Nuclear Operating Company

South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

December 18, 2006
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U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
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South Texas Project
Unit 1
Docket No. 50-498

Request for Enforcement Discretion for Technical Specifications 3.3.3.6 and 3.7.1.2

In this letter, STP provides a follow-up written request for Enforcement Discretion, which was granted verbally at 0839 hours (Central Time) on December 17, 2006, for South Texas Project Unit 1.

STP Nuclear Operating Company (STPNOC) requested Enforcement Discretion for Unit 1 from the provisions of Action 35 in Table 3.3-10 in Technical Specification (TS) 3.3.3.6, "Accident Monitoring Instrumentation," for Auxiliary Feedwater Flow and TS 3.7.1.2, "Auxiliary Feedwater System," Action b for the turbine-driven auxiliary feedwater pump. The allowed outage times were entered at 0945 hours on December 15, 2006, when power was lost to Auxiliary Process Cabinet "D" (APC-D) from Distribution Panel DP1202. The power supply to DP1202 is inverter 1202.

A visual inspection of inverter 1202 showed indications that one capacitor in the C805 ten-capacitor bank had failed, causing an electrical transient which damaged electrical components in APC-D2.

The Enforcement Discretion granted was effective until 2145 hours on December 18, 2006. QDPS Cabinet D2 was declared operable at 2155 hours on December 17, 2006.

As discussed in the teleconference with the staff, STPNOC determined the proposed Enforcement Discretion was not risk-significant and did not result in a net increase in the radiological risk to the public. Attachment 1 provides the required information for Enforcement Discretion as described in the Part 9900 Technical Guidance of the NRC Inspection Manual.

The only commitments made in this submittal are listed in Attachment 2.

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Although not discussed during the teleconference with the staff, this letter also documents the fact that during the period of enforcement discretion, STP Unit 1 was also in TS 3.3.2 (ESF Actuation System Instrumentation) Action 20, due to 1 of 4 channels of undervoltage / degraded voltage relays inoperable on the Train A ESF 4160 V bus. The TS permits one channel of relays to be inoperable indefinitely provided the channel is placed in trip within 72 hours. These relays were placed in the trip condition on December 3, 2006. This condition had no effect on the probabilistic risk assessment performed as part of the Enforcement Discretion request, since the undervoltage / degraded voltage function was met. STPNOC notified the Senior Resident Inspector and Chief, Reactor Projects Branch A, regarding this oversight on December 18, 2006. Please note that this instrumentation has been added to the list of inoperable equipment in Section 6 of Attachment 1 for completeness.

If there are any questions regarding this request, please contact Mr. Scott Head at (361) 972-7136 or me at (361) 972-7849.

JAMES R MERTINK FOR

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jrm/

Attachments: 1. Criteria for Enforcement Discretion
2. Commitments

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ATTACHMENT 1

Criteria for Enforcement Discretion

Criteria for Enforcement Discretion

1. The Technical Specification (TS) or other license conditions that will be violated:

Several loads were lost on the associated distribution panel (DP-1202) following an electrical transient on the STP Unit 1 Train D inverter. The loads included a qualified display processing system (QDPS) cabinet that provides auxiliary feedwater (AFW) flow indication and control functions for the Train D turbine driven AFW train.

The allowed outage time for the AFW flow indication is 48 hours and expires at 0945 CST on December 17, 2006. The allowed outage time for the turbine-driven (TD) AFW train is 72 hours and expires at 0945 CST on December 18, 2006.

STPNOC requests that the allowed outage time for both Technical Specifications (TS) be extended to 2145 CST on December 18, 2006, to allow time for repair and post-maintenance testing of the affected functions. This is an extension of 36 hours for the AFW flow indication and 12 hours for the TDAFW train.

The affected TS are listed in the table below.

TS	ACTION	Description of Condition Violated
3.3.3.6 Accident Monitoring Instrumentation Table 3.3-10 #11 AFW Flow	35 With the number of OPERABLE channels less than the Minimum Channels Operable requirement, restore at least one inoperable channel to OPERABLE status within 48 hours, or be in at least HOT SHUTDOWN within the next 12 hours	The Minimum Channels Operable requirement is 1/steam generator and allowed outage time is 48 hours. STPNOC is requesting to extend the allowed outage time an additional 36 hours to a total of 84 hours to allow repair and post-maintenance testing of the Train D AFW flow function. The extended time would expire at 2145 CST on December 18, 2006.

