UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 E. LAMAR BLVD.
ARLINGTON, TX 76011-4511

November 8, 2016

EA-16-169

Mr. Dennis Koehl
President and Chief Executive Officer
STP Nuclear Operating Company
P.O. Box 289
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION – NRC INTEGRATED INSPECTION REPORT 05000498/2016003 AND 05000499/2016003

Dear Mr. Koehl:

On September 30, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your South Texas Project Electric Generating Station, Units 1 and 2, facility. On October 13, 2016, the NRC inspectors discussed the results of this inspection with Mr. J. Connolly, Site Vice President, and other members of your staff. Inspectors documented the results of this inspection in the enclosed inspection report.

NRC inspectors documented one finding of very low safety significance (Green) in this report. This finding involved a violation of NRC requirements. Further, inspectors documented a licensee-identified violation which was determined to be of very low safety significance in this report. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2.a of the NRC Enforcement Policy.

If you contest the violations or significance of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC resident inspector at the South Texas Project Electric Generating Station, Units 1 and 2, facility.

If you disagree with a cross-cutting aspect assignment, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region IV; and the NRC resident inspector at the South Texas Project Electric Generating Station, Units 1 and 2, facility.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, “Public Inspections, Exemptions, Requests for Withholding,” a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC’s

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Sincerely,

/RA/

Nicholas H. Taylor, Branch Chief
Project Branch B
Division of Reactor Projects

Docket Nos.: 50-498 and 50-499
License Nos.: NPF-76 and NPF-80

Enclosure: Inspection Report
05000498/2016003
and 05000499/2016003
w/ Attachment: Supplemental Information

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Letter to Dennis Koehl from Nicholas Taylor dated November 8, 2016

SUBJECT: SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION – NRC INTEGRATED INSPECTION REPORT 05000498/2016003 AND 05000499/2016003

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	05000498, 05000499
License:	NPF-76, NPF-80
Report:	05000498/2016003 and 05000499/2016003
Licensee:	STP Nuclear Operating Company
Facility:	South Texas Project Electric Generating Station, Units 1 and 2
Location:	FM 521 - 8 miles west of Wadsworth Wadsworth, Texas 77483
Dates:	July 1 through September 30, 2016
Inspectors:	A. Sanchez, Senior Resident Inspector N. Hernandez, Resident Inspector M. Chambers, Physical Security Specialist P. Elkmann, Senior Emergency Preparedness Inspector G. George, Senior Reactor Inspector G. Guerra, CHP, Emergency Preparedness Inspector D. Proulx, Senior Project Engineer E. Schrader, Emergency Preparedness Specialist, NSIR
Approved By:	Nicholas H. Taylor Chief, Project Branch B Division of Reactor Projects

SUMMARY

IR 05000498/2016003, 05000499/2016003; 07/01/2016 – 09/30/2016; South Texas Project Electric Generating Station, Units 1 and 2; Maintenance of Emergency Preparedness

The inspection activities described in this report were performed between July 1 and September 30, 2016, by the resident inspectors at the South Texas Project Electric Generating Station and inspectors from the NRC's Region IV office. One finding of very low safety significance (Green) is documented in this report. This finding involved a violation of NRC requirements. Additionally, NRC inspectors documented in this report one licensee-identified violation of very low safety significance. The significance of inspection findings is indicated by their color (Green, White, Yellow, or Red), which is determined using Inspection Manual Chapter 0609, "Significance Determination Process." Their cross-cutting aspects are determined using Inspection Manual Chapter 0310, "Aspects within the Cross-Cutting Areas." Violations of NRC requirements are dispositioned in accordance with the NRC Enforcement Policy. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

Cornerstone: Emergency Preparedness

- Green. The inspectors identified a Green non-cited violation of 10 CFR 50.47(b)(10) for the failure between July 16, 2015, and September 8, 2016, to develop a range of protective actions for the plume exposure emergency planning zone for the public, considering evacuation and sheltering. The licensee restored compliance by implementing procedure 0ERP01-ZV-IN07, "Offsite Protective Action Recommendations," Revision 17, effective September 28, 2016. This issue has been entered into the licensee's corrective action program as Condition Report 16-9135.

  The implementation of a protective action scheme that recommends protective actions for members of the public who are not at radiological risk is a performance deficiency within the licensee's ability to foresee and correct. The finding is more than minor because it adversely affects the Emergency Planning cornerstone objective and is associated with the procedure quality and emergency response organization performance cornerstone objectives. The finding was evaluated using Inspection Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," dated September 22, 2015, and was determined to be of very low safety significance (Green), because it was a failure to comply with NRC regulations and was not a lost or degraded risk-significant planning standard function. This finding has a cross-cutting aspect in the area of human performance associated with avoiding complacency, because the licensee did not challenge the basis for existing program elements in reviewing their program against the revised NUREG-0654, Supplement 3 [H.12]. (Section 1EP5)

Licensee-Identified Violations

A violation of very low safety significance that was identified by the licensee has been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This violation and associated corrective action tracking number is listed in Section 4OA7 of this report.

PLANT STATUS

Units 1 and 2 began the inspection period at 100 percent power and remained there for the rest of the inspection period.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R04 Equipment Alignment (71111.04)

.1 Partial Walk-Down

a. Inspection Scope

The inspectors performed partial system walk-downs of the following risk-significant systems:

- July 18, 2016, Unit 1, train B emergency diesel generator starting air system while train C emergency diesel generator was out of service for maintenance
- August 30, 2016, Unit 2, train B component cooling water system while train C component cooling water was out of service for maintenance

The inspectors reviewed the licensee's procedures and system design information to determine the correct lineup for the systems. They visually verified that critical portions of the trains were correctly aligned for the existing plant configuration.

These activities constituted two partial system walk-down samples, as defined in Inspection Procedure 71111.04.

b. Findings

No findings were identified.

.2 Complete Walk-Down

a. Inspection Scope

On September 6, 2016, the inspectors performed a complete system walk-down inspection of the Unit 2, train B essential cooling water system. The inspectors reviewed the licensee's procedures and system design information to determine the correct essential cooling water lineup for the existing plant configuration. The inspectors also reviewed outstanding work orders, open condition reports, in-process design changes, temporary modifications, and other open items tracked by the licensee's operations and engineering departments. The inspectors then visually verified that the system was correctly aligned for the existing plant configuration.

