

HERA MONTHLY ENVIRONMENTAL MONITORING SUMMARY JANUARY 2025



Table of Contents

1. INTENT	3
2. SCOPE	3
3. DEFINITIONS.....	3
4. MAPS.....	4
5. MONITORING RESULTS	8
5.1. Weather.....	8
5.2. Water	9
Surface Water	9
Groundwater	9
5.3. Noise.....	9
5.4. Blast Monitoring.....	10
5.5. Air Quality	12
5.6. Gold Room Stack Monitoring	14
5.7. Ore and Waste Rock Transport.....	14
5.8. Concentrate Transport	14
5.9. Complaints	14

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1. Intent

This monthly environmental monitoring report is a requirement under section 66(6) of the NSW Protection of the Environment Operations Act 1997 (POEO Act), in which holders of an environment protection licence make their pollution monitoring data publicly available. This report is intended to keep the community, stakeholders, and regulators informed of the Hera-Federation mine's environmental performance and to maintain a transparent and accountable reporting system.

2. Scope

This report covers all of Hera-Federation's environmental monitoring conditions for January 2025. These conditions, where applicable, are measured against Hera-Federation's Environmental Protection Licence (EPL), development consent conditions and Australian Standards to determine Hera-Federation's compliance.

These conditions include;

- Weather Conditions
- Surface Water Monitoring results
- Ground Water Monitoring results
- Noise Monitoring results
- Blasting monitoring results
- Air Quality Monitoring results
- Gold Room Stack Monitoring
- Ore transport
- Concentrate Transport
- Complaints

3. Definitions

Term	Definition
mm/s	The peak of the vibration in millimeters per second
Insoluble Solids	The insoluble portion of the dust deposited in dust deposition gauge
Total Lead	Including dissolved lead in the liquid portion and the lead particulates in the filter paper following laboratory analysis
g/m ² /month	Grams per square meter per month
dB (L)	Decibel (linear maximum)
dB LA _{eq} (15 minute)	Decibel (linear weighted average over 15 minutes)
CN Free	Free Cyanide (Hydrogen Cyanide and Cyanide ions in solution)
CN WAD	Weak Acid Dissociable Cyanide (includes Cyanide species liberated at moderate pH of 4.5)
TSS	Total Suspended Solids

