



1101 Market Street, Chattanooga, Tennessee 37402

CNL-21-088

November 12, 2021

10 CFR 50.54(q)
10 CFR 72.44(f)

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Browns Ferry Nuclear Plant, Units 1, 2, and 3
Renewed Facility Operating License Nos. DPR-33, DPR-52, and DPR-68
NRC Docket Nos. 50-259, 50-260, 50-296, and 72-052

Sequoyah Nuclear Plant, Units 1 and 2
Renewed Facility Operating License Nos. DPR-77 and DPR-79
NRC Docket Nos. 50-327, 50-328, and 72-034

Watts Bar Nuclear Plant, Units 1 and 2
Facility Operating License Nos. NPF-90 and NPF-96
NRC Docket Nos. 50-390, 50-391, and 72-1048

Subject: **TENNESSEE VALLEY AUTHORITY - CENTRAL EMERGENCY CONTROL CENTER EMERGENCY PLAN IMPLEMENTING PROCEDURE REVISION**

In accordance with the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) 50.54(q) and 10 CFR 72.44(f), Tennessee Valley Authority (TVA) is submitting a description of changes to the TVA Radiological Emergency Plan (REP) for Browns Ferry Nuclear (BFN), Sequoyah Nuclear, and Watts Bar Nuclear plants. The affected document is the Central Emergency Control Center (CECC) Emergency Plan Implementing Procedure (EPIP) listed below.

<u>Document</u>	<u>Revision</u>	<u>Title</u>	<u>Effective Date</u>
CECC EPIP-17	24	Central Emergency Control Center Meteorologist Procedures	10/15/2021

Description of Changes and Summary of Analysis

CECC EPIP-17

TVA revised this EPIP as follows:

- Sections 2.0, 4.0, 5.0, 5.1, 5.1.2, and 5.4 – Specified location options for meteorological support.
- Section 3.1, “Activation and Notification” – Eliminated requirement to report specific locations.
- Section 3.2, “Shift Change” – Added instruction concerning completing the Meteorologist Shift Change Checklist (Attachment 2) and transferring responsibilities.
- Section 4.0, “Meteorologist Responsibilities” – Meteorologist does not receive or disseminate data. That is done automatically by Emergency Response Network (ERN) Multi-Unit (EMU) and WebEOC. Removed “real-time” to account for simulated data in scenarios.
- Section 5.0, “Procedure Requirements” – Distinguished between “providing” data and “ensuring adequacy” of data.
- Section 5.1.2 – Moved Step E to Section 5.1.3. Deleted reference to Attachment 3 (no longer exists) due to information being adequately covered elsewhere or no longer relevant because of the elimination of Forecast Radiological Emergency Dose (FRED)/Radiological Emergency Dose (RED)/Back-calculated Radiological Emergency Dose (BRED).
- Section 5.1.3 – C.2 was added to document in the WebEOC log CECC notification time, time of arrival, and other pertinent information. Removed reference to Muscle Shoals or Chattanooga, as support may be provided from other locations. Deleted Step E to ensure Environs Assessor (EA) has contacted Emergency Preparedness (EP) field support. This step is unnecessary as it is contained in the EA checklist. Removed exit flow rate from D.2. Exit flow rate is not needed for Meteorological Information & Dose Assessment System (MIDAS).
- Section 5.1.5 – Changed “Logon to the CECC-IS terminal” to “Logon to a terminal with access to WebEOC, EMU-MET, PEDS, and the internet,” which reflects that responsibilities can be performed elsewhere. Updated the note to remove the statement that simulated data is normally on a compact disc (CD) or digital video disc (DVD) and add “normally posted on a server” to reflect current practice. Updated the sources of meteorological data to reflect sources currently available. Added Integrated Computer System (ICS)/Plant Engineering Data System (PEDS); updated CEGNET server to internal Environmental Data Station (EDS) website; added external EDS website; removed CECC computer; removed MxVision Weather Sentry.
- Section 5.1.6 – Eliminated content of Revision 23 due to Meteorological Information (METINF)/Muscle Shoals Center Information (MSCINF) not being used/required for MIDAS.
- Section 5.2, “Ongoing Actions” – Removed the 15-minute criteria. Added the specific actions being performed will be determined based on assessment of the situation and responses needed.
- Section 5.2.1 – Removed RED/FRED/BRED references.

