

From: Galvin, Dennis
Sent: Monday, July 27, 2020 3:14 PM
To: Drew Richards (amrichards@stpegs.com)
Cc: AJ Albaaj (ajalbaaj@stpegs.com); Wendy Brost (webrost@stpegs.com)
Subject: South Texas Project – Request for Additional Information - License Amendment Request to Revise the Emergency Plan (EPID: L 2020-LLA-0059)
Attachments: STPEGS EP Rebaseline LAR RAIs 2020-07-27.pdf

Mr. Richards,

By letter dated March 30, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML200908745), as supplemented by letter dated April 29, 2020 (ADAMS Accession No. ML20120A618), the STP Nuclear Operating Company (STPNOC) submitted a license amendment request to revise the South Texas Project Electric Generating Station (STPEGS) Emergency Plan based on guidance in NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support Nuclear Power Plants," Revision 2 (ADAMS Accession No. ML19347D139).

The NRC staff has determined that additional information is needed to complete its review. The requests for additional information (RAIs) were transmitted to the licensee in draft form on July 14, 2020. A clarification call was held on July 23, 2020, and the licensee agreed to provide responses to the RAIs by August 24, 2020. The NRC staff agreed with this date.

If you have any questions, please contact me at (301) 415-6256 or Dennis.Galvin@nrc.gov.

Respectfully,

Dennis Galvin
Project Manager
U.S Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Division of Operating Reactor Licensing
Licensing Project Branch 4
301-415-6256

Docket No. 50-498, 50-499

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REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST TO REVISE THE EMERGENCY PLAN

STP NUCLEAR OPERATING COMPANY

SOUTH TEXAS PROJECT UNITS 1 AND 2

DOCKETS 50-498 AND 50-499

By letter dated March 30, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20090B745), as supplemented by letter dated April 29, 2020 (ADAMS Accession No. ML20120A618), the STP Nuclear Operating Company (STPNOC) submitted a license amendment request to revise the South Texas Project Electric Generating Station (STPEGS) Emergency Plan based on guidance in NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support Nuclear Power Plants," Revision 2 (ADAMS Accession No. ML19347D139).

To complete its review, the NRC staff requests the following additional information.

- RAI 1.** Section 2.0, "Integrated Planning and Emergency Plan Structure," of the proposed STPEGS Emergency Plan (Enclosure 2, "South Texas Project Electric Generating Station (STPEGS) Emergency Plan") states:

Prompt Notification System (PNS) Design Report – The PNS Design Report is the FEMA approved document that contains the specific design, testing, and maintenance of the system. ***The EAL*** [emergency action level] ***TBM*** [technical bases document] ***fulfills requirements of §50 Appendix E.IV.D.3.*** (emphasis added)

Given that this area of the plan is discussing the PNS Design Report rather than the EAL TBM, please revise the proposed plan to refer to the correct document.

- RAI 2.** Section 3.2.7, "[RIE 1-7] Repair Team Activities Function On-shift Staffing," of Enclosure 1, "Evaluation of Proposed Changes," describes proposed emergency response organization (ERO) staffing changes to repair team activities and supervision of repair team activities. The current STPEGS Emergency Plan on-shift staffing includes a Maintenance Coordinator, two Electrical Technicians, one Mechanical Technician, and an Instrument and Controls (I&C) Technician. These on-shift resources and a third train of safety equipment, in part, supported the extension of response times of the augmenting Emergency Director and engineering support personnel. STPNOC proposes to:

- Maintain the current response times of the augmenting engineers;
- Remove two on-shift Electrical Technicians, one on-shift Mechanical Technician, one on-shift I&C Technician, and one on-shift Maintenance Coordinator, and
- Provide one Maintenance Coordinator, one Electrical Technician, and one Mechanical Technician within 60 minutes and one I&C Technician within 90 minutes of the declaration of an Alert or greater emergency classification.

As provided in the letter dated July 19, 2018 (ADAMS Accession No. ML18159A212) approving the current ERO staffing, the Plant System Engineering augmentation response time is based, in part, on on-shift maintenance personnel, including a Duty Maintenance Supervisor, available to perform troubleshooting and minor maintenance repairs during initial phases of an event without interfering with their primary emergency response duties. As such, changes to the on-shift maintenance personnel could undermine the basis for the current Plant System Engineering response time of 90 minutes.

