

**From:** Pywell, Elisabeth @ Birmingham  
**Sent:** 16 January 2024 16:25  
**To:** Richardson, Leanne  
**Subject:** RE: APP/23/00127 Wartsila 4 Marples Way

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Hi Leanne,

Our consultant has put together a response below and have amended the dispersion modelling report to reflect. Please note, the heights have been updated along with an explanation about using the maximum/ worst case scenario.

The filter outlet diagram is showing the points where the emissions monitoring was carried out which is explained in the 1<sup>st</sup> point

- confirm the functional purpose of the flues identified as 1 & 2 in the attached pdf. I would infer from the reports that 2 is possibly an air inlet, and 1 is the discharge outlet, and that the two TPM samples reported in the EMR are taken as two perpendicular transects (A & B) taken across the centre of the duct (and that they do not represent a sample from each flue, with both being discharge flues) – it would be helpful for this interpretation to be explicitly confirmed.*  
Only one emission point exists, Point 1. The 2 TPM samples were taken from the vertical section of the ducting on the attached diagram. Point 2 is not an emission point and is sealed, it is the inlet ducting to the bag filter.
- explain the two sample results reported in the EMR insofar as they contribute to the 'conceptual emission' being modelled – I note that the AQA uses a value which likely derives from a simple mean of run 1 & run 2 measured TPM values, and that the report refers to the value used as both 'representative' and 'maximum'/'worst case', and it can't be both. It would assist the conceptual model greatly to understand whether we should regard the EMR results to be a worst case, or simply 2 sample results from a sample distribution which might have much wider variability. I have used the highest results of the two runs in the assessment to represent the worst case, in the report worst case has also been applied as I have run the stack operational for a full calendar year as operational times were not provided and to show a worst case scenario. This has been explained in the report now.*
- confirm that the model accounted for a 0 degree (horizontal) the discharge angle in the vertical plane, and a rotational angle in plan which reflects the orientation toward ENE, or alternatively to describe the reasons why orientation parameters would be trivial in this context, especially in lieu of receptors at 5-13 Abrams Way being specifically modelled. The Stack was modelled at a directly vertical angle and explained in the report due to constraints of ADMS software if I had run the stack at a horizontal angle then I wouldn't have been able to take account for building effects in the model and due to the flue exit velocity being low, the difference in results would be minor therefore from professional judgement this would be the most appropriate methodology.*
- demonstrate the triviality of modelled height at the receptor. The report states both that a varied heights were modelled to reflect the window elevations of each building, but only reports 1.5m height, which for nearby receptors I suspect is likely to under represent the*

*process contribution. The model was re-run to take account of window elevation height for all receptors modelled, they were modelled at varied heights, and the PC had very marginal differences in concentrations, however overall they were slightly lower at the elevated window height, and this has been demonstrated in the updated report.*

I hope that suffices for you colleagues and we can progress to determination.

Did we agree an EOT?

Kind regards,

Beth

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Upcoming Leave: 7<sup>th</sup> – 12<sup>th</sup> February