



Log # TXX-95167  
File # 10010  
916 (3/4.7)  
Ref. # 10 CFR Part 2,  
Appendix C

C. Lance Terry  
Group Vice President, Nuclear

June 14, 1995

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES) - UNIT 1  
DOCKET NUMBER 50-445  
ENFORCEMENT DISCRETION TO REMAIN IN HOT STANDBY (MODE 3)  
WHILE TESTING THE TURBINE DRIVEN AUXILIARY FEEDWATER PUMP

REF: NRC Inspection Manual, Part 9900, "10 CFR Part 2 Appendix C  
Enforcement Discretion," dated January 5, 1995

Gentlemen:

In accordance with the guidance provided by 10 CFR 2, Appendix C, Texas Utilities Electric Company (TU Electric) requests that the Nuclear Regulatory Commission (NRC) exercise enforcement discretion to allow CPSES Unit 1 to remain in Mode 3, Hot Standby, while testing on the Unit 1 Turbine Driven Auxiliary Feedwater (TDAFW) Pump is performed. Without the requested enforcement discretion, compliance with CPSES Technical Specification 3.7.1.2 would require an unnecessary mode change without a corresponding safety benefit, thus resulting in an unnecessary plant transient and unnecessary system realignments.

The referenced section of the NRC Inspection Manual provides guidance on the information to be included in a request for enforcement discretion. The sections below are arranged to correspond to that guidance.

1. REQUIREMENT/REQUEST:

Limiting Condition for Operation (LCO) 3.7.1.2, "Plant Systems, Auxiliary Feedwater System", requires, in part, that two motor-driven auxiliary feedwater (MDAFW) pumps and one steam turbine-driven auxiliary feedwater pump be OPERABLE in Modes 1, 2, and 3. Action Statement "a" requires that an inoperable auxiliary feedwater pump be restored to OPERABLE status within 72 hours or be in at least Mode 3, Hot Standby, within the next 6 hours, and in Mode 4, Hot Shutdown, within the following 6 hours. TU Electric requests that the 72 hour Allowed Outage Time (AOT) to restore operability be extended.

9506190432 950614  
PDR ADOCK 05000445  
P PDR

Do29  
11

## 2. CIRCUMSTANCES:

On June 11, 1995, at about 12:02 pm, CPSES Unit 1 was manually tripped from power due to a failure of a non-safety related inverter which caused a secondary plant transient. The Turbine Driven Auxiliary Feedwater Pump started as required but tripped due to overspeed. This pump has been considered inoperable since this event. CPSES Unit 1 was successfully shutdown to Mode 3 where it remains at this time. A successful pump test was performed at about 3am on June 12, 1995. The pump was properly aligned and in automatic such that it should have performed its safety function, if needed, from that test until disassembly for trouble shooting at about 3:00 pm on the same day.

The overspeed trip of the Turbine Driven Auxiliary Feedwater Pump has been under investigation. The problem appeared to be related to the turbine governor. Pump testing must be completed to confirm its operability. In order to provide adequate steam for testing the Turbine Driven Auxiliary Feedwater Pump, the Unit must be in Mode 3. The present schedule indicates that the repairs will be completed by approximately 3:00 pm on June 14, 1995. This would require that TU Electric enter the shutdown portion of the action statement and place the unit in Mode 4. Since Unit 1 is already in Hot Standby (Mode 3), TU Electric would be required to cycle the unit into Hot Shutdown (Mode 4) within the next 6 hours after the end of the 72 hour AOT, then return the Unit to Mode 3 to complete the testing required to confirm the operability of the pump following the repairs (essentially surveillance requirement 4.7.1.2b.2)). In addition, the surveillance requirement states that the provisions of Specification 4.0.4 are not applicable which allows entry into Mode 3 with the Turbine Driven Auxiliary Feedwater Pump available but not tested in order to perform the surveillance requirement. TU Electric is requesting enforcement discretion to allow for the testing of the Turbine Driven Auxiliary Feedwater Pump, while avoiding an unnecessary plant mode change and its associated unnecessary thermal transient and system realignments.

## 3. SAFETY SIGNIFICANCE AND POTENTIAL CONSEQUENCES:

The Auxiliary Feedwater (AFW) System is designed to supply an independent source of water to the steam generators during accident and transient conditions in the event of a loss of the main feedwater supply. The major components of the Comanche Peak AFW System are three essential safety-grade pumps, one steam-turbine-driven pump, and two motor-driven pumps. The AFW supply is provided by the condensate storage tank, with a backup supply available from the service water system.

