

TEXAS UTILITIES SERVICES INC.

2001 BRYAN TOWER DALLAS, TEXAS 75201-3050

Log # TXX-3637

File # 10010

March 1, 1983

Director of Nuclear Reactor Regulation
Attention: Mr. B. J. Youngblood, Chief
Licensing Branch No. 1
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION
DOCKET NOS. 50-445 AND 50-446
HUMAN FACTORS
SYSTEM FUNCTION TASK ANALYSIS

REF: (1) TXX-3588 of December 15, 1982, transmittal
of "Human Factors Control Room Design Review
of Comanche Peak Steam Electric Station"

Dear Sir:

This letter provides a description of how Comanche Peak Steam Electric Station (CPSES) has satisfied the human factors guidance with respect to a systems function task analysis (SFTA).

Texas Utilities decided to begin the Detailed Control Room Design Review (DCRDR) prior to the issuance of NUREG-0700 using NUREG-1580. The basis for that decision was as follows:

- Allow sufficient time for the DCRDR and backfit modifications prior to fuel load.
- Minimize negative training given to operators from learning a new control board layout.
- Make modification to the control board prior to affecting the CPSES simulator design.

NUREG-1580 did not address the need for a System Function Task Analysis (SFTA). CPSES was making modifications to the main control board as a result of the ongoing DCRDR when NUREG-0700 was issued. The only benefit the task team visualized that a SFTA would provide for the DCRDR would be to confirm that the modifications being made would actually correct the deficiency.

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PDR ADCK 05000445
A PDR

Boo!

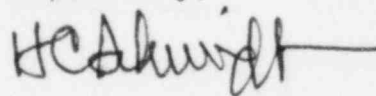
However, the Westinghouse Owners Group was preparing a comprehensive and fully integrated set of emergency response guidelines (ERG) and analytical bases for the guidelines which delineated operator's tasks to be performed during upset conditions. With this in mind, the task team decided to use the plant specific ERG procedure verification to determine if any Human Engineering Discrepancies (HED's) existed with the control board. (The plant specific procedures were written in accordance with NUREG-0899). The verification program ensured that the plant specific procedures could be carried out with the controls and indications on the main control board in an expeditious manner, with the least qualified reactor operator, and with the minimum shift crew compliment.

The CPSES ERG program was prepared in accordance with NUREG-0899 which satisfies Items I.C.1, I.C.8 and I.C.9 of NUREG-0737. NUREG-0700, Section 3.4.2.3 states, "It is expected that the analyses performed for Tasks I.C.1 and I.C.9 will provide much, if not all, of the function documentation needed for transient and potential accident events...".

Based on these discussions, the incomplete item in reference (1) with respect to SFTA is now considered complete.

In addition, the figures on the third page to Appendix E of reference (1) were inadvertently omitted. A correct copy of that page is included as attachment one to this letter. Attachment two to this letter is the status of the HED's in reference one as of February 21, 1983.

