

December 9, 1996

Southern Nuclear Operating Company, Inc.

ATTN: Mr. D. N. Morey

Vice President

P.O. Box 1295

Birmingham, AL 35201

SUBJECT: MEETING SUMMARY: INSPECTION REPORT 96-10 FINDINGS  
FARLEY NUCLEAR PLANT - DOCKET NOS. 50-348, 50-364

Dear Mr. Morey:

This refers to the management meeting on November 4, 1996, conducted at the NRC Region II Office. The purpose of the meeting was to discuss findings documented in Inspection Report (IR) 50-348, 50-364/96-10. It is our opinion, that this meeting was beneficial.

A List of Attendees and Handouts used by Southern Nuclear Operating Company representatives during the discussions are enclosed. Licensee representatives discussed their evaluations, root causes and corrective actions regarding the following Health Physics and Radiological Effluent program issues: containment high range monitor (CHRM) electronic calibrations; personal dosimetry use; radioactive material labeling; and liquid composite sample preservation. Regarding the examples of configuration control violations, potential root causes and status of corrective actions were reviewed and discussed for a radiation monitor sample line and for additional discrepancies noted for plant supports as documented in IR 50-348, 50-364/96-07 dated September 27, 1996. The status of, and current initiatives within the Health Physics and the Safety Audit and Engineering Review (SAER) programs were detailed.

During the discussions the licensee stated that identified violations regarding liquid composite sample preservation, CHRM electronic calibrations, and labeling of casks containing radioactive materials did not appear to be the result of a lack of attention to detail as documented in our letter transmitting IR 50-348, 50-364/96-10, but to misunderstandings regarding the adequacy of the program elements in place. We agree that the reasons for the CHRM calibration and labeling issues may be the result of misinterpretation of program adequacy. However, our references to a lack of attention to detail were intended to focus management and staff attention on finding the causes and successfully correcting the aggregate weaknesses and violations identified.

Licensee representatives discussed issues associated with the CHRM electronic calibrations and requested that the NRC review the bases for dispositioning the item as a violation rather than an Inspector Follow-up Item. The licensee's bases for their request and our supplemental review and final disposition regarding this issue are provided in Enclosure 3. We conclude that this issue was properly identified as a violation.

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In accordance with Section 2.790 of NRC's "Rules of Practice, "Part 2, Title 10 Code of Federal Regulations, a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

Should you have any questions concerning this letter, please contact us.

Sincerely,

(Original signed by A. F. Gibson)

Albert F. Gibson, Director  
Division of Radiation Safety

Docket Nos. 50-348, 50-364  
License Nos. NPF-2, NPF-8

Enclosures: 1. List of Attendees  
2. SNC Handouts  
3. Evaluation and Conclusion  
Violation 96-10-02

cc w/encl:

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SIGNATURE						
NAME	GKuzo	KBarr	PSkinner			
DATE	12 / / 96	12 / / 96	12 / / 96	12 / / 96	12 / / 96	12 / / 96
COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

