



Jondaryan Rail Loading Facility Air Quality Monitoring Results

Issue Month: June 2016

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: May 2016

Site	Dust Deposition (mg/m ² /day)	EA Criteria (mg/m ² /day) ^g	Compositional Analysis [†]			Comments
			Major (>20%)	Minor (<20%>1%)	Trace (<1%)	
JD1	20	120	Mineral Material (30%), Insects (30%)	Coal (20%), Polysaccharide Slime (10%), Vegetation (10%)	N/A	Rail and Highway to the north, north-west & north-east. JRLF to north-east. Dirt and gravel immediately surrounding, stubble paddock to east. 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. Gravel road to east & south-east.
JD2	33	120	Coal (30%)	Insects (20%), Mineral Material (20%), Polysaccharide Slime (20%), Vegetation (10%)	N/A	Rail and Highway to north, north-west & north-east. JRLF to the north-east. Grass immediately surrounding. Stubble paddock with bare areas to east. Stubble paddock to south-east. Residential to south and west. Road with unsealed edges to north-east, east, south-east & south. Dirt road to east. Road to north-east.
JD3	27	120	Insects (25%), Vegetation (25%)	Coal (20%), Mineral Material (20%), Polysaccharide Slime (10%)	N/A	Highway and Rail to north-west, north, north-east. JRLF to the north-east. Residential surrounding. Grass & garden immediately surrounding. Disturbed dirt garden to south-east. Road to north-west, north, north-east, east, south-east, south & south-west. Gravel drive to north-east & south.
JD4	313	120	Polysaccharide Slime (40%)	Insects (20%), Mineral Material (20%), Vegetation (20%)	Coal (<1%)	Rail, Highway and Jondaryan town to south-east, south, south-west & west. JRLF to the east. Immediate surround bare stubble paddocks to north, north-east & east. Roads to north-east, east, south-east, south, south-west. Bird droppings in funnel.
JD5	50	120	Mineral Material (30%), Other Impurities* (50%)	Copper Sludge (10%), Vegetation (10%)	Coal (<1%), Insects (<1%)	Rail and Highway to north-west, north, north-east. JRLF to the north-east. Grass immediately surrounding. Trench with exposed dirt immediately east. Dead mouse blocking funnel. 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

^g 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

^{*} Laboratory report defined other impurities as green spherical deposition

^g 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 May 2016 were from the south (15.91%), east (14.23%), south-east (11.86%), south-west (10.86%) & north-west (10.30%). The predominant wind speed for May was calm to light winds. 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 (63 and 130 mg/m²/day). JD4's compositional analysis reported coal at <1% with major constituents being insects and vegetative material therefore it is not considered that the JRLF is the major contributor to this elevated result.

Table 2: Quarterly PM₁₀ monitoring result for the period 17-18 February 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 ^g (µg/m ³)	Comments [*]
Corner of Lagoon and Earl Streets, Jondaryan	21	22	50	"This site was within the downwind area of coal stockpile for less than 20% of the time"

^g 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*.

May 2016 TEOM Results

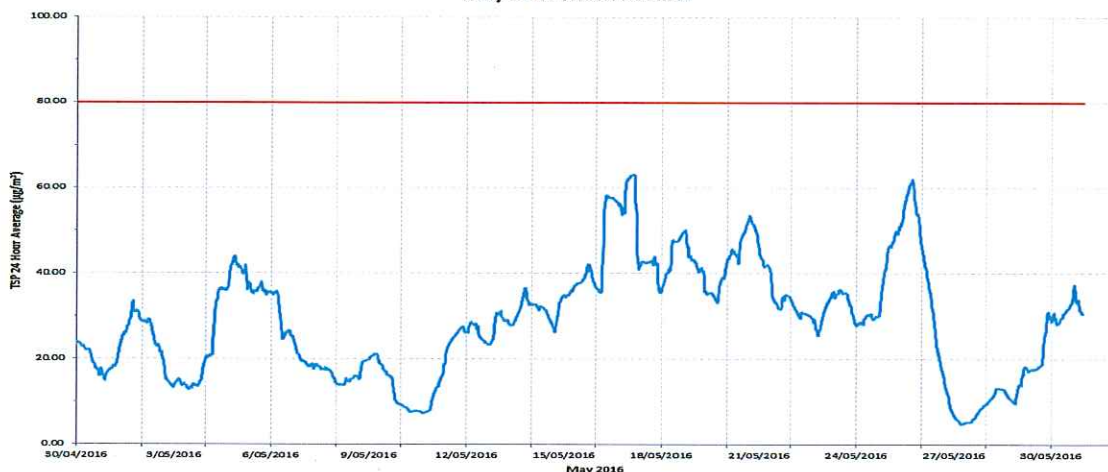


Figure 1: Jondaryan Township TSP continuous monitoring results for the period: May 2016

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 May 2016 were from the south (15.91%), east (14.23%), south-east (11.86%), south-west (10.86%) & north-west (10.30%). The predominant wind speed for May 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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