4. Maps

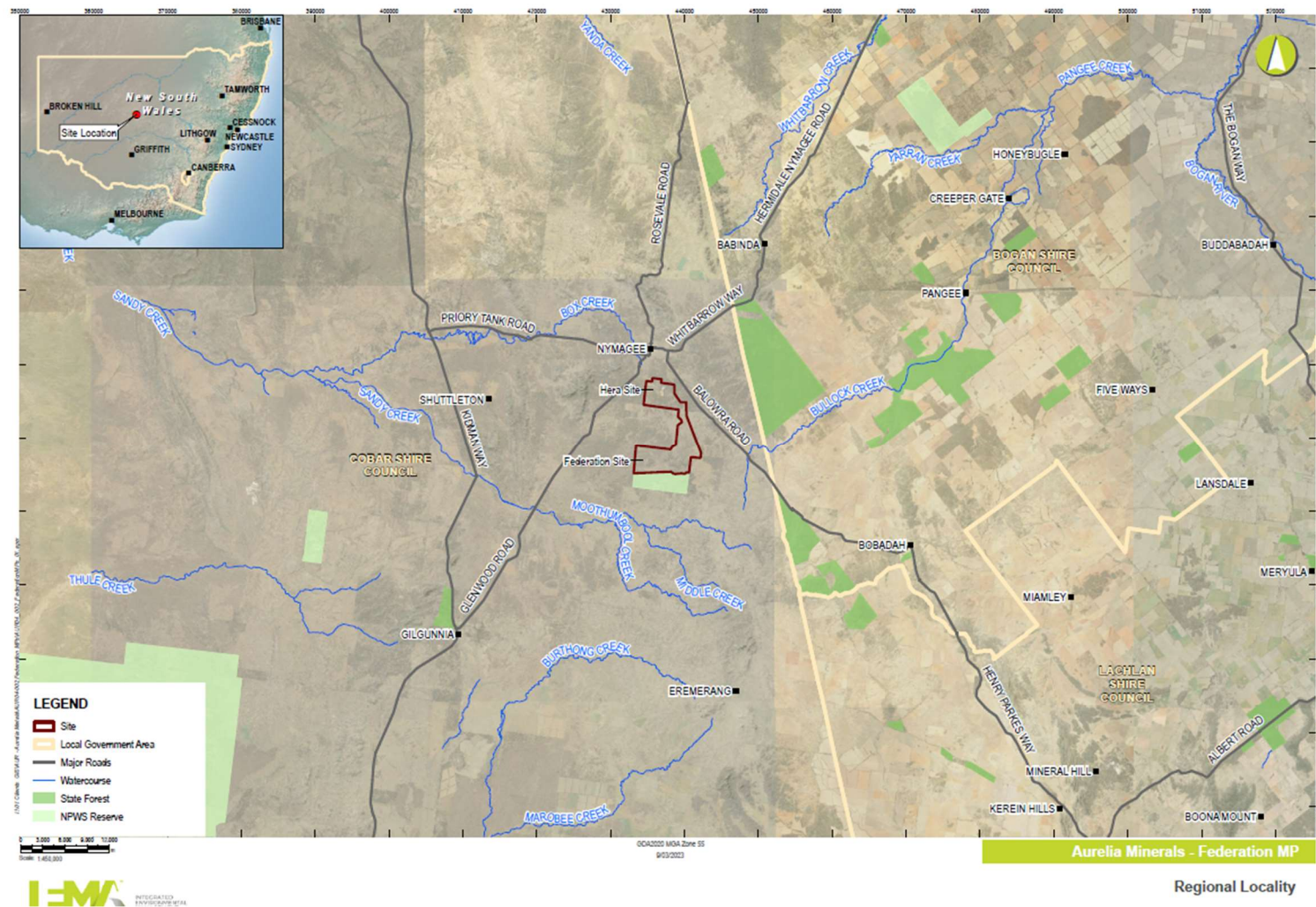


Figure 1 – Hera-Federation regional locality



Figure 2 – Hera Surface Water Monitoring Locations



Figure 3 – Federation Surface Water Monitoring Locations

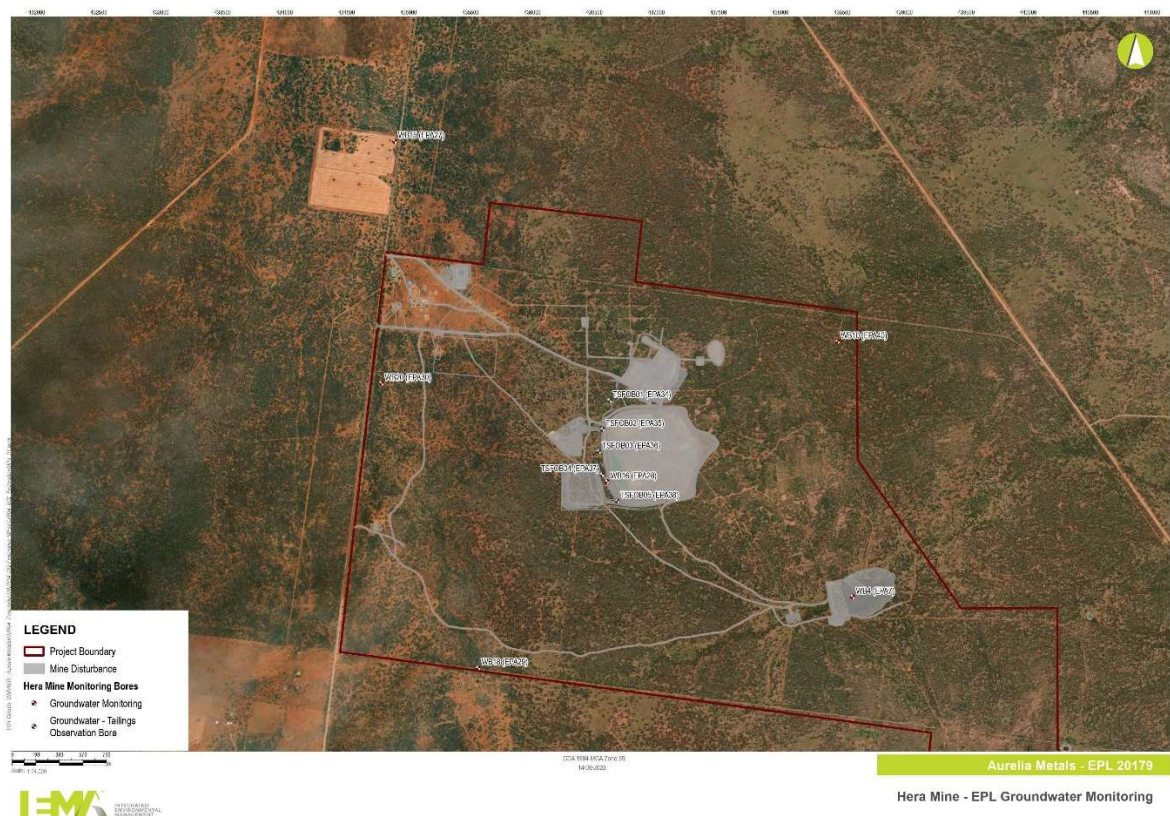


Figure 4 – Hera Groundwater Monitoring Locations



Figure 5 – Federation Groundwater Monitoring Locations



Figure 6 – Federation Groundwater Monitoring bores

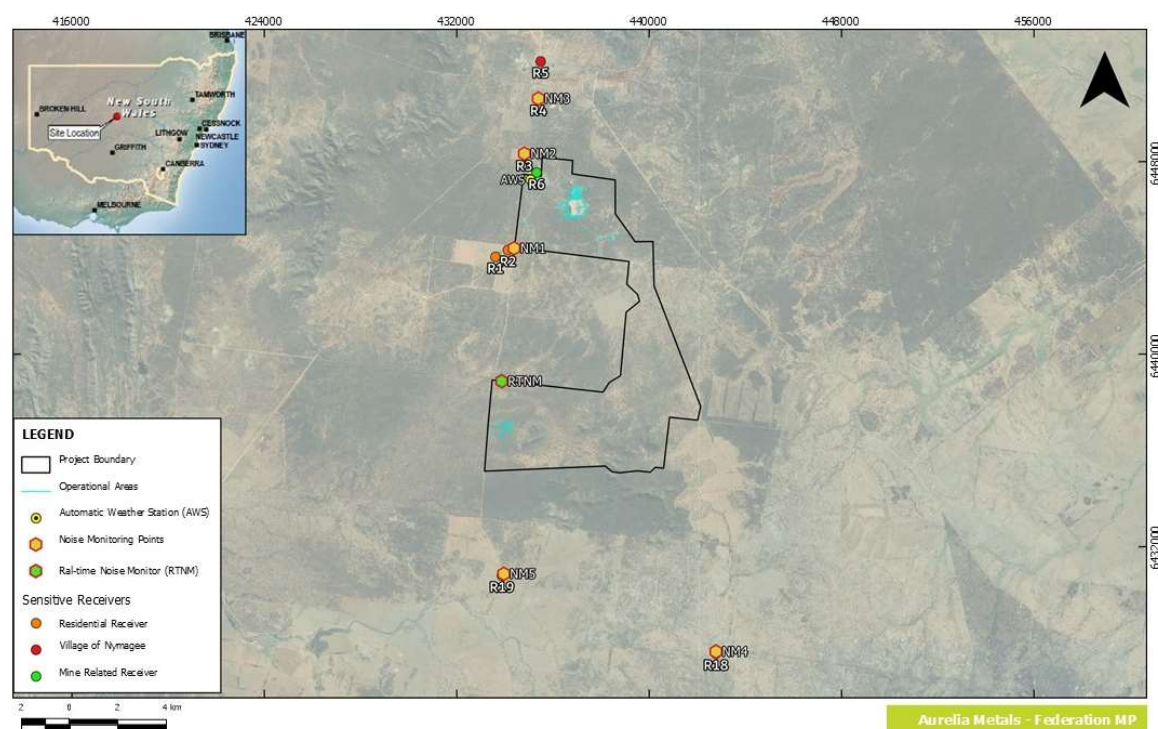


Figure 7 – Hera-Federation Noise Monitoring locations



Figure 8 – Hera-Federation Air Quality Monitoring Locations

5. Monitoring Results

