September 26, 2000

Mr. William T. Cottle
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 RE: ALLOWED OUTAGE TIME FOR CONTROL ROOM ENVELOPE AND THE FUEL HANDLING BUILDING VENTILATION SYSTEMS (TAC NOS. MA3849 AND MA3850)

Dear Mr. Cottle:

The Commission has issued the enclosed Amendment No. 125 to Facility Operating License No. NPF-76 and Amendment No. 113 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 (TSs) in response to your application dated September 28, 1998, as supplemented on April 22, 1999, April 27, 2000, and on August 15, 2000.

The amendments revise the TSs to eliminate the need to enter TS 3.0.3 when multiple trains of either the control room makeup and cleanup filtration system or the fuel handling building exhaust air system are inoperable by providing an allowed outage time of up to 12 hours to restore at least one train to an operable status.

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

Sincerely,
/RA/
Tae Kim, Senior Project Manager, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosures:
1. Amendment No. 125 to NPF-76
2. Amendment No. 113 to NPF-80
3. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION:

PUBLIC	PDIV-1 r/f	G. Hill (4)	RidsOgcRp
RidsNrrDlpmLpdiv (S.Richards)		RidsNrrPMTJKim	RidsNrrPMJNakoski
RidsNrrLACJamerson		RidsNrrDripRtsb (W.Beckner)	
RidsAcrsAcnwMailCenter		RidsRgn4MailCenter (J. Tapia, L. Hurley)	
RidsNrrSpsb (R. Barrett)		S. Lee	H. Walker

ACCESSION NO: ML00

OFFICE	PDIV-1/PM	PDIV-D/LA	SPLB/BC	SPSB/BC	TSB/BC	OGC	PDIV-1/SC
NAME	TJKim TJK	CJamerson	JHannon*	RBarrett*	WBeckner*		RGramm
DATE	9/12/00	9/12/00	8/30/00	9/1/00	9/15/00	9/ /00	9/26/00

DOCUMENT NAME: G:\PDIV-1\SouthTexas\amdma3849.wpd *No substantive changes to SE

OFFICIAL RECORD COPY

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 26, 2000

Mr. William T. Cottle
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 RE: ALLOWED OUTAGE TIME FOR CONTROL ROOM ENVELOPE AND THE FUEL HANDLING BUILDING VENTILATION SYSTEMS (TAC NOS. MA3849 AND MA3850)

Dear Mr. Cottle:

The Commission has issued the enclosed Amendment No. 125 to Facility Operating License No. NPF-76 and Amendment No. 113 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 (TSs) in response to your application dated September 28, 1998, as supplemented on April 22, 1999, April 27, 2000, and on August 15, 2000.

The amendments revise the TSs to eliminate the need to enter TS 3.0.3 when multiple trains of either the control room makeup and cleanup filtration system or the fuel handling building exhaust air system are inoperable by providing an allowed outage time of up to 12 hours to restore at least one train to an operable status.

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

Sincerely,

Tae Kim

Tae Kim, Senior Project Manager, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosures:
1. Amendment No. 125 to NPF-76
2. Amendment No. 113 to NPF-80
3. Safety Evaluation

cc w/encls: See next page

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. G. E. Vaughn/C. A. Johnson
Central Power and Light Company
P. O. Box 289
Mail Code: N5012
Wadsworth, TX 74483

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
Houston Lighting & Power Co.
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
1800 M Street, N.W.
Washington, DC 20036-5869

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

S. M. Head, Supervisor, Licensing
Quality & Licensing Department
STP Nuclear Operating Company
P. O. Box 289
Wadsworth, TX 77483

Office of the Governor
ATTN: John Howard, Director
Environmental and Natural
Resources Policy
P. O. Box 12428
Austin, TX 78711

Jon C. Wood
Matthews & Branscomb
One Alamo Center
106 S. St. Mary's Street, Suite 700
San Antonio, TX 78205-3692

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

Jim Calloway
Public Utility Commission of Texas
Electric Industry Analysis
P. O. Box 13326
Austin, TX 78711-3326

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

STP NUCLEAR OPERATING COMPANY

DOCKET NO. 50-498

SOUTH TEXAS PROJECT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 125
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 Houston Lighting & Power Company (HL&P), 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 September 28, 1998, as supplemented April 22, 1999, April 27, 2000, and August 15, 2000, 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 Houston Lighting & Power Company (HL&P), 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:

   Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 125 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee 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 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

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

Attachment: Changes to the Technical Specifications

Date of Issuance: September 26, 2000

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

STP NUCLEAR OPERATING COMPANY

DOCKET NO. 50-499

SOUTH TEXAS PROJECT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 113
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 Houston Lighting & Power Company (HL&P), 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 September 28, 1998, as supplemented April 22, 1999, April 27, 2000, and August 15, 2000, 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 Houston Lighting & Power Company (HL&P), 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:

   Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 113 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee 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 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Mohan Thadani for

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

Attachment: Changes to the Technical Specifications

Date of Issuance: September 26, 2000

ATTACHMENT TO LICENSE AMENDMENT NOS. 125 AND 113

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	INSERT
3/4 3-28	3/4 3-28
3/4 7-15*	3/4 7-15*
3/4 7-16	3/4 7-16
3/4 7-19	3/4 7-19
3/4 7-20	3/4 7-20
3/4 9-13*	3/4 9-13*
3/4 9-14	3/4 9-14

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

B3/4 3-2	B3/4 3-2
B3/4 7-4	B3/4 7-4
B3/4 7-5	B3/4 7-5
B3/4 9-3	B3/4 9-3

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

TABLE 3.3-3 (Continued)

ACTION STATEMENTS (Continued)

ACTION 26- With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, declare the affected Auxiliary Feedwater Pump inoperable and take ACTION required by Specification 3.7.1.2.

ACTION 27- For an inoperable channel, declare its associated ventilation train inoperable and apply the actions of Specification 3.7.7.

ACTION 28- With the number of OPERABLE channels less than the Minimum Channels OPERABLE requirement, within 1 hour initiate and maintain operation of the Control Room Makeup and Cleanup Filtration System (at 100% capacity) in the recirculation and makeup filtration mode.

ACTION 29- For an inoperable channel, declare its associated ventilation train inoperable and apply the actions of Specification 3.7.8.

ACTION 30- With irradiated fuel in the spent fuel pool: With the number of OPERABLE channels less than the Minimum Channels OPERABLE requirement, fuel movement within the spent fuel pool or crane operation with loads over the spent fuel pool may proceed provided the FHB exhaust air filtration system is in operation and discharging through at least one train of HEPA filters and charcoal adsorbers.

3/4.7.6 (This specification number is not used.)

3/4.7.7 CONTROL ROOM MAKEUP AND CLEANUP FILTRATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7 Three independent Control Room Makeup and Cleanup Filtration Systems shall be OPERABLE.

APPLICABILITY: All MODES.

