Log # TXX-4687
File # 10010
919

TEXAS UTILITIES GENERATING COMPANY

SKYWAY TOWER · 400 NORTH OLIVE STREET, L.B. 81 · DALLAS, TEXAS 75201

February 7, 1986

WILLIAM G. COUNSIL
EXECUTIVE VICE PRESIDENT

Director of Nuclear Reactor Regulation
Attention: Mr. Vince S. Noonan, Director
Comanche Peak Project
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
TMI ACTION ITEM I.D.2
SAFETY PARAMETER DISPLAY SYSTEM

Ref: 1) CPSES Supplemental Safety Evaluation Report No. 12 dated October 1985.

2) Letter from J. W. Beck (TUGCO) to the Director of Nuclear Reactor Regulation with attachment, "Safety Parameter Display System for Comanche Peak Steam Electric Station Units 1 and 2 Emergency Response Facility Computer".

Dear Mr. Noonan:

Reference (1) provides an update to the staff's safety evaluation report relative to the Safety Parameter Display System (SPDS) at CPSES. Attachment 1 contains the CPSES response to the three remaining open items for the SPDS.

Attachment 2 is the revision to the Safety Analysis Report for the SPDS, which was originally submitted per reference (2).

The enclosed attachments will enable the staff to complete its review of Outstanding Issue (35), "Safety parameter display system and parameter analysis (TMI Action Plan Item I.D.2)".

Very truly yours,

W. G. Counsil

JCH/arm
Attachments

c - Original + 40 copies
Annette Vietti-Cook

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ATTACHMENT 1

1. The staff finds the applicant's response to the NRC recommendation to add containment isolation valve status unacceptable - the applicant should add an indication of isolation valve status that allows a rapid assessment of containment integrity vis-a-vis isolation valve response (e.g., "Containment Isolation Phase A/B Complete/Incomplete"). The staff also recommends the addition of lower level, detailed information such as containment mimic showing isolation valves and their status (Supplement 1 to NUREG-0737, Sections 4.1.a, b, and f: "concise display" and "continuous display" of critical plant variables sufficient to rapidly and reliably assess the safety status of the plant regarding "containment conditions" and "radioactivity control"). The present methods are not concise, continuous indications and are not displayed on the SPDS. (Reference (1), p. 22-17)

   Response: Texas Utilities will add to the SPDS top-level display message area, messages that will indicate to a system user the status (complete/incomplete) of Phase A Containment Isolation, Phase B Containment Isolation, and Containment Ventilation Isolation events. These messages will be formatted as shown in Figure 1. The event message area will be blank until isolation signals are received. Upon receipt of each isolation signal, the name of the signal will appear in the message area, along with the time and date of signal receipt, and an event marker number. The marker number will be positioned near the top of each SPDS trend graph, at the time that corresponds to the time of signal receipt. The status of each isolation event will be indicated by an appropriate word that will appear immediately below the signal name. If all of the valves associated with the signal are in their correct positions, the word will be "COMPLETE"; otherwise, the word will be "INCOMPLETE". This event status word will be updated every other second.

   In addition, the system will include a lower-level display associated with each of these signals. Upon request, each of these displays will list relevant information about each valve that is not in its correct position. This information will be formatted as shown in Figure 2. This addition is scheduled to be implemented by July, 1986.

2. The staff has found that the applicant appears to have deviated from a commitment to include main stack radiation as an SPDS parameter (Supplement 1 to NUREG-0737, Sections 4.1.a, b, and f). This should be explained or corrected. (Reference (1), p. 22-17)

