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SUBJECT: Responds to NRC 910321 ltr re violations noted in insp rept
 50-530/91-01 on 910106-0216. Corrective actions: memo to
 ensure that surveillance testing would only be performed
 during Modes 4, 5 & 6 issued.

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NOTES: Standardized plant.

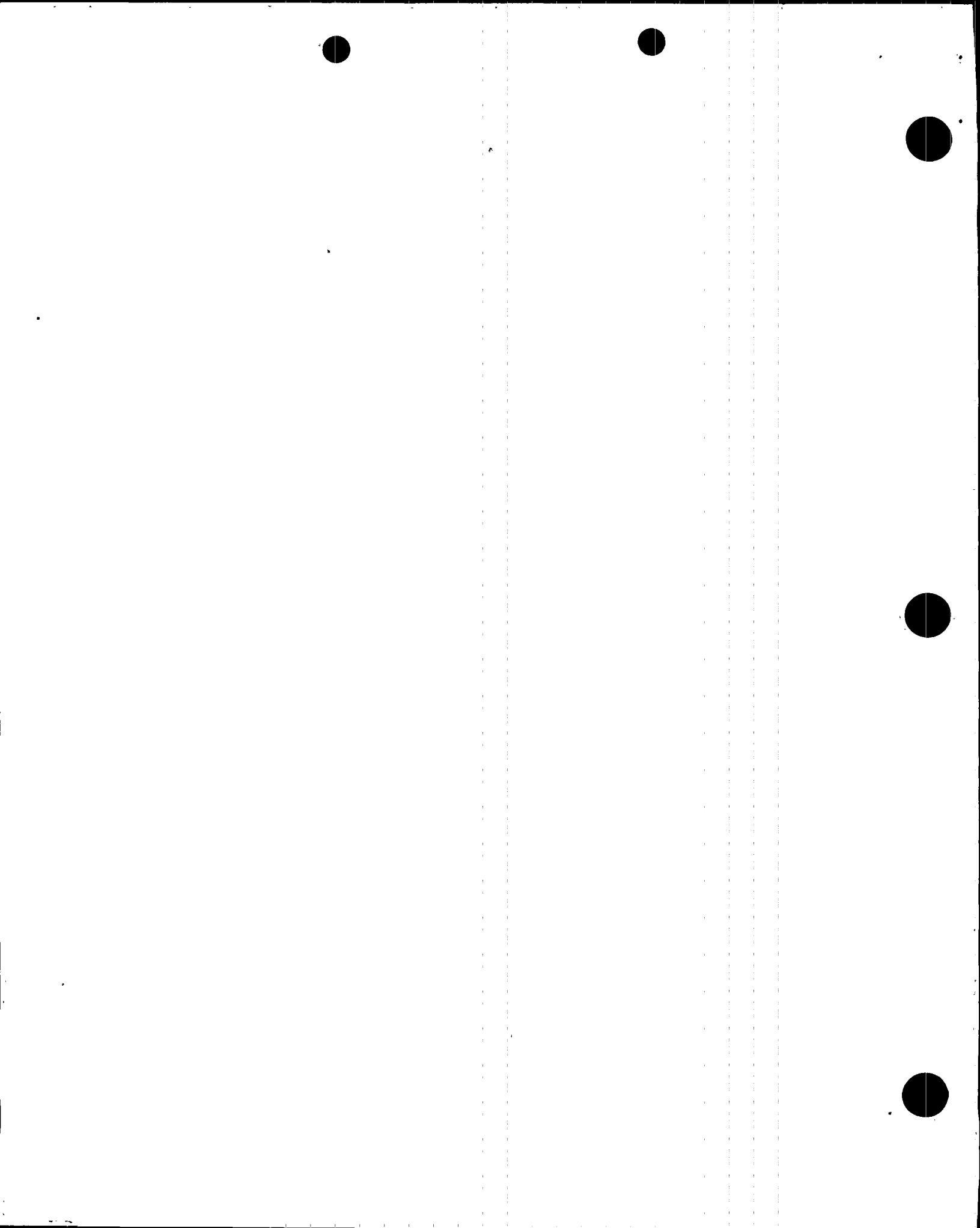
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WILLIAM F. CONWAY
EXECUTIVE VICE PRESIDENT
NUCLEAR

102-02014-WFC/TRB/JJN

April 19, 1991

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Mail Station: P1-37
Washington, DC 20555

Reference: Letter from R. P. Zimmerman, Director Division of Reactor Safety and Projects, NRC to W. F. Conway, Executive Vice President Nuclear, Arizona Public Service, dated March 21, 1991

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 1, 2, and 3
Docket No. STN 50-528 (License No. NPF-41)
Docket No. STN 50-529 (License No. NPF-51)
Docket No. STN 50-530 (License No. NPF-74)
Reply to Notice of Violations 50-530/91-01-01 and 530/91-01-02
File: 91-070-026

This letter is provided in response to the inspection conducted by Messrs. D. Coe, J. Ringwald, J. Sloan, D. Kirsch, and W. Ang from January 6 through February 16, 1991. Based upon the results of the inspection, two apparent violations of NRC requirements were identified. A restatement of the violations and APS's responses are provided in Appendix A and Attachment 1, respectively, to this letter.

As requested in the referenced letter, Attachment 2 provides APS's response regarding the adequacy of the evaluations performed following identification of the Diesel Generator Air Receiver leakage. Should you have any questions regarding this response, please contact me.

Very truly yours,



WFC/TRB/JJN

Attachments

cc: J. B. Martin
D. H. Coe
A. H. Gutterman
A. C. Gehr

9104260088 910419
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PDR

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APPENDIX A

NOTICE OF VIOLATION

Arizona Public Service Company
Palo Verde Unit 3

Docket Number 50-530
License Number NPF-74

During an NRC inspection conducted on January 6 through February 16, 1991, two violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1990), the violations are listed below:

- A. Palo Verde Unit 3 Technical Specifications Surveillance Requirement 4.8.1.1.2.d.1 states "Each diesel generator shall be demonstrated OPERABLE: At least once per 18 months during shutdown by: 1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service."

