

HERA MONTHLY ENVIRONMENTAL MONITORING SUMMARY NOVEMBER 2024



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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 November 2024. 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

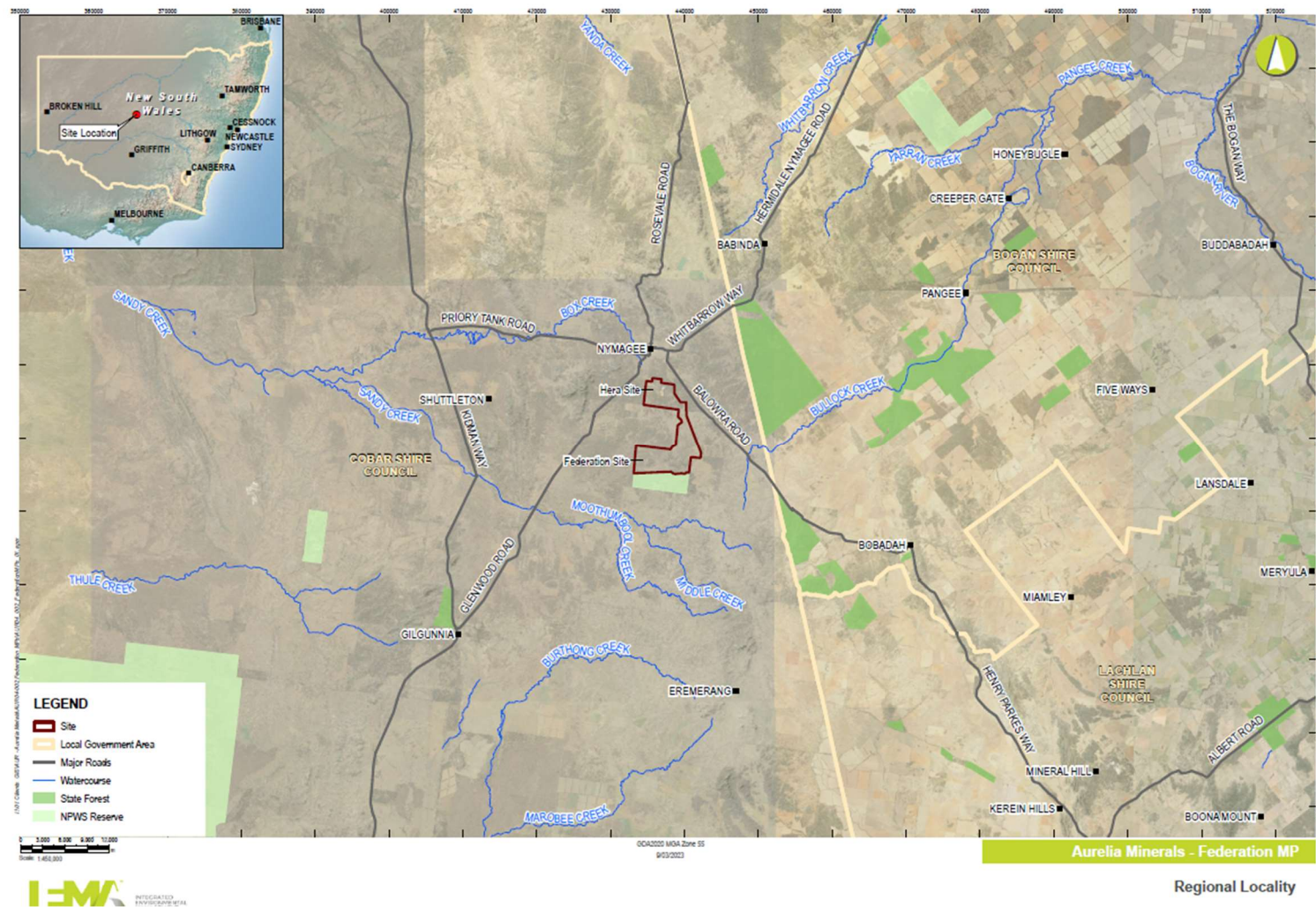


Figure 1 – Hera-Federation regional locality



Figure 2 – Hera Surface Water Monitoring Locations



