

Mr. B. Ralph Sylvia
 Executive Vice President Generation Business
 Group and Chief Nuclear Officer
 Niagara Mohawk Power Corporation
 Nuclear Learning Center
 450 Lake Road
 Oswego, NY 13126

June 5, 1997

SUBJECT: SUPPLEMENTAL REQUEST FOR ADDITIONAL INFORMATION REGARDING
 VERIFICATION OF SEISMIC ADEQUACY OF MECHANICAL AND ELECTRICAL
 EQUIPMENT, NINE MILE POINT NUCLEAR STATION, UNIT NO. 1
 (TAC NO. M69461)

Dear Mr. Sylvia:

The NRC staff is reviewing your submittal of March 11, 1996, associated with Unresolved Safety Issue (USI) A-46 regarding the verification of seismic adequacy of mechanical and electrical equipment in operating reactors. In addition to the NRC staff's requests for additional information dated March 11, 1997, to which you responded May 1, 1997, we find that further information is necessary to complete this review. Therefore, the enclosure identifies supplemental requests for additional information regarding report MPR-1600, "Nine Mile Point Unit 1 USI A-46 Seismic Evaluation Report," dated November 1995, forwarded by your letter of March 11, 1996.

Your response to the enclosure is requested within 45 days of receipt of this letter. If you have questions regarding the enclosure or are unable to meet the requested response date, please call me at (301) 415-3049, or e-mail me at dsh@nrc.gov.

Sincerely,

ORIGINAL SIGNED BY:

Darl S. Hood, Senior Project Manager
 Project Directorate I-1
 Division of Reactor Projects - I/II
 Office of Nuclear Reactor Regulation

Docket No. 50-220

Enclosure: Supplemental Request for
 Additional Information

cc w/encl: See next page

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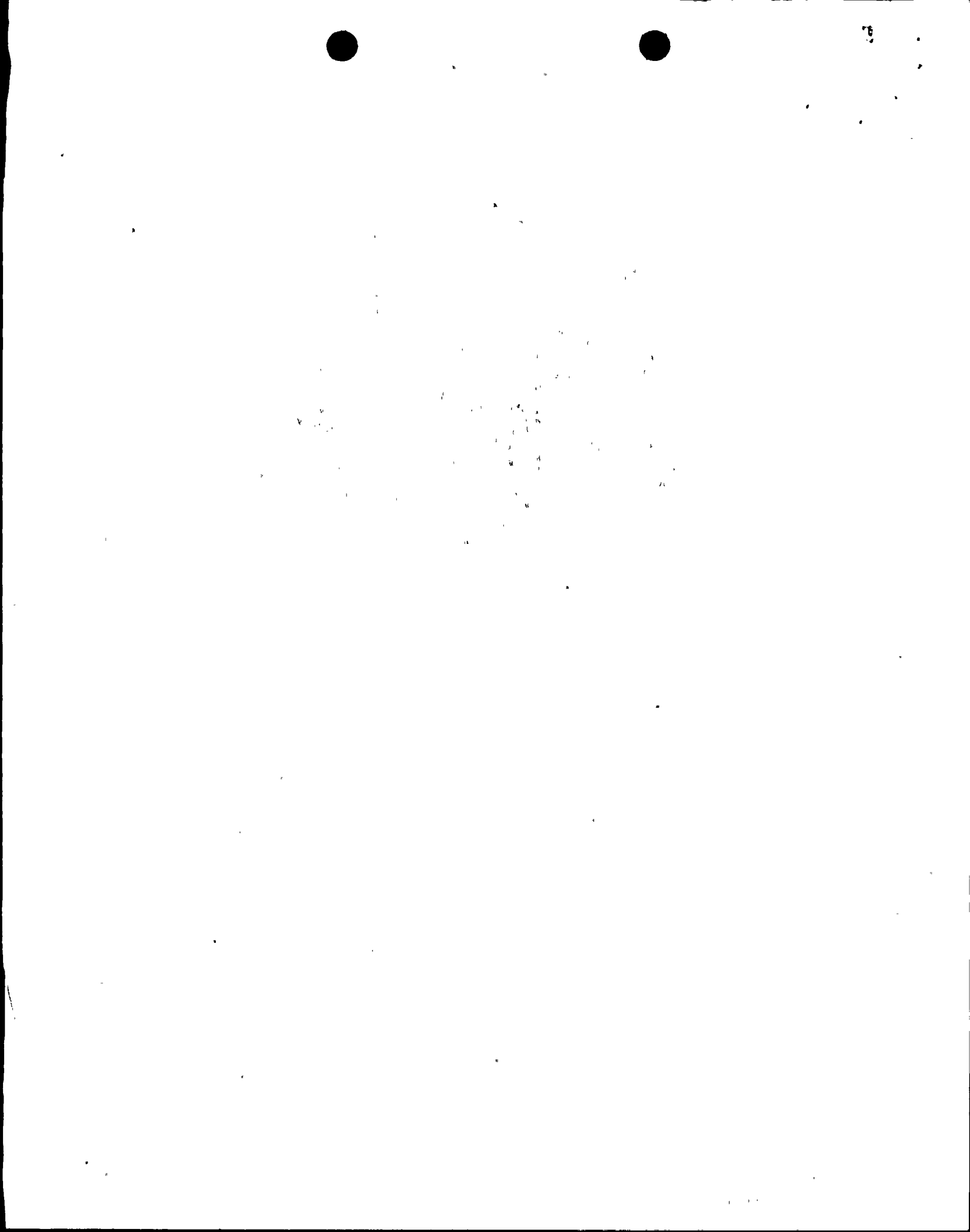
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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Niagara Mohawk Power Corporation

