



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

NOV 9 1984

MEMORANDUM FOR: See Attached List

FROM: Vincent S. Noonan, Project Director  
Comanche Peak Technical Review Team

SUBJECT: TRANSMITTAL OF DOCUMENTS FOR INFORMATION

Enclosed for your review and information is the following document:

Case comments on Applicant's 10/8/84 Program Plan to  
Respond to 9/18/84 Technical Review Team (TRT) Report.

Copies of these documents are being placed in the Public Document Room,  
Comanche Peak Unit 1 and 2, Docket No.s 50-445/50-446.

A handwritten signature in cursive script, appearing to read "C. Noonan".

Vincent S. Noonan, Project Director  
Comanche Peak Technical Review Team

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CASE COMMENTS ON APPLICANTS' 10/8/84 PROGRAM PLAN TO  
RESPOND TO 9/18/84 TECHNICAL REVIEW TEAM (TRT) REPORT

General Comments

Applicants 10/8/84 Plan places the same individuals in charge of correcting the problems who initially helped cause or allowed the problems to develop to begin with.

ITEM NUMBER I.c -- Electrical Conduit Supports

Page 2 of 4, item 3.(b): Analysis should include taking FSAR 3.7B.3.5 into account. This is important because Applicants did not do this in regards to cable trays. It also should be noted that C.C.'s and DCA's do not get reviewed until the very end of the design process.

ITEM NUMBER II.a -- Reinforcing Steel in the Reactor Cavity

Page 1 of 3, item 3. This is not the only reinforcing steel which was left out of the concrete. See attached pages VII - 16 through - 23 and XXVII - 42 through - 48 from CASE's 8/22/83 Proposed Findings and Fact and Conclusions of Law (Walsh/Doyle Allegations).

Also, the effect of leaving out the reinforcement steel must now be included in the analysis of the upper lateral restraint, a Walsh/Doyle allegation which is at issue in the operating license hearing. When

Applicants did the analysis referenced in their Motion for Summary Disposition, they included the wall where the reinforcing steel should have been, and in their analysis, they assumed that the reinforcing steel was there. See attachments to Affidavit of Robert C. Iotti, attached to Applicants' 5/20/84 Motion for Summary Disposition Regarding Upper Lateral Restraint Beam.

ITEM NUMBER II.b -- Concrete Compression Strength

Pages 1-4: The specific allegations set forth by the Technical Review Team (TRT) are not the only ones which the TRT should be investigating. There have been allegations for years (and also recently) about problems with concrete compressive strength (as well as other problems with concrete).

There were confirmed problems with cold weather concrete curing. See attached 9/12/83 letter to the Board from NRC Staff Counsel, attaching copies of Inspection Reports 77-01 and 77-04, regarding cold weather concrete curing. See also attached Inspection Report 83-24/83-15, by then-NRC Senior Resident Inspector - Construction, regarding placement and curing of concrete during freezing weather, pages 9-11. This also ties in with the following.

CASE Witness Mark Walsh is well qualified to speak to this issue. As discussed by Mr. Walsh in CASE's Answer to Applicants' Motion for Summary Disposition on Richmond Inserts, it appears that:

- (1) The compressive strength of the concrete at Comanche Peak is not as claimed by the Applicants.

- (2) A review of NCR's referenced in CASE Attachment D indicates that the Applicants' concrete is not in compliance with the original design.
- (3) A review of NCR's (CASE Attachment D) indicates that the quality and compressive strength of the concrete at Comanche Peak is indeterminate at best, and in some instances appears to be deficient. This review calls into question the quality of all of Applicants' concrete.
- (4) It appears that the field cure cylinder for concrete pour #201-5781-001 for the Reactor #2 cavity wall of 2/13/76 was 3559 psi-lbs. (below Applicants' stated design strength of 4000 psi-lbs.) and the two standard (or laboratory-tested) cylinders indicated a strength of 4257 and 4219 psi-lbs. (which is under Applicants' claimed actual strength of 4500 psi to 5000 psi).

It also appears that this concrete was never retested.

- (5) On many of the Nonconformance Reports (NCR's) or Deficiency and Disposition Reports (DDR's, the predecessors to NCR's) discussed in Attachment D, there are numerous concrete pours which had field cured cylinder compressive strengths less than the 4000 psi which the Applicants claim is their design strength.
- (6) At one point Brown & Root informed Texas Utilities that they would retest each concrete pour which was listed on the deficiency report, the attached documents indicate that they did not.

