

# HUNTER VALLEY OPERATIONS

## EPL 640 MONITORING DATA – AUGUST 2024

**DOCUMENT NUMBER**

HVOOC-1797567310-5034

**STATUS**

Approved

**VERSION**

2.0

**EFFECTIVE**

23/10/2024

**REVIEW**

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**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

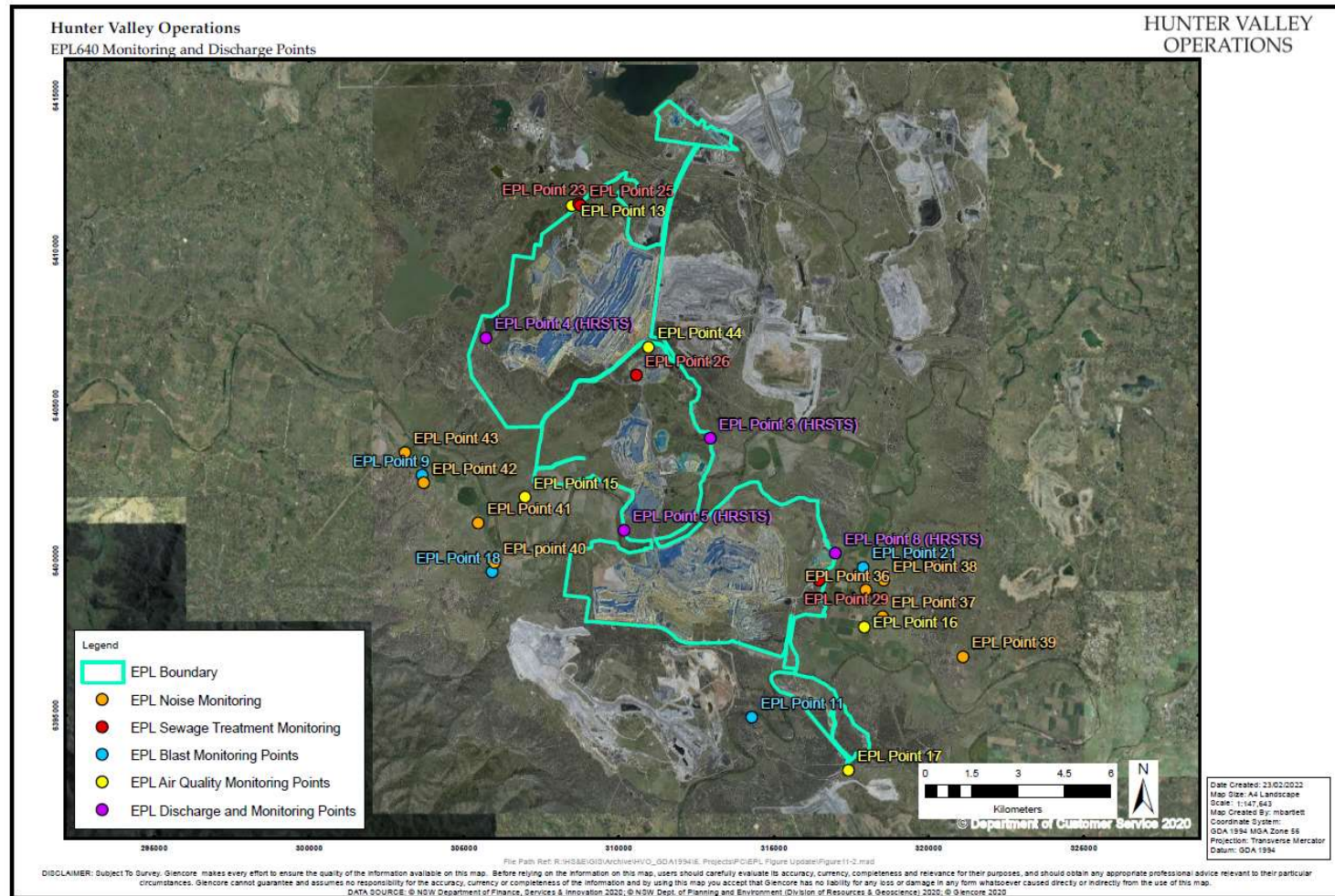


Figure 1: EPL 640 Monitoring Location

## 3 | AIR QUALITY

**Date Last Sampled:** 31/08/2024

**Date Obtained:** 25/09/2024

*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)
1/08/2024	µg/m <sup>3</sup>	Continuous	21.7	12.2	21.0	34.1	47.9
2/08/2024	µg/m <sup>3</sup>		20.5	16.4	16.4	29.8	73.7
3/08/2024	µg/m <sup>3</sup>		17.5	8.5	12.6	42.3	80.7
4/08/2024	µg/m <sup>3</sup>		36.0	17.0	18.3	26.4	60.4
5/08/2024	µg/m <sup>3</sup>		30.2	18.2	19.4	39.7	62.3
6/08/2024	µg/m <sup>3</sup>		17.1	10.2	10.8	15.6	26.7
7/08/2024	µg/m <sup>3</sup>		20.4	10.9	28.9	20.9	42.1
8/08/2024	µg/m <sup>3</sup>		29.6	21.2	19.1	53.0	64.7
9/08/2024	µg/m <sup>3</sup>		28.8	16.2	18.7	49.7	59.7
10/08/2024	µg/m <sup>3</sup>		35.4	24.2	19.0	34.8	48.4
11/08/2024	µg/m <sup>3</sup>		22.0	26.7	12.9	17.8	41.4
12/08/2024	µg/m <sup>3</sup>		15.2	16.7	9.6	9.2	11.4
13/08/2024	µg/m <sup>3</sup>		14.5	9.5	8.7	9.3	16.6
14/08/2024	µg/m <sup>3</sup>		10.1	8.4	9.4	9.3	13.5
15/08/2024	µg/m <sup>3</sup>		15.9	8.3	12.3	14.1	13.1

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16/08/2024	µg/m <sup>3</sup>		13.4	9.2	14.8	16.6	27.7
17/08/2024	µg/m <sup>3</sup>		7.6	5.3	10.2	13.9	48.5
18/08/2024	µg/m <sup>3</sup>		12.9	7.2	10.1	12.6	30.0
19/08/2024	µg/m <sup>3</sup>		37.4	24.7	12.2	17.3	15.0
20/08/2024	µg/m <sup>3</sup>		28.3	14.9	16.6	37.5	57.7
21/08/2024	µg/m <sup>3</sup>		23.3	20.6	27.3	30.5	138.7
22/08/2024	µg/m <sup>3</sup>		22.5	9.3	21.9	25.9	91.3
