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Memorandum

To	Natasha Harras	Page	1
CC	Antony Steynberg, Kristen Clarke, Dave Rollings		
Subject	MP05_0037 Mod 5 Rutherford: Response to EPA comments		
From	Simon Murphy		
File/Ref No.	60430258	Date	14-Apr-2016

Hi Natasha

Thank you for forwarding the additional comments from the EPA in relation to the above Project. Those comments raised by the EPA in their letter dated 6 April 2016 and summarised below along with our responses:

EPA Comment

1) Estimated Odour Emissions and Predicted Odour impacts.

- *Source of odour emission rates assumed in the modelling AECOM Response – the assumes odour emissions rate of some sources are comparable to those assumed by the Katestone report and other are three times less. The proponent must provide further information regarding the estimated odour emissions including a detailed emissions inventory and supporting sampling reports*

AECOM Response

I refer to **Table 1** attached to this letter, which describes the odour emissions sources used in the Project Air Quality Impact Assessment (AQIA) (AECOM, 2016) compared to the Katestone Report. The key point of comparison relates to TPR's EPL discharge point 19. Katestone applied a rate of 7,620 OUm^3/s based on one sampling event in August 2013. No duplicate sample was undertaken; which is currently common practice to assess repeatability of olfactometry measurements. In addition no conditions are known in relation to how the rate of 7,620 OUm^3/s was arrived at. On this basis, this result was discounted and not used in the assessment.

An independent sampling event undertaken by The Odour Unit (TOU) in February 2013 against known production rates yielded results of 600 and 310 OUm^3/s (duplicate sampling undertaken in this case). With the duplicate sampling to confirm repeatability, odour levels within this order of magnitude are considered more reliable for using as a basis for this assessment. AECOM used the higher of these two measurements and scaled it up to match the full production scenario (while also accounting for the peak-to-mean factor).

As detailed in the Katestone Report (Section 5.1) there are limitation in regards to the inventory included in their report. It should be noted that results of the February 2013 data are also presented in Section 4.5.4 of the Katestone report however no explanation is provided for the significant differences in odour concentration, between the two sampling events or which event was more representative of actual operations (as described above).

In addition to the discrepancy discussed above, the Project Assessment included consideration of EPL points 2 and 3 which represent the balance of potential odour sources for the Project. These results were not included in the previous Katestone report.

EPA Comment

- *Minimisation of Odour Impacts – the proponent is proposing to increase the height of the new burner stack to increase dispersion. The proponent needs to consider what reasonable and feasible mitigation measures need to be applied.*

AECOM Response

Predicted odour impacts from the proposal were found to have no significant impact on odour concentrations at nearby sensitive receptors, as such so no additional mitigation measures were investigated or considered necessary. Generally speaking odour issues, if they arise, would be dealt with through the sites existing operational environmental management system. If odour complaints are received investigations would be made to determine if the Project site is the source of odours and corrective actions taken. It is noted that a validation study has been recommended to confirm the outcomes of the AQIA. As part of this study an assessment could be made of odour emission rates to confirm the outcomes of the modelling. Should the potential for additional offsite impacts be identified further mitigation could be applied.

EPA Comment

2) *Fuel composition – The EPA requests further information regarding the proposed fuel composition and confirmation that estimates are based on all fuels proposed to be under in the 3.0 MW boiler.*

AECOM Response

Reference is made to Section 2.4 and 5.1.3 of the Project AQIA which provides detailed regarding the modelled fuel composition.

Emission rates used from Narangba Plant are considered conservative as the Narangba plant uses predominantly light oil fuel with some process gas. The Rutherford plant would use a combination of natural gas, light oil and a small amount of process gas as a fuel source. The sulphur content of the light oil at Rutherford is also lower than the Narangba Plant.

Under Part 6 Clause 58(1) of the POEO (Clear Air) Regulation 2010 the operation of fuel burning equipment with liquid fuel is limited to a sulphur content of equal to or less than 0.5 percent by weight. Cleanaway have indicated that four test results taken over an 18 month period on the light oil produced onsite at Rutherford has a sulphur content of approximately 0.05 percent by weight. This is considerably lower (approximately ten times) than the sulphur content of the light oil produced at Narangba.

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Table 1 Project Assessment and Katestone Emission Rates comparison

Katestone Source ID	AECOM Source ID	Source Description	Modelled Emission Rates		Raw Measured Emission Rates used by Katestone	Raw *Measured Emission Rates used by AECOM	Comments
			AECOM Scenario 1 (OUm^3/s)	AECOM Scenario 2 (OUm^3/s)			
N/A	Point 2	Existing 3.0 megawatt (MW) LP gas fired boiler stack. Proposed conversion to multi-fuel burner stack.	4868	4868	N/A	2540	Existing source not included in Katestone report
TPR -3	Point 3	0.2 MW gas fired boiler stack	1272	1272	-	553	Source identified in Katestone Report but not sampled.
TPR 2-2	Point 5	Emissions from light ends scrubber (vapour recovery unit)	35	12	29	15	N/A
TPR 4	Point 19	Gas fired heaters.	2379	1804	7620	600	Maximum emission rate of 600 $OU.m^3/s$ adopted based on The Odour Unit P/L* (TOU) data sampled on 14/02/2013 as part of an independent review. This was the higher of two samples taken with the other sample yielding a result of 310 OU.m3/s. The single sample used in the Kates tone report of 7620 OU.m3/s also undertaken by TOU on the 17/07/2013 is considerably higher and in comparison to the other samples and odour emissions from the site is considered to be an outlier. No other samples were taken on this day. It should be noted that odour measurements undertaken as part of the independent odour study by the TOU for 14/02/03 were also presented in Table 4.13 of Appendix B of the Katestone report for comparison with the 17/07/2013 data however no discussion was provided.
TPR 1	Point 20	Hydrogen reformer burner	1470	1173	672	639	N/A
TPR6	N/A	Product storage tanks	Not modelled	Not Modelled	41	N/A	Source not included in AECOM report. Not considered a significant source of odour
*Modelled emission rates have been scaled using peak to mean values and scaled for maximum production rates.							

*TOU (2013c) *Transpacific Refiners Pty Ltd, Odour Emissions Assessment*, Rutherford, NSW, Final Report, April 2013, Everligh NSW, Australia.