In fact, on DDP No. C-449, for example, they only retested 6 pours out of 20; there is no indication that they ever retested

the others; on DDR No. C-457, they retested 2 out of 16; on DDR No. C-499, they retested 17 (plus one additional second retest of one pour) out of 39; on DDR No. C-529, they retested 14 (plus additional second retests of three pours) out of 22 (a larger percentage than they tested on any of the other pours involved in documents which are discussed); and on NCR C642, they retested 8 out of 20.

- (7) On CASE Attachment D, there is a listing for several DDR's (or NCR's) which shows not only those field-cured cylinders which tested below 4000 psi-lbs., but also (marked by \*\*), those standard (or laboratory-tested) cylinders which tested below 4000 psi-lbs.

It is important to note that in no instance were concrete rebound hammer tests done for the concrete where both the field-tested and the standard (or laboratory tested) concrete showed to be below 4000 psi-lbs. All of the concrete rebound hammer retests were done for concrete pours where the standard (or laboratory tested) concrete initially showed to be 4000 psi-lbs. or above.

- (8) Applicants did not promptly and effectively institute action to correct the cause of the problem.

Further, despite the number and extent of the problems identified on the DDR's, all of them were marked: "Reportable Deficiency: No."

On NCR C642, Revision 0 was not available for file, which indicates a breakdown in document control.

C642R1 was issued to delete the requirement for a Corrective Action Report (CAR) to be written up; C642R2 was issued to add back the requirement for a CAR. A review of that CAR, S-8, was totally inadequate and did not identify the root cause or correct the real problem.

- (9) Applicants appear to be assuming that a sister pour near one which was deficient is a good pour (based on the initial field and laboratory tests similar to those which indicated that the other pour was deficient) and they use it as a comparison for the deficient pour. How can they be certain that the tests for the supposedly good pour are correct and those for the deficient pour are incorrect? How do they know that it is not the other way around; i.e., that the tests for the deficient pour are correct and the tests for the good pour are incorrect? If this were in fact the case, it could mean that instead of the retests showing that both pours are good, it actually means that both pours are deficient.
- (10) There is enough variation of results within the same group of comparison tests to call into question the accuracy of the tests.
- (11) There are documents in the record which indicate that there were also extensive problems with the water meters which were used to measure the amount of water which went into the concrete pours; this could have an adverse impact on the quality of the concrete.
- (12) Applicants stated that they reviewed a representative sample of test reports of concrete used at CPSES and also they they reviewed

NCR's regarding concrete, and that from their review, they concluded that test conditions are representative of conditions at CPSES. There was not any documentation to support Applicants' statements, and it is unknown what test reports and NCR's they reviewed, but the ones which Mr. Walsh reviewed certainly did not lead him to the same conclusion as reached by Applicants.

- (13) The testing procedures used to certify the concrete at Comanche Peak were not in conformance with established codes. This is especially important since these were retests done of concrete pours where field-tested concrete cylinders tested out at less than desired.

The retests which were done apparently used a concrete rebound hammer test to verify that concrete which appeared to be defective or weaker than desired was, in fact, adequate. This test was a rebound test and would fall under ASTM designation C805-79 (see Attachment E hereto). This ASTM specification states at paragraph 3.2:

"This method is not intended as an alterative for strength determination of concrete." (Emphasis added.)

ASTM C805-79 also stated in paragraph 3.1:

"The rebound number determined by this method may be used to assess the uniformity of concrete in situ, to delineate zones or regions (areas) of poor quality or deteriorated concrete in structures, and to indicate changes with time in characteristics of concrete such as those caused by the hydration of cement so that it provides useful information in determining when forms and shoring may be removed."

It appears that Applicants have used a concrete rebound test to qualify substandard concrete to justify poor concrete in the field.

- (14) Even if one were to accept the concrete rebound test as an acceptable method for retesting the strength of the concrete (which would be contrary to ASTM C805-79), ASTM also sets forth certain specific criteria for testing and reporting, several of which Applicants have not met. (Mark Walsh did not have time to go into detail regarding these in his Affidavit, but attached some documents, Attachments E, F, and G, to his Affidavit, which contained some information in this regard.)
- (15) There are also some additional cautions and drawbacks regarding the use of concrete rebound tests which are discussed in Attachments E, F, and G. For example:
- (a) The tests must not be regarded as a substitute for standard compression tests.
  - (b) The method should be used for comparative purposes.
  - (c) The method tests only the surface and does not give a good indication of the actual strength of the concrete.
  - (d) The results of the tests are affected by a wide variety of conditions, such as the age of the test specimen, the surface and internal moisture condition of the concrete, the type of coarse aggregate, the type of cement, the type of mold, the carbonation of the concrete surface, the smoothness of the surface under test, the size,



shape, and rigidity of test specimens, whether or not the same test hammer is used for the tests, hammer type, etc. Much of this information is not indicated on the concrete rebound hammer test reports referenced in CASE Attachment D hereto.

