



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

PDR

JAN 15 1985

Docket Nos. 50-445  
50-446

MEMORANDUM FOR: Docket File

FROM: D. C. Jeng, Comanche Peak TRT

SUBJECT: MINUTES OF TRT/TUGCO MEETING HELD ON JANUARY 7, 1985  
AT COMANCHE PEAK SITE

A list of attendees and agenda for this meeting are enclosed. Key issues discussed in the meeting are highlighted below:

I. INTRODUCTION

- Howard L. - Objectives of Meeting
- Overview of Action Plan for NRC
- CPRT Organization (Comanche Peak Response Team)
- NRC members at meeting had not received Howard L. letter to Vince Noonan dated December 12, 1984. Copies were provided at the meeting.
- All CPSES project activities will be overviewed by a third party.
- All work governed by procedures:  
First tier is Action Plan  
Other procedures as deemed necessary
- Qualification - CPSES Project Qualifications 3rd Party
- C. Hofmayer - Some of these points need concurrence by NRC/TRT representatives other than personnel at this meeting.
- Howard L. - Documentation
- C. Hofmayer - How is Quality Assurance related to 3rd Party (i.e., TERA)?
- Howard L. - Level of CPSES controlled by existing QA programs.  
TERA involvement is considered to be overview.  
Example: When TERA does reviews of calculations, these calculations will be checked.

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- C. Hofmayer - Suggest TUEC/TERA check with NRC-QA for concurrence of this approach.
- H. Levin - When TERA (Independent Party) became involved, logic diagrams were developed for each Action Plan to provide a path for resolution of the issues.

## II. CONCRETE COMPRESSIVE STRENGTH

- H. Levin - Identified concrete in time frame and outside time frame (succeeding six months).
- B&R prepare surfaces
  - Southwest Research (SWRI) performs test
  - Overview of statistical analysis by Jack Benjermin Associates (JBA), D. Veneciano, MIT, TERA.
- F. Webster - Identification of Population
- Steps in developing random sample of concrete at issue.
  - Comparison of Data - three statistical evaluations of rebound number data (slides attached).
- C. Hofmayer - Is it the intent to present data in all ways?
- F. Webster - No, we would like to select one method with NRC concurrence.
- R. Philleo - You have done what we requested. All that needs to be done is agree on the best method.
- H. Levin - We need the statistical method with the most power.
- R. Philleo - NRC objectives for today:
  - (1) preparation of surface
  - (2) operators be qualified (SWRI)
- S. Harrison - Test procedure
- SWRI to submit procedure and personnel qualifications
  - Test based on ASTM C-805-79
  - Documented on traveler:
    - Test location
    - Surface preparation
    - Tools used by craft

- R. Philleo - Schedule of test: January 21, 1985 for NRC witness; C. Hofmayer will also attend and can stay over to January 22, 1985.
- Would like to look at SWRI qualifications records during visit on January 21, 1985.

### III. CONDUIT

- H. Levin - Flow Chart (attached)
- Two samples selected: random & engineering
- Sampling restricted to 2"Ø and 1½"Ø
- Sample - as-built performed by CPSES project personnel with TERA overview.
- Gibbs & Hill perform evaluation with 3rd party review
- C. Hofmayer - What was criteria to build plant the first time?
- H. Levin - Train "C" conduit Non-"Q"/Non-seismic field run supported by generic details.
- Objective is to take a representative sample of the plant and see what happens with conduit.
- C. Hofmayer - For conduit 2"Ø or less, was considered not to be a problem being NNS. No adverse interaction. Are you trying to prove this is a valid assumption?
- H. Levin - The sample will attempt to show that no adverse interactions exist.
- C. Hofmayer - This approach may not be one of the design approaches in the FSAR. This criteria may change the philosophy of initial design assumptions. The plant is licensed to the FSAR, if the philosophy changes the FSAR would require changing.
- C. Mortgat - Conduit sample selection
- Random sample 1½"Ø and 2"Ø
- C. Hofmayer - Are you not considering conduit greater than 2"Ø?
- D. Witt - This larger conduit will be considered in review of the Damage Study Program.

- C. Mortgat - Population Identifications
- 3738 conduit runs
  - Random sample - 126 runs
  - Engineering sample subjectively selected based on selection criteria
  - Method of analysis
  - Third party activities
- H. Levin - Five additional runs were located after random sample was made. Total 3743 not 3738 as in December 28, 1984 letter. These will become a population by themselves.
- C. Hofmayer - Who is doing the survey?
- H. Levin - TUGCO engineering.
- C. Hofmayer - Are you (TERA) reviewing Gibbs & Hill?
- C. Mortgat - Yes.
- H. Levin/  
T. Wright - Conduit in the Control Room is part of the sample.
- T. Wright - Instruction for field walkdown (copy to NRC)
- Qualification of walkdown personnel
  - NRC looked at some documentation that has been generated. Isometrics, generic support sheet, special support sketches.
  - As-builts transmitted to New York (Gibbs & Hill)

#### IV. CONTROL ROOM CEILING

- H. Levin - Introduction
- Two areas: (1) Control Room Ceiling Design  
(2) Other Items Reviewed
  - Flow Chart of activities

