Message

From: Vozar, Shaun [Shaun.Vozar@AlleghenyCounty.US]
Sent: 8/11/2021 6:36:59 PM
To: Leon-Guerrero, Tim [Leon-Guerrero.Tim@epa.gov]
Subject: RE: Invenergy AEC Response to Commments
Attachments: ATT00001.txt

Tim,

You should receive another Package Notification for the rest of the Modeling Files for the 1-HR NO2 modeled violation of the NAAQS.
Carl Dettlinger will send that information to you shortly. Let me know if there are any problems.

Thank you,

Shaun

From: Leon-Guerrero, Tim <Leon-Guerrero.Tim@epa.gov>
Sent: Tuesday, August 10, 2021 3:11 PM
To: Maranche, Jason <Jason.Maranche@AlleghenyCounty.US>; Vozar, Shaun <Shaun.Vozar@AlleghenyCounty.US>
Subject: RE: Invenergy AEC Response to Commments

I fooled around with some R scripts and worked out Charleroi's background NO2 by season/hour of day for 2012-20. I confirmed the values that are in the modeling you did to alleviate the 1-hr NO2 NAAQS violations (2015-17). I attached a spreadsheet with all of the background values for each 3-yr period. The spreadsheets also include the number of missing (NA) values and total hours over each season/hour for each 3-yr period. (I also included tables for 2012-14, 2015-17 and 2018-20)

I'm fine with what you have done as far as model refinements. I only include this as FYI in case you like digging through date, which I do. It's somewhat concerning the amount of missing data that's showing up in Charleroi's more recent monitoring data. App W is pretty vague on what to do under those circumstances.

I attribute some missing hours in the later years to the monitor's consistently doing span and other calibration checks at the same hour of each day. I believe some states have avoided that by mixing up the hour's they do their instrument calibrations (so they aren't consistently losing every value for a specific hour over a certain time period). For ozone, nighttime is probably OK to do calibrations but some NAAQS probably peak in the overnight hours so calibrating then could cause loss of important data. Just a pet peeve of mine I guess.

Anyway, send me the ftp site for the rest of the files. Once I double check them I'll let my permitting folks know your responses are all good.

Tim LG

From: Maranche, Jason <Jason.Maranche@AlleghenyCounty.US>
Sent: Monday, August 09, 2021 3:05 PM
To: Leon-Guerrero, Tim <Leon-Guerrero.Tim@epa.gov>; Vozar, Shaun <Shaun.Vozar@AlleghenyCounty.US>
Subject: RE: Invenergy AEC Response to Commments

Tim:

Attached is a the summary report from AirData for the NO2 monitors in the CBSA for year 2019. (Also, a map of the area and monitors from the EPA NetAssess app is copied below (as used in our 2020 network assessment.) I wanted to make sure to exclude any data from 2020 because of potential low bias during COVID (although the numbers for 2020 are actually similar to 2019).

The most appropriate background site for the area at this point is probably the Houston/Marcellus site (220 Meddings Rd) in Washington Co. The Uniontown site (New Salem Rd) in Fayette Co is the lowest overall for SW PA. Both of these sites are relatively newer sites...I think only Houston would have more than three years of data.

However, we were leaning toward keeping the original modeling as much as possible....with just updates to the model version/options (ADJ_U*) and the years of the background used. Charleroi was used for Invenergy's modeling (and we've been working on this review off and on for a several years now, and for two different proposed locations). So, the use of Charleroi is the most consistent with the original modeling.

More on Charleroi...I assume that Arcelormittal Monessen would be the biggest local influence (located to the north, between the monitor site and Invenergy). But even when comparing that site to others, the NO2 numbers are pretty consistent with others (at least with SW PA sites with any kind of commercial/industrial influence). We're also planning to install a true NO2 monitor at Lawrenceville for NCore requirements (we had a math channel NOx-NO monitor here previously...it showed data similar to other sites).

