

Jondaryan Rail Loading Facility Air Quality Monitoring Results

Issue Month: January 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: December 2015

Site	Dust Deposition (mg/m ² /day)	EA Criteria (mg/m ² /day) ^a	Compositional Analysis ^b			Comments
			Major (>20%)	Minor (<20%>1%)	Trace (<1%)	
JD1	27	120	Mineral Material (65%)	Insects (15%), Coal (10%), Vegetation (5%), Polysaccharide Slime (5%)	N/A	Rail and Highway to the north, north-west & north-east. JRLF to east. Grass and gravel immediately surrounding, cropped paddock to north-east, east & south-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 & north. Gravel road to north-east, east & south-east.
JD2	50	120	Mineral Material (60%)	Coal (20%), Insects (10%), Vegetation (5%), Polysaccharide Slime (5%)	N/A	Rail and Highway to north, north-west & north-east. JRLF to the north-east. Grass immediately surrounding. Residential to south and west. Road with unsealed edges to north, north-east, east, south-east, south. Dirt road to south-east. Road to north-east. Bare paddock to north-east. Cropped paddock to south-west.
JD3	37	120	Mineral Material (70%)	Insects (15%), Coal (10%), Polysaccharide Slime (5%)	Vegetation (<1%)	Highway and Rail to north-west, north, north-east. JRLF to the east. Residential surrounding. Garden immediately surrounding. Road to north, north-east, east, south-east, south & south-west. Gravel drive to north-east, east and south-east. Spider web in funnel.
JD4	86	120	Mineral Material (65%)	Coal (10%), Insects (10%), Polysaccharide Slime (10%), Vegetation (5%)	N/A	Rail, Highway and Jondaryan town to south-east, south, south-west, west. JRLF to the east. Bare paddock & grass immediately surrounding. Bare paddock to north-west, north & north-east. Roads to north-east, east, south-east, south, south-west.
JD5	93	120	Insects (30%), Polysaccharide Slime (30%), Mineral Material (30%)	Coal (5%), Vegetation (5%)	N/A	Rail and Highway to north-west, north, north-east. JRLF to the north-east. Grass immediately surrounding. Grass paddocks to south, south-west, west & north-west. Residential to east, south and west. Road to north-east, east & south-east. Insects in funnel.

^a 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

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

^c Polysaccharide slime is a by product of the bio-degradation of insects and vegetation

^d 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 2015 were from the east (45.8%), north-east (21.2%), south-east (12.1%) and north-west (6.6%). The predominant wind speed for December was calm to light winds.

Table 2: Quarterly PM₁₀ monitoring result for the period 11-12 August 2015

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 ^a (µg/m ³)	Comments ^b
Corner of Lagoon and Earl Streets, Jondaryan	39	22	50	"This site was within the downwind area of coal stockpile for approximately 15% of the time"

^a Taken from monitoring report, with respect to most recent result

^b 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*.

December 2015 TEOM Results



Figure 1: Jondaryan Township TSP continuous monitoring results for the period: December 2015

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 2015 were from the east (45.8%), north-east (21.2%), south-east (12.1%) and north-west (6.6%). 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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