The AFW System is designed to accommodate a single failure in any active system component without loss of function. The AFW System consists of three trains, supplying all four steam generators. Each train is supplied by one AFW SYSTEM pump. The turbine driven pump train supplies all four steam generators. Each of the two motor-driven pump trains supplies two of the four steam generators. The motor-driven and turbine-driven pump trains are connected together downstream of the AFW valves, before the connection to the feedwater bypass line. The motor-driven pump trains are also cross

connected, through normally closed manual valves in series, to allow either motor-driven AFW pump to supply any of the steam generators after operator action to open the valves. The two motor-driven AFW SYSTEM pumps are provided with one suction connection to the condensate storage tank, and the turbine-driven AFW SYSTEM pump is provided with a separate suction connection to this tank. Steam supply to the turbine-driven pump is provided from two of four steam generators through separate air-operated valves which fail open on loss of the air supply. Thus, adequate feedwater is assured to at least two steam generators in the event of a high-energy pipe break or other postulated design-basis accident concurrent with a single failure.

The turbine-driven AFW SYSTEM pump train provides a diverse means of assuring feedwater supply to the steam generator independent of all offsite or onsite ac power sources.

The AFW System is required to function after any plant trip described in FSAR Chapter 15. With few exceptions, the initiating event does not affect the capability of the AFW System to perform its intended safety function; therefore, these events are unaffected by the status of the TDAFW pump.

The TDAFW pump is required to be operable in the analysis of the Feedwater Line Break presented in FSAR Section 15.2.8. In this analysis, one MDAFW pump is assumed to be the single failure, the second MDAFW PUMP is assumed to deliver its entire contents to the faulted steam generator, and the TDAFW pump is assumed to deliver 430 gpm to the three intact steam generators. (In reality, one would expect the second MDAFW PUMP to deliver somewhat more than half of its capacity to the affected steam generator; an intact steam generator would receive the remaining fluid.) This American Nuclear Society (ANS) Condition IV event is assumed to be initiated from full power and is analyzed to ensure that the core remains in a coolable geometry. This condition is satisfied by demonstrating that no voiding occurs in the hot leg.

The TDAFW pump is also assumed to be operable in the analyses of the Loss of Nonemergency Power to the Station Auxiliaries and Loss of Normal Feedwater transients presented in FSAR Sections 15.2.6 and 15.2.7. These events are assumed to be initiated from full power and are analyzed to demonstrate that the AFW system can remove enough heat to prevent the pressurizer from filling to the point where water relief through a safety or relief valve occurs. For these ANS Condition II events, water relief is equated with valve failure to close, thereby allowing the event to progress to a more serious accident. In this analysis, a minimum of 860 gpm is assumed to be provided by any combination of AFW pumps.

In addition, the AFW System would be used to provide a source of AFW following any plant trip. The TDAFW pump is also the sole source for AFW following a station blackout.

The intended safety function of the AFW System is to provide adequate AFW to an adequate number of steam generators such that, when considering a single failure, all events are shown to meet their relevant event acceptance

criteria. Given the plant condition, approximately 100 gpm of AFW is required to remove the decay heat. This amount of AFW represents approximately one-quarter the capacity of a single MDAFW pump. Given the plant condition, a single MDAFW pump is capable of fulfilling the intended safety function of the AFW System. Thus, even with the inoperable status of the TDAFW pump and a failure of one MDAFW pump, the AFW System would remain capable of performing its intended safety function as required by the FSAR Chapter 15 accident analyses.

When the turbine driven AFW pump is inoperable, the diverse means of assuring feedwater supply to the steam generators independent of offsite and onsite ac power sources is not available. By assuring that both sources of onsite ac power and at least two sources of offsite ac power remain available, and verifying the operability of both motor driven AFW pumps, the likelihood of needing the turbine driven AFW pump becomes minimal. This conclusion is validated by a review of the CPSES IPE.

#### 4. UNREVIEWED SAFETY QUESTION / NO SIGNIFICANT HAZARDS CONSIDERATION:

TU Electric has considered the criteria for assessing the potential of creating an unreviewed safety question or a significant hazards consideration with the exercising of enforcement discretion. Since the enforcement discretion only involves extending an allowed outage time, there is no impact on the probability or consequences of an event. No new accidents are created and the margin of safety is maintained. The extended period of the turbine driven AFW pump's AOT is mitigated by the recently demonstrated operability of the motor driven AFW pumps and the availability of all onsite and at least two offsite ac power sources.

