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10CFR50.92

TU ELECTRIC

April 2, 1991

William J. Cahill, Jr.
Executive Vice President

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES) UNIT 1
DOCKET NO. 50-445
ENGINEERED SAFETY FEATURES ACTUATION SYSTEM
ADDITIONAL ACTION STATEMENTS TO THE LOSS OF POWER RELAYS
LICENSING AMENDMENT REQUEST 91-002.

Gentlemen:

Pursuant to 10CFR50.90, Texas Utilities Electric Company (TU Electric) hereby requests an amendment to its Operating Facility Operating License No. NPF-87 by incorporating the enclosed change to Technical Specification Table 3/4 3.3-2 for Comanche Peak Steam Electric Station.

The enclosed License Amendment Request (LAR) proposes to add ACTION requirements to the ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION, LOSS OF POWER (6.9 kV & 480 V SAFEGUARDS SYSTEM UNDERVOLTAGE) function. These additional ACTION statements provide direction in the event two undervoltage relay channels on a bus become inoperable. The LAR also proposes to change the number of the ACTION requirement for the start of the MOTOR DRIVEN AUXILIARY FEEDWATER PUMP on a TRIP OF ALL MAIN FEEDWATER PUMPS but does not change the content of the ACTION.

The change proposed in this LAR is not required to address an immediate safety concern, incorporation of this change will provide consistency with the requirements of the technical specification on electrical power sources. TU Electric desires to implement the requested change as soon as possible and therefore, requests timely review and approval of this LAR by the NRC. TU Electric requests that the revised Technical Specifications be made effective seven days after approval of the license amendment by the NRC.

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
Texas Utilities Electric Company	)	Docket Nos. 50-445
	)	
(Comanche Peak Steam Electric Station, Unit 1)	)	

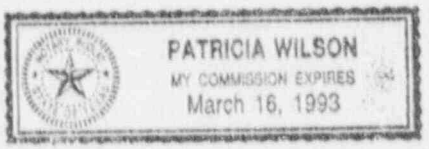
AFFIDAVIT

William J. Cahill, Jr. being duly sworn, hereby deposes and says that he is Executive Vice President, Nuclear of TU Electric, that he is duly authorized to sign and file with the Nuclear Regulatory Commission this License Amendment Request 91-002; that he is familiar with the content thereof; and that the matters set forth therein are true and correct to the best of his knowledge, information and belief.

William J. Cahill, Jr.
Executive Vice President, Nuclear

STATE OF TEXAS)
)
COUNTY OF SOMERVELL)

Subscribed and sworn to before me, a Notary Public, on this 2nd day of April, 1991.



Notary Public

In accordance with 10CFR50.91(b), TU Electric is providing the State of Texas a copy of this proposed amendment.

Sincerely,

William J. Cahill, Jr.

JDR/grp

Attachment 1. Affidavit
2. Proposed change and significant Hazards Consideration Evaluation (10CFR50.92)
3. Proposed replacement pages.

c - Mr. R. D. Martin, Region IV
Resident Inspectors, CPSES (3)
Mr. J. W. Clifford, NRR
D. K. Locker
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CPSES UNIT 1
NRC DOCKET NO. 50-445
LICENSE AMENDMENT REQUEST 91-002

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Significant Hazards Consideration
Proposed CPSES Unit 1 Technical Specification Change
ESF-Loss of Power (Undervoltage Relay)

I. Description

This change proposes to add ACTION requirements to the ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION, LOSS OF POWER (6.9 kV & 480 V SAFEGUARDS SYSTEM UNDERVOLTAGE) function. These additional ACTION statements provide direction in the event the number of operable undervoltage channels become less than the MINIMUM CHANNELS OPERABLE column of Table 3.3-2, Item 8. This change also proposes to change the number of the ACTION requirement for the start of the MOTOR DRIVEN AUXILIARY FEEDWATER PUMP on a TRIP OF ALL MAIN FEEDWATER PUMPS but does not change the content of the ACTION.

