Message

From: Siegel, Kathryn [siegel.kathryn@epa.gov]
Sent: 7/13/2018 8:49:10 PM
To: Hamilton, Scott [hamilton.scott@epa.gov]; Fuoco, Marta [fuoco.marta@epa.gov]; Coughlin, Justin [coughlin.justin@epa.gov]
CC: Compher, Michael [compher.michael@epa.gov]; Nwia, Jacqueline [nwia.jacqueline@epa.gov]
Subject: RE: Update on reprocessing DUVAS data

Thanks for the update, Scott. Like you suggested, please schedule some time to discuss next week.

Have a great weekend!

Katie Siegel, Chief
Air Toxics and Assessment Branch
Air and Radiation Division
U.S. EPA Region 5
siegel.kathryn@epa.gov
(312) 886-3006

From: Hamilton, Scott
Sent: Friday, July 13, 2018 11:42 AM
To: Fuoco, Marta <fuoco.marta@epa.gov>; Coughlin, Justin <coughlin.justin@epa.gov>
Cc: Siegel, Kathryn <siegel.kathryn@epa.gov>; Compher, Michael <compher.michael@epa.gov>; Nwia, Jacqueline <nwia.jacqueline@epa.gov>
Subject: Update on reprocessing DUVAS data

I have been working on reprocessing our raw spectral data. Ultimately, we should be able to report it and explain what we did. I still need to check a few things with DUVAS and will probably rerun the entire data set.

Note that the raw spectral data are NOT impacted when we calibrate (zero or span) in the field. So, we can run the raw data through DUVAS Solve and create the reference files. Those reference files are then used to generate the concentrations over DUVAS Solve in the datalog files.

Take a look at the comparison. The numbers are much better although, I think it is going to be impossible to rely on this since we did not record the EXACT times (to the second) when we collected the canisters. There is too much variability in the DUVAS 1 second measurements. We could try to rerun some of this using a 1 minute rolling average.

So far, I used these conditions to reprocess the data:

1. Configured DUVAS Solve to 240-280 nm as recommended by DUVAS.
2. Solved only for benzene and O2.
3. Created the reference calibration file for benzene using the calibration conducted on 5/8.
4. Created a zero (diode response) for each day when DUVAS was in clean ambient air. I tried to use the time immediately following when the QC checks were complete.

We can discuss this next week and hopefully get Marta a final data set.

Scott Hamilton
Air Monitoring and Analysis Section
Air and Radiation Division
U.S. Environmental Protection Agency
Phone: 312-353-4775

Mailing Address:
USEPA Region 5
Scott Hamilton (AT-18J)
77 W Jackson Blvd
Chicago, IL 60604