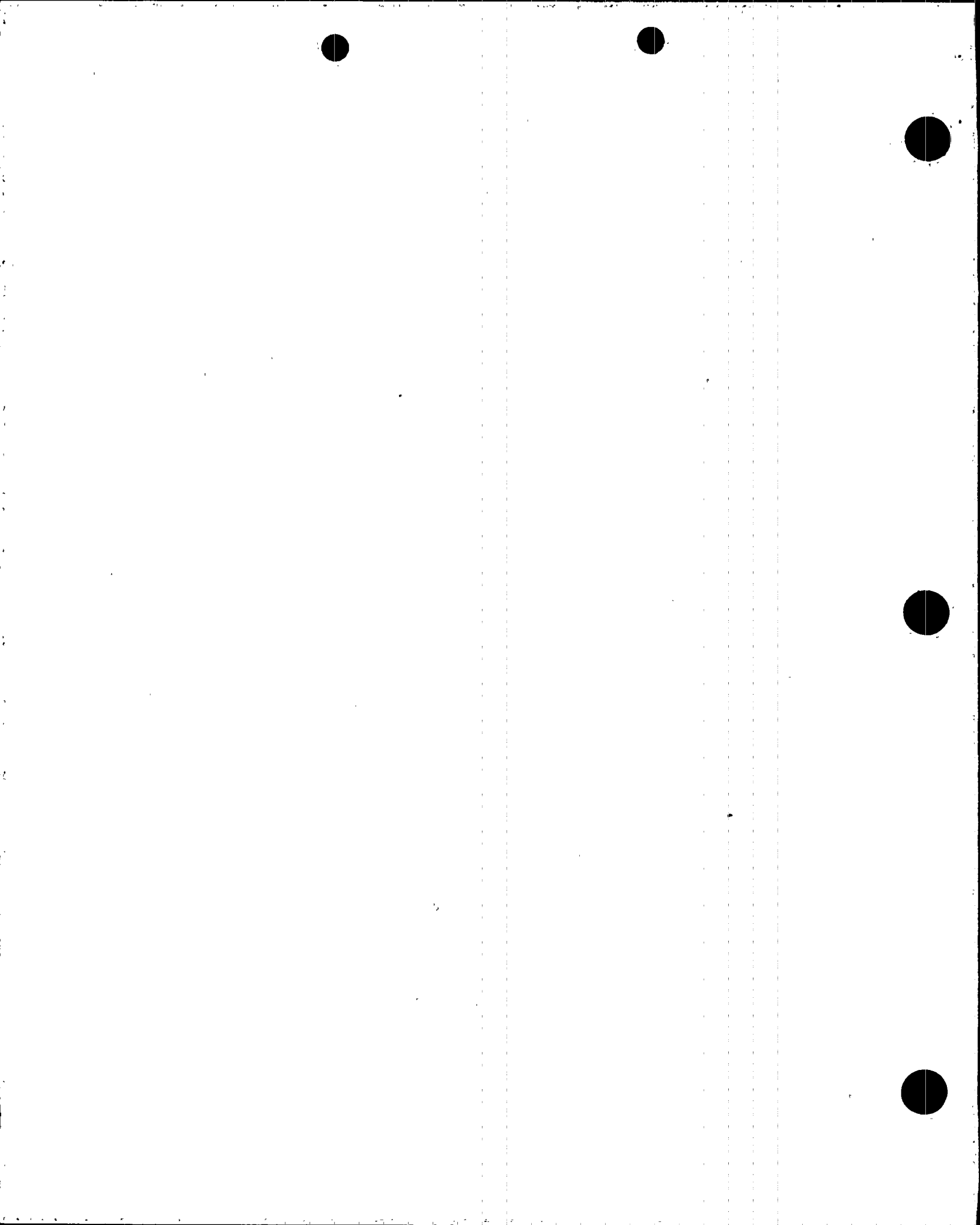
Contrary to the above, the licensee performed manufacturer recommended inspections on Unit 3 Train "A" and "B" diesel engines and electrical generators at various times between October 1990 and February 1991 while Unit 3 was being operated at power.

This is a Severity Level IV Violation (Supplement I) applicable to Unit 3.

- B. 10 CFR Part 50, Appendix B, Criterion XVI, requires that measures be established to assure that conditions adverse to quality such as deficiencies, malfunctions, and defective material and equipment be promptly identified and corrected.

Contrary to the above, manway cover gasket leakage in both EDG "A" starting air receivers, conditions adverse to quality, were identified in May 1990, but an appropriate evaluation had not been performed to identify potential impacts on safety function and the leakage had not been corrected as of February 1, 1991. The amount of air leakage from a receiver which can be experienced and still be considered capable of performing its specified function had not been determined, and the leakage through the manway cover gaskets had not been determined.

This is a Severity Level IV violation (Supplement I) applicable to Unit 3.



