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Sent: Friday, 3 July 2015 12:39 PM
To: dwpaika@bigpond.com
Subject: Iluka Resources - EIS follow-up

Hi Dianne and Ian,

Thanks for your time in meeting with me this week. Firstly, I'd like to correct a statement I made – the cut off for submissions to the NSW Government is **Monday** 6th July 2015, and not **Tuesday** like I believe I told you.

I have asked our environmental officers and EIS consultants to help forming a response to you on the issue of air quality and water impacts, given the indicated dust generation from Iluka's proposed activities. The following responses have been provided:

Air Quality Data

Tables 10.4, 10.5 and 10.6 provide the results of the air quality modelling for each of the mine years modelled (Years 1, 4 and 8) at the 10 most potentially impacted assessment locations. Results are provided for all assessment criteria (PM10, PM2.5, TSP and dust deposition). The tables do not include results for assessment locations R7, R45 and R95, which indicates that these locations are not within the 10 most potentially impacted assessment locations.

It should be noted that the modelling analysed potential air quality impacts at 345 assessment locations and the results for these are contained in Appendix E of the air quality assessment (which is in Appendix E in Volume 2 of the EIS).

The results for assessment locations R7, R45 and R95 for Years 1, 4 and 8 from Appendix E of the air quality assessment are as follows:

Year 1 operations – modelling predictions							
Assessment location	PM10 concentration (µg/m3)			PM2.5 concentration (µg/m3)			Inc
	24-hour Max	Annual average		24-Hour max	Annual Average		
	50 µg/m3	30 µg/m3		25 µg/m3	8 µg/m3		
	Increment	Increment	Cumulative	Increment	Increment	Cumulative	
R7 - Paika	6.6	0.7	18.7	1.3	0.1	6.6	
R45 - Murrundi	4.6	0.4	18.4	0.8	0.1	6.6	
R95 - Paika	6.6	0.6	18.6	1.2	0.1	6.6	

Year 4 operations – modelling predictions							
Assessment location	PM10 concentration (µg/m3)			PM2.5 concentration (µg/m3)			Inc
	24-hour Max	Annual average		24-Hour max	Annual Average		
	50 µg/m3	30 µg/m3		25 µg/m3	8 µg/m3		
	Increment	Increment	Cumulative	Increment	Increment	Cumulative	
R7 - Paika	3.1	0.4	18.4	0.5	0.1	6.6	
R45 - Murrundi	2.4	0.2	18.2	0.3	0.1	6.6	
R95 - Paika	3.1	0.4	18.4	0.5	0.1	6.6	

Year 8 operations – modelling predictions							
Assessment location	PM10 concentration (µg/m3)			PM2.5 concentration (µg/m3)			Inc
	24-hour Max	Annual average		24-Hour max	Annual Average		
	50 µg/m3	30 µg/m3		25 µg/m3	8 µg/m3		
	Increment	Increment	Cumulative	Increment	Increment	Cumulative	
R7 - Paika	1.9	0.6	18.6	0.3	0.1	6.6	
R45 - Murrundi	1.7	0.4	18.4	0.3	0.1	6.6	
R95 - Paika	1.9	0.6	18.6	0.3	0.1	6.6	

The modelling results demonstrated that there are no predicted exceedances of the assessment criteria for any of the operational years for the 10 most potentially impacted assessment locations. Similarly the above results show that there are no predicted exceedances of the assessment criteria for any of the operational years for assessment locations R7, R45 and R95. In fact the results show that air quality at assessment locations R7, R45 and R95 will be well within the assessment criteria and that incremental dust generated by the project is minor to negligible.

The prevailing wind regime was calculated using meteorological modelling in accordance with approved methods described by the EPA. The results demonstrate that winds are predominantly south-easterly to south-westerly in summer and autumn while more south-southwesterly to northerly winds are dominant during winter. West-southwesterly to southerly flows are dominant in spring.

The consultant's view is that based on the results of the modelling, air quality monitoring is not specifically required at or near assessment locations R7, R45 and R95 (monitoring stations are likely to be closer to dust sources to obtain higher yielding data). The location of air quality monitoring (and the number of and types) will be included in an air quality management plan that will be developed prior to the commencement of any activities. Under NSW regulation, our monitoring data needs to be publicly available – we assume at this stage the report will be available on Iluka's website but I can organise to send you (and other landholders/stakeholders) a copy directly, if requested.

Air Quality Monitoring

As identified on page 195 of the EIS, Iluka will prepare and implement an Air Quality Management Plan (AQMP) during construction and operations.

The AQMP will:

- be prepared in consultation with the Environment Protection Authority (EPA);
- detail measures to manage dust generation on site; and
- detail the air quality monitoring to be completed during construction and operations.

As discussed above, results from the air quality monitoring will be reported and made available on the Iluka website in accordance with Government approval and licence conditions.

Water Quality

Paika Lake and Paika Creek are not discussed in the EIS due to the project not directly impacting these two water bodies. In addition, no indirect impacts on these water bodies were identified. Full details of the surface water related impacts associated with the project are provided in Appendix H – Surface Water Management Report. No surface water monitoring of the water bodies has been undertaken to date due to the lack of identified impacts on these water bodies.

As identified on page 284 of the EIS, Iluka will prepare and implement a Water Management Plan (WMP) during construction and operations. The WMP will address both groundwater and surface water during construction and operations. As with the AQMP, the WMP will again:

- be prepared in consultation with the Environment Protection Authority (EPA);
- detail measures to manage water on the project; and
- detail the water quality monitoring to be completed during construction and operations.

Results from the water quality monitoring will be reported and made available on the Iluka website in accordance with Government approval and licence conditions.

I also direct your attention to Page 55 of the Air Quality assessment (Appendix E in Volume 2 of the EIS). You can see the predicted average dust deposition on the map on the right-hand side of the page. Although not specifically clear, the predicted dust deposition minimum contour fringes Paika Lake. In the consultant's opinion, this is unlikely to pose any specific impact on Paika, Paika Lake, water use or human health. Adding exposure to elements like radon, as we discussed, are highly unlikely and no discernible risk has been identified.

Many thanks for the opportunity to provide you with extra information. If this has met your needs then that's great but as we discussed if you remain concerned then lodging those concerns with the NSW Government is an option open to you. As always, let me know if I can provide more information.

Kind regards

Allan Kane