

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
Tennessee Valley Authority ) License Nos. DPR-33  
(Browns Ferry Plant) ) DPR-52  
 ) DPR-68  
 ) EA 81-30

ORDER IMPOSING CIVIL MONETARY PENALTIES

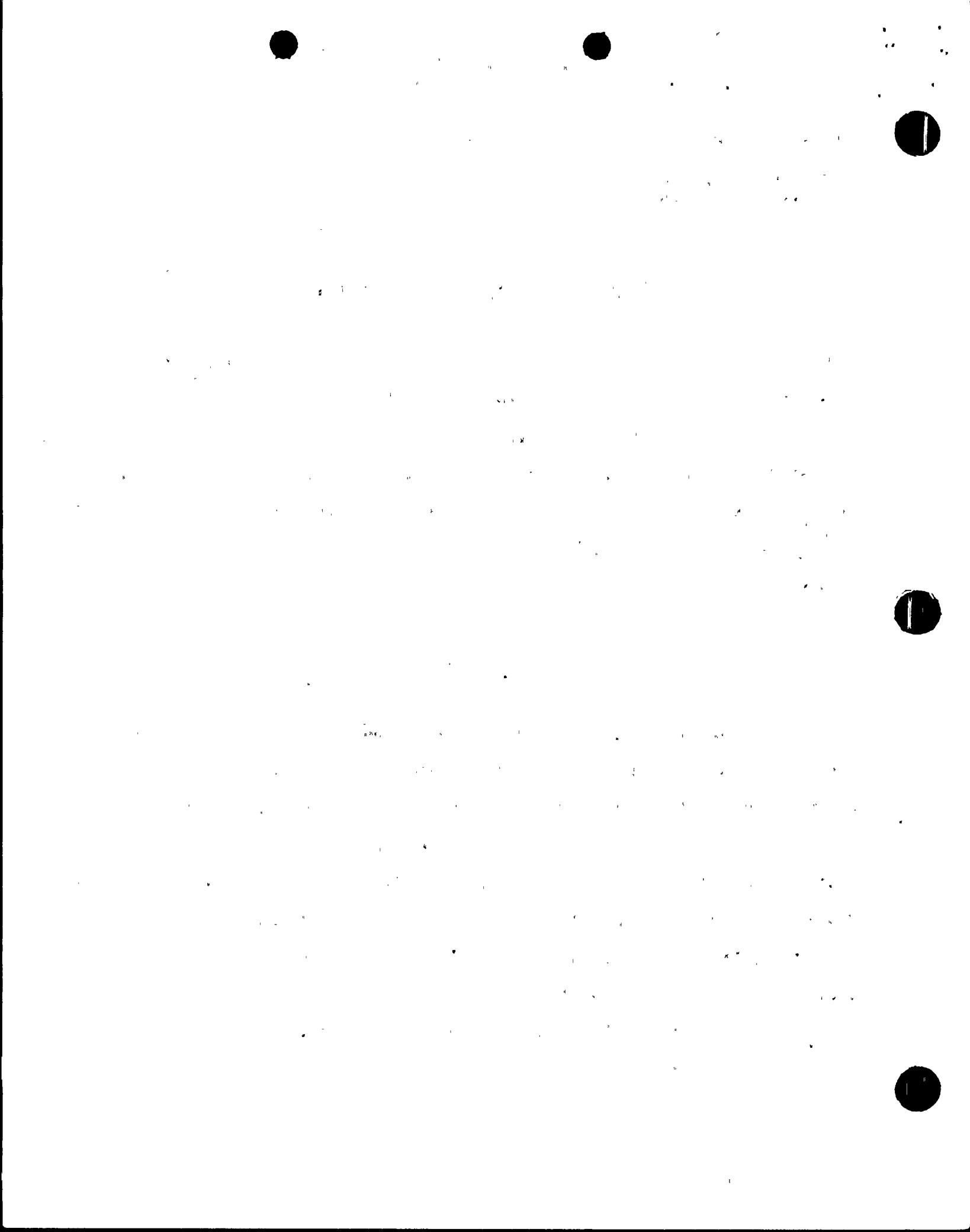
I

Tennessee Valley Authority, 500A Chestnut Street Tower II, Chattanooga, TN 37401, (the "licensee") is the holder of License Nos. DPR-33, DPR-52 and DPR-68 (the "licenses") issued by the Nuclear Regulatory Commission (the "Commission"). License Nos. DPR-33, DPR-52 and DPR-68 authorize operation of the Browns Ferry Nuclear Plant in Limestone County, Alabama, under certain specified conditions and are due to expire on May 10, 2007, May 10, 2007, and July 31, 2008, respectively.

II

An inspection of the licensee's activities under the license was conducted on January 6-9 and 20-23, 1981, at the Browns Ferry Nuclear Plant in Limestone County, Alabama. As a result of this inspection, it appears that the licensee has not conducted its activities in full compliance with conditions of its licenses and with the requirements of NRC regulations. A written Notice of Violation and Proposed Imposition of Civil Penalties was served upon the licensee by letter dated March 20, 1981. The Notice stated the nature of the violations, the provisions of Nuclear Regulatory Commission regulations and license conditions which the licensee had violated, and the amount of civil

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penalties proposed for each violation. An answer dated April 3, 1981, to the Notice of Violation and Proposed Imposition of Civil Penalties was received from the licensee.

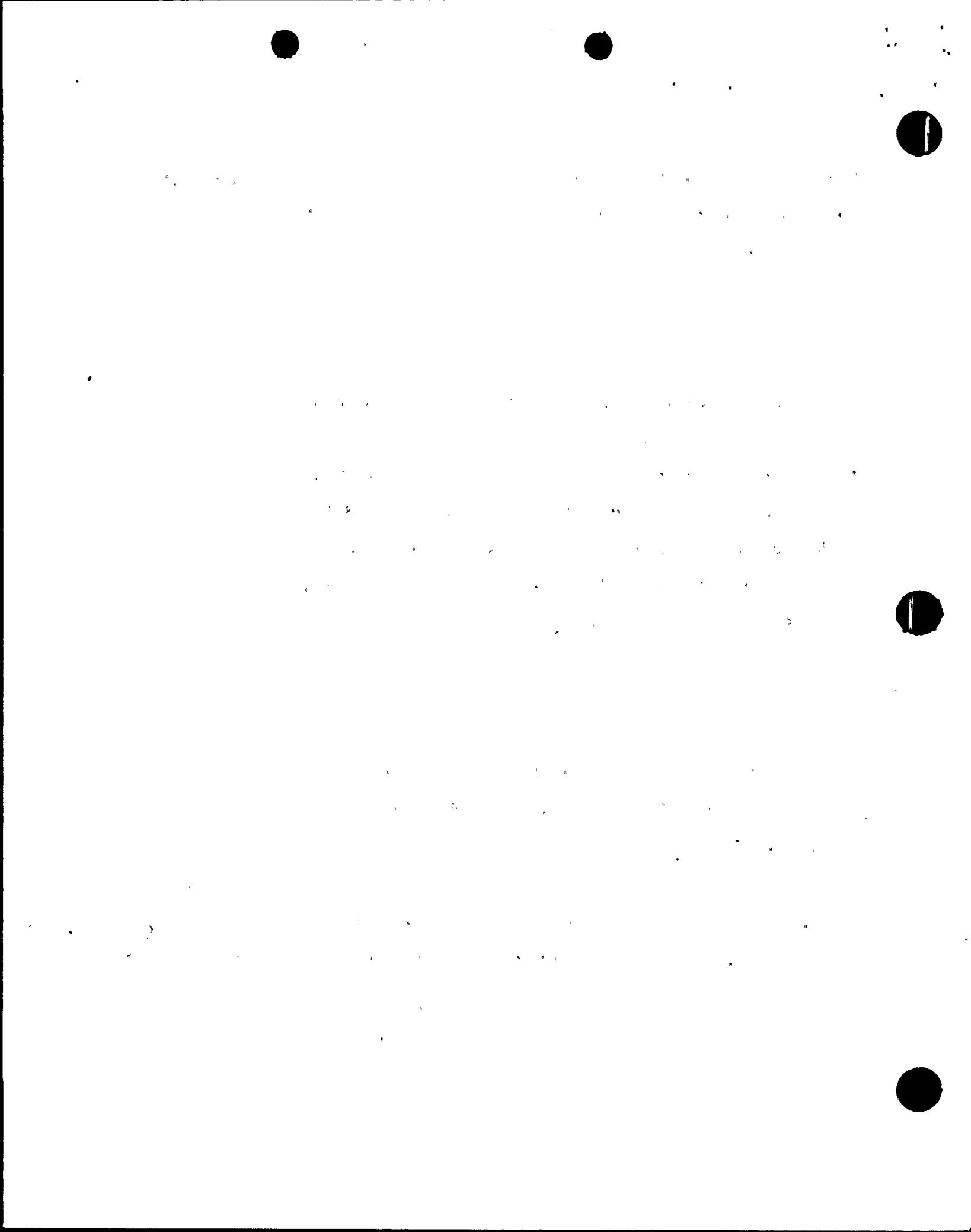
III

Upon consideration of the answers received and the statements of fact, explanation, and argument for mitigation of the proposed civil penalties, as set forth in the Appendix to this Order, the Director of the Office of Inspection and Enforcement determined that the penalties proposed for the violations designated in the Notice of Violation and Proposed Imposition of Civil Penalties should be imposed, except for Item C. Item C and its proposed civil penalty of \$5,000 have been withdrawn.

IV

In view of the foregoing and pursuant to Section 234 of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2282, P.L. 96-295), and 10 CFR 2.205, IT IS HEREBY ORDERED THAT:

The licensee pay civil penalties in the total amount of Forty-Five Thousand Dollars (\$45,000) within thirty days of the date of this order, by check,



draft, or money order, payable to the Treasurer of the United States and mailed to the Director of the Office of Inspection and Enforcement.

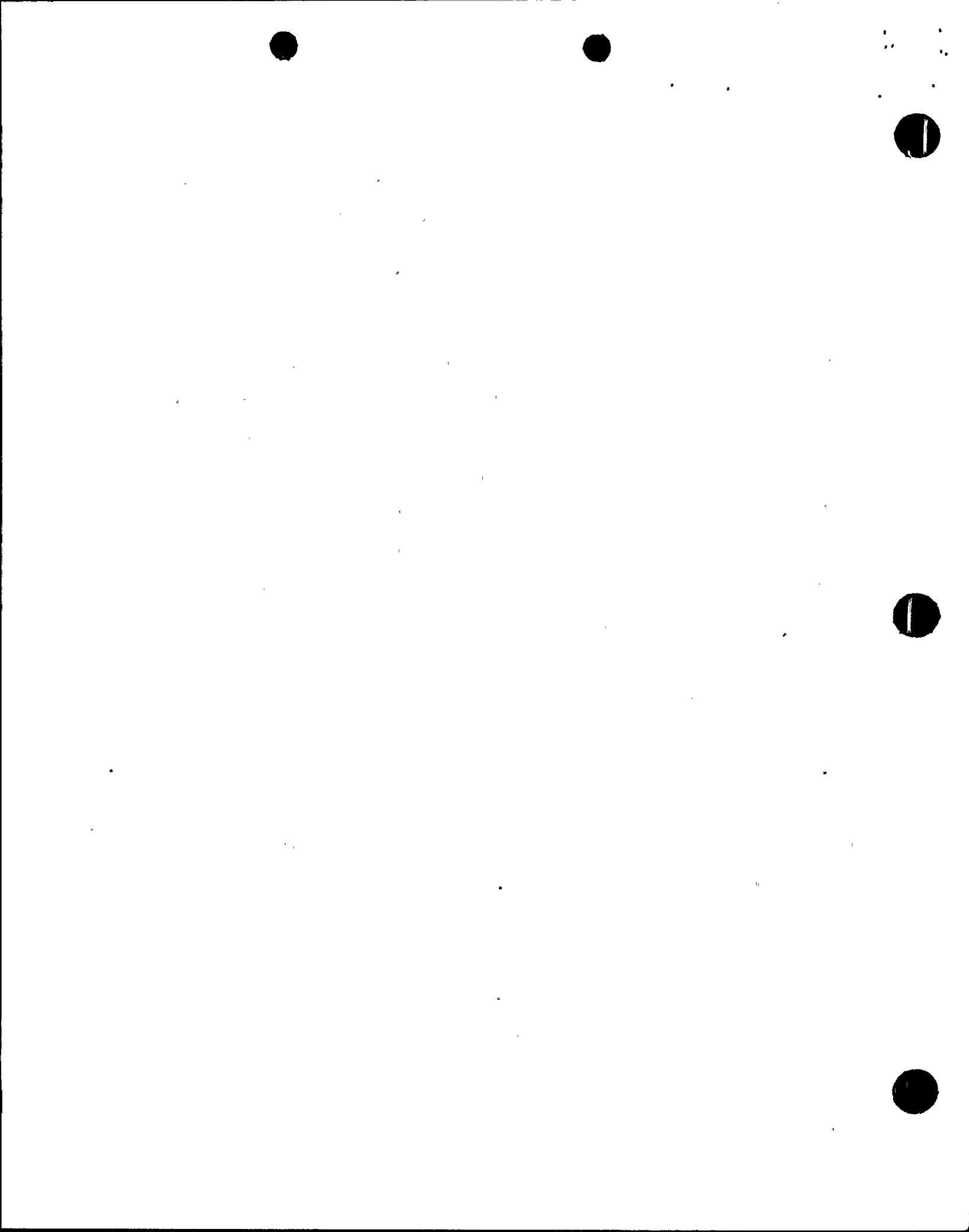
V

The licensee may, within thirty days of the date of this Order, request a hearing. A request for a hearing shall be addressed to the Director, Office of Inspection and Enforcement, U.S.N.R.C., Washington, D.C. 20555. A copy of the hearing request shall also be sent to the Executive Legal Director, U.S.N.R.C., Washington, D.C. 20555. If a hearing is requested, the Commission will issue an Order designating the time and place of hearing. Upon failure of the licensee to request a hearing within thirty days of the date of this Order, the provisions of this Order shall be effective without further proceedings and, if payment has not been made by that time, the matter may be referred to the Attorney General for collection.