Figure 3 – Federation Surface Water Monitoring Locations

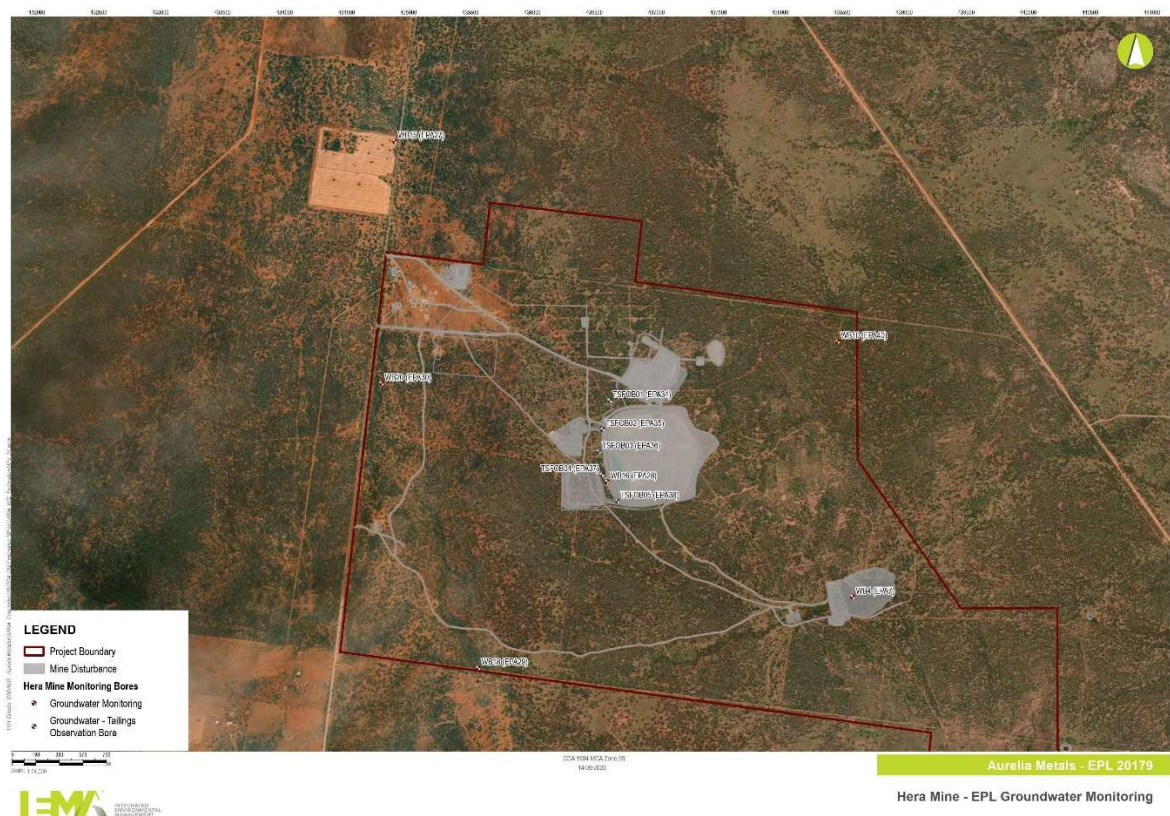


Figure 4 – Hera Groundwater Monitoring Locations



Figure 5 – Federation Groundwater Monitoring Locations



Figure 6 – Federation Groundwater Monitoring bores

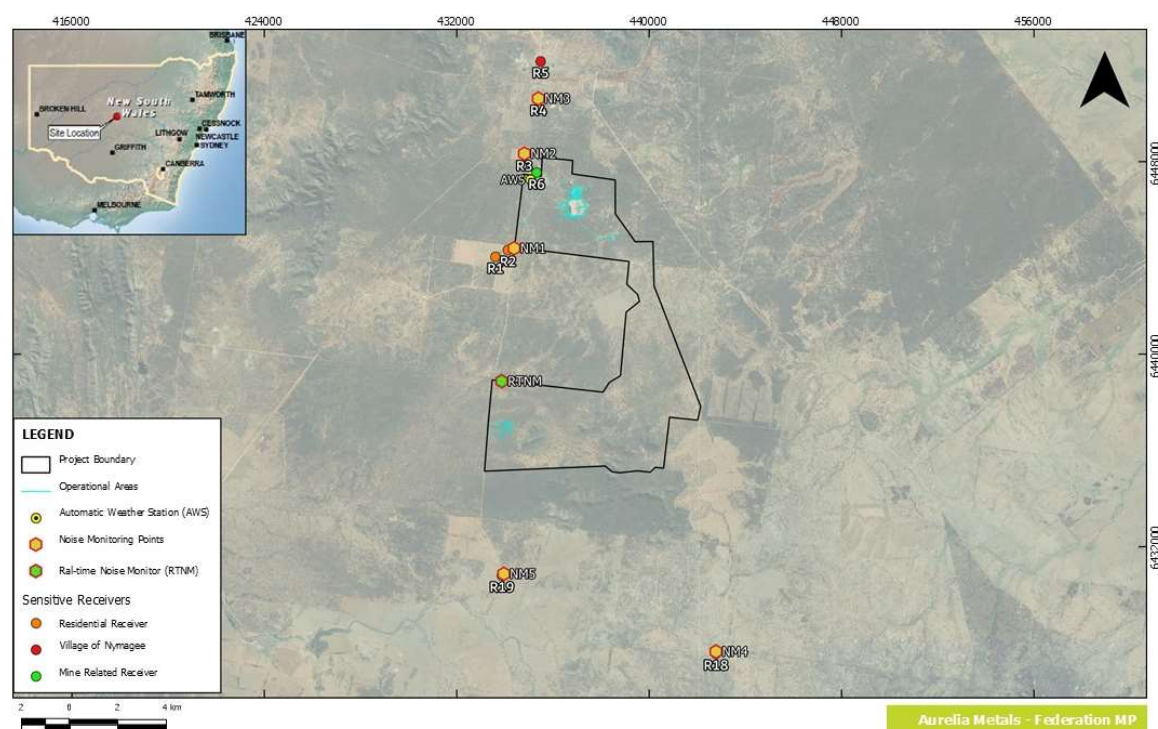


Figure 7 – Hera-Federation Noise Monitoring locations