ACTION:

MODES 1, 2, 3, and 4:

a. With one Control Room Makeup and Cleanup Filtration System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With two Control Room Makeup and Cleanup Filtration Systems inoperable, restore at least two systems to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With three Control Room Makeup and Cleanup Filtration Systems inoperable, suspend all operations involving movement of spent fuel, and crane operation with loads over the spent fuel pool, and restore at least one system to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5 and 6:

a. With one Control Room Makeup and Cleanup Filtration System inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the remaining OPERABLE Control Room Makeup and Cleanup Filtration Systems in the recirculation and makeup air filtration mode, or suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of spent fuel, and crane operation with loads over the spent fuel pool.

b. With more than one Control Room Makeup and Cleanup Filtration System inoperable, or with the OPERABLE Control Room Makeup and Cleanup Filtration Systems required to be in the recirculation and makeup air filtration mode by ACTION a. not capable of being powered by an OPERABLE emergency power source, suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of spent fuel, and crane operations with loads over the spent fuel pool.

SURVEILLANCE REQUIREMENTS

4.7.7 Each Control Room Makeup and Cleanup Filtration System shall be demonstrated OPERABLE:

a. At least once per 12 hours by verifying that the control room air temperature is less than or equal to 78°F;

b. At least once per 92 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers of the makeup and cleanup air filter units and verifying that the system operates for at least 10 continuous hours with the makeup filter unit heaters operating;

3/4.7.8 FUEL HANDLING BUILDING (FHB) EXHAUST AIR SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.8 The FHB Exhaust Air System comprised of the following components shall be OPERABLE.

a. Two independent exhaust air filter trains, and

b. Three exhaust ventilation trains.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With one FHB exhaust air filter train inoperable, restore the inoperable filter train to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.

b. With two FHB exhaust air filter trains inoperable, restore at least one inoperable filter train to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.

c. With one FHB exhaust ventilation train inoperable, restore the inoperable exhaust ventilation train to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.

d. With more than one FHB exhaust ventilation train inoperable, restore at least two exhaust ventilation trains to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.8 The Fuel Handling Building Exhaust Air System shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 10 continuous hours with the heaters operating with two of the three exhaust booster fans and two of the three main exhaust fans operating to maintain adequate air flow rate;

b. At least once per 18 months and (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by:

1) Verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% for HEPA filter banks and 0.10% for charcoal adsorber banks and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 29,000 cfm ± 10%;

2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52,

SURVEILLANCE REQUIREMENTS (Continued)

Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 1.0% when tested at a temperature of 30°C and a relative humidity of 70%; and

3) Verifying a system flow rate of 29,000 cfm ± 10% during system operation with two of the three exhaust booster fans and two of the three main exhaust fans operating when tested in accordance with ANSI N510-1980. All combinations of two exhaust booster fans and two main exhaust fans shall be tested.

c. After every 720 hours of charcoal adsorber operation, by verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 1.0% when tested at a temperature of 30°C and a relative humidity of 70%;

d. At least once per 18 months by:

1) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at a flow rate of 29,000 cfm ± 10%,

2) Verifying that the system starts on High Radiation and Safety Injection test signals and directs flow through the HEPA filters and charcoal adsorbers,

3) Verifying that the system maintains the FHB at a negative pressure of greater than or equal to 1/8 inch Water Gauge relative to the outside atmosphere, and

4) Verifying that the heaters dissipate 38 ± 2.3 kW when tested in accordance with ANSI N510-1980.

e. After each complete or partial replacement of a HEPA filter bank, by verifying that the HEPA filter bank satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the system at a flow rate of 29,000 cfm ± 10%; and

f. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the charcoal adsorber bank satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.10% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 29,000 cfm ± 10%.

IN-CONTAINMENT STORAGE POOL

LIMITING CONDITION FOR OPERATION

3.9.11.2 At least 23 feet of water shall be maintained over the top of irradiated fuel assemblies seated in the storage racks.

APPLICABILITY: Whenever irradiated fuel assemblies are in the in-containment storage pool.

ACTION:

a. With the requirements of the above specification not satisfied, suspend all movement of fuel assemblies and crane operations with loads in the fuel storage areas and restore the water level to within its limit within 4 hours.

b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.11.2 The water level in the in-containment storage pool shall be determined to be at least its minimum required depth at least once per 7 days when irradiated fuel assemblies are in the in-containment storage pool.

3/4.9.12 FUEL HANDLING BUILDING EXHAUST AIR SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.12 The FHB Exhaust Air System[1] comprised of the following components shall be OPERABLE:

a. Two exhaust air filter trains,

b. Two exhaust ventilation trains

APPLICABILITY: Whenever irradiated fuel is in the spent fuel pool.

ACTION:

a. With less than the above FHB Exhaust Air System components OPERABLE but with at least one FHB exhaust air filter train, one FHB exhaust ventilation train, and associated dampers OPERABLE, fuel movement within the spent fuel pool or crane operation with loads over the spent fuel pool may proceed provided the OPERABLE FHB Exhaust Air System components are capable of being powered from an OPERABLE emergency power source and are in operation and discharging through at least one train of HEPA filters and charcoal adsorbers.

b. With no FHB exhaust air filter train OPERABLE, suspend all operations involving movement of fuel within the spent fuel pool or crane operation with loads over the spent fuel pool.

c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.12 The above required FHB Exhaust Air Systems shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 10 continuous hours with the heaters operating with the operable exhaust booster fans and the operable main exhaust fans operating to maintain adequate air flow rate;

1At least one FHB exhaust air filter train, one FHB exhaust booster fan, and one FHB main exhaust fan are capable of being powered from an OPERABLE onsite emergency power source.

REACTOR TRIP SYSTEM and ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION (Continued)

The measurement of response time at the specified frequencies provides assurance that the Reactor trip and the Engineered Safety Features actuation associated with each channel is completed within the time limit assumed in the safety analyses. No credit was taken in the analyses for those channels with response times indicated as not applicable. Response time may be demonstrated by any series of sequential, overlapping, or total channel test measurements provided that such tests demonstrate the total channel response time as defined. Sensor response time verification may be demonstrated by either: (1) in place, onsite, or offsite test measurements, or (2) utilizing replacement sensors with certified response times.

The Engineered Safety Features Actuation System senses selected plant parameters and determines whether or not predetermined limits are being exceeded. If they are, the signals are combined into logic matrices sensitive to combinations indicative of various accidents, events, and transients. Once the required logic combination is completed, the system sends actuation signals to those Engineered Safety Features components whose aggregate function best serves the requirements of the condition. As an example, the following actions may be initiated by the Engineered Safety Features Actuation System to mitigate the consequences of a steam line break or loss-of-coolant accident: (1) Safety Injection pumps start, (2) Reactor trip, (3) feedwater isolation, (4) startup of the standby diesel generators, (5) containment spray pumps start and automatic valves position, (6) containment isolation, (7) steam line isolation, (8) Turbine trip, (9) auxiliary feedwater pumps start and automatic valves position, (10) reactor containment fan coolers start, (11) essential cooling water pumps start and automatic valves position, (12) Control Room Ventilation Systems start, and (13) component cooling water pumps start and automatic valves position.

