Appointment

From: Verhalen, Frances [verhalen.frances@epa.gov]
Sent: 6/23/2020 1:43:18 PM
To: Casso, Ruben [Casso.Ruben@epa.gov]; Diem, Art [Diem.Art@epa.gov]; Imhoff, Robert [imhoff.robert@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Smith, Darcie [Smith.Darcie@epa.gov]; Palma, Ted [Palma.Ted@epa.gov]
CC: Feldman, Michael [Feldman.Michael@epa.gov]

Subject: Denka modeling discussion
Attachments: Comparison of Modeled and Observed 2016-18.pptx; Denka Network Assessment.pptx
Location: Microsoft Teams Meeting

Start: 6/23/2020 4:00:00 PM
End: 6/23/2020 5:00:00 PM
Show Time As: Tentative

Required Attendees: Casso, Ruben; Diem, Art; Imhoff, Robert; Shappley, Ned; Smith, Darcie; Palma, Ted
Optional Attendees: Feldman, Michael

Discuss what modeling information from available analytical and meteorological data are available and if they can be used to support OAQPS needs.

FROM Bob Imhoff
I've attached a couple of additional presentations that may help address the representativeness of the SPOD monitoring relative to the Community monitoring.

- Denka Network Assessment.pptx looks at the community monitoring site locations' suitability as SPOD sampling locations
  - Angles to sources
  - Relative concentrations
  - Location map with modeled isopleths
  - Sites ranked by their likelihood of detecting events and for their ability to distinguish individual sources
- Comparison of Modeled and Observed 2016-18 shows statistical analysis of the observed and modeled concentration frequency distributions and performs a rough mass balance estimate for the relative emission rates from known routine emissions, unknown routine emissions, and episodic emissions.
  - The statistical analysis finds that about 2/3 of the dose after the installation of the RTO comes from 10% of the days (a perfect SPOD system could capture most of the dose with much less sampling)
  - Because of the deviation of the frequency distribution from log-normal, the analysis indicates that significant episodic emissions were detected on about 10% of the sampled days.
  - The mass balance indicates that the daily emission rate during episodic emissions is about 4X the modeled post-RTO emission rate.
  - The model vs observation analysis finds that
    - > 80% of the modeled dose occurs during the nighttime hours
    - Comparison with monitored distribution indicates that about ½ of the days have impacts from sources not included in the modeling, with 10% of the days having more than ½ of the daily maximum concentration due to unknown sources.

-Best regards,
Bob

Join Microsoft Teams Meeting

+1 202-991-0477 United States, Washington DC (Toll)

Conference ID: 716 497 534#

Local numbers | Reset PIN | Learn more about Teams | Meeting options

By participating in EPA hosted virtual meetings and events, you are consenting to abide by the agency's terms of use. In addition, you acknowledge that content you post may be collected and used in support of FOIA and eDiscovery activities.