(16) Once Applicants discovered that there was the possibility of deficient or defective concrete, what they should have done to test it was to drill a core sample for each pour and test that.

(17) Mark Walsh stated that his brief review of the documents referenced in CASE Attachment D hereto, coupled with the statements made in ASTM C805-79 and other documents which he attached, have raised doubts in his mind, not only regarding the Richmond inserts, but also regarding the quality of all of the concrete at Comanche Peak.

There are other more acceptable and reliable methods available to retest the concrete at Comanche Peak. For further information regarding this, CASE Attachment D and supporting documents for it, contact CASE President Juanita Ellis.

In addition, there are other documents and information which Mrs. Ellis would like to discuss with the Technical Review Team's expert on concrete.

(See attached portions of CASE's Answer to Applicants' Statement of Material Facts Relating to Richmond Inserts As To Which There Are No Material Facts, in the form of Affidavit of CASE Witness Mark Walsh, dated 9/11/84, answer 8, pages 13-22; CASE Attachment D thereto, Summary of Selected Documents Regarding Concrete Pours at Comanche Peak; and CASE

Attachment E thereto, ASTM C805-79, "Standard Test Method for Rebound Number of Hardened Concrete.")

ITEM NUMBER II.c -- Maintenance of Air Gap Between Concrete Structures

It is CASE's understanding that there was an area between buildings, where the Safeguards Building connects with the Containment Building, at a door, where there was no gap. (If necessary, CASE believes it can obtain affidavit(s) regarding this.)

The TRT should also be certain that the area between Category I and Category II structures are checked. If Category II structures are not designed as seismic Category I, they could possibly fall into Category I structures under seismic conditions; so they must also be reanalyzed.

ITEM NUMBER II.d -- Seismic Design of Control Room Ceiling Elements

This was an allegation sent by CASE on 3/11/83 to the NRC's Office of Inspection and Enforcement (see attached copy of Inspection & Enforcement (I&E) Report 50-445/83-24, 50-446/83-15, the inspection/investigation of this and other matters by then-NRC Senior Resident Inspector - Construction at Comanche Peak, Robert Taylor item 10, pages 8 and 9 of Appendix).

Page 3 of 10, paragraph 3: Why was it originally constructed as non-seismic and non-safety related? Who created this philosophy? And where else in the plant has that same philosophy been used?

Page 4 of 10, paragraph 2: Was the evaluation for this particular item and all items under consideration for item II.d in compliance with FSAR section 3.7B.3.5 (copy attached), which requires a 50% increase in load above the peak for the response spectra curve (i.e., 1.5 times the peak) to take into account multimodal response. Assurance of this is necessary because the Applicants neglected to consider this 50% increase in the design of the cable tray supports, as evidenced by the testimony of Cygna Energy Services in the May 1-2, 1984, operating license hearings (contact CASE for transcript pages). In addition, Applicants had allowed their cable tray supports to be overstressed, even without including the 50% increase. Also, Applicants have made inappropriate assumptions in their analyses. One of the inappropriate assumptions is that cable tray supports are always rigid in the vertical direction (i.e., a natural frequency above 33 hz.). The importance of the cable tray supports to the ceiling is that the same group of engineers qualified both structural appertenances.

Page 5 of 10, paragraph 4(a): Applicants state:

"The present design of the ceilings was predicated on the position that failure of architectural features with small masses would not be adverse to the occupants of the control room."

What Applicants are saying here is that they deliberately designed the ceilings with the idea that it was all right for the individual members (such as lighting fixtures, parts of the ceiling itself, etc.) to fall on the control room operators, but that this would be all right because the "architectural features" have "small masses."

Obviously, the Applicants have not defined what are "small masses." A small mass could be a dust flake, from which there would be no injury to the control room operators. But a "small" mass might also be a piece of gyp board falling on a control room operator or a lighting fixture falling on a control room operator. These two items could also be (and apparently were) considered "small masses" by the Applicants. These two "small" masses could be sufficient to injure and incapacitate the control room operator.

