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SUBJECT: Forwards response to NRC 800418 request for response to
 comments on auxiliary feedwater sys requirements.

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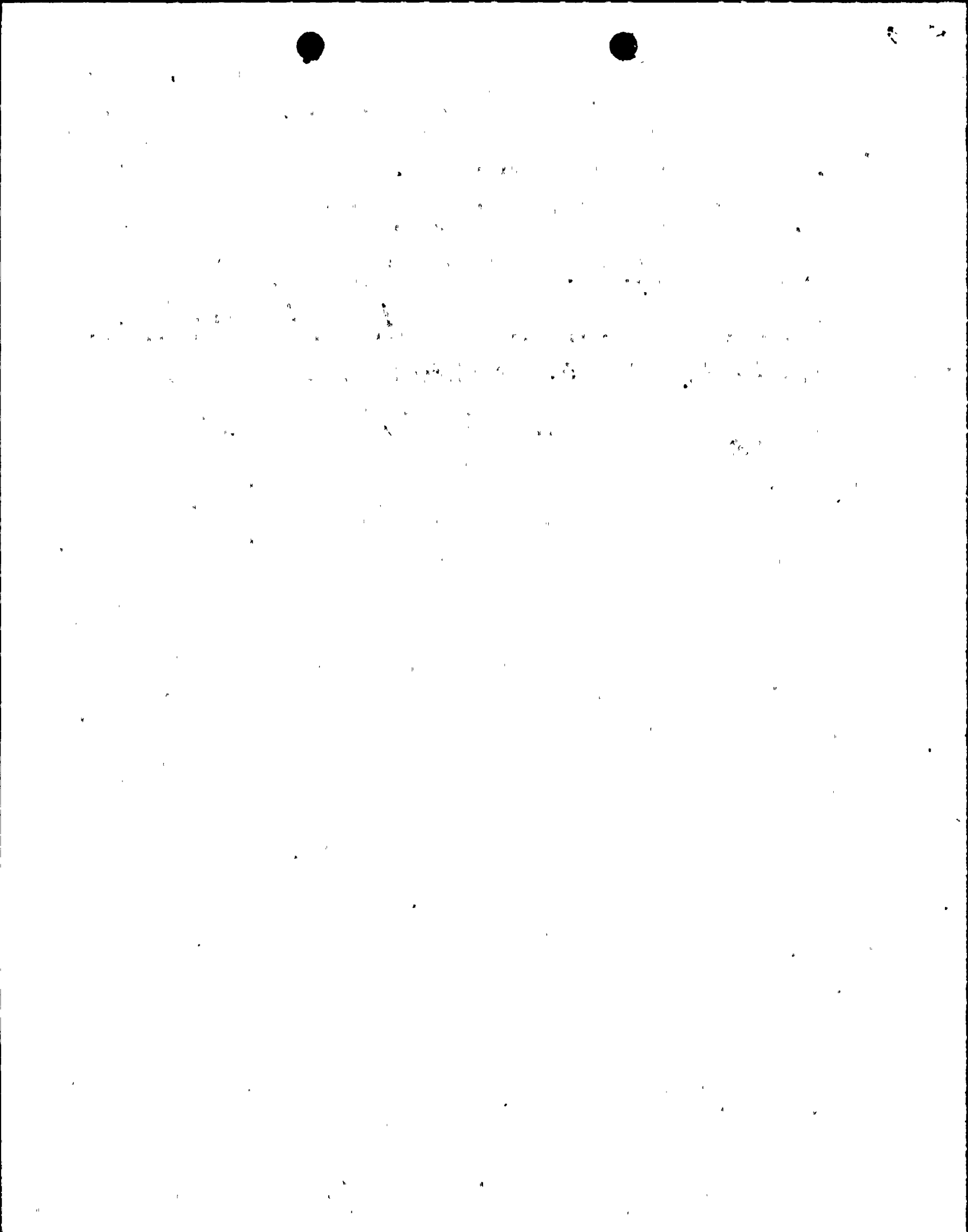
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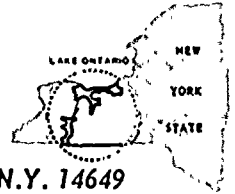


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LEON D. WHITE, JR.
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May 22, 1980

Director of Nuclear Reactor Regulation
ATTN: Mr. Dennis M. Crutchfield, Chief
Operating Reactors Branch 5
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Auxiliary Feedwater System Requirements
R. E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Crutchfield:

Dennis L. Ziemann's letter dated April 18, 1980 requested a response to staff comments on auxiliary feedwater system requirements. Our response is contained in the attachment to this letter.