Although Section 3.2.7, of Enclosure 1, discusses the use of diverse and flexible coping strategies (FLEX) and/or Severe Accident Management Guideline (SAMG) activities that could, in combination with the third train of safety equipment, justify the proposed changes to on-shift resources, the proposed discussion relative to FLEX is limited to stating that FLEX and/or SAMG activities are documented and controlled outside of the scope of the emergency preparedness program

To support the proposed changes to the Supervision of Repair Team Activities and Repair Team Activities functions, as well as maintaining the current augmentation time of 90 minutes for Plant System Engineering, please describe how STPEGS can implement FLEX and/or SAMG strategies to effectively respond to a radiological event using the proposed on-shift resources. This description should clearly indicate that on-shift personnel have the training, procedures, and equipment necessary to conduct mitigatory actions without the immediate need of ERO augmentation.

RAI 3. The proposed STPEGS Emergency Plan discussion in Section A.1.c states, “the title of the individual who will be in charge of the emergency response is provided in Element B.2.” However, discussion in Section B.2 only describes an individual that designated as the ***on-shift*** emergency coordinator. (emphasis added)

Please explain why the proposed STPEGS Emergency Plan does not specify the individual, by title/position, in charge and with the authority to direct emergency response activities (e.g., EOF Manager) following ERO augmentation and activation of the Technical Support Center (TSC) and Emergency Operation Facility (EOF).

RAI 4. Section B.1.a of the proposed STPEGS Emergency Plan provides that the dedicated on-shift senior reactor operators (SROs) are equivalent to the Shift Manager regarding emergency preparedness (EP) tasks, and that the SRO is capable of providing on-shift assistance with the Command & Control and Emergency Classification functions. Although this justification does not clearly indicate that on-shift SROs are either qualified as a Shift Manager or as an Emergency Director, Attachment 2, “ERO Positions Disposition,” of the Supplement to the LAR dated April 29, 2020, provides that the change from Shift Manager #2 to an SRO is only a title change. As such, it is reasonable to assume that the ERO position of SRO will continue to be filled by an SRO that is also qualified as a Shift Manager. Although this qualification is clearly indicated in Section B.1.a of the proposed STPEGS Emergency Plan, the qualification of the on-shift SRO filling the ERO function as a Shift Manager is implied, but not specifically stated, in the proposed STPEGS Emergency Plan nor the proposed Table B-1: “On-Shift and Augmenting ERO Staffing Plan.” As such, the STPEGS Emergency Plan could potentially be understood that any qualified SRO could relieve the Shift Manager of their ERO responsibilities.

Please explain how the title change for the current ERO on shift position of Shift Manager #2 to an SRO will continue to ensure that the individual filling the SRO position is either qualified as a Shift Manager or an Emergency Director or revise the proposed Table B-1 accordingly.

RAI 5. Section B.1.a of the STPEGS Emergency Plan provides on-shift ERO and minimum augmenting ERO positions, which are assigned the primary EP responsibilities. However, this listing of responsibilities for the positions have inconsistencies and are not clear what the specific responsibilities for these duties are (i.e., approve, review, recommend). Several examples are:

- The Shift Manager, Shift Lead Radiation Protection (RP) Technician, TSC Manager, TSC RP Coordinator, Operations Support Center (OSC) Supervisor, EOF Manager and EOF RP Coordinator all have same two responsibilities listed under their positions:
 - Use of KI [potassium iodide], and
 - Emergency exposure controls.
- The TSC Manager, TSC Maintenance Coordinator and TSC Operations Coordinator have the same responsibility for “facility relocation” listed under their positions.
- The Security Force Supervisor, TSC Operations Coordinator and OSC RP Supervisor have the same responsibility “first aid activities” listed under their positions

Please revise to provide position specific descriptions of ERO responsibilities, in sufficient detail, that can be used to determine the primary responsibilities of on-shift and augmenting ERO positions.

