

Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

CNL-16-158

September 28, 2016

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 REVISIONS

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), enclosed is a report of changes made to the Tennessee Valley Authority (TVA) Radiological Emergency Plan (REP). The affected documents are the Central Emergency Control Center (CECC) Emergency Plan Implementing Procedures (EPIPs) named below.

<u>EPIP</u>	<u>Revision</u>	Title	Effective Date
CECC EPIP-1	61	Central Emergency Control Center (CECC) Operations	8/30/2016
CECC EPIP-8	44	Dose Assessment Staff Activities During Nuclear Plant Radiological Emergencies	9/12/2016
CECC EPIP-9	55	Emergency Environmental Radiological Monitoring Procedures	9/01/2016

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The enclosure provides a summary of the changes and the analysis performed that concluded the changes to the CECC EPIPs do not reduce the effectiveness of the REP, and the 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 in this letter. If you have any questions regarding this submittal, please contact Edward D. Schrull at (423) 751-3850.

Respectfully,

J. W. Shea Vice President, Nuclear Licensing

Enclosure: Summary of the Changes and Analysis for the Central Emergency Control Center (CECC) Emergency Plan Implementing Procedure (EPIP) Revisions

cc (Enclosure):

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 NRR Project Manager - Browns Ferry Nuclear Plant NRR Project Manager - Sequoyah Nuclear Plant NRR Project Manager - Watts Bar Nuclear Plant NRR Project Manager - Watts Bar Nuclear Plant NRR Director - Division of Spent Fuel Management, NMSS

Affected Document(s)	Description of Changes	Summary of Analysis of Change
CECC EPIP-1, Revision 61	Changes were made to CECC EPIP-1, in Revision 61 as follows: Add a comma to Section 3.2. Re-word Section 3.3 to correct sentence structure, add a feminine pronoun, and spell out Governor's Authorized Representative (GAR). Spell out SRMAC and AEMA in Section 3.7. Spell out JIC in Section 3.9. Correct sentence structure in Section 3.14. Add a comma to Section 4.2. In Appendix A, reorder the EDO checklist items to bring higher priority items forward on the list. Although the items do not have to be performed in order, this results in higher priority items being read first. Specifically, items previously numbered 6 and 11 were moved up on the checklist. Add punctuation to the following items: Appendix A Item 11 Item 13 Item 14 Item 16 Appendix B Item 3 Item 5 Item 8 Item 11 Appendix D Item 6	The changes are editorial or typographical. The changes to the REP do not constitute a reduction in effectiveness.

Enclosure

Affected Document(s)	Description of Changes	Summary of Analysis of Change
CECC EPIP-1, Revision 61 (contd.)	 Appendix E Item 3 Item 4 Item 15 Appendix F Item 3 Item 4 Item 14 Appendix G Item 5 (page 1) Item 7 (page 1) Item 7 (page 2) Item 3 (page 2) Item 6 (page 2) Item 6 (page 2) Appendix J SAE, Item 3 GE, Item 3 GE, Item 4 GE, Item 3 GE, Item 3 General Operations, Item 1 General Operations, Item 3 In Appendix A, add the phone number for the Nuclear Duty Officer instead of requiring a lookup. In Appendix B, correct checklist formatting issues by eliminating extra lines and spaces. Replace 'verify' with 'ensure' in the Appendix J activation checklist. This change better aligns the verb with TVA standard verb usage. 	

Affected Document(s)	Description of Changes	Summary of Analysis of Change
CECC EPIP-1, Revision 61 (contd.)	 In Appendix K, change the numbering on pages 2 and 3 such that it matches the dose assessment outputs from FRED/RED and WATERDOSE. Also add a note about the numbering to specify that it is not sequential from the previous page in order to match the dose assessment outputs. This note is consistent with the note already contained in Appendix J under General Operations. Update the titles of the Public Information Manager (PIM) and Public Information Writer (PIW) in Section 3.0 and Appendix P in order to match the REP and CECC EPIP-14. 	

