

HERA MONTHLY ENVIRONMENTAL
MONITORING SUMMARY SEPTEMBER 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 September 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

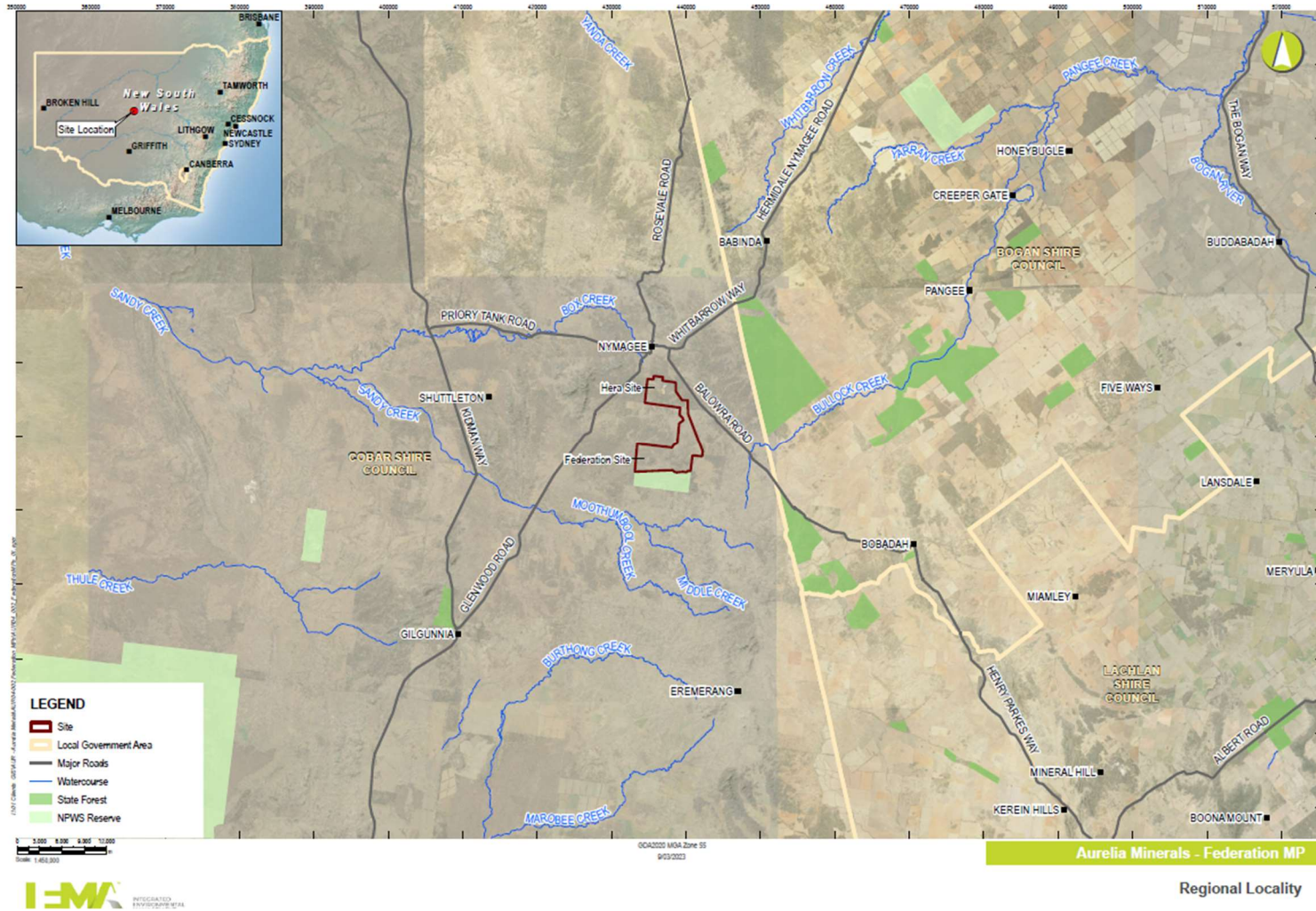


Figure 1 – Hera-Federation regional locality



Figure 2 – Hera Surface Water Monitoring Locations



Figure 3 – Federation Surface Water Monitoring Locations

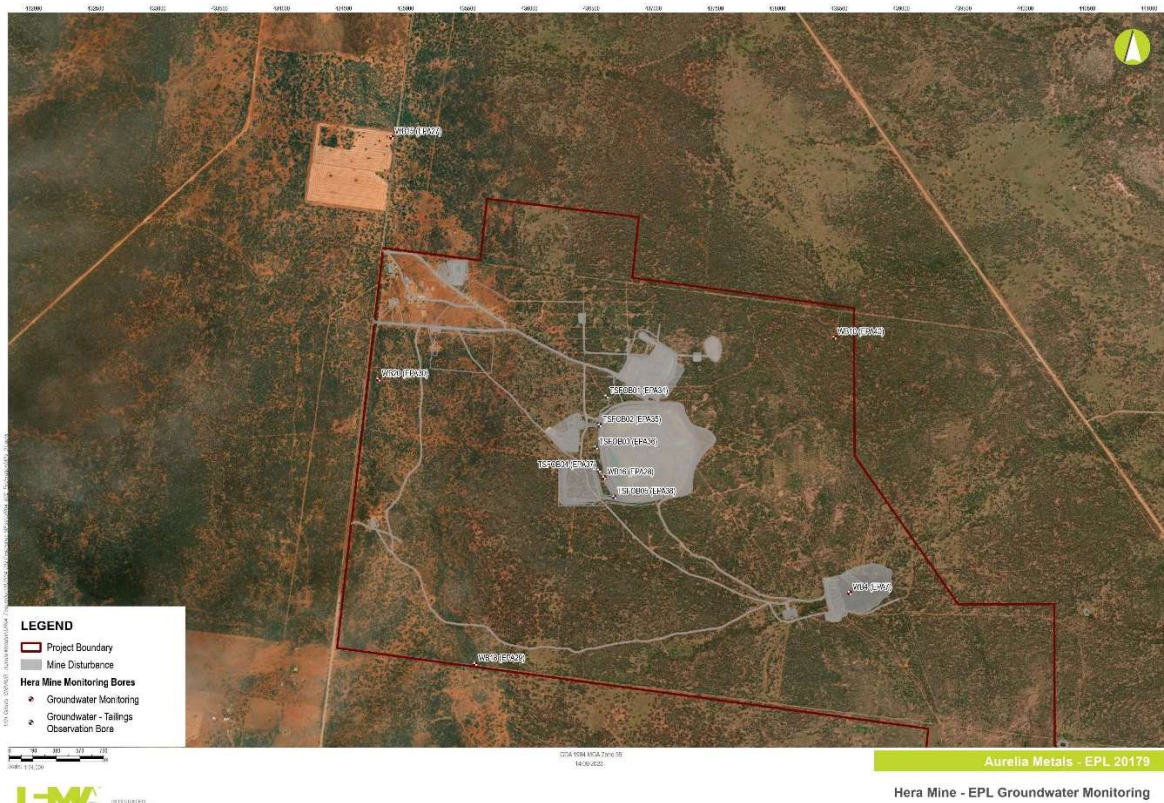


Figure 4 – Hera Groundwater Monitoring Locations



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 7** is the wind rose for the month of September 2024.

TABLE 1: Summary of meteorological data for September 2024

Parameter	No. of measurements for the month	Minimum Value	Mean Value	Median Value	Maximum value	Total
Air Temperature (°C)	Continuous	-3.26	13.56	14.53	28.50	-
Wind Speed (m/s)	Continuous	0.00	7.26	6.32	29.46	-
Sigma Theta (°)	Continuous	0.00	24.10	19.59	99.17	-
Rainfall (mm)	Continuous	0.00	0.00	0.00	2.40	16.80
Relative Humidity (%)	Continuous	10.81	58.65	59.08	97.58	-