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 November 2024.

TABLE 1: Summary of meteorological data for November 2024

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	-

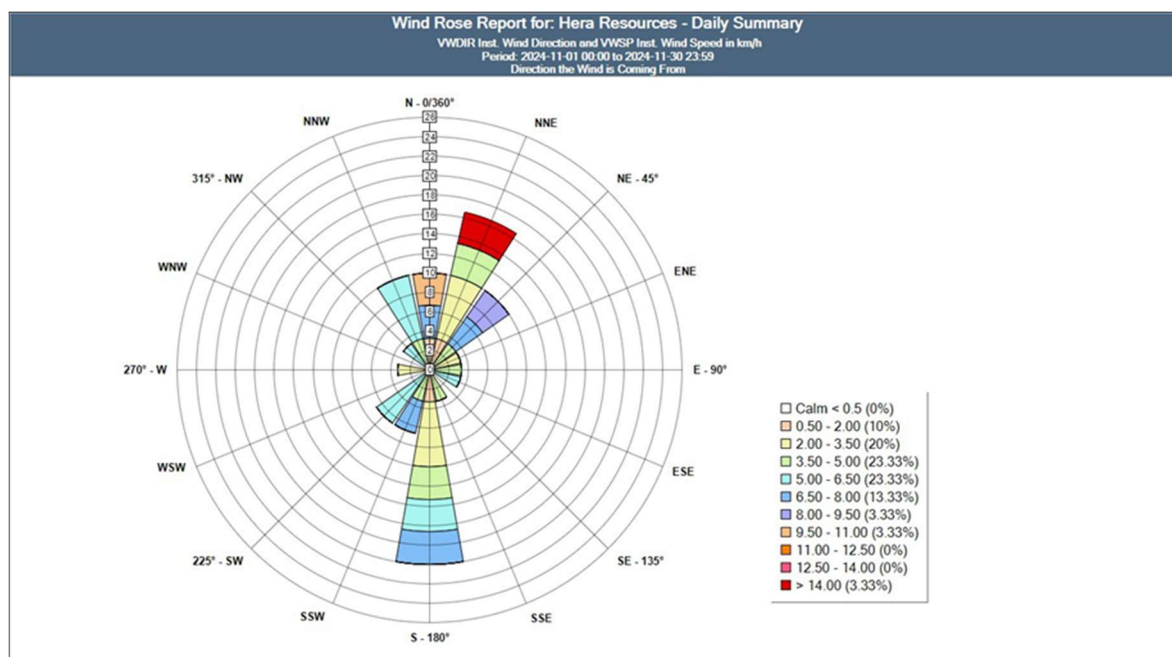


Figure 9 - Wind Rose for November 2024

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 November 2024. 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 November.

