

May 19, 2003

Mr. James J. Sheppard
President and Chief Executive Officer
STP Nuclear Operating Company
South Texas Project Electric
Generating Station
P. O. Box 289
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT, UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS
ON TECHNICAL SPECIFICATION 3/4.3.2 - REDUCE ACTUATION RELAY
TEST FREQUENCY (TAC NOS. MB6167 AND MB6168)

Dear Mr. Sheppard:

The U. S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 152 to Facility Operating License No. NPF-76 and Amendment No. 140 to Facility Operating License No. NPF-80 for the South Texas Project, Units 1 and 2, respectively. The amendments consist of changes to the Technical Specifications in response to your application dated August 19, 2002.

The amendments extend the interval between slave relay tests in the engineered safety features actuation system instrumentation from 3 months to 18 months. Specifically, the changes relate to the safety injection, containment spray, containment isolation, steam line isolation, turbine trip and feedwater isolation, auxiliary feedwater, and automatic switch over to containment sump instrumentation.

A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

Mohan Thadani, Senior Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosures: 1. Amendment No. 152 to NPF-76
2. Amendment No. 140 to NPF-80
3. Safety Evaluation

cc w/encls: See next page

May 19, 2003

Mr. James J. Sheppard
President and Chief Executive Officer
STP Nuclear Operating Company
South Texas Project Electric
Generating Station
P. O. Box 289
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT, UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS
ON TECHNICAL SPECIFICATION 3/4.3.2 - REDUCE ACTUATION RELAY
TEST FREQUENCY (TAC NOS. MB6167 AND MB6168)

Dear Mr. Sheppard:

The U. S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 152 to Facility Operating License No. NPF-76 and Amendment No. 140 to Facility Operating License No. NPF-80 for the South Texas Project, Units 1 and 2, respectively. The amendments consist of changes to the Technical Specifications in response to your application dated August 19, 2002.

The amendments extend the interval between slave relay tests in the engineered safety features actuation system instrumentation from 3 months to 18 months. Specifically, the changes relate to the safety injection, containment spray, containment isolation, steam line isolation, turbine trip and feedwater isolation, auxiliary feedwater, and automatic switch over to containment sump instrumentation.

A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

Mohan Thadani, Senior Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosures: 1. Amendment No. 152 to NPF-76
2. Amendment No. 140 to NPF-80
3. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION:

PUBLIC

PDIV-1 r/f

G. Hill (4)

RidsNrrDlpmLpdiv (HBerkow)

SMazumdar

RidsNrrDlpmLpdiv-1 (RGramm)

RidsNrrPMMThadani

RidsNrrPMMHoncharik

RidsNrrLAMMcAllister

RidsNrrDripRorp (RDennig)

RidsAcrcAcnwMailCenter

RidsOgcRp

RidsRgn4MailCenter (BJohnson)

ACCESSION NO: ML031400592

*No substantive change since SE input

**No legal objection

OFFICE	PDIV-1/PM	PDIV-1/PM	PDIV-1/LA	EEIB:DE/SC	OGC**	PDIV-1/SC
NAME	MThadani:sab	MHoncharik	MMcAllister	EMarinos*	RHoeffling	RGramm
DATE	5/2/03	4/30/03	4/30/03	3/10/03	5/12/03	5/19/03

OFFICIAL RECORD COPY

South Texas, Units 1 & 2

cc:

Mr. Cornelius F. O'Keefe
Senior Resident Inspector
U.S. Nuclear Regulatory Commission
P. O. Box 910
Bay City, TX 77414

A. Ramirez/C. M. Canady
City of Austin
Electric Utility Department
721 Barton Springs Road
Austin, TX 78704

Mr. M. T. Hardt
Mr. W. C. Gunst
City Public Service Board
P. O. Box 1771
San Antonio, TX 78296

Mr. C. A. Johnson/R. P. Powers
AEP - Central Power and Light Company
P. O. Box 289
Mail Code: N5022
Wadsworth, TX 77483

INPO
Records Center
700 Galleria Parkway
Atlanta, GA 30339-3064

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011

D. G. Tees/R. L. Balcom
Texas Genco, LP
P. O. Box 1700
Houston, TX 77251

Judge, Matagorda County
Matagorda County Courthouse
1700 Seventh Street
Bay City, TX 77414

A. H. Gutterman, Esq.
Morgan, Lewis & Bockius
1111 Pennsylvania Avenue, NW
Washington, DC 20004

Mr. T. J. Jordan, Vice President
Engineering & Technical Services
STP Nuclear Operating Company
P. O. Box 289
Wadsworth, TX 77483