Nine Mile Point Nuclear Station
Unit No. 1

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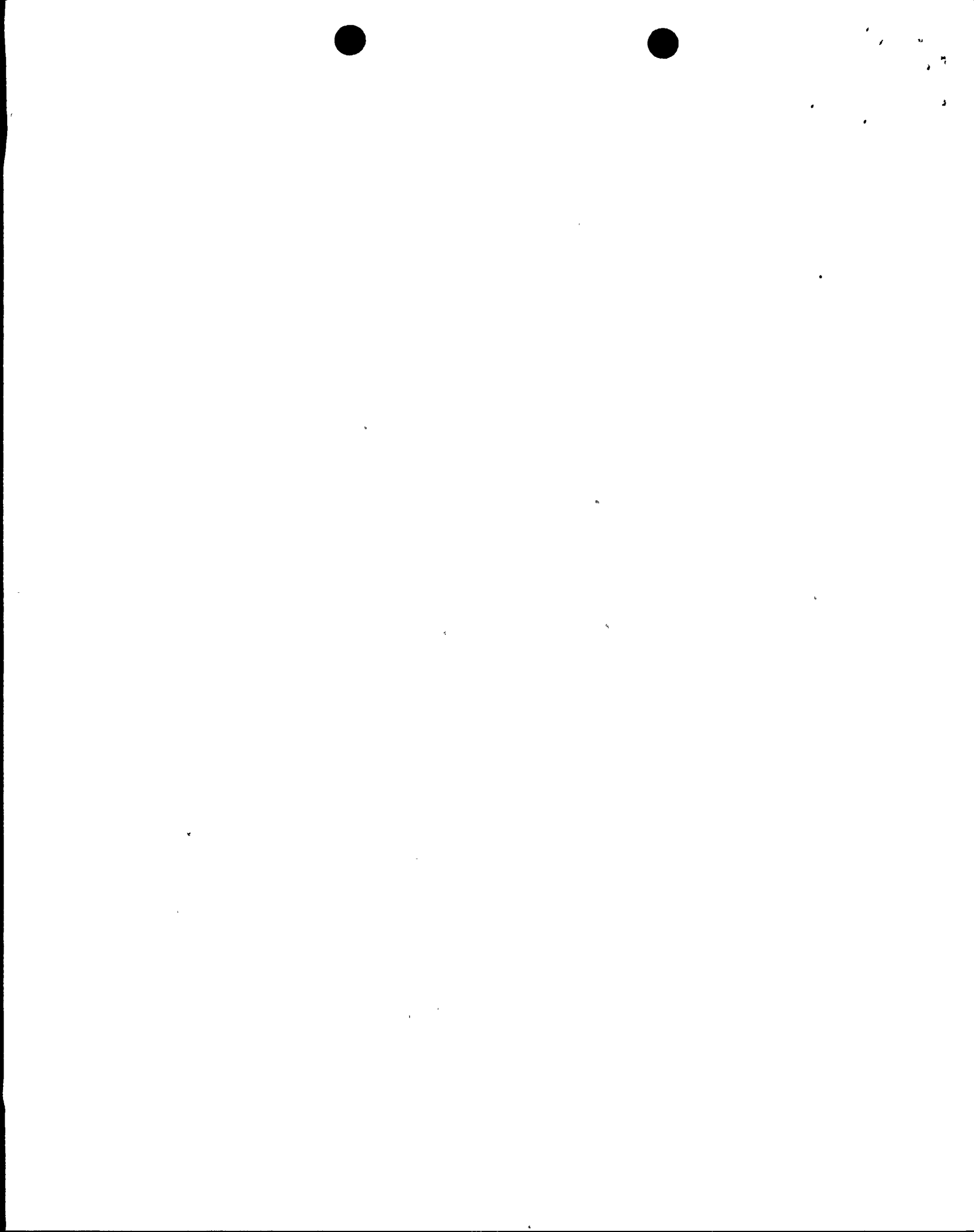
SUPPLEMENTAL REQUEST FOR ADDITIONAL INFORMATION
REGARDING REPORT MPR-1600, "NINE MILE POINT UNIT 1
USI A-46 SEISMIC EVALUATION REPORT,"
NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT NUCLEAR STATION, UNIT NO. 1
DOCKET NO. 50-220

