

Notice of request for more information
Environmental Permitting (England and Wales)
Regulations 2010

Notice requiring further information

To: The Company Secretary
Mitre House
160 Aldersgate Street
London
EC1A 4DD

Application number: EPR/PP3733WW/A001

Natural Resources Wales, in exercise of its powers under paragraph 4 of Part 1 of Schedule 5 of the above Regulations, requires you to provide the information detailed in the attached schedule. The information is required in order to determine your application for a permit, dated 9th October 2014. The information requested should be sent to the following address by 22nd June 2015.

Information should be sent to:

Wales Permitting Centre
Natural Resources Wales
Cambria House
29 Newport Road
Cardiff
CF24 0TP

Name	Date
Kevin Ashcroft	15 th May 2015

Authorised on behalf of Natural Resources Wales

Ffôn/Tel 03000 654207
Ebost/Email kevin.ashcroft@cyfoethnaturiolcymru.gov.uk
kevin.ashcroft @naturalresourceswales.gov.uk

Gwasanaeth Trwyddedu, Cyfoeth Naturiol Cymru, Tŷ Cambria, 29 Heol Casnewydd, Caerdydd. CF24 0TP
Permitting Service, Natural Resources Wales, Cambria House, 29 Newport Road, Cardiff. CF24 0TP

Gwefan/Website www.cyfoethnaturiolcymru.gov.uk
www.naturalresourceswales.gov.uk

Croesewir gohebiaeth yn y Gymraeg a'r Saesneg
Correspondence welcomed in Welsh and English

Schedule

The following queries relate specifically to the Best Available Techniques and Operating Techniques Document (BATOT)

1. The Best Available Techniques and Operating Techniques (BATOT) document cites the use of EPR 1.01 - Combustion Activities rather than the more appropriate sector guidance note EPR 5.01 - The Incineration of Waste. **Please clarify if this reference is used in error.**
2. Section 3 of BATOT – Accident Management Plan. This plan does not consider all of the risks as described in table 1.1 of EPR 5.01. **Please update the Accident Management Plan section to consider all of the risks associated with these activities.**
3. Table 2: Maximum Storage Capacities in section 4 of BATOT describes the maximum storage capacity of Incinerator Bottom Ash as “within a container”. **Please provide an actual capacity.**
4. Section 4.4 of BATOT states that the process will operate 24 hours a day for 365 days a year, but states that opening hours for waste deliveries will be controlled by conditions imposed by the planning permission. In considering the risk from this proposal it would be useful to know proposed opening hours for waste deliveries. **Please provide details.**
5. Section 5.1.5 of BATOT document states that “Koch or equivalent combustion technology will be utilised for the grate”. **Please provide details of what combustion technology will actually be used for the grate.**
6. Section 5.1.6 of BATOT states that the Incinerator Bottom Ash processing building will contain machinery (trommels, etc.) that will process the ash. **What machinery will be used for processing the IBA?**

7. Section 6.2 of BATOT – Engineered Containment System - states that bunds and other means of containment will be provided for all tanks containing liquids whose spillage could be harmful to the environment. No details have been provided in respect bund configuration, specification and construction. **What types of bunds will be used? What capacity will there be in the event of any spillages or fire? What materials will be used, to construct these bunds? To what specification will the bunds be constructed?**
8. Section 7 of BATOT on raw materials is vague and does not demonstrate how indicative BAT has been considered as described in EPR 5.01. **Please describe how indicative BAT for raw material usage has been considered.**
9. Section 8 of BATOT - Waste Handling, Recovery or Disposal - does not specify what measures will be used to comply with indicative BAT as described in section 1.4 of EPR 5.01 – Avoidance, recovery and disposal of wastes. **Please revise and demonstrate how this complies with indicative BAT.**
10. Section 1.2 of EPR 5.01 describes the measures that should be used for energy efficiency. Section 9 of BATOT document does not show how measures specified in indicative BAT has been considered. **Please demonstrate how the measures used will meet BAT.**
11. Section 2.4 of EPR 5.01 describes furnace legislative requirements under WID (now IED). BATOT does not go into a comparative level of detail. **Please either provide this detail or provide justification for its omission.**
12. Section 2.5 of EPR 5.01 describes indicative BAT for validation of combustion conditions. BATOT does not go into sufficient level of detail as specified in indicative BAT. **Please either provide this detail or provide justification or provide justification for its omission.**

13. Section 2.10 of EPR 5.01 describes indicative BAT for boiler design.
Please describe how the proposed boiler design will comply with indicative BAT.
14. Section 17.4.3 of BATOT states “*that emissions to air will be subject to a routine monitoring programme as described in Table 13*”. **Table 13 is missing, please provide this table.**
15. Section 17.5 of BATOT – Monitoring Standards & Techniques - states that “monitoring will be undertaken in compliance with recognised techniques or using standard methods”. **Please describe monitoring techniques that will be utilised.**