It should also be noted that Applicants' present position is certainly not what was indicated in the inspection/investigation report done by then-NRC Senior Resident Inspector - Construction at Comanche Peak, Robert Taylor (see copy attached of I&E Report 50-445/83-24, 50-446/83-15, item 10, pages 8 and 9 of Appendix, especially page 9, second paragraph). It should also be noted that Mr. Taylor stated in his report that (item 17, page 17 of Appendix):

"The SRIC met with one or more of the persons identified in paragraph 1 of this report at frequent intervals during the inspection period to discuss the licensee's position and proposed actions on a significant number of issues which occurred during the period."

Further, if the report had been inaccurate, the Applicants should have called this to the attention of Mr. Taylor and the NRC Staff.

Page 5 of 10, item 4(a)(1), first paragraph: When was this "initial evaluation" made? It appears that it was first done for Applicants' Program Plan in answer to the TRT Report. Obviously, it should have been done before they put up the control room ceiling to begin with. It also appears that Applicants propose -- apparently without having done any analysis or

made any calculations -- to install restraining elements for horizontal motion, in the interest of expediency. They should perform calculations and analyses before making their fix. And CASE should be allowed to have CASE Witness Mark Walsh, who is the individual who first brought this to CASE's attention, review such calculations and analyses.

Another question is: Of all the hundreds or thousands of people who have gone through, or worked near or in the control room since that ceiling has been up, why didn't anyone else besides Mr. Walsh recognize the design faults? Or did others notice it, only to be told it was none of their business; or were they intimidated and afraid to mention it because they were afraid they might lose their jobs if they did?

Page 6 of 10, item (2): What is a "total seismically qualified sloped ceiling"? Wasn't that what they were supposed to have had before? The NRC Technical Review Team should require that Applicants submit the design before they allow Applicants procure or install this latest "fix." Further, CASE Witness Mark Walsh should be provided with the design and allowed to analyze and comment on it before procurement or installation proceeds.

Page 7 of 10, item (3): Section 3.7B.2.8 of Applicants' FSAR (see attached copy) states:

"Non-Category I equipment and components located in seismic Category I buildings are investigated by analysis or testing, or both, to ensure that under the prescribed earthquake loading, structural integrity is maintained, and to ensure that they do not adversely affect the integrity or operability, or both, of any designated seismic Category I structure, equipment, or component."

Any such evaluation should be in compliance with Section 3.7B.3.5 (copy attached) of Applicants' FSAR, which requires a 50% increase in load above the peak for the response spectra curve (i.e., 1.5 times the peak) to take into account multimodal response. As discussed in the preceding, assurance of this is necessary because the Applicants neglected to consider this 50% increase in the design of the cable tray supports, as evidenced by the testimony of Cygna Energy Services in the May 1-2, 1984, operating license hearings (contact CASE for transcript pages). In addition, Applicants had allowed their cable tray supports to be overstressed, even without including the 50% increase.

CASE Witness Mark Walsh should also be allowed to review and analyze Applicants' evaluations.

Page 8 of 10, item (b): This needs to be specifically considered in regard to this particular item, rather than assuming that it will all be taken care of through some generic "fix."

Page 8 of 10, item (c), last sentence states: ". . . would not cause unacceptable damage . . ." (emphasis added). What would be acceptable damage to safety-related components?

Page 9 of 10, first paragraph: Did Applicants consider a 2 to 1 projectile range? They should not consider just something falling down, but also going horizontally and then falling down. (CASE understands that this is the procedure followed by other engineering firms.)

COMMENTS ON APPLICANT'S PROGRAM PLAN AND ACTION PLANS (October 8, 1984)

General Plan

(Page 3 of 15)

I. Personnel Qualifications /Testing: This is being doen in compliance with existing CPSES QA provisions--when the QA/QC portion of the TRT review has not yet been done by the NRC.

IV.A. (page 4 of 15): "The personnel assignments to this project reflect the importance that TUEC has attributed to its successful conduct and completion."

But on page 7 of 15 in this section, they have put VEGA in charge of QA/QC--and TOLSON in charge of protective coatings! And (on page 4 they put MERRITT in charge of the whole sheebang as Program Manager! He of T-Shirt Incident and Lipinsky memo fame. . . ) (P.S. When is someone going to get Merritt on the stand???)

In addition (page 8 of 15) McBay is in charge of Issue I.c/II.d-- and Vega is in charge of Issue I.d.1.