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.

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 September 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 66 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 November 2024

Date	Time	Vibration (mm/s)	Overpressure (dB)
1/11/2024	6:15	0.04	71
1/11/2024	19:00	0.12	78.6
2/11/2024	6:30	0.04	89.2
2/11/2024	13:00	0.19	76.6
2/11/2024	18:45	0.11	72.6
3/11/2024	3:00	0.03	70.1
3/11/2024	6:45	0.17	70.1
3/11/2024	11:30	0.14	99.9
3/11/2024	18:00	0.06	77
4/11/2024	6:40	0.07	71
4/11/2024	9:45	0.14	77.4
4/11/2024	17:00	0.09	83.5
5/11/2024	3:15	0.05	70.1
5/11/2024	17:30	0.06	77
6/11/2024	5:45	0.11	78.2
7/11/2024	2:10	0.04	71.8
7/11/2024	6:35	0.08	71
7/11/2024	16:00	0.06	73.9
7/11/2024	18:30	0.04	78.2
8/11/2024	5:22	0.07	71
8/11/2024	6:30	0.06	71
8/11/2024	23:50	0.07	71
9/11/2024	6:33	0.17	73.3
9/11/2024	13:20	0.13	78.6
9/11/2024	18:45	0.29	73.9

Date	Time	Vibration (mm/s)	Overpressure (dB)
10/11/2024	2:10	0.09	71.8
11/11/2024	18:30	0.06	70.1
12/11/2024	6:30	0.05	72.6
12/11/2024	14:45	0.03	73.9
12/11/2024	6:30	0.03	73.9
13/11/2024	18:30	0.09	87.4
14/11/2025	6:00	0.02	74.5
14/11/2025	18:00	0.06	75.1
15/11/2024	6:35	0.28	72.6
15/11/2024	11:00	0.04	90.8
15/11/2024	18:30	0.04	74.5
16/11/2024	5:45	0.03	83
16/11/2024	19:00	0.02	105.6
17/11/2024	3:00	0.03	103.1
17/11/2024	18:30	0.01	72.6
18/11/2024	4:30	0.02	72.6
18/11/2024	16:30	0.01	79.9
19/11/2024	2:45	0.02	74.5
19/11/2024	23:30	0.02	70.1
20/11/2024	19:00	0.02	78.2
21/11/2024	1:00	0.01	72.6
21/11/2024	6:45	0.01	75.6
22/11/2024	9:23	0.02	77
22/11/2024	19:17	0.02	87.9
23/11/2024	3:30	0.01	70.1
23/11/2024	13:35	0.08	83.9
23/11/2024	18:58	0.03	77.8
24/11/2024	6:30	0.01	71
24/11/2024	16:15	0.07	80.5
24/11/2024	18:30	0.14	86.4
25/11/2025	6:30	0.02	76.6
25/11/2024	0:20	0.02	91.7
26/11/2024	6:45	0.02	72.6
26/11/2024	18:50	0.08	87.9
26/11/2024	0:00	0.02	83
28/11/2024	1:48	0.06	71.8
28/11/2024	18:43	0.21	73.9
29/11/2024	18:15	0.22	79.6
30/11/2024	1:18	0.93	71

Date	Time	Vibration (mm/s)	Overpressure (dB)
30/11/2024	7:00	0.21	71
30/11/2024	17:25	0.04	73.9

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 November 2024 have been summarised in **TABLE 3able 3**. No exceedances were recorded.

EBAM and E-Sampler results are presented in **Figures 10, 11 and 12**.