TS	ACTION	Description of Condition Violated
3.7.1.2 Auxiliary Feedwater System	b. With the turbine-driven auxiliary feedwater pump inoperable, or with any two auxiliary feedwater pumps inoperable, restore the affected auxiliary feedwater pump(s) to OPERABLE status within 72 hours. MODE 3 may be entered with an inoperable turbine-driven auxiliary feedwater pump for the purposes of performing Surveillance Requirement 4.7.1.2.1a.2.	The AFW automatic flow control function is governed by TS 3.7.1.2 for AFW, not by the accident monitoring (TS 3.3.3.6). The requested 36 hour extension of the accident monitoring allowed outage time will also result in an extension of 12 hours to the 72-hour allowed outage time for the turbine-driven AFW pump. The extended time would expire at 2145 CST on December 18, 2006. STP analyses do not take credit for automatic flow control. Also, manual control is still available so that the TDAFW would be functional.

2. The circumstances surrounding the situation: including likely causes; the need for prompt action; action taken in an attempt to avoid the need for an NOED; and identification of any relevant historical events.

On December 15, 2006 at 0945, Control Room Operators noted an electrical transient on a Distribution Panel (DP1202) for the 120VAC distribution system. Engineering visual inspections revealed a failed capacitor in the inverter that supplies power to DP1202. The failed capacitor is one of several oil-filled capacitors contained within the inverter. There was evidence of carbonized oil on the capacitor and adjacent surfaces indicating a ground fault within the capacitor. This ground fault is the cause of the electrical transient.

Shortly after the electrical transient, the inverter output stabilized as did the voltage output of DP1202. This voltage output is logged by plant operators and remains stable.

Following the electrical transient, it was noted that several electrical loads supplied by DP1202 were no longer in operation. The affected loads include a qualified display processing system (QDPS) cabinet that provides auxiliary feedwater (AFW) flow indication and control functions for the Train D turbine-driven AFW train.

The turbine driven AFW pump has an automatic control feature to maintain AFW flow rate within a prescribed band. This band is controlled by QDPS through a feedback loop with the flow control valve. Manual operation of the flow control valve remains available in the control room.

The central processing unit (CPU) in the QDPS cabinet was found not functioning correctly. Troubleshooting identified that two of three EEPROMs (Electrically Erasable, Programmable, Read-Only Memory) located on the CPU circuit board had failed. The most credible cause of the EEPROM failure is the electrical transient which damaged the EEPROM. STPNOC does not currently have spare EEPROMs for this QDPS cabinet in stock, but is working with Westinghouse to expedite programming and shipping of replacement EEPROMs. The EEPROMs are currently scheduled to arrive on site December 17, 2006.

A similar event occurred at STP in December 2005. The initiating cause of the event was a failed capacitor in the same inverter. STPNOC performed a failure analysis of that capacitor and determined that an internal lead in the capacitor had shorted to ground. STPNOC notified the inverter vendor (Ametek) and the capacitor vendor (Aerovox) of our findings. Aerovox subsequently notified STPNOC that changes had recently been made in their manufacturing process to reduce the potential for internal faults. STPNOC replaced all capacitors in all Unit 1 Ametek inverters with newly designed capacitors in the October 2006 refueling outage. The December 2005 event did not result in damage to the EEPROMs because the power supply failed first, protecting all downstream components.

The APC-D2 controller board and central processing unit were replaced, but that did not restore the unit to operation. Two of the three EEPROMs, which are mounted on the CPU, were found to be damaged and will be replaced on December 17, 2006. After the replaced EEPROMs are confirmed to be operating properly, additional circuit boards and cards downstream of the CPU will be confirmed to be operating properly or will be replaced.

The electrical transient that damaged the QDPS could not have been anticipated. STPNOC promptly recognized that a short duration (48-hour) allowed outage time applied and assigned resolution of the condition highest priority and mobilized resources to resolve the condition, including determining the availability of spare parts for the QDPS. Resources are working the issue on a 24-hour basis. The issue was promptly communicated to the NRC via the Senior Resident and Region IV. Because of the need to obtain new EEPROMs, STPNOC cannot complete the corrective maintenance within the allowed outage time. Consequently, prompt action is required from the NRC to review and approve this request for enforcement discretion.

3. Information to show that the cause and proposed path to resolve the situation are understood by the licensee, such that there is a high likelihood that planned actions to resolve the situation can be completed within the proposed NOED timeframe.

The QDPS Class 1E control multi-bus card cage consists of eight circuit cards. Three of the circuit cards have EEPROMs installed. Two of three EEPROMs on the Main CPU board were found to be damaged. Four additional EEPROMs on one other circuit card were found damaged and have been replaced. STPNOC does not have the Main CPU EEPROMs in stock, but they are expected to arrive on December 17, 2006.

