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FACIL:50-275 Diablo Canyon Nuclear Power Plant, Unit 1, Pacific Ga 05000275
50-323 Diablo Canyon Nuclear Power Plant, Unit 2, Pacific Ga 05000323

AUTH.NAME	AUTHOR AFFILIATION
CRANE,P.A.	Pacific Gas & Electric Co.
RECIP.NAME	RECIPIENT AFFILIATION
SCHWENCER,A.	Licensing Branch 2

SUBJECT: Forwards response to NRC 800606 ltr requesting addl info. re shielding review,containment monitors & iodine sampling at facilities.Monitors are mutually redundant using separate power supplies from separate vital instrument busses.

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PACIFIC GAS AND ELECTRIC COMPANY

PG&E

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September 22, 1980

Mr. A. Schwencer, Acting Chief
Licensing Branch No. 3
Division of Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

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

Dear Mr. Schwencer:

Attached is PGandE's response to your request for additional information dated June 6, 1980 regarding Shielding Review, Containment Monitors, and iodine sampling at Diablo Canyon, Units 1 and 2.

Kindly acknowledge receipt of this material on the enclosed copy of this letter and return it to me in the enclosed addressed envelope.

Very truly yours,

Philip A. Crane, Jr.

Attachments (40)
CC w/attachment: Service List

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SHIELDING REVIEW

Question 331.18 (12.2.1, 12.3.2)

By November 1, 1980, the Pacific Gas and Electric Company plans to submit to the NRC a Shielding Review of the Diablo Canyon Power Plant. This Shielding Review is part of the PGandE response to NUREG-0578: "Short Term Lessons Learned Requirements." To formulate the PGandE response to Item 2.1.6.b of NUREG-0578, two meetings were held with the NRC on February 26, 1980 and April 4, 1980. During both meetings, the NRC commented favorably upon the scope and schedule of the Diablo Canyon Shielding Review. By mutual agreement, the Review was scheduled for submittal to the NRC during the last quarter of 1980, with a target date of November 1.

As defined in the PGandE response to NUREG-0578 and the April 4, 1980, NRC meeting, the Review will contain the items indicated below:

- The Review will discuss the calculational methods and source terms used in evaluating personnel access and the environmental qualification of equipment.

- The Review will discuss the systems assumed to contain high levels of radioactivity in a postulated post-accident situation. Deletion of any of the systems identified in meetings with the NRC will be explained.

- The Review will specify areas where personnel access is considered necessary for vital system operation after an accident. Deletion of any of the areas identified in meetings with the NRC will be explained.

- The Review will name the computer codes used in the Shielding analysis.

- The Review will present the projected doses to individuals for any necessary occupancy times in vital areas.

- An integral part of the Review is the environmental qualification of the safety-related equipment in the auxiliary building taking into account the radiation levels which would exist in the auxiliary building during the thirty days following an accident that has resulted in a degraded core condition. The Review will indicate the equipment which has not been qualified and will include plans and methods to qualify this equipment.

- The Review will include a brief description of the proposed plant modifications. These modifications will be complete by January 1, 1981 or prior to power ascension, whichever is later.

