

REGULATORY GUIDE 1.97
COMPLIANCE REPORT
FOR
FARLEY NUCLEAR PLANT
UNIT 1

VOLUME I

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COMPLIANCE REPORT RECORD OF REVISION

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Introduction and Users Guide

Alabama Power Company's response to Regulatory Guide 1.97 (R.G. 1.97) for Farley Nuclear Plant - Unit 1 is provided in this Compliance Report. Each variable shown in R.G. 1.97 is addressed in this Compliance Report.

A section of this report is dedicated to the review criteria and is entitled "R.G. 1.97 Design and Qualification Review Criteria". The left hand column in this section is a replication of the twelve R.G. 1.97 provisions. The center column is an interpretation of the Regulatory Guide which was used to develop the plant specific Design Evaluation Criteria presented in the right hand column. The Design Evaluation Criteria were used to determine a variable's compliance to or deviation from R.G. 1.97.

Each variable addressed in the report has been assigned a variable number. Table 1 correlates Farley Nuclear Plant variables to the R.G. 1.97 variables, through the assigned numbers.

The Farley Nuclear Plant variables are categorized in the Compliance Report according to the most stringent applicable R.G. 1.97 category. For example, if a particular Farley Nuclear Plant variable is designated as Category 1 and Category 3 in R.G. 1.97, it has been categorized in the Compliance Report as a Category 1 variable. Table 2 summarizes the categories and types associated with each variable. Regardless of the categorization in the response, the variables are reviewed against the most rigorous applicable provisions of R.G. 1.97.

Each Farley Nuclear Plant variable is addressed by an individual section of the Compliance Report. These sections address the compliance of the Farley Nuclear Plant variables to the twelve provisions of R.G. 1.97 (Equipment Qualification, Redundancy, Power Supply, Channel Availability, Quality Assurance, Display and Recording, Range Equipment Identification, Interfaces, Servicing-Testing-Calibration, Human Factors and Direct Measurement). A checklist at the beginning of each section summarizes the compliance of the variable to the twelve Regulatory Guide Provisions. The checklists indicate compliance by "YES" and deviations by "NO". Table 3 correlates room identification numbers to room names and floor elevations for sensor and display locations. Table 4 summarizes the compliance of all Farley Nuclear Plant variables to R.G. 1.97.

In addition to providing a compliance summary, the checklists identify the unique plant identification number (TPNS No.) of the specific plant sensors associated with the Farley Nuclear Plant variables.

For any deviation from R.G. 1.97, the checklists state whether a modification is proposed to bring the Farley Nuclear Plant variable into compliance with R.G. 1.97 or whether a justification based on the plant-specific design features of Farley Nuclear Plant is presented to provide for alternative means of compliance with R.G. 1.97. Only the proposed modifications and justifications for each variable are discussed following the variable's checklist. All other criteria not discussed in each variable section are considered by Alabama Power Company to be in compliance with R.G. 1.97.

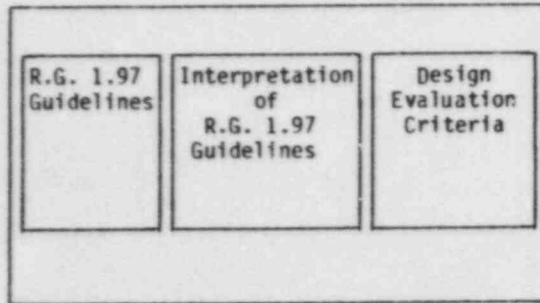
Part 6.2 of Supplement 1 to NUREG-0737 identifies eight points, (a) through (h), which should be covered in the response to Regulatory Guide 1.97. The following explanation describes how each of the eight points is addressed:

- (a) Instrument Range - The checklist for each variable identifies whether the range is in compliance with the range specified in R.G. 1.97. If the variable is not in compliance, a proposed modification or justification is presented.
- (b) Environmental Qualification - The checklist for each variable identifies the variable's compliance to the R.G. 1.97 environmental qualification provisions. If the variable is not in compliance, a modification is proposed or an alternative criteria (Appendix A) to R.G. 1.97 based on plant-specific design is presented as justification.
- (c) Seismic Qualification - The checklist for each variable identifies the variable's compliance to the R.G. 1.97 seismic qualification provisions. If the variable is not in compliance, a modification is proposed or an alternative criteria (Appendix B) to R.G. 1.97 based on plant specific design is presented as justification.
- (d) Quality Assurance - The checklist for each variable identifies the variable's compliance to R.G. 1.97. Appendix C addresses Alabama Power Company's quality assurance provisions.
- (e) Redundance and Sensor(s) Location(s) - The checklist for each variable identifies the variable's compliance to the R.G. 1.97 redundancy provisions. If the variable is not in compliance, a proposed modification or justification is presented. The location of sensors for each variable is identified in each variable section following the checklist.
- (f) Power Supply - The checklist for each variable identifies the variable's compliance to the R.G. 1.97 power supply provisions. If the variable is not in compliance, a proposed modification or justification is presented.
- (g) Location of Display - The location of displays is identified in each variable section following the checklist.
- (h) Schedule - The schedule for implementation of the proposed modifications is addressed in Attachment 2 to the cover letter for this report.

