

**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 exceedances in particulate levels (12) recorded on the monitoring station. However, no contribution from site activities was observed on either days where the criteria was exceeded. (No site activities were undertaken between 20/12/2024 and 30/12/2024 due to Christmas closure).

Ongoing bushfire at Grampians (South-West to the site) might have influenced elevation in PM10 at the monitoring station during high winds from the South-West direction between 17/12/2024 and 31/12/2024.

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 01/12/2024	2.13	9.88	Yes	
24:00 02/12/2024	5.44	9.61	Yes	
24:00 03/12/2024	7.57	54.3	No	Period of exceedance - 18:45h 03/12/2024 to 00:50h 04/12/2024. Average wind speed - 18.36 km/hr (up to 26.38km/h) Wind direction - predominantly from SW No site activities were being undertaken that might have contributed to the event.
24:00 04/12/2024	4.51	17.38	Yes	
24:00 05/12/2024	6.14	14.42	Yes	
24:00 06/12/2024	14.11	91.57	No	Period of exceedance - 14:40h 06/12/2024 to 21:10h 06/12/2024 Average wind speed - 18.36 km/hr (up to 30.45km/h) Wind direction - swung around from SW/S/SE/E No site activities were being undertaken that might have contributed to the event.
24:00 07/12/2024	27.78	182.92	No	Period of exceedance - 13:55h 07/12/2024 to 04:35h 08/12/2024

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Continuous Particulate Monitor (CPM1) NSW Environment Protection Licence 20795 Point #13				
Date Time	PM2.5	PM10	Compliant (Yes/No)	Comments
				Average wind speed - 21.78 km/hr (up to 31.89km/h) Wind direction - swung around from W/NW/SW/S No site activities were being undertaken that might have contributed to the event.
24:00 08/12/2024	6.83	45	Yes	
24:00 09/12/2024	5.29	34.35	Yes	
24:00 10/12/2024	4.76	39.26	Yes	
24:00 11/12/2024	4.24	28.86	Yes	
24:00 12/12/2024	3.74	12.92	Yes	
24:00 13/12/2024	3.49	18.04	Yes	
24:00 14/12/2024	4.77	17.25	Yes	
24:00 15/12/2024	4.86	18.43	Yes	
24:00 16/12/2024	24.81	185.92	No	Period of exceedance - 08:55h 16/12/2024 to 18:45h 16/12/2024 Average wind speed – 23.4 km/hr (up to 30.45km/h) Wind direction - predominantly from NW No site activities were being undertaken that might have contributed to the event.
24:00 17/12/2024	81.34	628.48	No	Period of exceedance - 20:55h 16/12/2024 to 05:45h 18/12/2024 Average wind speed – 23.4 km/hr (up to 30.45km/h) Wind direction - predominantly from SW No site activities were being undertaken that might have contributed to the event. Considering high winds from the SW direction, ongoing bushfire in Grampians might have impacted the PM10 dust levels at the monitor.
24:00 18/12/2024	13.13	67.66	No	Period of exceedance - continuation of 17/12/2024 event until 05:45h on the 18/12/2024 Average wind speed – 23.4 km/hr (up to 30.45km/h) Wind direction - predominantly from SW

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Date Time	PM2.5	PM10	Compliant (Yes/No)	Comments
				<p>No site activities were being undertaken that might have contributed to the event.</p> <p>Considering high winds from the SW direction, ongoing bushfire in Grampians might have impacted the PM10 dust levels at the monitor.</p>
24:00 19/12/2024	5.89	32.21	Yes	
24:00 20/12/2024	17.42	60.67	No	<p>Period of exceedance - 08:10h to 09:15h 20/12/2024; 22:05 20/12/2024 to 21:45h 21/12/2024</p> <p>Average wind speed – 20.48 km/hr (up to 33.76km/h) Wind direction – swung around from SW/S</p> <p>No activities on site as site closed due to Christmas Closure.</p> <p>Considering high winds from the SW direction, ongoing bushfire in Grampians might have impacted the PM10 dust levels at the monitor.</p>
24:00 21/12/2024	53.08	148.94	No	<p>Period of exceedance – 22:05 20/12/2024 to 21:45h 21/12/2024</p> <p>Average wind speed – 20.48 km/hr (up to 33.76km/h) Wind direction – swung around from SW/S</p> <p>No activities on site as site closed due to Christmas Closure.</p> <p>Considering high winds from the SW direction, ongoing bushfire in Grampians might have impacted the PM10 dust levels at the monitor.</p>
24:00 22/12/2024	26.94	105.76	No	<p>Period of exceedance – 14:10 22/12/2024 to 07:45h 23/12/2024</p> <p>Average wind speed – 21.85 km/hr (up to 38.7km/h) Wind direction – swung around from SW/W</p> <p>No activities on site as site closed due to Christmas Closure</p> <p>Considering high winds from the SW direction, ongoing bushfire in</p>

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Date Time	PM2.5	PM10	Compliant (Yes/No)	Comments
				Grampians might have impacted the PM10 dust levels at the monitor.
24:00 23/12/2024	50.46	364.7	No	<p>Period of exceedance – 10:10 23/12/2024 to 00:15h 24/12/2024</p> <p>Average wind speed – 21.56 km/hr (up to 29.16 km/h)</p> <p>Wind direction – predominantly from SW</p> <p>No activities on site as site closed due to Christmas Closure</p> <p>Considering high winds from the SW direction, ongoing bushfire in Grampians might have impacted the PM10 dust levels at the monitor.</p>
24:00 24/12/2024	6.09	19.58	Yes	
24:00 25/12/2024	4.71	17.72	Yes	
24:00 26/12/2024	23.09	185.58	No	<p>Period of exceedance – 09:40h 26/12/2024 to 09:20h 27/12/2024</p> <p>Average wind speed – 21.25 km/hr (up to 38.48 km/h)</p> <p>Wind direction – swung around from N/NW/W/SW</p> <p>No activities on site as site closed due to Christmas Closure</p>
24:00 27/12/2024	31.29	227.2	No	<p>Period of exceedance – 09:40h 26/12/2024 to 09:20h 27/12/2024; 22:35h 27/12/2024 to 00:40h 28/12/2024</p> <p>Average wind speed – 21.25 km/hr (up to 38.48 km/h)</p> <p>Wind direction – swung around from N/NW/W/SW</p> <p>No activities on site as site closed due to Christmas Closure</p>
24:00 28/12/2024	6.05	20.75	Yes	
24:00 29/12/2024	4.76	9.89	Yes	
24:00 30/12/2024	4.82	14.85	Yes	
24:00 31/12/2024	3.06	15.9	Yes	