VI

In the event the licensee requests a hearing as provided above, the issues to be considered at such hearing shall be:

- (a) whether the licensee violated NRC regulations and license conditions as set forth in the Notice of Violation and Proposed Imposition of Civil Penalties, as modified in the Appendix to this Order; and,



(b) whether, on the basis of such violations, this Order should be sustained.

FOR THE NUCLEAR REGULATORY COMMISSION

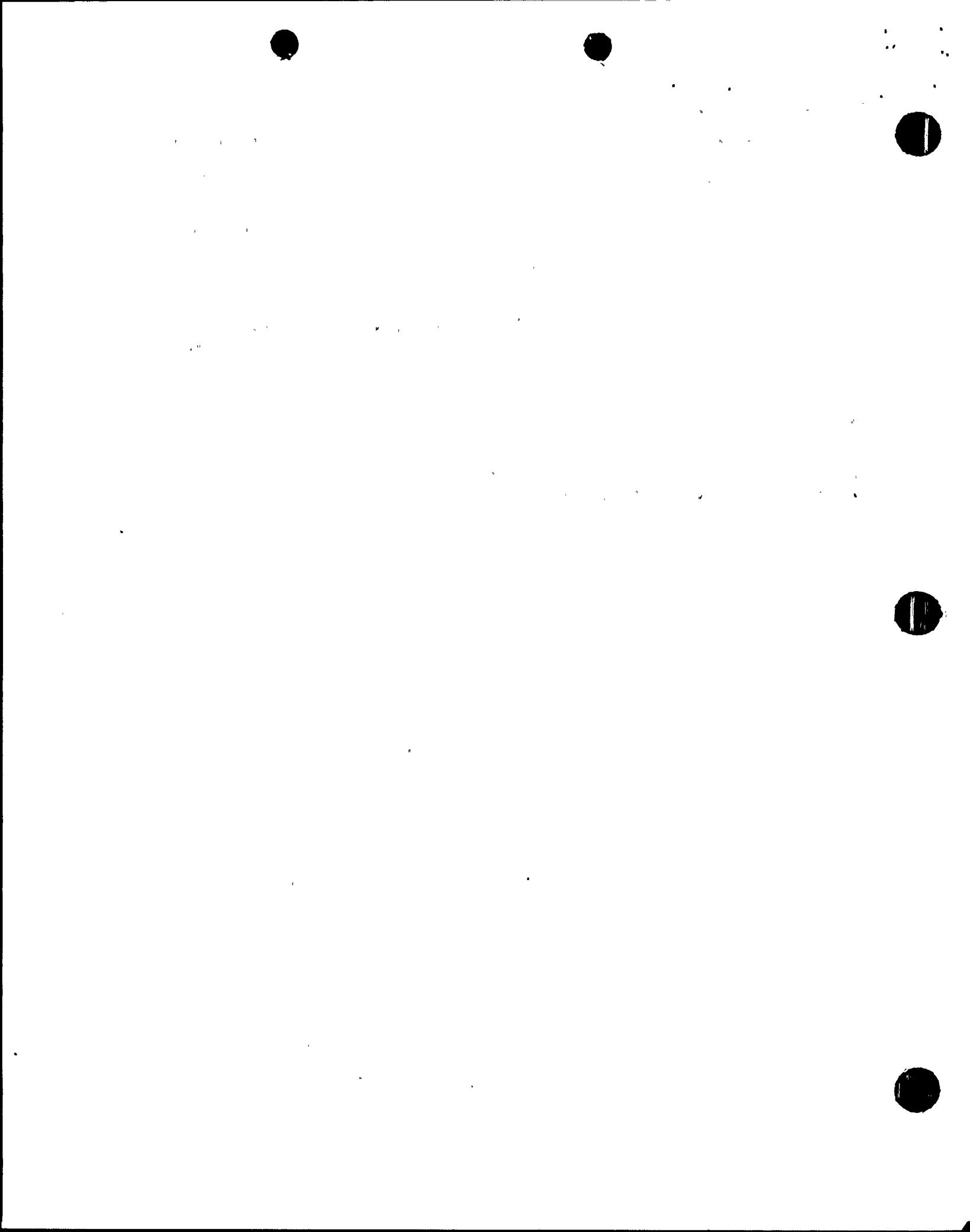
Original Signed by

V. Stello

Victor Stello, Jr., Director  
Office of Inspection and Enforcement

Dated at Bethesda, Maryland  
this 3rd day of June 1981

Attachment:  
Appendix, Evaluation and Conclusion



APPENDIX  
EVALUATION AND CONCLUSION

Each violation and associated civil penalty identified in the Notice of Violation and Proposed Imposition of Civil Penalties dated March 20, 1981, is restated and the Office of Inspection and Enforcement's evaluation and conclusion regarding the licensee's response to each item is presented. With the exception of items C and G the licensee admits the violations. The licensee asks, however, that the penalties for the admitted violations be mitigated by remission of the 25% increase over the base value civil penalty shown in Table 1 of the Interim Enforcement Policy. An evaluation of the licensee's arguments in support of mitigation is set forth at the end of this Appendix.

Statement of Noncompliance

- A. Facility Operating License paragraph 2.D.(1)(b) for Units 1 and 2 and paragraph 2.E(2)(b) for Unit 3 require the licensee to install automatic pre-action sprinkler systems in all areas of the plant required for safe shutdown by the end of the first refueling outage of any of the plant units after August 20, 1976. Unit 1 completed the first refueling outage on January 15, 1978. Areas requiring automatic pre-action sprinkler systems were identified in Part X, Section A of TVA's document "Browns Ferry Nuclear Plant Design Changes for the Recovery From the Fire of March 22, 1975", which included the electrical cable area for the RHR service water pumps at the intake pumping structure.

Contrary to the above, an automatic pre-action sprinkler system has not been installed in the intake pumping station.

This is a Severity Level III Violation (Supplement I.C.2).

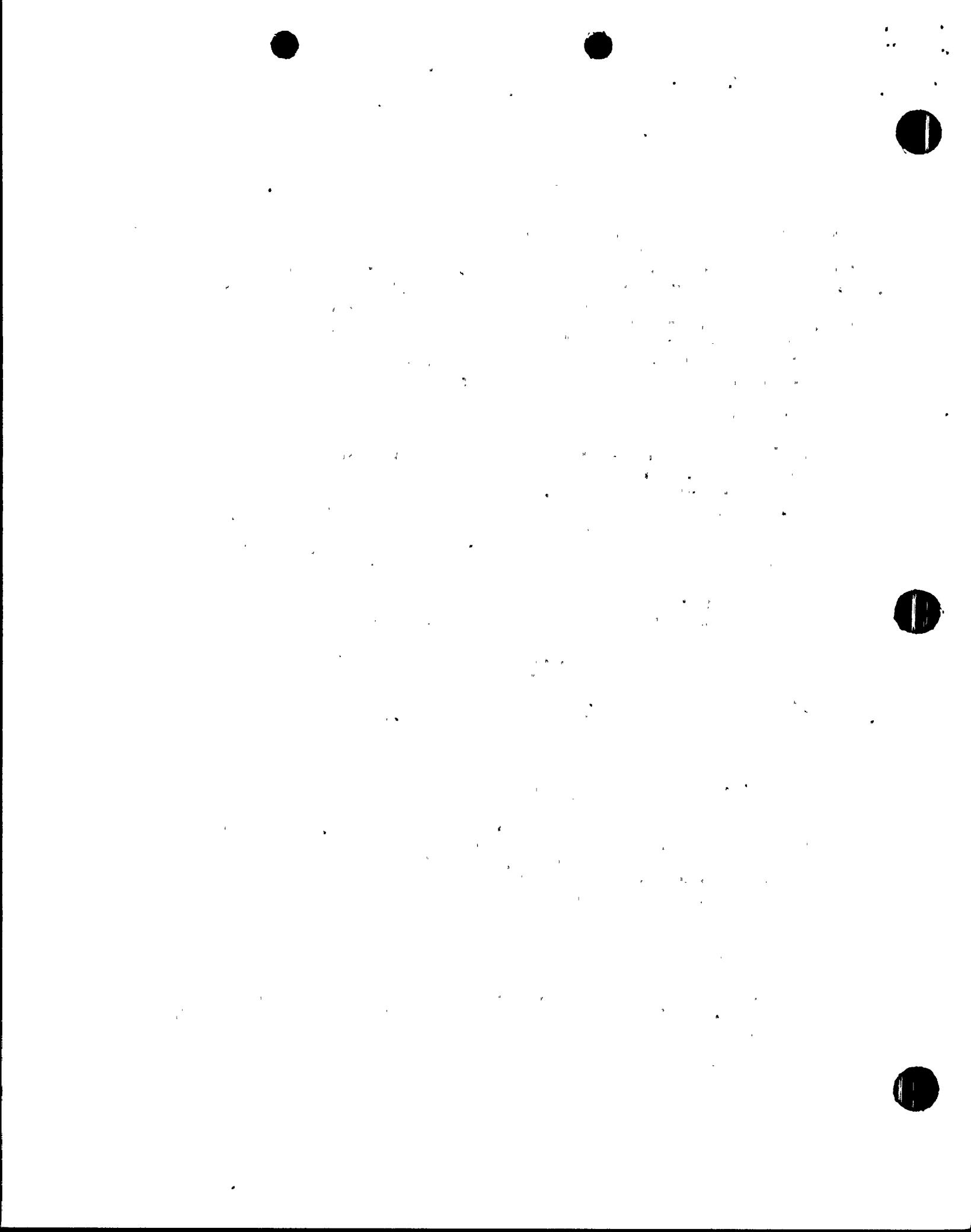
Civil Penalty - \$21,000.

Evaluation of Licensee Response

The licensee admits the violation. The licensee explains the failure to provide an automatic sprinkler system as an oversight. Once this oversight was detected, a continuous fire watch was established in the intake pumping station and was maintained until the sprinkler system was installed. The licensee now states that the sprinkler system is installed and tested.

Conclusion

The item as stated is a violation. The information provided by the licensee does not provide a basis for remission or mitigation of the proposed penalty.



Statement of Noncompliance

- B. Facility Operating License Paragraphs 2.D(1)(e) for Units 1 and 2 and 2.E(2)(e) for Unit 3 require fire protection features of the emergency

battery room complex to be changed to do one of the following: (1) provide a total fire rated barrier enclosure of the facility battery room complex that exceeds the fire load contained in the room; (2) reduce the fire load to be within the fire barrier capability of 1½ hours; or (3) provide a remote manual actuated sprinkler system in each room and provide the 1½ hours fire barrier separation. This change was required to be completed prior to the end of the first refueling outage. Unit 1 completed the first refueling outage on January 15, 1978.

Contrary to the above, the fire protection features provided for the battery rooms do not meet one of the three required modifications. TVA selected modification item 3 and provided a sprinkler system for each emergency battery room; however, a 1½ hour fire barrier was not provided. Ventilation ducts penetrate each battery room and are not equipped with fire dampers at each penetration. This voids the fire resistant rating of each enclosure.