Additional circuit cards have been replaced and cannot be tested until after EEPROM replacement on the Main CPU card. Additional downstream circuit cards may require replacement following EEPROM replacement. STPNOC has those replacement cards in stock, configured, and ready for installation.

An additional 36 hours beyond the allowed outage time for AFW Flow in TS 3.3.3.6 (12 hours for TDAFW in TS 3.7.1.2) will allow time to obtain the EEPROMs from the vendor, replace the EEPROMs and downstream circuit cards, restore the QDPS cabinet, and perform post-maintenance testing.

With the replacement of the EEPROMs and affected downstream cards, all potentially damaged components will be replaced. STPNOC is confident that the corrective maintenance will resolve the condition and will be completed by 2145 hours on December 18, 2006.

4. **The safety basis for the request, including an evaluation of the safety significance and potential consequences of the proposed course of action. The following information should be provided in support of this evaluation. To the extent practicable, the licensee should address the quantitative and qualitative aspects noted below. The numerical guidance for acceptance was established to augment qualitative arguments that the continued operation of the plant during the period of enforcement discretion will not cause risk to exceed the level determined acceptable during normal work controls and, therefore, there is no net increase in radiological risk to the public.**

Overview of AFW Flow Indication Functions

STP has four trains of AFW, each feeding an associated steam generator. Train A, B, and C have motor-driven AFW pumps and Train D has a turbine-driven AFW pump. Train A, B, and C AFW are powered from ESF Train A, B, and C, respectively. Steam Generator D supplies steam to the Train D turbine-driven AFW pump. Instrumentation and control for the turbine-driven Train D AFW is provided by Train A. The AFW supply piping is cross-connected so that any AFW train can supply any steam generator. If implementation of the cross-connect is required, it is accomplished by manual action from the Control Room.

Each of the four trains of AFW is provided with one channel of AFW flow monitoring.

One train of AFW feeding an intact steam generator is sufficient for post-accident decay heat removal. STP's safety analyses show that three trains of AFW feeding three steam generators are required for sufficient RCS cooling to prevent the pressurizer from going water solid in a loss of normal feedwater (LONF) assuming failure of Train A ESF actuation to start Train A AFW and Train D AFW and with credit for operator action to manually start one of the failed AFW trains from the control room.

Note 'o' to STP UFSAR Table 7.5-1 describes the basis for the AFW Flow monitoring redundancy as being provided by one channel per loop and identifies Steam Generator Level – Wide Range as a diverse backup.

STP UFSAR Sec. 10.4.9 also describes AFW instrumentation:

> "The AFW regulator valves are controlled by the QDPS to limit the flow (at all times) into the SG to below a preset high value. After a two-out-of-four low-low water level signal from any SG, an ATWS (Anticipated Transient Without Scram) Mitigation System Actuation Circuitry (AMSAC) signal, or an SI signal, flow is maintained between upper and lower limits using the QDPS, until manually reset. These valves may be manually controlled from the control room (subject to high flow limitation) or from the auxiliary shutdown panel..." [UFSAR 10.4.9.2]
>
> "Control room instrumentation is provided to monitor major AFWS parameters, such as the discharge pressure of each AFW pump, turbine-driven AFW pump inlet steam pressure available through the plant computer, and AFW flow to each SG. Turbine-driven pump discharge pressure is available at a control room indicator and through the QDPS; the motor-driven pump discharge pressures are available through the Emergency Response Facilities Data Acquisition and Display System [ERFDADS]. This instrumentation, in combination with the SG level indication described in Section 7.5, provides the operator with reliable indication of the AFWS performance....
>
> ...The two-of-four low-low water level signal in any SG, an AMSAC signal, or the SI signal closes the SG blowdown valves, sample line valves, and AFW crossover isolation valves, and initiates control of the AFW regulator valves between preset high and low flow values by the QDPS. It also allows the stop check valves to function normally. Thus on a LOOP, the motor-driven AFW pumps start and recirculate water to the AFST until an SI signal, an AMSAC signal, or a two-of-four low-low water level signal in any SG occurs. Each AFW regulator valve may be manually reset and remotely positioned by manual switches in the control room to allow throttling of flow below the minimum value which QDPS ensures after any of these signals. Manual control switches are also provided at the auxiliary shutdown panel for jogging operation. ..." [UFSAR 10.4.9.5]

AFW flow instrumentation is used in the Emergency Operating Procedures to define the potential loss of heat sink and the need to either establish another steam generator feed source or to initiate core cooling via RCS bleed and feed. The EOPs also use AFW flow to establish and monitor minimum AFW flow to a steam generator that has "dried out" in the course of an accident. It is used in accident classification procedure (Emergency Action Levels – EALs) to indicate the potential for the loss of the fuel rod cladding fission product barrier.