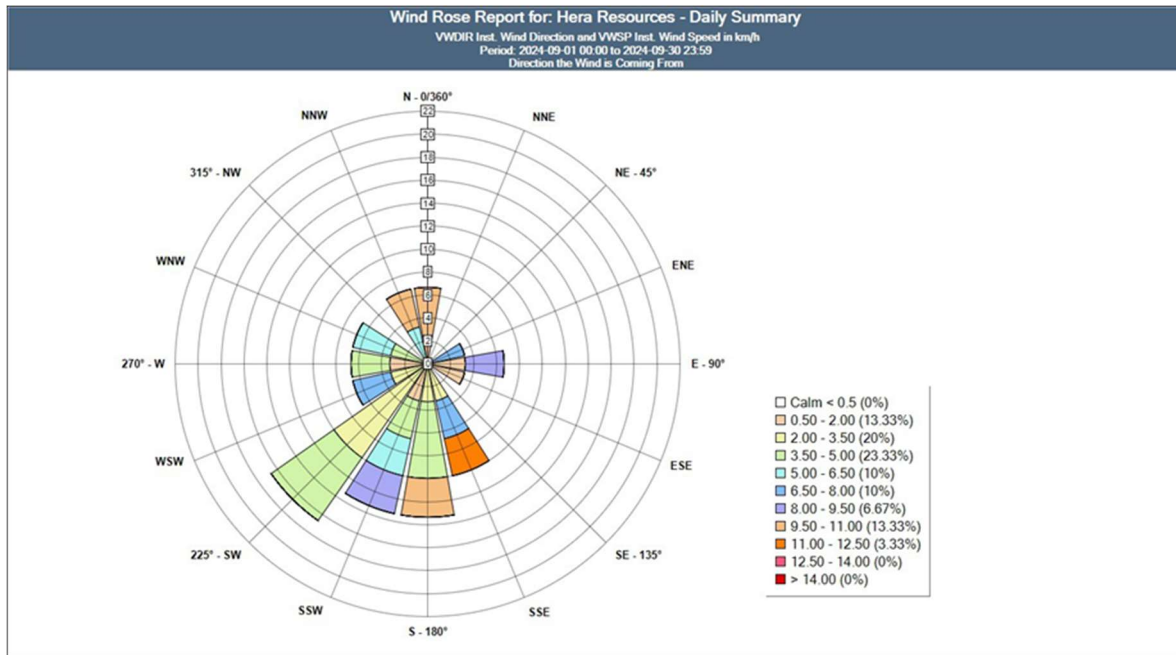


Figure 9 - Wind Rose for September 2024

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 September 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 September.

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. Results are shown in **TABLE 2** and **TABLE 3**.

TABLE 2: Summary of Federation groundwater monitoring results for September 2024

Licence Point	Analyte (mg/L)													
	Sb	As	HCO3-	B	Cd	Ca	CO3-2	Cl	Cr	Cu	CN-(Free)	CN-(Total)	CN-(WAD)	EC (mS/cm)
FMB001	<0.001	0.009	470	0.44	<0.0001	113	<1	900	<0.001	<0.001	<0.004	<0.004	<0.004	4.18
FMB002	<0.001	<0.001	315	0.3	<0.0001	96	<1	1220	<0.001	<0.001	<0.004	<0.004	<0.004	4.67
FMB003	<0.001	<0.001	416	0.52	<0.0001	146	<1	1470	<0.001	<0.001	<0.004	<0.004	<0.004	5.41
FMB004	<0.001	0.004	319	0.25	<0.0001	62	<1	643	<0.001	<0.001	<0.004	<0.004	<0.004	2.65
FMB005	<0.001	0.008	412	0.48	<0.0001	136	<1	1280	<0.001	<0.001	<0.004	<0.004	<0.004	4.8
FMB006	<0.001	<0.001	369	0.49	<0.0001	319	<1	2720	<0.001	<0.001	<0.004	<0.004	<0.004	9.4

TABLE 3: Summary of groundwater monitoring results for September 2024

Licence Point	Analyte (mg/L)													
	Fe	Pb	Mg	Hg	Mo	Ni	pH	K	Ag	Na	Sn*	TDS	Zn	SWL (m)
FMB001	8.65	<0.001	170	<0.0001	0.002	0.011	6.88	21	<0.001	619	<0.001	2720	0.025	84.95
FMB002	0.72	<0.001	129	<0.0001	<0.001	<0.001	7.13	21	<0.001	728	<0.001	3040	<0.005	89.45
FMB003	1.76	<0.001	209	<0.0001	<0.001	0.004	6.96	30	<0.001	770	<0.001	3520	0.007	87.04
FMB004	15.4	0.004	88	<0.0001	<0.001	0.003	6.55	22	<0.001	383	0.001	1720	0.021	88.75
FMB005	21.9	<0.001	205	<0.0001	<0.001	0.012	6.84	29	<0.001	671	<0.001	3120	0.009	87.48
FMB006	<0.05	<0.001	416	<0.0001	0.003	0.009	6.56	38	<0.001	1210	<0.001	6110	0.005	73.94

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**).

Due to the Hera site entering a Care and Maintenance phase there was no blasting undertaken during September.

Federation is presently in an exploration phase and construction being undertaken under a Review of Environmental Factors (REF). Blast monitoring for Federation will be in place prior to operations commencing.