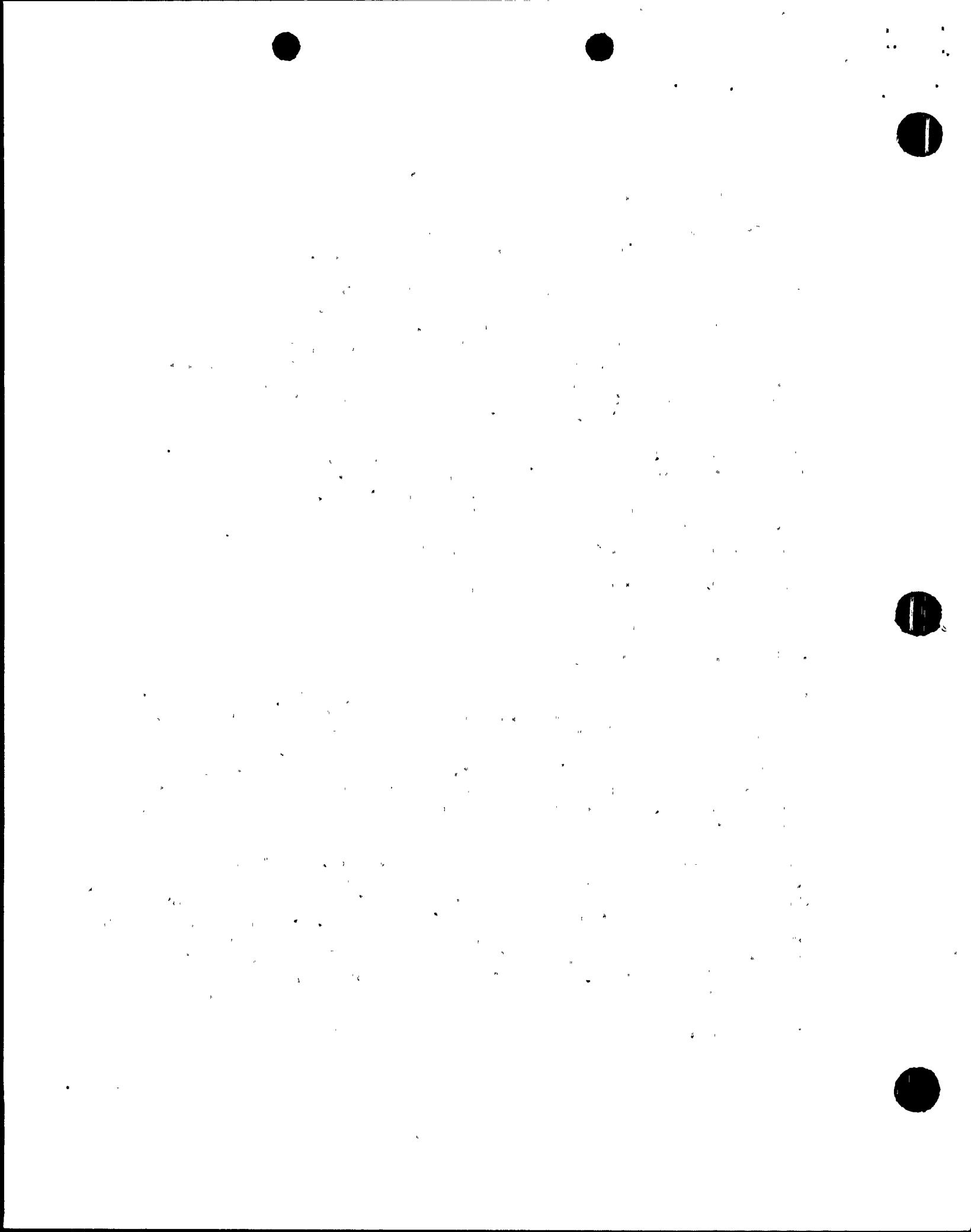
This is a Severity Level III Violation (Supplement I.C.2).

Civil Penalty - \$8,000.

Evaluation of Licensee Response

The licensee admits the violation, but states that only the ventilation ducts which penetrate the battery rooms for Units 2 and 3 are not equipped with fire dampers. The fire barrier separation philosophy applied by the licensee in the design of the plant was to prevent a single fire from causing the loss of more than one battery room complex. Since battery rooms 2 and 3 are separated by a distance of approximately 193 feet, the licensee states that a single fire probably would not cause the loss of both battery rooms.

NRC guidelines and general industry practice encourage utilization of fire barriers to protect safety related components from a fire involving either the redundant component or other areas of the plant. The NFPA criteria for ventilation systems (NFPA-90A, Air Conditioning Systems and NFPA-91, Blower and Exhaust Systems) require ducts passing through fire barriers to be equipped with fire dampers of a fire resistant rating equivalent to the barrier. The licensee's present battery rooms do not meet these criteria. The licensee is required to have battery rooms with 1½ hour-rated fire barriers. Physical separation of battery rooms does not relieve the licensee of this requirement.



Conclusion

The item as stated is a violation. The information provided by the licensee does not provide a basis for remission or mitigation of the proposed penalty.

Statement of Noncompliance

- C. Facility Operating License paragraphs 2.D(1)(c) and 2.D(1)(d) for Units 1 and 2 and paragraphs 2.E(2)(c) and 2.E(20)(d) for Unit 3 require a manual dry pipe sprinkler system for the cable spreading rooms and an automatic actuated carbon dioxide system for the cable spreading rooms.

Contrary to the above, the cable spreading rooms' dry pipe sprinkler systems are automatic operation and the carbon dioxide systems are manual in operation. A license change to describe the current operaton of the fire suppression systems for the cable spreading rooms has not been obtained.

This is a Severity Level III Violation (Supplement I.C.2.)

Civil Penalty - \$5,000

Evaluation of Licensee Response

The licensee does not agree that this represents a violation. The licensee changed the method of actuation for the cable spreading rooms fire suppression systems based on recommendations from the NRC. The NRC was advised by letter dated April 20, 1978, that these changes were to be completed by April 30, 1978. The licensee considers that the NRC was given sufficient notification to amend the license.

While only the NRC can modify the conditions of a license, the licensee bears the responsibility of compliance with existing license conditions and the responsibility to seek amendments to its license when other conditions may be preferable to existing requirements. The provision in question was a specific condition of the Browns Ferry licenses, and the licensee was not authorized, therefore, to change the arrangement of the fire suppression systems prior to obtaining a license amendment.

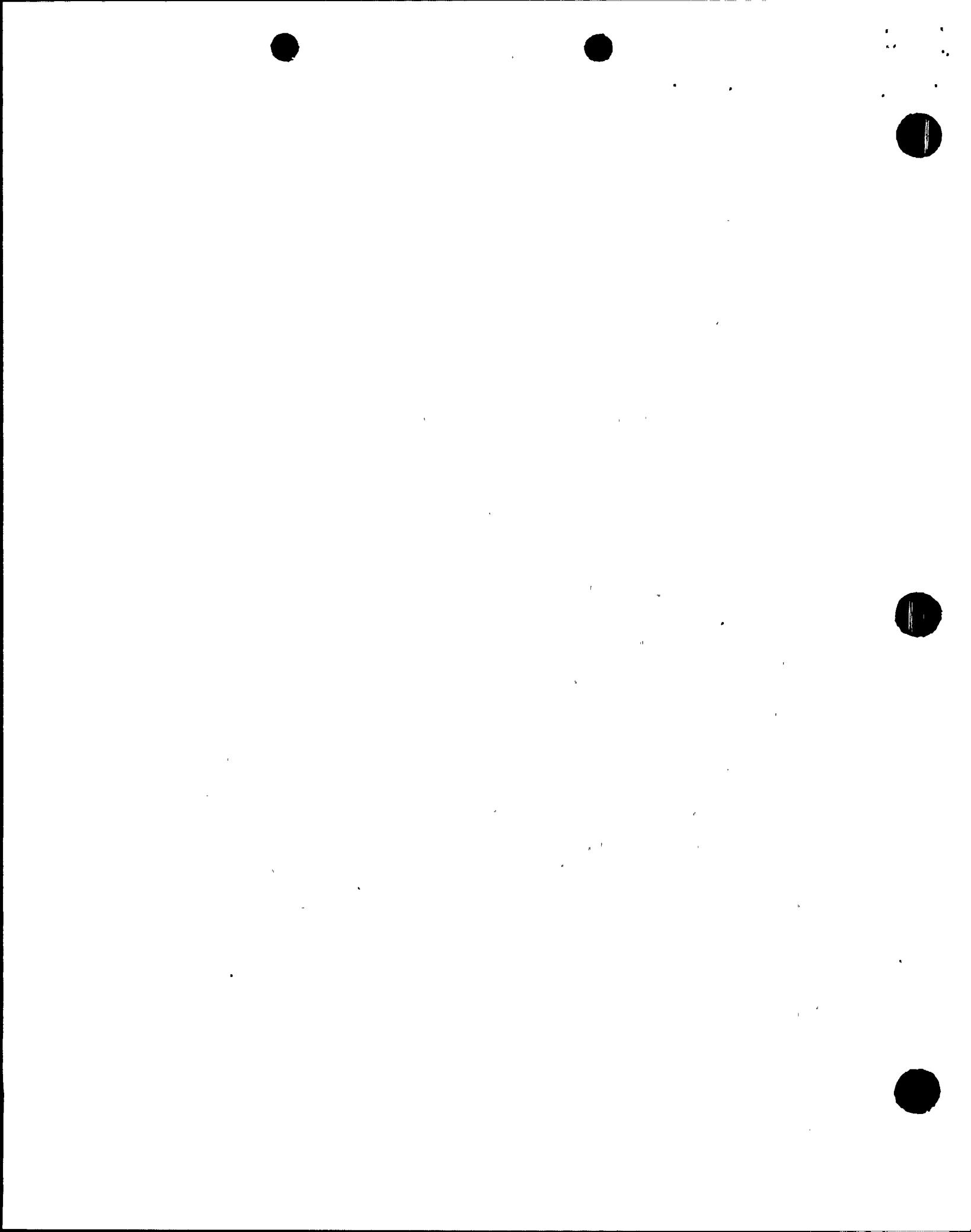
The licensee has now sought an amendment to its license. Under the circumstances of this matter, the violation and the associated civil penalty have been withdrawn.

Conclusion

The violation has been withdrawn.

Statement of Noncompliance

- D. Technical Specification 3.11.B requires that a continuous fire watch be established in the cable spreading rooms and a patrolling fire watch be established to make hourly checks of other (CO<sub>2</sub>) protected locations whenever the CO<sub>2</sub> fire protection system is lost.



Contrary to the above, the fire watches for the cable spreading rooms were conducted intermittently and the patrolling fire watch did not enter the auxiliary instrument rooms for hourly checks for all three units when the CO<sub>2</sub> system was out of service on October 5, 1980 between 7:12 p.m. and 9:00 p.m.

This is a Severity Level III Violation (Supplement I.C.2). A similar item was identified in Inspection Report 50-259/80-34.

Civil Penalty - \$5,000.

Evaluation of Licensee Response

The licensee admits the violation, but states that the violation occurred on October 15, 1980, rather than on October 5, 1980, as stated in the Notice. The licensee posted fire watches in the area lacking carbon dioxide protection, but failed to instruct the watches to enter the individual rooms as required by the Technical Specifications.

Conclusion

The item is corrected to indicate that the violation occurred on October 15, 1980. The information provided by the licensee does not provide a basis for remission or mitigation of the proposed penalty.

Statement of Noncompliance

- E. Technical Specification Section 4.11.A.1.b requires each high pressure fire protection system pump to be tested for operability once per month.

Contrary to the above, fire pump No. A was not tested for operability during October 1980.

This is a Severity Level III Violation (Supplement I.C.2).

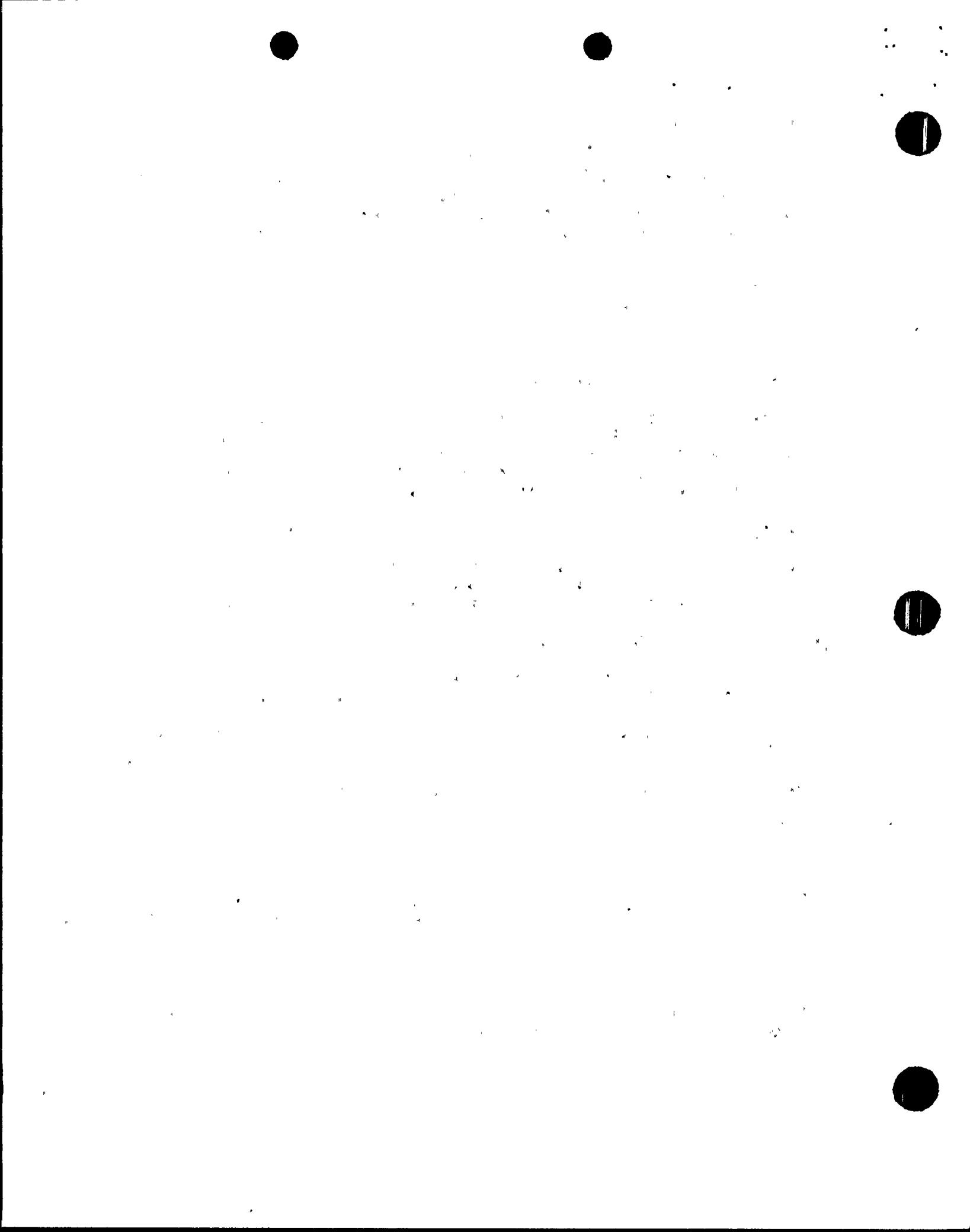
Civil Penalty - \$2,000.

