EXHIBIT NO. 8

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

| | | |
|---|---|---|
| In the Matter of | ) | |
| | ) | Docket Nos. 50-275 |
| PACIFIC GAS AND ELECTRIC COMPANY | ) | 50-323 |
| | ) | (Construction Quality Assurance) |
| (Diablo Canyon Nuclear Power Plant, Units 1 and 2) | ) | |

AFFIDAVIT OF GARY D. LARSON, DANIEL R. CADY

| | | |
|---|---|---|
| STATE OF CALIFORNIA | ) | |
| | ) | ss. |
| COUNTY OF SAN LUIS OBISPO | ) | |

The above, being duly sworn, depose and say:

1. I, Gary D. Larson am employed by Pullman Power Products as an NDE Level III Technician, qualified in radiography, ultrasonic, magnetic particle, and liquid penetrant testing.

I, Daniel R. Cady am employed by Bechtel Group Inc., as an Engineering Supervisor, NDE Level III, qualified in radiography, ultrasonic, magnetic particle and liquid penetrant testing, visual examination, and bubble testing.

2. We have reviewed the records of the wall thickness measurements of reactor coolant pressure boundary valves which were made in 1973 for Unit 1 at Diablo Canyon Nuclear Power Plant. We also have read the portion of the Unscheduled Audit #34 of Harold Hudson pertaining to the boundary valves which allegedly did not meet the 2% accuracy requirement of the AEC. We reviewed the data report for the two valves: 1-8067-C and 1-8956-C.

3. Valve location 1-8067-C was shown on Unscheduled Audit #34 as having calibration data as 10% out of tolerance. As shown on the data report for the valve (Exhibit 1 attached), the calibration block has four points of reference used for each calibration data. All the points but one match the pretest calibration. The point that does not show the same is lower by approximately 10%. This is quite obviously an error of the pencil and not of the actual test. Only two points are, in fact, needed to check an ultrasonic machine calibration. The lowest point of calibration and the highest point match the pretest calibration data, thereby verifying the machine's valid calibration within the 2% tolerance.

4. When one compares the entries of paragraph 3 with paragraph 5, which represent calibration before and after the test measure, respectively, one can see the direct correlation of instrument readings and the obvious absence of one digit.

5. Valve location 1-8956-C was identified in Unscheduled Audit #34 as having accuracy out of tolerance by 48%. All valve calibration block data on the data report (Exhibit 2 attached) before thickness measurement matches the calibration block data after the thickness measurement (paragraphs 3 and 5). The 48% difference is noted on the data recorded between the mechanical (micrometer point) and the actual UT measurement of the mechanical point.

6. The Mechanical Point was 1.062 and UT was 2.050 after thickness measurement versus Mechanical Point 1.062 and UT 1.050 before thickness measurement. If all calibration block data matched before and after thickness measurement, as they did, there is no possible way the after thickness measurement of the mechanical point could be 2.050. This was again an obvious pencil error and not an equipment error.

DATED: March 16, 1984

Gary D. Larson

GARY D. LARSON

DANIEL R. CADY

Subscribed and sworn to
before me this 16th day
of March, 1984

Ida Dutra

Ida Dutra
Notary Public in and for the
County of San Luis Obispo,
State of California.
My commission expires
January 2, 1987

OFFICIAL SEAL
IDA DUTRA
NOTARY PUBLIC - CALIFORNIA
SAN LUIS OBISPO COUNTY
My comm. expires JAN 2, 1987

5. Valve location 1-8956-C was identified in Unscheduled Audit #34 as having accuracy out of tolerance by 48%. All valve calibration block data on the data report (Exhibit 2 attached) before thickness measurement matches the calibration block data after the thickness measurement (paragraphs 3 and 5). The 48% difference is noted on the data recorded between the mechanical (micrometer point) and the actual UT measurement of the mechanical point

6. The Mechanical Point was 1.062 and UT was 2.050 after thickness measurement versus Mechanical Point 1.062 and UT 1.050 before thickness measurement. If all calibration block data matched before and after thickness measurement, as they did, there is no possible way the after thickness measurement of the mechanical point could be 2.050. This was again an obvious pencil error and not an equipment error.

DATED: March 17, 1984

GARY D. LARSON

Daniel R. Cady

DANIEL R. CADY

Subscribed and sworn to
before me this 17th day
of March, 1984

Wendy Sproul

Wendy Sproul
Notary Public in and for the
County of San Luis Obispo,
State of California.
My commission expires
June 30, 1986

OFFICIAL SEAL
WENDY SPROUL
NOTARY PUBLIC - CALIFORNIA
SAN LUIS OBISPO COUNTY
My comm. expires JUN 30, 1986

## EXHIBITS

1. Data report for valve 1-8067-C
2. Data report for valve 1-8956-C

Exhibit No. 1

1. Valve Identification: Unit No. 1, Mfr. Edward
   Location No. 1-8067-C, Type 2T58
   Remarks: (S/N, RN, Etc.) QCR215 R 312

