

7/19/84

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSIONBEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

TEXAS UTILITIES GENERATING  
COMPANY, et al.(Comanche Peak Steam Electric Station  
Station, Units 1 and 2)Docket Nos. 50-445-1  
and 50-446-1CASE'S REQUEST TO APPLICANTS AND NRC STAFF  
FOR ADMISSIONS

Pursuant to 10 CFR 2.742, CASE (Citizens Association for Sound Energy), Intervenor herein, requests admission by the Applicants and NRC Staff, separately, of the truth of the following matters of fact regarding the protective coatings issue of maximum roughness surface preparation:

1. Any and all coatings which are used inside the containment must go through a qualification test generally referred to as a DBA test (design basis accident test).
2. When coating inorganic zinc with a topcoat, a DBA test is required.
3. At Comanche Peak, it is a common practice to coat inorganic zinc with a topcoat.
4. The following has to do with the DBA test, design criteria, acceptance limits, etc., used for protective coatings at Comanche Peak:
  - (a) Carboline had a DBA test performed in 1976 or 1977.
  - (b) Carboline prepared test panels and sent them to Oak Ridge National Laboratories for testing.
  - (c) Oak Ridge National Laboratories performed the test and sent the results back to Carboline.

4. (continued):

- (d) At this point, usual industry practice would have been to send the results of the test to the Architect/Engineer for its evaluation.
- (e) However, in the case of Comanche Peak, usual industry practice was not followed because the Architect/Engineer did not have any design criteria for this.
- (f) Design criteria, in normal industry practice, sets up standards by which the test is performed and sets forth the acceptance limits.
- (g) Acceptance limits are necessary in order to perform an evaluation.
- (h) Acceptance limits were not established at Comanche Peak.
- (i) Since acceptance limits were not established at Comanche Peak, an evaluation of coatings at Comanche Peak was not performed.
- (j) When Carboline had the DBA test performed, the panels were prepared with a surface profile range of between 1 and 3 mils.
- (k) Therefore, no profile beyond the range of between 1 and 3 mils (either over 3 mils or under 1 mil) is allowed.
- (l) If a profile beyond (either over or under) the range used for the DBA test panels is to be allowed, new panels must be submitted for retesting.
- (m) The retesting referred to in (l) above is required by section 6. Design Verification, of ANSI N45.2.11 (to which Applicants are committed /1/).
- (n) ANSI N45.2.11 requires that anytime a system is modified, it must be retested.

---

/1/ See Applicants' Exhibit 148, ANSI N45.2.11, "Quality Assurance Requirements for the Design of Nuclear Power Plants," Draft No. 2, Rev. 2, May 1973.

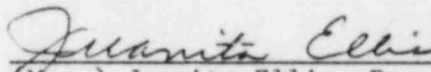
4. (continued):

- (o) Therefore, ANSI N45.2.11 requires that if the surface profile or thickness is changed, new panels must be submitted for retesting.
- (p) Testing of new panels outside the range of 1 to 3 mils has not been done for Comanche Peak.
- (q) When inorganic zinc is coated with a topcoat, a DBA test must be done for the combination (not just individually for the inorganic zinc and individually for the topcoat).
- (r) Inorganic zinc coated with a topcoat adheres by mechanical adhesion only, rather than by chemical adhesion.
- (s) Because inorganic zinc coated with a topcoat adheres by mechanical adhesion only, the importance of having a good profile is increased.
- (t) The DBA test which was performed for Comanche Peak was performed at a temperature much less than the temperature to be expected during a Loss of Coolant Accident (LOCA).
- (u) ANSI N45.2.11, Section 6 Design Verification, 6.3.3 Qualification Testing, requires that testing shall demonstrate adequacy of performance under the most adverse design conditions.
- (v) Under LOCA conditions, the polymer in the coating will begin to degrade.
- (w) When the polymer in the coating begins to degrade, it will also lose its density.
- (x) Loss of density will change the rate of flow through the water.
- (y) Applicants' calculations indicate from 90 to 120 lbs. per cubic ft. density.

4. (continued):
- (z) Actual density will be considerably less than 90 lbs. per cubic ft.
  - (aa) Following a LOCA, when paint particles begin to flow through the nozzles, the particles will probably be sheared.
  - (bb) This shearing must also be considered.
  - (cc) This shearing has not been considered by Applicants.
  - (dd) Applicants' calculations only consider the density of coatings when they have been uncontaminated or unexposed to LOCA conditions (i.e., they have not been irradiated).
  - (ee) Irradiation, contamination, or exposure to LOCA conditions will also affect the density of the coatings.
5. The recoating of inorganic zinc in the manner performed at Comanche Peak is not standard industry practice.
6. The recoating of inorganic zinc in the manner performed at Comanche Peak could be a very dangerous practice and is a matter of much concern to the NRC Staff.
7. Applicants are currently and have been in the past committed to:
- (a) ANSI N101.2, "Protective Coatings (Paints) for Light Water Nuclear Reactor Containment Facilities;"
  - (b) ANSI N5.12, "Protective Coatings (Paints) for the Nuclear Industry;"
  - (c) ANSI N45.2.13, "Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants."
8. Carboline recommends a minimum of a 1 mil surface profile for 191 Primer and CZ11 Primer.

9. Carboline has stated that they feel that a maximum of a 3 mil surface profile is acceptable for 191 Primer and CZ11 Primer.
10. Applicants have no documentation prior to 5/4/84 that Carboline recommends a minimum of a 1 mil surface profile for 191 Primer and CZ11 Primer.
11. Applicants have no documentation prior to 5/4/84 that Carboline felt that a maximum of a 3 mil surface profile was acceptable for 1 . Primer and CZ11 Primer.

Respectfully submitted,



(Mrs.) Juanita Ellis, President  
CASE (Citizens Association for Sound  
Energy)

1426 S. Polk  
Dallas, Texas 75224  
214/946-3446