Evaluation of Licensee Response

The licensee admits the violation. This violation was due to operations personnel testing the diesel-driven fire pump twice during October 1980 while failing to test fire pump A.

Conclusion

This item as stated is a violation. The information provided by the licensee does not provide a basis for remission or mitigation of the proposed penalty.



Statement of Noncompliance

- F. Technical Specification Section 6.3.A.10 requires written procedures covering the fire protection and prevention program to be prepared, approved and adhered to.
1. TVA Browns Ferry Emergency Plan - Fire, Explosion and Natural Disaster Plan, Section 11 requires each operating crew to participate in a fire drill at least once per three months.

Contrary to the above, each operating crew did not participate in a fire drill at least once per three months as required during 1980. The 1980 drill participation was: Group 1 - two; Group 2 - one; Group 3 - one; Group 4 - two; Group 5 - one.

This is a Severity Level III Violation (Supplement I.2.C).

Civil Penalty - \$3,000.

Evaluation of Licensee Response

The licensee admits the violation. The fire drills were not scheduled as required. However, each crew did participate in some drills during the year and three of the five crews did participate in at least a drill or a fire response during each quarter of 1980.

Conclusion

This item as stated is a violation. The information provided by the licensee does not provide a basis for remission or mitigation of the proposed penalty.

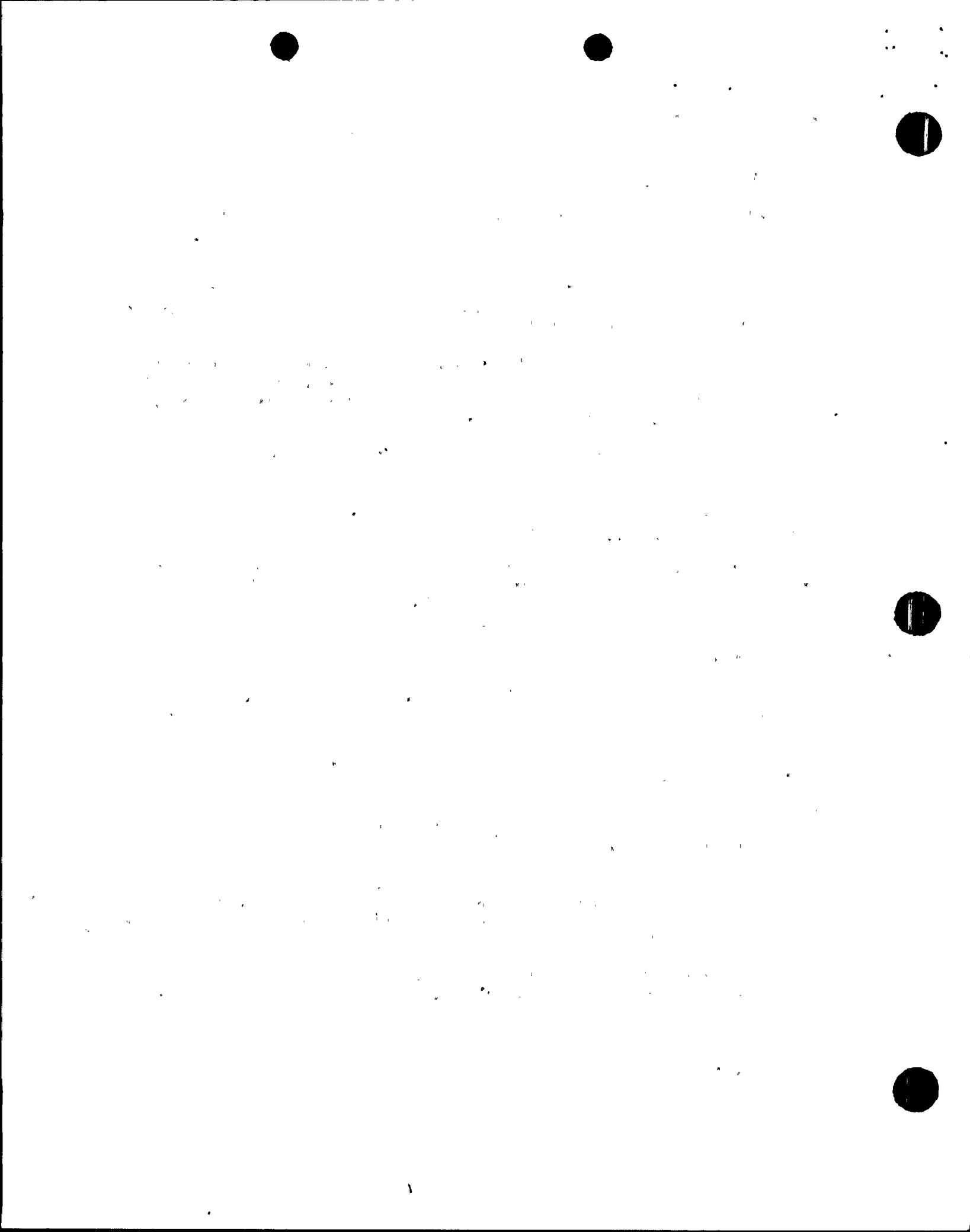
Statement of Noncompliance

- F. Technical Specification Section 6.3.A.10 requires written procedures covering the fire protection and prevention program to be prepared, approved, and adhered to.
2. TVA procedure MMI-75, Installation and Repair of Penetration and Fire Stops, Section 6.4.8 limits the maximum number of uncoated (not coated with "Flamemastic" fire resistance material) electrical cables within a cable tray to ten.

Contrary to the above, over ten uncoated electrical cables are installed in cable trays in all three units.

This is a Severity Level III Violation (Supplement I.C.2).

Civil Penalty - \$2,000.



Evaluation of Licensee Response

The licensee admits the violation. The licensee attributes this violation to the large number of NRC-required modifications and the tight schedule required for completion of these modifications. The number of cables which should be left uncoated within a cable tray apparently does not exist in either an NRC guideline or an industry standard. The limit of 10 uncoated cables was selected by TVA for administrative control. The cables used at Browns Ferry during the construction of the plant were combustible; however, most of the cables utilized in recent years contain a fire retardant outer jacket.

The licensee is required by the Technical Specifications to develop and implement procedures to which it can adhere. If a limitation to 10-cables per tray is overly restrictive, the procedures should have been revised if such a revision would be consistent with public health and safety. When a licensee promulgates procedures, the NRC expects the licensee to adhere to them.

Conclusion

This item as stated is a violation. The information provided by the licensee does not provide a sufficient basis for remission or mitigation of the proposed penalty.

Statement of Noncompliance

G. Technical Specifications Section 3.11.F states "If it becomes necessary to breach a fire stop, an attendant shall be posted on each side of an open penetration until work is completed and the penetration is resealed." The required attendant was not posted in each of the following examples:

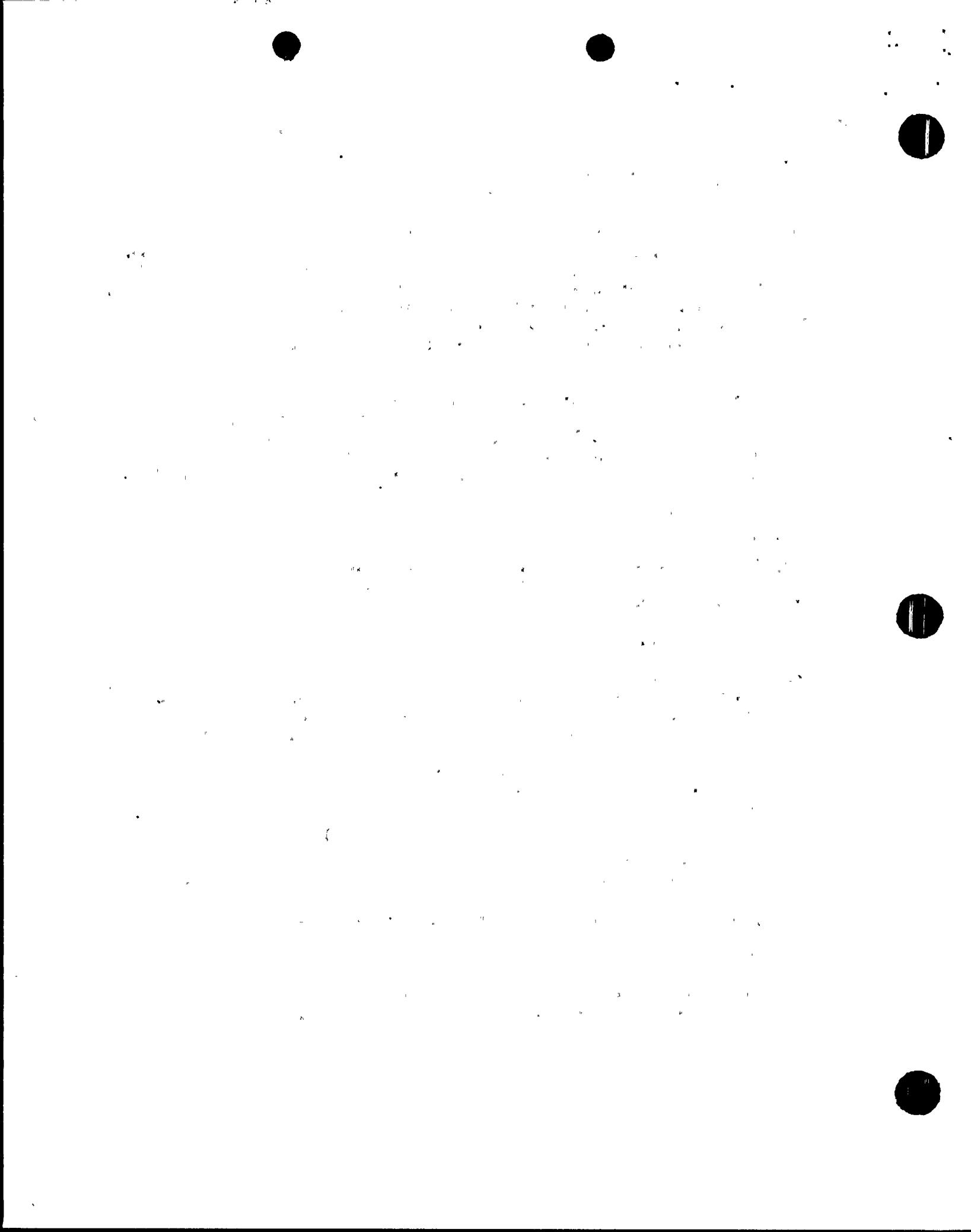
1. The fire door (door no. 632) separating the Unit 1 electrical shutdown board rooms is a fire stop and must be maintained in the closed position.

Contrary to the above, door No. 632 was found open due to an inoperative door closer on January 21, 1981 and the required attendants were not posted.

This is a Severity Level III Violation (Supplement I.C.2).

Civil Penalty - \$2,000.

2. The fire stops separating the Unit 3 electrical shutdown board rooms include door Nos. 655 and 656 which are required to be maintained in the closed position.



Contrary to the above, door Nos. 655 and 656 were found blocked and wedged in the open position on January 21, 1981 and the required attendants were not posted.

This is a Severity Level III Violation (Supplement I.C.2).

Civil Penalty - \$2,000.

#### Evaluation of Licensee Response

The licensee denies that this situation is a violation of Technical Specification 3.11.F, but acknowledges that this item was a deviation from industry standards and good operating practice. The licensee notes that it has implemented the requirements of 10 CFR Part 50, App. R, on inspection of fire doors, and requests mitigation on this basis as well.

Devices installed or provided in fire barrier penetrations to restrict the spread of fire and smoke such as fire doors are fire stops; therefore, these fire doors are penetrations which require posting under the conditions of the Technical Specifications. While new regulation may indicate specific requirements for operation and surveillance of fire doors, the licensee is still expected to conform with existing requirements that may cover the same equipment.

