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SUBJECT: Forwards response to anomalies listed in section 6.0 of  
 "Evaluation of Third 10-Year Interval for Pump & Valve IST  
 Program for DCP Units 1 & 2," dtd 970527. Rev 1 to IST valve  
 program included for info.

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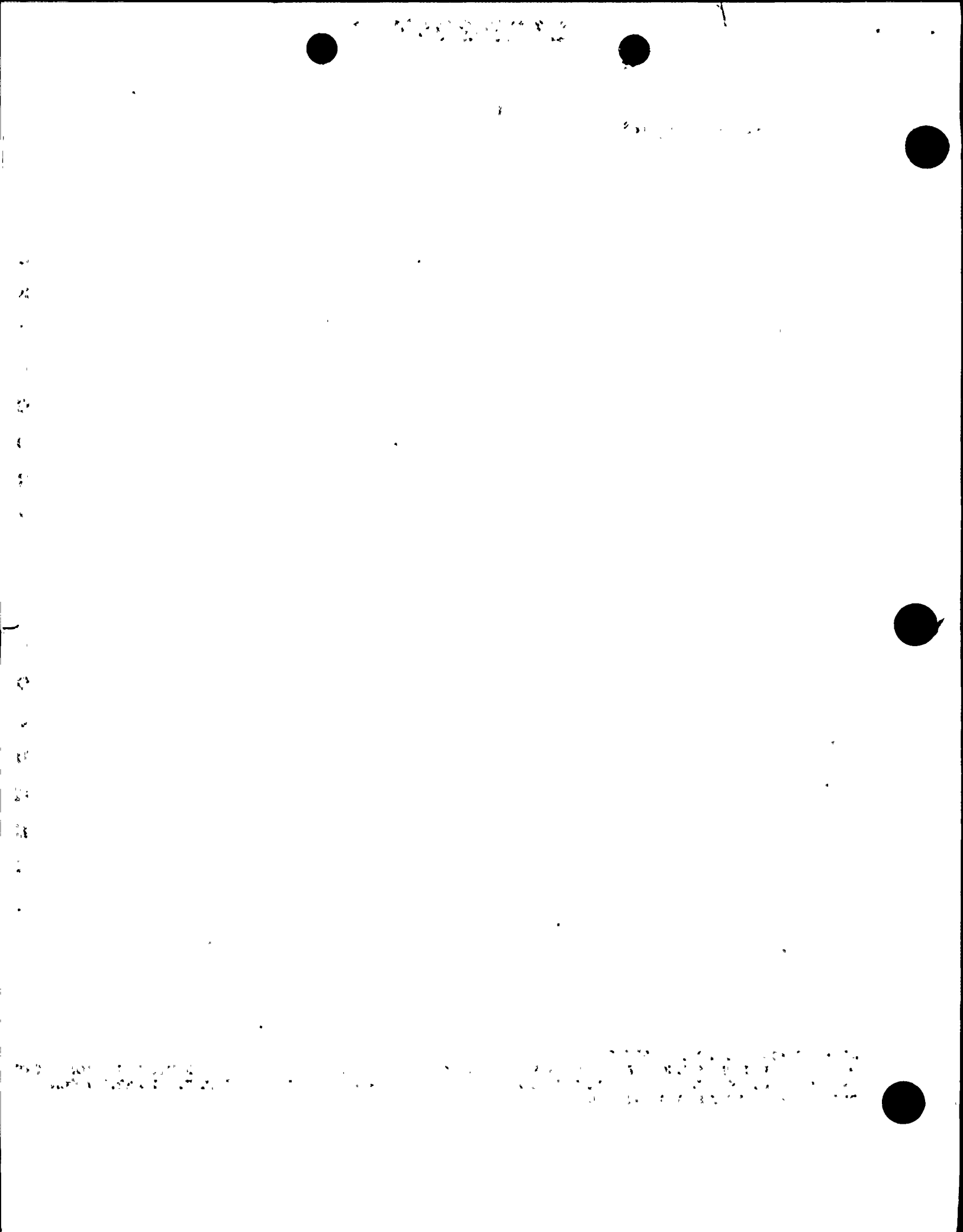
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June 29, 1998