Affected Document(s)	Description of Changes	Summary of Analysis of Change
CECC EPIP-1, Revision 61	 Changes were made to CECC EPIP-1 to clarify actions associated with hostile action based events. In Appendix A, this included: Adding the Alternate Facility as a location that could be activated. During a hostile action event, the Emergency Response Organization (ERO) may be required to first go to the Alternate Facility if the Technical Support Center (TSC) or Operations Support Center (OSC) cannot be accessed. Clarifying the location of the Incident Command Post (ICP). For some events, the ICP may actually be located offsite. The checklist item was changed to clarify that the ICP may not be established onsite. Changing the requirement to dispatch an EDO to the ICP so that it is optional. In Appendix B, this included adding that for a security event, the site ERO may be staffing the Alternate Facility. In Appendix O, this included information for the Nuclear Security Manager that it may be necessary to communicate with the Alternate Facility and the ICP Security Liaison for security events. 	None of these changes alter the activation of any facility or affect how the Alternate Facility is used. These changes clarify for CECC personnel what actions are being taken during a security event. Specific attention was given as to whether these changes impacted the (b)(8) planning standard. Based on that review, there was no impact. The changes to the REP do not constitute a reduction in effectiveness.

Affected Document(s)	Description of Changes	Summary of Analysis of Change
CECC EPIP-1, Revision 61	 Changes were made to CECC EPIP-1, Revision 61: Clarify wording in Section 3.12 for the State Liaison. The previous wording was grammatically incorrect because the second phrase in the list did not contain its own verb. The section also contained use of only a masculine pronoun. Add action to Appendix A to cancel call forwarding on the Emergency Duty Officer (EDO) phone. Call forwarding is set up when someone assumes the duty. This action ensures that the phone rings regardless of who is the first EDO to arrive in the center based on the all- call approach. Add new action to Appendix B to require that the time difference between the CECC and the site be recorded. This change ensures that the CECC Director understands the time that declarations are made at the site. This change also includes adding the words "Contact" and "Activation" to the second column of the Appendix B checklist. The addition of these words help clarify what should be recorded in those blanks since there will now also be a time recorded in the third column of the checklist. 	These changes have been reviewed individually and collectively and it has been determined that there are no planning standard impacts. The changes are not related to any planning standard of 10 CFR 50.47 nor do they involve a site-specific commitment. The changes to the REP do not constitute a reduction in effectiveness.

Affected Document(s)	Description of Changes	Summary of Analysis of Change
CECC EPIP-1, Revision 61 (contd.)	 In Appendix L, clarify where additional documents and drawings can be located. The group Management Services is located in the Document Control and Records Management (DCRM) office. The key for this office is also labeled DCRM. Also, change who maintains the position log for management services. Now that the position log is maintained in WebEOC, the log is updated by the Switchboard Operator. Neither the Switchboard Operator or the Management Services Supervisor are minimum activation staff positions. In Appendix P, remove the requirement for the CECC Technical Advisor to notify the CECC PIO Manager when the position is operational. The CECC Technical Advisor is physically located next to the CECC PIO Manager and there are no steps that actually make the position 'operational'. Therefore, when the Technical Advisor arrives, due to proximity, the CECC PIO Manager will know that the position has been filled. 	