5.1. Weather

The meteorology monitoring data is acquired through Hera's weather station located on the Hera Mine site, approximately 4km south of the town of Nymagee, NSW, Refer **Figure 1**.

Meteorological monitoring is conducted on a continuous basis. **Table 1** shows a summary of the data collected by the weather station this month. **Figure 9** is the wind rose for the month of January 2025.

TABLE 1: Summary of meteorological data for January 2025

Parameter	No. of measurements for the month	Minimum Value	Mean Value	Median Value	Maximum value	Total
Air Temperature (°C)	Continuous	4.26	22.50	23.22	38.35	-
Wind Speed (m/s)	Continuous	0.00	7.67	7.12	35.89	-
Sigma Theta (°)	Continuous	2.19	24.47	20.61	103.43	-
Rainfall (mm)	Continuous	0.00	0.01	0.00	5.40	45.20
Relative Humidity (%)	Continuous	9.45	51.12	47.04	98.64	-

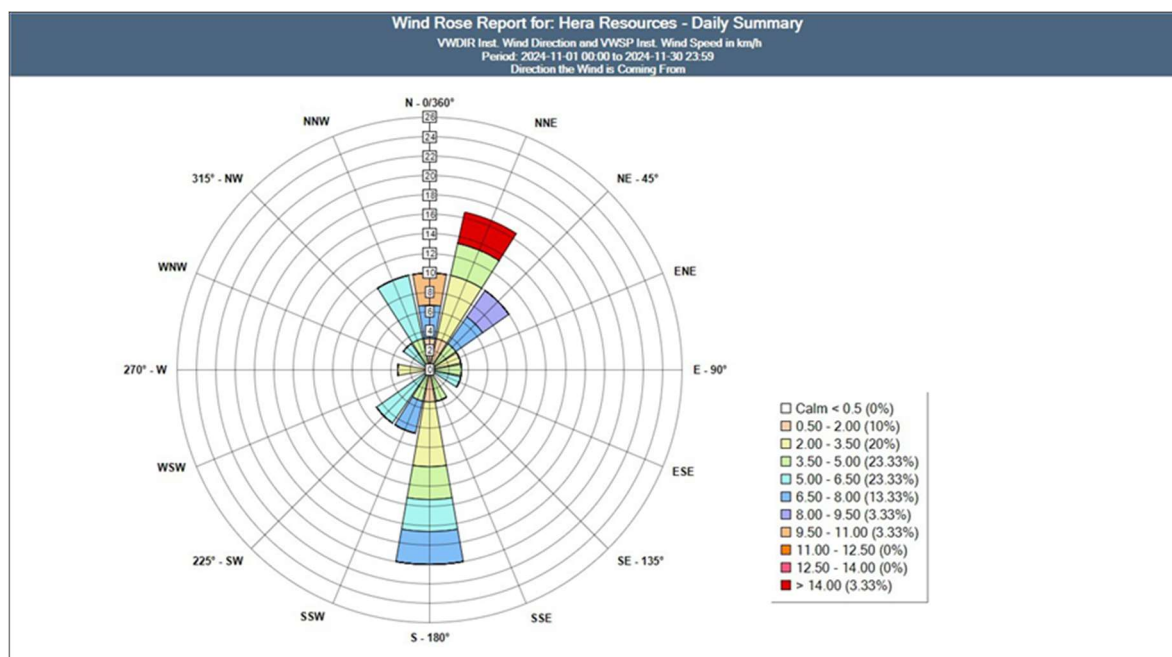


Figure 9 - Wind Rose for January 2025

5.2. Water

Water monitoring involves collecting water samples from several locations around site. The water samples are submitted to a NATA accredited laboratory for physical and chemical analysis. Analysis of pH and electrical conductivity are obtained in the field using a handheld monitor.