23/08/2024	µg/m <sup>3</sup>		37.1	21.1	18.8	63.5	78.0
24/08/2024	µg/m <sup>3</sup>		27.3	14.8	23.8	26.0	90.1
25/08/2024	µg/m <sup>3</sup>		18.4	9.7	17.8	16.4	64.1
26/08/2024	µg/m <sup>3</sup>		18.0	8.5	14.1	12.8	51.1
27/08/2024	µg/m <sup>3</sup>		23.7	6.2	21.8	14.2	83.3
28/08/2024	µg/m <sup>3</sup>		36.1	12.1	21.6	23.2	124.5
29/08/2024	µg/m <sup>3</sup>		30.2	13.7	26.9	21.1	89.5
30/08/2024	µg/m <sup>3</sup>		34.5	15.7	42.5	35.9	170.1
31/08/2024	µg/m <sup>3</sup>		34.7	16.0	31.5	31.2	125.5
<b>Monthly Meaningful Data</b>							
<b>August</b>	µg/m <sup>3</sup>	<b>Minimum</b>	7.6	5.3	8.7	9.2	11.4
	µg/m <sup>3</sup>	<b>Mean</b>	23.9	14.0	18.4	26.0	62.8
	µg/m <sup>3</sup>	<b>Maximum</b>	37.4	26.7	42.5	63.5	170.1
	µg/m <sup>3</sup>	<b>Median</b>	22.5	13.7	18.3	23.2	59.7

## 4 | SURFACE WATER MONITORING DATA

No discharges under the HRSTS occurred during August.

*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:** 31/08/2024

**Date Obtained:** 18/09/2024

*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
P210WK501A_P21003505A	2/08/2024 16:09	dB(L)	All blasts 100%	115	120	101.42	101.27	100.82	102.76
M1T208001A	3/08/2024 13:09	dB(L)		115	120	99.16	103.19	87.61	105.01
WS49MPG02B_WN49LAP02A	5/08/2024 13:09	dB(L)		115	120	90.52	82.82	99.45	89.16
P101N1002A	6/08/2024 13:08	dB(L)		115	120	94.66	89.38	104.18	101.64
P21000003A_P210N15P01C	6/08/2024 14:10	dB(L)		115	120	95.65	92.85	101.70	98.65
WN49LAA04B	8/08/2024 13:26	dB(L)		115	120	90.82	86.82	90.51	85.84
M1T208001B_M1T1ULD01A	10/08/2024 11:11	dB(L)		115	120	98.53	107.69	92.09	90.42
WS49MPG02C	10/08/2024 13:16	dB(L)		115	120	93.87	91.26	76.37	91.91
WS49MPG02D	14/08/2024 13:08	dB(L)		115	120	93.23	95.93	89.03	87.84
P101N1002B	14/08/2024 15:51	dB(L)		115	120	109.05	104.50	100.43	103.62

