

Jondaryan Rail Loading Facility Air Quality Monitoring Results



Issue Month: October 2017

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 August 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	13	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 dirt immediately surrounding. Bare paddock to north-east, east and south-east. Cropped paddock to 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	30	120	Mineral Material (80%)	Insects (10%), Vegetation (10%)	Coal (<5%)	Rail and Highway to north, north-west and north-east. JRLF to the north-east. Grass immediately surrounding. 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	20	120	Mineral Material (80%)	Coal (10%), Vegetation (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. Cropped paddock to south. Road with unsealed edges to south-east. Unsealed driveways to north-east, south-east and south.
JD4	286	120	Polysaccharide Slime (50%), Insects (30%)	Mineral Material (10%), Vegetation (10%)	Coal (<5%)	Rail, Highway and Jondaryan town to south-east, south, south-west and west. JRLF to the east. Immediate surrounding grass and cropped paddock. Cropped paddocks to south-west, west, north-west, north and north-east. Bare paddock to north and north-west. Roads to north-east, east, south-east, south and south-west.
JD5	33	120	Polysaccharide Slime (40%), Vegetation (35%), Mineral Material (25%)	N/A	Coal (<5%), Insects (<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 August 2017 were North-West (19.88%), South (19.49%) and South-West (19.09%). The predominant wind speeds were calm to light breeze². JD4 reported a concentration greater than the EA limit however two dust deposition gauges in between the JRLF and JD4 reported concentrations less than JD4 (50 and 86 mg/m²/day), JD4's compositional analysis reported coal at <5% with the major constituent being polysaccharide slime (50%), insects (30%), results indicate localised sources are the likely cause of the elevated result at JD4.

² Wind speed classification uses the Beaufort scale

Table 2: Quarterly PM₁₀ monitoring result for August 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 ³
Corner of Lagoon and Earl Streets, Jondaryan	20	22	50	"Winds from the east-north-east to east-south-east placed the site downwind of the Jondaryan Coal Stockpile (~1km) for approximately 82.4 % of the sampling period."

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.

TSP 24 Hour Average
August 2017

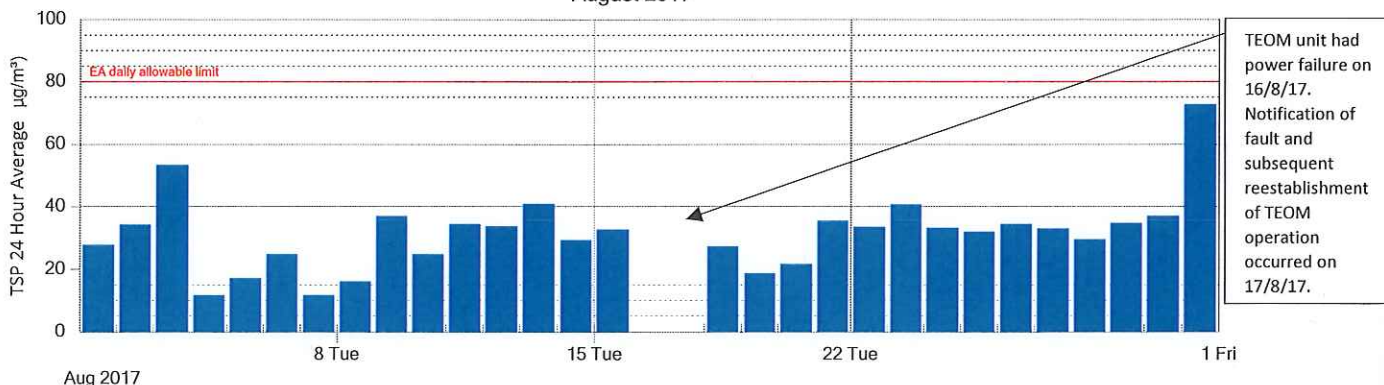


Figure 1: Jondaryan Township TSP continuous monitoring 24 Hr average results for August 2017

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 average) is 80 micrograms per cubic metre (80 µg/m³) as stated in the JRLF's EA. The graphical representation has been changed to report 24 Hour average in accordance with the Australian and New Zealand standard (*Methods for sampling and analysis of ambient air Determination of suspended particulate matter AS/NZS 3580.9.6*), it will replace the 24 Hour rolling average representation of previous reports. 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 August 2017 were North-West (19.88%), South (19.49%) and South-West (19.09%). The predominant wind speeds were calm to light breeze. The TEOM unit availability for TSP determination was 96.1% of the sample period, TEOM unit had a power failure on 16/8/17 following notification the TEOM unit was operational on 17/08/17.

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

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Date: 11/10/2017