ACTION 27 for an inoperable channel of control room ventilation requires the associated train of control room ventilation to be declared inoperable and the appropriate action take in accordance with Specification 3.7.7. Each control room ventilation system (train) is actuated by its own instrumentation channel. Consequently an inoperable channel of ventilation actuation instrumentation renders that system/train of ventilation inoperable and Specification 3.7.7 prescribes the appropriate action.

With less than the minimum channels of Control Room Intake Air Radioactivity – High, ACTION 28 of Table 3.3-3 requires the Control Room Makeup and Cleanup Filtration System to be operated at 100% capacity in the recirculation and filtration mode. Any two of the three 50% Control Room Makeup and Cleanup Filtration System trains meet the 100% capacity requirement.

The limitations on minimum water level and maximum temperature are based on providing a 30-day cooling water supply to safety-related equipment without exceeding its design basis temperature and is consistent with the recommendations of Regulatory Guide 1.27, "Ultimate Heat Sink for Nuclear Plants," March 1974.

B 3/4.7.6 (Not used)

B 3/4.7.7 CONTROL ROOM MAKEUP AND CLEANUP FILTRATION SYSTEM

The Control Room Makeup and Filtration System is comprised of three 50-percent redundant systems (trains) that share a common intake plenum and exhaust plenum. Each system/train is comprised of a makeup fan, a makeup filtration unit, a cleanup filtration unit, a cleanup fan, a control room air handling unit, a supply fan, a return fan, and associated ductwork and dampers. Two of the three 50% design capacity trains are required to be operable during the following modes of operation: shutdown, hot standby, normal operation, postulated accident condition, and loss of offsite power. The toilet/kitchen exhaust, heating, and computer room HVAC Subsystem associated with the Control Room Makeup and Filtration System are nonsafety-related and not required for operability.

The OPERABILITY of the Control Room Makeup and Cleanup Filtration System ensures that: (1) the ambient air temperature does not exceed the allowable temperature for continuous-duty rating for the equipment and instrumentation cooled by this system, and (2) the control room will remain habitable for operations personnel during and following all credible accident conditions. Operation of the system with the heaters operating for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. The OPERABILITY of this system in conjunction with control room design provisions is based on limiting the radiation exposure to personnel occupying the control room to 5 rems or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criterion 19 or Appendix A, 10 CFR Part 50. ANSI N510-1980 will be used as a procedural guide for surveillance testing.

The time limits associated with the ACTIONS to restore an inoperable train to OPERABLE status are consistent with the redundancy and capability of the system and the low probability of a design basis accident while the affected train (s) is out of service. A limited allowed outage time of 12 hours is allowed for all three trains to be out of service simultaneously in recognition of the fact that there are common plenums and some maintenance or testing activities required opening or entry into these common plenums. This time is reasonable to diagnose, plan, and possibly repair problems with the boundary or the ventilation system. This is acceptable based on the low probability of a design basis event in that brief allowed outage time and because administrative controls impose compensatory actions that reduce the already small risk associated with being in the ACTION. The compensatory actions are consistent with the intent of GDC 19 to protect plant personnel from potential hazards such as radioactive contamination, smoke, and temperature, etc. Pre-planned measures should be available to address these concerns for intentional and unintentional entry into the condition. The compensatory actions include:

- Procedures will preclude intentionally removing multiple trains of Control Room Envelope HVAC from service if Containment Spray is not functional or intentionally making a train of Containment Spray unavailable when multiple trains of Control Room Envelope HVAC are out of service. For purposes of this compensatory action, Containment Spray is considered functional if at least one train can be manually or automatically initiated.
- The plant will not make planned simultaneous entries into TS 3.7.7 ACTION c. for MODES 1, 2, 3, and 4 and TS 3.7.8 ACTION b or d.

The compensatory action may include placing fans in pull-to-lock as necessary to preclude there being a motive force to transport contaminated air to a clean environment in the event of an accident. These compensatory actions also include administrative controls on opening plenums or other openings such that appropriate communication is established with the control room to assure timely closing of the system if necessary. Since the Control Room Envelope boundary integrity also affects operability of the overall system, entry and exit is administratively controlled. Administrative control of entry and exit through doors is performed by the person(s) entering or exiting the area. Extended opening of the boundary is coordinated with the control room with appropriate plans for closure and communication.

B 3/4.7.8 FUEL HANDLING BUILDING EXHAUST AIR SYSTEM

The FHB exhaust air system is comprised of two independent exhaust air filter trains and three exhaust ventilation trains. Each of the three exhaust ventilation trains has a main exhaust fan, an exhaust booster fan, and associated dampers. The main exhaust fans share a common plenum and the exhaust booster fans share a common plenum. An OPERABLE ventilation exhaust train consists of any OPERABLE main exhaust fan, any OPERABLE exhaust booster fan, and appropriate dampers.

The OPERABILITY of the Fuel Handling Building Exhaust Air System ensures that radioactive materials leaking from the ECCS equipment within the FHB following a LOCA are filtered prior to reaching the environment. Operation of the system with the heaters operating for the least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. The operation of this system and the resultant effect on offsite dosage calculations was assumed in the safety analyses. ANSI N510-1980 will be used as a procedural guide for surveillance testing

The time limits associated with the ACTIONS to restore an inoperable train to OPERABLE status are consistent with the redundancy and capability of the system and the low probability of a design basis accident while the affected train (s) is out of service. A limited allowed outage time of 12 hours is allowed for multiple trains to be out of service simultaneously in recognition of the fact that there are common plenums and some maintenance or testing activities required opening or entry into these common plenums. This time is reasonable to diagnose, plan, and possibly repair problems with the boundary or the ventilation system. This is acceptable based on the low probability of a design basis event in that brief allowed outage time and because administrative controls impose compensatory actions that reduce the already small risk associated with being in the ACTION. The compensatory actions are consistent with the intent of GDC 19, GDC 60 and Part 100 to protect plant personnel and the public from potential hazards such as radioactive contamination, smoke, and temperature, etc. Pre-planned measures should be available to address these concerns for intentional and unintentional entry into the condition. The compensatory action may include placing fans in pull-to-lock as necessary to preclude there being a motive force to transport contaminated air to a clean environment in the event of an accident. These compensatory actions include administrative controls on opening plenums or other openings such that appropriate communication is established with the control room to assure timely closing of the system if necessary. Since the Fuel Handling Building boundary integrity also affects operability of the overall system, entry and exit is administratively controlled. Administrative control of entry and exit through doors is performed by the person(s) entering or exiting the area. Extended opening of the boundary is coordinated with the control room with appropriate plans for closure and communication.