TABLE 3: Summary of HVAS monitoring results for November 2024

Pollutant	Unit	Limit	Averaging Period	Result
TSP	$\mu\text{g}/\text{m}^3$	90	Annual	38.01
PM-10	$\mu\text{g}/\text{m}^3$	25	Annual	14.71
High Volume Air Samplers (PM ₁₀)				
4/11/2024	$\mu\text{g}/\text{m}^3$	50	24 Hour	20.1
7/11/2024	$\mu\text{g}/\text{m}^3$	50	24 Hour	10.2
19/11/2024	$\mu\text{g}/\text{m}^3$	50	24 Hour	12.1
25/11/2024	$\mu\text{g}/\text{m}^3$	50	24 Hour	19.1

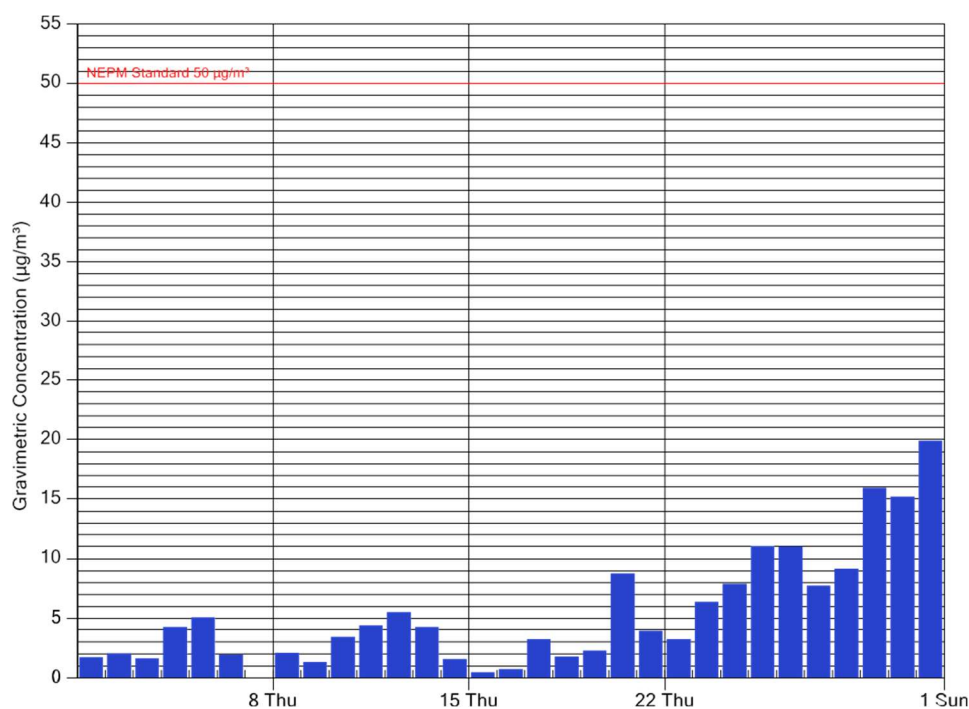


Figure 10 – EBAM plus PM₁₀ Daily Average Concentration – November 2024

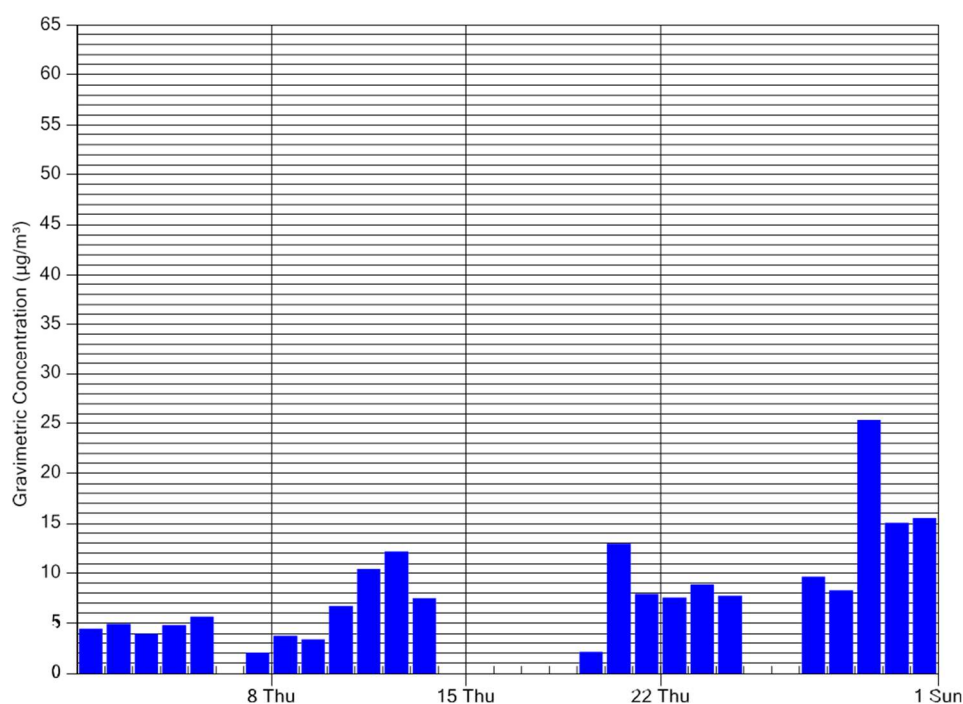


Figure 11 – E-Sampler 1 PM₁₀ Daily Average Concentration - November 2024