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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
P21003506A	14/08/2024 15:54	dB(L)	All Blasts 100%	115	120	102.04	97.13	94.84	97.77
P210M3P02A	15/08/2024 15:37	dB(L)		115	120	91.66	88.38	84.29	93.92
P210WK901A	19/08/2024 13:42	dB(L)		115	120	94.94	88.93	96.26	90.54
WS49MPG02E	22/08/2024 13:01	dB(L)		115	120	96.08	99.80	96.09	93.01
WS49LEB13A	23/08/2024 17:11	dB(L)		115	120	93.14	92.11	87.83	97.80
M1T309501A	24/08/2024 13:06	dB(L)		115	120	103.56	103.10	107.60	95.01
WS49UPG05A_WS49LPP01B	26/08/2024 16:45	dB(L)		115	120	88.95	83.53	93.85	83.09
P210WK902A	27/08/2024 15:22	dB(L)		115	120	89.92	81.59	104.95	99.67
P210N2004A	27/08/2024 15:32	dB(L)		115	120	89.89	86.42	96.26	97.73
M2TB11001A	30/08/2024 10:04	dB(L)		115	120	112.37	100.18	104.98	99.84
WN49U2A01A_WN49BAP02A	31/08/2024 10:11	dB(L)		115	120	89.48	100.60	110.87	100.28
<b>Monthly Meaningful Data</b>									
<b>August</b>		dB(L)	Minimum	115	120	88.95	81.59	76.37	83.09
		dB(L)	Mean	115	120	96.14	94.17	96.19	95.50
		dB(L)	Maximum	115	120	112.37	107.69	110.87	105.01
		dB(L)	Median	115	120	94.66	92.85	96.26	97.73

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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
P210WK501A_P21003505A	2/08/2024 16:09	mm/s	All Blasts 100%	5	10	0.23	0.11	0.40	1.23
M1T208001A	3/08/2024 13:09	mm/s		5	10	0.15	0.15	0.07	0.69
WS49MPG02B_WN49LAP02A	5/08/2024 13:09	mm/s		5	10	0.11	0.10	0.06	0.10
P101N1002A	6/08/2024 13:08	mm/s		5	10	0.26	0.11	0.23	0.59
P21000003A_P210N15P01C	6/08/2024 14:10	mm/s		5	10	0.14	0.05	0.23	0.68
WN49LAA04B	8/08/2024 13:26	mm/s		5	10	0.14	0.10	0.10	0.56
M1T208001B_M1T1ULD01A	10/08/2024 11:11	mm/s		5	10	0.13	0.15	0.06	0.12
WS49MPG02C	10/08/2024 13:16	mm/s		5	10	0.09	0.04	0.05	0.11
WS49MPG02D	14/08/2024 13:08	mm/s		5	10	0.09	0.02	0.03	0.12
P101N1002B	14/08/2024 15:51	mm/s		5	10	0.35	0.07	0.11	0.33
P21003506A	14/08/2024 15:54	mm/s		5	10	0.18	0.05	0.32	0.78
P210M3P02A	15/08/2024 15:37	mm/s		5	10	0.13	0.05	0.25	0.45
P210WK901A	19/08/2024 13:42	mm/s		5	10	0.24	0.09	0.33	1.61

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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
WS49MPG02E	22/08/2024 13:01	mm/s		5	10	0.10	0.03	0.05	0.07
WS49LEB13A	23/08/2024 17:11	mm/s		5	10	0.10	0.07	0.05	0.17
M1T309501A	24/08/2024 13:06	mm/s		5	10	0.17	0.26	0.07	0.14
WS49UPG05A_WS49LPP01B	26/08/2024 16:45	mm/s		5	10	0.10	0.07	0.07	0.11
P210WK902A	27/08/2024 15:22	mm/s		5	10	0.19	0.09	0.49	1.11
P210N2004A	27/08/2024 15:32	mm/s		5	10	0.14	0.07	0.25	0.66
M2TB11001A	30/08/2024 10:04	mm/s		5	10	0.21	0.06	0.09	0.52
WN49U2A01A_WN49BAP02A	31/08/2024 10:11	mm/s		5	10	0.08	0.05	0.07	0.21
Monthly Meaningful Data									
August	mm/s	Minimum	5	10	0.08	0.02	0.03	0.07	
	mm/s	Mean	5	10	0.16	0.09	0.16	0.49	
	mm/s	Maximum	5	10	0.35	0.26	0.49	1.61	
	mm/s	Median	5	10	0.14	0.07	0.09	0.45	

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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 September 2024 report.

## 7 | NOISE MONITORING DATA

**Date Sampled:** 28/08/2024

**Date Obtained:** 17/09/2024

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	27/08/2024 21:00	3.9	288	D	Yes	46	51	34	38	Nil	Nil
Knodlers Lane	27/08/2024 21:45	4.0	292	D	Yes	45	51	31	35	Nil	Nil
Maison Dieu	27/08/2024 21:22	3.5	296	D	Yes	44	51	33	35	Nil	Nil
Long Point (Dights Crossing)	27/08/2024 22:37	4.7	289	D	Yes	42	51	<20	<20	Nil	Nil
Kilburnie South	27/08/2024 23:08	4.6	300	D	Yes	44	51	29	32	Nil	Nil
Jerrys Plains East	27/08/2024 22:48	4.4	294	D	Yes	44	51	<25	30	Nil	Nil
Jerrys Plains Village	27/08/2024 21:19	3.5	296	D	Yes	45	51	<20	<20	Nil	Nil
Jerrys Plains West	27/08/2024 21:00	3.9	288	D	Yes	45	51	<20	<20	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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