These activities constituted one complete system walk-down sample, as defined in Inspection Procedure 71111.04.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

Quarterly Inspection

a. Inspection Scope

The inspectors evaluated the licensee's fire protection program for operational status and material condition. The inspectors focused their inspection on four plant areas important to safety:

- July 18, 2016, Unit 2, essential cooling water intake building, train C Fire Area 55, Fire Zone Z602
- August 29, 2016, Unit 2, diesel generator building, train A Fire Area 38, Fire Zone Z502
- August 30, 2016, Unit 1, electrical auxiliary building, train A battery room, Fire Area 02, Fire Zone Z002
- September 27, 2016, Unit 1, fuel handling building, train B safety injection pump room, Fire Area 35, Fire Zone Z306

For each area, the inspectors evaluated the fire plan against defined hazards and defense-in-depth features in the licensee's fire protection program. The inspectors evaluated control of transient combustibles and ignition sources, fire detection and suppression systems, manual firefighting equipment and capability, passive fire protection features, and compensatory measures for degraded conditions.

These activities constituted four quarterly inspection samples, as defined in Inspection Procedure 71111.05.

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

On September 27, 2016, the inspectors completed an inspection of the station's ability to mitigate flooding due to internal causes. After reviewing the licensee's flooding analysis, the inspectors chose one plant area containing risk-significant structures, systems, and components (SSCs) that were susceptible to flooding:

- Unit 1, electrical auxiliary building, room 006, train A safety-related battery room

- Unit 1, electrical auxiliary building, room 008, train D safety-related battery room

The inspectors reviewed plant design features and licensee procedures for coping with internal flooding. The inspectors walked down the selected areas to inspect the design features, including the material condition of seals, drains, and flood barriers. The inspectors evaluated whether operator actions credited for flood mitigation could be successfully accomplished.

This activity constituted completion of one internal flood protection measures sample, as defined in Inspection Procedure 71111.06.

b. Findings

No findings were identified.

1R07 Heat Sink Performance (71111.07)

a. Inspection Scope

On September 23, 2016, the inspectors completed an inspection of the readiness and availability of risk-significant heat exchangers. The inspectors observed the licensee's inspection of the Unit 1, 12A essential chilled water heat exchanger and the material condition of the heat exchanger internals. Additionally, the inspectors walked down the 12A essential chilled water heat exchanger to observe its performance and material condition, verified that the 12A essential chilled water heat exchanger was correctly categorized under the Maintenance Rule, and was receiving the required maintenance.

These activities constituted completion of one heat sink performance annual review sample, as defined in Inspection Procedure 71111.07.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program and Licensed Operator Performance (71111.11)

.1 Review of Licensed Operator Requalification

a. Inspection Scope

On September 14, 2016, the inspectors observed a portion of an annual requalification test for licensed operators. The inspectors assessed the performance of the operators and the evaluators' critique of their performance. The inspectors also assessed the modeling and performance of the simulator during the annual simulator exam for licensed operators.

These activities constituted completion of one quarterly licensed operator requalification program sample, as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

.2 Review of Licensed Operator Performance

a. Inspection Scope

The inspectors observed the performance of on-shift licensed operators in the Unit 1 main control room on September 29, 2016. At the time of the observations, the plant was in a period of heightened activity and risk for maintenance activities. The inspectors observed the operators' performance of the following activities:

- Post-maintenance test of fire pump 11
- Solid-state protection system train C slave relay testing

In addition, the inspectors assessed the operators' adherence to plant procedures, including conduct of operations procedure and other operations department policies.

These activities constituted completion of one quarterly licensed operator performance sample, as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed three instances of degraded performance or condition of safety-related SSCs:

- September 28, 2016, Unit 1, train A control room envelope heating, ventilation, and cooling fan 11A, high motor vibrations following corrective maintenance to replace the stator

- September 29, 2016, Units 1 and 2, qualified display processing system following several circuit card failures

- September 29, 2016, Unit 1, Westinghouse 7300 processing system following several circuit card failures

The inspectors reviewed the extent of condition of possible common cause SSC failures and evaluated the adequacy of the licensee's corrective actions. The inspectors reviewed the licensee's work practices to evaluate whether these may have played a role in the degradation of the SSCs. The inspectors assessed the licensee's characterization of the degradation in accordance with 10 CFR 50.65 (the Maintenance Rule), and verified that the licensee was appropriately tracking degraded performance and conditions in accordance with the Maintenance Rule.

These activities constituted completion of three maintenance effectiveness samples, as defined in Inspection Procedure 71111.12.

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope

The inspectors reviewed three risk assessments performed by the licensee prior to changes in plant configuration and the risk management actions taken by the licensee in response to elevated risk:

- August 4, 2016, Unit 2, planned maintenance on train B 125 vdc battery bank E2B11, and its associated 10 KVA inverter EIV-1203 that required entry into the Configuration Risk Management Program

- August 8, 2016, Unit 1, planned maintenance on train C electrical auxiliary building heating, ventilation, and air conditioning and steam generator power operated relief valve

- Week of August 22, 2016, Unit 2, planned maintenance on train A 125 vdc battery bank E2A11, and its associated 10 KVA inverter EIV-1201 that required entry into the Configuration Risk Management Program

The inspectors verified that these risk assessments were performed timely and in accordance with the requirements of 10 CFR 50.65 (the Maintenance Rule) and plant procedures. The inspectors reviewed the accuracy and completeness of the licensee's risk assessments and verified that the licensee implemented appropriate risk management actions based on the result of the assessments.

The inspectors also reviewed the licensee's actions for implementing the Configuration Risk Management Program for determining and implementing the risk-informed allowed outage time for the batteries E2A11 and E2B11, and 10 KVA inverters EIV-1201, and 1203 planned maintenance that took place on the dates noted above.

The inspectors also observed portions of two emergent work activities that had the potential to affect the functional capability of mitigating systems, and to impact barrier integrity:

- August 31, 2016, Unit 2, train B emergent emergency safeguards features actuation load sequencer troubleshooting, test and status module replacement

- September 8 through September 10, 2016, Unit 1, emergent spent fuel cooling pump 1A breaker failed to close on pump swap

The inspectors verified that the licensee appropriately developed and followed a work plan for these activities. The inspectors verified that the licensee took precautions to minimize the impact of the work activities on unaffected SSCs.