ATTACHMENT 1

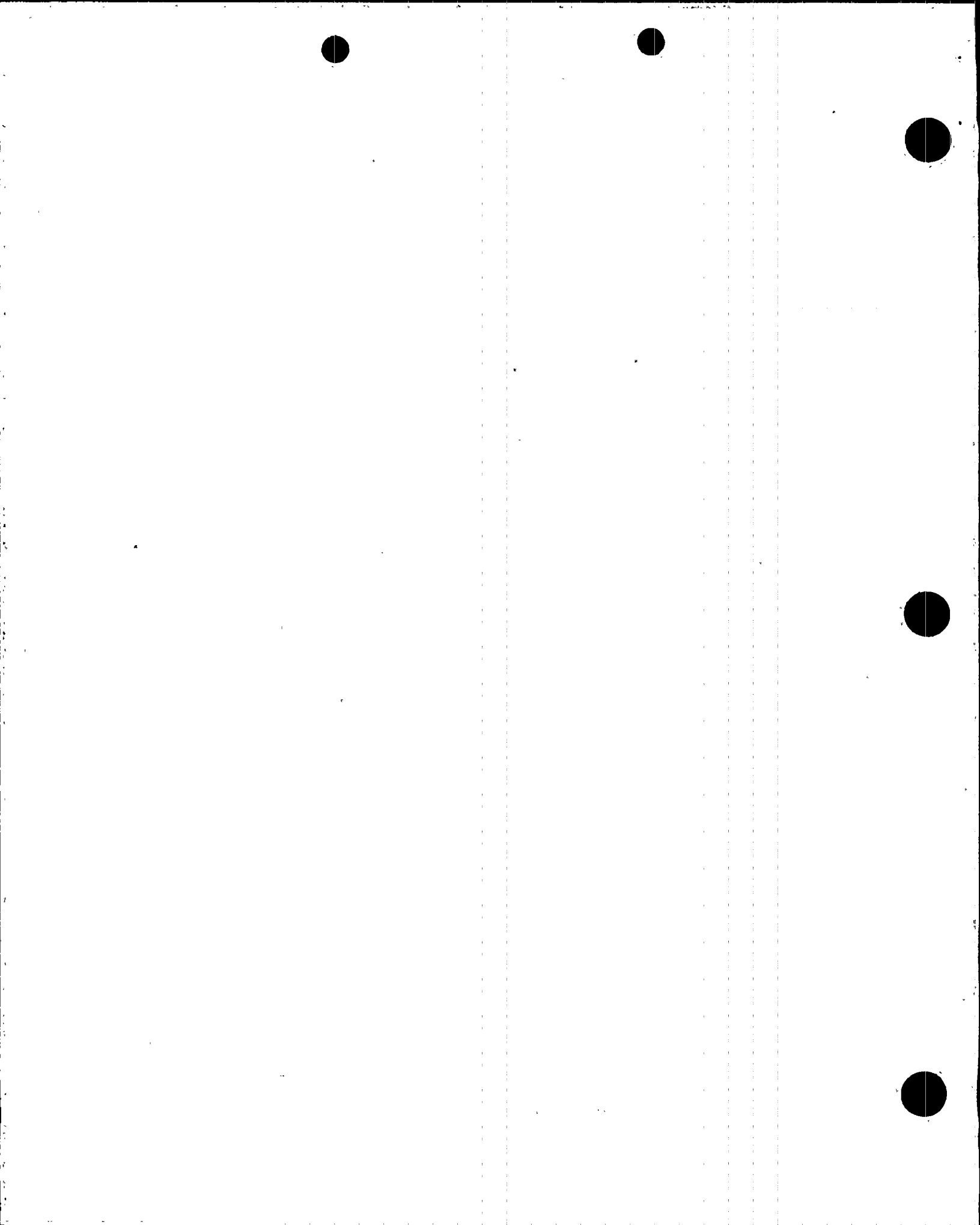
REPLY TO NOTICE OF VIOLATION 50-530/91-01-01

I. REASON FOR THE VIOLATION

The reason for the violation was an incorrect interpretation of the Technical Specification (TS) basis for performing vendor inspections while shutdown. The TS statement "during shutdown" of surveillance requirement 4.8.1.1.2.d.1 was interpreted as providing general guidance for vendor inspections that could not be performed within the 72 hour action statement for online outages and therefore had to be performed during a plant shutdown when the 72 hour action statement would not apply. Those portions of the Surveillance Tests (ST) which implemented vendor inspections and could be performed within the 72 hour action statement were performed based on the premise that affirming the reliability of the Diesel Generator (DG) to the extent practical for vendor recommended inspections was prudent.

II. CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

The Vice President Nuclear Production discussed the event with cognizant plant management and issued a memorandum to ensure that surveillance testing would only be performed during Modes 4 (HOT SHUTDOWN), 5 (COLD



SHUTDOWN), and 6 (REFUELING - including core defueled) when TS state "during shutdown".