II. Background

The CPSES undervoltage protection scheme consists of six distinct functional groups of relays for each train as shown on Technical Specification Table 3.3-2, Item 8. The primary functions of these relays are as follows:

A. 6.9 kV Preferred Offsite Source Undervoltage

Upon detection of an undervoltage condition, these relays cause the Preferred Offsite Feeder Breaker to the Class 1E safety busses to open.

B. 6.9 kV Alternate Offsite Source Undervoltage

Upon detection of an undervoltage condition, these relays cause the Alternate Offsite feeder breaker to the Class 1E safety busses to prevent closure if open or open if closed.

C. 6.9 kV Bus Undervoltage

Upon detection of an undervoltage condition on the safety bus, these relays cause load shedding of large motors, and the diesel generator to start.

D. 6.9 kV Degraded Voltage

Upon detection of a degraded voltage condition on the 6.9 kV safety bus, these relays cause the Preferred Offsite Power breaker, to the Class 1E safety busses, to open and the Alternate Source breaker to trip if it fails to establish the bus voltage. This in turn will actuate the bus undervoltage relays (item C) to initiate load shedding, diesel start, etc.

E. 480 V Degraded Voltage

These relays sense voltage on the 480 V safety bus and initiate the same actions as item D.

F. 480 V Low Grid Undervoltage

These relays sense voltage on the 480 V safety bus and initiate the same actions as item D.

Each of the above groups consist of two sensing relays per bus, with each relay providing input to a channel. The channels have a two-out-of-two logic to trip. Currently, if one of the relay channels is inoperable, ACTION statement 23 of Table 3.3-2 requires the inoperable channel to be placed in the trip condition within 6 hours, thus maintaining the capability of the instrumentation to actuate on undervoltage or degraded voltage as intended.

Table 3.3-2 does not provide a specific action statement for a situation where two relay channels for a single bus become inoperable. If both relay channels are inoperable, the capability of the instrumentation to protect against that specific undervoltage or degraded voltage condition on the bus is lost. The loss of this capability reduces the protection provided to the associated train.

This proposal provides specific ACTION requirements in the event both relay channels on a single bus become inoperable.

III. JUSTIFICATION

In the event that two relay channels for the same bus are inoperable, and in the absence of a specific ACTION statement, specification 3.0.3 would apply requiring a mode change to hot standby within 6 hours and hot shutdown within the following 6 hours. This is unduly restrictive since Technical Specification 3.8.1.1 for an inoperable 6.9 kV safeguards or Technical Specification 3.8.3.1 for an inoperable A. C. emergency bus allow greater outage time for recovery of the inoperable bus. This change is needed to provide consistency with the action requirements of Technical Specifications 3.8.1.1 and 3.8.3.1.

The number change to the ACTION requirement for the start of the MOTOR DRIVEN AUXILIARY FEEDWATER PUMP on a TRIP OF ALL MAIN FEEDWATER PUMPS is administrative and does not change the actual ACTION requirement. The proposed changes are consistent with the assumptions set forth in the BASES 3/4.8.

IV. SAFETY EVALUATION

The additional actions proposed for the undervoltage relays ensure that in the event both relays are inoperable the appropriate monitored function is declared inoperable, and the limiting condition for operation of Technical Specification 3.8.1.1 or 3.8.3.1 is entered. The action requirements of section 3.8 of the technical specifications are based on maintaining at least one redundant set of power sources and are consistent with the initial conditions assumed in the safety analysis.

V. DETAILED DISCUSSION

Table 3.3-2, item 6e

* Action item reference is changed from 23 to 23a.

  This is an administrative change to accommodate the proposed action requirements while leaving the action requirements for item 6e unaffected.

Table 3.3-2, items 8a, 8b, 8c, 8d, 8e, and 8f

* Action item reference for item 8a is changed from 23 to 23a, and proposed action item 23b is added.

  The change from 23 to 23a retains the original action required on one inoperable undervoltage relay channels. Proposed action item 23b is added to require declaring the preferred offsite power source inoperable and performing the actions of Technical Specification 3.8.1.1 in the event that two relay channels are inoperable.