The following queries relate specifically to Table 7 – Assessment of BAT against BREF Note for waste incineration

16. Section 5.1.7 of BATOT contains Table 7 – An assessment of BAT against BREF Note for Waste Incineration. BAT No. 1 is “*to select an installation design that is suited to the characteristics of the waste received, as described in BREF 4.1.1 and 4.2.1 and 4.2.3*”. The response provided does not specify how BAT No. 1 will be achieved by comparison with the requirements described in BREF 4.1.1, 4.2.1 and 4.2.3. **Please provide details of the specific measures used and how this actually compares to techniques described in sections 4.1.1, 4.2.1 and 4.2.3 of the BREF note.**
17. BAT No. 4 is “*to establish and maintain quality controls over the waste input, according to the types of waste that may be received at the installation, as described in:*
- 4.1.3.1 *Establishing installation input limitations and identifying key risks, and*
 - 4.1.3.2 *Communication with waste suppliers to improve incoming waste quality control, and*
 - 4.1.3.3 *Controlling waste feed quality on the incinerator site, and*
 - 4.1.3.4 *Checking, sampling and testing incoming wastes, and*
 - 4.1.3.5 *Detectors for radioactive materials*”.

The response provided does not answer specific questions and therefore does not demonstrate BAT. **Please provide a response that addresses the specific measures set out in the BREF note.**

18. BAT No.7 is “*to minimise the release of odour (and other potential fugitive releases) from bulk waste storage areas (including tanks and bunkers, but excluding small volume wastes stored in containers) and waste pre-treatment areas by passing the extracted atmosphere to the incinerator for combustion (see BREF 4.1.4.4). It is also considered to be BAT to make provision for the control of odour (and other potential fugitive releases) when the incinerator is not available (e.g. during maintenance) by: (a) Avoiding waste storage overload, and/or (b) Extracting the relevant atmosphere via an alternative odour control system*”. The response provided provides details of how odour can be controlled during planned shutdown by diverting waste to alternative facilities. **What alternative odour control measures will be in place for unplanned shutdown and when primary odour control measures cannot be utilised?**

19. BAT No. 12 is for “*the use of the techniques described in BREF 4.1.5.5 or 4.6.4 to, as far as practicably and economically viable, remove ferrous and non-ferrous recyclable metals for their recovery either: (a). after incineration from the bottom ash residues, or (b). where the waste is shredded (e.g. when used for certain combustion systems) from the shredded wastes before the incineration stage*”. **Has consideration been given to the recovery of metals prior to incineration? If so what methods will be used? Please also provide methods to be used for the IBA plant.**

20. BAT No. 15 is for “*the use of flow modelling which may assist in providing information for new plants or existing plants where concerns exist regarding the combustion or FGT performance (such as described in BREF 4.2.2), and to provide information in order to: (a) optimise furnace and boiler geometry so as to improve combustion performance, and (b) optimise combustion air injection so as to improve combustion performance, and (c) where SNCR or SCR is used, to optimise reagent injection points so as to improve the efficiency of NO_x abatement whilst*

minimising the generation of nitrous oxide, ammonia and the consumption of reagent (see general sections on SCR and SNCR at BREF? 4.4.4.1 and 4.4.4.2)". **Please provide details of the Baumagarte Process referenced in the response provided.**

21. BAT No. 17 is for *"the identification of a combustion control philosophy, and the use of key combustion criteria and a combustion control system to monitor and maintain these criteria within appropriate boundary conditions, in order to maintain effective combustion performance, as described in 4.2.6. Techniques to consider for combustion control may include the use of infrared cameras (see 4.2.7), or others such as ultra-sound measurement or differential temperature control"*. The response does not tell us specifics of how BAT will be achieved. **Please provided details of how the specific points raised in 4.2.6 of the BREF Note have been considered.**

22. BAT No. 19 – *"in general it is BAT to use those operating conditions (i.e. temperatures, residence times and turbulence) as specified in Article 6 of Directive 2000/76. The use of operating conditions in excess of those that are required for efficient destruction of the waste should generally be avoided. The use of other operating conditions may also be BAT – if they provide for a similar or better level of overall environmental performance. For example, where the use of operational temperatures of below the 1100°C (as specified for certain hazardous waste in 2000/76/EC) have been demonstrated to provide for a similar or better level of overall environmental performance, the use of such lower temperatures is considered to be BAT"*. **No response has been provided regarding this. Please clarify why no response is provided.**

23. BAT No. 21 is for *"the use of auxiliary burner(s) for start-up and shut-down and for maintaining the required operational combustion temperatures (according to the waste concerned) at all times when unburned waste is in the combustion chamber, as described in 4.2.20"*. **Although this BAT is achieved, please provided details for why diesel is used instead of gas.**