As demonstrated in the responses to Items 4.a through 4.g below, the minimal increase in risk is offset by the compensatory actions established such that STP has concluded that continued operation during the period of the requested Enforcement Discretion will not result in a net increase in the radiological risk to the public.

a. Use the zero maintenance PRA model to establish the plant's baseline risk and the estimated risk increase associated with the period of enforcement discretion. For the plant-specific configuration the plant intends to operate in during the period of enforcement discretion, the incremental conditional core damage probability (ICCDP) and incremental conditional large early release probability (ICLERP) should be quantified and compared with guidance thresholds of less than or equal to an ICCDP of 5E-7 and an ICLERP of 5E-8.

A zero maintenance PRA model based on STP_REV5 was used to perform ICCDP and ICLERP risk assessments associated with the extended QDPS D outage. The primary PRA function affected by the QDPS D outage is the SG PORV 1D. The ICCDP and ICLERP for 36 hours are 8.0E-09 and 1.0E-12 respectively. These values represent a very small increase in risk and are well below the guidance thresholds. In a sensitivity case that conservatively considered the AFW Train D pump non-functional, the associated ICCDP for a 12-hour duration was 3.1E-08.

b. Discuss the dominant risk contributors (cut sets/sequences) and summarize the risk insights for the plant-specific configuration the plant intends to operate in during the period of enforcement discretion.

The dominant contributor to the increase in core damage frequency (CDF) associated with maintenance of QDPS Train D is the steam generator tube rupture initiating event (SGTR).The SGTR contribution to CDF increase was approximately 1.5E-06 per year or 14.9%. Failure of QDPS Train D increases the likelihood of failure of steam generator power operated relief valves (PORVs) associated with depressurizing using the unaffected steam generators. Five scenarios involving fires outside the control room increased the contribution to CDF approximately 1.4% (2.9E-07 per year). These initiating event increases are associated with controlling RCS cooldown using the steam generator PORVs. All other initiating events do not have a significant change in core damage contribution. The compensatory actions described in 4c below are focused on maintaining the turbine driven pump and its associated steam generator PORV as a viable source for long term decay heat removal. NOTE, an increase in QDPS Train D unavailability for one week results in approximately a 3.7E-08 increase in ICCDP.

c. Explain compensatory measures that will be taken to reduce the risks associated with the specified configuration. Compensatory measures to reduce plant vulnerabilities should focus on both event mitigation and initiating event likelihood. The objectives are to:

i. reduce the likelihood of initiating events;
ii. reduce the likelihood of unavailability of trains redundant to the equipment that is out-of-service during the period of enforcement discretion;
iii. increase the likelihood of successful operator recovery actions in response to initiating events.

For the dominant risk contributors described in Section 4.b above, STPNOC will implement the following compensatory measures during the period of Enforcement Discretion. The compensatory measures denoted by an asterisk (*) are part of the quantified risk calculation.

Risk Contributor	Associated Compensatory Measures
Fire	• The two diesel fire pumps and one fire water storage tank will be verified to be functional for the duration of the NOED*. This ensures the availability of the fire suppression system in the event of a fire and is implicit in the fire initiating event frequencies.
Events crediting AFW Flow initiation	• Operating instructions will be provided and briefed routinely. These will include expected actions and alternate indications for AFW flow to SG 1D and prompt manual cross connect to other Steam Generators with functioning AFW flow indication. This briefing will address the manual control of AFW flow and local operation of the SG 1D PORV as directed from the Control Room or the Auxiliary Shutdown Panel. • Operating instructions will be provided and briefed routinely for manual cross-connect of AFW Pump 14 to the other three Steam Generators. • Operations crew will ensure a designated control room operator is responsible for and briefed on manual operation of AFW 14 flow control valve. The Operating crew will record the name of the designated control room operator in the Control Room Log. • Operations crew will ensure a dedicated field operator is responsible for and briefed on auxiliary feedwater controls including cross-connecting from SG 1D to others. The Operating crew will record the name of the dedicated field operator in the Control Room Log. • The balance of plant diesel generator (BOP DG) and

