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July 2, 1986  
6410-68

*Designated  
original  
Cm Trammell*

Mr. David Jeng  
United States Nuclear Regulatory Commission  
Phillips Building  
Mail Stop 316  
7920 Norfolk Avenue  
Bethesda, MD, 20814

Subject: Audit of Comanche Peak Train C Conduit Program

Dear Mr. Jeng,

Attached is an internal TES memo concerning the subject audit.

If you have any questions do not hesitate to contact Mr. Rivard or the writer.

Very truly yours,

TELEDYNE ENGINEERING SERVICES

*Donald F. Landers*

Donald F. Landers  
President

DFL:mld  
attachment

cc: V. Noonan (NRC)  
C. Trammell (NRC)  
A. Vietti-Cook (NRC)  
G. Bagchi (NRC)  
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# MEMORANDUM

TO: D. F. Landers

FROM: J. J. Rivard *JJR*

DATE: July 2, 1986

PROJECT: 6410C

SUBJECT: Audit of Comanche Peak Train C Conduit Program at Impell Corporation's Walnut Creek, CA Office

Attached is a copy of the Trip Report written by Giuliano DeGrassi of Brookhaven National Laboratory. The Trip Report consists of an outline of the audit discussions. Specific areas included: A review of the program status, an outline of Impell's review of Ebasco, and Gibbs and Hill analyses and Impell's response to NRC, TERA and CYGNA technical issues raised. In addition is a list of Action Items defined to close out the methodology audit.

The following concerns the proposed resolution to some Action Items.

## Action Item 2

This concern was raised by the NRC review team. The concern was whether 4% damping for OBE level loading and 7% for SSE are appropriate for conduit supports with Unistrut-type supports instead of the lower values used for piping systems. The basic question is whether the intent of Regulatory Guide 1.16 is met. Regulatory Guide 1.61 calls for 4% damping for OBE level loading and 7% for SSE for bolted structures. In Impell's presentation of their justification of these damping values, they list other plants which used 4% and 7% damping for conduit with similar Unistrut supports. If in fact these damping values are acceptable at other nuclear plants (I believe they are), the only justification required should be to verify this in addition to verifying that the conduit supports at these plants are similar to those at Comanche Peak.

## Action Item 3

The NRC review team raised a concern for the TUGCO and Impell proposal to use a Factor Safety of 3 for Hilti Bolts for the "Train C" conduit supports. Since the capacity of any expansion anchor is very dependent upon its installation, it is the opinion of the author that before this can be considered, the two things which must be established are the following:

1. What procedure were these Hilti's installed to?
2. Were the Hilti installations subject to QC inspection?

JJR:jej