Sincerely yours,

L. D. White, Jr.
L. D. White, Jr.

APR 25/11

8005280613

Attachment 1

Robert E. Ginna Nuclear Plant, Unit 1 Auxiliary Feedwater System Requirements

In the continuing review of the R.E. Ginna auxiliary feedwater system the NRC staff commented upon various aspects of the system in a letter from Dennis Ziemann dated April 18, 1980. The NRC comments are reproduced below followed by the RG&E response.

X.4.3.1 Short Term Recommendations

1. Recommendation GS-3

Your response to this recommendation is acceptable provided your response to Enclosure 2 of our letter dated October 22, 1979, adequately supports your conclusion that 200 gpm is sufficient to remove decay heat. You should expedite your response to Enclosure 2.

Response: Review of the design basis is continuing and will be completed as soon as possible. Our review to date supports the conclusion that 200 gpm auxiliary feedwater flow is sufficient to remove decay heat.

2. Recommendation (Plant Specific)

Your response to this recommendation is acceptable for the short term provided you implement interim emergency procedures for a complete loss of AC power that require an operator to be stationed at the turbine driven pump to monitor bearing oil temperatures and notify the control room if limits are exceeded. This will allow for on-off operation of the pump to prevent excessive oil temperatures if necessary.

Response: A test was run in August, 1979 to determine the effects of loss of cooling for the turbine driven auxiliary feedwater pump lube oil. The results of this test were discussed with the staff shortly after the test and the test data was provided for staff review on November 28, 1979. The test established that the turbine driven pump can be run without adverse affect with no cooling water flow to the lube oil heat exchanger. The pump manual recommends that the normal end bearing lube oil temperature be between 120°F and 150°F and recommends a minimum oil temperature of 100°F. The oil temperature reached 100°F after several minutes of operation and was stabilized near 120°F or less after approximately one and one half hours of operation. The pump was run

at 50% of the required flow but, as indicated in our November 28, 1979 submittal, only a small increase in the oil temperature is expected at full flow because of the pump's flat BHP curve. Therefore, during a complete loss of offsite AC power coupled with the loss of both diesel generators the turbine driven auxiliary feedwater can be expected to perform without the need for lube oil cooling. During the loss of all AC power event, caused by multiple failures, plant operators will be busy recovering the plant to stable conditions. Assigning an operator, 20% of the minimum shift complement, to do nothing but watch a pump which will perform satisfactorily is an imprudent use of resources. Our procedures will not be modified to require an operator to be stationed at the pump, however, we have implemented a change to our existing emergency procedure (E-4) to assure that the pump is periodically checked if all AC power is lost. We encourage the staff to expedite its review of the test results.

Recommendations GS-6

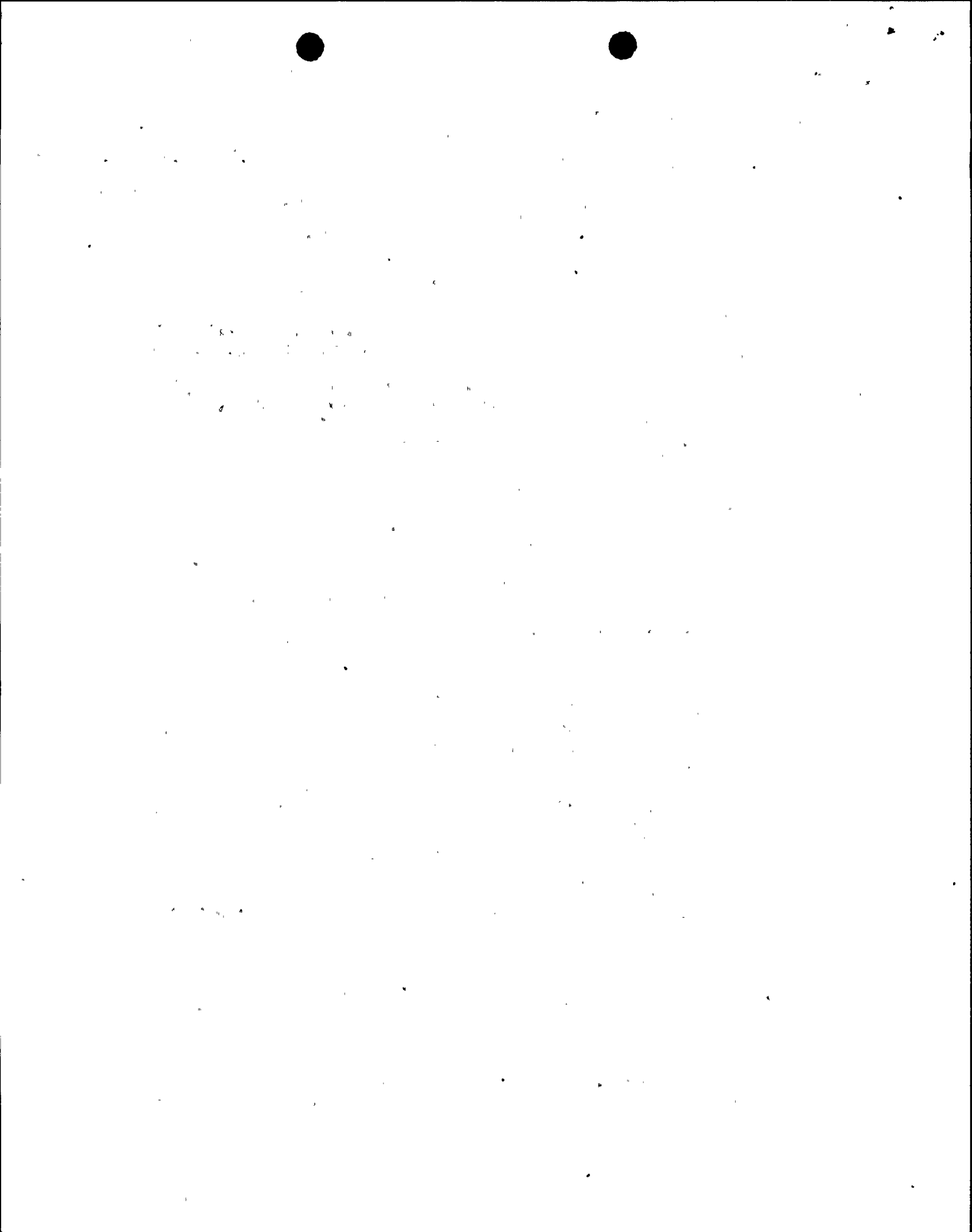
- a. In your response to this recommendation it is not clear that the AFW alignment checks following periodic tests or maintenance are performed twice by independent personnel. Verify that the testing personnel perform the first alignment check and that the alignment check performed by the Operations personnel is the second check.

