

HUNTER VALLEY
OPERATIONS

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

DOCUMENT NUMBER

HVOOC-1797567310-5089

STATUS

Approved

VERSION

1.0

EFFECTIVE

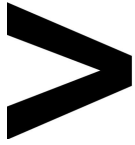
18/12/2024

REVIEW

[Planned Review Date]

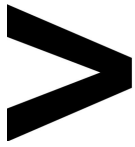
OWNER

Superintendent - Environment and Community



MONITORING DATA - OCTOBER 2024

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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

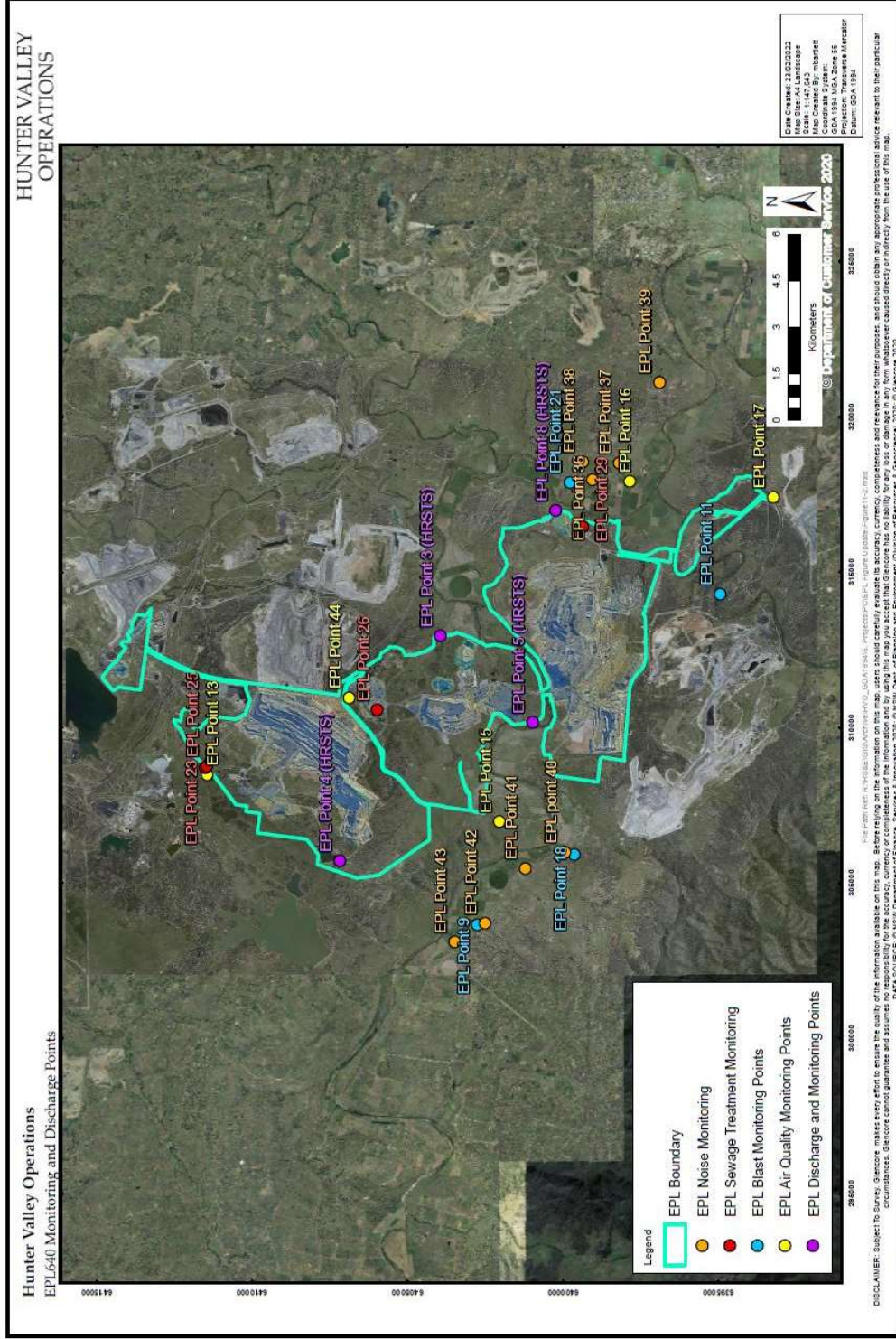


Figure 1: EPL 640 Monitoring Location

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Owner:	Superintendent - Environment and Community	Version:	1.0	Review:	[Planned Review Date]
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3 | AIR QUALITY