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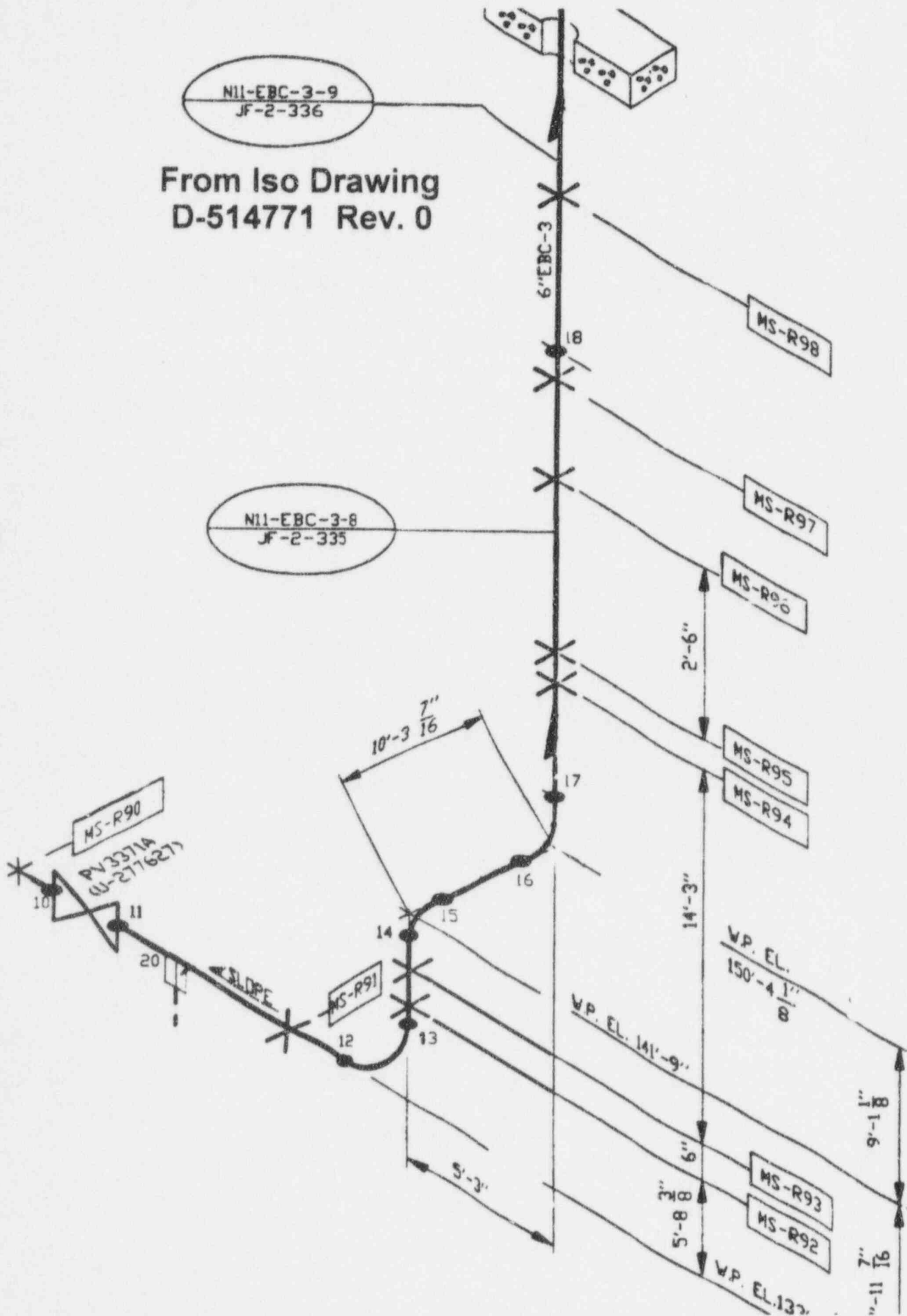
## LIST OF ATTENDEES

