



Oslo 2015.07.30

**Comments submitted by Norway on the draft chapters on BAT/BEP guidance documents for point sources falling within the 5 categories listed in Annex D as presented by the technical expert group.**

We find that the BAT/BEP guidance documents in general gives a good description on available control techniques and practices on mercury abatement. We have no other comments on the general level except that we suggest to add a list of the relevant abbreviations in each chapter to improve the reading comprehensiveness further. We also believe that it would be helpful if the chapters on upgrading existing systems where more detailed and descriptive and a part of the guidance for all categories.

Due to holidays in Norway we are sorry to say that we have not had the opportunity to comment on the guidance on coal-fired powerplants/industrial boilers. If we have any comments on these chapters, we will forward them as soon as possible in August.

***Smelting and roasting processes used in the production of lead, zinc, copper and industrial gold***

Norway has one plant for zinc production, Boliden Odda. They use the Boliden Norzink Process to remove mercury from waste gases. The document provides a straightforward schematic review of this process, by which the most important parameters are briefly described and is therefore sufficient as a process description. From the plants point of view, the process is the technically simplest and most robust process for mercury abatement for this kind of production. As referred to in the guidance, it is required to stabilize the calomel before disposal. Boliden Odda does this by binding the mercury to sulfur and thereby converting it into HgS.

We note that cost related to BAT (initial investments and maintenance) is not included in the document and suggest that this is taken into consideration.

Norway does not have production on copper, lead and industrial gold and have no comments on these issues.

***Waste incineration facilities***

Norway has several incineration facilities, most of them for municipal waste. They use abatement technology described in the guidance. We note that seleniumfilter is not accounted for in the document. This is not a commonly chosen technology in Norway, but we suggest that it is commented on in the guidance. The Norwegian incineration facilities most commonly use the combination of fabric filters/electrostatic precipitators and scrubbers. Injection of activated carbon, hearth furnace coke or other absorbents are also often used. By using two or three measures we can confirm that it is possible to have an emission level in air between 1 -2 µg/Nm<sup>3</sup>, and sometimes lower.

***Cement clinker production***

Norway has two cement clinker production facilities. They use several abatement technologies in line with those in the guidelines, with average emission levels between 0,002 and 0,007 mg Hg/Nm<sup>3</sup> in 2014.

We have no further comments to guidelines at this moment with reservations to any comments from the industry. Due to our summer holiday we have not had the chance to consult the industry about these matters.