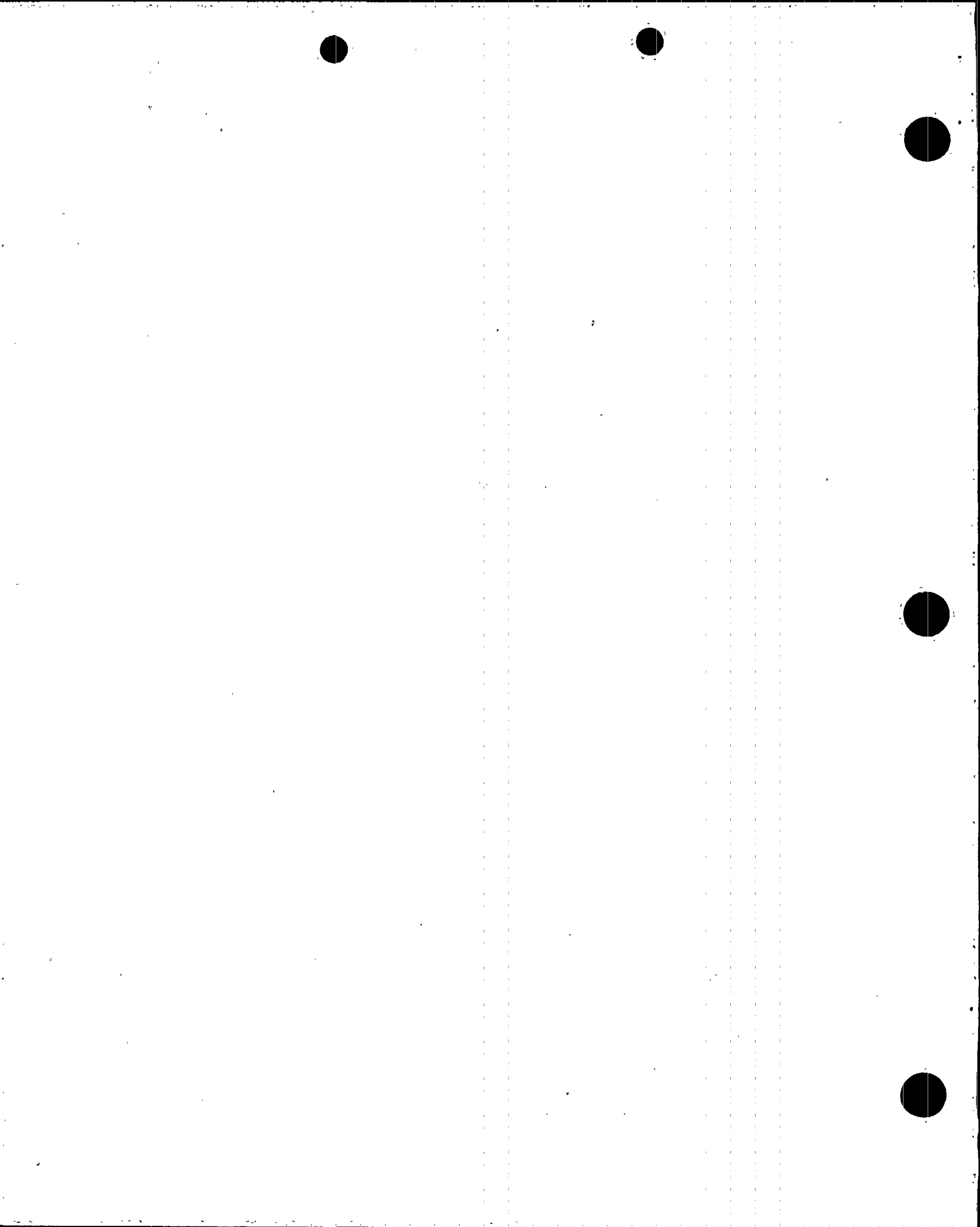
Additionally, Technical Specifications (TS) were reviewed to identify other Surveillance Requirements which are required to be performed only when the Unit is shutdown. The Surveillance Tests (ST) which implement those Surveillance Requirements were reviewed to identify the tests which could potentially be performed in Modes 1 (POWER OPERATION), 2 (STARTUP), and 3 (HOT STANDBY). Instruction Change Requests have been submitted to require specific precautions against performing these Surveillance Tests except in Modes 4, 5, and 6 (this includes core defueled).

III. CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID VIOLATIONS

APS believes that the corrective steps described above will prevent recurrence.

IV. DATE WHEN FULL COMPLIANCE WAS ACHIEVED

Full compliance was achieved on March 8, 1991, when the Vice President Nuclear Production issued a memorandum to ensure that testing would be performed only during Modes 4 (HOT SHUTDOWN), 5 (COLD SHUTDOWN), and 6 (REFUELING - including core defueled) when TS state "during shutdown".

