³		19.7	13.9	14.9	13.3	56.9
9/12/2024	µg/m ³		30.5	22.3	20.9	20.2	30.4
10/12/2024	µg/m ³		30.0	22.5	27.9	22.2	41.4
11/12/2024	µg/m ³		36.2	33.3	27.8	20.2	49.6
12/12/2024	µg/m ³		32.3	30.0	26.6	33.7	87
13/12/2024	µg/m ³		41.2	34.7	39.1	51.2	104.4
14/12/2024	µg/m ³		66.5	43.8	36.0	39.0	42.5
15/12/2024	µg/m ³		67.1	40.1	37.4	36.6	70.8

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16/12/2024	µg/m ³		44.0	29.4	24.7	22.5	32.7
17/12/2024	µg/m ³		36.4	22.8	24.0	29.2	124.8
18/12/2024	µg/m ³		24.6	17.1	7.6	16.0	16.1
19/12/2024	µg/m ³		39.0	24.7	11.8	23.0	23.3
20/12/2024	µg/m ³		45.9	30.6	13.1	29.8	58.9
21/12/2024	µg/m ³		49.2	27.2	24.2	34.0	71.8
22/12/2024	µg/m ³		50.1	33.3	21.0	29.0	64.7
23/12/2024	µg/m ³		38.1	25.2	33.2	35.1	156.7
24/12/2024	µg/m ³		37.6	22.7	23.1	58.9	61.5
25/12/2024	µg/m ³		15.3	14.1	15.9	16.7	21.9
26/12/2024	µg/m ³		42.6	19.9	22.1	21.3	94.7
27/12/2024	µg/m ³		45.8	31.3	28.1	40.3	*
28/12/2024	µg/m ³		36.3	30.5	21.0	29.5	65.6
29/12/2024	µg/m ³		57.1	37.1	27.6	40.7	83.3
30/12/2024	µg/m ³		43.1	27.2	22.4	22.9	34.5
Monthly Meaningful Data							
December	µg/m ³	Minimum	15.3	13.0	7.6	13.3	16.1
	µg/m ³	Mean	37.5	25.9	23.6	29.2	63.9
	µg/m ³	Maximum	67.1	43.8	39.1	58.9	156.7
	µg/m ³	Median	36.4	24.7	23.1	29.0	60.2

* Less than 75% data capture

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4 | SURFACE WATER MONITORING DATA

No discharges under the HRSTS occurred during December.

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: 30/12/2024

Date Obtained: 9/01/2025

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
P21000006A	3/12/2024 15:56	dB(L)	All blasts 100%	115	120	97.91	87.00	102.47	105.56
WS49LED09A	7/12/2024 13:29	dB(L)		115	120	104.10	109.09	109.00	94.40
P101VAX101B	9/12/2024 13:02	dB(L)		115	120	95.19	94.23	94.13	97.67
P21000007A	11/12/2024 13:30	dB(L)		115	120	96.63	90.51	100.02	99.41
WS49PGL04B	12/12/2024 13:11	dB(L)		115	120	101.24	101.49	97.24	107.06
WN47BAF04A	12/12/2024 13:35	dB(L)		115	120	96.06	96.72	96.51	98.10
P210PCF101A_P210V3P01A	14/12/2024 12:44	dB(L)		115	120	97.24	98.88	107.54	94.70
P101MTA303A	16/12/2024 16:32	dB(L)		115	120	102.04	108.02	109.89	97.36
WS49LEA202A_WS49LEB14A	17/12/2024 13:34	dB(L)		115	120	91.41	110.03	104.47	96.25
WN49LDL01A	20/12/2024 13:17	dB(L)		115	120	89.76	87.61	96.76	90.43

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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
M1T509501A	21/12/2024 10:14	dB(L)	All Blasts 100%	115	120	93.07	97.80	97.86	86.55
P210MTA301C	24/12/2024 9:14	dB(L)		115	120	88.54	90.74	95.64	97.12
P125W9P04A	24/12/2024 9:18	dB(L)		115	120	85.15	86.61	90.66	95.36
P101MTA304A	24/12/2024 9:19	dB(L)		115	120	93.94	86.11	98.83	100.69
WS49LEB15A	24/12/2024 13:00	dB(L)		115	120	95.76	103.45	94.39	96.06
WN47BAF04B	27/12/2024 13:15	dB(L)		115	120	94.80	98.95	103.28	105.11
P125WKW902A	30/12/2024 13:17	dB(L)		115	120	106.67	92.50	103.06	89.62
Monthly Meaningful Data									
December		dB(L)	Minimum	115	120	85.15	86.11	90.66	86.55
		dB(L)	Mean	115	120	95.85	96.46	100.10	97.14
		dB(L)	Maximum	115	120	106.67	110.03	109.89	107.06
		dB(L)	Median	115	120	95.76	96.72	98.83	97.12

