

C 8/29/78

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)
DISTRIBUTION FOR INCOMING MATERIAL

50-2757323

REC: STOLZ J F
NRC

ORG: CRANE P A
PACIFIC GAS & ELEC

DOC DATE: 08/24/78
DATE RCVD: 08/28/78

DOCTYPE: LETTER NOTARIZED: NO

COPIES RECEIVED
LTR 1 ENCL 0

SUBJECT:
FURNISHING RESPONSE TO NRC REQUEST FOR A REPT OF THE EFFECT AT SUBJECT
FACILITY OF THE 08/13/78 SANTA BARBARA EARTHQUAKE.

PLANT NAME: DIABLO CANYON - UNIT 1
DIABLO CANYON - UNIT 2

REVIEWER INITIAL: XJM
DISTRIBUTER INITIAL: M

***** DISTRIBUTION OF THIS MATERIAL IS AS FOLLOWS *****

NOTES:

J HANCHETT W/1 CY ALL MATERIAL
F HEBDON W/1 CY ALL SAFETY MATERIAL

PSAR/FSAR AMDTS AND RELATED CORESPONDENCE
(DISTRIBUTION CODE B001)

FOR ACTION: ASST DIR VASSALLO**LTR ONLY(1) BR CHIEF LWR#1 BC**LTR ONLY(1)
PROJ MGR ALLISON**LTR ONLY(1) LIC ASST LWR#1 LA**LTR ONLY(1)

| | | |
|-----------|----------------------------------|----------------------------------|
| INTERNAL: | REG FILE**LTR ONLY(1) | NRC PDR**LTR ONLY(1) |
| | I & E**LTR ONLY(2) | OELD**LTR ONLY(1) |
| | OPERATOR LIC BR**LTR ONLY(1) | EMERGENCY PLAN BR**LTR ONLY(1) |
| | QAB**LTR ONLY(1) | DIRECTOR NRR**LTR ONLY(1) |
| | MIFC**LTR ONLY(1) | AD FOR ENG**LTR ONLY(1) |
| | MECH ENG BR**LTR ONLY(1) | STRUCTURAL ENG BR**LTR ONLY(1) |
| | MATERIAL ENG BR**LTR ONLY(2) | AD FOR REAC SFTY**LTR ONLY(1) |
| | REACTOR SYSTEMS BR**LTR ONLY(1) | ANALYSIS BR**LTR ONLY(1) |
| | CORE PERFORMANCE BR**LTR ONLY(1) | AD FOR PLANT SYSTEMS**LTR ONLY |
| | AUXILIARY SYS BR**LTR ONLY(1) | CONTAINMENT SYSTEMS**LTR ONLY(1) |
| | I & C SYSTEMS BR**LTR ONLY(1) | POWER SYS BR**LTR ONLY(1) |
| | AD FOR SITE TECH**LTR ONLY(5) | AD FOR SITE ANLYS**LTR ONLY(1) |
| | ACCIDENT ANALYSIS**LTR ONLY(1) | EFFLUENT TREAT SYS**LTR ONLY(1) |
| | RAD ASSESSMENT BR**LTR ONLY(1) | KIRKWOOD**LTR ONLY(1) |
| | GEOSCIENCES BR**LTR ONLY(1) | |

EXTERNAL: LPDR'S
SAN LUIS OBISPO, CA**LTR ONLY(1)
TERA**LTR ONLY(1)
NSIC**LTR ONLY(1)

DISTRIBUTION: LTR 58 ENCL 0
SIZE: 2P

CONTROL NBR: 782360295

MR4 BD

***** THE END *****

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August 24, 1978

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ATTORNEYS

Mr. John F. Stolz, Chief
Light Water Reactors Branch No. 1
Division of Project Management
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Re: Docket No. 50-275-OL
Docket No. 50-323-OL
Diablo Canyon Units 1 & 2