B 3/4.7.9 (Not Used)

B 3/4.9.8 RESIDUAL HEAT REMOVAL AND COOLANT CIRCULATION

The requirement that at least one residual heat removal (RHR) loop be in operation ensures that: (1) sufficient cooling capacity is available to remove decay heat and maintain the water in the reactor vessel below 140°F as required during the REFUELING MODE, and (2) sufficient coolant circulation is maintained through the core to minimize the effect of a boron dilution incident and prevent boron stratification.

The requirement to have two RHR loops OPERABLE when there is less than 23 feet of water above the reactor vessel flange ensures that a single failure of the operating RHR loop will not result in a complete loss of residual heat removal capability. With the reactor vessel head removed and at least 23 feet of water above the reactor pressure vessel flange, a large heat sink is available for core cooling. Thus, in the event of a failure of the operating RHR loop, adequate time is provided to initiate emergency procedures to cool the core.

B 3/4.9.9 CONTAINMENT VENTILATION ISOLATION SYSTEM

The OPERABILITY of this system ensures that the containment purge and exhaust penetrations will be automatically isolated upon detection of high radiation levels in the purge exhaust. The OPERABILITY of this system is required to restrict the release of radioactive material from the containment atmosphere to the environment.

B 3/4.9.10 and B 3/4.9.11 WATER LEVEL - REFUELING CAVITY AND STORAGE POOLS

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed iodine gap activity released from the rupture of an irradiated fuel assembly. The minimum water depth is consistent with the assumptions of the safety analysis.

B 3/4.9.12 FUEL HANDLING BUILDING EXHAUST AIR SYSTEM

The FHB exhaust air system is comprised of two independent exhaust air filter trains and three exhaust ventilation trains. Each of the three exhaust ventilation trains has a main exhaust fan, an exhaust booster fan, and associated dampers. The main exhaust fans share a common plenum and the exhaust booster fans share a common plenum. An OPERABLE ventilation exhaust train consists of any OPERABLE main exhaust fan, any OPERABLE exhaust booster fan and appropriate OPERABLE dampers.

The limitations on the Fuel Handling Building Exhaust Air System ensure that all radioactive material released from an irradiated fuel assembly will be filtered through the HEPA filters and charcoal adsorber prior to discharge to the atmosphere. Operation of the system with the heaters operating for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. The OPERABILITY of this system and the resulting iodine removal capacity are consistent with the assumptions of the safety analyses. ANSI N510-1980 will be used as a procedural guide for surveillance testing. This Specification has been modified by a note that states, at least one FHB exhaust air filter train, one FHB exhaust booster fan, and one FHB main exhaust fan are capable of being powered from an Onsite emergency power source. This note ensures that required FHB exhaust train components will have an emergency power source available, even if the limiting conditions for operation can be satisfied.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 125 AND 113 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 a letter dated September 28, 1998, as supplemented April 22, 1999, April 27, 2000, and August 15, 2000, South Texas Project Nuclear Operating Company (the licensee) proposed amendments to Facility Operating License No. NPF-76 and Facility Operating License No. NPF-80 for the South Texas Project (STP), Units 1 and 2, respectively. The proposed amendments would revise the Technical Specifications (TSs) to modify the requirements associated with the control room (CR) and fuel handling building (FHB) heating, ventilation, and air conditioning (HVAC) systems. Specifically, this change would eliminate the need to enter TS 3.0.3 when multiple trains of any one of these systems is inoperable by providing an allowed outage time (AOT) of up to 12 hours to restore at least one train to an operable status. These amendments also include administrative changes to TS pages 3/4 3-28, 3/4 7-19, and 3/4 7-20 that involve removing footnotes from these pages that are no longer applicable.

The staff's initial proposed no significant hazards considerations determination based on the September 28, 1998, submittal was published in *Federal Register* (63 FR 64122) on November 18, 1998. Subsequently, the staff issued a revised proposed no significant hazards considerations determination (65 FR 46016, dated July 26, 2000) since the licensee's April 27, 2000, submittal changed the scope of the original application and the staff's initial proposed no significant hazards considerations determination. The licensee's August 15, 2000, submittal provided clarifying information in response to the staff's request for additional information (RAI). This information was within the scope of the revised application and *Federal Register* notice and did not change the staff's revised proposed no significant hazards considerations determination issued on July 26, 2000.

2.0 BACKGROUND

On May 1, 1998, and on October 20, 1998, the licensee requested, and received, an enforcement discretion with respect to the actions required by TS 3.0.3, since repairs to failed Unit 1 FHB exhaust booster fans 11A and 11B required placing the remaining fan (11C) out of service, thereby temporarily rendering all three trains of the FHB exhaust system inoperable. In a letter dated October 20, 1998, the licensee requested that the enforcement discretion be applicable to both Units 1 and 2 should similar situations arise with these fans on either unit until the subject license amendment request that was submitted on September 28, 1998, is approved.

In conjunction with the requests for an enforcement discretion, the licensee proposed the following compensatory measures: (1) stopping the movement of any loads over the spent fuel pool or over the emergency core cooling system pumps or suction piping in the FHB, (2) stopping any movement of irradiated fuel assemblies, (3) stopping all activities which could potentially affect spent fuel pool level or cooling, and (4) developing a pre-job briefing and other administrative controls to restore the FHB exhaust system within 16 minutes of an increase in reactor containment building radioactivity that would be an indication of a reactor coolant system leak, an increase in FHB radiation levels, or a reactor trip.

During the course of review for the subject license amendment request, the staff held tele-conferences with the licensee to discuss the applicability of a previously approved generic TS change. The Technical Specification Task Force (TSTF) Owners Group generic change to the Improved Standard Technical Specifications (TSTF-287, Revision 5) was issued on February 22, 2000, that permits a 24-hour AOT for a breach of the CR envelope boundary with compensatory measures to assure compliance with the intent of 10 CFR Part 100 and 10 CFR Part 50, Appendix A, General Design Criterion (GDC) 19. The licensee stated that TSTF-287 was considered, but it was the licensee's belief that TSTF-287 would not have bounded the plant conditions that resulted in the enforcement discretions in 1998. The licensee therefore requested that the subject license amendments be reviewed on its own technical merits.

Nevertheless, the staff judged the licensee's request on the same basis as it has judged requests for adoption of TSTF-287; namely that the changes are acceptable based on an acceptably low probability of a challenge to the subject systems during the AOT and compensatory actions that provide reasonable assurance that regulatory limits will continue to be met.

3.0 EVALUATION

The amendments eliminate the need to enter TS 3.0.3 when multiple trains of either the FHB exhaust air system or the CR makeup and cleanup filtration system are inoperable, by providing an AOT of up to 12 hours to restore at least one train of the affected system to an operable status. The amendments affect the following TSs:

- 3/4.7.7, "Control Room Makeup and Cleanup Filtration System"
- 3/4.7.8, "Fuel Handling Building (FHB) Exhaust Air System," and
- 3/4.9.12, "Fuel Handling Building Exhaust Air System"
- 3/4.3.2, Table 3.3-3, "Engineered Safety Features Actuation System Instrumentation," Applicable Functional Units, No. 10, "Control Room Ventilation," and No. 11, "FHB HVAC," Actions 27, 28, and 29

The proposed amendments also include administrative changes to TS pages 3/4 3-28, 3/4 7-19, and 3/4 7-20 that involve removing footnotes from these pages that are no longer applicable.

