



RAMBOLL

EMISSION MONITORING REVIEW

Ensuring that equipment and procedures deliver reliable and correct emission values with an acceptable uncertainty level.

Emission monitoring at Power Plants and Waste-to-Energy Facilities is a very important task as it often is regulated by the environmental permit and national law and has to meet company policies on quality assurance and environmental standards. When the emission measurements are used for taxation purposes, emission trading or green electricity accounting the incentives to perform with minimum uncertainty on the emission monitoring equipment are even higher as uncertainty can directly be translated to the financial bottom line.

Ramboll has a dedicated team of experts working with emission monitoring equipment for Power Plants and Waste-to-Energy facilities including all aspects of the complex task of reviewing and improving the performance of emission monitoring and reporting. Our experts deal with both equipment related issues as

well as registration, data transformation, logging, reporting and data corrections. Furthermore we have experts in the quality assurance and calibration side of the emission monitoring and we have worked with many clients to improve and document their procedures.

Working with the goal to find errors or minimize uncertainties Ramboll have developed several tools to assess the sanity and quality of reported emission meter data. With these tools Ramboll can offer fast and eased problem solving often finding the problem within a single working day. Overall quality analysis is often performed in connection to usage of emission monitoring data in models or software to conclude total flow of a single parameter like for example NO_x , Hg, CO_2 or H_2O .

WHAT

Review of emission reporting with a evaluation of the information quality and ad hence to internal and regulatory requirements

WHY

- Ensure fulfillment of requirements
- Minimizing errors and mistakes
- Lower uncertainty on results
- Work smarter and more efficient

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REFERENCES

- Emission data quality evaluation and CO₂ accounting software installed (BIOMA), Glostrup, Denmark
- Emission data quality evaluation and CO₂ accounting software installed (BIOMA), Roskilde, Denmark
- Emission data quality evaluation and CO₂ accounting software installed (BIOMA), Aarhus, Denmark
- Emission data quality evaluation and CO₂ accounting software installed (BIOMA), KARA/NOVOREN, Roskilde, Denmark
- Emission data quality evaluation and CO₂ accounting software installed (BIOMA), Aalborg, Denmark
- Emission data quality evaluation and CO₂ accounting software installed (BIOMA), AVR, Rotterdam, Netherlands
- Emission data quality evaluation and CO₂ accounting software installed (BIOMA), Horsens, Denmark
- Emission data quality evaluation and CO₂ accounting software installed (BIOMA), Maabjerg, Denmark
- Emission data quality evaluation and CO₂ accounting software installed (BIOMA), Køge Kraftvarmeværk, Denmark
- Emission data quality evaluation and CO₂ accounting software installed (BIOMA), Stockholm, Sweden
- Emission data quality evaluation and CO₂ accounting software used (BIOMA), Högdalen, Sweden
- Emission data quality evaluation and CO₂ accounting software installed (BIOMA), Næstved, Denmark
- Emission data quality evaluation and CO₂ accounting software installed (BIOMA), Nykøbing F, Denmark
- Emission data quality evaluation and CO₂ accounting software installed (BIOMA), Sheffield, UK
- Emission data quality evaluation and CO₂ accounting software prepared for installation (BIOMA), Runcorn, UK



WTE FACILITY, ROTTERDAM, NETHERLAND

CUSTOMER

AVR, Afvalverwerking Rotterdam

LOCATION

Rotterdam, Duiven

PERIOD

2014-2015

SERVICES PROVIDED

Emission data quality evaluation, calibration quality evaluation, CEMS equipment evaluation, BIOMA installation preparation



WTE FACILITY, HORSENS, DENMARK

CUSTOMER

Horsens Kraftvarmeværk

LOCATION

Horsens, Denmark

PERIOD

2012

SERVICES PROVIDED

Emission data quality evaluation, calibration quality evaluation, CEMS equipment evaluation, BIOMA installation preparation



POWER PLANT, KØGE, DENMARK

CUSTOMER

Køge Kraftvarmeværk

LOCATION

Køge, Denmark

PERIOD

2011-2015

SERVICES PROVIDED

Ramboll organized procedures for Quality Assurance of CEMS according to norms and Standards and worked with the client to optimize internal working procedures