Affected Document(s)	Description of Changes	Summary of Analysis of Change
	Description of Changes A change to CECC EPIP-1 in Revision 61 was made to clarify communications when conditions have changed but a new Protective Action Recommendation (PAR) is not required (Appendix G) and to clarify the CECC Director responsibilities in Appendix Q related to PARs beyond the emergency planning zone (EPZ). Appendix G was changed to distinguish between formal "notifications" and when the communication is for information only. The word "informed" is being used in place of "notified" in order to make this distinction. Additionally, the wording is being changed to clarify what to communicate when there is no change in the PAR as a result of the change in conditions. Appendix Q was changed to state that "upon activation of the CECC," the Director has the responsibility for PARs beyond 10 miles.	The changes do not alter the protective actions that will be recommended or how the state would be notified of the PAR. The proposed changes merely clarify the information provided in the procedure. In Appendix G, the instance being clarified is when a PAR is not required. Under the proposed wording, this continues to be the case. Communications in that situation are for information only and therefore do not constitute a formal notification. The wording clarifies this point. In Appendix Q, Section 1.0A already stated that the appendix is to be utilized by the CECC. The addition of the words "upon activation of the CECC" in Section 1.0B help clarify when the procedure is to be used. The additional words are consistent with the rest of the procedure and do not impact the range of protective actions developed for the plume exposure pathway EPZ. This is primarily due to the fact that the entirety of Appendix Q deals with PARs beyond the plume exposure pathway EPZ. The activity continues to comply with the requirements. These changes clarify the existing procedure requirements. Therefore, they improve the effectiveness of the plan and implementing procedures. No new
		responsibilities have been added and there is no impact on the timeliness of performing other emergency actions. The activity does not constitute a reduction in effectiveness.

Affected Document(s)	Description of Changes	Summary of Analysis of Change
CECC EPIP-1, Revision 61	A change was made to CECC EPIP-1 in Revision 61 to eliminate duplication of requirements within the procedure. In Appendix A, the checklist item to "check on the status of the BFN Plant Assessment Team leader" is being eliminated because the BFN Plant Assessment Team Leader is part of the ERO and there is already a checklist item to "ensure full staffing of all ERO positions."	No change has been made to how the emergency response organization is activated or when personnel will arrive at the EOF. This change only eliminates duplicate requirements as described in the description of change. The checklist in Appendix A already contains a requirement to ensure full staffing of the ERO. Since the BFN Plant Assessment Team Leader is part of the ERO, the checklist item being deleted is duplicative. The change eliminated duplicate procedure requirements and thereby increases the efficiency of performing the required task. As a result, this change improves the effectiveness of the plan by allowing the other tasks in Appendix A to be completed in a more timely/efficient manner. The activity continues to comply with the requirements. The proposed activity does not constitute a reduction in effectiveness.

Affected Document(s)	Description of Changes	Summary of Analysis of Change
CECC EPIP-1, Revision 61	A change was made to CECC EPIP-1 in Revision 61 to clarify the Emergency Response Data System (ERDS) terminal inspection in Appendix A. Currently, activation of ERDS is performed in accordance with CECC EPIP-3 at an Alert classification or higher. ERDS activation is not required at an NOUE. However, CECC EPIP-2 can be used at the Shift Manager's discretion to activate the CECC at an NOUE. If the facilities are activated at an NOUE, the ODS is not required to then enter CECC EPIP-3 which may result in the failure to activate ERDS. This checklist item is being modified so that the EDO will know to inspect the ERDS terminal at some later time if the CECC has been staffed at an NOUE.	No change has been made in the capability of ERDS or when ERDS is activated. No change has been made to any other communication methods between TVA and the NRC. This change clarifies the procedure to ensure that ERDS is activated when appropriate. This change improves the effectiveness of the plan by qualifying and clarifying the actions in the EDO checklist. The clarification helps ensure that the appropriate action will be taken regardless of the emergency classification level. The change adds no new actions or responsibilities and is intended to clarify the requirements. No requirements have been eliminated from the procedure related to ERDS. The activity continues to comply with the requirements. The activity does not constitute a reduction in effectiveness.