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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
P21000006A	3/12/2024 15:56	mm/s	All Blasts 100%	5	10	0.12	0.13	0.31	0.60
WS49LED09A	7/12/2024 13:29	mm/s		5	10	0.14	0.08	0.09	0.09
P101VAX101B	9/12/2024 13:02	mm/s		5	10	0.22	0.14	0.16	0.18
P21000007A	11/12/2024 13:30	mm/s		5	10	0.11	0.09	0.19	0.45
WS49PGL04B	12/12/2024 13:11	mm/s		5	10	0.10	0.05	0.10	0.36
WN47BAF04A	12/12/2024 13:35	mm/s		5	10	0.06	0.05	0.09	0.11
P210PCF101A_P210V3P01A	14/12/2024 12:44	mm/s		5	10	0.09	0.07	0.20	0.51
P101MTA303A	16/12/2024 16:32	mm/s		5	10	0.10	0.07	0.14	0.28
WS49LEA202A_WS49LEB14A	17/12/2024 13:34	mm/s		5	10	0.05	0.06	0.08	0.46
WN49LDL01A	20/12/2024 13:17	mm/s		5	10	0.10	0.16	0.09	0.09
M1T509501A	21/12/2024 10:14	mm/s		5	10	0.15	0.33	0.10	0.06
P210MTA301C	24/12/2024 9:14	mm/s		5	10	0.07	0.05	0.16	0.32
P125W9P04A	24/12/2024 9:18	mm/s		5	10	0.11	0.06	0.13	0.23

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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
P101MTA304A	24/12/2024 9:19	mm/s		5	10	0.14	0.07	0.19	0.45
WS49LEB15A	24/12/2024 13:00	mm/s		5	10	0.05	0.05	0.08	0.11
WN47BAF04B	27/12/2024 13:15	mm/s		5	10	0.04	0.05	0.06	0.10
P125WKW902A	30/12/2024 13:17	mm/s		5	10	0.10	0.08	0.10	0.28
Monthly Meaningful Data									
December	mm/s	Minimum	5	10	0.04	0.05	0.06	0.06	
	mm/s	Mean	5	10	0.10	0.09	0.13	0.28	
	mm/s	Maximum	5	10	0.22	0.33	0.31	0.60	
	mm/s	Median	5	10	0.10	0.07	0.10	0.28	

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6 | SEWAGE TREATMENT PLANT MONITORING DATA

Date Sampled: 18/12/2024

Date Obtained: 13/01/2025

Table 5 – Sewage Treatment Plant Monitoring

Monitoring Site	Date & Time	Pollutant	Unit of Measure	Monitoring Result
EPA ID 23	18/12/2024 8:20:00	Faecal Coliforms	Colony forming units/100ml	460,000
		pH	pH	7.58
EPA ID 25	18/12/2024 8:30:00	Faecal Coliforms	Colony forming units/100ml	180,000
		pH	pH	7.13
EPA ID 26	18/12/2024 10:00:00	Faecal Coliforms	Colony forming units/100ml	*
		pH	pH	*
EPA ID 29	18/12/2024 11:15:00	Faecal Coliforms	Colony forming units/100ml	≈ 4,000
		pH	pH	8.98

**No sample collected due to insufficient water*

7 | NOISE MONITORING DATA

Date Sampled: 2/12/2024

Date Obtained: 10/12/2024

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? ¹	EPL limits, dB ¹		HVO levels, dB		Exceedances, dB	
		Speed m/s	Direction ³			$L_{Aeq,15minute}$	$L_{A1,1min}$	$L_{Aeq,15minute}$ ²	$L_{A1,1min}$	$L_{Aeq,15minute}$	$L_{A1,1min}$
Shearers Lane	2/12/2024 21:00	2.7	82	D	No	41	46	IA	IA	Nil	Nil
Knodlers Lane	2/12/2024 21:47	2.3	76	D	No	40	46	IA	IA	Nil	Nil
Maison Dieu	2/12/2024 21:24	2.7	65	D	No	39	46	IA	IA	Nil	Nil
Long Point (Dights Crossing)	2/12/2024 22:46	2.0	193	D	No	37	46	IA	IA	Nil	Nil
Kilburnie South	2/12/2024 23:56	1.9	186	D	No	39	46	33	37	Nil	Nil
Jerrys Plains East	2/12/2024 23:35	1.9	183	D	No	39	46	<30	<30	Nil	Nil
Jerrys Plains Village	2/12/2024 22:12	2.4	207	F	No	40	46	<30	40	Nil	Nil
Jerrys Plains West	2/12/2024 21:53	1.8	161	D	No	40	46	<30	38	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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