Surface Water

Hera has 6 licence points associated with surface water. Four of these points are located within the mining lease and two are located off the mining lease, with one upstream and another downstream of the lease, refer **Figure 2**. Due to the Hera site being in a Care and Maintenance phase no processing was completed during January 2025. As a result, there were no surface water quality results for licence points.

Federation has 3 surface monitoring points (refer to **Figure 3**), all of which are triggered upon discharge. No discharge occurred during January 2025

Groundwater

Hera has 11 licence points associated with groundwater. These points are located around the Project Area, (refer **Figure 4**) and are a combination of observation bores, productions bores and piezometers. Monitoring is conducted quarterly for SWL and water chemistry is completed annually. Annual sampling was completed in June 2024 and quarterly SWL monitoring in December 2024.

Federation has 16 licence points associated with groundwater (Refer to **Figure 5** and **Figure 6**). Monitoring is conducted quarterly for SWL and water chemistry and was completed in December 2024.

5.3. Noise

The Company has six licenced monitoring points (R1, R2, R3, R4 and R18, R19) located along the Burthong and Balowra Road (**Figure 7**). The locations are strategically placed near the Hera-Federation's nearest neighbours. R1 and R2 are measured from the same point as both neighbours are in very close proximity to each other.

The annual noise assessment was carried out by Muller Accoustic Consulting on 13 to 16th May 2024. Results were presented in the May 2024 monthly website report.

Hera holds a Noise and Blast agreement with the Landholder of R3. The agreement has been provided to the EPA and the Department of Planning Housing and Infrastructure (DPHI).

5.4. Blast Monitoring

The blast monitor is located between the mining operations and the nearest residential receiver (**Figure 7**).

During November 2024 DPHI was notified that Hera-Federation had commenced mining with associated blasting.

Hera holds a Noise and Blast agreement with the Landholder of R3. The agreement has been provided to the EPA and DPHI.

A total of 62 blasts were completed during the month with no exceedances of blasting criteria. Blast monitoring results are presented in **Table 2**.

TABLE 2: Blast monitoring results for January 2025

Date	Time	Vibration (mm/s)	Overpressure (dB)
1/01/2025	1:45	0.18	71.0
2/01/2025	6:10	0.04	75.1
2/01/2025	23:00	0.09	72.6
3/01/2025	6:45	0.06	91.3
4/01/2025	6:00	0.01	72.6
4/01/2025	10:30	0.01	97.6
4/01/2025	13:30	0.01	92.5
4/01/2025	16:30	0.01	96.0
5/01/2025	1:45	0.01	71.0
5/01/2025	6:30	0.01	75.1
5/01/2025	17:30	0.10	80.8
6/01/2025	3:11	0.03	73.9
6/01/2025	18:30	0.01	89.7
7/01/2025	6:36	0.15	71.8
7/01/2025	19:26	1.97	90.7
8/01/2025	5:33	0.19	80.8
8/01/2025	6:20	0.09	84.4
9/01/2025	4:05	0.05	98.9
9/01/2025	6:30	0.03	91.6
9/01/2025	19:30	0.16	81.1
9/01/2025	22:40	0.05	71.8
10/01/2025	8:23	0.07	93.7
10/01/2025	17:00	0.06	77.8
11/01/2025	6:45	0.16	79.3
11/01/2025	12:40	0.24	91.3

