



Jondaryan Rail Loading Facility Air Quality Monitoring Results

Issue Month: February 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 the period: December 2016

Site	Dust Deposition (mg/m ² /day)	EA Criteria (mg/m ² /day) [#]	Compositional Analysis ⁺			Comments
			Major (>20%)	Minor (<20%>1%)	Trace (<1%)	
JD1	27	120	Mineral Material (55%)	Coal (5%), Insects (20%), Polysaccharide Slime (20%)	Vegetation (<1%)	Rail and Highway to the north, north-west & north-east. JRLF to north-east. Grass immediately surrounding. Residential to north and west. Road with unsealed edges to north-west, north & north-east, unsealed road to landfill to north-east & gravel driveways to west, north-west, north & north-east. Road to south-west, west & north-west.
JD2	136	120	Mineral Material (80%)	Coal (20%)	Insects (<1%), Vegetation (<1%)	Rail and Highway to north, north-west & north-east. JRLF to the north-east. Grass immediately surrounding, roadwork's on Highway to the north. Residential to south and west. Road with unsealed edges to north-east, east, south-east & south. Gravel road to south-east, south, south-west.
JD3	27	120	Mineral Material (70%)	Coal (10%), Insects (10%), Polysaccharide Slime (10%)	Vegetation (<1%)	Highway and Rail to north-west, north, north-east. JRLF to the north-east. Residential surrounding. Grass & garden immediately surrounding. Road to north-west, north, north-east, east, south-east, south & south-west. Gravel drive to north-east & south.
JD4	17	120	Mineral Material (70%)	Coal (10%), Insects (20%)	Vegetation (<1%)	Rail, Highway and Jondaryan town to south-east, south, south-west & west. JRLF to the east. Immediately surrounding grass and harvested paddock to west. Road works on Highway to south, south-east. Roads to north-east, east, south-east, south, south-west.
JD5	33	120	Mineral Material (55%)	Coal (5%), Insects (20%), Polysaccharide Slime (20%)	Vegetation (<1%)	Rail and Highway to north-west, north, north-east. JRLF to the north-east. Grass immediately surrounding. Residential to east, south and west. Road to north-east, east & south-east.

⁺ 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

[#] Copper sludge is a by product of the necessary preservative (copper sulphate) in sample containers as directed by the laboratory

^{*} Polysaccharide slime is a by product of the bio-degradation of insects and vegetation

[#] When measured at a sensitive place, the allowable maximum level of the release of dust from the JRLF is 120 milligrams per square metre per day (120mg/m²/day) as stated in the JRLF's Environmental Authority (EA). The dust deposition monitors do not distinguish between dust sources. The predominant wind directions for December 2016 were from the east (38.75%), north-east (19.02%), north-west (12.14%) and south-east (7.34%). The predominant wind speed for December was calm to light winds. JD2 reported a concentration greater than the EA limit however two dust deposition gauges in between the JRLF and JD2 report concentrations less than JD2 (33 and 110 mg/m²/day). JD2's compositional analysis reported coal at 20% with the major constituent being mineral material. Recent roadwork's on the Warrego Highway established a temporary stockpile of material approximately 50 meters north of JD2, which may have contributed to the elevated result. JD2's results will continue to be monitored to determine if a trend is being established.

Table 2: Quarterly PM₁₀ monitoring result for the period 11-12 October 2016

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)	Comments [*]
Corner of Lagoon and Earl Streets, Jondaryan	16	22	50	"Sampling is avoided during or after significant rainfall with the objective of collecting data during normal to worst-case (dustiest) conditions. This site was located downwind of mine-related activities (Jondaryan coal stockpile) for less than 6% of sample period."

^{*} Taken from monitoring report, with respect to most recent result

[#] PM₁₀ monitoring is undertaken on a quarterly basis for a nominal 24 hour period.

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

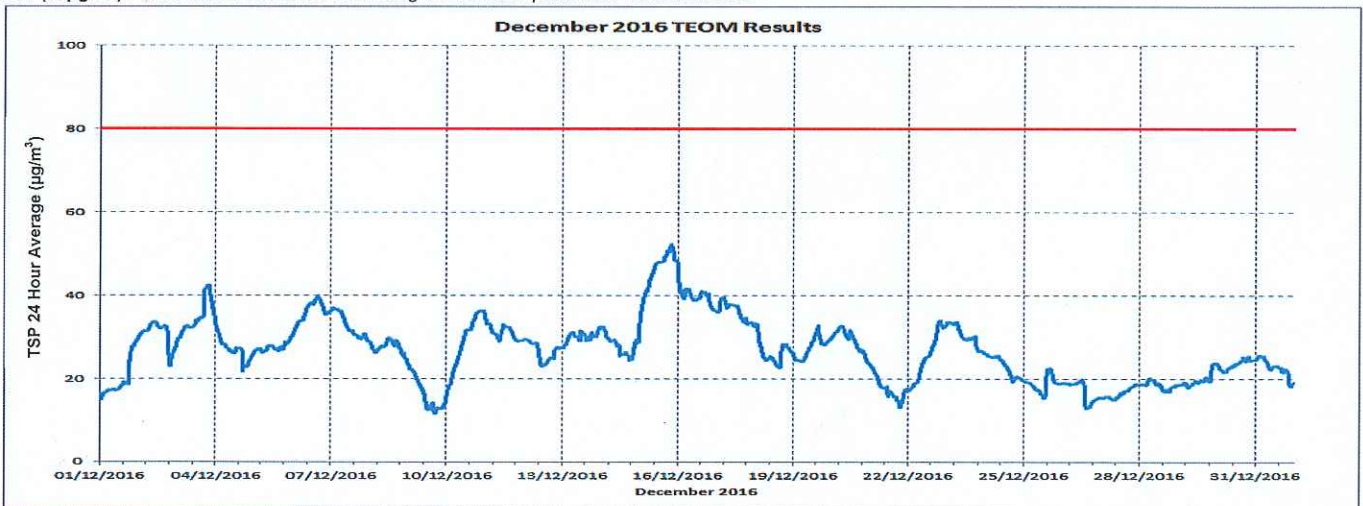


Figure 1: Jondaryan Township TSP continuous monitoring results for the period: December 2016

Comments: A TEOM located within the Jondaryan Township 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 (80µg/m³) as stated in the JRLF's EA. The TEOM's do not distinguish between particulate matter sources. The predominant wind directions for December 2016 were from the east (38.75%), north-east (19.02%), north-west (12.14%) and south-east (7.34%). The predominant wind speed for December was calm to light winds. The TEOM unit was operational for > 99% of the sample period.

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.

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Date: 07/02/2017