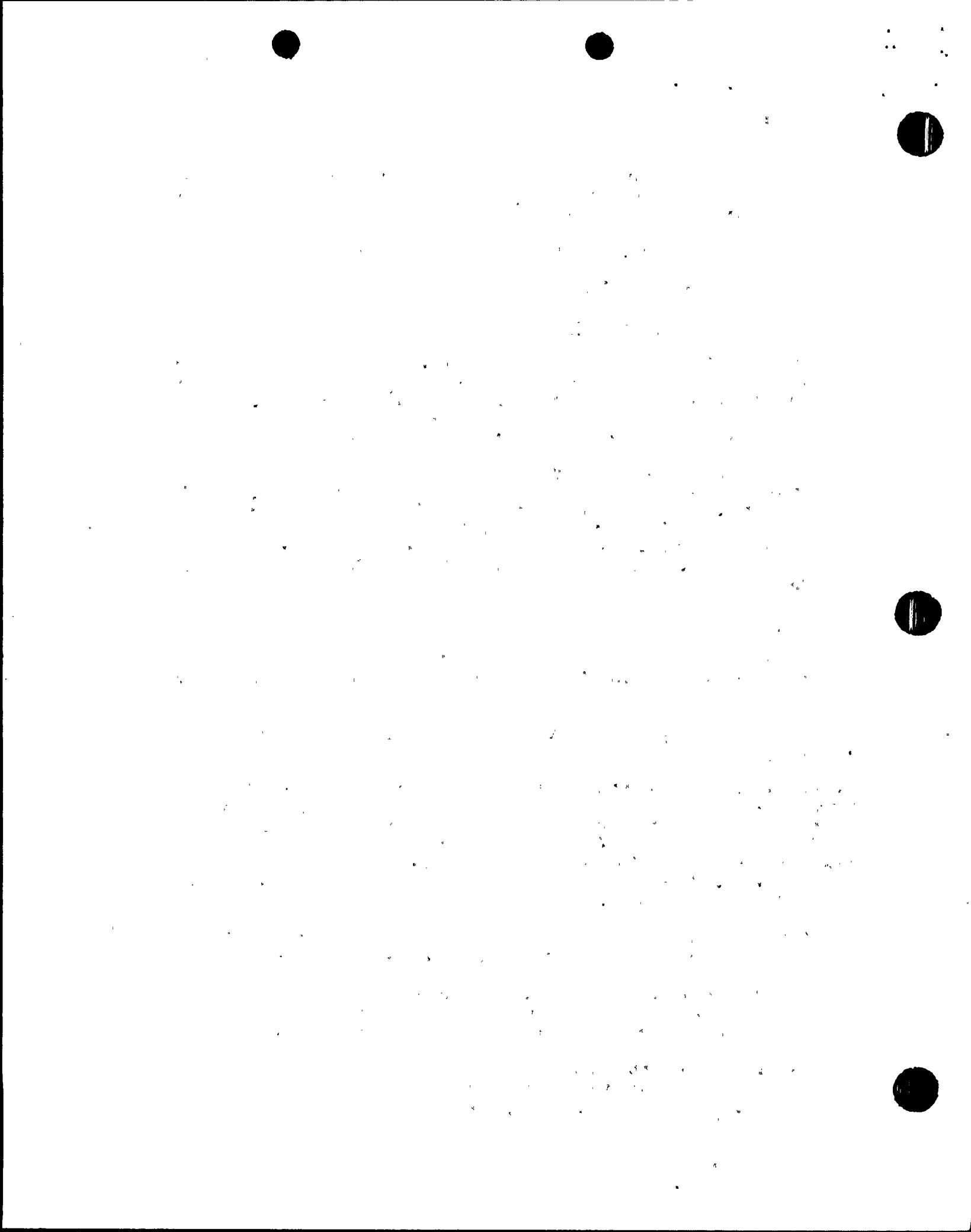
#### Conclusion

The item as stated is a violation. The information provided by the licensee does not provide a basis for remission or mitigation of the proposed penalty.

#### Evaluation and Conclusion with Respect to the Licensee's Arguments in Support of Mitigation

In accordance with the Interim Enforcement Policy, 45 FR 66754 (Oct. 7, 1980), a base penalty of \$40,000 was assessed for the violations set forth in the Notice of Violation and Proposed Imposition of Civil Penalties. This base penalty was increased by 25% to \$50,000, because TVA could have reasonably been expected to take effective measures to prevent these violations. In its answer to the Notice, the licensee gives the following basic reasons why the 25% increase is not warranted:

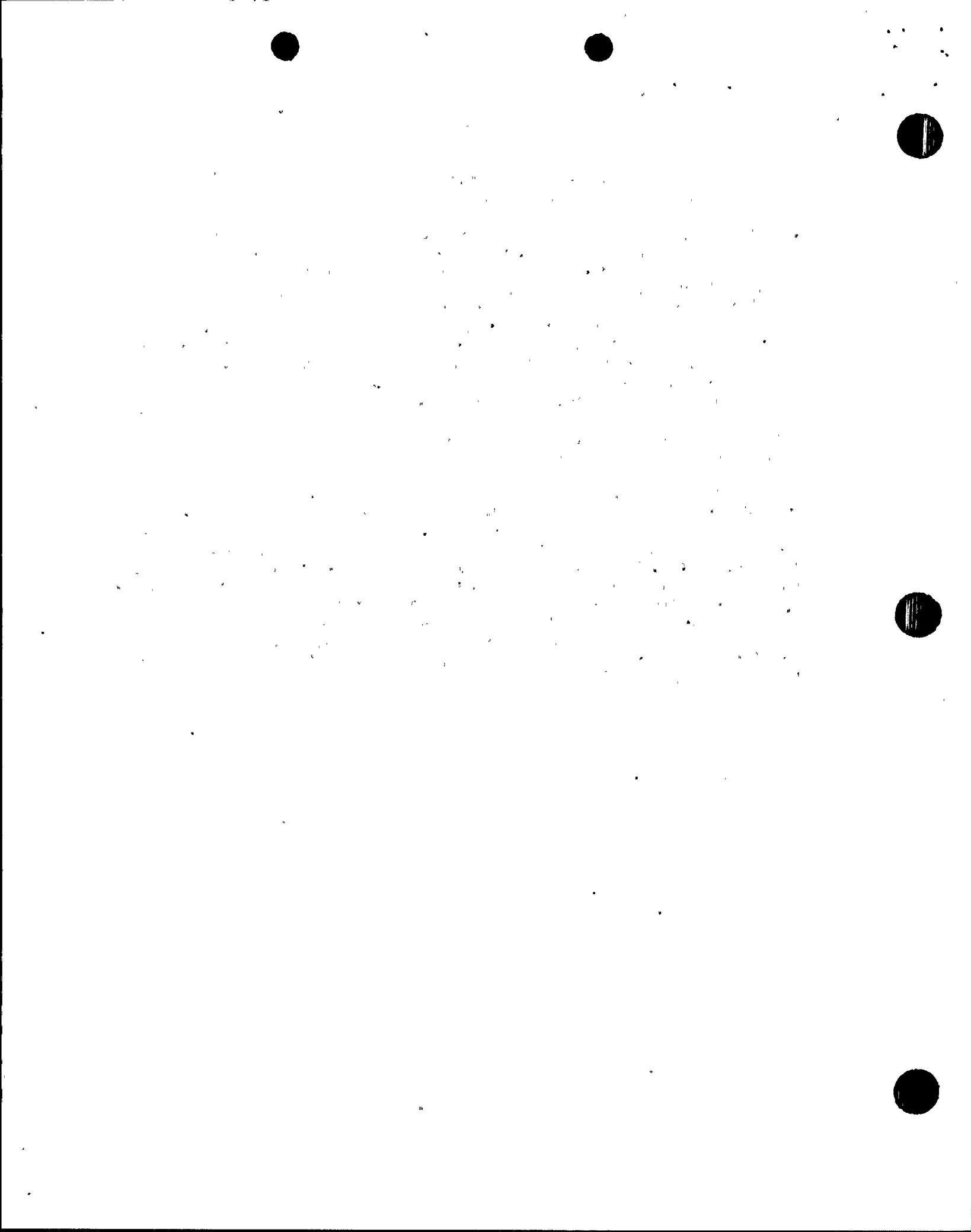
- (1) The violations did not represent a significant programmatic breakdown in the licensee's fire protection program;
- (2) The violations were isolated occurrences and were not willful and, therefore, do not reflect bad faith on the part of the licensee (see particularly responses to items A, E & F.2);
- (3) No significant degradation of fire protection systems occurred as a result of the individual violations (see particularly responses to items B, D, E, F.1, & F.2); and



- (4) The licensee took prompt corrective action (see particularly responses to items AD, & G).

The NRC recognizes that the violations were not willful and were not the result of "bad faith" on the part of the licensee. Had these elements been present, it is likely that penalties at the statutory maximum would have been proposed and the concurrent issuance of orders would have been considered. Although no individual violation defeated the entire fire protection system, this factor was taken into account in our categorization of the entire list of violations at Severity Level III. The violations are still, in our view, significant because they reflect a partial degradation of the fire protection systems or a reduction in the confidence that equipment and personnel will be maintained and function as required. While the licensee has taken prompt corrective action for the violations, such action is always required and does not serve as a basis for mitigating the penalties proposed here.

As a result of the 1975 fire at Browns Ferry, TVA should have been acutely aware of the importance of assuring that an adequate fire protection program was implemented at its nuclear plants. Even though TVA satisfied many of these requirements, the number of violations identified during the inspection indicate that TVA management did not exercise sufficient control over the fire protection program. TVA could have been reasonably expected to take effective measures to prevent the types of violations that were identified. The 25% increase over the base value civil penalty is appropriate owing to TVA's prior knowledge of the importance of meeting all fire protection requirements. Therefore, mitigation by remission of the 25% increase, as TVA requests, is not warranted.



EVALUATION AND CONCLUSION WITH  
RESPECT TO DEVIATIONS

Each deviation identified in the Notice of Deviation dated March 20, 1981 is restated and the Office of Inspection and Enforcement evaluation and conclusion regarding the licensee's response to each item is presented.

Statement of Deviation

- A. FSAR Section 10.11.3.1 references the April 21, 1977 TVA letter from J. E. Gilleland to E. G. Case of NRC/NRR as one of the documents containing the fire protection modification commitments made by TVA as a result of the March 22, 1975 fire. The enclosure to this letter identified a number of plant doors to be changed to approved fire doors and doors to be upgraded to equivalent approved fire doors. These modifications were to be completed by the end of the first refueling outage of either Unit 1 or Unit 2. Unit 1 restarted from the first refueling outage in January 15, 1978.

Contrary to the above, several doors in the control bay portion of the plant, primarily on the 593 and 617 foot elevations, have not been changed to approved type fire doors. Many of these doors contain ventilation louvers and thus do not have a fire resistant rating.

Evaluation of Licensee Response

The licensee admits the deviation. TVA's original commitment was to upgrade 13 fixed louver doors with doors equivalent to Class B (1½ hour) fire doors. Four of these doors were not upgraded and will be replaced by Class B fire doors. In addition, TVA was to replace 11 doors with louvered "UL" labeled fire doors. Seven of these doors have been installed. The remaining four doors have been certified by the manufacturer to be identical to labeled fire doors and TVA does not propose to replace these doors.

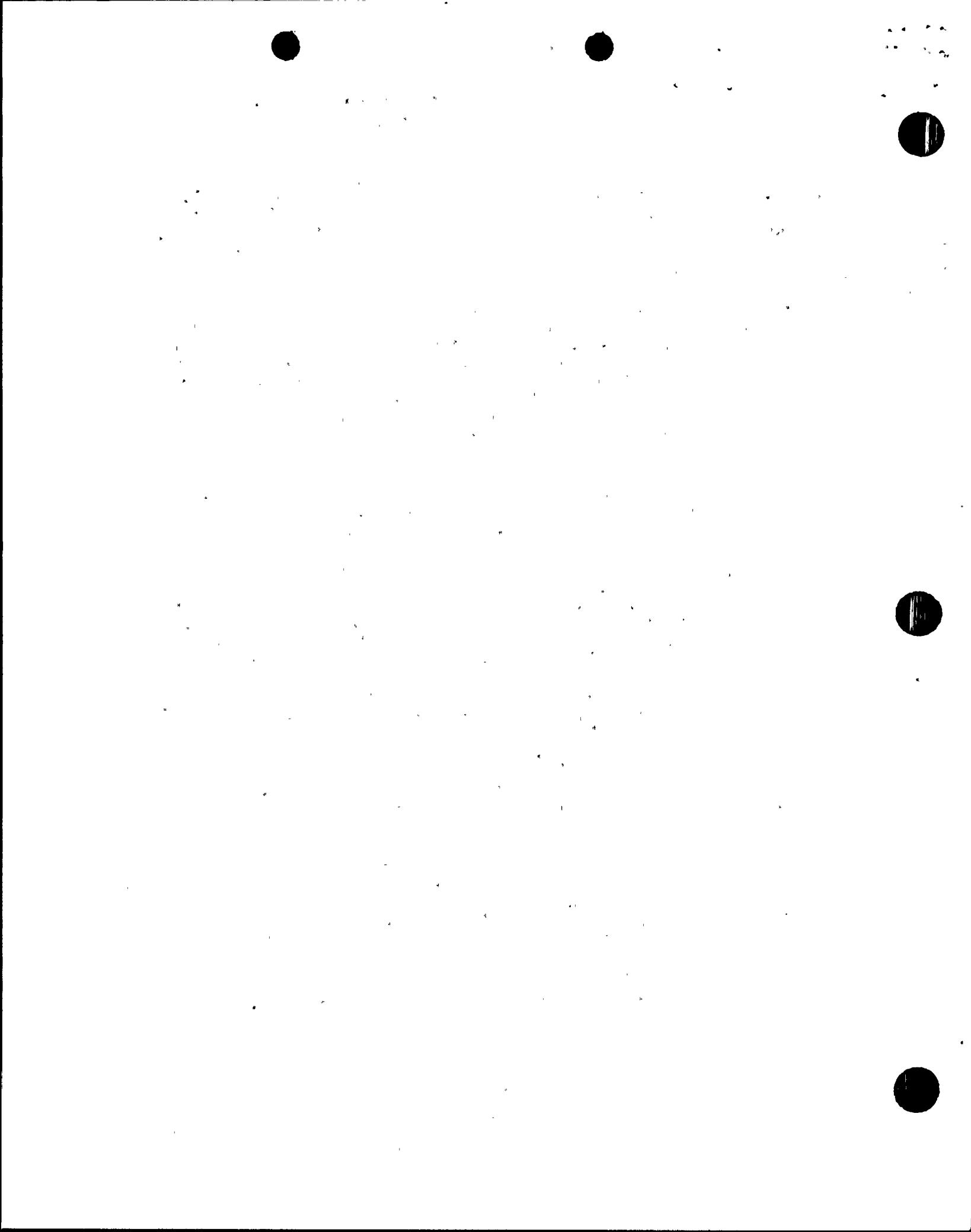
Conclusion

This item as stated is a deviation. If TVA proposes to revise a previous commitment to the NRC, a letter should be sent to the NRC/NRR.