Affected Document(s)	Description of Changes	Summary of Analysis of Change
CECC EPIP-1, Revision 61	Changes were made to CECC EPIP-1 in Revision 61 to clarify initial contact with the appropriate state agency and the timing of the State Update Form. In Appendix B, the checklist item to establish contact with the appropriate state agency is being modified to clarify who should be contacted. For SQN and WBN, the CECC Director does not actually contact the Governor's Authorized Representative (GAR), especially if the State Emergency Operations Facility has not yet been activated. The initial communication from the CECC would be to the Warning Point. For Tennessee Emergency Management Agency (TEMA), the State On-Call is notified by the Warning Point. Similarly, for BFN the GAR may not yet be aware of the situation since the notification goes from the Warning Point to the Alabama Radiation Control Duty Officer. The changes clarify who will actually be available at the State and how the CECC Director should go about contacting them. This initial contact does not constitute a notification of the state. Typically, the CECC is not yet activated when the initial communication occurs. Additionally, Appendix J is being revised to clarify when the one hour updates to the State are due. Checklist Item 7 previously caused confusion because it seemed to imply that all subsequent State Update Forms were based off the initial time of declaration. However, this interpretation could result in an instance where there were almost two hours between state updates. The clarification is being provided to ensure implementation is consistent with REP requirements.	Following these changes, provisions will continue to exist for prompt communications among principal response organizations. These changes clarify the procedure steps that already existed. No change has been made to the formal notification process. The clarification of the checklist in Appendix B more correctly reflects the individuals that will be available from the State early in the event. Direction to establish contact with those individuals is not a formal notification regarding an emergency classification. The changes made to the procedure have been discussed with the applicable State agencies. The change to Appendix J can only result in more frequent information being provided to the State. Previously, some had interpreted the timing of the State Updates in such a way that it was contrary to the REP requirements. These clarifications help to ensure that the REP requirements are being met. The changes improve the effectiveness of the REP by eliminating confusion. As stated above, the clarification of the Appendix B checklist more correctly reflects the individuals that will be available from the State early in the event. Additionally, the changes to Appendix J provide the State Communicator with more clear guidance. There is no change in the intent of the procedure. The methods for contacting the State and for providing the State Update information have not changed, therefore there is no impact on the timeliness of any function. The proposed activity does not constitute a reduction in effectiveness.

Affected Document(s)	Description of Changes	Summary of Analysis of Change
CECC EPIP-1, Revision 61	A change was made to CECC EPIP-1 in Revision 61 to correct the non-QA records list in Section 7.2. Appendix P, "CECC Technical Advisor Checklist" was not previously listed as a record. This change adds Appendix P to the list of non-QA records during actual emergencies.	The changes are not related to any planning standard of 10 CFR 50.47 nor do they involve a site-specific commitment.
CECC EPIP-8, Revision 44	Changes were made to CECC EPIP-8 Revision 44 to allow the Radiological Assessment Manager / Coordinator (RAM/RAC) to delegate the review of dose assessment inputs to a Dose Assessor who did not prepare the inputs. No change was being made to the review of dose assessment results or the responsibilities to evaluate them against Emergency Action Levels and Protective Action Recommendations. The changes impact Section 4.2, Section 5.1.1, Section 5.1.2, Attachment 3, Attachment 6, and Attachment 16.	This procedure change continues to comply with the regulatory requirements in that a means continues to be available for determining the magnitude of, and for continually assessing the impact of, the release of radioactive materials. In addition, the change does not alter the responsibilities of the RAM, RAC, or Dose Assessor as defined in the REP. Therefore, the change continues to meet REP requirements. The change improves the effectiveness of the REP by allowing the RAM/RAC to delegate responsibilities for reviewing dose assessment inputs. This allows them additional time to focus on the responsibilities required by the REP, including analyzing the dose assessment outputs. In addition, the RAM/RAC review of dose assessment outputs continues to effectively include a review of the inputs, since the outputs contain the input conditions and erroneous outputs would force the review of the input assumptions. This change also improves the timeliness with which dose assessment can be performed because Dose Assessors will not have to wait in order for the RAM or RAC to approve other paperwork. If other responsibilities require the RAM/RAC's attention, the input review can be delegated. The activity does not constitute a reduction in effectiveness.