-Jason

From: Leon-Guerrero, Tim <Leon-Guerrero.Tim@epa.gov>
Sent: Monday, August 9, 2021 1:01 PM
To: Vozar, Shaun <Shaun.Vozar@AlleghenyCounty.US>
Cc: Maranche, Jason <Jason.Maranche@AlleghenyCounty.US>
Subject: RE: Invenergy AEC Response to Commments

Thanks for looking into this and confirming what I had seen. I'll wait for the files and see if I can confirm your updated background values from Charleroi.

On that note, I did try and take a closer look at the Charleroi site (40.146578, -79.902226) to see what sources may be influencing that monitor. Using another monitor that reflects "true background" would probably show

final model values well below the NAAQS. I understand being conservative in monitor selection but I wonder how representative a monitor that is heavily influenced by local sources is as you move further away from it. I'd also say the previously violating model receptor is probably well away from any local (mobile) source influence so using a monitor like Charleroi is probably too conservative.

Anyway, my original thought was Charleroi was being unduly influenced by mobile (road) source emissions. I didn't see any large roadways that would account for the high NO2 values at the monitor. If you look just east of the monitor, there is a lock on the Monongahela River that is very close to the monitoring site. I'd guess that's the true source of the high NO2 background at Charleroi. I would doubt that the emissions from the river barge traffic would extend very far from the monitoring site.

If you're adventurous, I wouldn't be opposed to making this point in your response. For example, we feel the use of the Charleroi monitor is conservative since it probably reflects the impacts of river barge traffic (based on it's location) and doesn't necessarily reflect background concentrations across the entire modeling domain (especially where the model peaks are located, which is well away from any mobile source emissions).

Again, thanks for double checking this.

Tim LG

From: Vozar, Shaun <Shaun.Vozar@AlleghenyCounty.US>
Sent: Monday, August 09, 2021 10:22 AM
To: Leon-Guerrero, Tim <Leon-Guerrero.Tim@epa.gov>
Cc: Maranche, Jason <Jason.Maranche@AlleghenyCounty.US>
Subject: RE: Invenergy AEC Response to Commments

Tim,

My apologies for the oversite on my part. I do see the receptor 596,941.63 ; 4,460,887.00 had an exceedance of the 1-Hr NO2 Standard of 189.22192. After speaking with Jason, I decided to do redo the background NO2 analysis with data from the Charleroi monitor (42-125-0005) using 2015-2017 data instead of the 2012-2014 data that was originally used by the applicant. Attached is the updated background values in an excel spreadsheet.

I then reran the model using the updated background numbers and the new AERMET data with Adjust u*. Attached aermod.inp file. The new max receptor 8th rank is 187.00519, at the same location 596,941.63 ; 4,460,887.00. This value is under the threshold value of 188 ug/m3, so I think ACHD is in the clear. Attached files: plot file and mdc file. I will adjust the response to your comment #6 to reflect that ACHD used options 1 and 2 to get under the 1-HR NO2 NAAQS.

Our document control manager is out of office until Wednesday, so I won't be able to upload the full files until later this week. If you have any additional comments or concerns please let me know.

Shaun

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From: Leon-Guerrero, Tim <Leon-Guerrero.Tim@epa.gov>
Sent: Wednesday, August 4, 2021 7:07 AM
To: Vozar, Shaun <Shaun.Vozar@AlleghenyCounty.US>
Cc: Maranche, Jason <Jason.Maranche@AlleghenyCounty.US>
Subject: Invenergy AEC Response to Commments

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Shaun,

I've read over your response to comments document you sent us for the Invenergy Allegheny Energy Center project. All of the responses are appear to be good except for #6 (the 1-hr NO2 violation). I looked at the AERMOD output files you sent us (in the vozar folder) and I still see 1 modeled 1-hr NO2 violation. It's just one receptor at the 8th rank (your run was 189.22192 ug/m3). This is an improvement over the original submission.

Can you look at your output file and confirm what I think I see? The modeled violation doesn't change the application status since AEC's contribution at the violating receptor is below the SIL. It just leaves you with an obligation to address the model violation.

Timothy A. Leon Guerrero
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