NOTE: On page 10 of 15 they say that the assignment of these persons to their tasks was based on "the need to utilize personnel with demonstrated ability to make objective evaluations and decisions"  
TOLSON? VEGA? McBAY? MERRITT?

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ITEM NUMBER I.c - Electrical Conduit Supports

We need discovery on many items listed in this section that are applicable to ongoing items at issue in the other portion of the hearing--but of which we were unaware of their existance until now. These items include:

- All documentation associated with the Damage Study Program. (Page 1 of 4)
  - All documentation associated with teh seismic/non-seismic interaction study performed "in 1983" including the walkdown of 287 rooms.
  - A copy of Engineering Instruction CP-EI-4.0-36 "Control of Seismic and Non-Seismic Component Interaction Evaluations) (ALL REVISIONS).
  - A copy of Engineering INstruction CP-EI-4.0-53 "Maintenance of Damage Study Analysis" (ALL REVISIONS).
  - A copy of DCA-4693 delineating support requirements for 2" and under diameter conduit (ALL REVISIONS).
  - A copy of all summary documents (4.a on page 2 of 4) , seismic analyses (4.b, page 3 of 4) (both original generis analysis and any later revisions) and all documentation of the sampling program to verify field installation (4.b, page 3 of 4).
  - Copy of Reg. Guide 1,29 (All revisions)
- \*CASE objects to the sampling program proposed by Applicant as being insufficient response to the concern.

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ITEM NUMBER I.d.1 -QC Inspector Qualifications

1. The NRC envisions a two-tier approach: if the qualifications, etc. are OK per procedure for a particular inspector, then his work is OK--but if it is not per procedure, then all of his inspections should be reviewed for adequacy and impact.

TUEC proposes a three-tier approach to qualify otherwise unqualified (per procedure inspectors) outside of the procedures by a SPECIAL EVALUATION TEAM--who are not identified by name in the program plan. This list of their evaluation criteria (page 5 of 8 under Phase II) includes "Other considerations deemed appropriate by the SET"--which could include anything and probably will! TUEC's assurance of "expertise" is hardly enhanced by putting such personnel as TOLSON and VEGA in charge of the program parts to begin with--and CASE assumes that similarly "experienced" personnel will be on the SET. This way, TUEC hopes to keep any hardware/documentation reviews to a bare minimum (page 6 of 8, A, 3rd para.)

2. The NRC required an evaluation of ALL electrical QA/QC inspectors.  
Applicant only commits to evaluation of every non-ASME electrical inspector Applicant (without proof) claims that the ANI has previously reviewed all ASME electrical training/certification records (page 4 of 8, 2nd paragraph after Example 5 paragraph; also 4.A first paragraph). (Curiously in 4.A TUEC commits to reviewing certifications for ALL electrical inspectors NO LONGER ON SITE, but only non-ASME for those currently on site. Is this directed against potential CASE witnesses???) WE NEED DISCOVERY RE ANI re ASME QA/QC inspector checks of certification/training, etc.
3. The review of all inspector files (Phase I) will be done by TUGCO Audit group (page 6 of 8, item C)--a group not known in the past for great work.
4. (Page 7 of 8, D, 3) Note that VEGA is Issue Coordinator for this item--not guaranteed to elicit confidence--especially since he is now in charge of QA--and was previously in charge of AUDITS.

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ITEM NUMBER I.d.2 - QC INSpector Tests

NOTE: Team leader for this item is VEGA.

(page 2 of 2) TUEC only commits to FUTURE tests under revised procedures (4, 2nd paragraph). This is not sufficient--all past tests need to be reviewed to any revisions. NRC would not have listed this item if they did not think that the existing procedures were not inadequate.

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ITEM NUMBER II.a - Reinforcing Steel in Reactor Cavity

We need discovery on:

- The analysis of "asbuilt" reactor cavity which will be performed (page 2 of 3, 4-Scope) by Gibbs & Hill (considering all applicable loading combinations).

NOTE: It is important that no calcs apparently were done at the time of approval of the addition of rebar to the next higher level to ensure that the "fix" was OK--THIS IS APPALLING "ENGINEERING".

- All documentation on all instances of reinforcement omission in all safety-related Class 1 structures (page 2 of 3, under Expanded Review)--including all documentation and engineering calcs, etc. supporting all dispositions.