Statement of Deviation

- B. The applicable code or standard approved by the Commission for the design and installation of sprinkler systems is National Fire Protection Association Standard No. 13 (NFPA-13). NFPA-13 Section 1-8.1.2 states that only approved materials and devices shall be used in sprinkler systems.

Contrary to the above, unapproved fire protection deluge valves are provided for the HPCI sprinkler systems.



Evaluation of Licensee Response

The licensee denies the deviation as stated. The water spray system for the HPCI pump rooms were installed as part of the original plant fire protection system prior to the 1975 fire. TVA did not commit to replace these valves with standard fire protection (deluge valves) equipment as required by NFPA-13, Automatic Sprinkler Systems and NFPA-15, Water Spray Fixed Systems. This position is contrary to Appendix A of Branch Technical Position 9.5-1 which stipulates that the automatic sprinkler systems should, as a minimum, conform to NFPA-13 and 15. The licensee's position is not consistent with the NRC guidelines.

Conclusion

This item as stated is a deviation.

Statement of Deviation

- C. National Fire Protection Association Standard No. 80 Sections 2-8.2 and 2-8.7 require that automatic closing fire doors be provided with positive latching hardware which automatically engages when the door moves to the closed position.

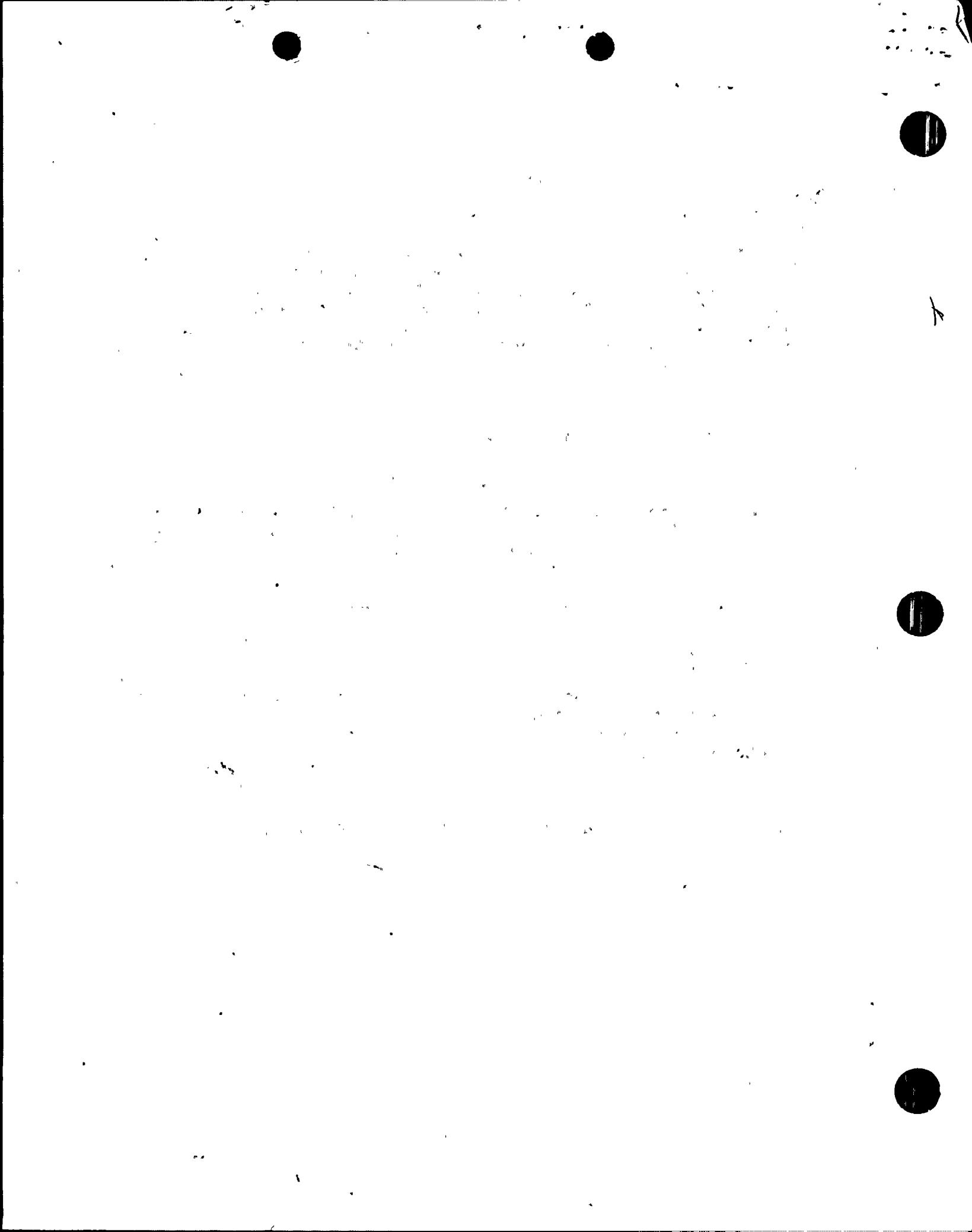
Contrary to the above, a pair of fire doors (door No. 294) is not provided with automatic latching hardware.

Evaluation of Licensee Response

The licensee admits the deviation. This door will be modified by replacing the flush bolts with self-latching flush bolts. In the interim, the inactive leaf of door 294 will be maintained in the closed position with the manual flush bolts engaged.

Conclusion

This item as stated is a deviation applicable to Units 1 and 2.



MAR 20 1981

Docket Nos.: 50-259, 260 and 296  
License Nos.: DPR-33, 55 and 68  
EA 81-30

Tennessee Valley Authority  
ATTN: W. F. Willis, General Manager  
400 Commerce Avenue  
E12 - B16  
Knoxville, TN 37902

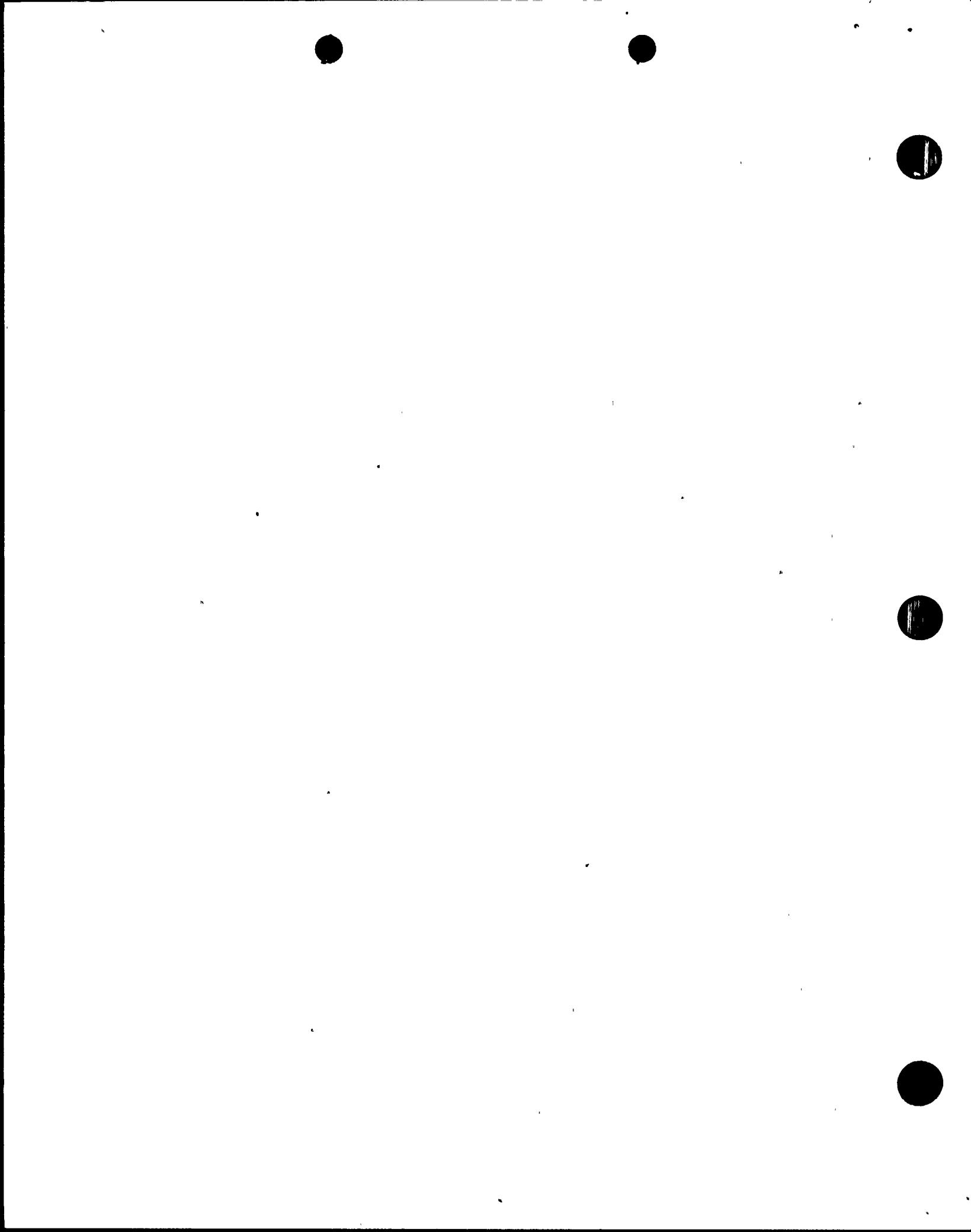
Gentlemen:

An inspection conducted at the Browns Ferry plant by the NRC Region II Office on January 6-9 and 20-23, 1981, indicated that licensed activities were not being conducted with proper concern for the fire protection program. This inspection revealed significant violations involving failure to provide automatic sprinkler protection for the RHR service water pumps in the intake pumping structure as required by the operating license, failure to provide an adequate fire resistant enclosure for the emergency battery rooms as required by the operating license, failure to obtain a license change which describes current operation of fire suppression systems for the cable spreading rooms, failure to provide adequate fire watches required by the technical specifications, and failure to adhere to the fire protection procedures for fire pump testing, fire brigade drills and application of fire retardant coatings of electrical cables. Our concerns regarding the safety significance of these matters were discussed with J. L. Cross, Executive Assistant to the Manager of Power by James P. O'Reilly, Director of the NRC Region II Office by telephone on February 4, 1981. Your corrective actions were confirmed in a letter dated February 4, 1981, from the NRC Region II Director to H. G. Parris, Manager of Power. These matters were also discussed in an enforcement meeting conducted in the Region II Office on February 11, 1981 with E. F. Thomas, Manager of Power Operations, and other members of your staff.

In view of the 1975 fire at Browns Ferry, TVA management should be aware of the importance of assuring that an adequate fire protection program is implemented at your nuclear plants. Following the 1975 fire, the Browns Ferry plant was given sufficient time to implement a fire protection program. However, the violations listed in Appendix A to this letter represent a significant breakdown in your control of the fire protection program. Accordingly, we propose the imposition of a \$50,000 civil penalty under the authority of the June 30, 1980, amendment to the Atomic Energy Act (P.L. 96-295) for the violations set forth in Appendix A to this letter.

group

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED



MAR 20 1981

Tennessee Valley Authority

- 2 -

This breakdown in management control of the fire protection program created a substantial potential for, or could have resulted in, a system designed to prevent or mitigate a serious safety event not being able to perform its intended function under certain conditions. Because of the 1975 fire, TVA could have reasonably been expected to take effective measures to prevent these violations; therefore, the cumulative civil penalty reflects an increase of 25% of the base value. This \$50,000 is the total of the penalties assigned to the violations in Appendix A. These violations occurred under both the old and new enforcement policies. The proposed civil penalty was assessed using the NRC Interim Enforcement Policy for violations that have occurred since September 4, 1980.

This inspection also identified certain activities which deviate from commitments to the NRC and from applicable codes approved by the NRC and have safety significance. These deviations are identified in the Notice of Deviations enclosed herewith as Appendix B and are additional examples of the breakdown in the management control of the fire protection program.

You are required to respond to this letter and should follow the instructions in Appendix A and Appendix B when preparing your response. Your reply to this letter and the results of future inspections will be considered in determining whether further enforcement action may be appropriate.

