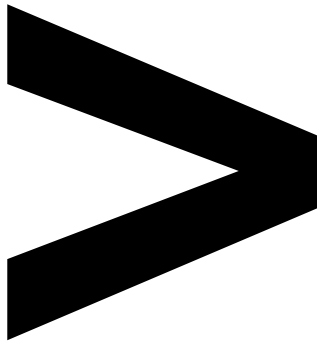




HUNTER VALLEY OPERATIONS

EPL 640 MONITORING DATA – MARCH 2025

DOCUMENT NUMBER
HVOOC-1797567310-5255

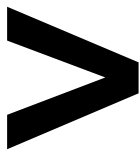
STATUS
Approved

VERSION
2.0

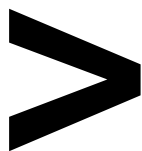
EFFECTIVE
10/07/2025

REVIEW
[Planned Review Date]

OWNER
Superintendent - Environment and Community



1 	Overview	3
2 	Definitions.....	3
3 	Air Quality	5
4 	Surface Water Monitoring Data	7
5 	Blast Monitoring Data	8
6 	Sewage Treatment Plant Monitoring Data.....	13
7 	Noise Monitoring Data.....	14



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

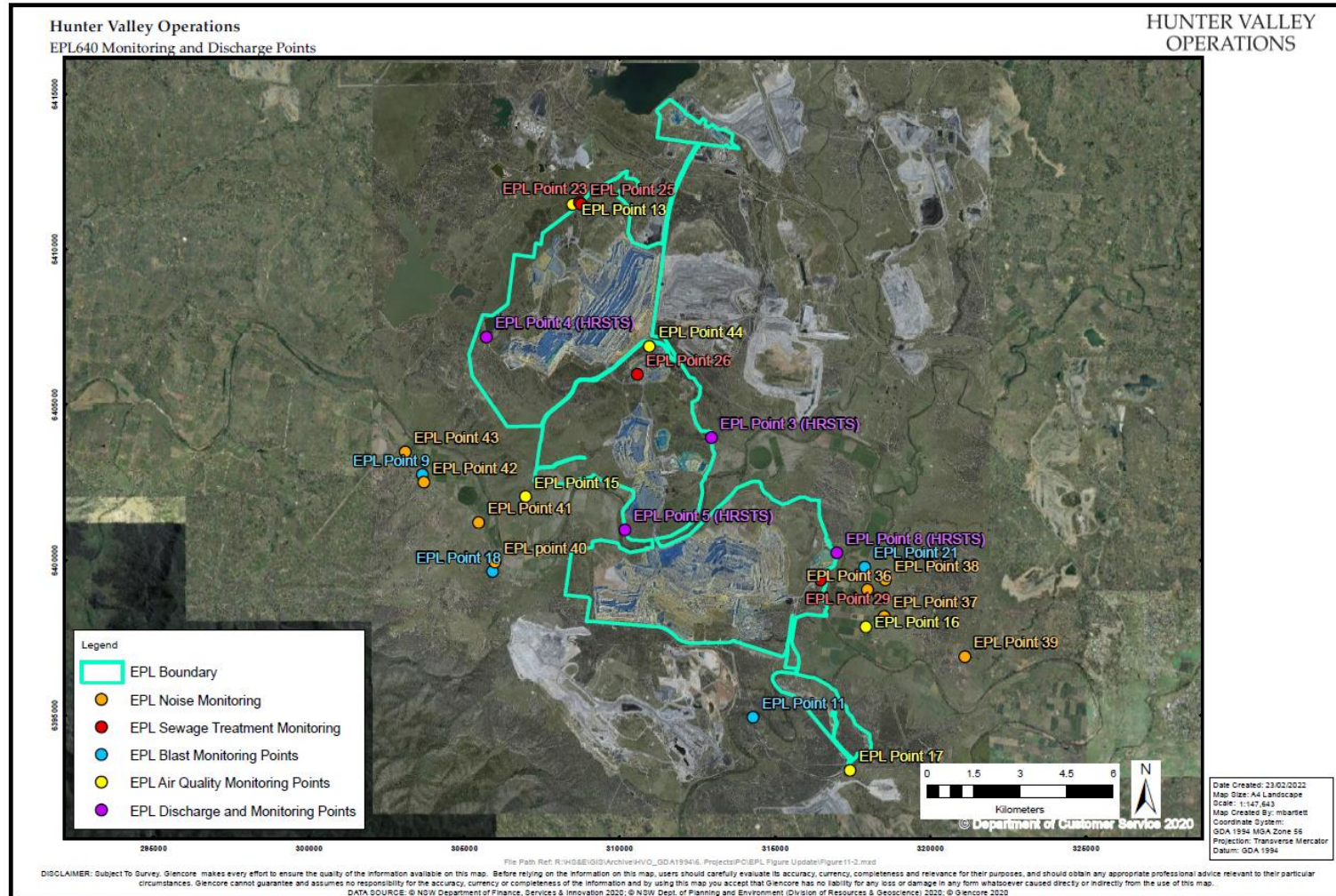
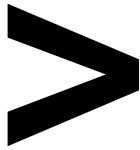
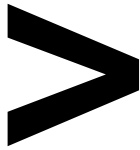