This evaluation also contains the staff's review of the licensee's analysis which addressed the impact of the proposed changes on plant risk.

3.1 Changes to TS 3/4.7.7, "CONTROL ROOM MAKEUP AND CLEANUP FILTRATION SYSTEM"

The current TS 3/4.7.7 specifies the following limiting condition for operation and associated action statements:

3.7.7 Three independent Control Room Makeup and Cleanup Filtration Systems shall be OPERABLE.

APPLICABILITY: ALL MODES.

ACTION:

MODES 1, 2, 3 and 4:

a. With one Control Room Makeup and Cleanup Filtration System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With two Control Room Makeup and Cleanup Filtration Systems inoperable, restore at least two systems to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5 AND 6:

a. With one Control Room Makeup and Cleanup Filtration System inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the remaining OPERABLE Control Room Makeup and Cleanup Filtration Systems in the recirculation and makeup air filtration mode.

b. With two Control Room makeup and Cleanup Filtration Systems inoperable, or with the OPERABLE Control Room Makeup and Cleanup Filtration System, required to be in the recirculation and makeup air filtration mode by ACTION a., not capable of being powered by an OPERABLE emergency power source, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.

The revised TS 3/4.7.7 appends Action Item "c." under MODES 1, 2, 3, and 4, as follows:

c. With three Control Room Makeup and Cleanup Filtration Systems inoperable, suspend all operations involving movement of spent fuel, and crane operation with loads over the spent fuel pool, and restore at least one system to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

The revised TS 3/4.7.7 also revises Action Items "a." and "b." under MODES 5 and 6, as follows:

a. With one Control Room Makeup and Cleanup Filtration System inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the remaining OPERABLE Control Room Makeup and Cleanup Filtration Systems in the recirculation and makeup air filtration mode, or suspend all operations involving CORE ALTERATIONS, movement of spent fuel, and crane operation with loads over the spent fuel pool.

b. With more than one Control Room Makeup and Cleanup Filtration System inoperable, or with the OPERABLE Control Room Makeup and Cleanup Filtration Systems, required to be in the recirculation and makeup air filtration mode by ACTION a. not capable of being powered by an OPERABLE emergency power source, suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of spent fuel, and crane operations with loads over the spent fuel pool.

The Action Item "c." for Modes 1-4 provides an AOT of up to 12 hours to restore at least one train to an operable status when all three trains of the CR makeup and cleanup filtration system are inoperable, provided all operations involving movement of spent fuel and crane operation with loads over the spent fuel pool are suspended. With the current TS, TS 3.0.3 would apply when all three trains of the CR makeup and cleanup filtration system are inoperable, and TS 3.0.3 requires placing the unit in hot standby within the next 6 hours and in cold shutdown within the following 30 hours. The Action Items "a." and "b." for Modes 5-6 provide compensatory measures that are designed to preclude fuel handling accidents while all three trains of the CR makeup and cleanup filtration system are inoperable.

The staff's review focused on the question of whether or not allowing all three trains of the CR makeup and cleanup filtration system to be inoperable for up to 12 hours could exceed the applicable regulatory limits. In its letter dated August 15, 2000, the licensee provided the following compensatory actions to be taken to ensure that the applicable regulatory limits continue to be met:

1. The fuel handling accident can be precluded from consideration during the time three trains of CR envelope HVAC are made inoperable by administratively suspending all operations involving core alterations, movement of spent fuel, and crane operation with loads over the spent fuel pool. The required actions are incorporated into the TS for Modes 1- 6 where Specification 3.7.7 applies. A similar administrative control will be incorporated into STP procedures for the defueled condition.

2. The containment spray system can be used to reduce the potential for radioactive material release under accident conditions. For Modes 1- 4, procedures will preclude intentionally removing multiple trains of CR envelope HVAC from service if the containment spray system is not functional. The procedures will also preclude intentionally making a train of the containment spray system unavailable when multiple trains of CR envelope HVAC are out of service.

3. The effects of a fuel handling accident are precluded by suspending all operations involving movement of fuel within the spent fuel pool or crane operations with loads over the spent fuel pool with no FHB air filter trains operable as required by TS 3/4.9.12. Procedures will impose this action regardless of whether the TS action was a planned entry or an emergent condition.

4. The licensee will not intentionally enter the action statements for TS 3.7.7 and TS 3.7.8, simultaneously.

5. Procedures will require appropriate communications between the CR operators and person(s) opening the ventilation system or breaching the boundary integrity for extended periods of time, to assure that the opening can be closed promptly if necessary.

The licensee stated that additional compensatory actions may be implemented depending on the configuration of the inoperable system. Although not all potential inoperable configurations can be anticipated, they would normally be expected to fall in one or more of the following three categories:

- a breach of the room boundary;

- a breach of the ventilation system itself (e.g., opening of a common plenum); and

- degraded or inoperable component in more than one train (e.g., vendor identified common mode problem).

Compensatory actions specific to each of these categories would include (in addition to those listed above):

- For the breach of the room boundary that makes all trains of the system inoperable:

  a. Pre-planned process for closing the breach in the unlikely event of an accident or identification of an accident precursor (e.g., unidentified reactor coolant system (RCS) leakage).

  b. Direct communications with the CR operators as described above with on-station personnel pre-briefed regarding their responsibility for closing the breach.

- For the breach of the ventilation system boundary that makes all trains of the system inoperable:

  a. Pre-planned process for closing the breach in the unlikely event of an accident or identification of an accident precursor (e.g., unidentified RCS leakage).

  b. Direct communications with the CR operators as described above with on-station personnel pre-briefed regarding their responsibility for closing the breach.

  c. Placing fans in pull-to-lock or positioning dampers (if appropriate for the situation) to assure that there would be no transport of potentially contaminated air into a clean area. Once the breach is closed, the fans may be started if they are functional.

- For degraded or inoperable components in all trains:

Depending on the nature of the nonconformance, there may be some degree of functionality retained by the system. In addition, it is very unlikely that a common mode failure would actually cause all trains to fail simultaneously. Actions for inoperable components could include placing fans in pull-to-lock, manually positioning dampers, providing temporary power supplies, etc.

In addition to the compensatory measures described above, the licensee stated that self-contained breathing apparatus (SCBA) is readily available to the CR operators in the unlikely event of an accident while all trains of the CR envelope HVAC system are inoperable. If a design-basis event were to occur when all trains of the CR envelope HVAC system were inoperable, the licensee would perform facility habitability checks in the CR in accordance with the Emergency Plan. These habitability checks would identify the need for the operators to don SCBA. In addition, potassium iodide (KI) is available and may be administered at the direction of the Site Emergency Director.

