

**Jondaryan Rail Loading Facility Air Quality Monitoring Results**

Issue Month: June 2016



**NEW HOPE GROUP**

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: April 2016**

Site	Dust Deposition (mg/m <sup>2</sup> /day)	EA Criteria (mg/m <sup>2</sup> /day) <sup>#</sup>	Compositional Analysis <sup>+</sup>			Comments
			Major (>20%)	Minor (<20%>1%)	Trace (<1%)	
JD1	20	120	Mineral Material (90%)	Insects (10%)	Coal (<1%), Vegetation (<1%)	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	126	120	Coal (90%)	Insects (10%)	Mineral Material (<1%), Vegetation (<1%)	Rail and Highway to north, north-west & north-east. JRLF to the north-east. Grass immediately surrounding. 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	30	120	Mineral Material (60%)	Coal (20%), Insects (10%), Vegetation (10%)	N/A	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	176	120	Insects (40%), Mineral Material (50%)	Polysaccharide Slime (10%)	Coal (<1%), Vegetation (<1%)	Rail, Highway and Jondaryan town to south-east, south, south-west & west. JRLF to the east. Grass immediately surrounding. Stubble paddock to south-west, west, north-west, north, north-east & south-east. Roads to north-east, east, south-east, south, south-west.
JD5	10	120	Mineral Material (90%)	Insects (10%)	Coal (<1%), Vegetation (<1%)	Rail and Highway to north-west, north, north-east. JRLF to the north-east. Grass immediately surrounding. Trench with exposed dirt immediately east. Residential to east, south and west. Road to north-east, east & south-east.

<sup>+</sup> 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

<sup>^</sup> Copper sludge is a by product of the necessary preservative (copper sulphate) in sample containers as directed by the laboratory

<sup>\*</sup> Polysaccharide slime is a by product of the bio-degradation of insects and vegetation

<sup>#</sup> 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/m<sup>2</sup>/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 April 2016 were from the east (36.57%), south-east (18.77%), north-east (10.70%) & south (8.73%). The predominant wind speed for April was calm to light winds. Rainfall was 48% below average (Oakey) for the month of April. JD2 and JD4 have reported levels greater than the EA limit however two dust deposition gauges in between the JRLF and JD2 reported concentrations less than JD2 (37 and 100 mg/m<sup>2</sup>/day), when compared to other sites, JD2's compositional analysis indicates a variation in the coal percentage where the nearest sites to JD2; JD1 and JD3 (~460m to the south and west respectively), reported coal at <1% and 20% respectively, JD's results will continue to be monitored to determine if a trend is being established.

**Table 2: Quarterly PM<sub>10</sub> monitoring result for the period 17-18 February 2016**

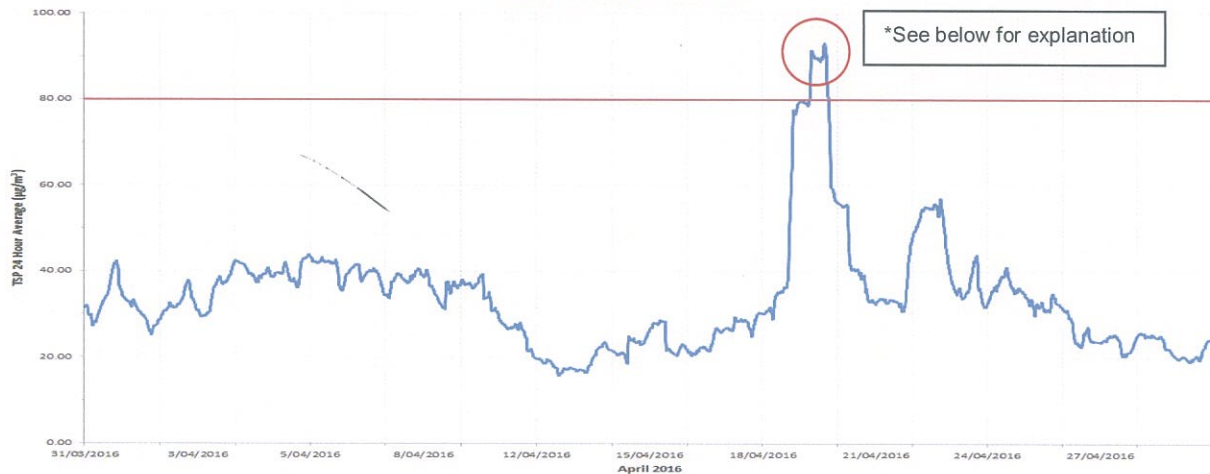
Location	24 Hour PM <sub>10</sub> Result (µg/m <sup>3</sup> )	Long-Term PM <sub>10</sub> Average (µg/m <sup>3</sup> )	NEPM Criteria for 24 Hour PM <sub>10</sub> exposure <sup>§</sup> (µg/m <sup>3</sup> )	Comments*
Corner of Lagoon and Earl Streets, Jondaryan	21	22	50	"This site was within the downwind area of coal stockpile for less than 20% of the time"

<sup>§</sup> Taken from monitoring report, with respect to most recent result

<sup>¶</sup> PM<sub>10</sub> monitoring is undertaken on a quarterly basis for a nominal 24 hour period.

The national 24-hour exposure standard for PM<sub>10</sub> particulates stated in the National Environment Protection Measure for Ambient Air Quality is 50 micrograms per cubic metre (50µg/m<sup>3</sup>). The PM<sub>10</sub> monitors do not distinguish between *particulate matter sources*.

**April 2016 TEOM Results**



**Figure 1: Jondaryan Township TSP continuous monitoring results for the period: April 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/m<sup>3</sup>) as stated in the JRLF's EA. The TEOM's do not distinguish between particulate matter sources. The predominant wind directions for April 2016 were from the east (36.57%), south-east (18.77%), north-east (10.70%) & south (8.73%). The predominant wind speed for April was calm to light winds. The TEOM unit was operational for > 99% of the sample period.

\*The wind direction from the JRLF area of interest (80-95 degrees from North) was registered for 12% from 18-21 April, indicating that the JRLF was not the major contributor to this result.

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: 03/06/2016