Jondaryan Rail Loading Facility Air Quality Monitoring Results

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 February 2018

Site	Dust Deposition ($mg/m^2/day$)	EA Criteria ($mg/m^2/day$)	Compositional Analysis[1]			Comments
			Major (>20%)	Minor (5% - 20%)	Trace (<5%)	
JD1	27	120	Mineral Material (80%)	Coal (10%), Vegetation (10%)	Insects (<5%)	Rail and Highway to the north, north-west and north-east. JRLF to north-east. Gravel, and bare ground immediately surrounding. Cropped paddock to south-east, stubble paddock to north-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	33	120	Mineral Material (90%)	Vegetation (10%)	Coal (<5%), Insects (<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	60	120	Mineral Material (55%), Vegetation (30%)	Coal (10%), Copper Sludge (5%)	Insects (<5%)	Highway and Rail to north-west, north and north-east. JRLF to the north-east. Residential surrounding. Grass and garden immediately surrounding. Road with unsealed edges to south-east. Unsealed driveways to north-east, south-east and south.
JD4	336	120	Mineral Material (70%), Coal (20%)	Insects (10%)	Vegetation (<5%)	Rail, Highway and Jondaryan town to south-east, south, south-west and west. JRLF to the east. Immediate surround grass and recently cropped paddock. Recently cropped paddocks to south-west, west, north-west, north and north-east. Roads to north-east, east, south-east, south and south-west.
JD5	160	120	Polysaccharide Slime (30%), Copper Sludge (20%), Mineral Material (20%)	Coal (10%), Insects (10%), Vegetation (10%)	N/A	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 $mg/m^2/day$ as stated in JRLF's Environmental Authority (EA). The dust deposition monitors do not distinguish between dust sources. The predominant wind directions for February 2018 were East (49.4%), South-East (17.5%) and North-East (9.4%). The predominant wind speeds were light air to gentle breeze[2]. JD4 reported concentrations greater than the EA limit however dust deposition gauges located ~500m and 630m west of JRLF and between JFLF and JD4 reported concentrations less than JD4 located ~960m west of JRLF (63 and 136$mg/m^2/day$ respectively), JD4's compositional analysis reported coal as 20% with the major constituent being Mineral Material (70%). JD4 results will continue to be monitored to determine if a trend is being established. JD5 reported concentrations greater than the EA limit however dust deposition gauges in between the JRLF and JD5 reported concentrations less than the JD5 (33 and 60 $mg/m^2/day$), JD5's compositional analysis reported coal as 10% with the major constituent being Polysaccharide Slime (30%), Copper Sludge (20%) and Mineral Material (20%), results indicate JRLF is not the major contributor to result.

[2] Wind speed classification uses the Beaufort scale

Table 2: Quarterly PM_{10} monitoring result for 17-18 January 2018

Location	24 Hour PM_{10} Result ($\mu g/m^3$)	Long-Term PM_{10} average ($\mu g/m^3$)	NEPM Criteria for 24 Hour PM_{10} exposure ($\mu g/m^3$)[3]	Comments[4]
Corner of Lagoon and Earl Streets, Jondaryan	33	22	50	"The sampling site was downwind of the Jondaryan Coal Stockpile (~1km) for approximately 21.4%."

[3] Taken from monitoring report, with respect to most recent result

[4] PM_{10} monitoring is undertaken on a quarterly basis for a nominal

The national 24-hour exposure for PM_{10} particulates stated in the National Environment Protection Measure for Ambient Air Quality is 50 micrograms per cubic meter (50 $\mu g/m^3$). The PM_{10} monitors do not distinguish between *particulate matter sources.*

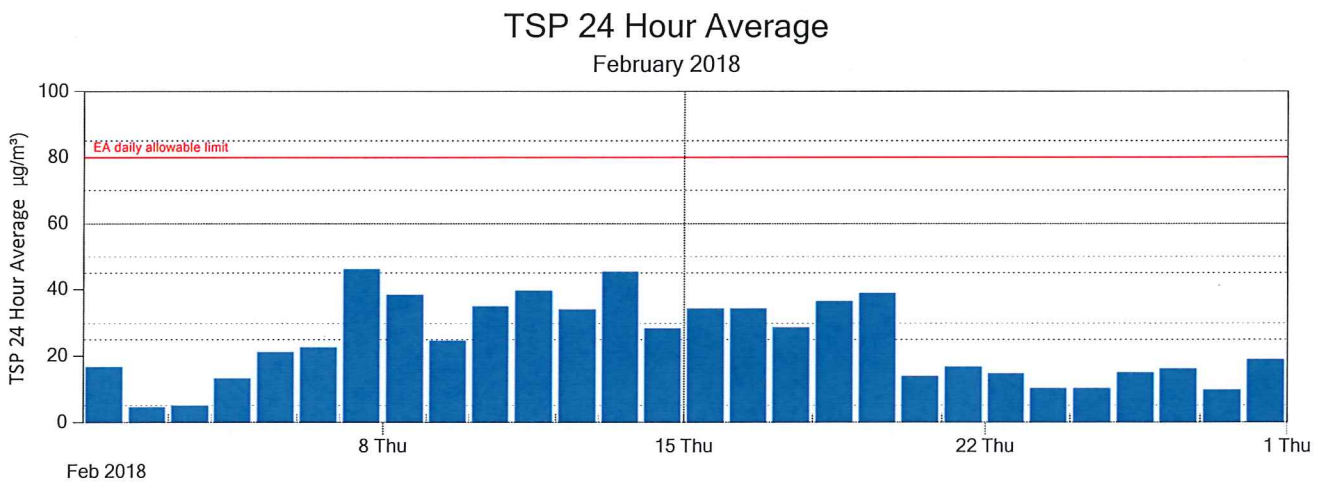

Figure 1: Jondaryan Township TSP continuous monitoring 24 Hr average results for February 2018

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 rolling average) is 80 micrograms per cubic metre (80 $\mu g/m^3$) as stated in the JLRF's EA. 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 February 2018 were East (49.4%), South-East (17.5%) and North-East (9.4%). The predominant wind speeds were light air to gentle breeze[2]. The predominant wind speeds were light air to gentle breeze[2]. The TEOM unit availability for TSP determination was 99.0% 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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