

**Iluka Resources Limited- Balranald Mineral Sands Mine
Monthly Particulate Monitoring (PM2.5 and PM10)**



The below air quality monitoring results have been obtained in accordance with the Balranald Mineral Sands Mine Air Quality Management Plan and assessed against the air quality criteria outlined in Table 4 of the NSW Development Consent SSD-5285.

Table 4- Short term impact assessment criterion for particulate matter		
Pollutant	Averaging period	Criterion
Particulate matter < 10µm (PM10)	24 Hour	50 µg/m ³
Particulate matter < 2.5µm (PM2.5)	24 Hour	25 µg/m ³

Due to prevailing hot and dry weather conditions with long frequent periods of high winds, there are a high number of exceedance days (11) in particulate levels recorded on the monitoring station. However, no contribution from site activities was observed on either days where the criteria was exceeded.

Please see the comment section of the individual days for detailed information in the table below.

Continuous Particulate Monitor (CPM1) NSW Environment Protection Licence 20795 Point #13				
Date Time	PM2.5	PM10	Compliant (Yes/No)	Comments
	µg/m³	µg/m³		
24:00 01/02/2025	8.22	26.34	Yes	
24:00 02/02/2025	18.37	97.74	No	Period of exceedance - 11:00h to 16:00h; 19:00h to 23:00h 02/02/2025. Average wind speed – 14.86 km/hr (up to 21.20 km/h) Wind direction – NE/E/NW/W (swirling winds) No site activities were being undertaken that might have contributed to the event. Prevailing hot temperatures (up to ~40°C) and dry conditions might have contributed in elevated PM10 at the monitor.
24:00 03/02/2025	6.41	26.56	Yes	
24:00 04/02/2025	28.25	169.82	No	Period of exceedance - 04:00h to 07:00h; 17:00h to 24:00h 04/02/2025. Average wind speed – 9.36 km/hr (occasional wind gusts up to 27.68 km/h) Wind direction – SW/SE/NE/N (swirling winds) Ongoing site activities were assessed to have not contributed to the event considering the wind direction was <u>towards</u> the site. Occasional wind gusts and prevailing dry conditions might have contributed

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Continuous Particulate Monitor (CPM1) NSW Environment Protection Licence 20795 Point #13				
Date Time	PM2.5	PM10	Compliant (Yes/No)	Comments
				to the elevate particulate matter concentration at the monitor.
24:00 05/02/2025	14.86	31.84	Yes	
24:00 06/02/2025	13.81	29.96	Yes	
24:00 07/02/2025	14.3	49.2	Yes	
24:00 08/02/2025	12.06	45.71	Yes	
24:00 09/02/2025	16.1	32.21	Yes	
24:00 10/02/2025	6.49	19.78	Yes	
24:00 11/02/2025	6.11	22.01	Yes	
24:00 12/02/2025	5.68	25.22	Yes	
24:00 13/02/2025	29.95	219.12	No	<p>Period of exceedance - 10:00h to 15:00h 13/02/2025; 17:00h 13/02/2025 to 02:00h 14/02/2025.</p> <p>Average wind speed – 18.54 km/hr (up to 28.40 km/h) Wind direction – predominantly from SW</p> <p>Considering wind was predominantly blowing from the SW direction, towards the site, any impact on dust levels cannot be attributed to the site activities.</p>
24:00 14/02/2025	25.91	185.37	No	<p>Period of exceedance - 05:00h to 07:00h 14/02/2025; 13:00h 14/02/2025 to 06:00h 15/02/2025.</p> <p>Average wind speed – 20.88 km/hr (up to 23.51 km/h) Wind direction – SW</p> <p>Considering wind was blowing from the SW direction, towards the site, any impact on dust levels cannot be attributed to the site activities.</p>
24:00 15/02/2025	42.6	331.84	No	<p>Period of exceedance - 12:00h 15/02/2025 to 03:00h 16/02/2025.</p> <p>Average wind speed – 22.39 km/hr (up to 26.1 km/h) Wind direction – predominantly from SW</p> <p>Considering wind blowing from the SW directions, towards the site, any impact on dust levels cannot be attributed to the site activities.</p>
24:00 16/02/2025	8	49.38	Yes	
24:00 17/02/2025	5.27	21.69	Yes	

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Continuous Particulate Monitor (CPM1) NSW Environment Protection Licence 20795 Point #13				
Date Time	PM2.5	PM10	Compliant (Yes/No)	Comments
24:00 18/02/2025	10.29	57.44	No	<p>Period of exceedance - 15:00h to 22:00h 18/02/2025.</p> <p>Average wind speed – 18.72 km/hr (up to 22.39 km/h) Wind direction – predominantly from SW</p> <p>Considering wind was predominantly blowing from the SW direction, towards the site, any impact on dust levels cannot be attributed to the site activities.</p>
24:00 19/02/2025	12.16	88.24	No	<p>Period of exceedance - 15:00h to 24:00h 19/02/2025.</p> <p>Average wind speed – 20.84 km/hr (up to 23.72 km/h) Wind direction – predominantly from SW</p> <p>Considering wind was predominantly blowing from the SW direction, towards the site, any impact on dust levels cannot be attributed to the site activities.</p>
24:00 20/02/2025	7.02	30.45	Yes	
24:00 21/02/2025	10.1	31.2	Yes	
24:00 22/02/2025	35.35	259.47	No	<p>Period of exceedance - 10:00h to 22:00h 22/02/2025.</p> <p>Average wind speed – 24.12 km/hr (up to 30.13 km/h) Wind direction – predominantly from N</p> <p>Ongoing site activities were assessed to have not contributed to the event. Considering the wind was blowing from the N, no dust generated from site activities is analysed to have impacted particulate matter levels at the monitor.</p>
24:00 23/02/2025	26.42	126.26	No	<p>Period of exceedance - 24:00h 22/02/2025 to 07:00h 23/02/2025; 11:00h 23/02/2025 to 05:00h 24/02/2025.</p> <p>Average wind speed – 21.71 km/hr (up to 32.32 km/h) Wind direction – N/NW/W/SW/S</p> <p>Ongoing site activities were assessed to have not contributed to the event considering the wind was not blowing in direction from the site.</p>

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Date Time	PM2.5	PM10	Compliant (Yes/No)	Comments
				Fairly high wind speed and prevailing dry conditions might have impacted the particulate matter concentration at the monitor.
24:00 24/02/2025	24.13	83.29	No	<p>Period of exceedance – continuation of 23/02/2025 event until 05:00h 24/02/2025.</p> <p>Average wind speed – 21.74 km/hr (up to 34.52 km/h) Wind direction – W/SW</p> <p>Ongoing site activities were assessed to have not contributed to the event considering the wind direction was <u>towards</u> the site.</p> <p>High wind speed and prevailing dry conditions might have impacted the particulate matter concentration at the monitor.</p>
24:00 25/02/2025	6.24	21.31	Yes	
24:00 26/02/2025	6.39	55.94	No	<p>Period of exceedance - 09:00h to 11:00h; 15:00h to 23:00h 26/02/2025.</p> <p>Average wind speed – 13.68 km/hr (up to 17.82 km/h) Wind direction – predominantly from SW</p> <p>Considering wind was blowing from the SW directions, towards the site, any impact on dust levels cannot be attributed to the site activities.</p>
24:00 27/02/2025	7.04	34.37	Yes	
24:00 28/02/2025	4.69	21.83	Yes	