Figure 1: EPL 640 Monitoring Location



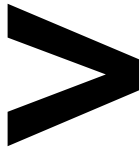
3 | AIR QUALITY

Date Last Sampled: 31/03/2025

Date Obtained: 29/05/2025

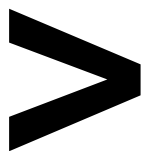
Table 1 - Particulate Matter Monitoring (<10µm)

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)
1/03/2025	µg/m ³	Continuous	43.5	49.9	38.8	40.9	25.4
2/03/2025	µg/m ³		57.9	29.2	28.9	29.4	42.7
3/03/2025	µg/m ³		31.4	15.9	24.1	30.5	39.8
4/03/2025	µg/m ³		34.1	17.0	17.5	23.0	34.7
5/03/2025	µg/m ³		*	15.3	11.0	17.7	21.4
6/03/2025	µg/m ³		20.2	14.5	12.2	17.8	9.5
7/03/2025	µg/m ³		24.7	11.3	11.8	18.8	15.4
8/03/2025	µg/m ³		15.0	11.3	8.6	12.1	*
9/03/2025	µg/m ³		18.0	20.8	11.5	15.3	*
10/03/2025	µg/m ³		11.7	13.4	9.2	8.2	*
11/03/2025	µg/m ³		16.1	16.2	7.4	8.8	*
12/03/2025	µg/m ³		18.3	17.0	8.7	14.3	10.9
13/03/2025	µg/m ³		18.6	21.2	14.5	18.2	23.1
14/03/2025	µg/m ³		23.1	31.1	22.2	26.1	67.2
15/03/2025	µg/m ³		33.0	36.2	33.2	48.8	111.2



16/03/2025	µg/m ³		19.5	31.4	46.9	38.1	83.1
17/03/2025	µg/m ³		27.4	29.4	37.4	30.2	33.8
18/03/2025	µg/m ³		31.5	29.0	22.4	28.5	21.8
19/03/2025	µg/m ³		32.2	33.7	17.4	24.2	37.0
20/03/2025	µg/m ³		40.2	29.6	22.5	20.0	53.6
21/03/2025	µg/m ³		19.5	15.6	14.5	28.0	47.9
22/03/2025	µg/m ³		20.1	19.5	15.4	25.0	16.2
23/03/2025	µg/m ³		14.9	13.2	9.1	13.5	8.1
24/03/2025	µg/m ³		18.8	16.7	12.4	15.9	14.1
25/03/2025	µg/m ³		16.0	11.5	12.2	15.5	13.0
26/03/2025	µg/m ³		12.3	16.4	10.7	10.4	6.2
27/03/2025	µg/m ³		*	19.6	13.2	14.1	7.3
28/03/2025	µg/m ³		8.1	18.4	21.7	12.7	8.3
29/03/2025	µg/m ³		5.1	4.9	7.0	9.1	4.1
30/03/2025	µg/m ³		7.9	7.7	9.4	15.0	7.5
31/03/2025	µg/m ³		13.3	7.5	10.3	20.3	15.1
Monthly Meaningful Data							
March	µg/m ³	Minimum	8.2	5.1	4.8	7.0	6.1
	µg/m ³	Mean	20.3	21.7	16.3	16.8	15.3
	µg/m ³	Maximum	48.8	57.9	33.3	46.9	32.4
	µg/m ³	Median	18.0	19.2	14.3	12.8	13.3

* Less than 75% 24-hour data capture



4 | SURFACE WATER MONITORING DATA

No discharges under the HRSTS occurred during March.

