

A 05/08/78

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60-275/323

REC: STOLZ J F
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PACIFIC GAS & ELEC

DOCDATE: 05/02/78
DATE RCVD: 05/08/78

DOCTYPE: LETTER NOTARIZED: NO

COPIES RECEIVED

SUBJECT:

LTR 1 ENCL 1

FURNISHING MISCELLANEOUS ITEMS INVOLVED IN NRC REVIEW OF APPLICANT'S APPL FOR AN OPERATING LIC FOR SUBJECT FACILITY, CONSISTING OF INFO RE SAFETY RELATED CABLES, SPLICE, CONNECTOR AND TERMINAL BLOCK, ET-AL.. W/ATT DRAWING.

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

REVIEWER INITIAL: XJM
DISTRIBUTER INITIAL: *rl*

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NOTES:

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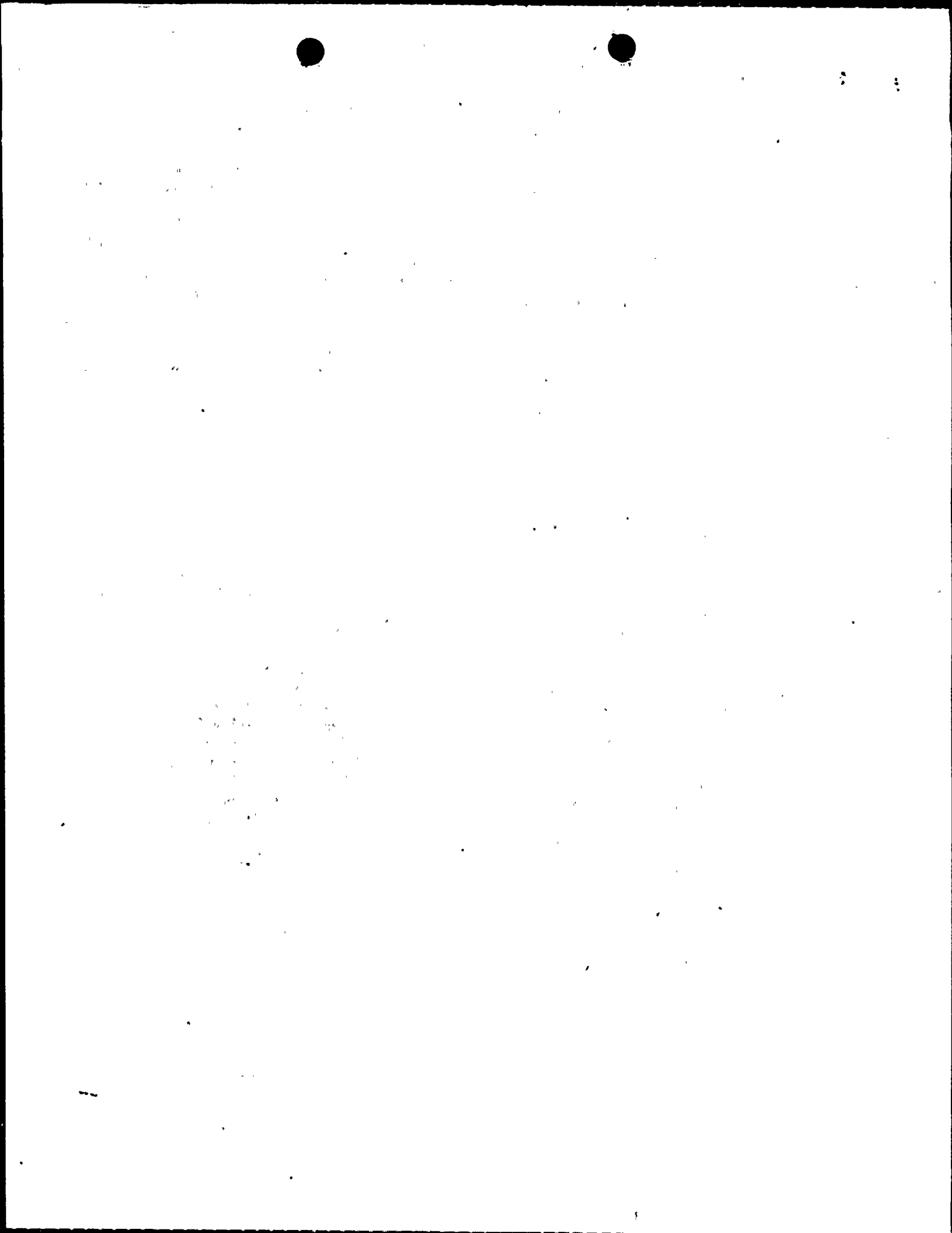
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REGULATORY DOCKET FILE COPY