The licensee concluded that there is reasonable assurance that the regulatory dose limits will continue to be met with the compensatory measures described above. In addition to the potential radiological impacts associated with the proposed changes, the licensee also addressed potential impacts on the CR equipment in its submittals. For the instrumentation and controls, including alarms and displays in CR, the licensee evaluations have determined that there will be no heatup effects for at least 24 hours, which is substantially greater than the 12-hour AOT requested in the proposed amendments. In addition, the licensee indicated that it routinely trains the plant operators on changes to the TSs as part of the established operator training program. When approved, the proposed changes will be included in the operator training program.

Based on the above, the staff has determined that the licensee has demonstrated, with reasonable assurance, that the regulatory limits specified in GDC 19 and 10 CFR Part 100 will continue to be met with the compensatory measurers as outlined above. A typographical error (text missing) found on TS page 3/4 7-16, Modes 5 and 6, Action a., was also corrected by the licensee. Therefore, the staff finds the proposed changes to TS 3/4.7.7, as described above, acceptable.

3.2 Changes to TS 3/4.7.8, "Fuel Handling Building (FHB) Exhaust Air System"

The current TS 3/4.7.8 specifies the following limiting condition for operation and associated action statements:

3.7.8 The FHB Exhaust Air System comprised of the following components shall be OPERABLE:

a. Two independent exhaust air filter trains,

b. Three independent exhaust booster fans,

c. Three independent main exhaust fans, and

d. Associated dampers.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With less than the above FHB Exhaust air System components OPERABLE but with at least one FHB exhaust air filter train, two FHB exhaust booster fans, two FHB main exhaust fans and associated dampers OPERABLE, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

The revised TS 3/4.7.8 limiting condition for operation modifies items "a." and "b.", and deletes items "c." and "d." as follows:

3.7.8 The FHB Exhaust Air System comprised of the following components shall be OPERABLE:

a. Two independent exhaust air filter trains, and

b. Three exhaust ventilation trains.

The NRC staff review found these changes acceptable because this change helps to clarify the definition of a ventilation train as is defined by the requested change to Bases 3/4.7.8.

The revised TS 3/4.7.8 action statement is provided below:

ACTION:

a. With one FHB exhaust air filter train inoperable, restore the inoperable filter train to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.

b. With two FHB exhaust air filter trains inoperable, restore at least one inoperable filter train to OPERABLE status within 12 hours or be at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.

c. With one FHB exhaust ventilation train inoperable, restore the inoperable ventilation train to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN in the following 30 hours.

d. With more than one FHB exhaust ventilation train inoperable, restore at least two exhaust ventilation trains to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.

The Action Items "a." and "c." in the revised TS 3/4.7.8 specify the same requirements that are included in the current action statement. The changes are administrative in nature, and therefore, the changes do not modify the current requirements.

The Action Item "b." provides an AOT of up to 12 hours to restore at least one train to an operable status when both trains of the FHB exhaust air filter system are inoperable. With the

current TS, TS 3.0.3 would apply, when both trains of the FHB exhaust air filter system are inoperable, and TS 3.0.3 requires placing the unit in hot standby within the next 6 hours and in cold shutdown within the following 30 hours. Similarly, Action Item "d." provides an AOT of up to 12 hours to restore at least two trains to an operable status when more than one train of the FHB exhaust ventilation system is inoperable. With the current TS, TS 3.0.3 would apply when more than one train of the FHB exhaust ventilation system is inoperable, and TS 3.0.3 requires placing the unit in hot standby within the next 6 hours and in cold shutdown within the following 30 hours.

The staff's review focused on the question of whether or not allowing Action Items "b." and "d." (i.,e., 12-hour AOT) would exceed any regulatory limits. In response to the staff's RAI, the licensee's August 15, 2000, letter stated in part that:

> The effects of a Fuel Handling Accident are precluded by suspending all operations involving movement of fuel within the spent fuel pool or crane operations with loads over the spent fuel pool with no Fuel Handling Building air filter trains OPERABLE as required by Specification 3/4.9.12. Procedures will impose this action regardless of whether the Technical Specification action was a planned entry or an emergent condition.

The letter also indicated that the licensee will not intentionally enter the Action Statements (i.e., the 12-hour AOT) associated with TS 3/4.3.7.7 and TS 3/4.3.7.8 simultaneously by taking multiple trains of the systems out of service in Mode 1, 2, 3, or 4, or during reduced RCS inventory operations.

In addition, the licensee has determined that there is reasonable assurance that the applicable regulatory limits (including radiation dose limits) will continue to be met with the implementation of the compensatory actions described in its August 15, 2000, letter. In particular, if the FHB exhaust fans are put in a pull-to-lock position, there will be no transport of contaminated air from the lower elevations where the safety injection pump seal leakage is postulated to occur during a design-basis accident.

Based on the above, the staff concluded that the compensatory measures as described in the August 15, 2000, letter provide reasonable assurance that the requirements of GDC 19 and 10 CFR Part 100 will continue to be met. Therefore, the staff finds the changes to TS 3/4.3.7.8, as described above, acceptable.

3.3 Changes to TS 3/4.9.12, "Fuel Handling Building Exhaust Air System"

The current TS 3/4.9.12 specifies the following limiting condition for operation and associated action statements:

> LIMITING CONDITION FOR OPERATION
>
> 3.9.12 The FHB Exhaust Air System comprised of the following components shall be OPERABLE:

a. Two exhaust air filter trains,

b. Two of three exhaust booster fans,

c. Two of three main exhaust fans, and

d. Associated dampers

APPLICABILITY: Whenever irradiated fuel is in the spent fuel pool.

ACTION:

a. With less than the above FHB Exhaust Air System components OPERABLE but with at least one FHB exhaust air filter train, one FHB exhaust booster fan, one FHB main exhaust fan, and associated dampers OPERABLE, fuel movement within the spent fuel pool or crane operation with loads over the spent fuel pool may proceed provided the OPERABLE FHB Exhaust Air System components are capable of being powered from an OPERABLE emergency power source and are in operation and discharging through at least one train of HEPA filters and charcoal adsorbers.

b. With no FHB exhaust air filter train OPERABLE, suspend all operations involving movement of fuel within the spent fuel pool or crane operation with loads over the spent fuel pool.

c. The provisions of Specification 3.0.3 are not applicable.

The revised TS 3/4.9.12 specifies the following limiting condition for operation and associated action statements:

3.9.12 The FHB Exhaust Air System comprised of the following components shall be OPERABLE:

a. Two exhaust air filter trains,

b. Two exhaust ventilation trains.

APPLICABILITY: Whenever irradiated fuel is in the spent fuel pool.