S. M. Head, Manager, Licensing
Nuclear Quality & Licensing Department
STP Nuclear Operating Company
P. O. Box 289, Mail Code: N5014
Wadsworth, TX 77483

Environmental and Natural Resources
Policy Director
P. O. Box 12428
Austin, TX 78711-3189

Jon C. Wood
Matthews & Branscomb
112 East Pecan, Suite 1100
San Antonio, TX 78205

Arthur C. Tate, Director
Division of Compliance & Inspection
Bureau of Radiation Control
Texas Department of Health
1100 West 49th Street
Austin, TX 78756

Brian Almon
Public Utility Commission
William B. Travis Building
P. O. Box 13326
1701 North Congress Avenue
Austin, TX 78701-3326

South Texas, Units 1 and 2

-2-

cc:

Susan M. Jablonski
Office of Permitting, Remediation
and Registration
Texas Commission on
Environmental Quality
MC-122
P.O. Box 13087
Austin, TX 78711-3087

G. R. Bynog, Program Manager/
Chief Inspector
Texas Department of Licensing
and Regulation
Boiler Division
P. O. Box 12157, Capitol Station
Austin, TX 78711

Mr. Ted Enos
4200 South Hulen
Suite 630
Ft. Worth, Texas 76109

STP NUCLEAR OPERATING COMPANY

DOCKET NO. 50-498

SOUTH TEXAS PROJECT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 152
License No. NPF-76

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by STP Nuclear Operating Company* acting on behalf of itself and for Texas Genco, LP, the City Public Service Board of San Antonio (CPS), Central Power and Light Company (CPL), and the City of Austin, Texas (COA) (the licensees), dated August 19, 2002, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

*STP Nuclear Operating Company is authorized to act for Texas Genco, LP, the City Public Service Board of San Antonio, Central Power and Light Company, and the City of Austin, Texas, and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-76 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 152, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The STP Nuclear Operating Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Robert A. Gramm, Chief, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: May 19, 2003

STP NUCLEAR OPERATING COMPANY

DOCKET NO. 50-499

SOUTH TEXAS PROJECT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 140
License No. NPF-80

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by STP Nuclear Operating Company* acting on behalf of itself and for Texas Genco, LP, the City Public Service Board of San Antonio (CPS), Central Power and Light Company (CPL), and the City of Austin, Texas (COA) (the licensees), dated August 19, 2002, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

*STP Nuclear Operating Company is authorized to act for Texas Genco, LP, the City Public Service Board of San Antonio, Central Power and Light Company, and the City of Austin, Texas, and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-80 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 140, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The STP Nuclear Operating Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Robert A. Gramm, Chief, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: May 19, 2003

ATTACHMENT TO LICENSE AMENDMENT NOS. 152 AND 140

FACILITY OPERATING LICENSE NOS. NPF-76 AND NPF-80

DOCKET NOS. 50-498 AND 50-499

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

3/4 3-42

3/4 3-43

3/4 3-44

3/4 3-45

3/4 3-46

3/4 3-47*

3/4 3-48*

3/4 3-49

INSERT

3/4 3-42

3/4 3-43

3/4 3-44

3/4 3-45

3/4 3-46

3/4 3-47*

3/4 3-48*

3/4 3-49

*Overleaf pages provided to maintain document completeness. No changes on these pages.

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NOS. 152 AND 140 TO
FACILITY OPERATING LICENSE NOS. NPF-76 AND NPF-80
STP NUCLEAR OPERATING COMPANY, ET AL.
SOUTH TEXAS PROJECT, UNITS 1 AND 2
DOCKET NOS. 50-498 AND 50-499

1.0 INTRODUCTION

By application dated August 19, 2002, STP Nuclear Operating Company (the licensee), requested changes to the Technical Specifications (TSs) for South Texas Project (STP), Units 1 and 2, respectively.

The proposed changes would revise TS 3/4.3.2, "Engineered Safety Features Actuation System Instrumentation," to reduce the surveillance test frequency of slave relays from every 3 months to every 18 months. Specifically, the proposed changes relate to the following engineered safety features actuation system (ESFAS) instrumentation channels involving Potter & Brumfield (P&B) motor-driven rotary (MDR) Series 4103-1, 4121-1, and 4156 slave relays:

- Safety Injection, Channel Functional Unit 1.c
- Containment Spray, Channel Functional Unit 2.c
- Containment Isolation, Channel Functional Units 3.a.3, 3.b.2, 3.c.2, and 3.d.1
- Steam Line Isolation, Channel Functional Unit 4.b
- Turbine Trip and Feedwater Isolation, Channel Functional Unit 5.a
- Auxiliary Feedwater, Channel Functional Unit 6.c
- Automatic Switchover to Containment Sump, Channel Functional Unit 7.a

In Table 4.3-2 the amendment would delete Notes 4 and 5 and add Note 8.