- H. Levin - Objective/Philosophy  
How do systems perform? What is important?  
Restraint architectural items vertically ceiling  
to be modified such that it responds in a way  
where no unacceptable interactions occur install  
system to limit horizontal sway.
- S. Swan - Review experience data/past experience
- Presented slide show on past experience data, SYLMAR  
Converter Station ceiling
- EQE recommendation is to restrain architectural items  
from falling. Most important aspect.
- M. Wells - Described the architectural features and how they will  
be restrained (from model)
- Limit sway of unistrut frames through cross cables
- C. Hofmayer - What is primary support?
- H. Levin - The rod hangers with redundant aircraft cables.  
Additional cross cables will be used to limit sway.
- C. Hofmayer - One needs to assess the load on the attachments to the  
building structure. Need something (calculations) on  
paper to justify the design.
- H. Levin - We focused more on interactions than gross performance of  
the ceiling. Worst loading case due to total weight  
that exists in the ceiling is very small.
- C. Hofmayer - Need to show support is not a problem; that sway does not  
give unacceptable interactions.
- D. Witt - 3rd party review
- Specific reviews on Control Room ceiling
- Program (Damage Study) review (audit)
- Review of architectural items by Damage Study and  
3rd party review (100%)
- 3rd party review (audit) of Damage Study, review  
interactions during audit, review is multidiscipline
- 3rd party review includes treatment of all non-Category  
I items
- 3rd party Damage Study review to focus on key assumptions

SITE TOUR

1. Group visited Auxiliary Building (el. 810'-6" hallway, and el. 873'-6" to witness the surveying of train "C" conduit under item I.C of the Action Plan.
2. Group visited Control Building to observe areas being prepared for concrete Schmidt Hammer test (el. 807, Units 1 and 2 Cable Spread Room). Surface was not complete but was fairly smooth. Surface was approximately 1/4" deep on a column. R. Philleo stated after looking at the surface that 1/8" minimum depth is probably okay on a vertical surface. Philleo cautioned that the prepared surface should be as flat as possible. SWRI will be responsible for acceptable surface per ASTM C805-79 prior to test.

CLOSING DISCUSSION:

- H. Levin - We are proceeding on the items discussed and other plans. How do we get comments and concurrence from the staff?
- C. Hofmayer - This will be relayed to NRC management for this response.
- H. Levin - Seismic Gap  
Objective: What is there and where is it?  
We will try to put the history together based on project information and visual data that is assembled. All structures - both units. May analyze or remove whichever is most expeditious. Valid analysis where rotofoam is permanently left in place.
- C. Hofmayer - When in design process did rotofoam being left in place become part of the design?
- H. Levin - We have chosen to handle generic issue of debris in the mechanical issue Action Plan associated with the reactor vessel. Went over flow chart of issue.
- C. Hofmayer - Are you looking for approval of the Action Plan?
- H. Levin - Not approval; concurrence, we are going in an acceptable direction.

REACTOR CAVITY REBAR OMISSION

- H. Levin - Flow chart explanation
- We are looking at all rebar omissions to assure appropriate documentation.
  - Look at New York to site interface
  - 3rd party parallels CPSES project activities
  - 17 cases of omission being reviewed

REBAR IN FUEL HANDLING BUILDING

- H. Levin - Cutting treated as specific case
- Look at other cut locations
- C. Hofmayer - What are you looking at?
- H. Levin - We are looking at locations where two layers of rebar are present. We will go look at hilti bolt length. Also, this particular crew's activities will be reviewed for hilti installation activities.
- C. Hofmayer - Procedure review; control of drill bits; quantity of drill bits versus quantity of bars that can be cut. Is there a correlation to bits purchases versus bars cut?

MINUTES TAKEN BY:

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C. R. HootonMINUTES ACCEPTABLE  
AS DOCUMENTED:

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Howard A. Levins

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Charles H. Hofmayer

## ATTACHMENT

## ATTENDANCE LIST FOR JANUARY 7, 1985 TRT MEETING

<u>ATTENDEES</u>	<u>COMPANY</u>	<u>PHONE NUMBER</u>
Howard Levin	TERA/TENERA	MD-301-654-8960 TX-817-897-4881 x895
Terry Langowski	NRC/TRT	301-443-7901
H. Shannon Phillips	NRC RIV Sr. Resident	FTS 897-2201
C. Hofmayer	NRC/TRT	516-282-2317
Randy Hooton	TUGCO	817-897-4881 x421
Chris Mortgat	TERA/TENERA	415-845-5200
Scott Harrison	TUGCO	817-897-4881 x591
Tim Wright	TUGCO	817-897-4881 x861
Gary Merka	Brown & Root	817-897-4881 x477
Fred Webster	JBA, Inc.	415-969-8212
Douglas Witt	TERA/TENERA	415-845-5200
Paul Smith	EQE	415-495-5500
Sam Swan	EQE	415-495-5500
Mark Wells	CPPE	817-897-4881 x477
Robert Philleo	Consulting Eng.	703-256-4183