ACTION:

a. With less than the above FHB Exhaust Air System components OPERABLE but with at least one FHB exhaust air filter train, one FHB exhaust ventilation train and associated dampers OPERABLE, fuel movement within the spent fuel pool or crane operation with loads over the spent fuel pool may proceed provided the OPERABLE FHB Exhaust Air System components are capable of being powered from an OPERABLE emergency power source and are in operation and

discharging through at least one train of HEPA filters and charcoal adsorbers.

The changes include deletion of items "c." and "d." and revision of item "b." in TS 3.9.12, and revision of Action Item "a.". The staff finds these changes acceptable since they do not alter current requirements while they clarify the term "ventilation train" as defined in the revised Bases 3/4.9.12.

3.4 TS 3/4.3.2, Table 3.3-3, "Engineered Safety Features Actuation System Instrumentation"

Changes to Actions 27 and 28 that are associated with Applicable Functional Unit, No. 10, "Control Room Ventilation," in Table 3.3-3 are described below:

The current Action 27 states:

ACTION 27 - MODES 1, 2, 3, 4: With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5 and 6: With the number of OPERABLE channels less than the Minimum Channels OPERABLE requirement, restore the inoperable Channel to OPERABLE status within 48 hours or initiate and maintain operation of the Control Room Makeup and Cleanup Filtration System (at 100% capacity) in the recirculation and makeup filtration mode.

The revised Action 27 states:

ACTION 27 - For an inoperable channel, declare its associated ventilation train inoperable and apply the actions of Specification 3.7.7

The current Action 28 states:

ACTION 28 - MODES 1, 2, 3, 4: With the number of OPERABLE channels less than the Minimum Channels OPERABLE requirement, within 1 hour isolate the Control Room Envelope and maintain operation of the ventilation system in the filtered recirculation mode.

MODES 5 AND 6: With the number of OPERABLE channels less than the Minimum Channels OPERABLE requirement, within 1 hour initiate and maintain operation of the Control Room Makeup and Cleanup Filtration System (at 100% capacity) in the recirculation and makeup filtration mode.

The revised Action 28 states:

> ACTION 28 - With the number of OPERABLE channels less than the Minimum Channels OPERABLE requirement, within 1 hour initiate and maintain operation of the Control Room Makeup and Cleanup Filtration System (at 100% capacity) in the recirculation and makeup filtration mode.

The changes to Actions 27 and 28 are designed to make these action statements consistent with the changes in TS 3.7.7, as described in Section 3.1 of this safety evaluation. The changes also remove the mode-dependent action requirements. The staff noted a potential discrepancy in the terminologies used in TS 3.7.7 vice Action 27 in that TS 3.7.7 refers to "systems" while Action 27 refers to "trains." In its August 15, 2000, letter, the licensee indicated that the terms "train" and "system" are used interchangeably in this case, and that the associated TS Bases have been revised for clarification. Accordingly, the staff finds the changes to Actions 27 and 28 acceptable.

Changes to Action 29 that is associated with Applicable Functional Unit, No. 11, "FHB HVAC," in Table 3.3-3 are described below:

The current Action 29 states:

> ACTION 29 - MODES 1, 2, 3, 4: With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or either initiate and maintain operation of the FHB exhaust air filtration system (at 100%) or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

The revised Action 29 states:

> ACTION 29 - For an inoperable channel, declare its associated ventilation train inoperable and apply the actions of Specification 3.7.8.

The changes to Action 29 are designed to make this action statement consistent with the changes in TS 3.7.8, as described in Section 3.2 of this safety evaluation. The licensee stated that Action 29 is being modified to align the AOTs for less than the minimum channels OPERABLE with those that apply when a similar condition exists on the actuated system. Specifically, Action 29 is modified to declare the ventilation train associated with the inoperable channel inoperable and requires the actions for an inoperable ventilation train be carried out per TS 3.7.8. A typographical error was found on TS page 3/4 3-28 and corrected by the licensee. Specification "3.7.7" was corrected to read "3.7.8." Accordingly, the staff finds the changes to Action 29 acceptable.

3.5 Changes to TS Pages 3/4 3-28, 3/4 7-19, and 3/4 7-20

The amendments also remove footnotes from TS Pages 3/4 3-28, 3/4 7-19, and 3/4 7-20. The footnotes read as follows:

Page 3/4 3-28

> With 2 or more FHB Exhaust Air actuation channels inoperable, restore the FHB Exhaust Air actuation channels to a condition that satisfies the ACTION statement above within 8 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours. The exception is effective until July 14, 1999 for Unit 2 only. The exception may be used twice during this time period.

Page 3/4 7-19

> With ALL FHB Exhaust Air System components inoperable, restore the FHB Exhaust Air System to a condition that satisfies the ACTION statement above within 8 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours. This exception is effective until July 14, 1999 for Unit 2 only. The exception may be used twice during this time period.

Page 3/4 7-20

> During the first six weeks after March 28, 1989, testing will be required for both 50 kW and 38 kW heaters.

As indicated by the licensee, the staff has determined that the footnotes described above are no longer applicable, and therefore, the staff finds it acceptable to remove the footnotes and the associated asterisks in the body of texts.

3.6 Evaluation of Impact on Plant Risk Associated with the Amendments

This evaluation contains the staff's review of the licensee's analysis that addressed the impact of the proposed changes on plant risk.

3.6.1 Impact of Proposed Allowed Outage Time (AOT) on Initiating Event

The licensee's probabilistic risk analysis (PRA) models loss of CR envelope (CRE) HVAC as an initiating event. A loss of CRE HVAC for a period longer than 24 hours is assumed to lead to heatup and eventual failure of the electronic components modeled in the reactor protection system, including actuation relays and instrumentation. This, in turn, is assumed to lead to a plant trip signal with failure of automatic actuation for the systems necessary to respond to the trip.

The STP PRA assumes that these events will not occur within the first 24 hours of failure of the CRE HVAC system. The proposed 12-hour AOT for all three CRE HVAC trains provides adequate time to place the plant in hot standby mode relative to the 24-hour period of inoperable CRE HVAC system assumed in the PRA. The licensee's request provides up to 12 hours to restore at least one train of CRE HVAC to operable condition when all three trains are inoperable, or be in shutdown within the next 6 hours.

Since the plant will be required to be in hot standby mode by about 12 hours prior to the heatup-driven initiating event that is assumed to occur in the PRA, the proposed AOT is expected to have no impact on the loss of CRE HVAC initiating event frequency. The staff finds that the unavailability of CRE HVAC as a result of the proposed 12- hour AOT will not have a significant impact on the loss of CRE HVAC initiating event frequency since the proposed action prevents the CRE HVAC from reaching its threshold limit of 24 hours before the electronic components for the reactor protection system start to fail.

3.6.2 Impact of Proposed AOT on Accident Mitigation

The STP PRA does not credit the CRE HVAC for post-accident/transient analysis. However, the licensee listed four design-basis accidents that the CRE HVAC is designed to mitigate. These include fuel-handling accident in the FHB, loss-of-coolant accident (LOCA), main steamline break (MSLB), and steam generator tube rupture (SGTR).

