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

DEC 0 7 1984

MEMORANDUM FOR: James P. Knight, Assistant Director
for Components and Structures Engineering
Division of Engineering

THRU: George Lear, Chief
Structural and Geotechnical Engineering Branch
Division of Engineering

P. T. Kuo, Leader
Structural Engineering Section B
Structural and Geotechnical Engineering Branch
Division of Engineering

FROM: Harold Polk, Structural Engineer
Structural Engineering Section B
Structural and Geotechnical Engineering Branch
Division of Engineering

SUBJECT: TRIP REPORT FOR MEETING - NOVEMBER 7-9, 1984, WITH PG&E ON DIABLO CANYON UNIT 2 AUDIT

Members of the NRC staff, George Lear, P. T. Kuo, Harold Polk, and Nilesh Chokshi along with consultants from Brookhaven National Lab, Dr. Philippacopoulos, Dr. Miller, Dr. Constantino, Dr. Bezler, and consultants from Franklin Research Institute, Dr. Vu Con and Prof. A. Hamid, met with members at the Diablo Canyon Project on November 7-9, 1984. The purpose of the meeting was to continue the Unit 2 design audit of the PG&E calculations used for qualification of the Unit 2 structures. The Brookhaven consultants are involved with the qualification of the various buildings, buried conduits, cable tray supports and assessment of EOI's and OI's while the Franklin Research consultants are only involved with the qualification with the masonry walls. See attachment 1 for the major items discussed and information supplied during this audit trip. Additional audits are envisioned for early December 1984.

Harold Polk

Harold Polk, Structural Engineer
Structural Engineering Section B
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cc: R. Vollmer
G. Lear
H. Schierling
P. Kuo
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ATTACHMENT 1

DIABLO CANYON UNIT 2
NOVEMBER 10-12 AUDIT

ITEMS DISCUSSED

1. Turbine Building
   a. Buttresses
   b. Shear wall stress evaluation.
   c. Modification to floor plates.

2. Buried Conduit
   a. Flexible connections at structures.
   b. Soil profile.

3. Containment Annulus Structure
   a. Member evaluation for torsional loads.
   b. 20 Hz frequency cutoff for generation of floor response spectra.

4. Raceway/Cable Tray
   a. Assessment of design aides.
   b. Correct use of design spectra.

5. Masonry Walls
   a. Energy balance method.
   b. Construction reports.
   c. Masonry block properties.

COPIES OF INFORMATION SUPPLIED

1. Diablo Canyon Unit 2 Containment Annulus Structure 20 Hz Frequency Study, calculation 1140 C-1.

2. Floor response spectra for the containment annulus and internal structure coupled dynamic model, nodes 138 and 140.

3. Torsion evaluation for containment annulus structural members H2129 and A2216 including the end connections.

4. Design Aids

#1	Conduit Properties	8-3-82
#2	Conduit Period versus Span	8-4-82
#11	Unistrut Section Properties	9-8-82
#29	Unistrut Member Allowable Stresses	11-23-84
#31	Conduit Clamp Pullout & Slip Capacity	5-11-84
#33	Allowable Design Load for 1/2" Concrete Anchor	7-30-82

#34	Allowable loads for 1/2" Channel Nut Strut Connection	6-26-84
#35	Allowable Design Loads for S-6 Brace	7-26-84
#35A	Allowable Design Loads for S-6 Brace Based on Member Capacity	7-26-84
#35B	Tabulation of Preact	1-10-84
#64	Peak Seismic Accelerations	7-19-83
#69	Allowable Bolt Loads for Unistrut Connector	4-4-84
File No. 52.7.11.3.6	Evaluation of Spot Weld Adequacy for Double Strut Section Sheets 1-6 and 59	9-7-84
	Raceway Weight Check Conduit K2613	11-8-84

5. The following information will be supplied by November 30, 1984:

   a. Justification for using 20Hz cut off frequency.
   b. Data on flexibility of buried conduit.
   c. Calculations for the diaphragm action of the turbine building floor at elevation 119 and the shear capability of the wall along column line 19.