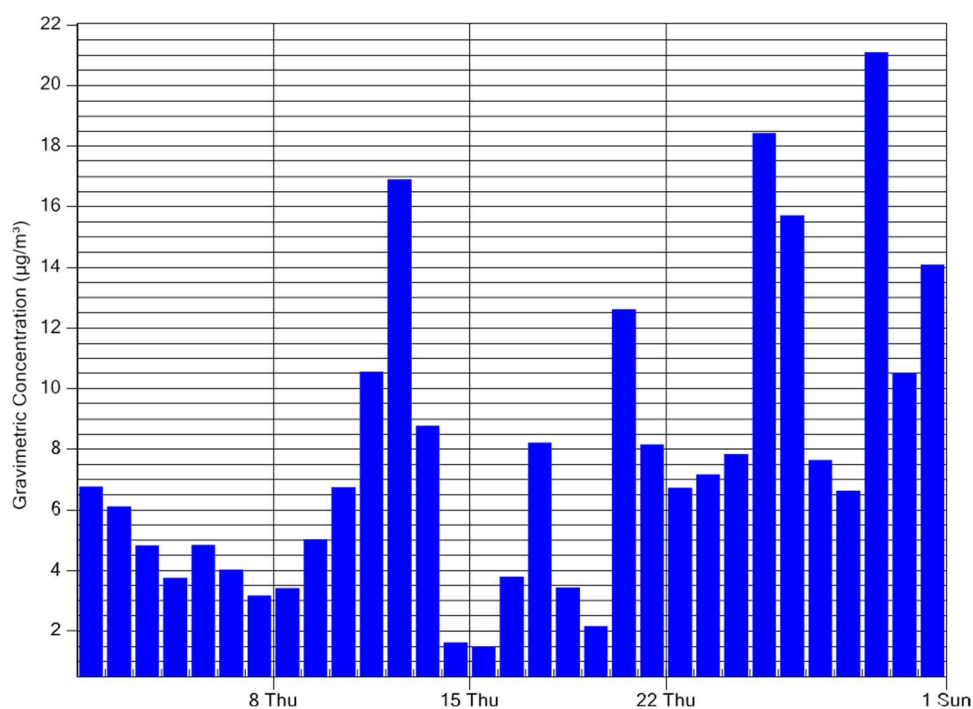


Figure 12 – E-Sampler 2 PM₁₀ Daily Average Concentration - November 2024

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.

Truck movements per day and quantity of ore transported is presented in **Table 4**.

TABLE 4: Summary of HVAS monitoring results for November 2024

Date	No. truck movements/day	Quantity (Dry tonnes)
21/11/2024	4	109
22/11/2024	18	620.40
23/11/2024	12	422.20
24/11/2024	-	-
25/11/2024	18	623.10
26/11/2024	18	314.45
27/11/2024	6	195
28/11/2024	14	489.55
29/11/2024	20	701.1
30/11/2024	22	728.75
TOTAL		4203.55

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 November

5.9. Complaints

No complaints were received this month.