PACIFIC GAS AND ELECTRIC COMPANY

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VICE PRESIDENT AND GENERAL COUNSEL

May 2, 1978

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Division of Project Management
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

RECEIVED DISTRIBUTION SERVICES UNIT
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US NRC DISTRIBUTION SERVICES BRANCH

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

Dear Mr. Stolz:

This letter is designed to cover a number of miscellaneous items involved in your review of our application for an operating license for the Diablo Canyon Units.

Safety Related Cable

The following is in response to the Staff's informal request for identification of all safety related cable that has polyethelene in its construction.

Polyethelene cable is not used at Diablo Canyon. Instead, cross-linked polyethelene supplied by Raychem Corporation and the Okonite Company is used. The cross-linked polyethelene serves as both the electrical insulation and physical protection for the single conductor cable while the multi-conductor cable has an additional over-all jacket of cross-linked polyethelene. Both Raychem and Okonite cable have passed the qualification tests. However, Okonite cable has been found to have superior long-term water absorption properties and is specified for use in wet locations.

Splice, Connector and Terminal Block

The following is submitted in response to an informal staff request for identification of each type of splice, connector, and terminal block subject to accident environments and a description of how each is environmentally qualified.

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1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that this is essential for ensuring the integrity of the financial system and for providing a clear audit trail. The text notes that without proper record-keeping, it would be difficult to identify discrepancies or to hold individuals accountable for their actions.

2. The second part of the document outlines the specific procedures that must be followed when recording transactions. It details the steps from the initial entry to the final review and approval process. The text stresses that every step must be performed meticulously and in accordance with established guidelines to avoid any errors or omissions.

3. The third part of the document addresses the role of technology in modern record-keeping. It discusses how digital systems can improve efficiency and accuracy while also providing enhanced security and access control. The text highlights the importance of choosing reliable software and ensuring that all data is properly backed up and protected from unauthorized access.

4. The final part of the document provides a summary of the key points discussed and offers some concluding thoughts on the overall importance of record-keeping. It reiterates that this is a fundamental aspect of any organization's operations and that it requires the attention and commitment of all staff members involved in the process.

All safety related electrical connections exposed to the containment environment are a sealed butt type splice. This type of splice was subjected to the following conditions and retained acceptable electrical characteristics:

1. Aged at 121°C for 168 hours;
2. Irradiated at a rate of 0.27 megarads per hour to a total of 2×10^8 rads;
3. Exposed to 5 hours of 360°F, 70 psig steam;
4. Exposed to 6 hours of 320°F, 70 psig steam;
5. Exposed to 24 hours of 250°F, 21 psig steam and 0.2% boric acid spray;
6. Exposed to 12 days at 221°F, 2.5 psig steam.

Connections to equipment where screw type terminations are used are made within the equipment housing. The housing is sealed to prevent exposure to containment atmosphere.

Spare Hose Sections

This letter will confirm conversations with the Staff in which we agreed to provide spare hose sections for the temporary hose connection between the raw water reservoir and the plant auxiliary feedwater system. This temporary connection was described in our letter of April 17, 1978. We also agreed to periodic inspection and replacement of the hose. It is our understanding that the requirements for spare hose sections and inspection and replacement will be set forth in the technical specifications.

Palo Verde Letter

On a number of occasions during the past few months the Regulatory Staff has mentioned the possibility of requiring PGandE to respond to the safety issues addressed in the Palo Verde letter (R. S. Boyd to Edwin E. Van Brunt, Jr., Arizona Public Service Company, December 12, 1977). We have examined the letter and fail to see how a response would clarify any relevant issues.