Response: Test

After the performance of periodic tests on the Auxiliary Feedwater and Standby Auxiliary Feedwater System, the Results and Test Department personnel return all the valves manipulated during the test to their safeguard position as directed by the procedure. In addition, at the completion of the test, an independent verification of valve alignment is performed by the Operation Department personnel. The independent verification is part of the procedure and applies to all safety related valves in the system that are manipulated during the test. Once the independent verification is accomplished, the Shift Supervisor signs the procedure as completed (see attached sample procedure PT-16 step 6.6 through 6.6.14).

Maintenance

After maintenance has been performed on the Auxiliary Feedwater and Standby Auxiliary Feedwater System, Results and Test Department personnel are notified in accordance with the procedure to perform a test of the system (see attached sample procedure M-11.5B step 5.10). The notification prompts the steps outlined in the previous paragraph concerning tests.



- b. Your response to this recommendation is acceptable. However, we wish to clarify that an extended cold shutdown should be considered for any refueling outage and any cold shutdown in excess of 30 days.

Response: As indicated in our November 28, 1979 response, we perform flow tests on the auxiliary feedwater pump monthly or prior to reaching 5% power following an extended shutdown if the time since the last test exceeds one month. No additional response is required.

4. Recommendation GS-7

Your response to this recommendation is currently under review.

Response: No additional response is required.