Date Last Sampled: 31/10/2024

Date Obtained: 5/12/2024

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)
1/10/2024	µg/m ³	Continuous	25.5	20.6	18.4	17.9	62.1
2/10/2024	µg/m ³		27.7	21.9	16.8	21.3	19.7
3/10/2024	µg/m ³		30.7	22.2	16.1	17.9	16.1
4/10/2024	µg/m ³		28.4	20.9	33.1	33.9	73.5
5/10/2024	µg/m ³		17.2	9.9	25.3	22.3	44.0
6/10/2024	µg/m ³		29.4	12.4	34.0	29.8	72.1
7/10/2024	µg/m ³		22.0	16.6	31.9	35.2	82.4
8/10/2024	µg/m ³		35.7	25.2	25.2	29.1	48.1
9/10/2024	µg/m ³		16.9	10.2	11.2	14.8	19.4
10/10/2024	µg/m ³		20.4	29.6	19.1	19.4	65.5
11/10/2024	µg/m ³		41.2	35.8	24.1	34.0	72.6
12/10/2024	µg/m ³		36.9	23.6	25.9	32.0	39.1
13/10/2024	µg/m ³		23.7	20.1	13.6	14.8	30.6
14/10/2024	µg/m ³		21.1	13.5	14.2	24.3	48.0
15/10/2024	µg/m ³		16.1	12.2	13.8	16.1	17.3
16/10/2024	µg/m ³		16.6	16.5	12.2	14.4	16.0

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17/10/2024	µg/m ³	22.2	14.5	15.8	16.5	29.5
18/10/2024	µg/m ³	18.0	12.1	16.3	15.0	34.8
19/10/2024	µg/m ³	13.0	10.1	9.3	13.2	23.6
20/10/2024	µg/m ³	23.3	18.9	15.3	21.2	22.3
21/10/2024	µg/m ³	25.0	14.6	16.9	21.8	25.4
22/10/2024	µg/m ³	31.6	30.8	25.0	30.1	66.4
23/10/2024	µg/m ³	35.3	19.1	36.3	61.7	93.8
24/10/2024	µg/m ³	38.8	20.8	28.2	40.3	62.1
25/10/2024	µg/m ³	22.0	12.3	14.7	16.5	37.1
26/10/2024	µg/m ³	37.1	25.0	20.6	25.4	23.4
27/10/2024	µg/m ³	38.9	27.8	27.5	37.2	94.5
28/10/2024	µg/m ³	43.0	22.7	26.4	*	103.9
29/10/2024	µg/m ³	41.0	29.1	26.1	*	35.0
30/10/2024	µg/m ³	50.7	38.0	28.9	*	133.1
31/10/2024	µg/m ³	46.6	23.9	34.5	41.0	117.1
Monthly Meaningful Data						
October	µg/m³	13.0	9.9	9.3	13.2	16.0
	Mean	28.9	20.4	21.8	25.6	52.5
	Maximum	50.7	38.0	36.3	61.7	133.1
	Median	27.7	20.6	20.6	22.1	44.0

*Less than 75% data capture due to annual calibration



4 | SURFACE WATER MONITORING DATA

No discharges under the HRSTS occurred during October.

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



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5 | BLAST MONITORING DATA

Date Last Sampled: 31/10/2024

Date Obtained: 6/11/2024

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	Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	Moses Crossing EPL ID 18	Warkworth EPL ID 11
WS49LEC11A	1/10/2024 13:09	dB(L)	All blasts 100%	115	120	77.12	84.92	93.28	87.33
WS49LPG01B	2/10/2024 15:15	dB(L)		115	120	89.80	81.06	90.84	99.66
P101MA303A	8/10/2024 13:21	dB(L)		115	120	99.69	112.55	98.15	93.15
P125N2502A	8/10/2024 13:21	dB(L)		115	120	101.34	111.60	101.33	110.98
WS49MPG03A	10/10/2024 14:17	dB(L)		115	120	81.71	86.52	97.30	82.27
P210WK608A	12/10/2024 11:01	dB(L)		115	120	96.56	102.84	96.72	100.93
WS49LEC11B	12/10/2024 13:02	dB(L)		115	120	100.05	95.30	96.97	95.12
WS49MPG04A	14/10/2024 13:21	dB(L)		115	120	98.88	98.66	100.65	100.18
P101MTA301A	15/10/2024 13:03	dB(L)		115	120	85.53	92.64	95.10	89.11
P210WK608B	15/10/2024 15:25	dB(L)		115	120	97.47	92.83	100.07	93.06
M1T309502A	22/10/2024 13:12	dB(L)		115	120	100.42	101.87	97.00	81.71

