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Karl R. Goller, Assistant Director
for Operating Reactors
Directorate of Licensing

PACIFIC GAS AND ELECTRIC COMPANY, HUMBOLDT BAY POWER PLANT UNIT 3,
CASK DROP ACCIDENT - REQUEST FOR ADDITIONAL STRUCTURAL INFORMATION
(TAR-1018)

Plant Name: Humboldt Bay Unit 3
Docket No. 50-133
Request From: K. R. Goller
Request Contact: F. D. Anderson
Requested Completion Date: September 25, 1974
Technical Branch Involved: Accident Analysis Branch
Structural Engineering Branch
Auxiliary & Power Conversion Systems Branch
Description of Request: Memo from K. R. Goller to J. M. Hendrie
dated July 11, 1974
Review Status: Awaiting information from Applicant (TAR-1018)

The Structural Engineering Branch has been requested by the Auxiliary
& Power Conversion Systems Branch to review and comment on the struc-
tural aspects of the cask drop on the basis of the amendment to the
FSAR. We find we need additional information to complete our eval-
uation, and the specific information required is listed in the enclosure.

R. R. Maccary, Assistant Director
for Engineering
Directorate of Licensing

Enclosures: 1. Request for Additional Structural Information
2. Document B

cc w/o encl:	cc w/encl:	M. Diggs, L
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DATE →	10/17/74	10/21/74	10/21/74			

PACIFIC GAS AND ELECTRIC COMPANY
HUMBOLDT BAY POWER PLANT UNIT 3
CASK DROP ACCIDENT
REQUEST FOR ADDITIONAL STRUCTURAL INFORMATION

The structural information on the adequacy of the spent fuel pool and its adjacent floor slab at elevation +12' - 0 to withstand a cask drop accident is contained in an amendment (accompanied the June 14, 1974 letter from F. T. Searls to D. J. Slovholt) to FSAR. This information is incomplete. In order to proceed with an evaluation, we need the following:

1. Indicate all the important characteristics of the transfer cask and the shipping cask, such as weight, main dimensions and location of the center of gravity.
2. Provide a list of all the design loads assumed to be acting on the structure at the time of the impact.
3. Indicate the manner in which the loads due to cask drop impact are determined and used in the analysis.
4. Provide load - deformation curve for the cellular energy absorption assembly.
5. Discuss the effects of the cask dropping in a normal and in a tilted position on the cellular assembly.
6. Include the load combination equations and the load factors.
7. Present the design criteria including a clear statement as to what method of analysis is used: working stress method, ultimate strength method or both.
8. Indicate all the pertinent stresses and compare them with the allowables as permitted in ACI or other applicable codes.
9. Indicate the assumptions made in the analysis for a composite section consisting of a layer of steel and a layer of concrete for local and overall structural effects due to cask drop impact.
10. Prepare a detailed design and analysis report incorporating all the information as requested herein. The basic design criteria for evaluating the effects of cask drop should conform as much as

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possible the enclosed document (B) issued by the Structural Engineering Branch and dated June 1973.