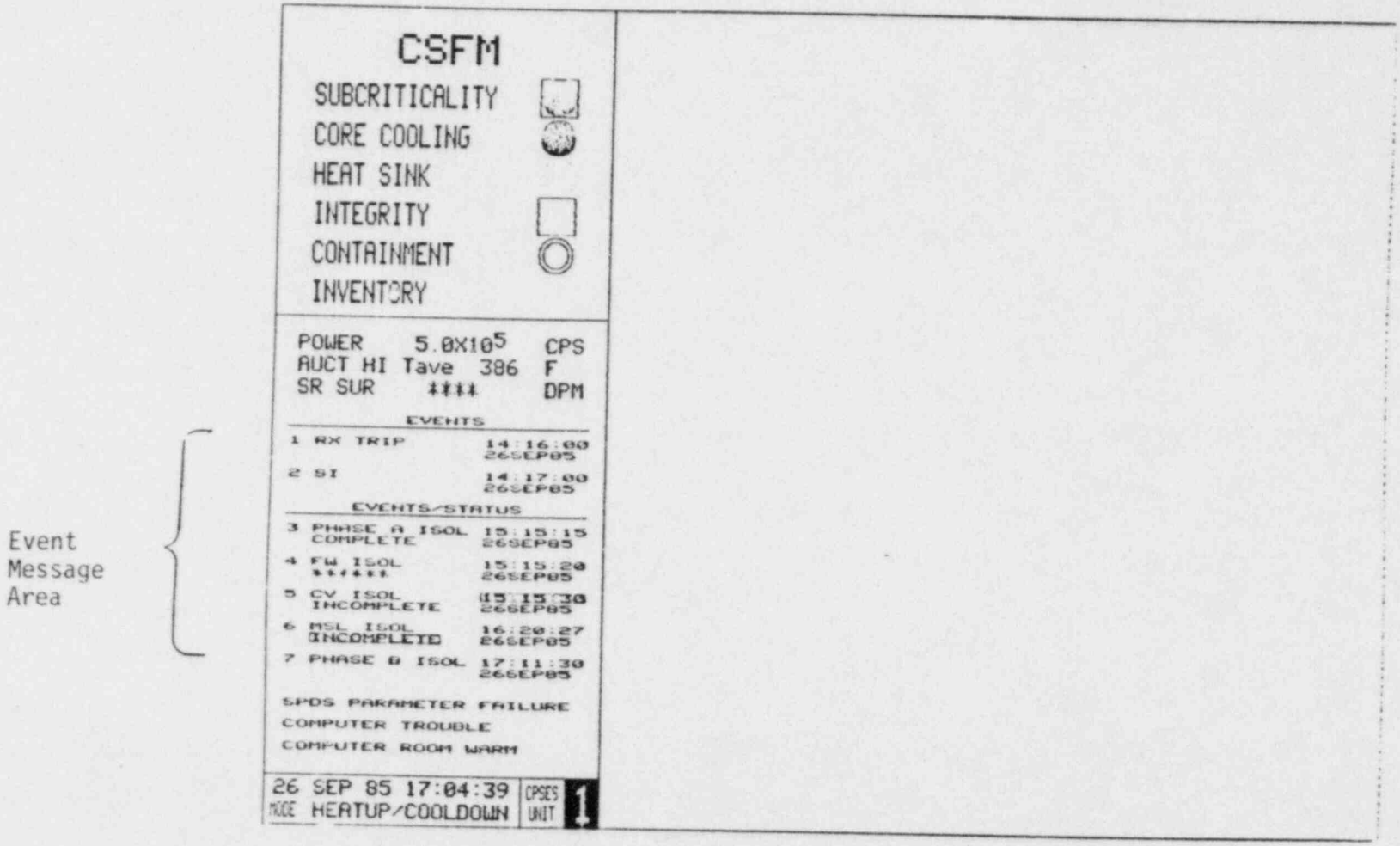
   Response: Texas Utilities will add main stack radiation indication to one of the SPDS trend graphs. The parameter that will be trended is the sum of the wide-range gaseous monitor signals from the north and south plant vent stacks. The format of this trend graph is shown in Figure 3, with the new parameter shown on the left. In addition, the status of this parameter will be monitored through the "RAD MON" target on the Operation top-level display; if this parameter reaches its alarm limit, or if any of the other parameters monitored through the target reach their limits, the target color will change from green to yellow, to indicate an "alert" condition. This addition is scheduled to be implemented by July, 1986.

3. The applicant has not fully reviewed the implemented system against the functional requirements and design specifications and has not performed final dynamic validation testing to ensure that the system (person/machine) performs as specified and is usable under a wide range of events.

   Response: Final site verification and validation (V & V) tests are currently scheduled to be performed in July of 1986, by a V & V contractor.