AEP:NRC:0969BG

Docket Nos 50-315  
50-316

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
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Gentlemen:

Donald C. Cook Nuclear Plant Units 1 and 2  
THIRD 10-YEAR INSERVICE TESTING (IST) PROGRAM  
RESPONSE TO NRC'S EVALUATION

References:

1. Letter AEP:NRC:0969AM, "Donald C. Cook Nuclear Plant Units 1 and 2, Relief Requests for the Third 10-Year Pump Inservice Test Plan", dated August 19, 1997.
2. Letter AEP:NRC:0969AN, "Donald C. Cook Nuclear Plant Units 1 and 2, Relief Requests for the Third 10-Year Valve Inservice Test Plan", dated April 24, 1996.
3. Letter Gail H. Marcus, NRC, to E. E. Fitzpatrick, "Evaluation of Third 10-Year Interval for the Pump and Valve Inservice Testing Program for Donald C. Cook Nuclear Plant Units 1 and 2", dated May 27, 1997.

References 1 and 2 transmitted our relief requests for the third 10-year IST interval. The NRC's evaluation of the relief requests was transmitted by reference 3. Section 6.0 of the evaluation listed eleven anomalies that were to be responded to within a year of the date of the letter. Attachment 1 contains our response to the anomalies listed in section 6.0 of reference 3. Revision 1 to the IST valve program is included for your information as attachment 2.

Sincerely,

J. R. Sampson  
Vice President

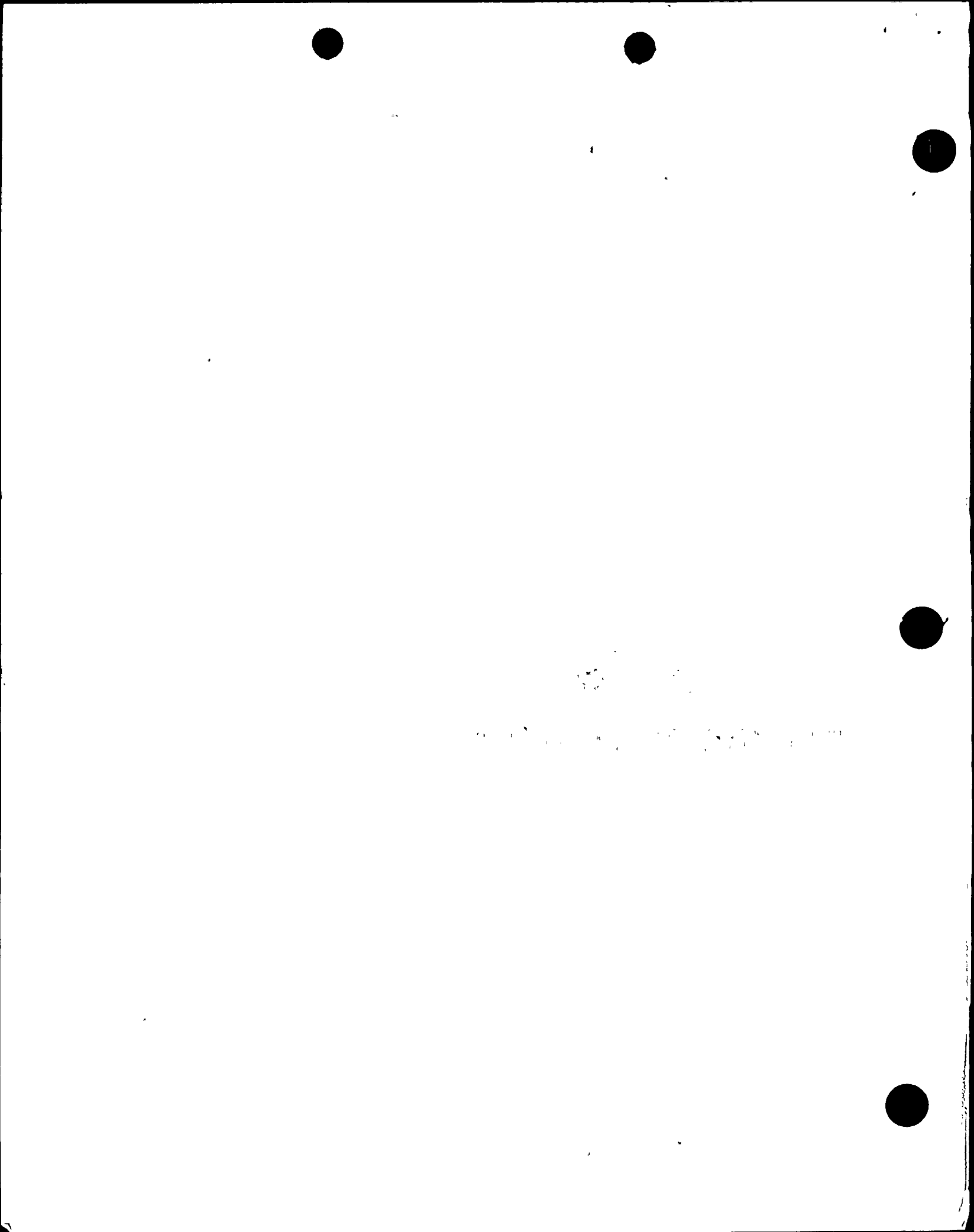
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Attachments

