

HUNTER VALLEY
OPERATIONS

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

DOCUMENT NUMBER
HVOOC-1797567310-4965

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EFFECTIVE
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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 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

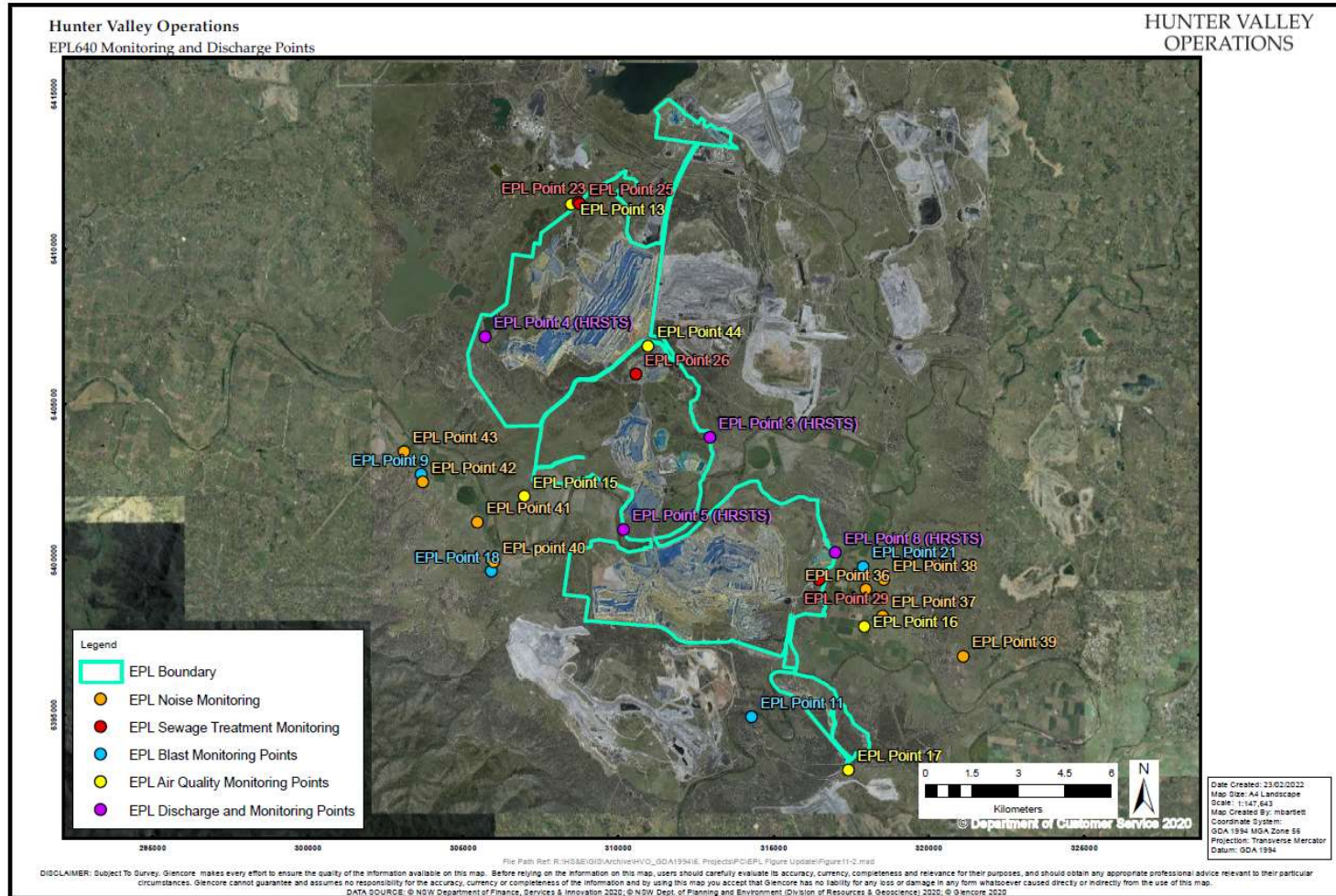


Figure 1: EPL 640 Monitoring Location

3 | AIR QUALITY

Date Last Sampled: 31/05/2024

Date Obtained: 27/06/2024

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)
1/05/2024	µg/m ³	Continuous	11.5	7.1	8.7	11.6	47.0
2/05/2024	µg/m ³		14.5	14.3	10.3	12.1	67.1
3/05/2024	µg/m ³		17.6	12.9	10.5	15.3	65.1
4/05/2024	µg/m ³		12.2	11.3	7.4	9.9	51.0
5/05/2024	µg/m ³		8.9	8.1	9.7	12.5	29.2
6/05/2024	µg/m ³		9.7	7.0	9.3	10.2	22.2
7/05/2024	µg/m ³		15.4	24.7	12.6	14.8	48.9
8/05/2024	µg/m ³		19.0	16.2	11.1	14.4	67.5
9/05/2024	µg/m ³		17.4	33.8	11.5	13.7	*
10/05/2024	µg/m ³		23.3	18.6	10.9	12.8	32.7
11/05/2024	µg/m ³		7.8	10.6	5.2	6.8	33.0
12/05/2024	µg/m ³		12.0	13.3	13.7	17.4	51.6
13/05/2024	µg/m ³		14.0	12.2	12.6	18.3	74.4
14/05/2024	µg/m ³		19.1	17.8	16.5	26.3	99.9
15/05/2024	µg/m ³		20.4	28.1	22.7	38.3	80.8

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16/05/2024	µg/m ³		24.4	20.4	16.9	28.4	34.2
17/05/2024	µg/m ³		20.5	12.2	19.1	28.0	29.7
18/05/2024	µg/m ³		12.6	8.8	17.2	22.5	18.8
19/05/2024	µg/m ³		12.1	7.1	13.1	23.0	22.4
20/05/2024	µg/m ³		19.9	12.5	17.8	23.6	28.5
21/05/2024	µg/m ³		19.5	11.0	8.4	22.1	*
22/05/2024	µg/m ³		21.0	16.8	12.7	28.1	*
23/05/2024	µg/m ³		29.6	13.8	15.1	34.9	26.7