As an additional aid for reviewers of this report, the following illustration highlights the principle parts of the response and demonstrates their use.

ILLUSTRATED USERS GUIDE

DESIGN AND QUALIFICATION REVIEW CRITERIA



The Design Evaluation Criteria, as stated in the right hand column of the Design and Qualification Review Criteria, formed the basis for the Compliance Review.

TABLE 1: REGULATORY GUIDE VARIABLE CROSS REFERENCE TO VARIABLE NUMBER

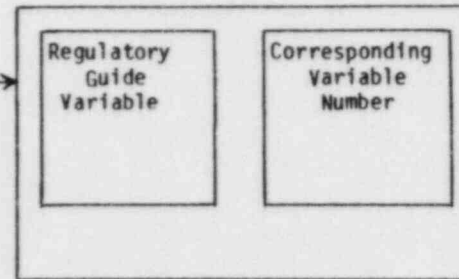


Table 1 correlates the variable numbers to the variable descriptions found in the Regulatory Guide.

The reviews are documented in the Compliance Report volumes and summarized in Table 4.

A section in the Compliance Report is dedicated to each variable.

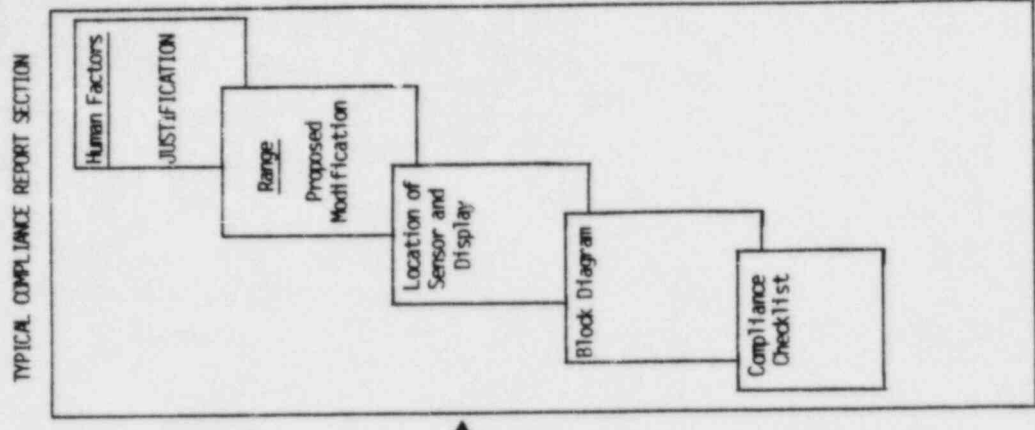
TYPICAL COMPLIANCE CHECKLIST

REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE NO. Example	GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1PNS No(s): Example			
1. QUALIFICATION			
a) ENVIRONMENTAL		YES	
b) SEISMIC		YES	
2. REDUNDANCY		YES	
3. POWER SUPPLY		YES	
4. CHANNEL AVAILABILITY		YES	
5. QUALITY ASSURANCE		YES	
6. DISPLAY AND RECORDING			
a) DISPLAY		YES	
b) RECORDING		YES	
7. RANGE		NO	MODIFY
8. EQUIPMENT IDENTIFICATION		YES	
9. INTERFACES (isolation)		YES	
10. SERVICING, TESTING, CALIBRATION		YES	
11. HUMAN FACTORS		NO	JUSTIFY
12. DIRECT MEASUREMENT		YES	

The first sheet in each section is a compliance checklist which summarizes the variable's compliance to the provisions of the Regulatory Guide.

Aspects of the variable which do not comply with the provisions of the Regulatory Guide are addressed individually with either a justification or proposed modification. The variable in this illustration does not comply to the Regulatory Guide Range or Human Factors provisions.



The locations of the sensor and display devices for each variable are addressed in a page following the block diagram. Block diagrams which depict the major components of an instrument loop(s) are also provided for applicable FNP variables.