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

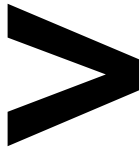
5 | BLAST MONITORING DATA

Date Last Sampled: 28/03/2025

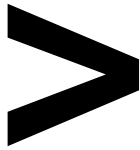
Date Obtained: 12/05/2025

Table 3 – Blast Monitoring (Air Blast Overpressure)

Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Moses Crossing EPL ID 18	Monitoring Point		Warkworth EPL ID 11
				95% of Blasts	100% of Blasts		Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	
WS49ARU303C	1/03/2025 13:13	dB(L)	All blasts 100%	115	120	87.46	84.34	92.87	95.94
P209BRN602A	3/03/2025 13:35	dB(L)		115	120	101.86	101.78	109.63	101.05
P101MTA306A_P101MTA307A	3/03/2025 13:37	dB(L)		115	120	95.00	99.03	103.48	94.13
P102BWF401A	4/03/2025 13:38	dB(L)		115	120	104.71	111.40	107.52	92.83
M1TB12501A	4/03/2025 15:09	dB(L)		115	120	105.75	98.19	108.64	87.79
P210WKW903A_P210M3P04A	7/03/2025 12:27	dB(L)		115	120	102.84	103.29	109.66	103.52



Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Moses Crossing EPL ID 18	Monitoring Point		Warkworth EPL ID 11
				95% of Blasts	100% of Blasts		Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	
M1T711001A	8/03/2025 12:48	dB(L)	All Blasts 100%	115	120	101.92	102.31	107.67	91.94
P125FCL04A	10/03/2025 14:15	dB(L)		115	120	91.81	85.80	91.47	87.54
P102BWF401B	10/03/2025 14:17	dB(L)		115	120	96.54	100.79	95.96	99.72
P210M3P05A	11/03/2025 16:16	dB(L)		115	120	93.17	93.41	96.65	90.52
WS49PGU07A_WS49LPP02A	12/03/2025 16:47	dB(L)		115	120	100.44	98.14	97.28	90.09
P102W6P01B	14/03/2025 13:27	dB(L)		115	120	98.67	87.11	94.80	89.61
WN49LDU101A_WN49ULP03A	15/03/2025 13:23	dB(L)		115	120	92.52	98.18	96.50	83.50
P210WKW903B_P210M3P04B	17/03/2025 13:30	dB(L)		115	120	100.68	105.80	103.63	105.07
M1T307001B	20/03/2025 12:11	dB(L)		115	120	93.08	93.85	90.37	98.87



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
WS49PGU07B_WS49LPP02B_WS49LDP04A	20/03/2025 13:30	dB(L)		115	120	96.99	80.89	89.39	89.62
P210VAX101A	21/03/2025 16:21	dB(L)		115	120	88.71	83.87	97.78	105.69
P101B4P01A	22/03/2025 12:48	dB(L)		115	120	84.97	82.18	82.72	87.12
P102BWF402A	25/03/2025 15:21	dB(L)		115	120	100.71	101.96	101.78	93.46
P210WKW904A_P210N20P01A	26/03/2025 16:35	dB(L)		115	120	100.06	96.55	103.07	103.11
P210PCF301B	27/03/2025 13:25	dB(L)		115	120	90.62	101.98	100.91	93.91
P101B4P01B	28/03/2025 14:03	dB(L)		115	120	103.09	108.26	101.28	85.86
Monthly Meaningful Data									
March		dB(L)	Minimum	115	120	84.97	80.89	82.72	83.50
		dB(L)	Mean	115	120	96.89	96.32	99.23	94.13
		dB(L)	Maximum	115	120	105.75	111.40	109.66	105.69
		dB(L)	Median	115	120	97.83	98.19	99.35	93.15

Number: HVOOC-1797567310-5255

Status: Approved

Effective: 10/07/2025

Page 10 of 14

Owner: Superintendent - Environment and Community

Version: 2.0

Review: [Planned Review Date]

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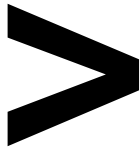
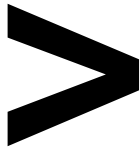


Table 4 – Blast Monitoring (Ground Vibration)