The Palo Verde letter covers the following:

1. Issues connected with the Commission's replication policy as it is being applied to the construction permit (PSAR) stage of a plant, namely, Palo Verde Units 4 and 5. Diablo Canyon is a custom plant at the operating license stage (FSAR).



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2. Seismic information and issues which are significantly different from Diablo Canyon. The Diablo Canyon licensing application has already been extensively amended to supply the Staff with seismic data pertinent to the Diablo Canyon site.
3. Backfitting of various regulatory guides and Staff positions. PGandE has already addressed in amendments and other documents all Regulatory Guides and Staff positions relevant to our licensing application.

Accordingly, we submit that a Palo Verde type submittal should not be required of PGandE.

Reactor Cavity Annulus Seal Ring

The following information is provided in response to the letter of February 2, 1978 to PWR licensees from Mr. Victor Stello, Jr., regarding the reactor cavity annulus seal ring.

The Diablo Canyon reactor cavity annulus seal ring is left in a raised position during normal operation. Figure 1 is a representative cross-section of the seal ring in this position. Biological shielding material is not employed in the reactor cavity annulus.

The seal ring has been evaluated for the effects of a loss of coolant (LOCA) pipe break inside the reactor vessel cavity. Determination of the loading on the seal ring assembly was based on the peak calculated LOCA pressurization (115 psig)¹ of the uppermost compartments of the reactor cavity. A maximum local load of 8,800 pounds was calculated for the region immediately above the broken pipe. The most highly stressed member resulting from this maximum load is above the material yield stress, but is below the ultimate strength of the material. Should this member yield, load redistribution to adjacent members would be expected. We therefore conclude that the reactor cavity seal ring will not become a missile as a result of a pipe rupture within the reactor vessel cavity.

Miscellaneous Information

This letter will also confirm the following information discussed with the NRC Staff by telephone on April 26, 1978.

Boric Acid Tank Level Transmitters - The transmitters used on the boric

¹ WCAP-9241 (proprietary) "Evaluation of the Reactor Coolant System for Postulated Loss-of-Coolant Accidents for the Diablo Canyon Nuclear Power Plant," December 1977.



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acid tanks to send level signals to the control room are identical with those qualified seismically for pressurizer and steam generator level services. The qualification of these transmitters is discussed in Sections 10.3.17 of the Hosgri Seismic Evaluation (HSE) and 3.10.2 of the FSAR and is presented in Tables 10-1 (item 17) of the HSE and 3.10-1 (item 17) of the FSAR.

Condensate Storage Tank Level Indication - We will add a local pressure gauge to the instrumentation on the condensate storage tank. We will revise our operating procedures to require that, should the plant be shut down as the result of an earthquake, an operator will go to the local gauge to verify that the tank level indicated in the control room is correct. This confirmation would be done in an expeditious manner, but will not be required before use of water in the tank may be initiated.

Boration Path Valve Indication - In order to verify the correct indication in the control room of valve position for certain valves in the charging and boration path, we will revise our operating procedures to require that should the plant be shut down as a result of an earthquake a procedure will be followed to confirm this indication before reactor coolant system (RCS) boration is initiated. The procedure will show that when valves 8145, 8146, and 8147 are indicated to be closed, flow and level instrumentation confirm that there is no flow into the RCS and also that when valve 8146 or 8147 (each singly) is indicated to be open the corresponding flow into the RCS is confirmed.

Boration Path Valve Single Failure - Separate backup supplies of compressed gas are being supplied to valves 8146 and 8147 to insure reliable operation should offsite power and consequently the plant compressed air system be lost following an earthquake. If, in spite of this precaution, either of these valves should suffer a failure which caused them to remain open, the uncontrolled flow pathway may allow the introduction of sufficient water into the reactor coolant system to fill the available volume before depressurization by pressurizer spray could be completed. Should this series of events occur, the RCS could be depressurized by the use of one of the pressurizer power operated relief valves. Separate backup supplies of compressed gas also are being supplied to these valves to ensure reliable operation following an earthquake.