Risk Contributor	Associated Compensatory Measures
	instrument air compressor 14 (IA #14) will be verified to be functional for the duration of the NOED. This allows not credited operator actions to be taken to cross-tie the auxiliary feedwater supply to the steam generators. • No planned maintenance on BOP DG, IA #14, or MCC 1G5: this provides instrument air capability during LOOP for AFW cross-connect AOVs • A temporary flow instrument has been installed to provide local indication of AFW flow for the TDAFW train. Use of this instrument is included in the instructions for expected operator actions for alternate indication for AFW flow. These actions regarding reinforcement of operating instructions and staffing, though not quantified, reduce the probability of human performance error. Operator action to crosstie auxiliary feedwater from any auxiliary feedwater pump to any steam generator is not modeled in the PRA. These actions are included in the plant emergency operating procedures and provide additional defense-in-depth for events that disable a steam generator PORV. The temporary flow instrumentation provides an additional capability to facilitate operator response to an event that requires information on AFW flow indication for the TDAFW train.
Events requiring SG PORV operation	• Operating instructions will be provided and briefed routinely for the local manual operation of SG 1D PORV. • Operations crew will ensure a designated field operator responsible for and briefed on local manual operation of SG 1D PORV. The Operating crew will record the name of the designated field operator in the Control Room Log. These actions regarding reinforcement of operating instructions and staffing, though not quantified, reduce the probability of human performance error.

Risk Contributor	Associated Compensatory Measures
Station Blackout	• STPNOC will contact the Transmission and Distribution Service Provider (TDSP) and confirm the stability of the power grid and that there are no unusual factors that need to be considered in this evaluation.* • The switchyard will be locked, and STPNOC will ensure that no maintenance activities are performed in the switchyard that could directly cause a Loss of Offsite Power event, unless required to ensure the continued reliability and availability of the offsite power sources* • STPNOC will not perform any planned maintenance on the Unit 1 Technical Support Diesel Generator, Load Center 1W and Motor Control Center 1G8, and the Positive Displacement Charging Pump.* • STPNOC will ensure that no planned maintenance is performed on the Emergency Transformer or the 138 KV Blessing to STP and Lane City to Bay City lines.* • STPNOC will not perform any planned maintenance on Switchgear 1L or 1K.* • STPNOC will ensure that no planned maintenance is performed on the Unit 1 Standby Diesel Generators.* These actions minimize the potential for an event that causes a loss of off-site power.
Cross Train/Increased CDP	• Zero Maintenance State* - No other maintenance that would render a system non-functional other than QDPS Cabinet D2 will be performed during the 48 hour enforcement discretion period: - No planned maintenance will be performed on the other Unit 1 QDPS Cabinets, AFW trains, or SG PORVs. - STPNOC will not perform any planned voluntary maintenance in Unit 1 during the Enforcement Discretion period that would increase the ICCDP. • Placement of protected train signs on Trains A, B, and C QDPS Cabinets, and SG 1A, 1B, and 1C AFW Pumps, and SG PORVs. These actions minimize the potential for maintenance activities to cause a transient that challenges the plant or cause entry into an unplanned TS action.

Risk Contributor	Associated Compensatory Measures
General	• Briefing on-shift Operations crews that AFW 14 flow control valve must be operated manually from the Main Control Room and SG 1D PORV must be operated manually from the local hydraulic skid. • The Unit 1 on-shift Operations Crews will brief on the manual control of AFW 14 flow control valve and the manual operation of SG 1D PORV. • Operations Crews will continue to monitor and evaluate emergent material condition issues that increase the risk in Unit 1 per the STPNOC CRMP. • STPNOC will notify the NRC Resident Inspector of any changes that affect the basis for approval of the Enforcement Discretion request. • STPNOC will notify the NRC Resident Inspector of any changes to plant configuration that affects the calculated risk basis described in this request. • STPNOC will notify the NRC Resident Inspector when QDPS APC D2 is declared operable. These actions to brief the on-shift crews, though not quantified, reduce the probability of human performance error.

d. Discuss how the proposed compensatory measures are accounted for in the PRA. These modeled compensatory measures should be correlated, as applicable, to the dominant PRA sequences identified in item b. above. In addition, other measures not directly related to the equipment out-of-service may also be implemented to reduce overall plant risk and, as such, should be explained. Compensatory measures that cannot be modeled in the PRA should be assessed qualitatively.