These activities constituted completion of five maintenance risk assessments and emergent work control inspection samples, as defined in Inspection Procedure 71111.13.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15)

a. Inspection Scope

The inspectors reviewed eight operability determinations that the licensee performed for degraded or nonconforming SSCs:

- July 19, 2016, operability determination of Unit 2 qualified display processing system auxiliary processing cabinet B1 due to a degraded power supply
- July 27, 2016, operability determination of Unit 2, train A essential cooling water pump broken bolt on seismic support in the intake bay
- August 26, 2016, operable but degraded determination of the Unit 1, train B steam generator level loop L-0529 due to a suspected tin-whisker
- September 13, 2016, operability determination of the Unit 1, train D auxiliary feedwater pump for a steam leak of 10 drops per minute at a flow orifice connection
- September 26, 2016, operable but degraded determination of the Unit 2, train B qualified display processing system, auxiliary processing cabinet B1 due to a degraded self health circuit board
- September 27, 2016, operability determination of emergency diesel generator 11 following particulates identified in bearing lube oil
- September 28, 2016, operability determination of emergency diesel generator 13 following discovery of a jacket water circulating pump leak
- September 29, 2016, operability determination of Unit 1, train B steam generator power operated relief valve due to repeat hydraulic fluid leakage from the actuator

The inspectors reviewed the timeliness and technical adequacy of the licensee's evaluations. Where the licensee determined the degraded SSC to be operable, the inspectors verified that the licensee's compensatory measures were appropriate to provide reasonable assurance of operability. The inspectors verified that the licensee had considered the effect of other degraded conditions on the operability of the degraded SSC.

These activities constituted completion of eight operability review samples, as defined in Inspection Procedure 71111.15.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

a. Inspection Scope

On September 29, 2016, the inspectors reviewed a temporary plant modification in Unit 2 that effected a temporary repair of the poly-acrylic acid injection piping and valves into main feedwater piping.

The inspectors verified that the licensee had installed this temporary modification in accordance with technically adequate design documents. The inspectors verified that this modification did not adversely impact the operability or availability of affected SSCs. The inspectors reviewed design documentation and plant procedures affected by the modification to verify the licensee maintained configuration control.

These activities constituted completion of one sample of temporary modifications, as defined in Inspection Procedure 71111.18.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed six post-maintenance testing activities that affected risk-significant SSCs:

- July 7, 2016, Unit 2, train A emergency safeguards features load sequencer following replacement of the load sequencer/auto test module
- August 29, 2016, Unit 1, train B steam generator power operated relief valve following maintenance to correct hydraulic fluid leaks from the actuator
- August 31, 2016, Unit 2, train B emergency safeguards features load sequencer following troubleshooting and replacement of the auto-test, input/output, and test status control modules
- September 8, 2016, Unit 2, train C component cooling water check valve CC-0183 following replacement due to a failed leak rate test
- September 12, 2016, Unit 1, spent fuel pool cooling pump 1A breaker following extensive testing and clean and inspection activities due to the failure to close during routine train swaps

- September 19, 2016, Unit 1, train A emergency diesel generator following electronic governor replacement

The inspectors reviewed licensing- and design-basis documents for the SSCs and the maintenance and post-maintenance test procedures. The inspectors observed the performance of the post-maintenance tests to verify that the licensee performed the tests in accordance with approved procedures, satisfied the established acceptance criteria, and restored the operability of the affected SSCs.

These activities constituted completion of six post-maintenance testing inspection samples, as defined in Inspection Procedure 71111.19.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed seven risk-significant surveillance tests and reviewed test results to verify that these tests adequately demonstrated that the SSCs were capable of performing their safety functions:

In-service tests:

- July 21, 2016, Unit 2, train D turbine-driven auxiliary feedwater pump in-service test
- August 11, 2016, Unit 2, train D turbine-driven auxiliary feedwater pump in-service test
- September 1, 2016, Unit 2, train B low head safety injection in-service test
- September 1, 2016, Unit 1, train B high head safety injection pump in-service test

Other surveillance tests:

- August 10, 2016, Unit 1, auxiliary feedwater storage tank level channel calibration
- September 1, 2016, Unit 1, channel 3, 4.16 kV Class 1E undervoltage relay channel trip actuating device operational test
- September 21, 2016, Unit 1, train A motor-driven auxiliary feedwater feed motor-operated regulating valve AF-7524 dynamic testing

The inspectors verified that these tests met technical specification requirements, that the licensee performed the tests in accordance with their procedures, and that the results of the test satisfied appropriate acceptance criteria. The inspectors verified that the licensee restored the operability of the affected SSCs following testing.

These activities constituted completion of seven surveillance testing inspection samples, as defined in Inspection Procedure 71111.22.

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP1 Exercise Evaluation (71114.01)

a. Inspection Scope

The inspectors observed the July 13, 2016, biennial emergency preparedness exercise to verify the exercise acceptably tested the major elements of the emergency plan and provided opportunities for the emergency response organization to demonstrate key skills and functions. The exercise demonstrated the licensee's capability to implement its emergency plan by simulating:

- A reactor coolant system leak that escalates to a loss of coolant accident
- A shear in a reactor coolant pump shaft, creating fragments that damage fuel
- Failure of a vital electrical bus
- A failure of isolation valves in a containment purge line, creating an unfiltered and unmonitored radiological release to the environment

During the exercise, the inspectors observed activities in the control room simulator and the following dedicated emergency response facilities:

- Technical Support Center
- Operations Support Center
- Emergency Operations Facility
- Joint Information Center

The inspectors focused their evaluation of the licensee's performance on the risk-significant activities of event classification, offsite notification, recognition of offsite dose consequences, and development of protective action recommendations.

The inspectors also assessed recognition of, and response to, abnormal and emergency plant conditions, the transfer of decision-making authority and emergency function responsibilities between facilities, onsite and offsite communications, protection of emergency workers, emergency repair evaluation and capability, and the overall implementation of the emergency plan to protect public health and safety and the environment. The inspectors reviewed the current revision of the facility emergency plan, emergency plan implementing procedures associated with operation of the licensee's emergency response facilities, procedures for the performance of associated emergency functions, and other documents as listed in the attachment to this report.

The inspectors attended the post-exercise critiques in each emergency response facility to evaluate the initial licensee self-assessment of exercise performance. The inspectors also attended a subsequent formal presentation of critique items to plant management.

