Re: Cleanaway's Western Sydney Energy & Resource Recovery Centre (project/25896)

cleanaway <cleanaway@newgatecomms.com.au>
Wed 4/11/2020 11:05 AM
More actions
Dear Rafael,

Thank you for your email on Monday 2 November and for participating in the WSERRC Air and Health Citizens' Panel briefing on Wednesday 28 October.

We contacted all of the Air and Health Citizens' Panel members via email and invited them to attend the EIS update session. The session was voluntary and open to all members of the Air and Health Citizens' Panel. While we did have a handful of panel members register, we appreciate that people lead busy lives which is why we recorded the session so people could view it at their leisure. We hope also that the information in the interactive community information room has assisted the group. We will circulate the recorded session to the entire group shortly.

I apologise that you feel your questions have not been answered - we have done our best on multiple occasions to provide you with the answers. Always happy to continue the conversation. In response to your questions (which are copied below and underlined):

1. When the plant is operating, when will the flue emissions be monitored?
   Information on how and when emissions are monitored was discussed in the Air and Health Panel sessions and can be found in the EIS, Chapter 3 (Proposal Description) section 3.4.15, accessible through this link https://ca-v2.s3-ap-southeast-2.amazonaws.com/cleanaway/efw-virtual/documents/Chapters/3--Proposal-description.pdf.

   In summary, continuous monitoring will be conducted for pollutants required by the EPA in compliance with the NSW Energy from Waste Policy Statement, including **NOx, CO, particulates, TOC, HCl, NH3, Hg and SO2,** as well as for auxiliary parameters including flow rate, temperature, pressure, moisture content, oxygen and CO2. Real-time emission data from the **Continuous Equipment Monitoring System (CEMS)** will be available to the EPA, and provided regularly online to the public**. For pollutants whose levels are too small to be detected, a periodic sampling and testing regime will be implemented. This would be the case for heavy metals (As, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, TI, V), Nitrous Oxide, dioxins and furans.**

2. What method will be used to monitor the emissions? That is, what chemical/instrumental procedures will be used?
   As mentioned above, the monitoring in the facility will be done on a continuous basis using a Continuous Equipment Monitoring System (CEMS). The CEMS will be compliant with the BREF-WI document (https://ec.europa.eu/jrc/en/publication/eur-scientific-

and-technical-research-reports/best-available-techniques-bat-reference-document-large-combustion-plants-industrial) which ensures continuous online monitoring and automatic adjustments to occur. BAT 3 and BAT 4 within the EIS Technical report D, Best Available Techniques Assessment Report (https://ca-v2.s3-ap-southeast-2.amazonaws.com/cleanaway/efw-virtual/documents/Technical+reports/Technical-Report-D--Best-Available-Techniques-Assessment-Report.pdf), has additional information on the CEMS requirements that you might find of interest.

3. What chemical species/compounds will be monitored?
   As suggested above, please see Chapter 3 (Proposal Description) Section 3.4.15 in the EIS for a full list of pollutants that must be monitored. The EPA licence provided for the facility if approved will provide a full instruction of monitoring requirements.

4. Most importantly, what are ALL the chemicals making up the flue gases. The flue emissions will contain many more components/chemicals than the handful that Alex referred to for monitoring and that are discussed in the EIS. Contrary to Alex's assertion, for health assessment purposes, chemicals cannot be grouped into dioxins/furans and other organics and groups of metals. Similarly, a full profile of any and all metals contained in the flue emission must be known before any opinion can be made regarding the toxicity of the emissions. At the operating temperature of the combustion, many metals will become volatile and many metals will form volatile organometallic complexes/compounds. These chemicals must be known to assess their toxicities and possible health effects.
   With regards to this question, it is important to remember that energy-from-waste is not new and has been operating safely overseas for decades. We monitor specific chemicals based on the requirements that the authorities, i.e. the EPA, have determined are necessary and in accordance with the BREF (Best Available Techniques Reference document). The BREF was updated in 2019 based on new knowledge and improvements in technology, and provides guidance on operation using the best available techniques for waste incineration. Please see the link to the BREF document below
   https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/best-available-techniques-bat-reference-document-large-combustion-plants-industrial

   The use of Reference Facilities that have like waste streams, are of a similar size and use the same combustion and flue gas treatment technology is also important to your question as it provides an indication of the pollutants that would be emitted from our proposed facility and what we will need to monitor. The information regarding the chemicals that are monitored in the flue for the Dublin facility is outlined within the Air Quality and Odour Impact Assessment Technical Report and can be found in Section 6.5, page 41 (https://ca-v2.s3-ap-southeast-2.amazonaws.com/cleanaway/efw-virtual/documents/Technical+reports/Technical-Report-A--Air-Quality-and-Odour-Impact-Assessment.pdf).

It is also worth noting that during the commissioning phase for the Centre, there would be extensive monitoring undertaken to ensure that all systems are functioning correctly before commencing normal operations. As part of the commissioning testing, a wide range of substances will be analysed and will almost certainly include the full suite of substances that the laboratory is able to analyse.

For assessing groups of chemicals, such as VOCs, the 'Approved Methods' lists the specific criteria for each of the individual pollutants. For dioxins and furans, the Approved Methods provide a single (worst-case) criteria for all the pollutants which fall under this group. A Toxic Equivalence Factor (TEQ) for speciated dioxins and furans are provided in the POEO (Clean Air) Regulation 2010 which be applied to determine the equivalent criteria for each of the individual species. By assessing for a single (worst-case) criteria for dioxins and furans, all pollutants which fall under this group are indirectly assessed. Links to the relevant documents can be found here NSW Approved Methods and here POEO (Clean Air) Regulation 2010.
This document, the Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (Approved Methods), lists the statutory methods for modelling and assessing emissions of air pollutants from stationary sources in the state.

I hope the above has been of use and welcome further conversation with you on the monitoring of chemicals and questions you have on the process.

Kind regards,
Mikaela Orme.