Currently note 4 reads:

"Except relays K807, K814, K829 (Train B only), K831, K845, K852 and K854 (Trains B and C only) which shall be tested at least once per 18 months during refueling and during each COLD SHUTDOWN exceeding 24 hours unless they have been tested within the previous 92 days."

Currently note 5 reads:

"Except relay K815 which shall be tested at indicated interval only when reactor coolant pressure is above 700 psig."

Proposed note 8 would read:

“The test interval is R for Potter & Brumfield MDR Series slave relays.”

The licensee provided a risk assessment of the proposed TS changes, but does not propose the changes as risk-informed changes. This safety evaluation addresses the acceptability of the proposed TS amendment.

2.0 REGULATORY EVALUATION

The NRC staff finds that the licensee in Section 4.0 of Attachment 1 to its submittal, stated that extension of the slave relay test intervals from 3 months to 18 months by replacing Notes 4 and 5 with Note 8 is based on information contained in Westinghouse Topical Report WCAP-13878, Revision 2-P-A (proprietary), “Reliability Assessment of Potter & Brumfield MDR Series Relays,” dated August 2000. WCAP-13878 supports extending the surveillance testing of P&B MDR relay models 4103-1 and 4121-1 from quarterly to refueling frequency. By letters dated May 31, 1996, and July 12, 2002, the NRC staff approved this report.

The risk impact and potential risk implications of the licensee’s TS amendment request was based on Regulatory Issue Summary (RIS) 2001-02, “Guidance on Risk-Informed Decisionmaking in License Amendment Reviews,” dated January 18, 2001. RIS 2001-02 provides guidance on whether a “special circumstance” exists that creates an undue risk to public health and safety even though regulatory requirements appear to be satisfied.

The NRC staff also utilized the risk-informed decisionmaking process in Regulatory Guide (RG) 1.174, “An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis,” and RG 1.177, “An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications,” in its review. The guidance in RG 1.177 states that the risk associated with the proposed change may be acceptable if (1) the current regulations are met, (2) operation is consistent with the defense-in-depth philosophy, (3) sufficient safety margin is maintained, (4) only a small increase in core damage frequency results, and (5) the basis for the risk estimate is monitored using performance measurement strategies. Because the license amendment requests were not risk-informed, the probabilistic risk assessment (PRA) was limited to review of the licensee’s evaluation of core damage frequency (CDF) and large early release frequency (LERF) impact.

The NRC staff based its acceptance on the above requirements.

3.0 TECHNICAL EVALUATION

The NRC staff has reviewed the licensee's technical and regulatory analyses in support of its proposed license amendments which are described in Sections 4.0 and 5.0 of Attachment 1 to the licensee's submittal. The detailed evaluation below will support the conclusion that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Since the licensee is taking credit for WCAP-13878, they have provided the following responses to the requirements stipulated by the NRC in the safety evaluations approving WCAP-13878:

3.1 Plant Specific Applicability of WCAP-13878, Revision 1:

WCAP-13878, Revision 2-P-A, supports extending the surveillance testing of P&B MDR slave relays, Models 4103-1 and 4121-1, from quarterly to refueling frequency in solid state protection system (SSPS) applications. The proposed TS changes apply to Model 4103-1, 4121-1, and 4156 relays. The Model 4156 relays are identical to Model 4121-1 relays. Model 4156 relays have gold plated contacts and different contact labels and are used for low load applications. WCAP-13878, Revision 2-P-A, states that a typical SSPS slave relay is normally de-energized, operating only in response to trip demands or during periodic testing, is protected from the damaging effects of debris and contamination, and is protected from the extremes of high ambient temperature and high relative humidity by the heating, ventilation, and air conditioning system. Westinghouse specifies 40 years shelf life for MDR relays below 120°F. The licensee stated that WCAP-13878, Revision 2-P-A, is applicable for the STP, Units 1 and 2, because MDR relays at the STP plants operate in normally de-energized condition and are located in air-conditioned rooms whose environmental condition are milder than those specified by Westinghouse shelf life requirements. Furthermore, the subject relays will be replaced in accordance with WCAP-13878 recommendations.

The NRC staff finds the licensee's justification acceptable.

3.2 Relay Procurement Program:

The licensee stated that the MDR slave relays are used in normally de-energized condition and meet the WCAP-13878, Revision 2-P-A, application requirements and that it would procure qualified relays from Westinghouse in the future. The licensee's procurement programs specify that only new MDR relays are acceptable and that no refurbished slave relays will be used. The licensee also stated, "the MDR relay manufacturer, Tyco Electronics Corp., is surveyed periodically under the Nuclear Procurement Issues Committee Joint Commercial Grade Item Survey Program which ensures that standards of control are met in design, procurement, materials, manufacturing process, inspection, and testing."