RAI 6. Section B.2.a of the proposed STPEGS Emergency Plan states, “the Shift Manager is responsible for performing the following non-delegable responsibilities until relieved”:

- Event declaration,
- Notification of offsite authorities,
- PARs [Protective Action Recommendations] for the general public, and
- Emergency Exposure (dose limits and KI).

This section further states, “when the Shift Manager is relieved of overall command and control of emergency response, the non-delegable responsibilities of classification, notification and PARs and the role of Emergency Director are passed to the EOF Manager.”

Please clarify whether the non-delegable responsibility for emergency exposure is also transferred to the EOF Manager.

RAI 7. Section B.1.a of the proposed STPEGS Emergency Plan provides a listing of on-shift ERO and minimum augmenting ERO positions and their primary EP responsibilities. Although directing the use of KI is a non-delegable responsibility of the Emergency Director, a total of seven individuals are assigned the “Use of KI” responsibility.

Please clarify the specific responsibility for the “Use of KI” for these individuals (i.e., approve, recommend).

RAI 8. The Maintenance Coordinator, located in the TSC, is assigned the supervision of repair team activities function at 60 minutes. At 90 minutes, an Electrical, Mechanical, I&C, and an RP Supervisor arrive at the OSC. All identified ERO responders at the OSC are assigned the responsibility of “OSC dispatch and control.” As such, it is not clear whether the Maintenance Coordinator is maintaining control of OSC activities from the TSC, or if one or more of the individuals reporting to the OSC are in overall control of the OSC.

Please clarify who is responsible for maintaining overall control and prioritization of OSC activities.

RAI 9. Section B.1.a of the proposed STPEGS Emergency Plan provides that the EOF Manager has the responsibility to “Manage facility emergency response activities.” The TSC positions do not clearly state who is in charge of that facility.

Please clarify who is responsible for maintaining overall maintaining control and prioritization of TSC activities.

RAI 10. Section B.1.a of the proposed STPEGS Emergency Plan provides that the Security Force Supervisor, TSC Operations Coordinator, and the OSC RP Supervisor are assigned responsibility for first aid activities.

Please clarify who is responsible for maintaining overall the responsibility of first aid activities.

RAI 11. Section 3.1.1.7, “Emergency Notification & Response System (ENRS),” of the current STPEGS Emergency Plan states:

ENRS consists of an Off-site Primary and Backup computer system used for notifying ERO members during a declared emergency. The offsite systems are capable of autodialing ERO members in addition to text and paging. ***An On-site ENRS computer system is available for activation of all ERO wireless communications devices should both offsite systems fail.*** (emphasis added)

However, the discussion under Evaluation Criterion F.1.c, “Systems for alerting or activating emergency personnel in each response organization,” of the proposed STPEGS Emergency Plan states:

The Emergency Notification & Response System (ENRS) is used for notifying ERO members during a declared emergency and consists of offsite primary and backup computer systems. The systems are capable of autodialing and communicating a message on ERO member phones and by text.

Please clarify why the on-site ENRS computer system is not included in the proposed STPEGS Emergency Plan.

RAI 12. Section 13.3.2.7, “Public Education and Information,” of NUREG-0781, Supplement No. 3, Safety Evaluation Report Related to the Operation of South Texas Project, Units 1 and 2 (ADAMS Accession No. ML091330138) states, in part:

The public information is printed in English and Spanish to inform all residents of the area.

Evaluation Criterion G.1 of the proposed STPEGS Emergency Plan states:

Provisions are made for a coordinated annual dissemination of information to the public within the plume exposure pathway EPZ [emergency planning zone], including transient populations and those with access and functional needs, regarding how they will be notified and what actions should be taken. The information is disseminated using multiple methods, to include non-English translations per current Federal guidance.

Section G.1 of the proposed STPEGS Emergency Plan states, in part:

The content of the printed materials includes, but are not limited to:

- Contacts and telephone numbers for additional information, along with a Spanish information number.

Information for residents with special needs and non-English translations is made available in accordance with current federal guidance.

Section 3.6.5 [RIE 5-5], “Public Information Material no Longer Published in Spanish,” of Enclosure 1 states, in part:

The information materials disseminated annually to the general public is no longer printed in Spanish.