CONTAINMENT MONITOR

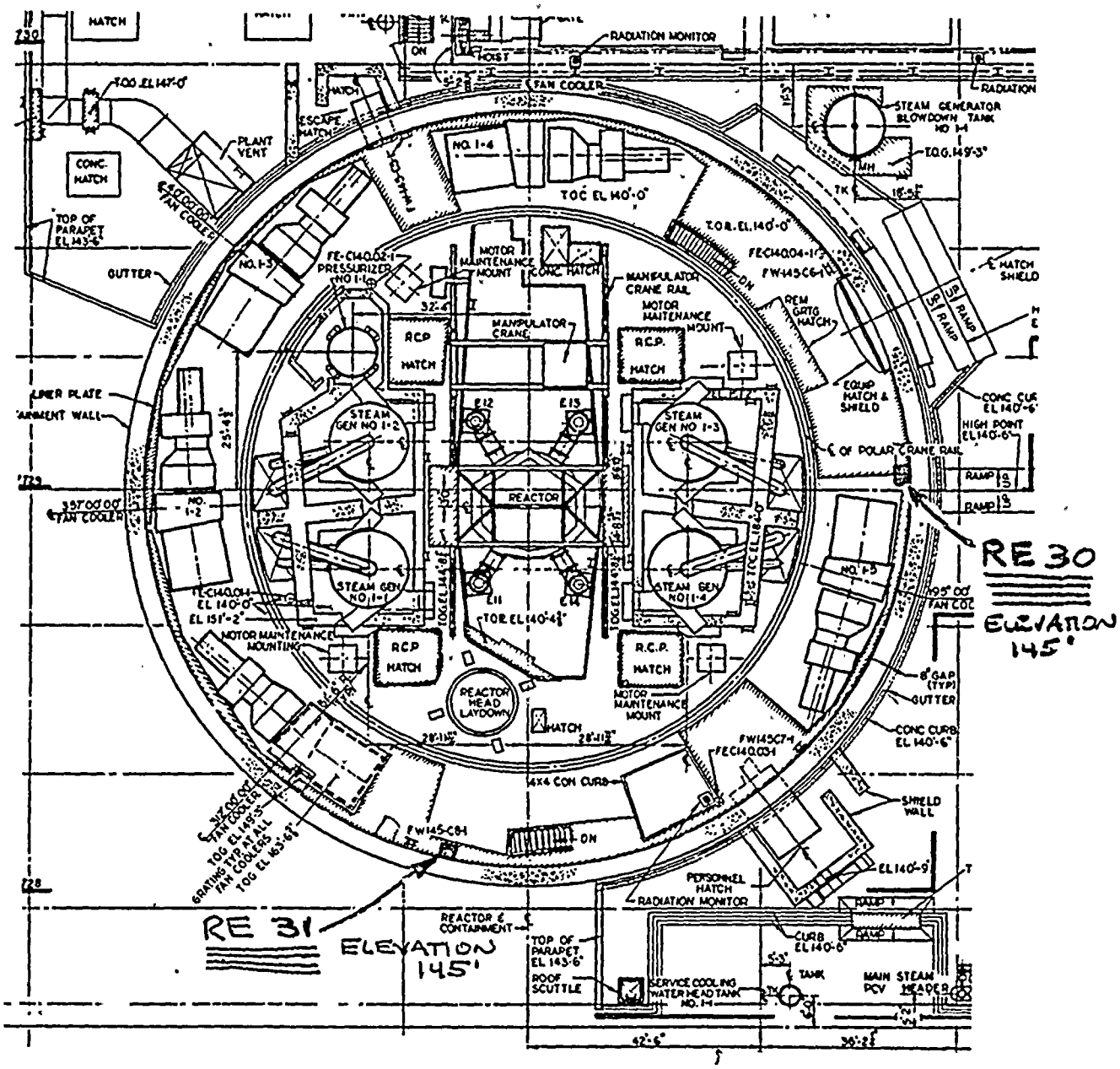
Question 331.19 (12.3.4)

The two high range containment monitors measure photons above 60 keV. Calibration is performed in a test lab using cobalt 60 at approximately 300 R/hr. No on-site capability exists to calibrate these devices. A functional check of electrode configuration and electrical operation of detector, cable, polarizing voltage application, and detector output measurement function is automatically performed every 25 minutes. The check can be initiated manually to compare system output to a fixed input.

The monitors are mutually redundant, using separate power supplies from separate vital instrument busses. They will be fully operational before January 1, 1981.

The supplier is repeating the environmental qualification tests after replacing an "O" ring which failed in the original test with a seal welded joint. No other problems were found. The qualification package, which includes both seismic and environmental qualifications, will be completed before January 1, 1981, and will comply with regulatory guides 1.89 and 1.100.

A containment layout showing the location of the monitors is attached.



"LOCATION OF HIGH RANGE CONTAINMENT MONITORS, RE 30 AND RE 31."

IMPROVED IODINE

Question 331.20 (12.3.4, 12.5.2)

The number and types of portable iodine samplers at Diablo Canyon are shown on Table 1. All listed samplers can be fitted with either silver zeolite or impregnated charcoal cartridges for the collection of iodine samples. Analysis of the cartridges for the portable samplers will be made utilizing a germanium gamma spectrum analysis system calibrated for this use. There will be, upon completion of the Technical Support Center, germanium gamma spectrum analysis systems in the following locations: radioanalytical counting room (adjacent to Chemistry Laboratory Level 85), whole body counting room (also on Level 85 adjacent to access control), Technical Support Center (TSC) Laboratory, mobile radioanalytical van, and California Polytechnic University. In addition, a portable gamma spectrum analysis system will be available prior to fuel loading which will be capable of being set up in various areas of the plant. This portable system will initially include a shielded sodium iodide detector. The detector on this system will be replaced with an intrinsic germanium detector prior to power ascension.

Procedures for post-accident iodine sampling are being developed and the radiation process monitors (RPMs) will be trained to perform these functions. This post-accident iodine sampling procedure is similar to existing procedures on collection and analysis of routine iodine samples. All gamma analysis systems described above are capable of determining sample results within 10 minutes after start of count, assuming there is sufficient activity on sample.

TABLE 1

IODINE AIR SAMPLERS

SAMPLER DESCRIPTION	FEATURES	NUMBER ON SITE
Radeco Constant Air Monitor	Constant Flow Pump-8 CFM max., single Channel I-131 analysis with BKG subtract, alarms for high activity or rate of change, and detector failure, recorder on portable unit	4
Radeco HD 28/B Sampler	Constant Flow Pump-4 CFM max., adjustable flow rate with indicator, elapsed time counter	8
Radeco HD 28 Sampler	Constant Flow Pump-1 to 3 CFM elapsed time counter	17