24/05/2024	µg/m ³		33.8	21.3	15.7	31.2	41.8
25/05/2024	µg/m ³		24.4	26.5	15.2	36.2	41.5
26/05/2024	µg/m ³		17.8	16.9	20.3	40.2	51.6
27/05/2024	µg/m ³		29.5	16.1	21.6	31.9	81.9
28/05/2024	µg/m ³		11.5	23.5	25.8	50.9	28.0
29/05/2024	µg/m ³		18.1	19.6	23.6	61.7	31.0
30/05/2024	µg/m ³		34.3	20.0	25.2	42.9	16.5
31/05/2024	µg/m ³		21.0	16.0	26.0	29.4	77.4
Monthly Meaningful Data							
May	µg/m ³	Minimum	7.8	7.0	5.2	6.8	16.5
	µg/m ³	Mean	18.5	16.1	15.0	24.8	46.4
	µg/m ³	Maximum	34.3	33.8	26.0	61.7	99.9
	µg/m ³	Median	18.1	16.0	13.7	23.0	41.6

* Less than 75% data capture

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4 | SURFACE WATER MONITORING DATA

No discharges under the HRSTS occurred during May.

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: 30/05/2024

Date Obtained: 5/06/2024

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
P21002001B	1/05/2024 16:01	dB(L)	All blasts 100%	115	120	93.11	92.49	98.27	95.62
WN49LAP01A	4/05/2024 12:57	dB(L)		115	120	102.56	103.93	94.56	83.53
P125BF403A	4/05/2024 14:28	dB(L)		115	120	100.55	99.32	90.49	99.14
P210N2001A	8/05/2024 13:15	dB(L)		115	120	97.72	91.28	96.00	88.94
WS49LAL06A	10/05/2024 16:08	dB(L)		115	120	96.88	96.32	92.25	87.15
P10101002A	11/05/2024 13:05	dB(L)		115	120	101.76	93.72	96.14	88.31
P209BYP01A	11/05/2024 16:15	dB(L)		115	120	97.91	94.48	86.23	90.20
P209BR502A_P209BYP01B	13/05/2024 10:33	dB(L)		115	120	96.01	100.15	94.60	90.50
WN49LAA02B	17/05/2024 16:59	dB(L)		115	120	87.61	80.59	87.60	89.97
WS49LEC08C	17/05/2024 17:10	dB(L)		115	120	88.47	81.24	93.37	91.09