To prevent the fuel-handling accident from occurring during the time when three trains of CRE HVAC are made inoperable, the licensee proposed administrative controls in the TSs that will suspend all operations involving core alterations, movement of spent fuel, and crane operation with loads over the spent fuel pool, as described in the previous sections of this safety evaluation.

For a postulated SGTR event, the licensee reported that a potential tube rupture would most likely be preceded by increased primary-to-secondary leakage in the steam generator. Activity in the steam and power conversion systems is subject to continual surveillance. The STP TS allows only 150 gallons per day of primary-to-secondary leakage through any one steam generator before plant shutdown is required. Maintenance activities on plant systems are evaluated for compatibility with current plant conditions prior to commencement as a part of the plant's work control process. The licensee stated that while activities are in progress to respond to an increased steam generator leakage indicative of a rapidly degrading condition, it would not perform maintenance activities that would jeopardize the availability of the CRE HVAC. Therefore, the licensee concluded that the potential for a tube rupture during the proposed 12-hour AOT is not credible. Although it is possible for an SGTR to occur during the AOT, the staff does consider the likelihood of this event occurring within the 12-hour window to be sufficiently low at about 1 in 100,000.

With respect to other accident scenarios, the licensee determined that the postulated LOCA is the design-basis event that could result in the highest CR operator doses. The probability that this design-basis event would occur during the 12-hour AOT for the CRE HVAC was estimated to be 2.2E-5 (or about 2.2 in 100,000). This estimate was derived by multiplying the frequency of occurrence for all loss-of-coolant initiating events (including the SGTR event), 1.6E-2/year, with the likelihood of the CRE HVAC being in the inoperable configuration, 12 hours/8760 hours. The licensee stated that this estimate, 2.2E-5, represents a low probability of a design-basis event occurring during the 12-hour AOT and thus concluded that the proposed TS changes do not represent a significant challenge to the plant. Similarly, the licensee determined that a postulated MSLB accident would not pose a significant risk challenge to the plant since the estimated probability of an MSLB occurring during the 12-hour AOT is low.

Furthermore, since the CRE HVAC system is not designed to mitigate core damage or to mitigate the effects of a large early release of radioactive contamination to the outside

environment (i.e., beyond design-basis events), the licensee concluded that the proposed 12-hour AOT would not result in any change to the core damage frequency (CDF) or large early release frequency (LERF). In the unlikely event that these accidents would occur when all three trains of CRE HVAC were inoperable, the licensee reported that precursors would allow time to restore system operability.

Although CRE HVAC may not be explicitly modeled in the STP PRA for accident mitigation, it is the staff's view that it is assumed in the PRA for CRE HVAC to be available and thus allow the CR operators to participate in the mitigation effort. Therefore, the staff requested additional information from the licensee to assess operator response actions modeled in the PRA and to provide justification that the human reliability assumed in the PRA would not be degraded by potential radiological environment if an accident (i.e., LOCA) were to occur when the HVAC was unavailable.

In its response letter, dated August 15, 2000, the licensee described the compensatory actions that could be effective in preventing a detrimental radiological environment to exist in the CR and thus sustaining appropriate operator performance level to mitigate an accident. First, maintaining direct communications with the CR with a plan for closing a breach in the CRE HVAC would allow the operators to retain control of the evolution. In addition, planning of the work on HVAC would be such that boundary or system breaches can be closed promptly, typically within an hour. Moreover, compensatory actions to minimize doses to the operators (i.e., fans in a pull-to-lock position, dampers isolated) would preclude any significant dose to the operators for the time it would take to close the breach in the system. Consequently, a radiological environment that could significantly affect CR operator reliability would be prevented from occurring.

Therefore, the staff has determined that the operator reliability would remain essentially unchanged for these design-basis accidents if the proposed compensatory measures remain effective. Furthermore, based on these compensatory actions in conjunction with the low probability of a design-basis accident occurring during a 12-hour AOT and that operator action, in particular for mitigating a LOCA, is more relied on at a later phase of the accident mitigation (i.e., recirculation), the staff considers the overall plant risk to remain essentially unchanged.

However, in the unlikely event where an accident were to occur while all trains of CRE HVAC are inoperable and the compensatory actions are not effective, SCBA will be available and KI would be available to be administered at the direction of the Site Emergency Director. Notwithstanding potential degradation of operator reliability in performing Emergency Operating Procedures in these scenarios, the staff would expect only a negligible change in the overall plant risk, if any, because the likelihood of encountering these situations are so low and that other mitigating systems, if function as designed, would prevent core damage.

Therefore, the staff concludes that the proposed 12-hour AOTs would have an immeasurably small impact on human reliability; therefore, the staff would expect the concomitant change in CDF and LERF to be negligibly small.

3.6.3 FHB HVAC

Similar to CRE HVAC, the FHB HVAC system is not credited in the STP PRA for mitigating core damage accidents. However, STP analyses credit the FHB HVAC and the CRE HVAC systems for mitigating operator doses from a fuel-handling accident in the FHB. The proposed actions compensate for the degraded condition of the two systems. The effects of a fuel handling accident are precluded by the licensee's TS proposal to suspend all operations involving movement of fuel within the spent fuel pool or crane operations with loads over the spent fuel pool with no FHB air filter trains operable. As stated previously, a fuel handling accident can be precluded from consideration during the time three trains of FHB HVAC are made inoperable by administratively suspending all operations involving core alterations, movement of spent fuel, and crane operation with loads over the spent fuel pool.

Although the FHB HVAC is not modeled in the STP PRA, the staff recognizes that the proposed compensatory actions to preclude all fuel movement operations in the spent fuel as well as crane operations with loads over the pool will significantly diminish the chance of a fuel-handling accident from occurring.

Based on these reasons, the staff has determined that the impact of the proposed 12-hour AOT for the FHB HVAC on plant risk would be negligible.

The staff has evaluated the potential impact of the proposed 12-hour AOT for the CRE HVAC and the FHB HVAC on the STP overall plant risk. Based on the above, the staff concludes that the change in the overall plant risk resulting from the proposed AOT would be negligible.

3.7 Changes to TS Bases

The staff has reviewed the changes to the following TS Bases associated with the TS amendments and finds the changes are consistent with the changes made to the TSs.

B 3/4.3.1 and 3/4.3.2 - REACTOR TRIP SYSTEM and ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

B 3/4.7.7 - CONTROL ROOM MAKEUP AND CLEANUP FILTRATION SYSTEM

B 3/4.7.8 - FUEL HANDLING BUILDING EXHAUST AIR SYSTEM

3/4.9.12 - FUEL HANDLING BUILDING EXHAUST AIR SYSTEM

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 the 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 (65 FR 46016). 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 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 Contributors: H. Walker
S. Lee

Date: September 26, 2000