- Section 5.2.2 – Removed the time requirement for data review. Data review is not tied to a specific time interval. Replaced “Review METINF/MSCINF output” with “Review PEDS & EMU-MET output.” PEDS and EMU meteorological display (EMU-MET) are now the primary source of data.
- Section 5.2.3 – Step 1 updated to state that if observed data are acceptable, no further action is needed. Data can be used for REP applications. Step 2 updated to read that if observed data are not acceptable to obtain correct data from other sources (e.g., National Weather Service [NWS]) of estimate values using Nowcast process. Step 3 updated to instruct the user to log in WebEOC (both Meteorologist and Radiological Group logs) when observational data are not acceptable and alternative values are being used. Removed RED/FRED/BRED references. Table was updated to include only information required for MIDAS.
- Section 5.2.4 – Rewrote the section to eliminate the discussion of the data update board because the data is posted automatically. Also, provided a list of data display locations. Deleted content of Revision 23 concerning BFN release point flow rate and exit velocity due to MIDAS not using plume rise. Therefore, there is no need for flow rate and exit velocity information.
- Section 5.2.5 – Updated the second bullet to read, “Release conditions (for example, release height at BFN).” This change deleted release point and flow information, which are not needed for MIDAS because plume rise is not used.
- Section 5.2.6 – Updated section to inform radiological assessment area/staff of any significant changes in meteorological conditions. Additions are a change in protective action recommendation sectors (CECC EPIP-1, Appendix I) and other conditions the meteorologist may be requested to track. Removed references to FRED, which includes deletion of the note concerning changes to stability class or wind speed that might affect FRED results. Tracking of wind direction, wind speed, and stability class changes was previously needed to determine when new RED runs needed to be initiated. With MIDAS, the software runs continuously, so any changes will be automatically accommodated.
- Section 5.2.7 – Removed references to RED/FRED/BRED. Deleted content of Revision 23 due to EPIP-1, for each site, no longer specifying a wind speed threshold that can be monitored remotely. Emergency action level (EAL) can only be declared based on onsite observations.
- Section 5.2.8 – Removed references to RED/FRED/BRED. Replaced “Compare METINF/MSCINF output with dose model output” with “Verify meteorological data in dose model output is correct.” Rewrote 5.2.8.A to remove METINF/MSCINF and read, “Compare meteorological information with dose assessment model output (for example, state update forms and plume plots on WebEOC) for consistency.”
- Section 5.2.9 – Expanded B for clarity.
- Section 5.2.10 – Removed the section note that references the use of METINF/MSCINF. Also, removed references to Attachments 6 and 7 of Revision 23, which have been deleted. Removed the specific timeframe for forecasts to be performed and replaced it with the statement, “Type a qualitative forecast discussion into the “Quantitative Forecast/Comments” section of the EMU-MET page. Update as necessary. Provide additional information when appropriate.” Only a qualitative forecast is required by

MIDAS. Additionally, changed “Meteorologist modifies the persistence assumption when site and synoptic factors dictate a change is needed” to remove time requirements associated with detailed 15-minute forecasts, which are not required by MIDAS.

- Section 5.2.11 – Removed detail concerning responding to the CECC and/or Muscle Shoals Weather Center and direction if not at the CECC. Removed unnecessary detail concerning the use of the Nowcast manual.
- Section 5.2.13 – Deleted content of Revision 23 concerning verification that correct meteorological data is being displayed. This duplicates the task in 5.2.5. Removed for the meteorologist to log significant emergency status changes. Emergency status changes are logged elsewhere in WebEOC by positions that are specifically assigned that duty.
- Section 5.2.16 – Deleted content of Revision 23 concerning verification of vent and flow rate information for BFN. MIDAS does not use plume rise, so there is no need for flow rate and exit velocity information.
- Section 5.3.1 – Replaced backup sources may require “more than 15 minutes to complete” with “considerable time to implement.” Added the use of available sources (e.g., other locations or NWS) in addition to Nowcast. Removed references to the METINF program and form. Replaced references to the use of CECC Information System (CECC-IS) with PEDS. Updated EMU to EMU-MET. Rewrote second bullet to state, “If meteorological data are not being transmitted automatically by PEDS, manually input meteorological information into EMU-MET. EMU will automatically transmit data to WebEOC.” Step 1 modified with updated EDS web address. Step 2 reworded; no change to the intent. Step 3 modified to remove request to the radiological assessment coordinator to call the Technical Support Center (TSC) Communicator specifically to have data read from a TSC or control room display. The TSC Communicator is very busy with their communication with the control room. There are others in the TSC that can fill this role. Step 4 added to coordinate with the EA to request the Emergency Preparedness Field Support (EPFS) simulators deploy the portable met tower.
- Section 5.3.2 – Updated reference to CECC-IS to PEDS. Updated Nowcast manual references and attachment references based on deleted attachments.
- Section 5.4, “Shift Relief and Function Transfer” – Rewrote section to make function more generic (not just between CECC and Muscle Shoals).
- Section 5.5, “Termination” – Updated termination actions to ensure WebEOC log entries are complete and to log off WebEOC and EMU. Replaced “Log off CECC-IS terminals” with “Log off computers.”
- Section 6.0, “References” – Removed references A through D due to CECC-IS no longer being used.
- Section 7.0, “Records” – Removed Attachments 4 and 8 from Quality Assurance (QA) Records during actual emergencies. These attachments have been deleted. Removed Attachment 6 from Non-QA Records during actual emergencies. Attachment 10 was renumbered as Attachment 4.
- Section 8.0, “Abbreviations and Definitions” – Added definition for EMU-MET – meteorological display on EMU. Added definition for MIDAS and deleted definitions for BRED, FRED, and RED.