The table in the response to Item 4.c correlates the compensatory actions to the dominant risk contributors and provides a qualitative assessment of the risk reduction. The proposed compensatory actions (as noted by the asterisks) are included in the quantification of the PRA zero maintenance model. No other planned maintenance or surveillances that may affect the likelihood of loss of offsite power or the plant response to a loss of offsite power are included in the quantification.

e. Discuss the extent of condition of the failed or unavailable component(s) to other trains/divisions of equipment and what adjustments, if any, to the related PRA common cause factors have been made to account for potential increases in their failure probabilities. The method used to determine the extent of condition should be discussed. It is recognized that a formal root cause or apparent cause is not

required given the limited time available in determining acceptability of a proposed NOED. However, a discussion of the likely cause should be provided with an associated discussion of the potential for common cause failure.

As discussed in the response to Question 3, the cause of the failure in the QDPS cabinet was the electrical transient from the inverter and associated distribution panel. There is no evidence of a pre-existing degraded condition within the affected QDPS cabinet. Therefore, the extent of condition review addressed the potential for a similar inverter failure and transient to affect another QDPS cabinet.

As noted, the root cause of the 2005 capacitor failure was confirmed to be a due to a manufacturing defect. There was no confirmed generic design flaw that would indicate the potential for additional capacitor failures.

It is acknowledged that the potential for similar capacitor failure does exist. However, STPNOC as well as industry operating experience indicates that these failures occur in a relatively short timeframe following installation.

The Unit 2 inverters were installed in 2005 and have been operating per design since installation. The Unit 1 inverter capacitors were replaced in October 2006 and STPNOC has confirmed that capacitors from the same manufacturing lot were only installed in inverter 1202. Additionally, based on consultation with the inverter vendor, this capacitor failure that resulted in the transient that damaged the Unit 1 QDPS is the only known failure since the capacitor manufacturer implemented process improvements

Because the fault appears to be limited to inverter 1202, and no inverter is inoperable or non-functional, no adjustment was made to the common cause modeling of the Class 1E Vital 120V AC inverters.

f. **Discuss external event risk for the specified plant configuration. Action may be taken to reduce fire ignition frequency in the affected areas or reduce human error associated with time-critical operator actions in response to such scenarios.**

Five scenarios involving fires outside the control room increased the contribution to core damage frequency by 2.9E-07 per year (1.4%). The compensatory actions are described in 4.c.

g. **Discuss forecasted weather conditions for the NOED period and any plant vulnerabilities related to weather conditions.**

The weather forecast for STP through December 19, 2006 reflects mild conditions with low temperatures in the 60s and highs in the high 70s to low 80s. There is a chance of thunderstorms on December 18 and December 19. There is a 10% chance of rain on

December 18 and a 30% chance of rain on December 19. There are no significant plant vulnerabilities to the forecasted weather.

5. The justification for the duration of the noncompliance.

STPNOC requests that the allowed outage time for both Technical Specifications (TS) be extended to 2145 CST on December 18, 2006 to allow time for repair and post-maintenance testing of the affected functions. This is an extension of 36 hours for the AFW flow indication and 12 hours for the TDAFW train.

The response to Question 3 provides the basis for the requested 36-hour extension. The response to Question 4 demonstrates that the risk associated with that duration is small. Therefore, STPNOC concludes that the duration is justified.

6. The condition and operational status of the plant (including safety-related equipment out of service or otherwise impaired).

The equipment listed below is inoperable.

Equipment	Operational Impact
• Train D AFW Flow indication	• As discussed in this request.
• Train D TDAFW	• As discussed in this request
• D Steam Generator Power Operated Relief Valve (TS 3.3.5.1, TS 3.7.1.6)	• Valve is inoperable and not functional. 7-day allowed outage time expires at 0945 on December 22, 2006. The PORV provides a decay heat removal path via the steam generator. There is adequate design basis margin provided by the other three steam generators.
• One channel of D Steam Generator Narrow Range Level (TS 3.3.1, Table 3.3-1 Item 14 – ACTION 6, TS 3.3.2, Table 3.3-3 Item 5.b – ACTION 20)	• Minimal impact because the other 3 channels of narrow range level on the D steam generator are operable. Channel may be bypassed for 72 hours, then must be placed in the tripped condition.
• RCS T-hot for loop 2 (TS 3.3.1, Table 3.3-1 Item 8 & 9 – ACTION 6)	• Minimal impact because the other T-hot indications for the other three loops are operable. Channel may be bypassed for 72 hours, then must be placed in the

• Channel 1 undervoltage / degraded voltage relays for Train A 4160V ESF Bus (TS 3.3.2 Item 8 – ACTION 20)	tripped condition. • Minimal impact because the other channels for Train A undervoltage / degraded voltage are operable. Channel may be bypassed for 72 hours, then must be placed in the tripped condition.

