

JUN 1 1984

Docket No. 50-73

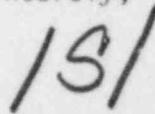
Mr. R. W. Darmitzel, Manager
Irradiation Processing Product Section
Vallecitos Nuclear Center
General Electric Company
P. O. Box 460
Pleasanton, California 94566

Dear Mr. Darmitzel:

We are continuing our review of the documentation that has been submitted in support of your application for renewal of the operating license for your reactor facility. An additional review was recently performed during our visit to your facility in May 1984. During these reviews, several questions have arisen for which we require answers. You are requested to provide written responses to the enclosed questions no later than June 8, 1984. Following receipt of this information we will continue our safety evaluation.

If you have any questions concerning this request, please contact your Project Manager, Harold Bernard, at (301) 492-9799.

Sincerely,



Cecil O. Thomas, Chief
Standardization and Special
Projects Branch
Division of Licensing

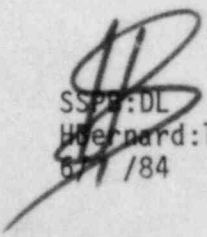
"The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P. L. 96-511."

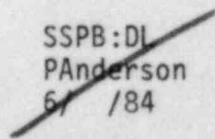
Enclosure:
As stated

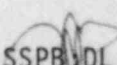
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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Mr. R. W. Darmitzel, Manager
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Sincerely,

"The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P. L. 95-511."

A handwritten signature in cursive script that reads "Cecil O. Thomas".

Cecil O. Thomas, Chief
Standardization and Special
Projects Branch
Division of Licensing

Enclosure:
As stated

cc: See next page

General Electric Company (NTR)

50-73

cc: w/enclosure(s)

California Department of Health
ATTN: Chief, Environmental
Radiation Control Unit
Radiological Health Section
714 P Street, Room 498
Sacramento, California 95814

Attorney General
555 Capitol Mall
Sacramento, California 95814

Mr. G. E. Cunningham
Irradiation Processing Product Section
Vallecitos Nuclear Center
General Electric Company
P. O. Box 460
Pleasanton, California 94566

General Electric Nuclear Test Reactor (GENTR)
Formal Review Questions

1. Provide a Technical Specification for an acceptable conductivity range in the primary water and include appropriate measurement and calibration frequencies.
2. What is the average weight in grams of the ^{235}U in the fuel disk for the current core?
3. Define potential, console, and total excess reactivity. How are they determined? Example would be very helpful.
4. What is the shutdown margin? How is it determined? Provide a Technical Specification for shutdown margin. Provide calculations with highest worth rod out.
5. What are the accuracy and precision (reproducibility) for each control rod position measurement?
6. What are the individual worths of each safety and control rod and each manual poison sheet? How are these worths determined?
7. How many of the poison sheet positions have been modified to provide positive restraint for the manual poison sheet? If less than six, what controls exist to insure that only the modified positions are used? Explain all normal operations involving the manual poison sheets.
8. What is the source of supply air to the reactor facility ventilation air?
9. How do you ensure that the primary coolant level in the fuel loading tank is maintained at the desired level?
10. Describe the administrative organization of the radiation protection program, including the authority and responsibility of each position identified.
11. Describe any radiation protection training for the non-Health Physics staff.
12. Provide information on GENTR "ALARA" policy.
13. For the fixed-position radiation and effluent monitors, specify the generic type of detectors and their operable ranges. Also, describe the frequency and methods of instrument calibration and routine operational checks.
14. Identify the generic type, number, and operable range of each of the portable Health Physics instruments routinely available at the reactor installation. Specify the methods and frequency of calibration.

15. Describe your personnel monitoring program.
16. Provide a summary of the reactor facility's annual personnel exposures [the number of person receiving a total annual exposure within the designated exposure ranges, similiar to the report described in 10 CFR 20.407(b)] for the last 5 years of operation.
17. Specify the concentration ($\mu\text{Ci/mL}$) of noble gases that will equal the stack alarm point of 2×10^{-11} A. Specify the quantity (μCi) or the concentration ($\mu\text{Ci/mL}$) of airborne particulates that will produce the stack alarm point of 1×10^4 cpm.
18. What is the average annual release of ^{41}Ar from the reactor facility to the environment? Provide data for the last 5 years.
19. Describe the liquid radwaste management program.
20. Describe the solid radwaste management program.
21. As part of 19 and 20, include summaries of the quantities of liquid and solid radioactive waste resulting from reactor operation for the last 5 years (total activity of each physical form at times of release or shipment for each year).
22. Describe your environmental monitoring program; summarize the results for the past 5 years and compare recent measurements with any performed before any initial reactor criticality.
23. Comment on the ability of the reactor components and systems to continue to operate safely and withstand prolonged use over the term of the requested license renewal. Include the potential effects of aging on fuel elements, instrumentation, and safety systems.
24. Provide an analysis for an unspecified accident that involves crushing (compacting) the reactor core, and if fission products are released, calculate the dose in unrestricted areas.
25. Provide a new Technical Specification for the linear power channel scrams at 125 kW and perhaps a visible/audible alarm for the log N at a power of 140 kW. Include provisions for exceeding the normal scram trip point quarterly for purposes of calibration; for example, "the normal power level may be exceeded for periods of less than _____ hours during quarterly instrument and channel calibrations." The tables should be footnoted to the effect that trip points are based on the most recent channel calibration.
26. Submit updated Technical Specifications using ANSI/ANS 15.1 (1982).
27. Submit a list of major modifications made to the GENTR since 1969.