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

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 September 2024 have been summarised in **TABLE 4**. No exceedances were recorded.

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

TABLE 4: Summary of HVAS monitoring results for September 2024

Pollutant	Unit	Limit	Averaging Period	Result
TSP	µg/m ³	90	Annual	35.31
PM-10	µg/m ³	25	Annual	13.65
High Volume Air Samplers (PM₁₀)				
2/09/2024	µg/m ³	50	24 Hour	21.5
8/09/2024	µg/m ³	50	24 Hour	34
14/09/2024	µg/m ³	50	24 Hour	22.9
20/09/2024	µg/m ³	50	24 Hour	23.4
26/09/2024	µg/m ³	50	24 Hour	5.1

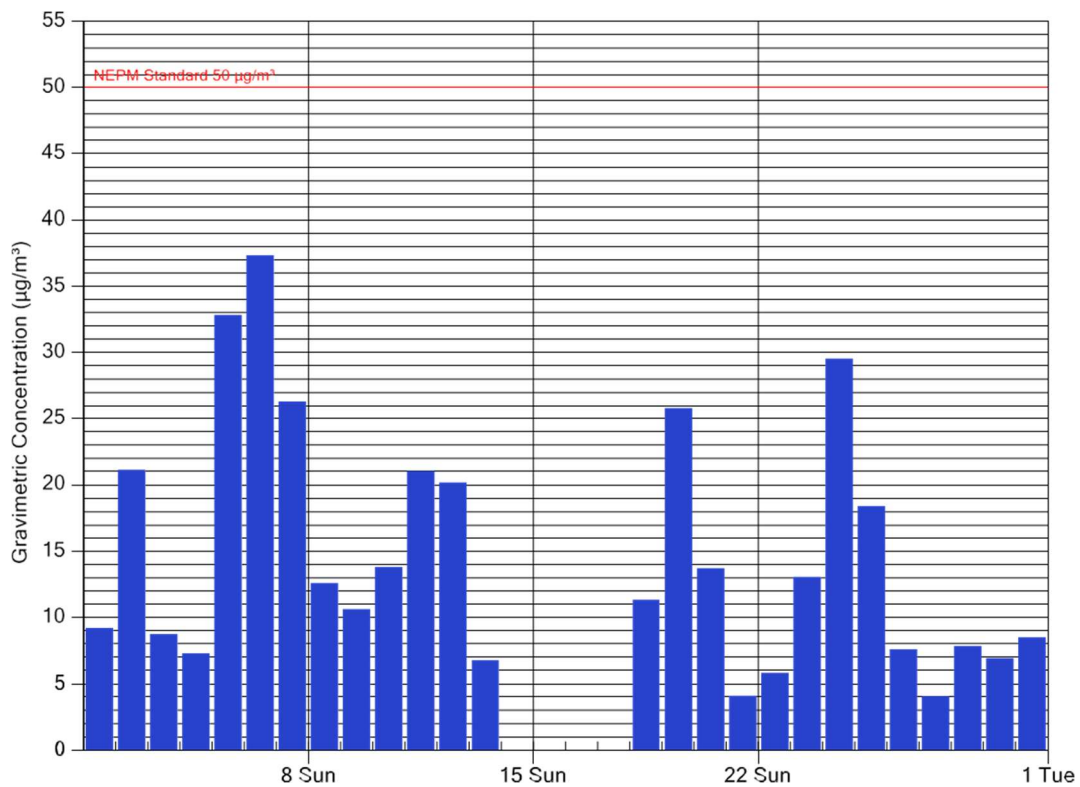