Date	Time	Vibration (mm/s)	Overpressure (dB)
12/01/2025	4:30	0.08	80.8
12/01/2025	7:00	0.18	79.6
12/01/2025	18:30	0.63	82.1
13/01/2025	2:00	0.03	88.9
13/01/2025	21:30	0.15	98.5
14/01/2025	6:30	0.06	85.3
14/01/2025	11:30	0.02	80.2
14/01/2025	23:15	0.02	83.0
15/01/2025	5:00	1.96	79.9
16/01/2025	3:15	0.13	94.5
16/01/2025	6:35	0.07	76.6
17/01/2025	6:45	0.08	71.8
17/01/2025	18:40	0.01	101.9
18/01/2025	6:30	0.01	81.4
18/01/2025	18:30	0.01	101.1
19/01/2025	0:20	0.01	90.5
19/01/2025	14:40	0.02	80.5
19/01/2025	18:40	0.03	82.4
20/01/2025	6:30	0.01	78.6
20/01/2025	15:40	0.02	79.9
20/01/2025	18:35	0.01	72.6
21/01/2025	6:30	0.01	71.8
21/01/2025	18:30	0.01	83.0
22/01/2025	6:20	0.01	71.8
23/01/2025	6:36	0.01	73.3
23/01/2025	21:25	0.01	102.8
24/01/2025	6:40	0.01	72.6
24/01/2024	12:45	0.01	87.0
26/01/2025	18:30	0.01	75.1
27/01/2025	6:45	0.01	79.0
27/01/2025	12:45	0.01	93.3
27/01/2025	18:36	0.01	85.3
28/01/2025	5:00	0.01	86.4
29/01/2025	0:35	0.02	73.3
30/01/2025	6:30	0.01	72.6
30/01/2025	18:00	0.01	92.6
31/01/2025	13:01	0.01	78.6

5.5. Air Quality

Two High Volume Air Samplers (HVAS), designed to sample Particulate matter less than 10 μm (PM₁₀) or Total Suspended Particulate (TSP) matter an EBAM and two E-samplers form the Hera-Federation air quality monitoring network (refer to **Figure 8**).

Results for air quality monitoring conducted in January 2025 have been summarised in **TABLE 3**. No exceedances were recorded.

EBAM and E-Sampler results are presented in **Figures 10, 11 and 12**. E-Sampler 1 has experienced calibration issues and has since been replaced with a new monitor.

TABLE 3: Summary of HVAS monitoring results for January 2025

Pollutant	Unit	Limit	Averaging Period	Result
TSP	$\mu\text{g}/\text{m}^3$	90	Annual	37.35
PM-10	$\mu\text{g}/\text{m}^3$	25	Annual	14.24
High Volume Air Samplers (PM₁₀)				
01/01/2025	$\mu\text{g}/\text{m}^3$	50	24 Hour	15.2
06/01/2025	$\mu\text{g}/\text{m}^3$	50	24 Hour	23.1
12/01/2025	$\mu\text{g}/\text{m}^3$	50	24 Hour	10.9
18/01/2025	$\mu\text{g}/\text{m}^3$	50	24 Hour	11.6
24/01/2025	$\mu\text{g}/\text{m}^3$	50	24 Hour	17.6
30/01/2025	$\mu\text{g}/\text{m}^3$	50	24 Hour	20.3

