

BellBendCOLPEm Resource

From: Canova, Michael
Sent: Monday, July 13, 2009 10:57 AM
To: Sgarro, Rocco R; BBNPP@pplweb.com; 'jennifer.mcqueeney@unistarnuclear.com'; 'Katie.Thurstin@unistarnuclear.com'
Cc: BellBendCOL Resource; Mazaika, Michael; Weisman, Robert
Subject: Bell Bend Meteorology Audit Agenda and Information Needs
Attachments: BBNPP Meteorology Audit Information Needs.pdf

The information needs list for this audit is attached, and the Audit Agenda is as shown below.

AGENDA

REGULATORY AUDIT TO REVIEW SUPPORTING TECHNICAL INFORMATION RELATED TO
CHAPTER 2 OF THE BELL BEND NUCLEAR POWER PLANT COMBINED LICENSE APPLICATION

PPL Bell bend, LLC., 38 Bomboy Lane, Berwick, PA

07/21/2009 Day 1

- 08:00 a.m. Site Orientation Briefing by PPL
- 09:00 a.m. Visit to Susquehanna Steam Electric Station for Inspection of Primary Meteorological Tower Site and Surrounding Area (SME required)
- 10:30 a.m. Inspection of Back-up and Downriver Meteorological Tower Sites
- 11:30 a.m. Tour of Susquehanna Property to Assess Topologic Influences on Tower Data
- 1:00 p.m. Visit to Proposed Bell Bend Meteorological Tower Site and Surrounding Property
- 2:00 p.m. Return to TBD Location to Begin Review of Met Monitoring (Operation, Maintenance, Calibration, Data Processing) Documentation (SME required briefly to start)
- 4:30 p.m. End First Day (No findings discussions)

07/22/2009 Day 2

- 08:00 a.m. Talking Points Discussion Related to Audit Information Needs (SME's required)
- 10:00 a.m. Continue Documentation Review
- 2:00 p.m. Return Visit to Primary Meteorological Tower
- 3:30 p.m. Complete Audit Activities
- 4:00 p.m. Audit Exit Discussion

If there are any questions, please contact me.

Michael A. Canova

Project Manager - Bell Bend COL Application

Docket 52-039

EPR Project Branch

Division of New Reactor Licensing

Office of New Reactors

301-415-0737

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SITE AUDIT INFORMATION NEEDS

Applies to Bell Bend Nuclear Power Plant (BBNPP) Combined License Application (COLA) Part 2 - Final Safety Analysis Report (FSAR) Section 2.3.

- Provide a general tour of the site and surrounding area, including:
 - the existing onsite primary meteorological tower site and shelter for Susquehanna Steam Electric Station (SSES) Units 1 and 2,
 - the planned meteorological tower site for the BBNPP,
 - the existing backup and supplemental (downriver) meteorological tower sites and shelters (if applicable), and
 - the onsite and immediate offsite vicinity (to observe potential obstructions to airflow with respect to each tower).
- Make available for audit site plan(s)/map(s), corresponding to the information in ER Tables 6.4-2, 6.4-4, 6.4-5, and FSAR Table 2.3-145, that show, by sector, the distance between the meteorological tower sites and:
 - existing obstructions to airflow (including SSES buildings, cooling towers, paved or improved surfaces, terrain features, trees and other vegetation), and
 - planned obstructions to airflow (including BBNPP buildings, cooling towers, paved or improved surfaces).
- Provide subject matter experts (SMEs) knowledgeable in and/or responsible for routine operation, maintenance, and calibration of the SSES Units 1 and 2 meteorological tower, instrumentation, and data acquisition and recording equipment.
- If possible, provide access to the Standard Operating Procedures, related records and documentation regarding: routine operation, maintenance, and calibration; data processing, validation, reporting and archiving; and problem reports and corrective action for the meteorological monitoring program covering the period of record (POR) used in the COLA (i.e., 2001 thru 2007). If external coordination is necessary on the NRC's part with the operating Units, provide a contact point for such coordination.
- Provide an SME to discuss items not addressed under COL FSAR Sections 2.3.3.1 and 2.3.3.2 (the pre-operational and operational phases, respectively, as applicable), including:
 - exposure of tower-mounted instruments relative to tower structure;
 - boom length and orientation and rationale behind these selections;

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- presence or absence of icing protection for wind sensors; of wind shield for rain gauge (operational phase); and lightning protection for tower and instrumentation.
- Provide an SME to confirm or clarify:
 - whether the specifications for all instruments do, in fact, apply to the SSES tower for the 2001 to 2007 POR used in the COLA as well as to the BBNPP meteorological tower during the operational phase;
 - whether accuracy specifications listed in COL FSAR Table 2.3-144 represent the component (sensor) accuracy values or system accuracy values consistent with the accuracies listed under the "Requirements" column in the same table, and, in either case, the methodology used in determining the listed accuracy specifications and the related documentation;
 - the range specification for vertical temperature difference in COL FSAR Table 2.3-144 (that is, -5 °F to +5 °F) which appears to be too narrow; and
 - whether the vertical temperature difference is calculated by subtracting the 10-m ambient temperature from the concurrent measurement at the 60-m measurement level or if temperature difference is recorded from a dedicated delta-T circuit.
- Provide a SME to discuss, for both the pre-operational and operational phases:
 - how 15-minute and one-hour average values for meteorological parameters are computed;
 - the minimum number of valid samples required to be collected for a 15-minute average; and
 - the minimum number of valid samples or 15-minute averages required be collected in order to determine a one-hour average value.
- Provide a SME to discuss the use of calculated sigma-theta values, based on concurrent wind direction measurements, in place of missing vertical temperature difference (stability) data, the extent to which such data substitution occurred during the POR used in the COLA (i.e., 2001 to 2007), and how sigma-theta data were applied (straight or modified approach).
- The Applicant described, during the recent environmental site audit, the SSES dewpoint measurements as being often in error and unreliable. Provide an SME to further discuss these issues and:
 - the planned approach for demonstrating that the dewpoint data from the Williamsport NWS station are representative of the BBNPP site;

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- whether and, if so, how the onsite measurements would be used and/or adjusted in this demonstration; and
- the annual and composite data recoveries for the onsite dewpoint measurements, given the description of data quality contrasted with relatively minimal data substitution and no qualification of the data issues in the COL FSAR.
- The Applicant indicated during the recent environmental site audit that the SSES and BBNPP meteorological towers will operate independently, but that it is possible they could also serve in a “backup” role for each other. That contingency should be addressed in the COL FSAR Section 2.3.3 description of the operational monitoring program. Provide a SME to discuss the status and timeline for that decision and the timeline (if any) for any planned upgrade of the SSES monitoring system to Revision 1 of Regulatory Guide 1.23.
- Provide an SME to clarify whether the distances from the BBNPP meteorological tower as listed in COL FSAR Table 2.3-145 are relative to the SSES Met tower (pre-operational phase) or the BBNPP Met tower (operational phase) since both FSAR Section 2.3.3.1.6 and FSAR Section 2.3.3.2.6, respectively, reference the same table.
- The Applicant indicated during the recent environmental site audit that a study to evaluate the effects of the existing cooling towers on measurements at the SSES meteorological tower would be cited and placed on the docket. Provide a SME to further discuss this issue, and the status and timeline for making that information available to the Staff for review.
- Provide an SME to explain why the onsite meteorological data used in the dispersion modeling analyses in COL FSAR Sections 2.3.4 and/or 2.3. is considered representative of the site region given the significant variation in topography within a 50-mile radius around the site and the differences in wind roses for the SSES site, Wilkes-Barre/Scranton, Williamsport, and Allentown.