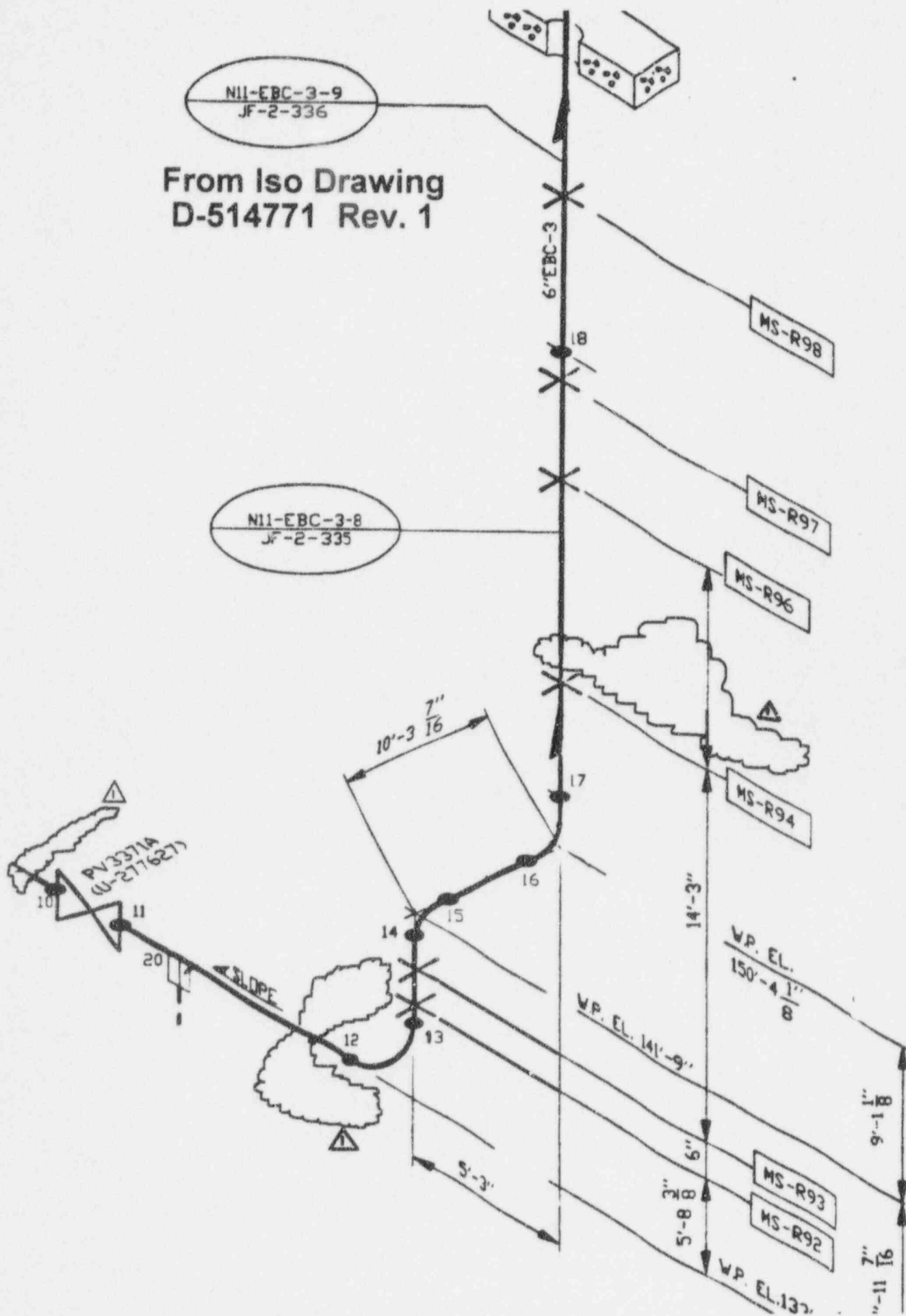
### Southern Nuclear Operating Company

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D. Morey, Vice President  
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S. Fulmer, Technical Manager, Farley Nuclear Plant (FNP)  
D. Jones, Engineering Manager, Corporate  
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T. Ross, Senior Resident Inspector, FNP, DRP, Branch 2  
G. Kuzo, Senior Radiation Specialist, PSB, DRS







Grinnell

PIPE HANGER DEPARTMENT

ENG BY WJH DATE 5-21-76CHECK BY WJH DATE 5-21-76RE DRAWN BY WJH DATE 5-22-77CUSTOMER ALABAMA PWR. CO.ORDER OR CONT NO P.O. 8FHF-222JOB NAME PARLEY NOG. STA. UNIT #1

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Z = .021

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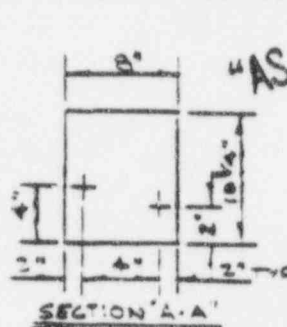
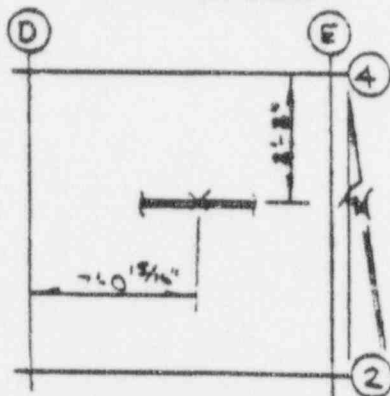
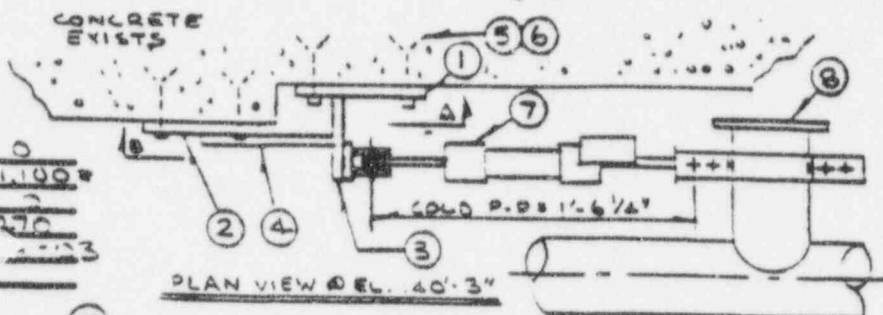
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Z Design Load = 370