Affected Document(s)	Description of Changes	Summary of Analysis of Change
CECC EPIP-8, Revision 44	 Changes were made to CECC EPIP-8 in Revision 44 as follows: Add definition for EMU as ERN [Emergency Response Network] Multi-Unit Add reference to CECC EPIP-6, Appendix B, to the note in Attachment 3 	These changes were editorial in nature. The change continues to comply with the requirements. This change to the REP does not constitute a reduction in effectiveness.
CECC EPIP-8, Revision 44	A change was made to CECC EPIP-8 in Revision 44 to remove the word "fuel" from the User Specified Release Type options in Item 7 of Attachment 3. This word should have been removed as part of the changes to CECC EPIP-8 which were made in Revision 43 to clarify the dose assessment activities for spent fuel. CECC EPIP-8 was previously revised to specify the default release type for spent fuel accidents should be considered Gap. The User Specified option was not revised to reflect the new guidance at that time.	This change continues to ensure that adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in place. No change has been made to the ability to assess airborne or liquid releases. The means for determining the magnitude of, and for continually assessing the impact of, the release of radioactive materials are described and are being bolstered by additional clarifying information regarding the performance of accident assessment for spent fuel pool events. This activity improves the effectiveness of the REP by providing additional clarifying information regarding the performance of accident assessment for accidents associated with the spent fuel pool. The timeliness of the accident assessment function is improved because no additional requirements are being imposed, but the additional information will result in more efficient performance of the function. Since no changes have been made to the associated software programs, and since no information has been removed from the procedure (this component of the user specified option is assumed to be a Gap release), there is continued capability to meet the accident assessment function. The change to the REP does not constitute a reduction in effectiveness.

Affected Document(s)	Description of Changes	Summary of Analysis of Change
CECC EPIP-8, Revision 44	A change was made to CECC EPIP-8 in Revision 44 to rewrite the instructions for FRED and RED in Attachment 4. This change is being made as a result of several instances where FRED and RED were run incorrectly. The change separates the guidance for each code and incorporates user aids that were previously maintained apart from the procedure. The steps continue to be maintained (included) in the new version of Attachment 4 with one exception. The information "The State Update Form will print out at the printer the input data for the FRED run printed. And the FRED screen will return to the report menu." has been removed from the procedure since it would become obvious when following the new written instructions.	This change represents clarification of the methods used to assess and monitor actual or potential offsite consequences of a radiological emergency condition. The change is an enhancement to the procedure and the methods continue to be in use. The means used for determining the magnitude of, and for continually assessing the impact of, the release of radioactive materials continues to be described. In fact, the description is now more thorough and relies less on individual dose assessor training. No change has been made to the software for performing dose assessment. This change improves the effectiveness of the plan by providing more specific instruction for performing dose assessment where previous deficiencies had been identified. Although longer and more thorough, the instruction for performing dose assessment to the required amount of time. The ability to run RED in 15 minute increments continues to exist. While the revised instruction for FRED and RED can be used as a continuous use procedure, there is no requirement to do so. Therefore there is not an adverse impact on the timeliness with which dose assessment can be performed. There is no change in the method for performing dose assessment can be performed. There is no change in the method for performing dose assessment runs are required to be performed. As noted in the change description, only one portion of the previous version of the instructions has not been included in the new instructions. There is no impact from removing that information since it would be obvious to the performer whether the reports printed and what screen the code returned to. As such, removing the information does not adversely impact the effectiveness of the procedure.

Affected Document(s)	Description of Changes	Summary of Analysis of Change
CECC EPIP-8, Revision 44	A change was made to CECC EPIP-8 in Revision 44 to clarify Section 5.6 and eliminate outdated reference to spooling of information to the state.	Direct spooling of dose assessment information has been eliminated and replaced by emailing electronic copies and faxing. Previously, spooling provided a direct link to print the dose assessment inputs and outputs in other TVA facilities as well as State facilities. Spooling was eliminated because it utilized analog lines leased from AT&T that could no longer be maintained and required equipment that is now obsolete. No change has been made to the locations that receive the information. The REP was reviewed and no requirement could be identified related to the spooling of information to locations outside of the CECC. Provisions still exist for prompt communications among principal response organizations. Systems remain in place to transfer dose assessment information to offsite response organizations. The procedure reference to CECC EPIP-1 ensures that the applicable pages of CECC EPIP-1, Appendix K, will be transmitted to the state with the appropriate data following manual dose assessment. The activity does continue to comply with the requirements.
		The change to remove spooling from CECC EPIP-8 maintains the effectiveness of the plan because the same information continues to be transmitted via email and fax. There is no change in the actual function that is being performed. The same information which was spooled is also listed on the State Update Form provided in CECC EPIP-1. This change merely corrects the reference and consideration of data being spooled. No change has been made to the action that should be taken. Therefore, there is no impact in the timeliness of performing the function. The activity does not constitute a reduction in effectiveness.