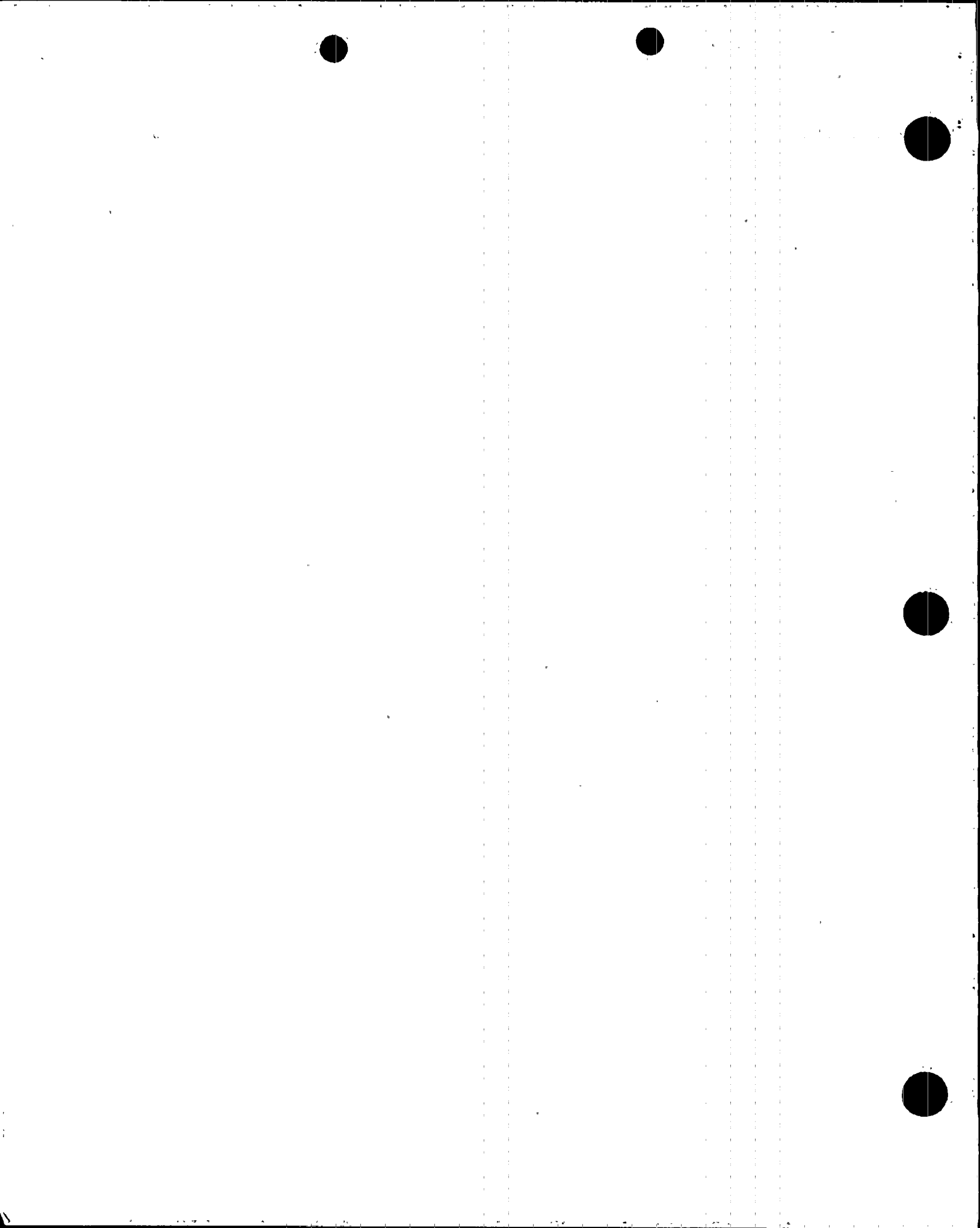


REPLY TO NOTICE OF VIOLATION 50-530/91-01-02

APS does not believe that a violation of regulatory requirements occurred. However, in reviewing the circumstances surrounding this issue APS recognizes the need to enhance the review process of safety related deficiencies to ensure that the design bases are maintained. Results of that review are contained in Attachment 2.

I. REASON FOR THE DENIAL

The Diesel Generator air receiver leak was identified, reported, and evaluated in accordance with APS's administrative controls. APS believes that the determination of operability and scheduling of maintenance was appropriate for the condition identified. The air compressors were observed to be running only one to two minutes per cycle to restore air pressure in the receivers in accordance with design. Following this, the air receiver pressure was observed to remain between the nominal setpoints of 240 to 250 psig (the setpoints for cycling the compressor on and off) for several minutes. [Note: The evaluations discussed in Attachment 2 showed the highest observed receiver leakage resulting in compressor operation of about a minute and a half approximately every 17 minutes.] The minimum pressure required for operability is 175 psig. Accordingly, it was apparent that the specific leak at the air receiver manway cover, as part of nominal



system leakage, was not close to a level which would render inoperable or significantly degrade the Diesel Generator.

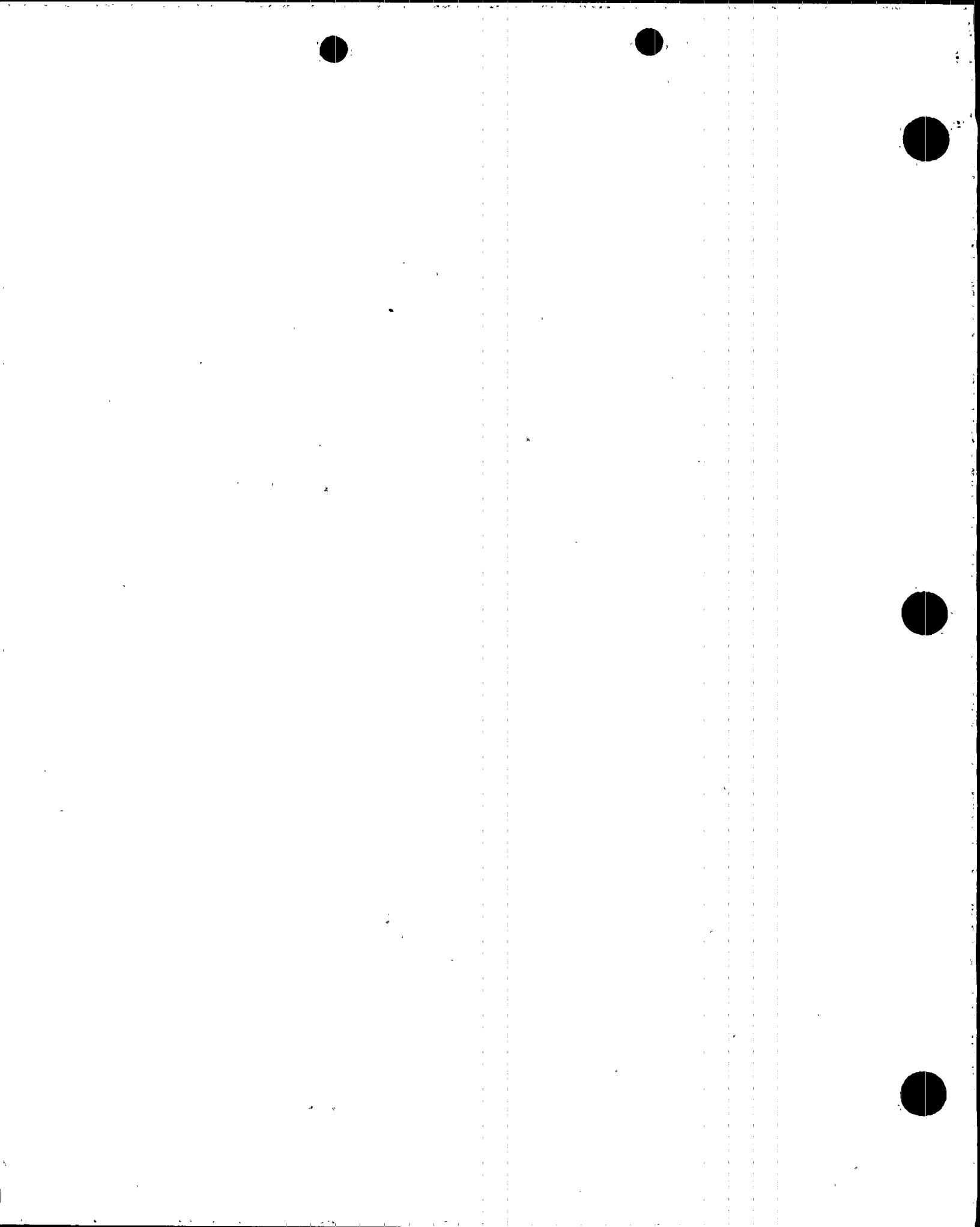
APS believes that any significant increase in the air leakage that could have invalidated the initial evaluation would have been identified during shiftly tours by direct observation of the leak, the air receiver pressure, or by the operating time of the compressor. Additionally, the control room is provided with a low pressure alarm.

II. CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

To reverify the operability of the DG and to ensure that the DG starting air receiver would continue to meet its design basis as described in the Final Safety Analysis Report (FSAR), the evaluations described in Attachment 2 were conducted. These evaluations confirmed the initial operability determination described above.

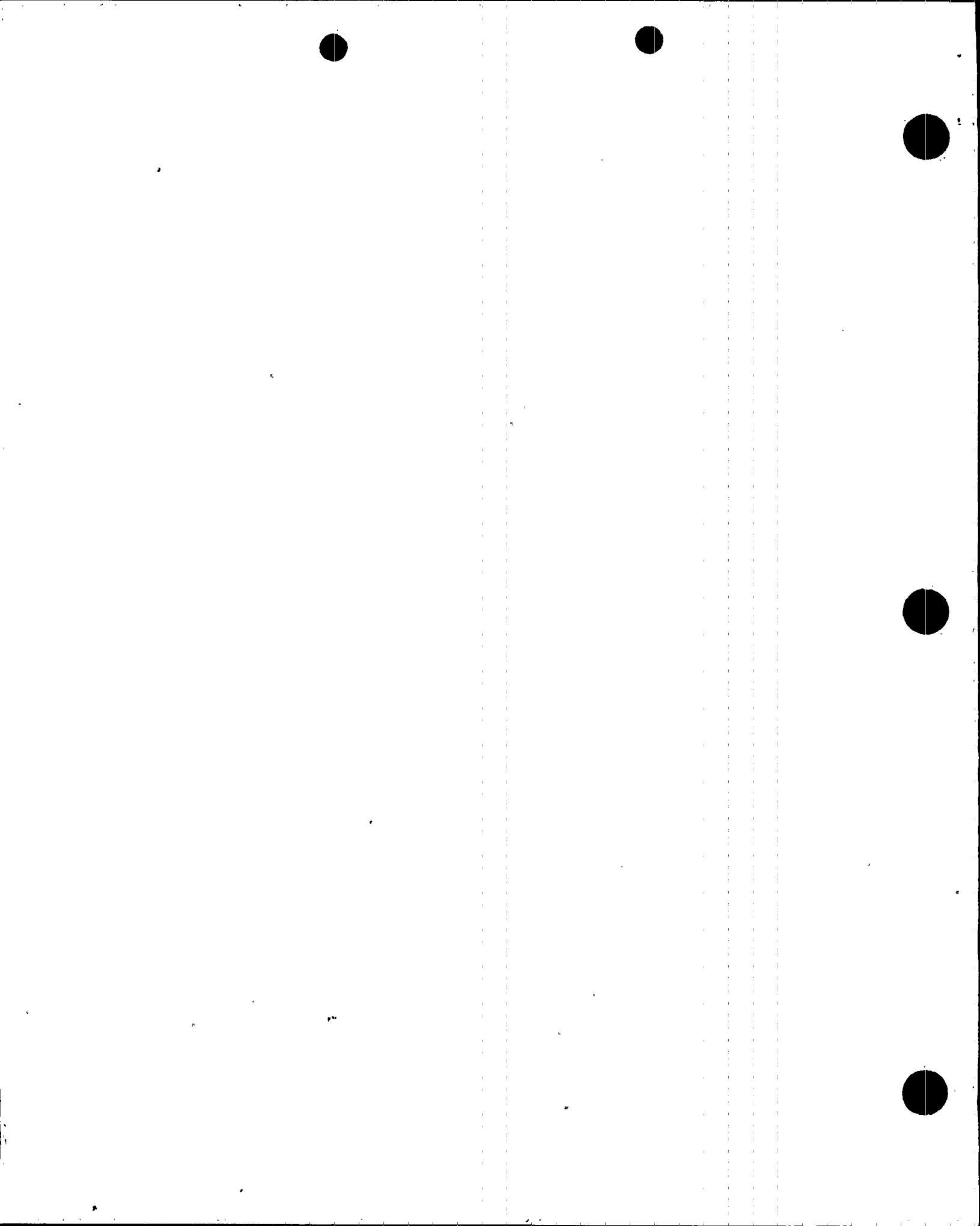
III. CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID VIOLATIONS

Although APS believes that no violation of regulatory requirements occurred, Attachment 2 describes enhancements which APS believes will avoid the possibility of violations of this type.



IV. DATE WHEN FULL COMPLIANCE WAS ACHIEVED

Full compliance was achieved at all times.