X.4.3.2 Additional Short Term Recommendations

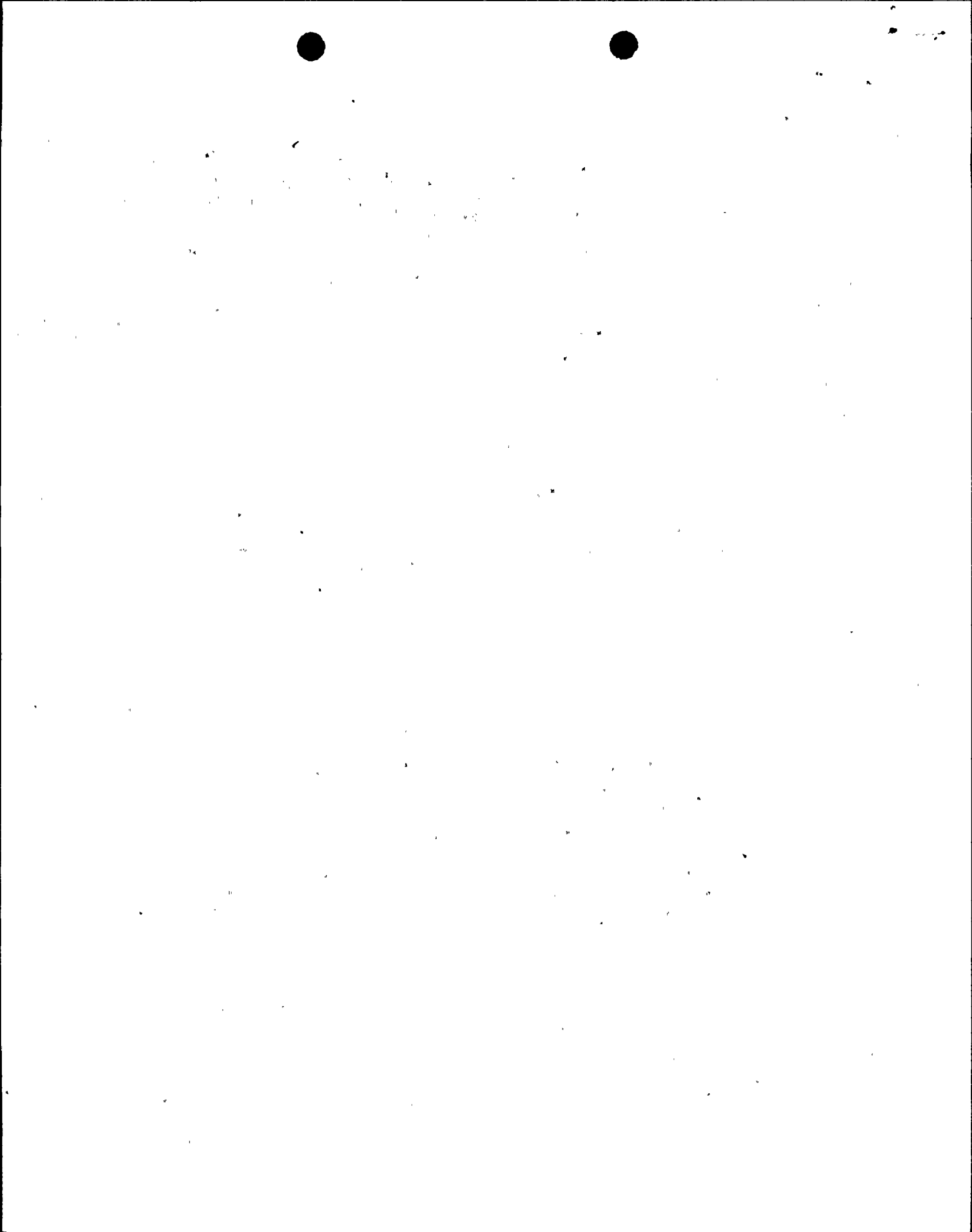
1. Your response to this recommendation is acceptable provided the redundant indication and alarm circuitry you install have redundancy all the way from the detectors to the indicators including their power supplies. They also should be powered by emergency busses with at least one circuit backed by a battery source. Verify that your design will meet the above recommendations.

Response: The design of our redundant indication and alarm circuitry will meet the staff recommendations.

2. Recommendation No. 2

We have revised this recommendation such that a 48-hour test may be performed rather than the 72-hour test. The attached revised Additional Short Term Recommendation No. 2 should be used instead of the original. Follow the provisions of the revised AFW pump endurance test and submit the requested test information.

Response: The changes in the staff position have been noted and the length of the pump endurance tests has been reduced to 48 hours. Testing of the standby auxiliary feedwater pumps has been completed; test results will be forwarded soon. The turbine driven auxiliary feedwater pump will be tested after the new intermediate building ventilation system is installed. The new HVAC system is to provide additional cooling following the installation of fire barriers which reduced air flow in the building. The new system will reduce the potential for reactor trips during power operation caused by environmental conditions during the extended testing period. The HVAC system should be completed to allow testing of the pump this fall. Because of the extensive operating times which have been accumulated over the past ten years for the main motor driven auxiliary feedwater pumps no additional testing of these pumps is planned.



3. Your response to this recommendation is currently being reviewed and evaluated by the Lessons Learned Implementation Task Force.

Response: No additional response required.

4. This recommendation does not apply to the Ginna Nuclear Plant.

Response: No response required.

X.4.3.3 Long Term Recommendations

1. Recommendation GL-3

Your response to this recommendation is acceptable. Also see the plant specific short term recommendation No. 2.

Response: No additional response required.

2. Recommendation (Plant Specific)

We will review and evaluate your response to this recommendation at a later date.

Response: Our evaluation of the water source capabilities to provide AFW flow for two hours independent of AC power was submitted March 28, 1980. No additional response is required.

3. Recommendation GL-5

See short term recommendation GS-7.

Response: See response to short term recommendation GS-7.

4. & 5. These long term items will be reviewed as part of the Systematic Evaluation Program.

Response: No response required.