Figure 10 - EBAM plus PM₁₀ Daily Average Concentration - September 2024

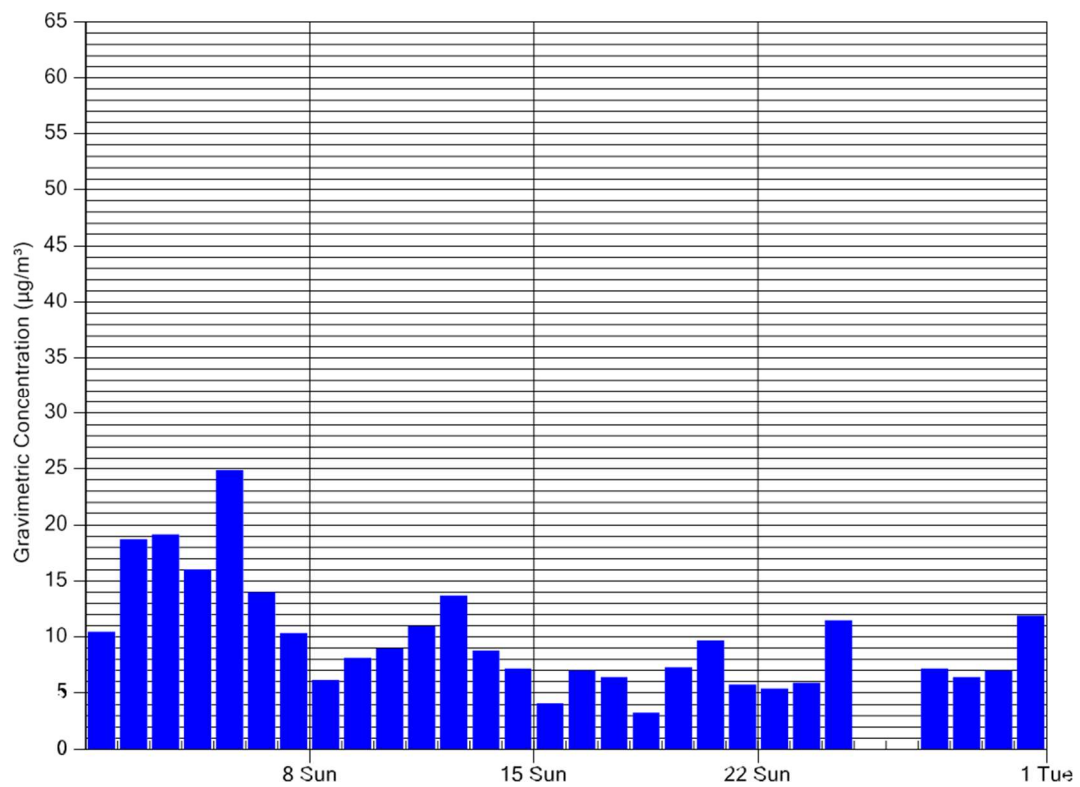


Figure 11 - E-Sampler 1 PM₁₀ Daily Average Concentration - September 2024

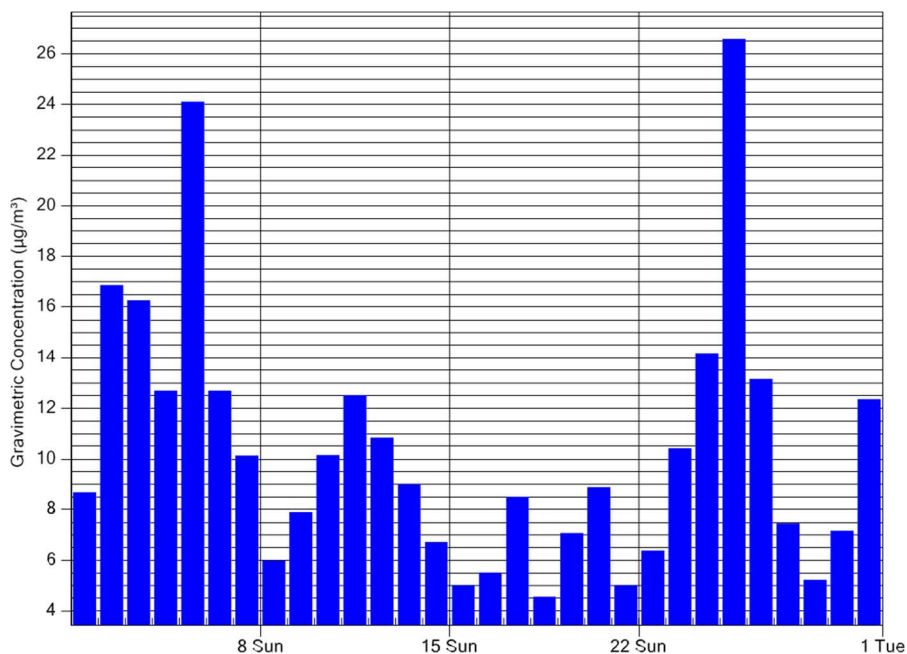


Figure 12 - E-Sampler 2 PM₁₀ Daily Average Concentration - September 2024

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 September 2024 no ore was transported.

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 September 2024.

5.9. Complaints

One complaint was received this month as presented in **Table 5**.

TABLE 5: Summary of complaints received in September 2024

Date	Complaint Category
6/9/2024	Air quality – Tailings Storage Facility dust