c: J. A. Abramson  
MDEQ - DW & RPD  
NRC Resident Inspector  
C. J. Paperiello

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ATTACHMENT 1 TO AEP:NRC:0969BG

RESPONSE TO ANOMALIES IDENTIFIED IN NRC'S EVALUATION REPORT  
THIRD TEN-YEAR INSERVICE TESTING PROGRAM



## 6.0 ANOMALIES

"The following anomalies were noted during the course of the IST program review. The licensee should review these items and make changes to their IST program, testing procedures, or other plant documentation as necessary. Items which require a response to the NRC should be completed within 1 year or the next refueling outage, whichever is longer, unless otherwise stated. Relief requests determined to be required as a result of this review should be submitted for NRC evaluation prior to the next scheduled testing, or within 90 days, whichever is later. Proposed alternatives may not be implemented without prior NRC approval except where testing in accordance with the Code is impractical."

### 6.1 P-1 (SE Section 3.1)

"Relief was denied to change the Code vibration acceptable range from  $\leq 2.5 V_r$  to  $\geq 2.0 V_r$ , the Code vibration alert range limit from  $2.5 V_r$  to  $6 V_r$  or 0.325 inches/second (in/sec) to  $2.0 V_r$  to  $4 V_r$  or 1.2 in/sec, and the Code required action range from  $>6 V_r$  or  $>0.70$  in/sec to  $>4 V_r$  or  $>2.0$  in/sec for the CTS pump PP-009. The relief request did not contain sufficient specific information on the pump vibration history and efforts to improve performance to justify the less conservative absolute requirements. Therefore, the licensee must perform testing of the CTS pump in accordance with the Code requirements."

#### Response To 6.1

Following discussions with NRC staff members, an interim relief request for one cycle was submitted in letter AEP:NRC:0969BJ, dated March 3, 1998. This submittal is currently under NRC review. Additionally, we are pursuing a containment spray system pump design change. The design change will include shipping a spare pump to the pump vendor, making modifications to the pump, testing the modified pump, and assessing the effectiveness of the modifications. Discussions on the modification, as well as the feasibility of performing the modification prior to restart, are currently ongoing with the NRC.