The inspectors reviewed the scenarios of previous biennial exercises and licensee drills conducted between September 2014 and June 2016 to determine whether the July 13, 2016, exercise was independent and avoided participant preconditioning in accordance with the requirements of 10 CFR Part 50, Appendix E, IV.F(2)(g). The inspectors also compared observed exercise performance with corrective action program entries and after-action reports for drills and exercises conducted between September 2014 and June 2016 to determine whether identified weaknesses had been corrected in accordance with the requirements of 10 CFR 50.47(b)(14) and 10 CFR Part 50, Appendix E, IV.F.

The inspectors discussed the integrated exercise with staff at the Federal Emergency Management Agency (FEMA), Region VI, to determine whether the exercise scenario supported the FEMA exercise evaluation objectives and the results continued to support that participants could adequately protect the health and safety of the public.

These activities constituted one exercise evaluation sample, as defined in Inspection Procedure 71114.01.

b. Findings

No findings were identified.

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspectors performed an on-site review of the following emergency plan implementing procedures:

- 0ERP01-ZV-IN01, “Emergency Classification,” Revision 10
- 0ERP01-ZV-IN02, “Notifications to Offsite Agencies,” Revision 33
- 0ERP01-ZV-IN07, “Offsite Protective Action Recommendations,” Revision 16

These revisions implemented new administrative instructions related to the implementation of NRC approved emergency classification scheme changes described below and other editorial changes and form updates.

Additionally, the inspectors reviewed emergency plan change:

- Emergency Plan Change ICN 20-18

This revision made changes to Emergency Plan, Section D, “Emergency Classification System,” and Emergency Plan, Attachment 2, “Implementing Procedures.” Section D incorporated references to NRC-approved emergency action level scheme change to Nuclear Energy Institute 99-01, “Development of Emergency Action Levels for Non-Passive Reactors,” November 2012, and updated Table D-1, “Initiating Conditions for Emergency Classification,” with the new initiating conditions. Attachment 2 was updated to include the NRC-approved “STPEGS Emergency Action Level Technical

Bases – NEI 99-01 Rev. 6 Implementation," as an implementing procedure. Documents reviewed in addition to the above are listed in the attachment to this report.

These revisions were compared to previous revisions, to the criteria of NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1, and to the standards in 10 CFR 50.47(b) to determine if the revision adequately implemented the requirements of 10 CFR 50.54(q)(3) and 50.54(q)(4). The inspectors verified that the revisions did not reduce the effectiveness of the emergency plan. This review was not documented in a safety evaluation report and did not constitute approval of licensee-generated changes; therefore, the revisions are subject to future inspection.

These activities constituted completion of four emergency action level and emergency plan change samples, as defined in Inspection Procedure 71114.04.

b. Findings

No findings were identified.

1EP5 Maintenance of Emergency Preparedness (71114.05)

a. Inspection Scope

The inspectors observed the licensee's recommendations of protective actions for the public to offsite authorities during the July 13, 2016, biennial emergency preparedness exercise. The inspectors subsequently reviewed Procedure 0ERP01-ZV-IN07, "Offsite Protective Action Recommendations," Revision 15, using NUREG-0654, Supplement 3, "Guidance for Protective Action Strategies," dated November 2011.

These activities constituted completion of one maintenance of the emergency preparedness program sample, as defined in Inspection Procedure 71114.05.

b. Findings

Introduction. The inspectors identified a Green non-cited violation of 10 CFR 50.47(b)(10) for the failure between July 16, 2015, and September 8, 2016, to develop a range of protective actions for the plume exposure emergency planning zone (EPZ) for the public, considering evacuation and sheltering.

Description. The inspectors reviewed Procedure 0ERP01-ZV-IN07, "Offsite Protective Action Recommendations," Revision 15, using NUREG-0654, Supplement 3, "Guidance for Protective Action Strategies," dated November 2011. The revision was implemented on July 26, 2015, and states, in part,

> *§2.21. SHELTER IN PLACE: Is intended to mean that instructions are given to remain indoors, turn off ventilation that pulls outside air into the structure, close windows, monitor your EAS radio and prepare to evacuate.*
>
> *§3.2. Shelter in place may be the appropriate action for releases of radioactive material if there is assurance that the release is short term and the area near the plant cannot be evacuated before the plume arrives.*

§5.3. For a short duration release (less than 30 minutes) the shelter in place zones and affected downwind sectors are determined using Addendum 4.

§5.13. Consider shelter in place instead of evacuation when environmental conditions could impact travel such as flooded or icy roads or if an evacuation cannot be completed prior to significant release and transport of radioactive material to the affected zones or a short duration puff release (< 30 minutes).

§5.5.1 IF a radiological release is ongoing: (1) Perform dose assessment {STAMPEDED}, or (2) Manually using procedure 0ERP01-ZV-TP01, Offsite Dose Calculations with Addendum 1, Radiological Release Protective Action Recommendations {Table 1.1}.

Table 1.1 Radiological Release, II. Projected Doses: (c) Projected Doses ≥ PAG 5-10 miles, Evacuate Downwind Zones 10 miles, Shelter in Place adjacent Downwind Zones 10 miles

Table 1.1 Radiological Release, II. Projected Doses: (d) Projected Doses ≥ PAG at greater than 10 miles and dose projection is supported by field monitoring team results, Evacuation Downwind Zones 10 miles, Shelter in Place Adjacent Downwind zones 10 miles, Evacuate affected downwind sectors in 2 mile increments until PAG is not exceeded

Table 1.1 Radiological Release, III. Site Boundary Dose Rates: (c) > 1000 mR/h, Evacuate Downwind Zones 10 miles, Shelter in Place Adjacent Downwind Zones 10 miles

Addendum 3, Evacuate Zones and Affected Downwind Sectors (table), Evacuate Downwind Zones 10 miles, Shelter in Place Adjacent Downwind Zones 10 miles

The inspectors determined that Revision 15 to Procedure 0ERP01-ZV-IN07 was implemented by the licensee to consider the use of evacuation time estimates and other guidance from NUREG-0654, Supplement 3, "Guidance for Protective Action Strategies," dated November 2011, in accordance with the requirements of 10 CFR Part 50, Appendix E, Part IV.3. Revision 15 requires the licensee to recommend minimum protective actions of evacuate within a 2-mile radius of the plant, shelter-in-place the downwind zones between 2 miles and 5 miles, and monitor-and-prepare all other areas. The minimum protective action is expanded commensurate with the distance to which protective action guides are exceeded or projected to be exceeded. When downwind areas between 5 miles and 10 miles are recommended for evacuation, Addendum 1, Table 1.1, and the flowchart of 0ERP01-ZV-IN07, Addendum 2, also requires that shelter-in-place is recommended for geographical areas adjacent to the downwind zones.