The NRC staff finds the licensee's justification acceptable.

3.3 Pre-1992 P&B MDR Relays:

The licensee stated that no slave relays are used in normally energized applications and that scheduled plant applications result in a duty cycle of less than 5 percent.

3.4 Contact Loading Analysis:

The licensee stated that it addressed contact loading of MDR relays in 1987. Evaluation of the MDR relays for contact loading has been completed and corrective actions to resolve the discrepancies have been taken. Review of inductive loading of contact ratings is included in its current design practice.

The NRC staff finds the licensee's justification acceptable.

The licensee also stated that it will implement a program to monitor the performance of the P&B MDR slave relays. If two or more P&B MDR relays in ESFAS fail in a 12-month period, the program will reevaluate the appropriateness of the extended surveillance interval and corrective actions will be taken.

Furthermore, the licensee stated that similar amendments have been approved for Diablo Canyon Nuclear Power Plant, Units 1 and 2, and Vogtle Electric Generating Plant, Units 1 and 2. The Diablo Canyon amendments, dated August 19, 1996, extended the test interval for all P&B slave relays in ESFAS to 18 months. The Vogtle amendments dated August 22, 2000, extended the interval for ESFAS slave relay testing from 92 days to 18 months for all circuits containing P&B MDR Series relays.

The licensee performed a sensitivity analysis by using plant-specific PRA and incorporating the proposed 18 month slave relay surveillance interval. The plant-specific PRA was modified to increase the engineered safety feature (ESF) slave relay latent failures by a factor of 6 to reflect the increase from a 3 month to an 18 month surveillance interval. Both the basic event and the common cause for the ESF slave relay models were modified. The PRA was then re-quantified using the revised slave relay surveillance interval. The licensee stated that the difference in CDF resulting from the increased slave relay surveillance interval was less than $1\text{E-}07$ events per year. The licensee also stated the difference in LERF was less than $1\text{E-}09$ events per year.

A factor of 6 increase in latent failures is a reasonable assumption based on previous instrument surveillance interval extensions (1-to-3 month and 24-month) which have not shown significant changes in failure rates or failure modes over an extended surveillance interval. The results of the licensee sensitivity study resulted in a very small change in CDF and LERF. The licensee noted that the result for the change in CDF was within the guidelines stated in RG 1.174 for changes in CDF and LERF. Additionally, the licensee addressed the NRC staff provisions identified in the topical report including performance monitoring, procurement, and the review of failure mechanisms dependent on age/temperature effects accelerated by relay operating mode and duty cycle.

The NRC staff finds that the licensee's proposed changes do not reveal an unforeseen hazard or substantially greater potential for a known hazard to occur based on the insignificant increase in CDF and LERF (i.e., the increase in risk is within the RG 1.174 acceptance guidelines). The NRC staff notes that the estimated risk impacts are very small and should not significantly influence the overall results of the licensee's deterministic analysis. The NRC staff did not identify "special circumstances" that, if reviewed on risk-informed basis, would invalidate the assumption of adequate protection, warrant attaching additional conditions, or result in denial of the proposed license amendment. Although the NRC staff used RG 1.174 and RG 1.177 as

guidance in its evaluation of the licensee's amendment request, the NRC staff's review was limited to the licensee's PRA analysis. The licensee amendment request did not follow the guidance of RG 1.174 or RG 1.177 but was based instead on a traditional engineering analysis.

On the basis of the above regulatory and technical evaluations of the licensee's justifications for TS changes, the NRC staff concludes that the licensee's proposed TS changes are acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Texas State official was notified of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (67 FR 61685, dated October 1, 2002). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 SUMMARY OF COMMITMENTS

The following list identifies actions committed to by the licensee.

1. The P&B type MDR relays will be replaced in accordance with WCAP-13878 recommendations.
2. To support implementation of the extended surveillance interval, the licensee will implement a program to monitor performance results of the MDR actuation relays. If two or more P&B MDR ESFAS subgroup relays fail in a 12-month period, the program will ensure the adequacy of the extended surveillance interval is re-evaluated and corrective action taken.

The NRC staff finds that reasonable controls for the implementation and for subsequent evaluation of proposed changes pertaining to the above regulatory commitments are best provided by the licensee's administrative processes, including its commitment management program. The above regulatory commitments do not warrant the creation of regulatory requirements.

7.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Subinoy Mazumdar

Date: May 19, 2003