Affected Document(s)	Description of Changes	Summary of Analysis of Change
CECC EPIP-8, Revision 44	A change was made to CECC EPIP-8 in Revision 44 to clarify the actions to take when determining whether MIDAS data acquisition is working correctly.	The changes are not related to any planning standard of 10 CFR 50.47 nor do they involve a site-specific commitment.
CECC EPIP-8, Revision 44	A change was made to CECC EPIP-8 in Revision 44 to add Release Rate Input Information as Attachment 19. This information was previously contained outside of the procedure as an aid. A copy of the proposed Attachment 19 is attached to this evaluation. As part of this change, references to Attachment 19 will also be added to Section 8.2A, Attachment 3, and Attachment 18. This change does not alter any responsibilities required by the procedure.	The changes are not related to any planning standard of 10 CFR 50.47 nor do they involve a site-specific commitment.
CECC EPIP-9, Revision 55	A change was made to CECC EPIP-9 Rev 55. This revision updates Attachment 3 Table 1, Barium Source Activity Chart to include 2017. The table is used during the setup of the Bicron Analyst/Nal Detector and contains Ba133 activity for multiple sources. This revision does not change, introduce, or remove any of the requirements in CECC EPIP-9, only updates the stated table.	The changes are not related to any planning standard of 10 CFR 50.47 nor do they involve a site-specific commitment.

Affected Document(s)	Description of Changes	Summary of Analysis of Change
CECC EPIP-9, Revision 55	A change was made to CECC EPIP-9 Rev 55. This change updated the records list in section 10 to specify which records are considered QA or Non-QA records during actual events and during drill or exercises. EPDP-8, Emergency Preparedness Quality Assurance, states, in part, "During actual emergencies the matrix below defines which forms will be considered QA records." Based on this statement, other EP procedures identify that QA records are retained as such only during actual emergencies; no such guidance existed in CECC EPIP-9 prior to revision 55. This revision does not change, introduce, or remove any of the requirements or records in CECC EPIP- 9, only updates the list of records.	The changes are not related to any planning standard of 10 CFR 50.47 nor do they involve a site-specific commitment.
CECC EPIP-9, Revision 55	A change was made to CECC EPIP-9 Rev 55. This change updates the notes on Attachment 3, page 3 to match those on page 4 of the same attachment. The previous version of the notes did not contain the full guidance necessary to perform the step. The same notes on page 4 of the attachment did contain the full guidance. The error was on omission in the previous revision.	The changes are not related to any planning standard of 10 CFR 50.47 nor do they involve a site-specific commitment.
	In revision 54, the note did not include the direction to "press "Menu" prior to the "^" Info button. Failing to perform this action could result in the 1 minute count not being performed correctly. In revision 54, operators could use the correct note found on the subsequent page to correctly perform the sample. The change includes the complete guidance on both pages of Attachment 3 to ensure proper set-up of instrumentation.	

Affected Document(s)	Description of Changes	Summary of Analysis of Change
CECC EPIP-9, Revision 55	A change was made to CECC EPIP-9 Rev 55. This change updates Step 6 of Attachment 3. The previous revision referred the user to "Table 1 above" which could lead to confusion as the referenced table is two pages prior to the step.	The change is editorial or typographical.