The inspectors reviewed Procedure 0ERP01-ZV-IN07, Revision 15, against the guidance of the November 2011 revision of NUREG-0654, Supplement 3, and concluded that Supplement 3 did not recommend that licensees provide shelter-in-place recommendations for areas of the EPZ not affected by a radiological release. In addition, inspectors concluded that the licensee's use of shelter-in-place as a protective measure for adjacent not affected areas, as directed by Table 1.1 and Addendum 2, was not consistent with shelter-in-place as described in 0ERP01-ZV-IN07, steps 2.21, 3.2, 5.3, and 5.13. Therefore, the inspectors concluded that 0ERP01-ZV-IN07, Revision 15, did not provide adequate measures to protect the health and safety of the public, because it could cause protective measures to be recommended for members of the

public not affected by a radiological release. In particular, the use of shelter-in-place is a concern under conditions of extreme temperatures when the direction to turn off heating and air conditioning systems could create a safety concern for the public. The additional risk may be justified when radioactive material is present, but is not justified under other conditions.

The inspectors reviewed Procedure 0ERP01-ZV-IN07, Table 1.1, and determined that there were wind directions which caused the licensee to recommend the shelter-in-place protective measure for members of the public located as much as 180 degrees away from the plume centerline because of the location, size, and orientation of the adjacent geographical subzones.

Analysis. The implementation of a protective action scheme that recommends protective actions for members of the public who are not at radiological risk is a performance deficiency within the licensee's ability to foresee and correct. The finding is more than minor because it adversely affects the Emergency Planning cornerstone objective and is associated with the procedure quality (plan changes) and emergency response organization performance (program elements meet 50.47[b] planning standards) cornerstone objectives. The licensee's ability to implement adequate measures to protect the health and safety of the public is degraded when the licensee recommends unnecessary protective measures. The finding was associated with a violation of NRC requirements. The finding was evaluated using Inspection Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," dated September 22, 2014, and was determined to be of very low safety significance (Green), because it was a failure to comply with NRC regulations and was not a lost or degraded risk-significant planning standard function. The performance deficiency was not a degraded risk significant planning standard function because unnecessary protective measures would be recommended for areas between 5 miles and 10 miles downwind. This finding has a cross-cutting aspect in the area of human performance associated with avoiding complacency, because the licensee did not challenge the basis for existing program elements in reviewing their program against the revised NUREG-0654, Supplement 3 [H.12].

Enforcement. Title 10 CFR 50.47(b)(10) states, in part, that a range of protective actions has been developed for the plume exposure pathway emergency planning zone for the public. In developing this range of actions, consideration has been given to evacuation and sheltering. Contrary to the above, between July 16, 2015, and September 8, 2016, the licensee failed to develop a range of protective actions for the public in the plume exposure pathway EPZ that considered evacuation and sheltering. Specifically, the licensee implemented a scheme of protective actions that would result in a shelter-in-place protective measure being recommended for members of the public who are not at radiological risk. The licensee restored compliance by implementing procedure 0ERP01-ZV-IN07, "Offsite Protective Action Recommendations," Revision 17, effective September 28, 2016. This violation was entered into the licensee's corrective action program as Condition Report 16-9135. This violation is being treated as a non-cited violation (NCV), consistent with Section 2.3.2.a of the Enforcement Policy. (NCV 05000498/2016003-01; 05000499/2016003-01, "Implementation of a Protective Action Recommendation Strategy That Can Recommend Unnecessary Protective Actions for the Public")

1EP8 Exercise Evaluation – Scenario Review (71114.08)

a. Inspection Scope

The licensee submitted the preliminary exercise scenario for the July 13, 2016, biennial exercise to the NRC on May 9, 2016, in accordance with the requirements of 10 CFR Part 50, Appendix E, IV.F(2)(b). The inspectors performed an in-office review of the proposed scenario to determine whether it would acceptably test the major elements of the licensee's emergency plan, and provide opportunities for the emergency response organization to demonstrate key skills and functions. The inspectors discussed the preliminary scenario with staff at the FEMA, Region VI, to determine whether the preliminary scenario supported the FEMA exercise evaluation objectives.

These activities constituted completion of one exercise scenario evaluation sample, as defined in Inspection Procedure 71114.08.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Security

4OA1 Performance Indicator Verification (71151)

.1 Mitigating Systems Performance Index: Emergency AC Power Systems (MS06)

a. Inspection Scope

The inspectors reviewed the licensee's mitigating system performance index data for the period of April 2015 through June 2016 to verify the accuracy and completeness of the reported data. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data.

These activities constituted verification of the mitigating system performance index for emergency ac power systems for Units 1 and 2, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index: High Pressure Injection Systems (MS07)

a. Inspection Scope

The inspectors reviewed the licensee's mitigating system performance index data for the period of April 2015 through June 2016 to verify the accuracy and completeness of the

reported data. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data.

These activities constituted verification of the mitigating system performance index for high pressure injection systems for Units 1 and 2, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.3 Mitigating Systems Performance Index: Heat Removal Systems (MS08)

a. Inspection Scope

The inspectors reviewed the licensee's mitigating system performance index data for the period of April 2015 through June 2016 to verify the accuracy and completeness of the reported data. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data.

These activities constituted verification of the mitigating system performance index for heat removal systems for Units 1 and 2, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.4 Drill/Exercise Performance (EP01)

a. Inspection Scope

The inspectors reviewed the licensee's evaluated exercises and selected drill and training evolutions that occurred between October 2015 and June 2016 to verify the accuracy of the licensee's data for classification, notification, and protective action recommendation (PAR) opportunities. The inspectors reviewed a sample of the licensee's completed classifications, notifications, and PARs to verify their timeliness and accuracy. The inspectors used Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data. The specific documents reviewed are described in the attachment to this report.

These activities constituted verification of the drill/exercise performance, performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.5 Emergency Response Organization Drill Participation (EP02)

a. Inspection Scope

The inspectors reviewed the licensee's records for participation in drill and training evolutions between October 2015 and June 2016 to verify the accuracy of the licensee's data for drill participation opportunities. The inspectors verified that all members of the licensee's emergency response organization in the identified key positions had been counted in the reported performance indicator data. The inspectors reviewed the licensee's basis for reporting the percentage of emergency response organization members who participated in a drill. The inspectors reviewed drill attendance records and verified a sample of those reported as participating. The inspectors used Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data. The specific documents reviewed are described in the attachment to this report.