Five copies of this letter are being sent separately to Mr. Dennis Allison.

Very truly yours,

Philip A. Brown

CC: Service List with enclosure



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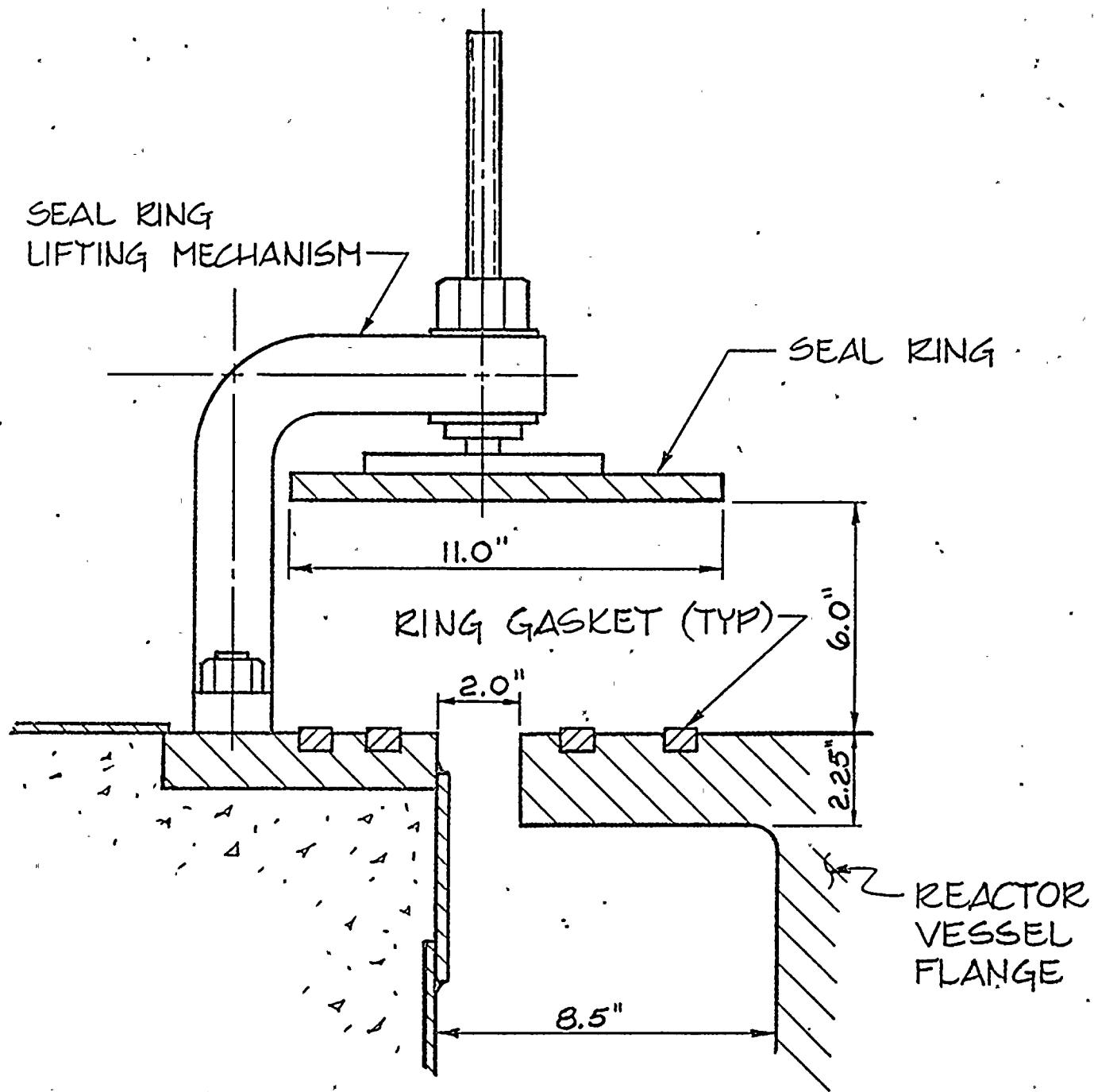


FIGURE 1

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