A copy of this letter will be placed in the Public Document Room in accordance with 10 CFR 2.790.

Sincerely,

"Origin.: Signed By  
R. C. DeYoung"

Victor Stello, Jr.  
Director  
Office of Inspection and Enforcement

Enclosures:

1. Appendix A, Notice of Violation and Proposed Imposition of Civil Penalties
2. Appendix B, Notice of Deviations

cc w/encl:

H. G. Parris, Manager of Power  
E. F. Thomas, Manager of Power, Operations  
H. J. Green, Division Director  
H. L. Abercrombie, Plant Superintendent  
R. E. Rogers, Project Engineer  
H. N. Culver, Chief, Nuclear Safety  
Review Staff

WPU:JD  
3/9/81  
THOM8(G)

EIE  
GBarber  
3/16/81

EIE  
Brockett  
3/10/81

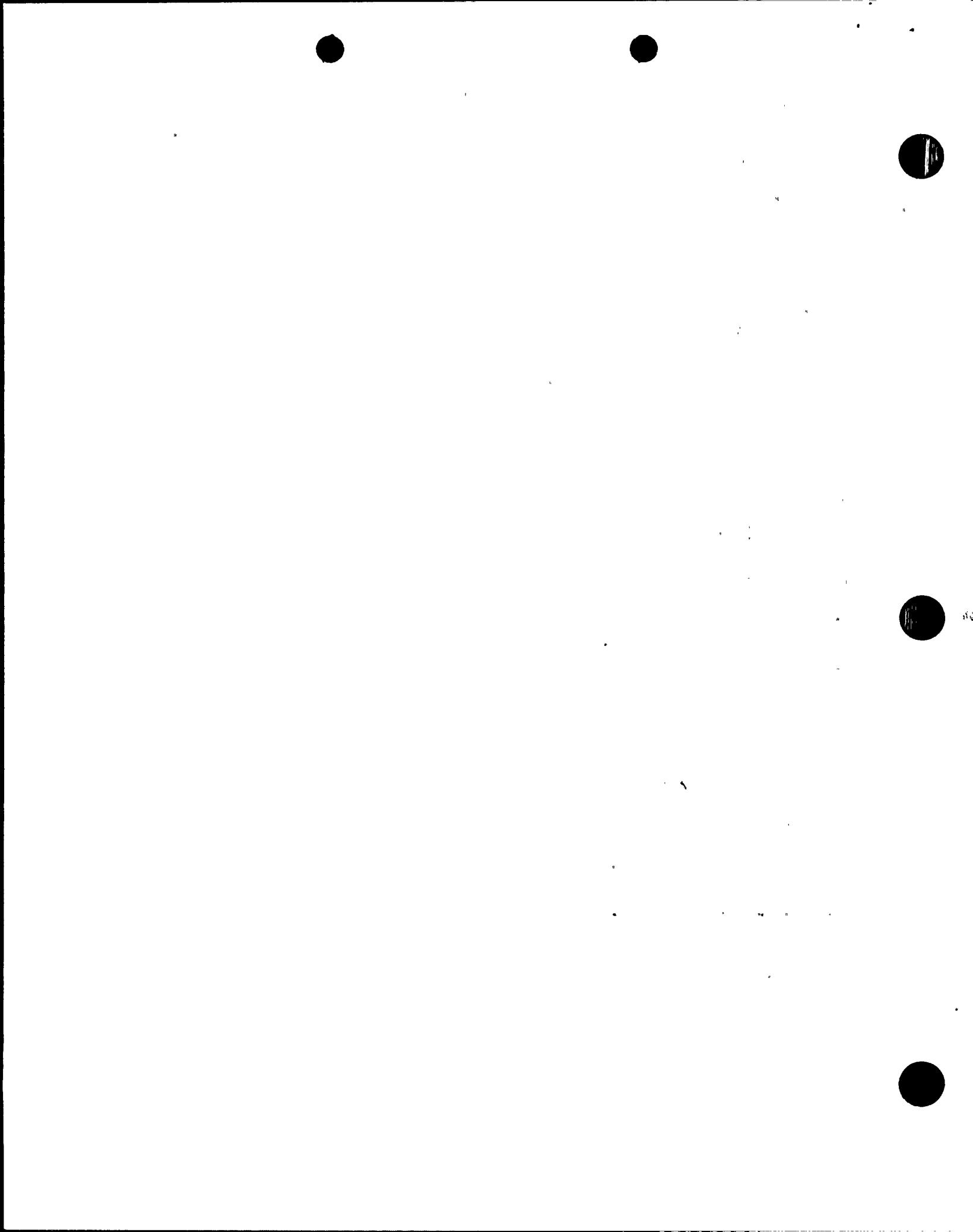
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S. Burns  
By phone  
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JCummings, OIA

Enforcement Coordinators, RI, RII, RIII, RIV, RV

TWBrockett, IE

IE Files

Central Files

Civil Penalty Book

CON

EI Reading File

EDO Reading File

RJClark, NRR

Tippolito, NRR

State Department of Public Health

ATTN: Aubrey Godwin, Director

Division of Radiological Health

State Office Building

Montgomery, Alabama 36104

Office of the Attorney General

ATTN: Hon. Charles Graddick

Attorney General

State Administrative Building

Montgomery, Alabama 36130

Public Service Commission

ATTN: Juanita W. McDaniel

President

State Office Building

Montgomery, Alabama 36104

APPENDIX A  
NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTIES

Tennessee Valley Authority

Docket Nos. 50-259, 50-260

and 50-296

Browns Ferry 1, 2 and 3

License Nos. DPR-33, DPR-55

and DPR-68

As a result of the inspection conducted on January 6-9 and 20-23, 1981, and in accordance with the Interim Enforcement Policy, 45 FR 66754 (October 7, 1980), Section 234 of the Atomic Energy Act of 1954 as amended (42 USC 2282, P.L. 96-195), 10 CFR 2.201, and 10 CFR 2.205, the NRC proposes to impose civil penalties in the amounts set forth below for the following alleged violations.

- A. Facility Operating License paragraphs 2.D(1)(b) for Units 1 and 2 and paragraph 2.E(2)(b) for Unit 3 require the licensee to install automatic pre-action sprinkler systems in all areas of the plant required for safe shutdown by the end of the first refueling outage of any of the plant units after August 20, 1976. Unit 1 completed the first refueling outage on January 15, 1978. Areas requiring automatic pre-action sprinkler systems were identified in Part X, Section A of TVA's document "Browns Ferry Nuclear Plant Design Changes for the Recovery From the Fire of March 22, 1975", which included the electrical cable area for the RHR service water pumps at the intake pumping structure.

Contrary to the above, an automatic pre-action sprinkler system has not been installed in the intake pumping station.

This is a Severity Level III Violation (Supplement I.C.2).  
Civil Penalty - \$21,000.

- B. Facility Operating License paragraphs 2.D(1)(e) for Units 1 and 2 and 2.E(2)(e) for Unit 3 require fire protection features of the emergency battery room complex to be changed to do one of the following: (1) provide a total fire rated barrier enclosure of the facility battery room complex that exceeds the fire load contained in the room; (2) reduce the fire load to be within the fire barrier capability of 1½ hours; or (3) provide a remote manual actuated sprinkler system in each room and provide the 1½ hours fire barrier separation. This change was required to be completed prior to the end of the first refueling outage. Unit 1 completed the first refueling outage on January 15, 1978.

Contrary to the above, the fire protection features provided for the battery rooms do not meet one of the three required modifications. TVA selected modification item 3 and provided a sprinkler system for each emergency battery room; however, a 1½ hour fire barrier was not provided. Ventilation ducts penetrate each battery room and are not equipped with fire

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dampers at each penetration. This voids the fire resistant rating of each enclosure.

This is a Severity Level III Violation (Supplement I.C.2).  
Civil Penalty - \$8,000.

- C. Facility Operating License paragraphs 2.D(1)(c) and 2.D(1)(d) for Units 1 and 2 and paragraphs 2.E(2)(c) and 2.E(2)(d) for Unit 3 require a manual dry pipe sprinkler system for the cable spreading rooms and an automatic actuated carbon dioxide system for the cable spreading rooms.

Contrary to the above, the cable spreading rooms' dry pipe sprinkler systems are automatic operation and the carbon dioxide systems are manual in operation. A license change to describe the current operation of the fire suppression systems for the cable spreading rooms has not been obtained.

This is a Severity Level III Violation (Supplement I.C.2)  
Civil Penalty - \$5,000

- D. Technical Specification 3.11.B requires that a continuous fire watch be established in the cable spreading rooms and a patrolling fire watch be established to make hourly checks of other (CO2) protected locations whenever the CO2 fire protection system is lost.

Contrary to the above, the fire watches for the cable spreading rooms were conducted intermittently and the patrolling fire watch did not enter the auxiliary instrument rooms for hourly checks for all three units when the CO2 system was out of service on October 5, 1980 between 7:12 p.m. and 9:00 p.m.

This is a Severity Level III Violation (Supplement I.C.2). A similar item was identified in Inspection Report 50-259/80-34.  
Civil Penalty - \$5,000

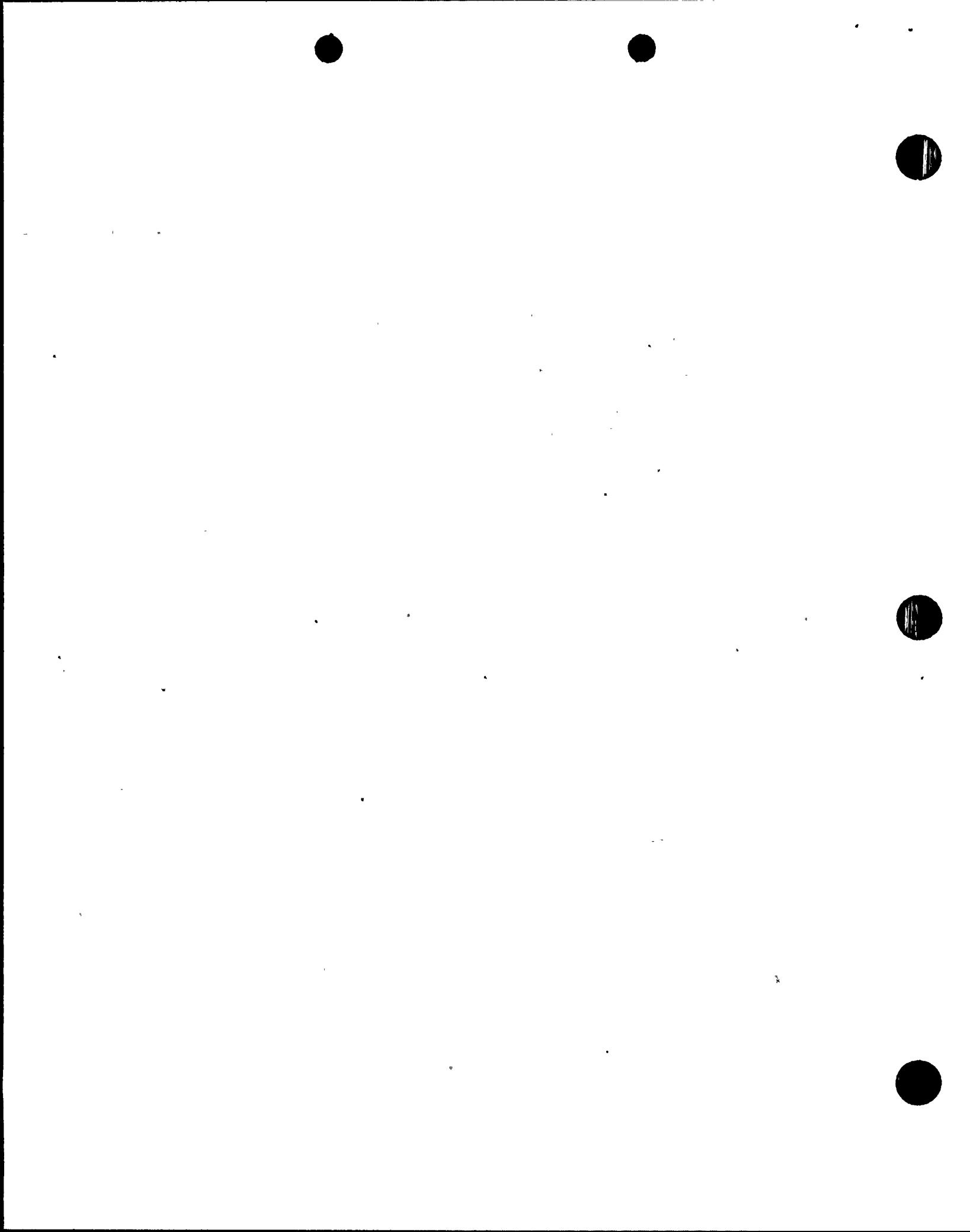
- E. Technical Specification Section 4.11.A.1.b requires each high pressure fire protection system pump to be tested for operability once per month.

Contrary to the above, fire pump No. A was not tested for operability during October 1980.

This is a Severity Level III Violation (Supplement I.C.2).  
Civil Penalty - \$2,000

- F. Technical Specification Section 6.3.A.10 requires written procedures covering the fire protection and prevention program to be prepared, approved and adhered to.

1. TVA Browns Ferry Emergency Plan - Fire, Explosion and Natural Disaster Plan, Section 11 requires each operating crew to participate in a fire drill at least once per three months.