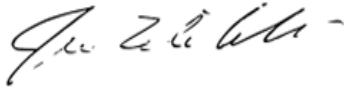
- Attachment 1, “Meteorologist Checklist”
 - “Initial Actions” – Deleted item 7, to confirm EPFS activation. EPFS is contained on the EA checklist; therefore, this is doubling effort. Add new item 3, to login to EMU. Subsequent items were renumbered accordingly.
 - “Ongoing Activities” – Deleted items 4, 5, and 9 (Revision 23), which are associated with RED/FRED/BRED and are no longer needed. Wind speed and stability class were removed from item 6 as they are not needed for MIDAS. Removed 15-minute criteria from item 1. Moved “Verify correct meteorological data are being displayed” to item 2. Deleted item 11 (Revision 23) due to EAL threshold items not being able to be declared based on offsite readings.
 - “Termination Actions” – Updated to be consistent with termination actions in Section 5.5.
- Attachment 2, “Meteorologist Shift Change Checklist” – Top of checklist changed “between Chattanooga and Muscle Shoals” to “between locations” to provide flexibility for other locations. Under Incoming Staff, deleted the following items associated with RED/FRED/BRED: dose assessment methods, exit velocity, and mixing height. Changed “Transport/dispersion (plume rise, plume position, etc.)” to “Current and forecast weather conditions.” Under Review synoptic situation and latest forecast, removed “(ARP, HMD, etc.)” Deleted “Data dissemination” associated with METINF. Also, changed “Review special contacts (TSC, State, etc.) and notify of any telephone number changes” to “Notify appropriate contacts of any telephone number changes.”
- Deleted Attachment 3, “Information from CECC Needed by Meteorologist in Muscle Shoals” of Revision 23 due to information being adequately covered elsewhere or no longer relevant (RED/FRED/BRED).
- Attachment 3, “Information and Conversions”
 - Section 3.0, “Pasquill Stability Index” – Added degree symbol before C for Temperature Change with Height conversion formula.
 - Section 4.0, “Precipitation Class Limits” – Replaced reference to METINF/MSCINF form with MIDAS and updated precipitation class limits to those used in MIDAS.
- Deleted Attachment 4, “Meteorological Information (METINF) Form” of Revision 23 due to METINF no longer being used because of MIDAS transition.
- Attachment 4, “Worksheet for Nowcasting Meteorological Data” – Removed “Template for METINF/MSCINF Program Input” portion of the attachment. This portion of the attachment is no longer needed because METINF/MSCINF is not used with MIDAS. Added a column for margin of error (+/-).
- Deleted Attachment 5, “Procedure for Interpreting RED/FRED Results When Mixing Height is Significantly Different from 600 Meters” of Revision 23. This attachment is specific to RED/FRED.
- Deleted Attachment 6, “Meteorological Forecast Input Worksheet” of Revision 23 due to METINF forecasts no longer being used because of MIDAS transition.
- Deleted Attachment 7, “Example Forecast Data Format” of Revision 23 due to METINF forecasts no longer being used because of MIDAS transition.
- Deleted Attachment 8, “Meteorological Data from a Backup Source” due to no longer being used for qualitative forecasts.

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The above changes were evaluated in accordance with 10 CFR 50.54(q)(3) and 10 CFR 72.44(f). TVA determined that the changes did not reduce the effectiveness of the TVA REP. The TVA REP, as revised, continues to meet the requirements in Appendix E to 10 CFR 50 and the planning standards of 10 CFR 50.47(b).

There are no new regulatory commitments contained in this letter. If you have any questions regarding this submittal, please contact Kimberly D. Hulvey, Senior Manager, Fleet Licensing at (423) 751-3275.

Respectfully,



James T. Polickoski
Director, Nuclear Regulatory Affairs

cc:

- NRC Regional Administrator - Region II
- NRC Senior Resident Inspector - Browns Ferry Nuclear Plant
- NRC Senior Resident Inspector - Sequoyah Nuclear Plant
- NRC Senior Resident Inspector - Watts Bar Nuclear Plant
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