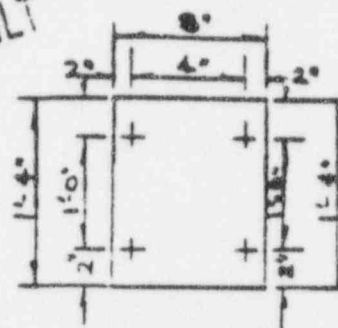
Iso. # = 370

Prob # = 370

Critical



AS BUILT



ITEM NO	MATERIALS AND OPERATIONS	QUAN	SNIP
	SEISMIC SHOCK & SWAY SUPPRESSOR CONSISTING OF ALL MATERIAL EXISTS IN FIELD	ONE	
1	1/2"x8" Carbon Steel Plate 0'-10 3/4" Long	1	
2	1/2"x8" Carbon Steel Plate 1'-6" Long	1	
3	1/2"x5 1/2" Carbon Steel Plate 0'-6" Long	1	
4	1/2"x6" Carbon Steel Plate 0'-9" Long	1	
5	3/4" Rod Nuts	6	
6	3/4" Tap Bolts 1 1/2" Long	6	
7	1 1/2" cylinder 5" Stroke, Fig. 200 Option #3, 2 3/8" O.D. Pipe, Hydraulic Shock & Sway Suppressor, Load = 1100#, Cold Piston Setting = " Hot Piston Setting = 3 11/16"/24-74	1	
8	Special U.S. 63, Carbon Steel Type "A" 2" Stanchion 6" Pipe 2'-0'-9 1/8", E=7 1/8", G=3/8"x6"x6"	1	
	SEISMIC ASSEMBLY SKETCH & ENGINEERING BUNDLE & TAG	1	
	MARK# AEW-267	1	

FOR MATERIALS AND OPERATIONS SEE SKETCH NO \_\_\_\_\_ REV \_\_\_\_\_

REF DRWG NOS PIPE 2-175220-4 STEEL 2-17624-1 MARK NO AEW-267 SKETCH NO 11064 REV 1



## EVALUATION AND CONCLUSION

Violation 50-348, 50-364/96-10-02

On September 27, 1996, a Notice of Violation (Notice) was issued for five violations identified during a NRC Inspection conducted August 12-16, and August 26-30, 1996. The Southern Nuclear Operating Company (SNC) responded to the Notice on October 25, 1996, and agreed to the stated violations. However, during a November 4, 1996 Management Meeting, licensee representatives requested that the bases for issuing a violation for failure to meet *in situ* electronic calibration of the containment high range monitors (CHRM) as specified in NUREG 0737, Clarification of TMI Action Plan Requirements, Table II.F.1-3 be reviewed. The NRC evaluation and conclusions regarding the licensee's arguments are as follow:

### Restatement of the Violation

10 CFR 50.54(h) requires, in part, the license to be subject to the provisions of the Act now or hereafter in effect, and to all rules, regulations and orders of the Commission.

By letter dated March 14, 1983, an Order to implement and maintain license commitments for post-TMI related items was issued. The Order referenced commitments documented in letters dated April 16, 1982, and June 4, 1982, issued in response to NRC Generic Letters 82-05 and 82-10, and specified, in part, that Three Mile Island (TMI) Action Item II.F.1-3 was complete.

NUREG 0737, Clarification of TMI Action Plan Requirements, Table II.F.1-3 Containment High Range Monitor, specifies, in part, a monitor range of 1 Roentgen per hour (R/hr) to 10<sup>7</sup> R/hr, and that *in situ* calibration by electronic signal substitution is acceptable for all range decades above 10 R/hr.

Contrary to the above, as of August 12, 1996, the licensee failed to implement and maintain the March 14, 1983 Order, in that, *in situ* special calibration by electronic signal substitution for all range decades above 10 R/hr were not conducted for the installed containment high range monitors.

This is a Severity Level IV violation (Supplement IV).