1. In report MPR-1600 transmitted by your letter of March 11, 1997, you stated that resolution of all outliers will be completed at the conclusion of refueling outage 15 (RF015) which is scheduled for 1999. Please elaborate on your decision to defer the resolution of identified outliers and your evaluation in support of the conclusion that the licensing basis for the plant will not be affected by your decision. Specifically, you are requested to provide the justification for assuring operability of the affected systems and components while a number of safety-related components in the safe shutdown path have been identified as outliers--thus rendering their seismic adequacy questionable and their conformance to the licensing basis uncertain.
2. In Table 5-3 of report MPR-1600, many outliers related to cinch anchors were resolved based on calculations and bolt tightness checks. Provide the seismic adequacy evaluations, the details of the calculations, and the findings of the tightness checks for the items with the following designated equipment identification numbers:
 - a. 210.1-36 (CRAC/Chill Water Circ. Pump #12)
 - b. 210-01 (CRAC/Emerg. Vent Fan #11)
 - c. MSIVIR (AP/Main Steam Isolation Valve Instrument Rack)
 - d. PRC167 (AP/MG Set #167 Proj. Relay Cabinet)
 - e. 96-04 (EDG 102 Air Start Tank #1)
 - f. TRANS 167A/600 to 120/208 V Transformer)
 - g. BB11 (AP/125 V DC Battery Board #11)

Submit for NRC staff's review the report RTR-2661, "Lead Expansion Anchor Load Capacity in Reactor Buildings at the Savannah River Site," dated August 15, 1989, which is referenced in Appendix E to MPR-1600.

3. Provide the details of the seismic adequacy evaluations and the outlier resolutions for the items with the following designated equipment identification numbers:
 - a. VB12 (CTRL/125-V-DC VLV Board #12)
 - b. 1671 (AP/600V Powerboard, Ref. DER 1-95-3101)
 - c. 1S35 (CTRL/Aux Control Relay Cabinet 1S35, Ref. DER-1-95-3151)
 - d. 72-03 (SW/Emerg. Service Water Pump #12)

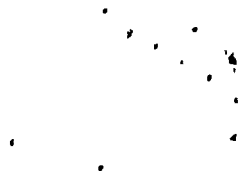
Enclosure



4. On page 36 of Appendix B, "Composite Safe Shutdown Equipment List (SSEL)," to report MPR-1600, line 8101 (AP/Emergency Diesel Generator #102), you indicate that the diesel generator, oil transfer pump, and control panel are on the same skid and are, therefore, evaluated together. Provide the details of the seismic adequacy evaluations for each of these three equipment items.
5. On pages 1 and 2 of Appendix B to report MPR-1600, lines 3144-3154, you indicate that since the safety valves are not required to satisfy the Generic Implementation Procedure (GIP) safe shutdown requirements, it is not necessary to perform a seismic evaluation of these valves. Provide justification for this statement.
6. In your March 11, 1996, letter and in associated report MPR-1600, you state that you committed to implement the GIP-2 including the clarifications, interpretation, and exceptions in SSER-2, and to communicate to the NRC staff any significant or programmatic deviations from the GIP-2 guidance. You further state (Section 9) that the submittal confirms that no significant or programmatic deviations from the GIP-2 guidance were made.