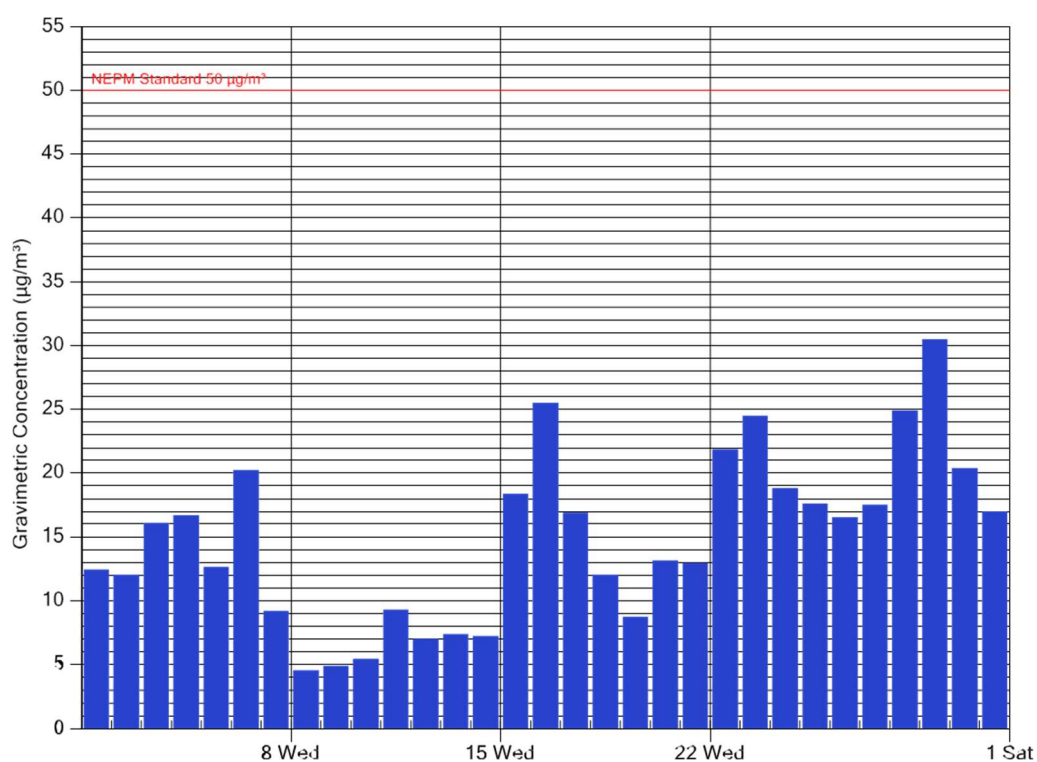


Figure 10 – EBAM plus PM₁₀ Daily Average Concentration – January 2025

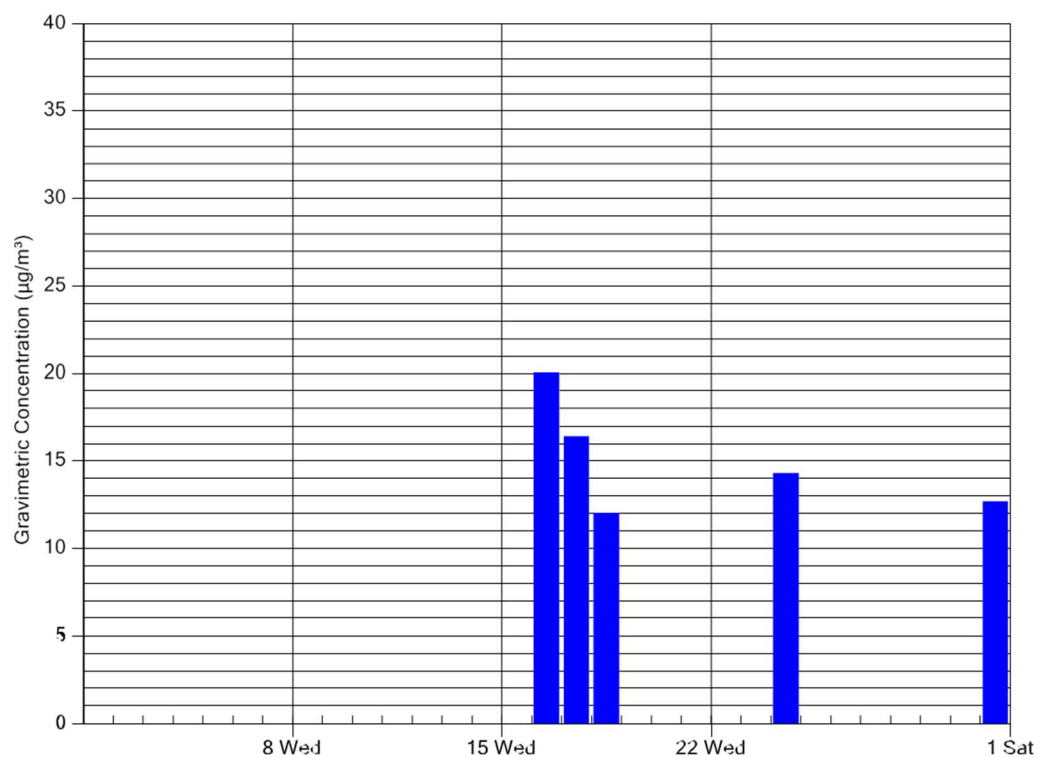


Figure 11 - E-Sampler 1 PM₁₀ Daily Average Concentration - January 2025

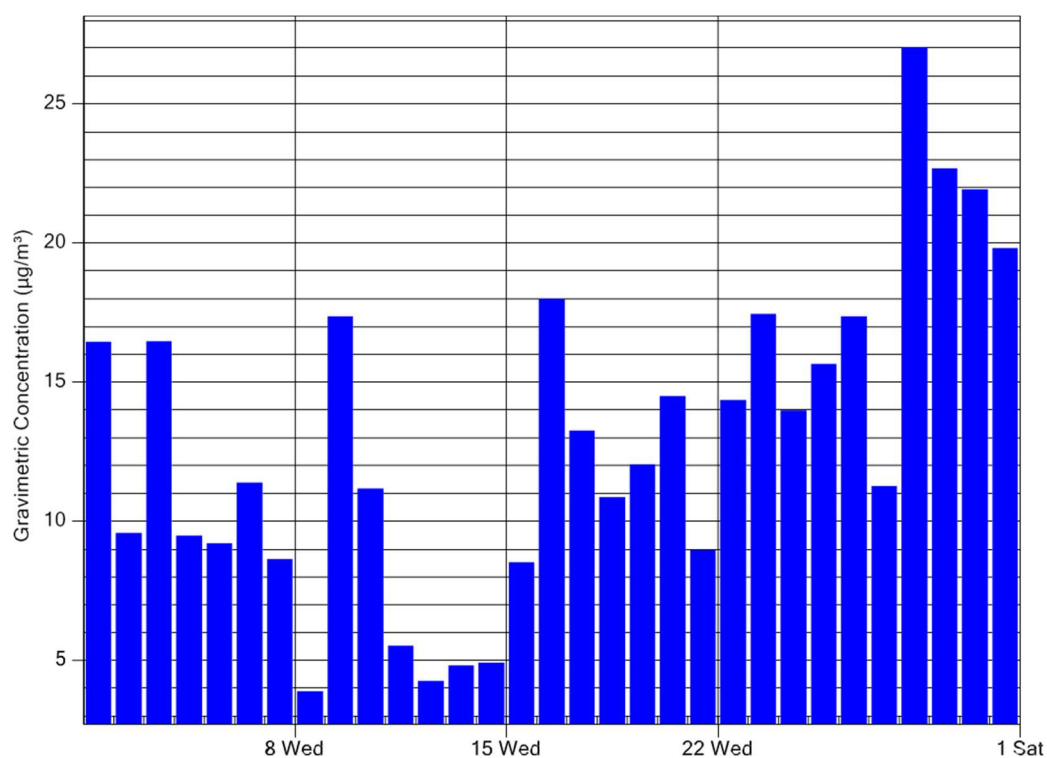


Figure 12 - E-Sampler 2 PM₁₀ Daily Average Concentration - January 2025

5.6. Gold Room Stack Monitoring

Hera-Federation has two licenced gold room stack monitoring points (Refer to **Figure 8**).

The Hera site is on Care and Maintenance and no stack monitoring will be undertaken unless the gold room operations recommence.

5.7. Ore and Waste Rock Transport

The Company is licenced to transport 200,000 tonnes annually (FY) of ore from the Hera-Federation site to The Peak mine between 7am to 7pm daily.

During November 2024 DPHI was notified that Hera-Federation had commenced mining and trucking of ore to The Peak Mine.

There was no movement of ore to The Peak Mine during January 2025.

5.8. Concentrate Transport

The Company is licenced to transport 155,000 tonnes of lead/zinc concentrate from the Hera site to Hermidale rail siding from 7am to 7pm daily.

The Federation site does not produce concentrate.

The Hera site is on Care and Maintenance and no concentrate movements have occurred during January 2025

5.9. Complaints

No complaints were received this month.