These activities constituted verification of the emergency response organization drill participation performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.6 Alert and Notification System Reliability (EP03)

a. Inspection Scope

The inspectors reviewed the licensee's records of Alert and Notification System tests conducted between October 2015 and June 2016 to verify the accuracy of the licensee's data for siren system testing opportunities. The inspectors reviewed procedural guidance on assessing alert and notification system opportunities and the results of periodic alert and notification system operability tests. The inspectors used Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data. The specific documents reviewed are described in the attachment to this report.

These activities constituted verification of the alert and notification system reliability performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152)

.1 Routine Review

a. Inspection Scope

Throughout the inspection period, the inspectors performed daily reviews of items entered into the licensee's corrective action program and periodically attended the licensee's condition report screening meetings. The inspectors verified that licensee

personnel were identifying problems at an appropriate threshold and entering these problems into the corrective action program for resolution. The inspectors verified that the licensee developed and implemented corrective actions commensurate with the significance of the problems identified. The inspectors also reviewed the licensee's problem identification and resolution activities during the performance of the other inspection activities documented in this report.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On June 6, 2016, the inspectors presented the inspection results of the in-office review of the preliminary scenario for the July 13, 2016, biennial exercise, submitted date May 9, 2016, with Mr. J. Enoch, Manager, Emergency Preparedness, and other members of the licensee staff. The licensee acknowledged the issues presented.

On September 8, 2016, the inspectors presented the results of the onsite inspection of the licensee's emergency preparedness program to Mr. A. Capristo, Executive Vice President and Chief Administrative Officer, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

On October 13, 2016, the inspectors presented the inspection results to Mr. J. Connolly, Site Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

4OA7 Licensee-Identified Violations

The following licensee-identified violation of NRC requirements was determined to be of very low safety significance and meets the NRC Enforcement Policy criteria for being dispositioned as a Non-Cited Violation.

- Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, & Drawings," states, in part, that activities affecting quality shall be prescribed by procedures of a type appropriate to the circumstance. Contrary to the above, from February 27 through June 20, 2014, and from February 27 through April 22, 2015, the procedure for temporary modifications for the technical support center (TSC) diesel generator, an activity affecting quality, was not appropriate to the circumstance. Specifically, Procedure 0POP06-PE-00W0, "Load Center 1W(2W) Bus Outage," Revision 14, step 10.11.2 failed to ensure that temporary modification T2-14-13955-85, that supplied power to the TSC diesel generator support systems, was from a diesel backed power source, or was not permitted to be implemented during outage activities. As a result, the TSC diesel generator was not available to supply alternating current power to the containment hatch hoists in order to close that hatch in the event of a loss of offsite power during outage conditions. Thus, the licensee failed to maintain containment closure capability for initiating events during shutdown conditions. This

violation required a detailed risk evaluation using Manual Chapter 0609, “Significance Determination Process,” Appendix G, Section 4.5, “Findings Requiring Quantitative Risk Assessment,” and was determined to be of very low safety significance (Green). The analysts performed a detailed risk evaluation considering quantitative factors, including loss of offsite power initiating event frequency; emergency power supply system failure rate; applicable plant operating states; potential makeup sources; and recovery of alternating current power sources. Additionally, the Significance and Enforcement Review Panel considered the impact of qualitative risk factors, including the licensee’s procedures for closing the containment hatch in advance of a major storm; the potential for additional human errors; and potential additional core cooling strategies. This issue was entered into the licensee’s corrective action program as Condition Report 15-10558.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

R. Aguilera, Manager, Health Physics
J. Atkins, Manager, Systems Engineering
M. Berg, Manager, Design Engineering
C. Bowman, Manager, Nuclear Oversight
W. Brost, Engineer III
A. Capristo, Executive Vice President and Chief Administrative Officer
J. Connolly, Site Vice President
M. Crain, Manager, Emergency Response
R. Dunn Jr., Manager, Nuclear Fuel and Analysis
J. Enoch, Manager, Emergency Preparedness
T. Frawley, Manager, Plant Protection/Emergency Response
C. Gann, Manager, Employee Concerns Program
R. Gibbs, Manager, Operations, Production Support
R. Gonzales, Senior Licensing Engineer
N. Hall, Engineer
J. Hartley, Manager, Mechanical Maintenance
G. Hildebrandt, Manager, Operations
K. Hilscher, Manager, Training
G. Janak, Manager, Operations Training
D. Koehl, President and CEO
J. Lovejoy, Manager, I&C Maintenance
R. McNeil, Manager, Maintenance Engineering
J. Milliff, Manager, Security
M. Murray, Manager, Regulatory Affairs
M. Page, General Manager, Engineering
C. Pence, Manager, Chemistry
L. Peter, General Manager, Projects
J. Pierce, Manager, Unit 1 Operations
G. Powell, Chief Nuclear Officer
D. Rencurrel, Senior Vice President, Operations
M. Ruvalcaba, Manager, Strategic Projects
R. Savage, Engineer, Licensing Consult Specialist
R. Scarborough, Manager, Quality Assurance
M. Schaefer, Plant General Manager
R. Stastny, Manager, Maintenance
L. Sterling, Supervisor, Licensing
J. Von Suskil, Owner Representative – NRG South Texas LP
D. Zink, Supervising Engineering Specialist

Other Contacts

N. Williams, Chairman, Radiological Assistance Committee, FEMA Region VI

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000498/2016003-01 05000499/2016003-01	NCV	Implementation of a Protective Action Recommendation Strategy That Can Recommend Unnecessary Protective Actions for the Public (1EP5)

LIST OF DOCUMENTS REVIEWED

Section 1R04: Equipment Alignment

Procedures

Number	Title	Revision
0POP02-CC-0001	Component Cooling Water	48
0POP02-EW-0001	Essential Cooling Water Operations	69

Condition Reports (CRs)

15-3762	16-2156	14-19159	14-19350	14-25262
14-26824	15-3762	15-6338	15-16787	15-25704
16-636	16-2156	14-14923	14-16425	14-14894