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Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Monitoring Point					
				95% of Blasts	100% of Blasts	Jerrys Plains EPL ID 9	Moses Crossing EPL ID 18	Maison Dieu EPL ID 21	Warkworth EPL ID 11		
P101V1P01B	23/10/2024 14:55	dB(L)	All Blasts 100%	115	120	83.00	96.50	99.47	96.37		
P210WKW903A_P125M3P01B	24/10/2024 14:47	dB(L)		115	120	101.11	103.80	105.54	107.10		
P21000004A	24/10/2024 14:49	dB(L)		115	120	102.24	102.03	103.93	98.75		
WN49BAR01A_WN49BAP03A	29/10/2024 13:18	dB(L)		115	120	85.54	101.65	86.53	87.57		
WS49MPG04B	29/10/2024 13:19	dB(L)		115	120	84.72	97.72	91.04	93.73		
P101PCF102A	31/10/2024 14:13	dB(L)		115	120	87.26	97.70	95.29	96.01		
P125N2503A	31/10/2024 14:15	dB(L)		115	120	88.54	98.27	95.66	95.64		
<i>Monthly Meaningful Data</i>											
October		dB(L)		Minimum	115	120	77.12	90.84	81.06	81.71	
		dB(L)		Mean	115	120	92.28	98.06	96.57	94.93	
		dB(L)	Maximum	115	120	102.24	103.80	112.55	110.98		
		dB(L)	Median	115	120	93.18	97.71	95.48	95.38		



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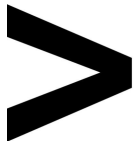
Table 4 – Blast Monitoring (Ground Vibration)

Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Monitoring Point			
				95% of Blasts	100% of Blasts	Jerrys Plains EPL ID 9	Moses Crossing EPL ID 18	Maison Dieu EPL ID 21	Warkworth EPL ID 11
WS49LEC11A	1/10/2024 13:09	mm/s	All Blasts 100%	5	10	0.05	0.10	0.10	0.56
WS49LPG01B	2/10/2024 15:15	mm/s		5	10	0.05	0.10	0.06	0.12
P101MA303A	8/10/2024 13:21	mm/s		5	10	0.06	0.11	0.24	0.70
P125N2502A	8/10/2024 13:21	mm/s		5	10	0.11	0.21	0.24	0.70
WS49MPG03A	10/10/2024 14:17	mm/s		5	10	0.07	0.07	0.07	0.36
P210WK608A	12/10/2024 11:01	mm/s		5	10	0.07	0.07	0.19	0.40
WS49LEC11B	12/10/2024 13:02	mm/s		5	10	0.09	0.09	0.06	0.09
WS49MPG04A	14/10/2024 13:21	mm/s		5	10	0.06	0.06	0.04	0.91
P101MTA301A	15/10/2024 13:03	mm/s		5	10	0.20	0.20	0.17	0.15
P210WK608B	15/10/2024 15:25	mm/s		5	10	0.08	0.08	0.17	0.41
M1T309502A	22/10/2024 13:12	mm/s		5	10	0.10	0.10	0.07	0.27
P101V1P01B	23/10/2024 14:55	mm/s		5	10	0.14	0.14	0.11	0.24
P210WKW903A_P125M3P01B	24/10/2024 14:47	mm/s		5	10	0.21	0.21	0.24	0.90
P2100004A	24/10/2024 14:49	mm/s		5	10	0.14	0.14	0.30	0.88



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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
WN49BAR01A_WN49BAP03A	29/10/2024 13:18	mm/s		5	10	0.23	0.43	0.13	0.14
WS49MPG04B	29/10/2024 13:19	mm/s		5	10	0.05	0.04	0.08	0.62
P101PCF102A	31/10/2024 14:13	mm/s		5	10	0.07	0.05	0.09	0.84
P125N2503A	31/10/2024 14:15	mm/s		5	10	0.16	0.08	0.18	0.43
Monthly Meaningful Data									
October		mm/s	Minimum	5	10	0.05	0.04	0.04	0.09
		mm/s	Mean	5	10	0.12	0.10	0.14	0.48
		mm/s	Maximum	5	10	0.23	0.43	0.30	0.91
		mm/s	Median	5	10	0.10	0.06	0.12	0.42



6 | SEWAGE TREATMENT PLANT MONITORING DATA

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



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7 | NOISE MONITORING DATA

Date Sampled: 15/10/2024

Date Obtained: 21/11/2024

Table 6 – Night L_{Aeq,15minute} and 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	15/10/2024 21:00	4.5	141	D	Yes	46	51	IA	IA	Nil	Nil
Knodlers Lane	15/10/2024 21:41	2.8	128	E	No	40	46	IA	IA	Nil	Nil
Maison Dieu	15/10/2024 21:21	3.5	139	D	Yes	44	51	IA	IA	Nil	Nil
Long Point (Dights Crossing)	15/10/2024 22:32	2.6	126	E	No	37	46	IA	IA	Nil	Nil
Kilburnie South	15/10/2024 23:17	2.5	151	E	No	39	46	32	37	Nil	Nil
Jerrys Plains East	15/10/2024 22:55	2.2	147	E	No	39	46	IA	IA	Nil	Nil
Jerrys Plains Village	15/10/2024 21:22	3.5	139	D	Yes	45	51	IA	IA	Nil	Nil
Jerrys Plains West	15/10/2024 21:00	4.5	141	D	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 NPfl.

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

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