### 6.2 P-2 (SE Section 3.2)

"Interim relief was granted from the Code axial direction vibration measurement requirements for the boric acid transfer pumps 1-PP-45-1,2 and 2-PP-46-3,4. The licensee's proposed alternative did not provide sufficient justification to exclude the axial measurement as a major vibrational contributor. The licensee did not describe methods or attempts at taking axial vibrations, or discuss other examples of similar pumps where axial vibration is not a major contributor to the vibration of the pump. The relief is granted for an interim period of 90 days from the date of the SE to allow the licensee time to revise its relief request to address the concerns raised in this evaluation and incorporate any appropriate guidance provided in NUREG-1482."

Response To 6.2

A revised relief request was submitted in our letter AEP:NRC:0969BL, dated March 26, 1998. The revised relief request proposes taking axial vibration measurements at the outboard motor bearing in lieu of obtaining axial vibration measurements at the pump bearing.

6.3 REL-01 (SE Section 4.1)

"Relief is granted for local observation of the steam generator power-operated relief valves MRV-201/223/233/243 based on the impracticality of performing testing in accordance with the Code. The granting of relief is provisional on the licensee establishing acceptance criteria and corrective actions and including these in the appropriate IST procedure."

Response To 6.3

Acceptance criteria and appropriate corrective actions have been included in appropriate operations department surveillance procedures. Note that MRV-201 should be MRV-213.

6.4 REL-03 (SE Section 4.3)

"Relief is granted for stroke timing component cooling water letdown heat exchanger regulating valve CRV-470. The relief was granted provided the licensee develops acceptance criteria for the proposed alternate testing and appropriate corrective action if the valves fail the quarterly testing. Relief for fail-safe testing the valve to its closed position at cold shutdown frequency is not needed."

Response To 6.4

Acceptance criteria for the quarterly exercising of the valve is included in operations department surveillance procedures. If the valve fails the quarterly testing, it will be declared inoperable and the appropriate T/S action statement entered.

6.5 REL-07 (SE Section 4.7)

"Relief is granted for stroke timing and fail-safe testing of charging header regulating valve QRV-251. The relief was granted provided the licensee develops acceptance criteria for the proposed alternate testing and appropriate corrective action if the valves fail the quarterly testing. Relief for full-stroke testing at cold shutdown frequency is not needed, and the alternate cold shutdown frequency is justified based on the consistence with Section 2.4.5 of NUREG-1482."

Response To 6.5

An acceptance criterion for the quarterly exercising of the valve is included in the operations department surveillance procedures. If the valve fails the quarterly testing, it





will be declared inoperable and the appropriate T/S action statement entered.

6.6 REL-08 (SE Section 4.8)

"Relief is granted provided the sample disassembly program conforms to the guidance in GL 89-04, attachment 1, position 2, and NUREG-1482. If the program does not conform with the guidance given in GL 89-04, Attachment 1, Position 2, and NUREG-1482, the licensee must seek approval of a relief request for the differences."

Response To 6.6

The sample disassembly program conforms to the guidance in generic letter (GL) 89-04, attachment 1, position 2, and NUREG-1482. No relief request is required.

6.7 REL-09 (SE Section 4.9) and Appendix C

The licensee has requested 11 refueling outage justifications (REL-09, ROJ-01, ROJ-02, ROJ-05, ROJ-06, ROJ-08, ROJ-09, ROJ-10, ROJ-16, ROJ-17, and ROJ-18). The justifications are consistent with Section 4.1.4 of NUREG-1482. Option B of Appendix J may not, however, be used to justify changing the closure testing frequency beyond each refueling outage. The licensee should ensure that the closure testing frequency is each refueling outage. If an extended interval for local leakage rate testing is justified under Option B, the licensee may consider an alternative means of performing closure testing and revise these refueling outage justifications.

Response To 6.7

Cook Nuclear Plant IST procedures are consistent with the position stated above. When valve closure is verified using appendix J test methods, option B may not be used to extend the testing interval past a refueling outage frequency.