Section 1R05: Fire Protection

Procedures

Number	Title	Revision
0PGP03-ZF-0019	Control of Transient and Fire Loads and Use of Combustible and Flammable Liquids and Gases	15

Condition Reports (CRs)

16-11730	16-11731	16-11732	16-11734

Fire Preplans

Number	Title	Revision
1ECW56-FP-0603	Essential Cooling Water Intake Structure Pump Room Train C	4
0DGB38-FP-0502	Fire Preplan for Diesel Generator Building, Train A	3
0EAB02-FP-0002	Fire Preplan Electrical Auxiliary Building Channel II Battery Room	3

Fire Preplans

Number	Title	Revision
0FHB35-FP-0306	Fire Preplan Fuel Handling Building Train B/SI/CSS Cubicle	3

Section 1R06: Flood Protection Measures

Procedures

Number	Title	Revision
PMMM186003776	Battery Room Sump Pump Lube Bearings	5

Condition Reports (CRs)

03-13312

Drawings

Number	Title	Revision
9M069B0149	Plumbing Mechanical Electrical Auxiliary Buildings	0
9M131A01030	Architectural Mechanical and Electrical Auxiliary Floor Plan	17

Calculation

Number	Title	Revision
NC9701	Flooding Analysis Electrical Auxiliary Building	5

Section 1R07: Heat Sink Performance

Procedures

Number	Title	Revision
0PEP07-EW-0001	Performance Test For Essential Cooling Water Heat Exchangers	8
0PGP03-ZE-0080	Essential Cooling Water System Reliability Program	1

Work Authorization Number (WAN)

511433 442858

Section 1R11: Licensed Operator Requalification Program and Licensed Operator Performance

Procedures

Number	Title	Revision
0POP01-ZA-0049	Condition Report Operations Evaluation Program	7
0POP04-RC-0004	Steam Generator Tube Leakage	32
0POP04-MS-0001	Excessive Steam Demand	13
0POP04-RP-0001	Loss of Automatic Pressurizer Pressure Control	15
0POP04-RP-0003	Failure of RCS Loop Flow Transmitter	4
0POP04-TM-0005	Fast Load Reduction	31
0POP05-EO-EO00	Reactor Trip or SI	23
0POP05-EO-EO10	Loss of Reactor or Secondary Coolant	22
0POP05-EO-EO11	Loss of Emergency Coolant Recirculation	19
0POP05-EO-EO30	Steam Generator Tube Rupture	26

Condition Reports (CRs)

16-2340 00-17684

Scenarios

Number	Title	Revision
LOR 164 Exam 1	2016 Annual Performance Test	0
LOR 164 Exam 12	2016 Annual Performance Test	0

Miscellaneous

Title	Revision
Conduct of Operations: Shift Operating Practices	70
Conduct of Operations: Communications	11
Conduct of Operations	71

Section 1R12: Maintenance Effectiveness

Procedures

Number	Title	Revision
SEG-0009	Maintenance Rule Basis Document Guideline	4
0PGP04-ZE-0313	Maintenance Rule Program	7

Condition Reports (CRs)

15-13422	15-5177	16-7273	16-17314	16-1800
16-8773	16-7322	16-7510	16-1225	99-2748
99-2916				

Miscellaneous

Title	Revision
Analysis/Assessment Sequence Number: PSA-99-003	0

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures

Number	Title	Revision
0PGP02-ZA-0003	Comprehensive Risk Management Program	13
0PGP03-ZA-0091	Configuration Risk Management Program	13
0PGP03-ZO-0039	Operations Configuration Risk Management	29
0PGP03-ZG-RMTS	Risk-Managed Technical Specifications Program	2
0PGP04-ZA-0604	Probabilistic Risk Assessment Program	7
0POP01-ZO-0006	Risk Management Actions	23
0POP11-DJ-0002	Online Class 1E 125V DC Battery and Inverter Removal from Service and Restoration	12

Condition Reports (CRs)

16-10452	16-10971

STP Risk Sequences

2772	2786	2757	2785	2756
2773				

Work Activity Risk (WAR)

2660

Work Authorization Number (WAN)

547234	418260	547917

Section 1R15: Operability Determinations and Functionality Assessments

Procedures

Number	Title	Revision
0PGP03-ZO-9900	Operability Determinations and Functionality Assessments Program	7
0PGP04-ZA-0002	Condition Report Engineering Evaluation	23
0POP01-ZA-0049	Condition Report Operations Evaluation Program	7
0POP01-ZO-0011	Operability, Functionality, and Reportability Guidance	10

Condition Reports (CRs)

16-8841	16-10311	16-8841	16-11358	16-11124
16-8841	16-10351	16-9853	16-9104	16-8266
16-11721				

Drawings

Number	Title	Revision
5S141F00024, Sheet 1 & 2	Auxiliary Feedwater	5
3P20-0-C-5024	Concrete: Essential Cooling Water Intake Structure	15

Design Change Package (DCP)

16-9104-1

Work Authorization Number (WAN)

539902

Section 1R18: Plant Modifications

Procedures

Number	Title	Revision
0PGP03-ZO-0003	Temporary Modifications	28

Condition Reports (CRs)

16-0049

Temporary Modifications

Title	Revision
Temporary Repair of Unit 2 S/G Loops 2A, 2B and 2C PAA Injection Line Piping and Valves	0

Section 1R19: Post-Maintenance Testing

Procedures

Number	Title	Revision
0PGP03-ZM-0021	Control of Configuration Changes	21
0PMP05-NA-0008	Westinghouse 480 Volt Breaker Test	39
0PMP05-NA-0015	Calibration of Westinghouse Amptectors	22
0PMP05-ZE-0202	Insulation Resistance Testing – Low Voltage Motors	23
0POP02-FC-0001	Spent Fuel Cooling and Cleanup System	81
0PSP02-FW-0517	Steam Generator Narrow Range Level ACOT (Loop 2 Set 2 (L-0529)	24
0PMP07-SF-0001B	Train B ESF Diesel Sequencer Remote Timing Test	1
0PSP03-MS-0001	Main Steam System Valve Operability Test	47
0PMP04-SG-0007	Steam Generator PORV Hydraulic Actuator Maintenance	21
0POP02-FC-0001	Spent Fuel Pool Cooling and Cleanup System	81
0POP02-DG-0001	Emergency Diesel Generator 11(21)	67
0PSP03-DG-0001	Standby Diesel 11 (21) Operability Test	53
0PSP11-CC-0011	LLRT: M-37 CCW to RHR HX and Pump 2C	16

