MEMO

Date:	08 October 2024	6-7 Lovers Walk
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Regarding:	CVSH Permit Application S13/006	

Calder Valley Skip Hire Small Waste Incineration Plant (SWIP) Permit Application S13/006

Response to Bureau Veritas Peer Review of the Human Health Risk Assessment

Bureau Veritas was appointed by Calderdale Metropolitan Borough Council (CMBC) to peer review the Human Health Risk Assessment (HHRA) submitted in February 2022 in support of the previous Environmental Permit application for a small waste incineration activity by Calder Valley Skip Hire Ltd (CVSH) which so far as concerns the HHRA is identical to the current Environmental Permit application. The HHRA was submitted again in support of the current application.

Shortly after submission of the HHRA in February 2022 CMBC appointed Tetra Tech to assess the HHRA. In Tetra Tech's Note dated 17 March 2022 it observed that the HHRA concluded that for the maximally exposed individual, exposure to dioxins, furans and dioxin-like PCBs is not significant. Tetra Tech did not request any further information.

CMBC had the February 2022 HHRA and Tetra Tech's March 2022 assessment and had had the opportunity to review them well before it, as advised by its Counsel, submitted its Opening Statement in the subsequent appeal which stated that the Council had concluded that there are no legitimate grounds or basis to resist the grant of a permit subject to appropriate conditions: a position which was, in effect, repeated in the Council's subsequent Closings dated 31 May 2023.

It is, therefore, with respect, to be deprecated that approximately 2 ½ years after the Tetra Tech review CMBC has asked another consultancy to review the HHRA again. This is another element of unreasonable behaviour on the part of CMBC. We hope that CVSH will not have the need to pursue the issue of CMBC's conduct but it reserves its right to do so should that become appropriate particularly as regards costs.The Bureau Veritas report identified three points where further clarification was suggested purportedly to provide greater comfort in the conclusions. These are listed below along with our response. However, in each case our response is made entirely without prejudice to what is stated above.

- *The modelled residential receptors do not align with the Air Quality Assessment. Of particular concern is the worst case modelled receptor from the Air Quality Assessment (identified as '5' within the AQA) has not been modelled in the HHRA. It would be beneficial to include this.*

  In IRAP, the model is used to select the receptors in each area that will be exposed to the highest concentration and highest deposition rate. IRAP adopts the worst-case exposure for each defined area based on both airborne concentration and deposition. This is discussed in more detail in Section 4.1 of the submitted HHRA. Furthermore, unlike the Air Quality Assessment (AQA) where discrete receptors focus on actual properties (e.g. houses and farms), IRAP is used to select the highest affected area of

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farming irrespective of whether there is a farmhouse at this location. This is because although there may not be human exposure at this location, crops or pasture may be present at these locations. Therefore, a very worst-case scenario is adopted for HHRA.

Indirect exposure is influenced by maximum deposition rates which often occur at different locations to maximum airborne concentrations. Therefore, whilst it would be feasible to include the discrete receptors considered in the AQA within the IRAP model, the worst case IRAP receptors do not for that reason align with the AQA and lower exposure would be predicted at the AQA receptors.

Consequently, the worst-case receptor within the AQA is not the worst-case receptor for HHRA. On this basis we consider that there would be no value in including the worst-case modelled receptor identified in the AQA in the HHRA model because, for the reasons explained above, exposure at that receptor will be lower than the worst-case scenario adopted for HHRA.

- *It should be confirmed that the ADMS model outputs used for the IRAP software were based on the worse case sensitivity tests from the Air Quality modelling assessment.*

The predicted process contributions (PCs) as shown in Table 5.1 of the AQA set out the long term PCs that informed that assessment. Sensitivity tests for calm and varying surface roughness tests were included within the AQA. For the annual mean NO_2 concentrations, the PCs were the same, or lower, for the calms and surface roughness sensitivity tests when rounded to 1 decimal place.

Sensitivity tests was also carried out using alternative met data from the Bingley Met Station and a further sensitivity testing scenario using the AERMOD model. In both cases data, to one decimal place had slightly higher PCs for a couple of receptors but in general the results were the same.

A comparison of the PCs used within the AQA with those predicted from the sensitivity modelling is shown in Table 1 below. Note numbers in red are the higher results (when reported to 1 decimal place).

Table 1: Comparison of Modelled PCs used on the HHRA and Sensitivity Tests PCs

Receptor ID	Receptor Name	Max Annual-Mean NO_2 PC ($\mu g.m^{-3}$)	Calms	Varying surface roughness	Bingley Met data	AERMOD
1	28 Rochdale Road	0.17	0.2	0.2	0.2	0.19
2	9 Breck Lea	0.08	0.1	0.1	0.1	0.13
3	Sacred Heart Catholic Primary	0.08	0.1	0.1	0.1	0.09
4	Haugh End House	0.10	0.1	0.1	0.1	0.13
5	84 Rochdale Road	0.24	0.2	0.2	0.3	0.15
6	Highfield Jerry Lane	0.20	0.2	0.2	0.3	0.19
7	Spring Bank Industrial Estate	3.18	3.0	3.1	3.0	0.44
8	Mill West (AQMA)	0.19	0.2	0.2	0.2	0.09
9	Ivy Cottage	0.23	0.2	0.2	0.2	0.53
10	Cottage	0.16	0.2	0.2	0.1	0.37

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Receptor ID	Receptor Name	Max Annual-Mean NO$_2$ PC (µg.m^{-3})	Calms	Varying surface roughness	Bingley Met data	AERMOD
11	Black Sowerby Croft	0.18	0.2	0.2	0.2	0.21
12	Prospect Terrace	0.03	<0.05	0.0	0.0	0.05
13	Hullen Edge	0.03	<0.05	0.0	0.0	0.04
14	Bank House	0.18	0.2	0.2	0.1	0.20
15	Mill House Farm	0.23	0.2	0.2	0.2	0.10
16	Mill House Lodge	0.17	0.2	0.2	0.2	0.12

As the long-term results to one decimal place are very similar for all scenarios, the use of any modelling scenario when considering long term impacts would have been similar. On this basis we would expect a similar level of variability at the HHRA receptors for the sensitivity scenarios considered and consequently the conclusions of the HHRA would also be similar whichever scenario was considered. It follows that the HHRA conclusions are robustly worst-case for all of these scenarios.

- *There are some assumptions used in the assessment which would benefit greater evidence, i.e. assumption of a 70 year lifespan and assumption of 20 kg average child weight.*

The 70 year lifespan is not actually used for assessing intake but only used for assessing lifetime carcinogenic risk and is not used for this assessment. The 20 kg child is used as the background intake for a child as derived by the Environment Agency which uses a 20 kg child, refer to Section 3.2.1 (Total Intake). Refer to Environment Agency's Science Report SC050021/TOX 12 (Contaminants in soil: updated collation of toxicological data and intake values for humans, Dioxins, furans and dioxin-like PCBs).

We trust the above addresses the comments raised and clarifies the approach to the HHRA.

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