ITEM NUMBER II.b - Concrete Compression Strength

(SEE ATTACHED PAGES FROM JUANITA)

ITEM NUMBER II.c - Maintenance of Air Gap Between Concrete Structures

1. Define "inaccessible areas" (page 2 of 6, under 3, 3rd paragraph) and define "conservative estimates" (same).
2. Define "best-effort" basis" (page 2 of 6, 4.1).
3. We need discovery on item 4.3 (page 3 of 6):  
All documentation regarding the re-evaluations to be performed "using similar methodology with revised stiffness (or spring values) based on actual debris characteristics and locations". This evaluation will "determine the changes in frequency from the original mode and evaluate interaction effects." (Also what changes in components, piping, etc. result.)

This sounds like a big mess--since they have not outlined the allegedly "similar" methodology, nor given the "revised values" (for two different types of values, yet!)--to produce calculations that will change the seismic calculations for possibly many components and piping (4.3, last sentence).

ITEM NUMBER II.c (continued)

Also, Mark says that the proper personnel to do the visual examination are engineers, not QC personnel who may not be trained to know what should and should not be there (e.g., concrete).

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ITEM NUMBER II.d - Seismic Design of Control Room Ceiling Elements

(SEE ATTACHED PAGES FROM MARK)

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ITEM NUMBER II.e - Rebar in the Fuel Handling Building

We need discovery on the design calcs to be performed that will "demonstrate that structural integrity will be maintained..." (page 2 of 3, 4 - Scopte).

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ITEM III.a.3 - Technical Specification for Deferred Tests

We need discovery on the authorization to defer the seven (7) preoperational tests by NRR--including the technical rationale, calculations, etc. for so doing.

We also need discovery on the special test exceptin to the technical specification for snubber operability (page 1 of 2, 3-Background). CASE had filed a motion for a new contention last fall (1983) regarding the punch list and the thermal expansion tests and the cases of snubber failure during hot functional tests--and this all points to data that could allow our contention in at this time--or at least point out that they still have problems with snubbers in the hot functional/thermal expansion tests.

(ATTACH CONTENTION)

ITEM NUMBER III.a.2 - JTG Approval of Test Data

We need discovery on all documentation regarding deferred preoperational testing completed as it is done.

We also need all information on thermal expansion test with the goal of completion at the 30% testing plateau (pre ascension to 50% power). This is crucial information (see III.a.3) regarding our proposed contention (disallowed last fall)--and also for rate hearings. Something is drastically wrong with snubbers--since in the August\_\_\_\_, 1984 meeting on site (between TRT and TUEC) regarding some motions for summary disposition, the TUEC personnel referred to a new "snubber reduction program". We want to know WHAT is going on, WHY, and if the FIX is permissible from an engineering (and cost) standpoint. (Why did they put in snubbers in the first place if they didn't need them? And why take them out if you do need them? Or is it not possible to fix the snubbers so that they will work during actual plant operations\_ etc. etc. etc.)

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GENERAL OBSERVATIONS ON PROGRAM PLAN:

1. Where the NRC demands 100% reinspections, TUEC decides for itself that it will do a "random sampling" of only a limited number of items in question.
2. Where NRC gives a set plan, TUEC adds at least one or sometimes more steps to dilute the force of the NRC plan (eg. QC inspector review of training).
3. TUEC blandly admits to not having calculations in many engineering cases. and promises to "generate them" NOW.
4. TUEC claims to have "found" documentation that the NRC TRT did not see or (for some reason) did not use.
5. TUEC downplays the significance of any item under discussion and asserts that it will prove that no problem is safety-related.
6. All cover sheets for each item were signed off (preparer, reviewer, program manager and senior review team member) on the same day, October 5, 1984-- While individual issue coordinators could well have had a due date of October 5--it does not seem that a thorough review of all such plans could have been reviewed by the review team leader (if he had several to review)--and especially that all could have been "reviewed" in depth by the program manager or the senior review team member ON THE SAME DAY. This shows that shallow "rubber-stamping" that will occur in this impressive-on-paper "defense-in depth" levels of review.
7. NOTE: Whoever signed the "Senior Review Team" on most issue cover sheets did so in a color of ink that did not reproduce--we can't read the signatures and need legible copies of all cover sheets.

J. McKnight  
(PDR)

Addressee List

E. Case  
J. McKnight (PDR)  
R.C. Tang  
R. Wessman  
A. Vietti  
J. Gagliardo  
R. DeYoung  
B. Martin, Region IV  
D. Hunter, Region IV  
C. McCracken

Team Leaders

J. Caivo  
L. Shao  
P. Matthews  
R. Keimig  
H. Livermore