* Action item reference for item 8b is changed from 23 to 23a, and proposed action item 23c is added.

  The change from 23 to 23a retains the original action required on one inoperable undervoltage relay channel. Proposed action item 23c is added to require declaring the preferred offsite power source inoperable and performing the actions of Technical Specification 3.8.1.1 in the event that two relay channels are inoperable.

* Action item reference for item 8c is changed from 23 to 23a, and proposed action item 23d is added.

  The change from 23 to 23a retains the original action required on one inoperable undervoltage relay channel. Proposed action item 23d is added to require declaring the appropriate train emergency buses inoperable and performing the required actions of Technical Specification 3.8.3.1 in the event that two relay channels are inoperable.

* Action item reference for items 8d, 8e, and 8f are changed from 23 to 23a, and proposed action item 23e is added.

  The change from 23 to 23a retains the original action required on one inoperable undervoltage relay channel. Proposed action item 23e is added to require declaring both offsite power sources inoperable and performing the required actions of Technical Specification 3.8.1.1 in the event that two relay channels are inoperable.

Page(s) 3/4-26 and 3/4-27

* Change action item 23 to 23a and add proposed action requirements 23b, 23c, 23d, 23e.

VI. PRECEDENTS

The principal attributes of the proposed CPSES Unit 1 Technical Specifications have been previously incorporated at Diablo Canyon Unit 2.

VII. NO SIGNIFICANT HAZARDS EVALUATION PER 10CFR50.92

The proposed changes affect the operability of the ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION; LOSS OF POWER (6.9 kV & 480 V SAFEGUARDS SYSTEM UNDERVOLTAGE) protection. Under the proposed change the out-of-service time, when two undervoltage relay channels declared inoperable, is changed to become consistent with the out-of-service time allowed for the 6.9 kV and 480 V safeguards busses as specified in Technical Specification 3.8.3.1 or 3.8.1.1.

The proposed changes do not affect the operation of the undervoltage protection relay channels nor the protection they provide. The increase in out-of-service times, to be consistent with those specified by 3.8.3.1 and 3.8.1.1, does not increase the probability of an accident previously evaluated. The out-of-service times of 3.8.3.1 or 3.8.1.1 are designed to ensure that sufficient power is available to mitigate and control accident condition, thus applying these times in the proposed context does not significantly increase the consequences of accidents previously evaluated.

The proposed changes do not involve system hardware or circuit changes and, as stated above, do not change the manner in which the undervoltage relay channels operate or provide plant protection. Since no physical, electrical, or functional changes are made to the undervoltage relay channels, no new failure modes are introduced. Therefore the proposed changes do not create the possibility of a new or different kind of accident.

As stated above, the proposed changes increase the out-of-service time to that already allowed in specification 3.8.3.1. Because the proposed changes do not increase the out-of-service time any more than already allowed, there is no reduction in the margin of safety.

VIII. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission has provided guidance concerning the application of the standards for determining whether a significant hazards consideration exists by providing certain examples (51 FR 7751) of amendments that are considered not likely to involve significant hazards consideration. Example (vi) relates to a change which either may result in some increase to the probability or consequences of a previously-analyzed accident or may reduce in some way a safety margin, but where the results of the change are clearly within all acceptable criteria with respect to the system or component specified in the Standard Review Plan: for example, a change resulting from the application of a small refinement of a previously used calculational model or design method.

In this case, the proposed changes described above are similar to Example (vi) in that the changes have been shown not to increase the probability or consequences of previously evaluated accidents.

Based on the above evaluation, TU Electric concludes that the activities associated with the above described changes satisfy the no significant hazards consideration standards of 10CFR50.92(c) and accordingly, a no significant hazards consideration finding is justified.

IX. ENVIRONMENTAL EVALUATION

TU Electric has evaluated the proposed changes and has determined that the changes do not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed changes meet the eligibility criterion for categorical exclusion set forth in 10CFR51.22(c)(9). Therefore, pursuant to 10CFR51.22(b), an environmental assessment of the proposed changes is not required.

X. References

CPSES Unit 1 Technical Specifications BASES