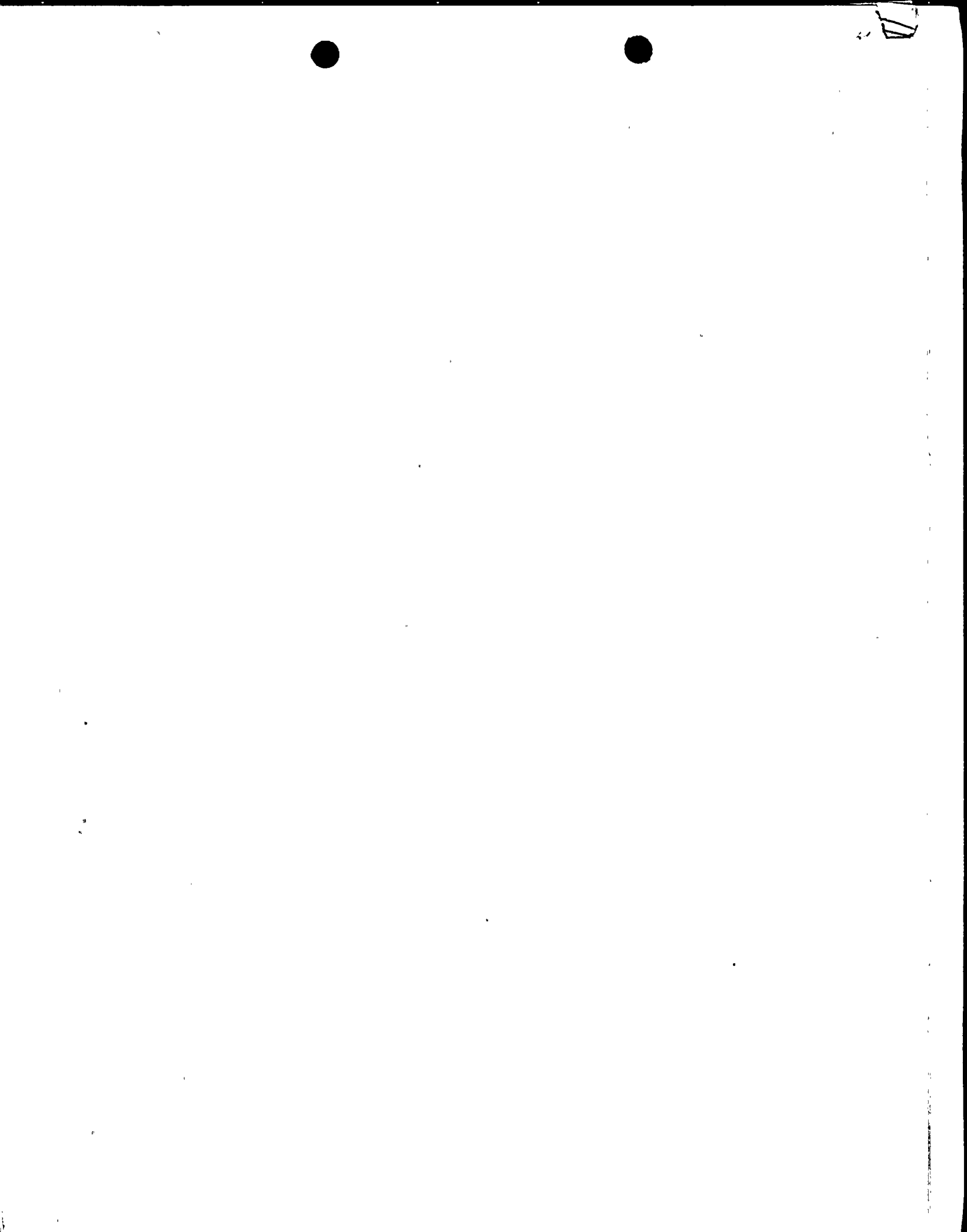
Dear Mr. Stolz:

This letter answers your request for a report of the effect at Diablo Canyon of the August 13, 1978 Santa Barbara earthquake. The quake occurred at 3:55 p.m. and was reported as 5.1M (Cal Tech), 5.5M (USGS), and 5.9M (UC-Berkeley). Santa Barbara lies about eighty miles south of Diablo Canyon.

Apparently no one on duty at the plant at the time of the earthquake felt the tremor. After the plant personnel were notified of the quake, the seismic instruments were checked for records. A few non-zero readings were found, but these are suspect for reasons shown in the table below. Actuation of the Unit 1 spent fuel pool low level alarm, which occurred at about 3:57 p.m., about two minutes after the earthquake, may have been related to the tremor. This is discussed below.

The strong motion instrumentation system at the Diablo Canyon Site consists of three triaxial force-balance accelerometers (Kinematics FBA-3), one triaxial seismic trigger (Kinematics TS-3A), one triaxial response spectrum recorder (Engdahl PSR-1200), six triaxial peak recording accelerographs (Teledyne PRA-103), one central recorder (Kinematics SMA-3), one single-channel playback unit (Kinematics SMP-1), and one triaxial earthquake force monitor (Kinematics EFM-1). The recording system is actuated by the trigger, which is located on the south edge of the foundation mat of the Unit 1 containment structure at Elevation 89 ft. (4 ft. above plant grade).

Boo 1/10



Mr. John F. Stolz

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August 24, 1978

Trigger level is set at 0.01g.

The following table summarizes the records from the strong motion instrumentation system:

| <u>INSTRUMENT</u> | <u>NUMBER</u> | <u>RECORDED RESPONSE</u> | <u>COMMENTS</u> |
|-------------------|---------------|--|---|
| Kinematics TS-3A | 1 | ---- | Did not trip |
| Kinematics SMA-3 | 1 | None | System was functionally tested on August 10 and again on August 14. All tests indicated proper function. |
| Kinematics FBA-3 | 3 | (9 Channels, total) | |
| Kinematics SMP-1 | 1 | | |
| | | | |
| Kinematics EFM-1 | 1 | None | |
| Engdahl PSR-1200 | 1 | Reed #1(1.9Hz):0.019g Reed #2(2.45Hz):0.039g (12 Reeds, total) | "Passive" (non-electric) instrument. Only these two reeds, the lowest frequency ones, gave readings. It appears that these readings may have been due to sag in the reeds, which at this end of the range are quite flexible. |
| Teledyne PRA-103 | 6 | 10 Channels:zero 8 Channels:3g or more (18 Channels, total) | "Passive" (non-electric) instrument. Clearly spurious. Removal of instrument covers and of recording chips disturbed the instruments. |

Prior to the time of the Santa Barbara event, the Unit 1 spent fuel pool water level was observed to be near the alarm point, which is set well above the level required by the fuel storage license. A very slight change in water level at the sensor due to movement of the pool water would have been enough to trip the alarm.

The conditions which caused the spurious readings shown in the table will be corrected.

Very truly yours,

Philip A. Grene, Jr.

CC: Service List