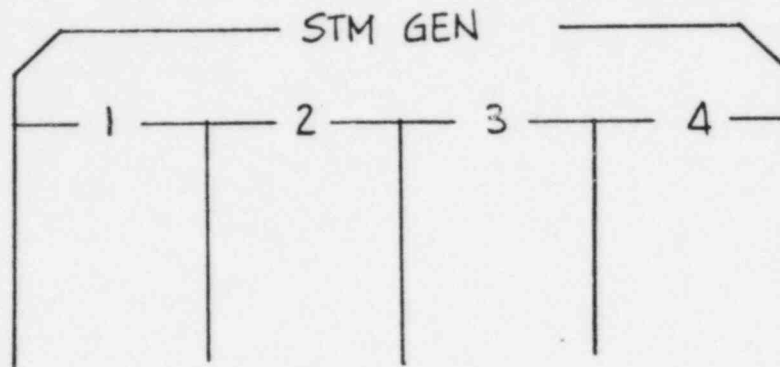
Respectfully,



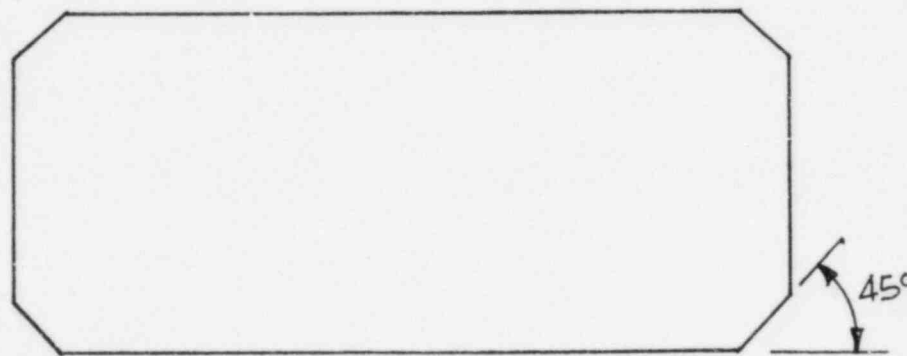
H. C. Schmidt

DRW:tls
Attachments

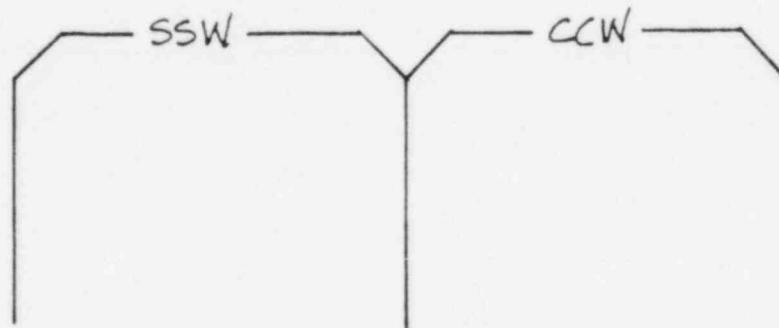
3. Hierarchical Demarcation — Hierarchical demarcation should be used whenever possible. This reduces visual search on a CR, panel, system, and subsystem level. An example is presented below.



4. Demarcation Shapes — The overall shape of a demarcated area should be even and regular whenever possible. The recommended demarcation shape for CPSES is presented below.



5. Adjacent Demarcated Areas — Adjacent areas should be demarcated as shown below.



The following HEDs were submitted to you as NO BACKFIT ACTION required:

1	43	73	144	169	214	249	288
8	44	78	146	174	222	251	291
9	45	81	149	175	224	264	295
13	46	89	151	177	228	265	296
17	47	102	155	183	229	266	297
29	50	107	156	185	234	267	302
32	51	109	157	189	241	272	314
35	52	116	161	193	242	273	325
37	53	126	162	207	243	275	329
39	55	135	165	208	245	277	330
40	63	140	167	209	246	280	332
41	68	143	168	210	247	281	333

The following HEDs backfits are complete as of February 21, 1983

2	48	77	117	137	192	270	313
3	49	79	120	138	194	276	315
10	54	83	121	139	217	278	318
11	56	84	122	141	227	279	319
14	58	87	123	142	230	282	320
15	61	91	125	145	240	283	321
18	64	92	127	147	252	284	322
19	66	103	131	158	254	285	323
20	68	105	132	159	255	286	324
21	69	108	133	163	256	287	
22	71	112	134	164	258	306	
23	74	115	136	184	262	312	

The following HEDs will be addressed following completion of a preliminary noise, lighting, and environmental survey:

42	113	308
59	154	310
110	170	311
111	171	

The following HED backfits are in various stages of completion:

BACKFIT DESCRIPTION	HED(S)	STATUS (% COMPLETE)			ESTIMATED COMPLETION DATE
		ENGINEERING	PROCUREMENT	INSTALLATION	
Control Switch Escutcheons	130, 160, 191, 204, 211, 212, 213, 215, 216, 219, 271, 300, 304, 305, 328	100	0	0	5/1/83
Control Board Labeling	4, 6, 7, 24 33, 34, 67, 75, 95, 97, 98, 99, 106, 148, 152, 186, 190, 196, 205, 206, 239, 253, 299, 301	30	100	0	4/1/83
Indicator Scales	57, 62, 150, 179, 195, 197, 199, 200, 201, 202, 203, 231, 232, 235, 248, 250, 263, 326	100	30	5	BFL*
Recorder Scales	88, 181, 187, 198, 233, 236, 237, 238	0	0	0	6/1/83
Control Board Enhancements	5 12 16 25 26 27 28 31 38	100 100 100 90 100 90 100 100 100	100 0 50 80 100 100 N/A 100 50	0 0 0 80 0 25 0 0 0	3/15/83 5/01/83 4/01/83 6/07/83 3/15/83 5/01/83 4/01/83 4/01/83 5/01/83

*Before Fuel Load

BACKFIT DESCRIPTION	HED(S)	STATUS (% COMPLETE)			ESTIMATED COMPLETION DATE
		ENGINEERING	PROCUREMENT	INSTALLATION	
Control Board	60	0	0	0	Note 1
Enhancements	72	85	100	0	5/01/83
	76	100	0	0	4/01/83
	80	100	N/A	50	3/15/83
	82	100	N/A	0	BFL
	85	100	N/A	0	4/01/83
	86	100	0	0	4/01/83
	90	90	80	80	6/07/83
	93	100	N/A	0	4/01/83
	94	100	100	0	4/01/83
	96	100	100	0	4/01/83
	100	100	0	0	4/01/83
	101	100	N/A	0	4/01/83
	104	100	60	0	4/01/83
	114	100	50	0	Note 2
	124	100	100	0	3/15/83
	128	100	0	0	4/01/83
	129	25	10	10	5/01/83
	153	0	0	0	BFL
	166	100	75	0	6/01/83
	172	90	50	5	5/01/83
	173	100	100	0	4/01/83
	176	90	50	5	5/01/83
	178	100	100	0	4/01/83
	182	100	100	0	4/01/83
	188	90	80	80	6/07/83
	218	100	N/A	0	BFL
	220	100	N/A	0	BFL
	221	100	75	0	4/01/83
	223	100	75	0	4/01/83
	225	100	0	0	4/01/83
	226	100	N/A	0	4/01/83
	244	100	100	0	4/01/83
	257	100	100	0	4/01/83
	259	100	60	0	4/01/83
	261	50	0	0	5/01/83
	274	100	100	0	3/15/83
	289	100	0	0	5/01/83
	290	100	100	0	3/15/83
	292	100	0	0	6/01/83
	293	100	50	0	4/01/83
	294	100	100	0	3/15/83
	303	100	100	0	4/01/83

Notes:

1. Gibbs & Hill investigating feasibility of backfitting "Turbine % Power" indication.
2. RVLIS installation scheduled for third refueling outage.

BACKFIT DESCRIPTION	HED(S)	STATUS (% COMPLETE)			ESTIMATED COMPLETION DATE
		ENGINEERING	PROCUREMENT	INSTALLATION	
	327	0	0	0	BFL
	331	100	N/A	90	4/01/83
Other	30	90	N/A	0	4/01/83
	70	100	100	0	BFL
	118	0	0	0	BFL
	119	0	0	0	BFL
	260	0	N/A	0	5/01/83
	268	0	N/A	0	5/01/83
	269	0	N/A	0	5/01/83
	298	90	N/A	0	5/01/83
	307	90	N/A	0	5/01/83
	309	0	N/A	0	5/01/83
	316	95	N/A	0	4/01/83
	317	100	N/A	0	BFL Note 3
	334	100	N/A	0	BFL Note 4

Notes:

3. Startup presently checking-out all annunciators. Blank windows may be illuminated from time to time but all will be de-energized before fuel load.
4. Permanent storage facility not yet complete.