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Table 1: Regulatory Guide Variable Cross Reference to Variable Number

Table 2: Variable Type and Category Reference

Table 3: Room Identifications

Table 4: Regulatory Guide 1.97 Compliance Summary

CATEGORY 1 Variables

VARIABLE NO.	DESCRIPTION
1	RCS Pressure (Wide Range)
2	RCS Hot Leg Temperature (Wide Range)
3	RCS Cold Leg Temperature (Wide Range)
4	Steam Generator Level (Wide Range)
5	Steam Generator Level (Narrow Range)
6	Pressurizer Level
7	Containment Pressure (Normal Range)
8	Main Steam Line Pressure
9	Refueling Water Storage Tank Level
10	Containment Water Level
11	Condensate Storage Tank Level
12	Auxiliary Feedwater Flow
13	Containment Radiation (High Range)
14	Primary Coolant Radioactivity Concentration
15	Core Exit Temperature
16	Containment Pressure (Extended Range)
17	Neutron Flux (Intermediate Range)
18	Reactor Water Level

VOLUME II

19/1	Pen No. 29 - Accumulator Test Line
19/2	Pen No. 63 - Nitrogen Supply to Accumulators
19/3	Pen No. 64 - Nitrogen Supply to PRT
19/4	Pen No. 30 - Pressurizer Relief Tank Makeup
19/5	Pen No. 31 - Reactor Coolant Drain Tank
19/6	Pen No. 70 - CTMT Differential Press. Inst.
19/7	Pen No. 16 - Residual Heat Removal-Out
19/8	Pen No. 18 - Residual Heat Removal-Out

VARIABLE
NO.

DESCRIPTION

19/9	Pen No. 15 - Residual Heat Removal-In
19/10	Pen No. 17 - Residual Heat Removal-In
19/11	Pen No. 23 - Normal Letdown Line
19/12	Pen No. 28 - Excess Letdown and Seal Water
19/13	Pen No. 24 - Normal Charging Line
19/14	Pen No. 56 - Pressurizer Steam Sample Line
19/15	Pen No. 57 - Pressurizer Liquid Sample Line
19/16	Pen No. 58 - Hot Leg Sample Line
19/17	Pen No. 48 - Instrument Air
19/18	Pen No. 55 - Containment Air Sample-In
19/19	Pen No. 54 - Containment Air Sample-Out
19/20	Pen No. 12 - CTMT Purge Supply (Main and Mini)
19/21	Pen No. 13 - CTMT Purge Exhaust (Main and Mini)
19/22	Pen No. 78 - Containment Sump Pumps
19/23	Pen No. 34 - Serv. Wtr to CTMT CLR 1A
19/24	Pen No. 35 - Serv. Wtr to CTMT CLR 1B
19/25	Pen No. 36 - Serv. Wtr to CTMT CLR 1C
19/26	Pen No. 37 - Serv. Wtr to CTMT CLR 1D
19/27	Pen No. 38 - Serv. Wtr from CTMT CLR 1A
19/28	Pen No. 39 - Serv. Wtr from CTMT CLR 1B
19/29	Pen No. 40 - Serv. Wtr from CTMT CLR 1D
19/30	Pen No. 41 - Serv. Wtr from CTMT CLR 1C
19/31	Pen No. 42 - RCP Cooling Water Supply
19/32	Pen No. 71 - Leak Rate Test
19/33	Pen No. 72 - Leak Rate Test
19/34	Pen No. 44 - RCP Cooling Water Return
19/35	Pen No. 43 - RCP Thermal Barrier CLG Wtr Ret.
19/36	Pen No. 45 - Excess Letdown HX & RC Drain Tank HX CCW Supply
19/37	Pen No. 46 - Excess Letdown HX & RC Drain Tank HX CCW Return
19/38	Pen No. 80 - High Head Safety Injection
19/39	Pen No. 20 - High Head Safety Injection

VOLUME III

19/40	Pen No. 81 - High Head Safety Injection
19/41	Pen No. 21 - Containment Spray Line
19/42	Pen No. 22 - Containment Spray Line
19/43	Pen No. 10 - CTMT Sump Recirculation Line
19/44	Pen No. 11 - CTMT Sump Recirculation Line
19/45	Pen No. 93 - CTMT Sump Spray Recirculation
19/46	Pen No. 94 - CTMT Sump Spray Recirculation
19/47	Pen No. 49 - Accumulator Makeup Line
19/48	Pen No. 50 - Accumulator Sample Line
19/49	Pen No. 62 - Reactor Coolant Drain Tank Vent
19/50	Pen No. 19 - Boron Injection Line
19/51	Pen No. 101 - Low Head Safety Inj.
19/52	Pen No. 60 - Serv Wtr to RCP Motor Coolers
19/53	Pen No. 32 - Serv Wtr From RCP Motor Coolers
19/54	Pen No. 33 - CTMT Sump Pump Sample Recirc.
19/55	Pen No. 67 - Post LOCA CTMT Sample-Out
19/56	Pen No. 61 - Post LOCA CTMT Sample-Out
19/57	Pen No. 61 - Post LOCA CTMT Sample-In