ATTACHMENT 2

RESPONSE TO COVER LETTER

EVALUATION ASSESSMENT

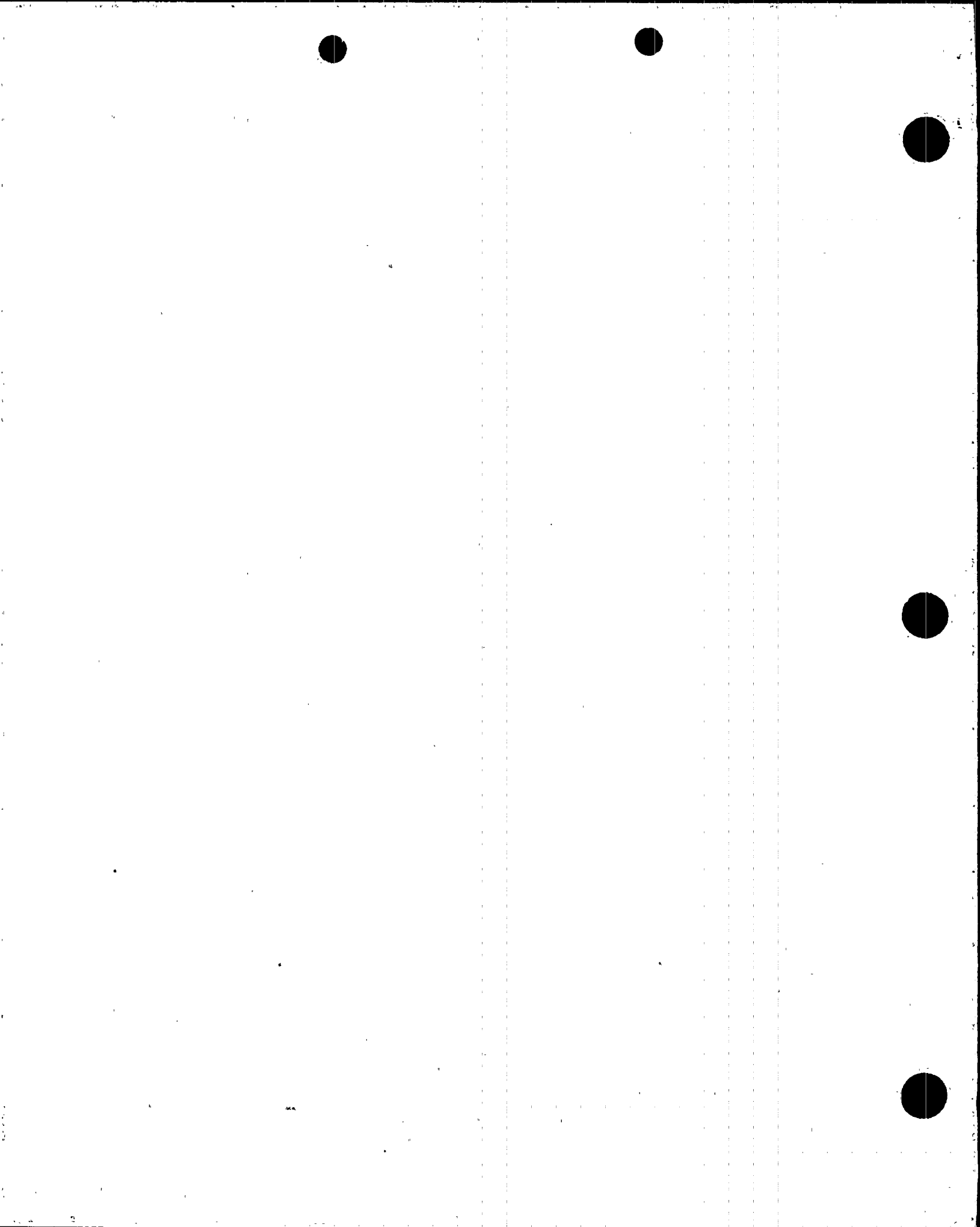
The cover letter to NRC Inspection Report 50-528, 529, and 530-91-01 requested an assessment of the adequacy of the evaluations performed following identification of the EDG air start system leakage. To assess whether the May 1990 determination of operability was adequate, two evaluations were performed as follows:

On February 28, 1991, an Engineering Evaluation was initiated to determine the acceptable air leakage rate for the Starting Air Subsystem and to determine the current air leakage rate from the Starting Air Subsystem and to compare the two. This evaluation showed the allowed maximum leakage rate to be one where the air compressor(s) was not capable of maintaining the minimum air pressure in one receiver. The air leakage rate was such that this criteria was met at all times.

On March 20, 1991, a Non Conformance document (MNCR) was initiated to request definition of the word "after" in the Updated Final Safety Analysis Report sentence, "The DGSS (Diesel Generator Starting System) shall remain functional during and after SSE (Safe Shutdown Earthquake)." The word "after" was dispositioned to mean immediately after an SSE. Since the DGSS is designed to withstand a SSE and start the diesel generator in response to loss of offsite power that occurs concurrent with or immediately after the SSE, minor leakage does not render the DGSS incapable of performing its intended safety function and is therefore in agreement with the PVNGS UFSAR statement.

The two aforementioned evaluations substantiate the evaluation conducted in May 1990 that the Diesel Generator continued to be OPERABLE despite the minor air leakage. However, in reviewing this item, APS has recognized that, although the evaluation ultimately showed compliance with regulatory requirements, the evaluation process for determining whether conditions may render equipment inoperable based on not meeting its design basis could be improved. The following explanation of the present process for evaluating deficiencies is provided with an explanation of changes being developed to the process.

Presently, anyone at Palo Verde who discovers a plant hardware deficiency is



directed to prepare a Work Request to identify the problem¹. The Work Request is then given to a Licensed Operator for an initial determination of operability/reportability in accordance with the Technical Specifications and 10CFR50.72/73 and for initial determination of priority. The present priority system provides two priorities for work to be done on a real time basis (work must begin within 24 hours), two priorities which allow scheduling of work into the future, and one priority for outage work.

The personnel reviewing Work Requests have a detailed understanding of the power plant from an operational and system aspect and, in all but a few cases, are fully capable of making determinations of the importance of the problem identified. However, a few cases may arise in which certain design bases may not be obvious or explicitly contained in the Technical Specifications. As such, the personnel reviewing work orders may not be fully cognizant of the intricacies of some design bases. In those cases, there exists the possibility of assigning a priority which allows scheduling of work into the future when, in fact, the work should be performed on a real time basis.