STP follows applicable Federal and State rules and guidance involving language access for the general public. Emergency preparedness regulations and guidance do not address requirements or guidance for language access regarding public education information.

This change was previously evaluated under 50.54(q) as no decrease in effectiveness. The proposed STPEGS Emergency Plan will continue to describe the content and process used to disseminate public education information related to STP in conformance with the applicable rules and guidance for language access.

However, the explanation section for Evaluation Criterion G.1 of the Radiological Emergency Preparedness Program Manual, FEMA P-1028 / December 2019 states:

Plans/procedures include provisions for providing public information to non-English speaking populations within the plume exposure pathway EPZ [emergency planning zone]. At a minimum, public information materials are translated into any non-English language spoken by more

than 10,000 individuals or more than 5% of the total voting age population in a single political subdivision (usually a county, but a township or municipality in some States) within the plume exposure pathway EPZ. All translated information is clear, accurate, consistent, and complete.

Please explain if the need for non-English public information materials has been re-evaluated based on changes to the current population in the EPZ. If this evaluation was completed, please include what reference information was used in making this determination.

RAI 13. Section G.3, "Technical Support Center," of the current STPEGS Emergency Plan states, in part:

Each Technical Support Center is provided sufficient radiological protection and monitoring equipment to assure that radiation exposure to any person working in the activated Technical Support Center will not exceed five (5) rem TEDE [total effective dose equivalent] or twenty-five (25) rem thyroid CDE [committed dose equivalent] during the duration of a declared accident.

NRC guidance provided in Section 2.6, "Habitability," in NUREG-0696, "Functional Criteria for Emergency Response Facilities," states, in part:

Since the TSC is to provide direct management and technical support to the control room during an accident, it shall have the same radiological habitability as the control room under accident conditions. TSC personnel shall be protected from radiological hazards, **including direct radiation** and airborne radioactivity from in plant sources under accident conditions, to the same degree as control room personnel. (emphasis added)

Evaluation Criterion H.1 of the proposed STPEGS Emergency Plan states, "A TSC is established, using current Federal guidance, from which NPP [Nuclear Power Plant] conditions are evaluated and mitigative actions are developed." However, the proposed STPEGS Emergency Plan does not include information related to radiation protection, only radiological habitability.

Please justify why this specific information is not included in the proposed STPEGS Emergency Plan or provide an explanation on the protection from direct radiation afforded by the TSC.

RAI 14. Evaluation Criterion J.6 of the proposed STGEES Emergency Plan states:

The basis and methodology are established for the development of PARs for the responsible OROs [offsite response organizations], including evacuation, sheltering, and, if appropriate, radioprotective drug use, for the plume exposure pathway EPZ. Current Federal guidance is used.

Section J.6 of the proposed STPEGS Emergency Plan references EPA-400-R-92-001, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, May 1992.

Evaluation Criterion K.1.a of the proposed STGEES Emergency Plan states:

Onsite emergency exposure guidelines for emergency workers consistent with their assigned duties and current Federal guidance and the conditions under which the guidelines apply.

Section K.1.a of the proposed STPEGS Emergency Plan states, in part:

1. Onsite exposure guidelines for emergency workers, consistent with **EPA 400-R-92-001**, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, U.S. Environmental Protection Agency, **May 1992**, (emphasis added)
2. The administration of potassium iodide (KI) to STPEGS and vendor personnel may be used to mitigate the consequences of inhalation of radioiodine during an emergency. **EPA-400/R-17/001**, PAG Manual: Protective Action Guides and Planning Guidance for Radiological Incidents, **January 2017**, (emphasis added)

Please justify why reference to the latest version of this guidance is not consistently referenced in the proposed STPEGS Emergency Plan.

RAI 15. Addendum N-1, "DRILLS AND EXERCISES," of the current STPEGS Emergency Plan states, in part:

3.0, "COMMUNICATION TESTS," Communication tests with State and local governments within the Plume Exposure Pathway Emergency Planning Zone will be conducted monthly. Communications with Federal emergency response organizations and **State within the ingestion pathway** will be tested **on a quarterly basis**. (emphasis added)

However, discussion under Evaluation Criterion F.3, "The testing method and periodicity for each communication system used for the functions identified in evaluation criteria E.2, F.1, and F.2 are described," of the proposed STPEGS Emergency Plan removes testing of communications with the State within the Ingestion pathway and changes the frequency for testing of communications with Federal emergency response organizations to annually.

