

Jondaryan Rail Loading Facility Air Quality Monitoring Results

New Acland Coal Pty Ltd (NAC) undertakes air quality monitoring as part of the environmental monitoring program for the Jondaryan Rail Loading Facility (JRLF). The following air quality data is provided to the Jondaryan community.

Table 1: Dust deposition and compositional monitoring results for December 2017

Site	Dust Deposition (mg/m ² /day)	EA Criteria (mg/m ² /day)	Compositional Analysis ¹			Comments
			Major (>20%)	Minor (1% - 20%)	Trace (<5%)	
JD1	23	120	Mineral Material (85%)	Vegetation (10%), Coal (5%)	Insects (<5%)	Rail and Highway to the north, north-west and north-east. JRLF to north-east. Gravel and grass immediately surrounding. Cropped paddock to north-east, east and south-east. Residential to north and west. Road with unsealed edges to north-west, north and north-east. Unsealed roads and driveways to east, south-east, west and north-east.
JD2	17	120	Mineral Material (45%), Vegetation (40%)	Insects (10%), Coal (5%)	N/A	Rail and Highway to north, north-west and north-east. JRLF to the north-east. Grass immediately surrounding. Cropped paddock to south-east. Spider web in funnel. Residential to south and west. Road with unsealed edges to north-east, east, south-east and south. Unsealed road to south-east, south and south-west.
JD3	43	120	Mineral Material (70%)	Vegetation (20%), Coal (10%)	Insects (<5%)	Highway and Rail to north-west, north and north-east. JRLF to the north-east. Residential surrounding. Grass and garden immediately surrounding. Road with unsealed edges to south-east. Unsealed driveways to north-east, south-east and south.
JD4	380	120	Polysaccharide Slime (50%)	Mineral Material (20%), Vegetation (20%), Insects (10%)	Coal (<5%)	Rail, Highway and Jondaryan town to south-east, south, south-west and west. JRLF to the east. Immediate surrounding grass and stubble paddock. Stubble paddocks to south-west, west, north-west, north, north-east and south-east. Roads to north-east, east, south-east, south and south-west.
JD5	256	120	Polysaccharide Slime (60%), Insects (25%)	Mineral Material (10%), Vegetation (5%)	Coal (<5%)	Rail and Highway to north-west, north and north-east. JRLF to the north-east. Grass immediately surrounding. Residential to east, south and west. Road to north-east, east and south-east.

¹ A semi-qualitative visual analysis of a representative portion of the collected sample which is as consistent as possible (however potentially biased) to that of the complete sample. When measured at a sensitive place, the allowable maximum level of the release of dust from JRLF is 120 milligrams per square metre per day (120 mg/m²/day) as stated in JRLF's Environmental Authority (EA). The dust deposition monitors do not distinguish between dust sources. The predominant wind directions for December 2017 were East (33.6%), North-East (25.0%) and South-East (10.1%). The predominant wind speeds were light air to gentle breeze². JD4 reported concentrations greater than the EA limit however a dust deposition gauges in between the JRLF and JD4 reported concentrations less than the EA limit (33 and 63mg/m²/day), JD4's compositional analysis reported coal as less than 5% with the major constituent being polysaccharide slime (decomposed soft body parts of insects and vegetation) (50%) and vegetation (20%). JD5 reported concentrations greater than the EA limit however dust deposition gauges in between the JRLF and JD5 reported concentrations less than the EA limit (17 and 43 mg/m²/day), JD5's compositional analysis reported coal as less than 5% with the major constituent being polysaccharide slime (decomposed soft body parts of insects and vegetation) (60%) and insects (25%), results indicate that the JRLF is not the major contributor to elevated results.

² Wind speed classification uses the Beaufort scale

Table 2: Quarterly PM₁₀ monitoring result for 26 - 27 October 2017

Location	24 Hour PM ₁₀ Result (µg/m ³)	Long-Term PM ₁₀ average (µg/m ³)	NEPM Criteria for 24 Hour PM ₁₀ exposure (µg/m ³) ³	Comments ⁴
Corner of Lagoon and Earl Streets, Jondaryan	14	21	50	"Site was not downwind of the Jondaryan coal stockpile at all during the sampling. Sampling is avoided during or after significant rainfall where possible, with the objective of collecting data during normal to worst-case (dustiest) conditions."