2. Test Equipment: Mfr. BRANSON Model 303
   S/N 154060 Transducer: S/N 1
   Frequency 2.25 M Hz. Couplant GLYCERIN

3. Calibration: Step wedge material 316 Forged ASTM 182 HT# 511240
   Actual step thickness: A .992 B .747 C .497 D .247
   Ultrasonic readings: A 1.000 B .750 C .500 D .250
   Calibration check (when possible on valve): Mechanical .515 UT .515
   Performed by: [signature] Date: 7-30-73

4. Valve Body Measurement: (Refer to Step 7.3.1 for Grid Lay-out)

| | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| A | 1.165 | .650 | .625 | .680 | .520 | B-1 | .650 | .645 | .650 | |
| B | 1.250 | .635 | .640 | 1.025 | .965 | B-1 | .650 | .635 | .640 | |
| C | 1.200 | .805 | .800 | 1.020 | 1.000 | | | | | |
| D | .950 | .940 | 1.125 | 1.000 | 1.050 | | | | | |
| E | .750 | .530 | 1.135 | .950 | 1.090 | | | | | |
| F | .575 | .510 | 1.095 | 1.000 | 1.070 | | | | | |
| G | .650 | .565 | 1.000 | 1.000 | 1.060 | | | | | |
| H | .840 | .970 | 1.050 | .950 | 1.000 | | | | | |
| I | 1.050 | .800 | 1.160 | .955 | .950 | I-1 | .645 | .645 | .635 | |
| J | 1.150 | .665 | .660 | 1.000 | .900 | J-1 | .650 | .645 | .650 | |
| K | | | | | | | | | | |
| L | | | | | | | | | | |
| M | | | | | | | | | | |

Note: If additional space is required, attach pages as required.

5. Measurement and Post Calibration by: [signature] Date: 7-30-73
   Actual step thickness: A .992 B .747 C .497 D .247
   Ultrasonic readings: A 1.000 B .750 C .45 D .250
   Calibration check (when possible on valve): Mechanical .515 UT .515
6. Wall Thickness: Min. allowed .437 Min. obtained .510
7. Valve Identified per Step 7.3.5 by: Bowden WD Date: 7-30-73
8. Valve Protection restored by: Bowden WD Date: 7-30-73
9. Remarks:

DESTROY THIS COPY WHEN NO LONGER NEEDED. MASTER COPY LOCATED IN PROJECT CENTRAL FILE

Serial No. of Micrometers: 23502 MWS

Report by: [signature] Date: 7-30-73

Exhibit No. 2

Remarks: (S/N, ID, Etc.) 94-12892-72

REPLACEMENT FOR ORIGINAL 1-5554-C. TESTED

2. Test Equipment: Mfr. BRANSON Model SONORAY 301

S/N 7012417 Transducer: S/N Z101CS

Frequency 1.00 MHZ Ult. Coupant GLYCERINE

3. Calibration: Step wedge material CAST SS 304 ASTM A351 CF8 HT 2776

Actual step thickness: A 2.489 B 1.988 C 1.485 D .987

Ultrasonic readings: A 2.500 B 2.000 C 1.500 D 1.000

Calibration check (when possible on valve): Mechanical 1.062 UT 1.050

Performed by: [signature] Date: 11-29-73

4. Valve Body Measurement: (Refer to Step 7.3.1 for Grid Lay-out)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| A | | | | | | | | | | |
| B | | | | | | | | | | |
| C | | | | | | | | | | |
| D | | | | | | | | | | |
| E | | | | | | | | | | |
| F | | | | | | | | | | |
| G | | | | | | | | | | |
| H | | | | | | | | | | |
| I | | | 1.850 | 1.475 | 1.685 | | | | | |
| J | | | | | | | | | | |
| K | | | | | | | | | | |
| L | | | | | | | | | | |
| M | | | | | | | | | | |

Note: If additional space is required, attach pages as required.

5. Measurement and Post Calibration by: [signature] Date: 11-29-73

Actual step thickness: A 2.459 B 1.988 C 1.485 D .987

Ultrasonic readings: A 2.500 B 2.000 C 1.500 D 1.000

Calibration check (when possible on valve): Mechanical 1.062 UT 2.050

6. Wall Thickness: Min. allowed 1.310 Min. obtained 1.475

7. Valve Identified per Step 7.3.5 by: [signature] Date: 11-29-73

8. Valve Protection restored by: [signature] Date: 11-29-73

9. Remarks:

FLAT PAD ON BOTTOM OF CASTING INSPECTED ONLY FOR THICKNESS

DESTROY THIS COPY WHEN NO LONGER NEEDED. MASTER COPY LOCATED IN PROJECT CENTRAL FILE.

Serial No. of Micrometers: 22301 Mitk

Report by: [signature] Date: 11-29-73

Form No. 1 103-R1