VARIABLE NO.	DESCRIPTION
19/58	Pen No. 66 - Post LOCA CTMT Sample-In
19/59	Pen No. 103 - Post LOCA CTMT Venting
19/60	Pen No. 82 - Demineralized Water

CATEGORY 2 Variables

101	RHR/LHSI Flow
102	Boric Acid Flow
103	HHSI Flow
104	Main Steam Flow
105	Containment Spray Flow
106	Charging Line Flow
107	Letdown Flow
108	CCW HX Inlet Flow
109	Plant Vent Stack Flow
110	RCP Seal Injection Flow
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112	Pressurizer Pressure
113	Volume Control Tank Level
114	RHR HX Discharge Temperature
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VOLUME IV

116	CTMT Cooler Service Water Outlet Temperature
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119	Component Cooling Water Heat Exchanger Discharge Temperature
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131/3	Diesel Generator Voltage and Frequency
131/4	Diesel Generator Watts
131/5	Diesel Generator Fuel and Day Tank Level
132	Core Subcooling Monitor
133	Service Water Flow to CTMT Coolers

VARIABLE NO.	DESCRIPTION
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CATEGORY 3 Variables

1001	Main Feedwater Flow
1002	Pressurizer Relief Tank Level
1003	Radioactive Liquid Tank Levels
1004	Pressurizer Relief Tank Temperature
1005	Portable Plant/Environs Radiation
1006	Containment Hydrogen Concentration
1007	Pressurizer Relief Tank Pressure
1008	Waste Gas Decay Tank Pressure
1009	Control Rod Position
1010	Post Accident Sample - CTMT Air
1011	RCP Motor Current
1012	Particulates and Halogens Sampling (Vent Stack)
1013	Airborne Radio-Halogens and Particulates (Environs)
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1015	Wind Speed
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1018	Accumulator Tank Level
1019	Portable Plant/Environs Radioactivity (Gamma-Ray Spectrometer)

APPENDIX A: Environmental Qualification Justification

APPENDIX B: Seismic Qualification Justification

APPENDIX C: Quality Assurance Provisions

APPENDIX D: Main Control Board Modifications

R.G. 1.97
DESIGN AND QUALIFICATION REVIEW CRITERIA

NOTE: The outline of this document will follow the format contained in Table 1 of R.G. 1.97 Rev. 3 starting with the guidelines for Category 1 instrumentation and ending with the guidelines for Category 3 instrumentation. Three columns will be used. In the left column, the R.G. 1.97 Rev. 3 Table 1 guidelines are shown as they appear in the Regulatory Guide for each design/qualification guideline. The center column contains an interpretation of the R.G. 1.97 Rev. 3 guidelines without consideration of the existing licensing basis for Farley Nuclear Plant. (Assumes that compliance with R.G. 1.97 Rev. 3 as published must be obtained without exception.) The right column contains the design evaluation criteria which has been used to evaluate the compliance of the existing instrumentation at FNP to the R.G. 1.97 Rev. 3 design/qualification guidelines or to the existing licensing basis design/qualification requirements if non-compliance to the R.G. 1.97 Rev. 3 design/qualification guidelines is justifiable. The R.G. 1.97 Rev. 2 design/qualification guidelines were considered in developing the Interpretation and Design Evaluation Criteria used for the range evaluation of all variables, the seismic qualification of safety-related Category 2 variables, the environmental qualification of the neutron flux monitoring channel (variable 17), and the equipment identification evaluation of all variables.

A. CATEGORY 1 INSTRUMENTATION

1. EQUIPMENT QUALIFICATION

R.G. 1.97 Rev. 3 Guidelines

The instrumentation should be qualified in accordance with Regulatory Guide 1.89, "Qualification of Class 1E Equipment for Nuclear Power Plants," and the methodology described in NUREG-0588, "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment."

Interpretation of R.G. 1.97 Rev. 3

All Category 1 or 2 instrumentation channel devices which are located in harsh plant environments shall be qualified in accordance with Regulatory Guide 1.89, "Qualification of Class 1E Equipment for Nuclear Power Plants," and the methodology described in NUREG-0588, "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment."