Contrary to the above, each operating crew did not participate in a fire drill at least once per three months during 1980. The 1980 drill participation was: Group 1 - two; Group 2 - one; Group 3 - one; Group 4 - two; Group 5 - one.

This is a Severity Level III Violation (Supplement I.C.2).  
Civil Penalty - \$3,000

2. TVA Procedure MMI-75, Installation and Repair of Penetration and Fire Stops, Section 6.4.8 limits the maximum number of uncoated (not coated with "Flamemastic" fire resistance material) electrical cables within a cable tray to ten.

Contrary to the above, over ten uncoated electrical cables are installed in cable trays in all three units.

This is a Severity Level III Violation (Supplement I.C.2).  
Civil Penalty - \$2,000

- G. Technical Specifications Section 3.11.F states "If it becomes necessary to breach a fire stop, an attendant shall be posted on each side of an open penetration until work is completed and the penetration is resealed." The required attendant was not posted in each of the following examples:

1. The fire door (door No. 632) separating the Unit 1 electrical shutdown board rooms is a fire stop and must be maintained in the closed position.

Contrary to the above, door No. 632 was found open due to an inoperative door closer on January 21, 1981 and the required attendants were not posted.

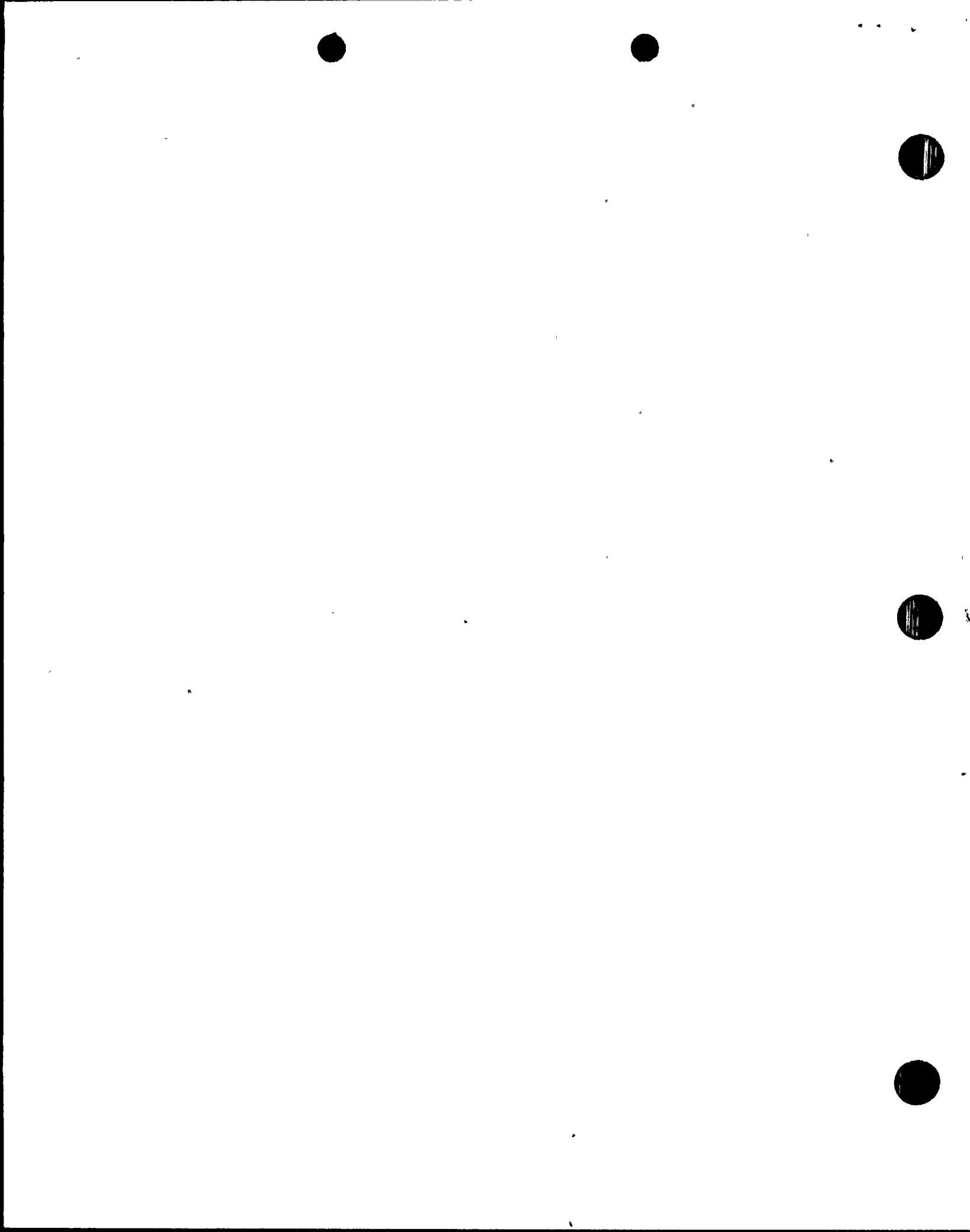
This is a Severity Level III Violation (Supplement I.C.2).  
Civil Penalty - \$2,000

2. The fire stops separating the Unit 3 electrical shutdown board rooms include door Nos. 655 and 656 which are required to be maintained in a closed position.

Contrary to the above, door Nos. 655 and 656 were found blocked and wedged in the open position on January 21, 1981 and the required attendants were not posted.

This is a Severity Level III Violation (Supplement I.C.2).  
Civil Penalty - \$2,000

Pursuant to 10 CFR 2.201, Tennessee Valley Authority is hereby required to submit to this office within 25 days of the date of this Notice a written statement or explanation including: (1) admission or denial of the alleged violations, (2) the reason for the violations if admitted, (3) corrective



steps which have been taken and the results achieved, (4) corrective steps which will be taken to avoid further violations and, (5) the date when full compliance will be achieved. Under the authority of Section 182 of the Atomic Energy Act as amended, this response shall be submitted under oath or affirmation.

Tennessee Valley Authority, within 25 days of the date of this Notice, may pay the civil penalty in the cumulative amount of \$50,000 or may protest the imposition of the civil penalty in whole or in part by a written answer. Should Tennessee Valley Authority fail to answer within the time specified, this office will issue an order imposing the civil penalty proposed above. Should Tennessee Valley Authority elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalty, such answer may (a) deny the items of noncompliance listed in this Notice in whole or in part, (b) demonstrate extenuating circumstances, (c) show error in this Notice or (d) show other reasons why the penalty should not be imposed. In addition to protesting the civil penalty in whole or in part, such answer may request remission or mitigation of the penalty. Any written answer in accordance with 10 CFR 2.205 should be set forth separately from the statement or explanation in reply pursuant to 10 CFR 2.201, but may incorporate by specific reference (e.g., giving page and paragraph numbers) to avoid repetition.

Tennessee Valley Authority's attention is directed to the other provisions of 10 CFR 2.205 regarding, in particular, failure to answer and ensuing orders; answer, consideration by this office, and ensuing orders; requests for hearings, hearings and ensuing orders; compromise; and collection.

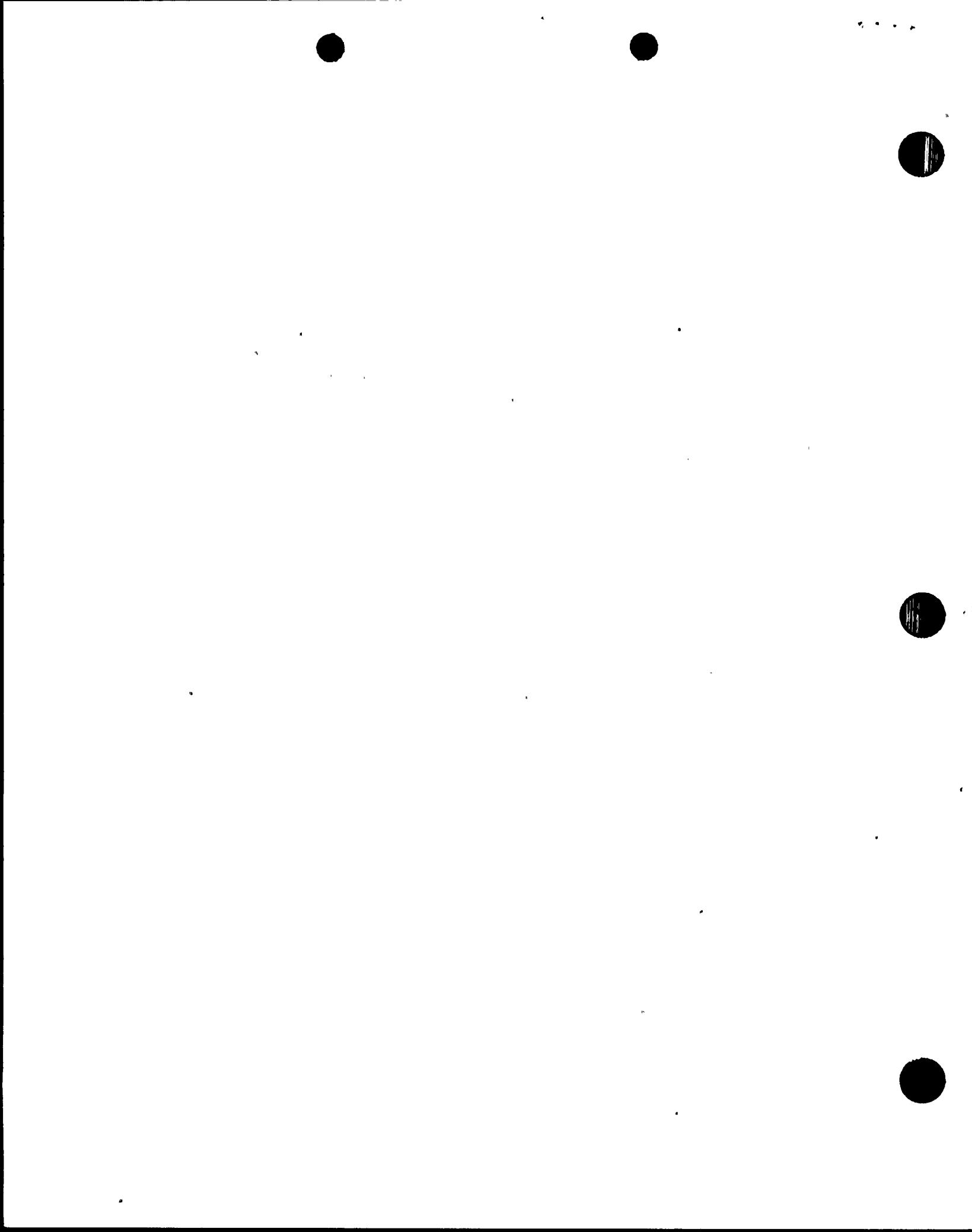
Upon failure to pay any civil penalty due which has been subsequently determined in accordance with the applicable provisions of 10 CFR 2.205, the matter may be referred to the Attorney General and the penalty, unless compromised, remitted, or mitigated, may be collected by civil action pursuant to Section 234c of the Atomic Energy Act of 1954, as amended (42 USC 2282).

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed By  
R. C. DeYoung

Victor Stello, Jr., Director  
Office of Inspection and Enforcement

Dated at Bethesda, Maryland  
this 20th day of March 1981



APPENDIX B  
NOTICE OF DEVIATION

Tennessee Valley Authority

Browns Ferry 1, 2 and 3

Docket Nos. 50-259, 50-260  
and 50-296  
License Nos. DPR-33, DPR-55  
/and DPR-68  
EA 81-30

Based on the results of the NRC inspection conducted on January 6-9 and 20-23, 1981, certain of your activities appear to deviate from your commitments to the Commission and applicable codes, guides, or standards approved by the Commission and have safety significance as indicated below:

- A. FSAR Section 10.11.3.1 references the April 21, 1977 TVA letter from J. E. Gilleland to E. G. Case of NRC/NRR as one of the documents containing the fire protection modification commitments made by TVA as a result of the March 22, 1975 fire. The enclosure to this letter identified a number of plant doors to be changed to approved fire doors and doors to be upgraded to equivalent approved fire doors. These modifications were to be completed by the end of the first refueling outage of either Unit 1 or Unit 2. Unit 1 restarted from the first refueling outage on January 15, 1978.

Contrary to the above, several doors in the control bay portion of the plant, primarily on the 593 and 617 foot elevations, have not been changed to approved type fire doors. Many of these doors contain ventilation louvers and thus do not have a fire resistant rating.

- B. The applicable code or standard approved by the Commission for the design and installation of sprinkler systems is National Fire Protection Association Standard No. 13 (NFPA-13). NFPA-13 Section 1-8.1.2 states that only approved materials and devices shall be used in sprinkler systems.

Contrary to the above, unapproved fire protection deluge valves are provided for the HPCI sprinkler systems.

- C. National Fire Protection Association Standard No. 80 Sections 2-8.2 and 2-8.7 require that automatic closing fire doors be provided with positive latching hardware which automatically engages when the door moves to the closed position.

Contrary to the above, a pair of fire doors (door no. 294) is not provided with automatic latching hardware.

Provide this office within twenty-five days of the date of this Notice written comments including a description of corrective actions that have been or will be taken, corrective actions which will be taken to avoid further deviations and the date your corrective action will be completed.

