From: James Kim
Sent: Thursday, September 28, 2023 3:25 PM
To: Wiwel, Michael
Cc: Montgomery, Richard; Thomas, Brian J.
Subject: FW: PSEG - Acceptance Review of LAR to Reduce EABs for Hope Creek and Salem NPPs Related to Met Monit and Dispersion Modeling
Attachments: PSEG - Supplemental Met Monit and Modeling Info for LAR to Modify Hope Creek and Salem EAB.docx

Importance: High

Mike,

I forgot to forward the attached. NRC staff from EXHB and ARCB would like to have a call next Tuesday (10/3) at 1 pm. Will you be able to support the meeting on 10/3?
Email form the EXHB staff is shown below.

Thanks,
Jim

This is a follow-up to my email from yesterday morning regarding my acceptance review of the PSEG LAR (dated Sept. 6, 2023) to reduce the exclusion area boundaries for the adjacent Hope Creek and Salem nuclear power plants. My acceptance review input is with respect to the accident-related atmospheric dispersion modeling and the meteorological (Met) data used in those analyses based on the Met monitoring program shared by both facilities.

As I mentioned yesterday, from my perspective, I believe that the licensees should the offered the opportunity to supplement the original LAR submittal rather considering it to be incomplete. There is sufficient other info in the LAR to begin my technical review. The attached file identifies initial information needs related to my review and would be the basis for my part of a follow-up phone call as suggested previously by Sean Meighan as related to his dose assessment review. My list is based on info in the LAR, my previous email to you on May 31, and previous experience in reviewing other LAR submittals. I agree with Sean that the approach to having this type of info early on could minimize later RAIs.

Note that Item 3 in my list could be eliminated if in fact the Met data for years 2019, 2020, and 2021 were provided as MS Excel files which I have not received. As the item indicates, I currently only have the hourly data as PDF files. In my experience and observation, there has often been a disconnect between what's been input to ADAMS and then provided to the review staff while the NRC has actually received the data as electronic files and/or on CDs as part of a submittal. Please clarify if you can – working from the Excel files would be more efficient.

Hearing Identifier: NRR_DRMA
Email Number: 2267

Mail Envelope Properties (DM6PR09MB47115588FC27699BEFAE9F4AE4C1A)

Subject: FW PSEG - Acceptance Review of LAR to Reduce EABs for Hope Creek and Salem NPPs Related to Met Monit and Dispersion Modeling
Sent Date: 9/28/2023 3:24:47 PM
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Recipients:
"Montgomery, Richard" <Richard.Montgomery@pseg.com>
Tracking Status: None
"Thomas, Brian J." <Brian.Thomas@pseg.com>
Tracking Status: None
"Wiwel, Michael" <Michael.Wiwel@pseg.com>
Tracking Status: None

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MESSAGE	1970	9/28/2023 3:24:00 PM
PSEG - Supplemental Met Monit and Modeling Info for LAR to Modify Hope Creek and Salem EAB.docx	27562	

Options
Priority: High
Return Notification: No
Reply Requested: No
Sensitivity: Normal
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PSEG LAR to Modify Exclusion Area Boundary for Hope Creek and Salem NPPs
Supplemental Info Related to Met Monitoring and Atmospheric Dispersion Modeling

1. Verify type of wind speed and/or wind direction sensor(s) used during 2019-2021 period of record (POR) (i.e., mechanical or ultrasonic instruments). If the latter, how was wind direction and/or wind speed data averaging done (i.e., as scalar or vector average values). Table 2.3-16 of Salem UFSAR (Rev. 33, 102422) only lists measured parameters, not instrumentation. However, Figure 2.3-7 of Salem UFSAR (Rev. 33, 102422) uses a symbol for the wind sensor possibly suggesting an ultrasonic device may have been installed. Similarly, Table 2.3-29 of Hope Creek UFSAR (Rev. 26, 041323) only lists measured parameters, not instrumentation. Note that Tables 2.3-29a-c (Rev. 13, 111403) have been deleted. Not sure what info those tables presented.
2. Confirm whether wind direction sensors are oriented to True North, Magnetic North, or Plant North. If offset from True North, need to know the offset in degrees (only True North appears to be indicated by LAR Figures 2.2-1, 2.6-1, and 2.6-2) and how, or if, the data was adjusted.
3. Section 3.1.1 of LAR submittal indicates the hourly meteorological (Met) data were provided as Excel files. Attachment 1 appears to list the data instead in PDF format. Please confirm whether MS Excel files were provided.
4. Provide tabular list of percent data recovery rates for wind speed, wind direction, and delta-T stability class, and for the joint recovery of all three parameters, for individual years (i.e., 2019 to 2021) and for the three-year composite POR.
5. Provide tabular lists of JFDs by stability class (i.e., A thru G). LAR only presents a composite of all classes. Note that for confirmatory PAVAN model runs the values can be keyed in from the three model input files, but frequency values can't be more easily cross-checked.
6. Calm winds appear to have been distributed into the lowest non-calm wind speed class based on the parenthetical note in LAR Table 3.1-2. However, LAR Table 3.1-1 indicates the occurrence of calm winds as "0". Verify if there were calm occurrences and, if so, confirm the wind speed assigned to the calm occurrences in calculating the X/Qs for this wind speed class.
7. Section 3.1 (Para. 3) of the LAR submittal indicates that the Met data used was obtained and processed in accordance with Regulatory Guide 1.23. Reference 6 corresponds to current Revision 1 of that guidance, dated March 2007. Subsection 1.8.1.23 of the Hope Creek UFSAR states that "HCGS complies with the intent of Regulatory Guide 1.23" - that is, Revision 1. However, note that the Hope Creek UFSAR, Section 2.3.3.1 also cites SRP Section 2.3.3 (Rev. 2, July 1981), not the current revision (i.e., Rev. 3, March 2007) and Safety Guide 23 (although the text refers to it as "Regulatory Guide 1.23") regarding conformance of the Met monitoring system. There may be other discrepancies within the Hope Creek UFSAR that should be reconciled. The Salem UFSAR appears to include fewer citations of Regulatory Guide 1.23 but Appendix 3A states that "[t]he Salem Station meteorological program will conform with the intent of the Regulatory Guide" – that is, Revision 1 of Regulatory Guide 1.23. Both plants use same Met monitoring system.
8. Confirm if Licensees or their consultant(s) used their own version of PAVAN. Subsection 2.3.3.3 of the Hope Creek UFSAR indicates that atmospheric transport and diffusion is calculated by the Meteorological Information and Dose Assessment System (MIDAS). A similar statement is made in Subsection 2.3.3.2 of the Salem UFSAR. Both UFSARs indicate conformance to Reg Guide 1.145, the guidance applicable to accident-related dispersion analyses. However, Section 3.1 (Para. 1) of the LAR states that "[r]evised EAB X/Qs were developed using the PAVAN computer code." If an alternate model to PAVAN was used, benchmarking of that model against PAVAN would be helpful.
9. The input file in Attachment 4 of the LAR submittal (Hope Creek PAVAN Input File) includes two distances at which X/Qs were calculated (i.e., 337 meters and 362 meters). Either confirm whether the 362-meter distance is an arbitrary input value (or a typo) as there is no other mention of that character string in the LAR submittal or provide an explanation for the use of that value and the corresponding X/Q results. Note that Table 2.6-1 of the LAR submittal identifies a minimum distance of "462" meters to the proposed EAB.