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
WS49ARU303C	1/03/2025 13:13	mm/s	All Blasts 100%	5	10	0.29	0.24	0.26	0.17
P209BRN602A	3/03/2025 13:35	mm/s		5	10	0.21	0.11	0.61	1.12
P101MTA306A_P101MTA307A	3/03/2025 13:37	mm/s		5	10	0.07	0.07	0.11	0.38
P102BWF401A	4/03/2025 13:38	mm/s		5	10	0.10	0.08	0.08	0.18
M1TB12501A	4/03/2025 15:09	mm/s		5	10	0.04	0.09	0.04	0.07
P210WKW903A_P210M3P04A	7/03/2025 12:27	mm/s		5	10	0.14	0.13	0.31	0.91
M1T711001A	8/03/2025 12:48	mm/s		5	10	0.13	0.43	0.06	0.11
P125FCL04A	10/03/2025 14:15	mm/s		5	10	0.02	0.05	0.03	0.08
P102BWF401B	10/03/2025 14:17	mm/s		5	10	0.08	0.07	0.08	0.18
P210M3P05A	11/03/2025 16:16	mm/s		5	10	0.18	0.14	0.33	1.01
WS49PGU07A_WS49LPP02A	12/03/2025 16:47	mm/s		5	10	0.08	0.09	0.06	0.12
P102W6P01B	14/03/2025 13:27	mm/s		5	10	0.26	0.12	0.11	0.22
WN49LDU101A_WN49ULP03A	15/03/2025 13:23	mm/s		5	10	0.17	0.15	0.16	0.11



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
P210WKW903B_P210M3P04B	17/03/2025 13:30	mm/s		5	10	0.11	0.10	0.17	0.64
M1T307001B	20/03/2025 12:11	mm/s		5	10	0.09	0.18	0.07	0.05
WS49PGU07B_WS49LPP02B_WS49LDP04A	20/03/2025 13:30	mm/s		5	10	0.07	0.10	0.11	0.38
P210VAX101A	21/03/2025 16:21	mm/s		5	10	0.03	0.03	0.08	0.37
P101B4P01A	22/03/2025 12:48	mm/s		5	10	0.16	0.08	0.10	0.24
P102BWF402A	25/03/2025 15:21	mm/s		5	10	0.19	0.09	0.14	0.26
P210WKW904A_P210N20P01A	26/03/2025 16:35	mm/s		5	10	0.11	0.09	0.18	0.47
P210PCF301B	27/03/2025 13:25	mm/s		5	10	0.04	0.05	0.07	0.35
P101B4P01B	28/03/2025 14:03	mm/s		5	10	0.11	0.09	0.09	0.11
Monthly Meaningful Data									
March		mm/s	Minimum	5	10	0.02	0.03	0.03	0.05
		mm/s	Mean	5	10	0.12	0.12	0.15	0.34
		mm/s	Maximum	5	10	0.29	0.43	0.61	1.12
		mm/s	Median	5	10	0.11	0.09	0.11	0.23

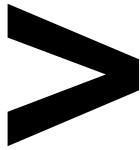
6 | SEWAGE TREATMENT PLANT MONITORING DATA

Date Sampled: 12/03/2025

Date Obtained: 12/05/2025

Table 5 – Sewage Treatment Plant Monitoring

Monitoring Site	Date & Time	Pollutant	Unit of Measure	Monitoring Result
EPA ID 23	12/03/2025 09:00:00	Faecal Coliforms	Colony forming units/100ml	60000
		pH	pH	7.6
EPA ID 25	12/03/2025 09:05:00	Faecal Coliforms	Colony forming units/100ml	No sample collected. Water level too low.
		pH	pH	
EPA ID 26	12/03/2025 10:15:00	Faecal Coliforms	Colony forming units/100ml	<100
		pH	pH	5.8
EPA ID 29	12/03/2025 12:10:00	Faecal Coliforms	Colony forming units/100ml	9400
		pH	pH	9.26



7 | NOISE MONITORING DATA

Date Sampled: 19/03/2025

Date Obtained: 29/04/2025

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	19/03/2025 21:02	3.2	125	D	Yes	46	51	IA	IA	Nil	Nil
Knodlers Lane	19/03/2025 21:48	3.3	141	E	Yes	45	51	IA	IA	Nil	Nil
Maison Dieu	19/03/2025 21:25	3.0	144	E	No	39	46	IA	IA	Nil	Nil
Long Point (Dights Crossing)	19/03/2025 22:50	3.1	139	E	Yes	42	51	IA	IA	Nil	Nil
Moses Crossing	19/03/2025 23:09	2.6	142	E	No	39	46	28	32	Nil	Nil
Jerrys Plains East	19/03/2025 22:48	3.1	139	E	Yes	44	51	<20	<20	Nil	Nil
Jerrys Plains Village	19/03/2025 21:20	3.0	136	D	No	40	46	29	32	Nil	Nil
Jerrys Plains West	19/03/2025 21:00	3.2	125	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.