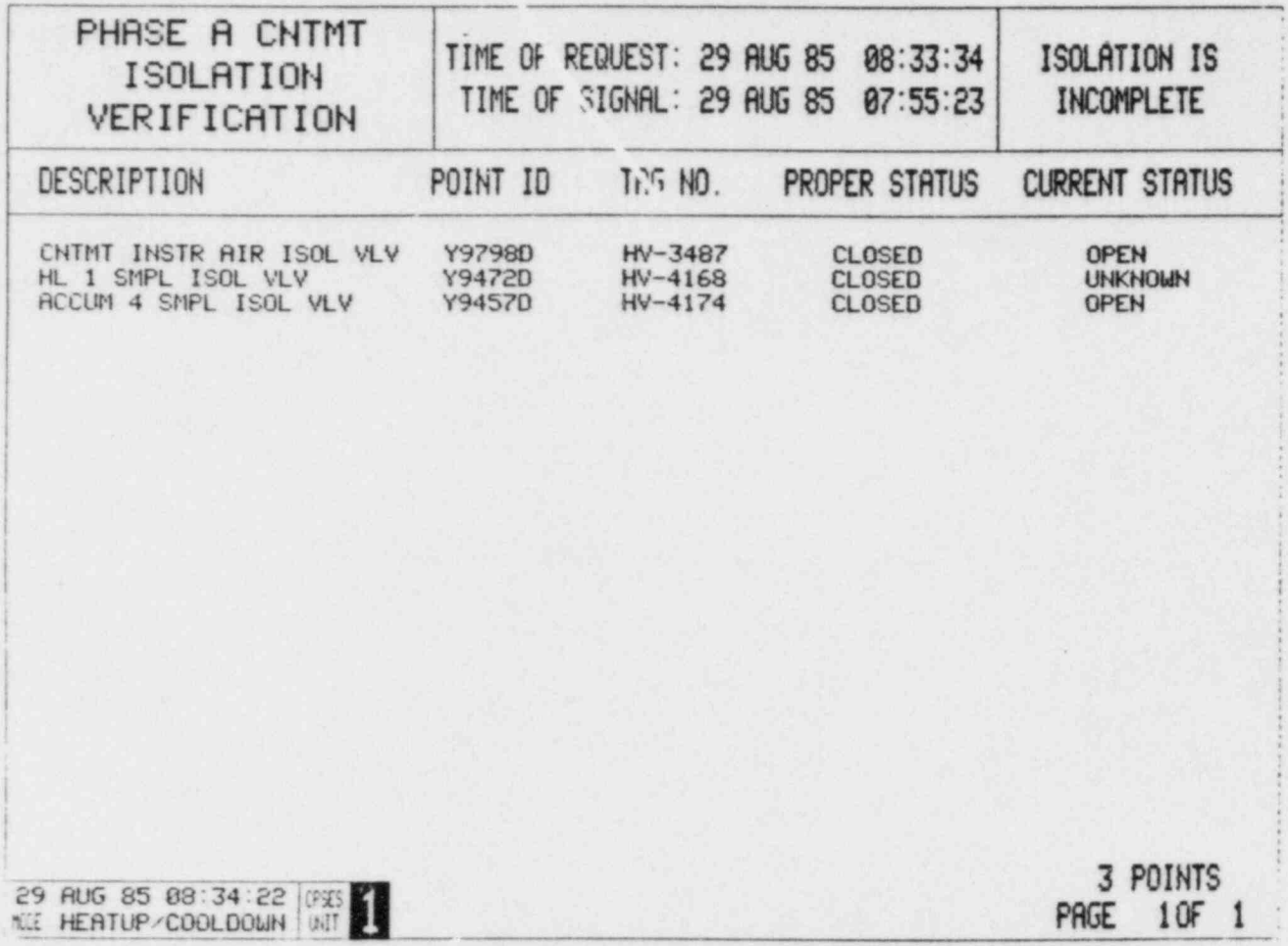
   Texas Utilities will develop a dynamic testing program to address both the validation of the parameter set and human factors consideration. This program will include validation methods similar to those used in the validation of the generic Safety Assessment System, and will be implemented during operator training on the CPSES simulator, before the first refueling outage.

Figure 1. New Event Message Area Format



ATTACHMENT 1

Figure 2. Format of Isolation Event Verification Displays
(Phase A Containment Isolation Verification Display Shown)



PHASE A CNTMT ISOLATION VERIFICATION

TIME OF REQUEST: 29 AUG 85 08:33:34
TIME OF SIGNAL: 29 AUG 85 07:55:23

ISOLATION IS INCOMPLETE

DESCRIPTION	POINT ID	TAG NO.	PROPER STATUS	CURRENT STATUS
CNTMT INSTR AIR ISOL VLV	Y9798D	HV-3487	CLOSED	OPEN
HL 1 SMPL ISOL VLV	Y9472D	HV-4168	CLOSED	UNKNOWN
ACCUM 4 SMPL ISOL VLV	Y9457D	HV-4174	CLOSED	OPEN

29 AUG 85 08:34:22
MODE HEATUP/COOLDOWN
CRSES UNIT 1

3 POINTS
PAGE 1OF 1

ATTACHMENT 1

Figure 3. Revised "RAD MON" Trend Graph (with "STACK" parameter trend)