7. The status and potential challenges to off-site and on-site power sources.

All onsite and offsite power sources are currently available. The TDSP has confirmed there are no known challenges to the offsite power sources. The Technical Specification-required components of the onsite power distribution system are operable and capable of performing their design function.

8. The basis for the licensee's conclusion that the noncompliance will not be of potential detriment to the public health and safety.

a. The proposed Enforcement Discretion does not involve a significant increase in the probability or consequences of a previously evaluated accident. As discussed in Section 4 above, there are no significant safety concerns resulting from the proposed Enforcement Discretion. Measurement and display of Auxiliary Feedwater Flow are not initiators of any accident previously evaluated. The inoperable automatic control of the AFW regulating valve is not an initiator of any accident previously evaluated. The accident analyses do not credit automatic control of AFW flow, and manual control of the regulating valve remains operable. A probabilistic risk assessment has determined that the incremental core damage and large early release probabilities are not risk significant.

b. The proposed Enforcement Discretion does not create the possibility of a new or different accident from any previously evaluated. No new accident precursors have been created due to the unavailability of one channel of Auxiliary Feedwater Flow. The requested extended period of operation with one channel of this parameter unavailable does not introduce any new modes of operation or new accident precursors and does not involve any physical modifications to the plant. Three other channels of these instruments on the other three steam generators remain available for post-accident acquisition and display.

c. The proposed Enforcement Discretion does not involve a significant reduction in the margin of safety. Three other trains of measurement and indication for Auxiliary Feedwater Flow on the other three steam generators remain available for post-accident acquisition and display. Alternate indication is provided by steam generator water level - narrow range and the temporary flow instrumentation discussed in Section 4.c.

Based on the above, the proposed changes will not be of potential detriment to the public health and safety and no significant hazards consideration is involved.

9. The basis for the conclusion that the noncompliance will not involve adverse consequences to the environment.

STP has reviewed the proposed Enforcement Discretion request and the NRC Final Environmental Assessment for the South Texas Project Units 1 and 2, and has concluded that pursuant to 10 CFR 51, there are no significant radiological or non-radiological impacts associated with the proposed Enforcement Discretion request.

This proposed Enforcement Discretion request has been evaluated against the criteria for and identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21. It has been determined that the proposed changes meet the criteria for categorical exclusion as provided for under 10 CFR 51.22(c)(9). The following is a discussion of how the proposed Enforcement Discretion request meets the criteria for categorical exclusion.

(i) The proposed change involves no Significant Hazards Consideration (refer to Section 8 above),

(ii) There is no significant change in the types or significant increase in the amounts of any effluent that may be released offsite since the proposed changes do not affect the generation of any radioactive effluent nor do they affect any of the permitted release paths, and

(iii) There is no significant increase in individual or cumulative occupational radiation exposure.

Accordingly, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Based on the aforementioned and pursuant to 10 CFR 51.22(b), no environmental assessment or environmental impact statement need be prepared.

10. A statement that the request has been approved by the facility organization that normally reviews safety issues (Plant On-site Review Committee, or its equivalent).

The Plant Operations Review Committee approved this request on December 16, 2006.

11. The request must specifically address which of the NOED criteria for appropriate plant conditions specified in Section B is satisfied and how it is satisfied.

The NOED criteria for an operating plant are applicable in this situation. The criteria and associated justification are as follows:

a. *Avoid unnecessary transients as a result of compliance with the license condition and, thus, minimize potential safety consequences and operational risks.*

Requiring the plant to shutdown and put the systems through the resulting transient and thermal cycle is not commensurate with the low safety significance of this condition. As discussed above, the minimal risk associated with the maintenance on QDPS APC-D2 is offset by the compensatory measures described in this request.

12. Written NOED request and follow-up license amendment request.

Verbal approval of Enforcement Discretion was granted on December 17, 2006, at 0839 hours (Central Time). A written NOED request will be submitted by December 18, 2006. As discussed with the NRC staff, a follow-up amendment request is not needed because a request was submitted on October 2, 2006 to extend the 48-hour AOT for Auxiliary Feedwater Flow (TS Table 3.3-10) to 30 days (ML062830032). Additionally, a broad-scope Risk Managed Technical Specification amendment application is currently under review by the NRC staff that once approved should preclude the need for Enforcement Discretion for the AFW allowed outage time in TS 3.7.1.2.

13. For NOED requests involving severe weather or other natural events.

The requested Enforcement Discretion does not involve severe weather or other natural events.