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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
P209BR601A_P209BR502B	20/05/2024 13:00	dB(L)	All Blasts 100%	115	120	93.40	89.00	104.64	98.29
P101MA301A_P10101002A	21/05/2024 13:02	dB(L)		115	120	100.72	94.10	97.91	98.24
WN49UAP02A	22/05/2024 16:04	dB(L)		115	120	80.84	76.34	81.13	92.52
WS49LEP07A_WS49LAU01A	23/05/2024 13:09	dB(L)		115	120	103.96	105.17	95.67	90.41
P10101002C_P101N10P01B	24/05/2024 13:04	dB(L)		115	120	91.87	83.99	99.88	96.17
WS49UPG03A	25/05/2024 16:42	dB(L)		115	120	82.80	87.03	81.00	97.52
WN49UAA03A	30/05/2024 13:07	dB(L)		115	120	91.26	87.78	93.90	89.25
Monthly Meaningful Data									
May	dB(L)	Minimum	115	120	80.84	76.34	81.00	83.53	
	dB(L)	Mean	115	120	94.55	91.58	93.16	92.17	
	dB(L)	Maximum	115	120	103.96	105.17	104.64	99.14	
	dB(L)	Median	115	120	96.01	92.49	94.56	90.50	

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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
P21002001B	1/05/2024 16:01	mm/s	All Blasts 100%	5	10	0.17	0.07	0.41	1.13
WN49LAP01A	4/05/2024 12:57	mm/s		5	10	0.11	0.17	0.11	0.07
P125BF403A	4/05/2024 14:28	mm/s		5	10	0.15	0.04	0.11	0.26
P210N2001A	8/05/2024 13:15	mm/s		5	10	0.16	0.05	0.42	0.71
WS49LAL06A	10/05/2024 16:08	mm/s		5	10	0.12	0.1	0.21	0.14
P10101002A	11/05/2024 13:05	mm/s		5	10	0.17	0.06	0.12	0.18
P209BYP01A	11/05/2024 16:15	mm/s		5	10	0.19	0.06	0.34	0.59
P209BR502A_P209BYP01B	13/05/2024 10:33	mm/s		5	10	0.11	0.03	0.2	0.28
WN49LAA02B	17/05/2024 16:59	mm/s		5	10	0.19	0.13	0.12	0.12
WS49LEC08C	17/05/2024 17:10	mm/s		5	10	0.11	0.06	0.07	0.06
P209BR601A_P209BR502B	20/05/2024 13:00	mm/s		5	10	0.17	0.07	0.39	1.00
P101MA301A_P10101002A	21/05/2024 13:02	mm/s		5	10	0.18	0.06	0.11	0.51
WN49UAP02A	22/05/2024 16:04	mm/s		5	10	0.11	0.08	0.06	0.61
WS49LEP07A_WS49LAU01A	23/05/2024 13:09	mm/s		5	10	0.18	0.12	0.09	0.64

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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
P10101002C_P101N10P01B	24/05/2024 13:04	mm/s		5	10	0.14	0.05	0.09	0.57
WS49UPG03A	25/05/2024 16:42	mm/s		5	10	0.09	0.03	0.05	0.57
WN49UAA03A	30/05/2024 13:07	mm/s		5	10	0.19	0.11	0.35	0.24
Monthly Meaningful Data									
May	mm/s	Minimum	5	10	0.09	0.03	0.05	0.06	
	mm/s	Mean	5	10	0.15	0.08	0.19	0.45	
	mm/s	Maximum	5	10	0.19	0.17	0.42	1.13	
	mm/s	Median	5	10	0.16	0.06	0.12	0.51	

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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 June 2024 report.

7 | NOISE MONITORING DATA

Date Sampled: 1/05/2024

Date Obtained: 13/06/2024

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	1/05/2024 21:00	3.7	157	D	Yes	41	46	NM	NM	Nil	Nil
Knodlers Lane	1/05/2024 21:50	3.2	150	D	Yes	45	51	IA	IA	Nil	Nil
Maison Dieu	1/05/2024 21:25	2.8	156	D	No	39	46	IA	IA	Nil	Nil
Long Point (Dights Crossing)	1/05/2024 22:49	2.3	160	D	No	37	46	IA	IA	Nil	Nil
Kilburnie South	1/05/2024 23:10	3.3	150	D	Yes	44	51	IA	IA	Nil	Nil
Jerrys Plains East	1/05/2024 22:50	2.3	160	D	No	39	46	IA	IA	Nil	Nil
Jerrys Plains Village	1/05/2024 21:19	2.8	167	D	No	40	46	IA	IA	Nil	Nil
Jerrys Plains West	1/05/2024 21:00	3.7	157	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.

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