Provide the 10 worst-case items (from the safety point of view) that deviate from the GIP-2 guidelines but were categorized as not being significant. Also, provide (1) the definition of "significant deviations" that the walkdown crew used to classify the deviation as significant or insignificant and (2) a justification as to why such a definition is adequate.

7. Referring to the in-structure response spectra provided in your 120-day-response to the NRC's request in Supplement No. 1 to Generic Letter (GL) 87-02, dated May 22, 1992, the following information is requested:
 - a. Identify structure(s) having in-structure response spectra (5 percent of critical damping) for elevations within 40-feet above the effective grade, that are higher in amplitude than 1.5 times the Seismic Qualification Utility Group (SQUG) Bounding Spectrum.
 - b. With respect to the comparison of equipment seismic capacity and seismic demand, indicate which method in Table 4-1 of GIP-2 was used to evaluate the seismic adequacy for equipment installed on the corresponding floors in the structure(s) identified in your response to Item 7.a. above. If you have elected to use method A in Table 4-1 of the GIP-2, provide a technical justification for not using the in-structure response spectra provided in your 120-day-response. Some USI A-46 licensees appear to be making an incorrect comparison between their plant's safe shutdown earthquake (SSE) ground motion response spectrum and the SQUG Bounding Spectrum. The SSE ground motion response spectrum for most nuclear power plants is defined at the plant foundation level. The SQUG Bounding Spectrum is defined at the free field ground surface. For plants located at deep soil or rock sites, there may not be a significant difference between the ground motion amplitudes at the foundation level and those at the



ground surface. However, for sites where a structure is founded on shallow soil, the amplification for the ground motion from the foundation level to the ground surface may be significant.

- c. For the structure(s) identified in your response to Item 7.a. above, provide the in-structure response spectra designated according to the height above the effective grade. If the in-structure response spectra identified in the 120-day-response to Supplement No. 1 to GL 87-02 was not used, provide the response spectra that were actually used to verify the seismic adequacy of equipment within the structures identified in the response to Item 7.a. above. Also, provide a comparison of these spectra to 1.5 times the Bounding Spectrum.
8. Table 5-2 of report MPR-1600 indicates that a cutout cover-plate size of a motor control center (equipment identification no. PB1671) exceeds the GIP maximum dimension. However, you accepted it as a "standard GE unit whose structural adequacy is judged acceptable." The use of the term "judged" is vague and this judgment needs to be justified. Provide an analysis or test result that demonstrates equipment item PB1671 is seismically adequate.
9. Table 6-1 of report MPR-1600 provides only brief descriptions and resolutions for the tank and heat exchanger outliers. Provide the detailed descriptions and calculations for the tanks and heat exchangers with identification numbers 60-09, 82-43, 96-35, and 305-125.
10. In Item 9 above, if you used the seismic margin methodology described in the report EPRI NP-6041 for the tank evaluations, you should describe the extent to which the method was used in the NMP1 A-46 program. Since this methodology is known to yield analytical results that are not as conservative as those obtained by following the GIP-2 guidelines, it is generally not acceptable for the USI A-46 program. Therefore, for each deviation from the GIP-2 guidelines, in situations where the margin methodology is utilized, identify the nature and the extent of the deviation, and provide the justification for its acceptance.
11. Section 7 of report MPR-1600 states that a total of eight worst-case limited analytical reviews (LARs) for the cable and conduit raceways were selected. Provide the list of those eight cases. Indicate whether the LARs include a review for the hanger supports. Provide the analysis for the cast iron inserts for the resolution of CB-TB-261.
12. Discuss the issue described in NRC Information Notice 95-49 regarding Thermo-Lag panels--in particular, the issue regarding seismic resistance capability of the cable tray and its support when appropriate weight and models of the Thermo-Lag are included in your LARs.