ATTACHMENT 2

Commitments

As part of this Enforcement Discretion request, STPNOC makes the following commitments:

The following compensatory actions will be in effect until the Unit 1 QDPS cabinet D2 is restored to OPERABLE status:

1. The two diesel fire pumps and one fire water storage tank will be verified to be functional for the duration of the NOED*. This ensures the availability of the fire suppression system in the event of a fire and is implicit in the fire initiating event frequencies.
2. Operating instructions will be provided and briefed routinely. These will include expected actions and alternate indications for AFW flow to SG 1D and prompt manual cross connect to other Steam Generators with functioning AFW flow indication. This briefing will address the manual control of AFW flow and local operation of the SG 1D PORV as directed from the Control Room or from the Auxiliary Shutdown Panel.
3. Operating instructions will be provided and briefed routinely for manual cross connect of AFW Pump 14 to the other three Steam Generators.
4. Operations crew will ensure a designated control room operator is responsible for and briefed on manual operation of AFW 14 flow control valve. The Operating crew will record the name of the designated control room operator in the Control Room Log.
5. Operations crew will ensure a dedicated field operator is responsible for and briefed on auxiliary feedwater controls including cross-connecting from SG 1D to others. The Operating crew will record the name of the dedicated field operator in the Control Room Log.
6. The balance of plant diesel generator (BOP DG) and instrument air compressor 14 (IA #14) will be verified to be functional for the duration of the NOED. This allows not credited operator actions to be taken to cross-tie the auxiliary feedwater supply to the steam generators.
7. No planned maintenance on BOP DG, IA #14, or MCC 1G5: this provides instrument air capability during LOOP for AFW cross-connect AOVs
8. A temporary flow instrument has been installed to provide local indication of AFW flow for the TDAFW train. Use of this instrument is included in the instructions for expected operator actions for alternate indication for AFW flow.
9. Operating instructions will be provided and briefed routinely for the local manual operation of SG 1D PORV.
10. Operations crew will ensure a designated field operator responsible for and briefed on local manual operation of SG 1D PORV. The Operating crew will record the name of the designated field operator in the Control Room Log.
11. STPNOC will contact the Transmission and Distribution Service Provider (TDSP) and confirm the stability of the power grid and that there are no unusual factors that need to be considered in this evaluation.*

12. The switchyard will be locked, and STPNOC will ensure that no maintenance activities are performed in the switchyard that could directly cause a Loss of Offsite Power event, unless required to ensure the continued reliability and availability of the offsite power sources*
13. STPNOC will not perform any planned maintenance on the Unit 1 Technical Support Diesel Generator, Load Center 1W and Motor Control Center 1G8, and the Positive Displacement Charging Pump.*
14. STPNOC will ensure that no planned maintenance is performed on the Emergency Transformer or the 138 KV Blessing to STP and Lane City to Bay City lines.*
15. STPNOC will not perform any planned maintenance on Switchgear 1L or 1K.*
16. STPNOC will ensure that no planned maintenance is performed on the Unit 1 Standby Diesel Generators.*
17. Zero Maintenance State* - No other maintenance that would render a system non-functional other than QDPS Cabinet D2 will be performed during the 48 hour enforcement discretion period:
    - No planned maintenance will be performed on the other Unit 1 QDPS Cabinets, AFW trains, or SG PORVs.
    - STPNOC will not perform any planned voluntary maintenance in Unit 1 during the Enforcement Discretion period that would increase the ICCDP.
18. Placement of protected train signs on Trains A, B, and C QDPS Cabinets, and SG 1A, 1B, and 1C AFW Pumps, and SG PORVs.
19. Briefing on-shift Operations crews that AFW 14 flow control valve must be operated manually from the Main Control Room and SG 1D PORV must be operated manually from the local hydraulic skid.
20. The Unit 1 on-shift Operations Crews will brief on the manual control of AFW 14 flow control valve and the manual operation of SG 1D PORV.
21. Operations Crews will continue to monitor and evaluate emergent material condition issues that increase the risk in Unit 1 per the STPNOC CRMP.
22. STPNOC will notify the NRC Resident Inspector of any changes that affect the basis for approval of the Enforcement Discretion request.
23. STPNOC will notify the NRC Resident Inspector of any changes to plant configuration that affects the calculated risk basis described in this request.
24. STPNOC will notify the NRC Resident Inspector when QDPS APC D2 is declared operable.

Note: The compensatory measures denoted by an asterisk (*) are part of the quantified risk calculation.