

TEXAS UTILITIES SERVICES INC.

2001 BRYAN TOWER - DALLAS, TEXAS 75201

TXX-2929

December 21, 1978

Mr. R. Naventi
Licensing Project Manager
Light Water Reactors Branch No. 4
Division of Project Management
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

COMANCHE PEAK STEAM ELECTRIC STATION
NRC ROUND RADIOLOGICAL ASSESSMENT BRANCH QUESTIONS
DOCKET NOS. 50-445 & 50-446
FILE NO. 10010

Dear Mr. Naventi:

Enclosed are our initial responses to your Radiological Assessment Branch round one questions (Q331.5-Q331.7). As agreed, these are being transmitted to you by letter to expedite response time. These responses will be retransmitted to the commission in our next formal FSAR amendment.

If you have any questions about this matter, please contact this office.

Sincerely,

C. K. Feist
C. K. Feist

CKF:tls
Enclosure
cc: H. C. Schmidt

7812270259

Boo1
SE
111

Q331.5 Your response to item 331.1 does not clearly identify the individual responsible for the independent radiation protection review of design changes, nor how that individual is placed in the Texas Utilities Services, Inc./Texas Utilities Generating Company organization, relative to the individual responsible for the overall design. Describe how this radiation protection review is to be independent from the overall design process.

R331.5 The individual responsible for the independent radiation protection review or design change is the TUSI Health Physicist. This individual reports directly to the Manager, Nuclear Services and as such is independent from the overall design process which is under the Project Engineer. Refer to Figure 13.1-3.

Q331.6 Your response to item 331.3 is not acceptable. While use may be made of published average data on experience at operating plants in evaluating likely doses, the dose assessment addressed in 12.4 should be plant-specific. Describe the calculational model or engineering judgments from which your estimate of 421 man-rems is derived, taking into account actual projected dose rates at Comanche Peak, design improvements specific to Comanche Peak, and actual expected staffing levels and man-hour requirements for the various operations at Comanche Peak. An acceptable dose assessment is described in Regulatory Guide 8.19.

R331.6 Refer to Table 331.6-1

Q331.7 Your response to item 331.4 is incomplete. Describe the traffic flow, for male and female workers, from access points through the plant and the change areas, for duty assignments in high-zoned areas, and return. Describe how these facilities will be used to control the spread of radioactive materials to uncontaminated areas by such workers.

R331.7 Figure 331.7-1 is an example of the type of arrangement which will be made to control the spread of contamination and to accommodate both male and female radiation workers. Such arrangements will be made in those contaminated areas of the station as required by the conditions of the radiation work permit. Friskers or similar radiation detecting instruments will be utilized at the step of pads to ensure that contamination is not carried to uncontaminated areas.

If in any area, arrangements similar to Figure 331.7-1 are not feasible, a single control point will be established and an appropriate undergarment will be worn if necessary to accommodate both male and female radiation workers. Female workers will use the first aid room as a change area.

The decontamination facilities as shown in Figure 12.3-21 will be used as required for decontamination of both male and female workers.

CPSES/FSAR

TABLE 331.6-1 (Sheet 1 of 3)

OCCUPATIONAL DOSE ESTIMATE BY
SPECIFIC TASK FOR VARIOUS WORK FUNCTIONS

<u>Task</u>	<u>Est. Dose Range mrem/hr</u>	<u>Duration manhrs/yr</u>	<u>Dose Man-Rem</u>
1) Reactor Operations & Surveillance			
a) Routine Patrols & Operations	.25/300	18,000	8
b) Radiation Surveys	.25/2.5	5,500	6
c) Radiation Surveys	2.5/100	4,000	13
d) Radiation Surveys	>100	50	7
e) Periodic Tests, Insp. & Calib.	.25/2.5	10,000	3
f) Periodic Tests, Insp. & Calib.	2.5/25	1,500	4
* g) Control Room Operations	<.25	50,000	5
			46
* The control room is a Zone I radiation area, but it is included in this table due to the large duration associated with it.			
2) Routine Maintenance			
a) Normal Operations			
1) Pumps	.25/50	2,500	5
2) Valves	.25/50	4,000	10
3) Instrument & Controls	.25/25	4,000	3
4) Motors	.25/25	1,500	2
5) Heat Exchanger	.25/1500	1,000	4
6) Waste Processing Systems	.25/1500	1,000	7
7) Demineralizer (Resin Change)	2.5/25	1,000	3
8) Filter Changes	2.5/25	1,000	3
9) HVAC	.25/25	500	1
10) Misc.	.25/25	1,500	6
b) Refueling Operations			
** 1) Preparation for Head Removal	5/200	1,900	40
2) Head Removal	5/200	80	11
3) Upper Internals Removal	2.5/150	100	2
4) Installation of Upper Internals	2.5/150	100	2

CPSES/FSAR

TABLE 331.6-1 (Sheet 2 of 3)

<u>Task</u>	<u>Est. Dose Range mrem/hr</u>	<u>Duration manhrs/yr</u>	<u>Dose Man-Rem</u>
** 5) Preparation for Head Installation	5/1500	1,900	45
6) Head Installation	5/200	80	11
7) Refueling Cavity Clean-Up	5/100	500	10
8) Preparation for Contain- ment Closure	2.5/100	2,800	36
9) Steam Generator Test	5/15000	1,000	10
10) Incore Instrumentation	10/50	500	10
			221
** Items (1) and (5) include detensioning/removal of reactor stud bolts and installation/tensioning of same.			
3) Inservice Inspection	2.5/200	700	13
4) Special Maintenance			
a) Steam Generator Maint.	5/15,000	4,000	22
b) Reactor Coolant Pump Seal Insp. & Repair	5/500	1,000	8
c) Evaporator	5/100	500	5
d) Heat Exchanger	5/100	700	10
e) Demineralizer	5/100	500	6
f) Safety System Modification	5/100	500	5
g) Pumps	.25/100	700	6
h) Waste Processing System	.25/1500	500	7
i) Motors	.25/25	500	5
j) Instrument & Control	.25/25	300	3
k) HVAC	.25/25	500	3
			80
5) Waste Processing	2.5/100	4,000	29

CPSES/FSAR

TABLE 331.6-1 (Sheet 3 of 3)

<u>Task</u>	<u>Est. Dose Range mrem/hr</u>	<u>Duration manhrs/yr</u>	<u>Dose Man-Rem</u>
6) Refueling			
a) Health Physics Operations	.25/1500	7,000	14
b) Fuel Handling	2.5/25	1,300	12
c) Testing & Inspections			
Specific to Refueling	.25/100	6,000	<u>6</u>
			32

Containment

NORTH

Personnel Air Lock

Shield

Safeguards
Building

Laundry Hampers

Step Off Pads

Men's Change Area

Women's Change
Area

Safeguards and Auxiliary
Building Corridor

Flow 83176"

Not to Scale

Figure 331.7-1

CONTAINMENT BUILDING CORRIDOR FLOW 83176"