### Summary of the Reasons for the Licensee's Request

During the November 4, 1996 Management Meeting, licensee representatives requested the NRC staff to review the dispositioning of the CHRM electronic calibration issue as a violation. Based on current vendor calibration and in-plant surveillance activities, they believed the intent of their commitments for the CHRM referenced in their April 16, 1982, and June 4, 1982 letters was met.

The licensee stated that their current calibration was conducted in accordance with the original vendor procedural guidance which met the intent of NUREG 0737 requirements. The failure to conduct an electronic calibration at each decade above 10 R/hr was based on a misinterpretation of the words "range

Enclosure 3

decade" in Table II.F.1-3 which, specifies, in part, *in situ* calibration by electronic signal substitution is acceptable for all range decades above 10R/hr.

In addition, the licensee referenced two NRC documents which they believed indicated confusion by other licensees implementing the CHRM special electronic calibrations following initial publication of NUREG 0737. The referenced correspondence included an April 20, 1982 Memorandum from G. D. Brown, Chief, Technical Program Branch, Region IV to R. Mattson, Director, Division of Systems Integration, Office of Nuclear Reactor Regulation (NRR), which specified, in part, that licensees identified difficulties in obtaining pulse generators with the necessary range to perform full scale electronic response tests of the electrical circuit. The second document referenced by the licensee, an August 16, 1982 Memorandum from D. Eisenhut, Director Division of Licensing, NRR, to Regional Administrators provided guidelines for meeting the intent of CHRM monitor special calibrations as documented in Item II.F.1-3 of NUREG 0737.

#### NRC Evaluation

The NRC staff has reviewed carefully the licensee's request and has concluded that no significant supplemental information was provided that had not been considered previously in dispositioning the identified non-compliance.

The use of vendor calibrations to meet the special calibrations in NUREG 0737 Table II.F.1-3 is not acceptable. The guidance specifies that "the original laboratory calibration is not an acceptable position due to the possible differences after *in situ* installation."

Further, we do not agree that the April 20, 1982, and August 16, 1982 Memoranda, and the use of the original vendor procedure justify the licensee's current misinterpretation in implementing the *in situ* electronic calibration. NUREG 0737, II.F.1, Attachment 3, Containment High-Range Radiation Monitor, Changes to Previous Requirements and Guidance, Section (6) documented that electronic calibration is acceptable for high dose rate ranges because such methods are sufficient to provide acceptable accuracy. Also, the Special Calibration details referenced in Table II.F.1-3 allowed use of electronic signal substitution for each range decade above 10 R/hr *in lieu* of source calibrations due to ALARA considerations. The April 20, 1982, Memorandum documented, in part, that licensees were concerned with the necessity to demonstrate periodically, that the detector properly responds to radiation sources through the designated exposure rate range ([10 R/hr - 10 E+07 R/hr]); and that there were difficulties in obtaining adequate pulse generators to perform full scale electronic response tests. The August 16, 1982, Eisenhut Memorandum reconfirmed that electronic checks by signal substitution using a calibrated current source would be a satisfactory method of demonstrating that the system electronics would respond to radiation fields over the range of 10 R/hr through 10 E+07 R/hr. The Memorandum also identified that pulse generators were available to perform full scale response tests of the high range radiation monitors' electrical circuits. Further, changes in the vendor's field calibration procedure in 1983, as referenced in Inspection Report 50-348, 50-364/96-10, corroborated our finding of deficiencies in the original procedures for meeting the intent of Table II.F.1-3.

Finally, the Farley Nuclear Plant (FNP) Standard Test Procedure (STP) used to conduct the electronic calibration did not verify adequately, the linearity and accuracy of the upper ranges for the installed equipment. For example, the data in FNP-1-STP-227.18A, dated October 16, 1995, only verified that the system electronics responded within tolerance for an electronic pulse representing approximately  $1 \text{ E}+3 \text{ R/hr}$  for each of four separate switch positions and for a pulse representing  $\text{E}+4 \text{ R/hr}$  for the fifth switch position associated with the readout module. The surveillance test, as conducted, did not verify the linearity and accuracy of the installed equipment at the upper ranges from  $\text{E}+5$  through  $\text{E}+7 \text{ R/hr}$  as intended in NUREG 0737, Table II.F.1-3

#### NRC Conclusion

For the above reasons, the NRC staff concludes that this issue was identified properly as a violation for failure to implement and maintain the March 14, 1983, Order for the Containment High Range Monitor in situ special calibration by electronic signal substitution for all range decades above  $10 \text{ R/hr}$ .