6.8 REL-12 (SE Section 4.12)

Relief is granted to part-stroke exercise the check valve, SI-189, at cold shutdown frequency and disassemble, manually full-stroke exercise, and visually inspect the valve, per GL 89-04, Attachment 1, Position 2, on a frequency of each refueling outage. The relief requested to perform the examination every third refueling frequency for the valve is denied, because the licensee has not provided adequate justification to extend the testing beyond a period of every refueling outage. The licensee should submit, for approval prior to the next refueling outage, a revised relief request justifying the extreme hardship to extend the interval to every other refueling outage.

Response To 6.8

Our submittal AEP:NRC:0969BE, dated August 19, 1997, revised this relief request. Extreme hardship could not be justified



to extend the interval. The valve will be disassembled each refueling outage. The revised relief request is shown below.

SI-189: This valve is located in the safety valves discharge (emergency core cooling, residual heat removal, centrifugal charging pump, etc.) collection header leading to the pressurizer relief tank. Isolating this valve for testing would result in dead heading all safety valves in the above systems. This would result in loss of over-pressurization protection and could put the plant in an unsafe condition. Therefore, the valve will be part-stroke exercised to the open position using an external source via a test connection at a cold shutdown frequency. The valve will be disassembled, manually full-stroke exercised, and visually examined at refueling frequency.

6.9 REL-13 (SE Section 4.13)

"For CVCS check valves CS-328L1, CS-328L4, CS-329L1, and CS-329L4, the licensee's basis for relief does not adequately describe the impracticality in performing testing in accordance with the Code requirements and relief is denied. The relief request should be revised to more completely describe why the valves cannot be tested with flow or back pressure."

Response To 6.9

Our submittal AEP:NRC:0969BE revised this relief request. The revised relief request is shown below.

CS-328L1,L4; CS-329L1,L4: These check valves have a closed safety function and provide the interface point between the reactor coolant system (RCS) and the chemical and volume control system (CVCS). Because the discharge piping of the CVCS is designed to a pressure rating higher than the RCS, these valves do not perform a pressure isolation function. The high pressure to low pressure isolation is accomplished by other valves that are tested to category A requirements. These 3" bolted bonnet swing check valves have no external position indication or means of exercising, and are located inside the crane wall in the reactor containment. There is no upstream instrumentation that can be used to show that the valves return to the fully closed position after exercising. In accordance with GL 89-04, attachment 1, position 2, the valves will be disassembled and inspected on a sample basis (1 of 4) during each refueling outage.

6.10 ROJ-13 (Appendix C)

For deferral of testing valve SI-148 to refueling outages, when the reactor vessel head is removed, the core is offloaded, and sufficient volume to inject is available, the ROJ is sufficient if the core is offloaded and the test performed each refueling outage. If the core is not offloaded each refueling outage, then the ROJ should be changed to a relief request for performing testing only during those refueling outages when the core is offloaded, with justification that such an extended test interval will continue to provide assurance of the operational readiness of



the valve. This is not meant to suggest that the licensee offload the core each refueling outage, but is meant to point out that extensions beyond each refueling outage must be covered by a relief request.

Response To 6.10

We plan to offload the core each refueling outage. If this plan changes, a relief request will be generated.

6.11 Relief Requests REL-02, REL-05, REL-06, REL-10, and REL-11

For the listed relief requests, the licensee has proposed to use a sample disassembly and inspection program. The use of such a program is acceptable where testing in accordance with the Code is impractical; however, the program must comply with the guidance delineated in Position 2 of Attachment 1 to GL 89-04. Where the program does not comply with the guidance, relief for the deviations must be granted. If test methods are developed that make testing practical, the licensee should investigate the use of such methods and make changes to the IST of these valves as appropriate.

Response To 6.11

The sample disassembly and inspection program is consistent with the guidance in GL 89-04, attachment 1, position 2, and NUREG-1482. No additional relief requests are required at this time. If test methods are developed that make testing practical, we will investigate the use of such methods and make changes to the IST of these valves as appropriate. We are currently investigating other test methods to be used in lieu of the alternatives shown in REL-10 and REL-11 to decrease radiation exposure. If the proposed alternatives can successfully demonstrate valve operability, a program revision will be initiated.