To address this issue, Palo Verde is clarifying the System Engineering program to include a requirement for the System Engineer to review open safety related work requests, which potentially could impact system availability, on a periodic basis to ensure potential design bases concerns do not exist for identified deficiencies. Concerns identified through this process will be documented through the Material Non-Conformance program to ensure timely evaluation and/or correction of the deficiency. Documentation of the reviews of work requests which do not become MNCRs will be maintained in accordance with engineering department procedures.

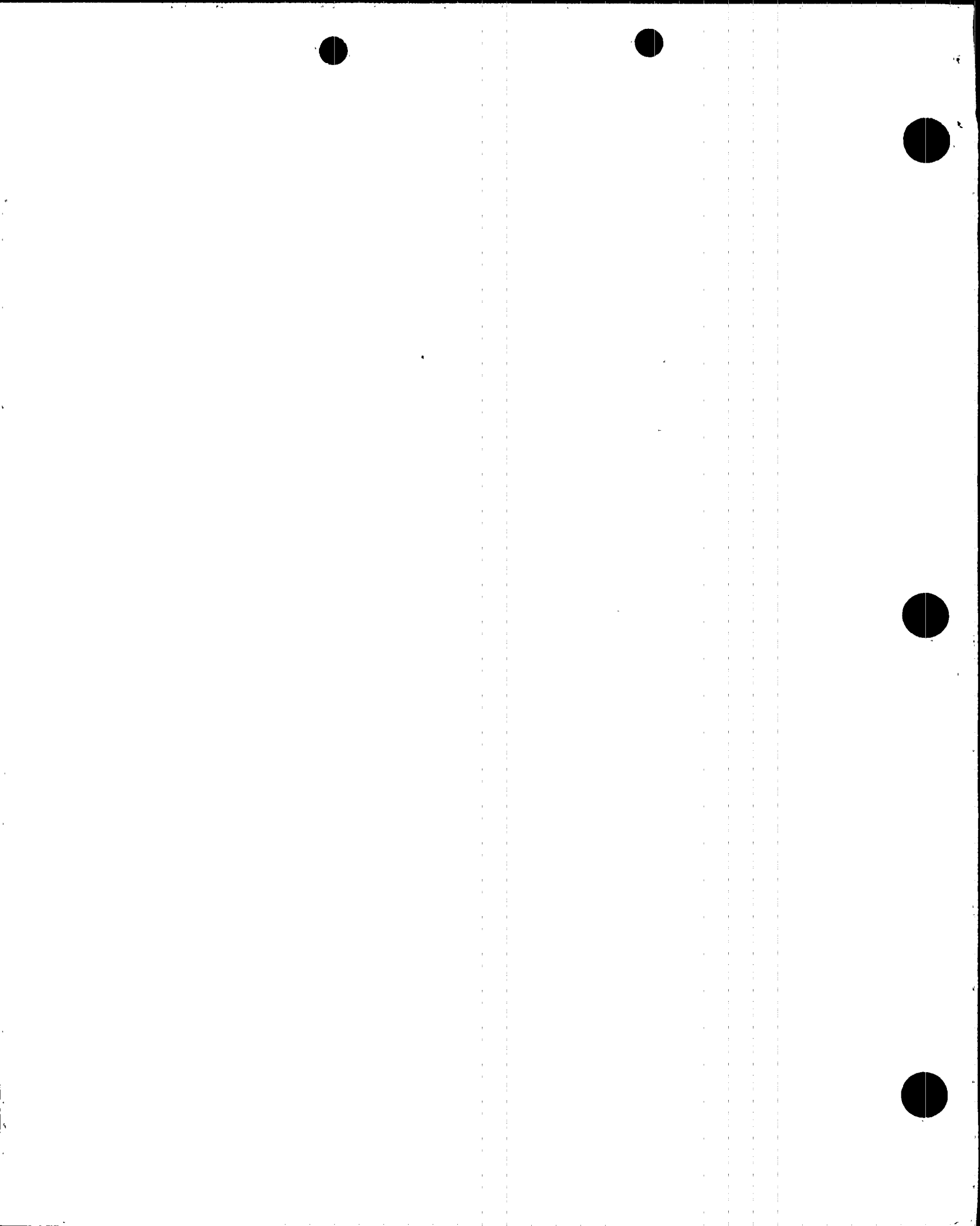
Addition of this requirement should ensure the System Engineer provides engineering expertise to assure reliable availability of assigned system(s) as presently required by the System Engineering program. This additional step will also assure that the requirements of 10CFR50 Appendix B Criterion XVI are consistently applied.

MAINTENANCE SCHEDULING AND PLANNING

The cover letter also stated that the two apparent violations appeared to indicate weaknesses in the maintenance scheduling and planning process. As a point of clarification, the following is provided.

As discussed in the responses to the violations (Attachment 1), neither condition identified was attributable to a weakness in our scheduling and planning of maintenance. In the first example, an incorrect interpretation of

¹An individual may also initiate a MNCR for a hardware deficiency. However, this document receives the type of review necessary to ensure the design basis continues to be met.



Technical Specifications resulted in the performance of work at power. In the second case, although APS believes no violation of regulatory requirements occurred, maintenance scheduling was based on an assigned priority in accordance with our program. The ingredient missing from the scheduling was a review by engineering that justified the schedule. Neither of these conditions reflect a weakness in the maintenance scheduling and planning process.

Additionally, as discussed recently with NRC regional management, APS has implemented strict controls with regard to removing safety-related equipment from service for maintenance. These controls demonstrate APS management's sensitivity to this issue.