24. BAT No. 25 states that “in order to avoid operational problems that may be caused by higher temperature sticky fly ashes, a boiler design should be used that allows gas temperatures to reduce sufficiently before the convective heat exchange bundles (e.g. the provision of sufficient empty passes within the furnace/boiler and/or water walls or other techniques that aid cooling), as described in 4.2.23 and 4.3.11. The actual temperature above which fouling is significant is waste type and boiler steam parameter dependent. In general for MSW it is usually 600 – 750 °C, lower for HW and higher for SS. Radiative heat exchangers, such as platten type super heaters, may be used at higher flue-gas temperatures than other designs (see 4.3.14)”. **BAT states that fouling occurs at 600 - 750°C; however, the response states the temperature will be below 680°C. Please provide justification for why this is considered BAT.**

25. BAT No. 32 is for “the general minimisation of overall installation energy demand, including consideration of the following (see 4.3.6): (a) for the performance level required, the selection of techniques with lower overall energy demand in preference to those with higher energy demand (b) Wherever possible, ordering flue-gas treatment systems in such a way that flue-gas reheating is avoided (i.e. those with the highest operational temperature before those with lower operational temperatures) (c) where SCR is used; (i) to use heat exchangers to heat the SCR inlet flue-gas with the flue-gas energy at the SCR outlet (ii) to generally select the SCR system that, for the performance level required (including availability/fouling and reduction efficiency), has the lower operating temperature (d) where flue-gas reheating is necessary, the use of heat exchange systems to minimise flue-gas reheating energy demand (e) avoiding the use of primary fuels by using self-produced energy in preference to imported sources”. **The submitted response does not address specific points detailed in BAT. Please revise to address the specific points referenced in BAT.**

26. BAT No. 41 is for “the reduction of overall PCDD/F emissions to all environmental media, the use of: (a). techniques for improving knowledge of and control of the waste, including in particular its combustion characteristics, using a suitable selection of techniques

described in 4.1, and (b). primary (combustion related) techniques (summarised in 4.4.5.1) to destroy PCDD/F in the waste and possible PCDD/F precursors, and (c). the use of installation designs and operational controls that avoid those conditions (see 4.4.5.2) that may give rise to PCDD/F reformation or generation, in particular to avoid the abatement of dust in the temperature range of 250 – 400°C. Some additional reduction of de-novo synthesis is reported where the dust abatement operational temperature has been further lowered from 250°C to below 200°C, and (d). the use of a suitable combination of one or more of the following additional PCDD/F abatement measures: (i). adsorption by the injection of activated carbon or other reagents at a suitable reagent dose rate, with bag filtration, as described in 4.4.5.6, or (ii). adsorption using fixed beds with a suitable adsorbent replenishment rate, as described in 4.4.5.7, or (iii). multi layer SCR, adequately sized to provide for PCDD/F control, as described in 4.4.5.3, or (iv). the use of catalytic bag filters (but only where other provision is made for effective metallic and elemental Hg control), as described in 4.4.5.4". **The response submitted does not specifically address the BAT requirements listed above. Please revise.**

27. BAT No. 52 is for "the separation of remaining ferrous and non-ferrous metals from bottom ash (see 4.6.4), as far as practicably and economically viable, for their recovery and BAT No 53 is the treatment of bottom ash (either on or off-site), by a suitable combination of: (a). dry bottom ash treatment with or without ageing, as described in 4.6.6 and 4.6.7, or (b). wet bottom ash treatment, with or without ageing, as described in 4.6.6 and 4.6.8, or (c). thermal treatment, as described in 4.6.9 (for separate treatment) and 4.6.10 (for in-process thermal treatment) or (d). screening and crushing (see 4.6.5) to the extent that is required to meet the specifications set for its use or at the receiving treatment or disposal site e.g. to achieve a leaching level for metals and salts that is in compliance with the local environmental conditions at the place of use". The response submitted or supporting documents does not describe in sufficient detail the full process for the treatment of IBA. **Please provide details for how IBA will be treated and what techniques will be used for metal separation.**

28. The BREF for Waste Incineration lists several measures specific to incineration of municipal waste (BAT 57 – 72). No assessment has been made against these. **Please explain and prepare responses where necessary.**

The following queries relate specifically to the Air Dispersion Modelling

29. In the calculation of acid deposition, the report states “N from NO_x” and “S from SO_x”. Although referring earlier in the report to deposition rates for NH₃ and HCl, the consultant appears to have not included them in their calculation of acid deposition. **Please explain why the contribution from NH₃ and HCl has not been included in the calculation of acid deposition, and revise the report accordingly to include this information if required**
30. The critical load function tool on the APIS website has been used to assess the predicted process contribution of acid deposition to each habitats critical load function. The consultant has detailed the minimum and maximum critical load function ranges for each habitat and its respective features given by APIS. In calculating the percentage contribution to the critical load the maximum of the range MaxCLMaxN, rather than MinCLMaxN has been used. **We expect that the minimum of the critical load function range is used in assessment, or, justification for not using the minimum of the critical load function range should be supplied.**