Procedures

Number	Title	Revision
WCG-0008	Preventing Recurring Equipment Problems	

Condition Reports (CRs)

16-10971	16-10311	16-10852	16-8374	16-11117

Work Authorization Number (WAN)

418260	547917	547085	547234	547134
546569	546293	418260	547917	543378
493324	316093			

Section 1R22: Surveillance Testing

Procedures

Number	Title	Revision
0PEP07-AF-0004	Dynamic Stroke Testing of Train B Auxiliary Feed Motor Operated Feed Regulating Valve	3
0PMP05-ZE-0309	MOV Dynamic Testing	16
0PMP05-ZE-0312	Limitorque MOV Actuator Lubrication	27
0PMP05-ZE-0423	MOV Diagnostic testing (VIPER) – Rising Stem Valves	12
0PSB03-AF-0007	Auxiliary Feedwater Pump 14(24) Inservice Test	47
0PSP06-PK-0003	4.16KV Class 1E Undervoltage Relay Channel Calibration/TADOT- Channel 3	21
0PSP06-PK-0007	4.16kV Class 1E Degraded Voltage Relay Channel Calibration/TADOT-Channel 3	30
0PGP03-ZA-0019	Performing and Verifying Station Activities	37
0PSP03-SI-0005	High Head Safety Injection Pump 1B(2B) Inservice Test	22
0PSP03-SI-0002	Low Head Safety Injection Pump 1B(2B) Inservice Test	18
0PSP05-CT-7716	AFW Storage Tank Level Channel Calibration	13

Condition Reports (CRs)

16-10749	16-11451

Work Authorization Number (WAN)

518393

Section 1EP1: Exercise Evaluation

Procedures

Number	Title	Date
0PGP05-ZV-0001	Emergency Response Exercises and Drills, Revision 16	May 28, 2015
0PGP05-ZV-0006	Emergency Notification and Response System, Revision 3	December 20, 2001
ZV0019	Scenario Design and Development, Revision 2	April 3, 2015
ZV0027	Drill and Exercise Performance Objectives and Demonstration Criteria, Revision 2	November 18, 2015
0ERP01-ZV-EF01	EOF Director, Revision 17	November 18, 2015
0ERP01-ZV-EF03	Radiological Director, Revision 13	November 18, 2015
0ERP01-ZV-TS01	TSC Manager, Revision 17	June 16, 2014
0ERP01-ZV-IN01	Emergency Classification, Revision 10	January 28, 2016
0ERP01-ZV-IN02	Notification to Offsite Agencies, Revision 33	January 28, 2016
0ERP01-ZV-IN03	Emergency Response Organization Notification, Revision 18	October 23, 2013
0ERP01-ZV-IN06	Radiological Exposure Guidelines, Revision 7	January 30, 2014
0ERP01-ZV-IN07	Offsite Protective Action Recommendations, Revision 16	January 28, 2016
0ERP01-ZV-TP01	Offsite Dose Calculation, Revision 26	January 28, 2016
0ERP01-ZV-OS01	OSC Coordinator, Revision 9	September 30, 2014
0ERP01-ZV-OS06	Emergency Teams, Revision 10	October 11, 2007

Condition Reports (CRs)

2016-8694	2016-8745	2016-8861	2016-8864	2016-8915
2016-9078	2016-9135			

Miscellaneous

Title
South Texas Project Emergency Plan

Section 1EP4: Emergency Action Level and Emergency Plan Changes

Procedures

Number	Title	Date
ZV0023	10CFR50.54(q) Screening Reference Document, Revision 0	July 31, 2012
0PGP05-ZV-0010	Emergency Plan Changes, Revision 16	February 1, 2016

Miscellaneous

Number	Title	Date
NOC–AE-16003338	Changes to South Texas Project Electric Generating Station Emergency Plan	February 18, 2016

Section 1EP5: Maintenance of Emergency Preparedness

No additional documents were reviewed.

Section 1EP8: Exercise Evaluation – Scenario Review

No additional documents were reviewed.

Section 4OA1: Performance Indicator Verification

Procedures

Number	Title	Revision
ZV0013	Alert Radio Maintenance and Distribution	1
0PGP05-ZV-0007	Prompt Notification System	10
0PGP05-ZV-0013	Performance Indicator Tracking Guide	7
0PGP05-ZV-0016	Prompt Notification System Implementing Procedure	10
SEG-0007	Mitigating System Performance Indicator Collection, Processing and Maintenance of Data	5

Miscellaneous

Title	Revision/Date
Mitigating System Performance Index [MSPI] Bases Document	21
MSPI Data Report (Raw Data) April 2015-June 2016	April 2015 - June 2016
MSPI Derivation Report URI and UAI for Unit 1 & 2 Emergency AC Power	June 2016
MSPI Derivation Report URI and UAI for Unit 1 & 2 High Pressure Injection System	June 2016

Miscellaneous

Title	Revision/Date
MSPI Derivation Report URI and UAI for Unit 1 & 2 Heat Removal System	June 2016

Section 4OA2: Problem Identification and Resolution

Procedures

Number	Title	Revision
0POP04-AM-0001	Loss of QDPS	12
0POP04-FW-0001	Loss of Steam Generator Level Control	27
0POP09-AN-05M2	Annunciator Lampbox 5M02 Response Instructions	36

Condition Reports (CRs)

16-8773 16-8842

Section 4OA3: Follow-up of Events and Notices of Enforcement Discretion

Procedures

Number	Title	Revision
0PGP03-ZO-0003	Temporary Modifications	26, 27
0POP06-PE-00W0	Load Center 1W(2W) Bus Outage	12

Condition Reports (CRs)

15-10558 14-0662 09-15204 14-4629 12-6660
12-11078

Temporary Modifications

T1-13-2100-67 T2-14-13955-85

Design Change Package (DCP)

09-2528-2

Drawings

Number	Title	Revision
00009E0PEAN#1	480V Load Center 1W (EAB)	22

Drawings

Number	Title	Revision
00009E0PFAE#1	480V Motor Control Center 1L1 (EAB)	18
00009E0PFBC#1	480V Motor Control Center 1G8 (EAB)	27
00009E0PFBC#2	480V Motor Control Center 2G8 (EAB)	22
00009E0VNAT#2	120/208V Distribution Panel DPJ134, DP234, DPG834 (EAB)	26, 27