³ Taken from monitoring report, with respect to most recent result

⁴ PM₁₀ monitoring is undertaken on a quarterly basis for a nominal

The national 24-hour exposure for PM₁₀ particulates stated in the National Environment Protection Measure for Ambient Air Quality is 50 micrograms per cubic meter (50 µg/m³). The PM₁₀ monitors do not distinguish between *particulate matter sources*.

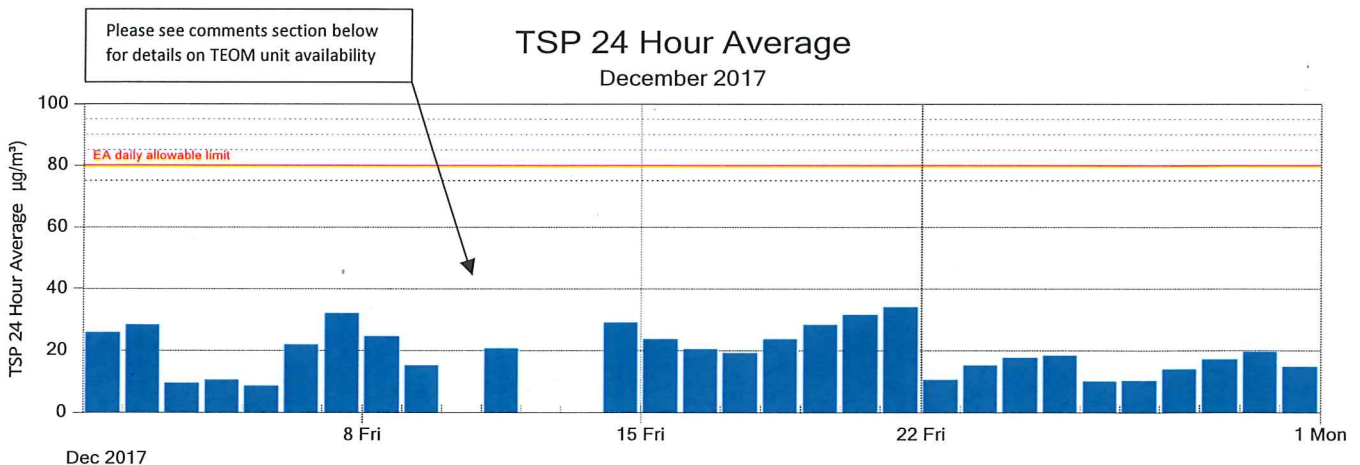
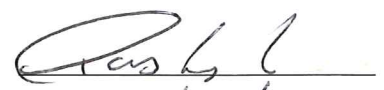


Figure 1: Jondaryan Township TSP continuous monitoring 24 Hr average results for December 2017

Comments: Ecotech Pty Ltd has been contracted by NAC for the maintenance and data collection at a TEOM site located in the Jondaryan Township which continuously measures Total Suspended Particulate (TSP) matter. When measured at a sensitive place, the maximum level of the release of TSP from the JRLF (24 hour rolling average) is 80 micrograms per cubic metre (80 µg/m³) as stated in the JRLF's EA. Any exceedances of this limit are displayed in Figure 1 (above). The TEOM does not distinguish between particulate matter sources. The predominant wind directions for December 2017 were East (33.6%), North-East (25.0%) and South-East (10.1%). The predominant wind speeds were light air to gentle breeze². The TEOM unit availability for TSP determination was 95.8% of the sample period. TEOM unit availability down on the 10/12/17 from 1:20am to 9:05am due to power interruption of unit. TEOM unit availability down on the 12/12/17 from 1:50pm to 3:20pm due to faulty flow meter, unit had unrealistic data from the 12/12/17 3:25pm to 13/12/17 10:05am. Maintenance performed on 13/12/17 10:10am to 10:55am to replace TEOM filter.

If there are any queries regarding the air quality monitoring undertaken for the Jondaryan Rail Loading Facility please contact Rob Rashleigh at the New Acland Coal Mine during business hours on 4694 8888.

Issued by:
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New Acland Coal Pty Ltd


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