Please justify the basis for the change in communications testing or revise accordingly.

RAI 16. Evaluation Criterion N.4.h, "Off-Hours Report-In Drills," of the proposed STPEGS Emergency Plan states:

STPEGS will conduct an off-hours unannounced ERO report-in drill at least **once within an eight-year cycle**. (emphasis added)

However, Evaluation Criterion N.4.h of Revision 2 to NUREG-0654/FEMA-REP-1 states:

Off-Hours Report-In Drills. Off-hours report-in drills are conducted **biennially** and are unannounced. (emphasis added)

Please justify the basis for not following the guidance in Revision 2 to NUREG-0654/FEMA-REP-1 or revise accordingly.

RAI 17. Evaluation Criterion N.4.i of the proposed STPEGS Emergency Plan states:

Off-Hours Call-In Drills Off-hours call-in drills are conducted **quarterly**, such that each ERO member's normally expected response time is assessed at least biennially based on call-in drill responses or an alternate means for determining response time. Some drills are unannounced. (emphasis added)

However, discussion under Section N.4.i of the proposed STPEGS Emergency Plan states:

STPEGS ERO notification is an all-call process.

STPEGS will conduct an off-hours unannounced ERO call-in drill **biennially** to validate each ERO member's response time. (emphasis added)

Please justify the basis for not following the endorsed guidance in Revision 2 to NUREG-0654/FEMA-REP-1 or revise accordingly.

RAI 18. Evaluation Criterion O.1 of the proposed STPEGS Emergency Plan states:

Each organization ensures the training of emergency responders and other appropriate individuals with an operational role is described in the emergency plan. Initial training and at least annual retraining are provided.

Discussion under Section O.1 of the proposed STPEGS Emergency Plan further states:

1. Shift Managers and Emergency Directors

- Event Classification
- Event Notification
- Protective Action Recommendations

However, discussion under Section B.2.a of the proposed STPEGS Emergency Plan states:

The Shift Manager is responsible for performing the following non-delegable responsibilities until relieved:

- Event declaration
- Notification of offsite authorities
- PARs for the general public
- **Emergency Exposure (Dose limits and KI)** (emphasis added)

Please justify why "Emergency Exposure (Dose limits and KI)" was not included in Planning Standard O.1 for Shift Managers and Emergency Directors or revise accordingly.

RAI 19. Section 3.2.4, “[RIE 1-4] Field Monitoring Function On-shift Staffing,” of Enclosure 1, states, in part:

The current STPEGS Emergency Plan provides one on-shift Onsite Radiation Monitor ERO position.

The original basis for establishing the on-shift Onsite Field Monitor ERO position was to remove the need for a 60-minute minimum augmentation ERO position. The onsite Field Monitoring Technician 60-minute ERO position has been added in the proposed STPEGS Emergency Plan.

However, the Safety Evaluation dated February 12, 2018 (ADAMS Accession No. ML18044A284) states, in part:

Based on the licensee’s current dose assessment capability, the use of installed plant radiological instrumentation, and the on-shift complement of two RPTs [Radiation Protection Technologist] with an additional individual qualified to perform field monitoring activities, the NRC staff finds the requested changes to augmentation times and staffing levels to be acceptable for the Major Functional Area of **offsite and onsite surveys**, and in-plant surveys. (emphasis added)

The staff used the basis of having the on-shift Onsite Radiation Monitor ERO position as part of its justification to extend the Offsite Field Monitoring Teams from 75 minutes to 90 minutes, as well as an Onsite Radiation Monitor to 90 minutes.

The guidance in Revision 2 to NUREG-0654/FEMA-REP-1 provides for one Onsite Field Monitoring Team and one Offsite Field Monitoring Team at 60 minutes, and one Offsite Field Monitoring Team at 90 minutes.

Please provide justification for not meeting the approved guidance for having the ability to perform Offsite Field monitoring capability at 60 minutes,