As a result, the requested enforcement discretion does not create an unreviewed safety question and does not constitute a significant hazards consideration.

#### 5. ENVIRONMENTAL CONSEQUENCES:

The request only involves repairs within the plant. These repairs and their potential consequences are limited to the plant and will not result in any unplanned releases that could impact the environment.

#### 6. COMPENSATORY ACTIONS:

The Auxiliary Feedwater System provides cooling water to the steam generators to cool the Reactor Coolant System to below 350 degrees F should an accident occur while the Unit is in Modes 1, 2 or 3. Both Motor Driven Auxiliary Feedwater pumps have been recently demonstrated to be operable and will be maintained operable. Either of the independent Motor driven pumps is capable of providing the flow needed to cool the Reactor Coolant System to below 350 degrees F. TU Electric will maintain the operability of both Emergency Diesel Generators and at least two offsite power supplies for CPSES Unit 1 for the duration of the enforcement discretion.



7. DURATION:

The requested duration is based upon TU Electric's best estimate of the time required to perform the required repair and return the Turbine Driven Auxiliary Feedwater Pump to service. It is estimated that the additional time required is about 31 hours, and therefore TU Electric requests that the duration of the AOT to restore operability be extended by 48 hours (to allow for unexpected delays) to a total of 120 hours.

8. SORC REVIEW:

This activity has been reviewed and approved by the Station Operations Review Committee (SORC).

9. CRITERIA FOR EXERCISING ENFORCEMENT DISCRETION:

10 CFR 2, Appendix C, Section VII, Subsection C provides the criteria for exercising enforcement discretion, as follows:

For an operating plant, this exercise of enforcement discretion is intended to minimize the potential safety consequences of unnecessary plant transients with the accompanying operational risks and impacts or to eliminate testing, inspection, or system realignment which is inappropriate for the particular plant conditions.

For plants in a shutdown condition, exercising enforcement discretion is intended to reduce shutdown risk by, again, avoiding testing, inspection or system realignment which is inappropriate for the particular plant conditions, in that, it does not provide a safety benefit or may, in fact, be detrimental to safety in the particular plant condition. Exercising enforcement discretion for plants attempting to startup is less likely than exercising it for an operating plant, as simply delaying startup does not usually leave the plant in a condition in which it could experience undesirable transients. In such cases, the Commission would expect that discretion would be exercised with respect to equipment or systems only when it has at least concluded that, notwithstanding the conditions of the license:

- (1) The equipment or system does not perform a safety function in the mode in which operation is to occur:
- (2) the safety function performed by the equipment or system is of only marginal safety benefit, provided remaining in the current mode increases the likelihood of an unnecessary plant transient; or
- (3) the TS or other license condition requires a test, inspection or system realignment that is inappropriate for the particular plant conditions, in that it does not provide a safety benefit, or may, in fact, be detrimental to safety in the particular plant conditions.

The referenced NRC guidance provides the same criteria.

Enforcement discretion avoids the unnecessary system realignments needed to go to Mode 4 and back to Mode 3. Further, a heatup to Mode 3 is needed to test the TDAFW pump. No safety benefit is gained by the transient and system realignments. As such, this request complies with criterion (3) for a shutdown plant.

10. PROPOSED TECHNICAL SPECIFICATION CHANGES:

The request enforcement discretion is temporary and nonrecurring and a amendment to the technical specifications is not practical.

11. ADDITIONAL INFORMATION REQUESTED BY THE NRC STAFF:

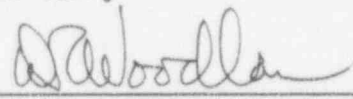
The NRC staff has requested no additional information.

CONCLUSION:

TU Electric requests the NRC grant the requested enforcement discretion to provide the additional time necessary to complete the required repairs and testing. If there is a significant change in the circumstances associated with this exercising of enforcement discretion, TU Electric will notify the NRC. A response is requested by noon (CDT) on June 14, 1995.

Sincerely,

C. L. Terry

By:   
D. R. Woodlan  
Docket Licensing Manager

DRW/gp

c - Mr. L. J. Callan, Region IV  
Mr. T. J. Polich, NRR  
Mr. D. F. Kirsch, RIV  
CPSES Resident Inspectors