Design Evaluation Criteria

All existing instrumentation channel devices identified as Category 1 or 2 will be evaluated to determine if the devices are located in a harsh environment (radiation exposure from recirculated post-LOCA fluids outside of the containment will be considered a harsh environment). If the Category 1 or 2 instrumentation devices are located in harsh environments, the evaluation will consider that the environmental qualification guidelines of R.G. 1.89 and R.G. 1.97 Rev. 3 are not complied with since the Category 1 and 2 instrumentation will not be evaluated to the guidelines of R.G. 1.89. However, the evaluation will determine whether or not the existing instrumentation devices are included in the IEB 79-01B and NUREG-0588 submittals. Category 1 or 2 existing instrumentation devices which are located in a harsh environment, and are not included in the existing IEB 79-01B or NUREG-0588 submittals, will be reviewed for compliance to IEB 79-01B or NUREG-0588 guidelines.

R.G. 1.97 Rev. 3 Guidelines

Instrumentation whose ranges are required to extend beyond those ranges calculated in the most severe design basis accident event for a given variable should be qualified using the guidance provided in Paragraph 6.3.6 of ANS-4.5.

Qualification applies to the complete instrumentation channel from sensor to display where the display is a direct-indicating meter or recording device. R.G. 1.97 Rev. 2 states that "at least one channel should be

1. EQUIPMENT QUALIFICATION (CONTINUED)
Interpretation of R.G. 1.97 Rev. 3

When the instrument range is required to extend beyond the range calculated for the most severe design basis accident as defined in Chapter 15 of the FSAR, the qualification environment should be established in accordance with the following criteria of ANS-4.5: "The qualification environment for Type C instrumentation components shall be based on the design basis accident events, except the assumed maximum of the value of the monitored variable shall be the value equal to the maximum range for the variable (as specified in Table 3 of R.G. 1.97 Rev. 3). The monitored variable shall be assumed to approach this peak by extrapolating the most severe initial ramp associated with the Design Basis Accident Events. The decay for this variable shall be considered proportional to the decay for this variable associated with the Design Basis Accident Events. No additional qualification margin needs to be added to the extended range variable. All environmental envelopes except that pertaining to the variable measured by the instrumentation channel shall be those associated with the Design Basis Accident Event."

For R.G. 1.97 instrumentation displays which consist of direct-reading indicators/meters or recording devices (recorders), the qualification requirements apply to the complete instrumentation channel from the sensor to the

Design Evaluation Criteria

For extended range Category 1 or 2 instruments located in harsh environments, the qualification documentation for each instrument will be reviewed against the guidelines provided in Paragraph 6.3.6 of ANS-4.5. If compliance to the guidelines in ANS-4.5 cannot be demonstrated, the instrument will be considered not in compliance with R.G. 1.97 Rev. 3 Equipment Qualification Requirements. (Paragraph 6.3.6 of ANS-4.5-1980 has been reviewed, and it has been determined that ANS-4.5 is applicable only to extended range Type C variables. An extended range variable is defined as one whose range exceeds that postulated in the most severe design basis event by a significant magnitude in excess of the normal design margin. The only instruments at FNP that would be considered extended range Type C variables are the extended range containment pressure instruments, PT0950Y and 950Z; however, as these pressure instruments are located in the auxiliary building and are not subject to a LOCA or HELB, the qualification requirements of ANS-4.5 do not apply. The other extended range variables specified by R.G. 1.97 are the primary coolant radiation level and the high range containment area radiation. However, neither is considered within the scope of ANS-4.5 since the high range containment area radiation is a Type E variable, not a Type C, and the primary coolant radiation level will not be determined by an instrument but by analysis of a sample obtained through the post-accident sampling system.)

For all Category 1 instrumentation channels where the R.G. 1.97 display device is a direct-reading indicator/recorder or computer-generated display, the instrument loop devices (including the sensor, cabling and

R.G. 1.97 Rev. 3 Guidelines

displayed on a direct-indicating or recording device." If the instrumentation channel signal is to be used in a computer based display, recording, or diagnostic program, qualification applies from the sensor up to and including the channel isolation device.

1. EQUIPMENT QUALIFICATION (CONTINUED)
Interpretation of R.G. 1.97 Rev. 3

display device. Qualification applies to at least one instrument channel having direct-reading or indicating devices. If the R.G. 1.97 instrumentation display for an instrumentation channel consists of a computer-based display, the qualification guidelines apply from the sensor up to and including the channel isolation device which isolates the signal for use by the computer system.

The seismic portion of qualification should be in accordance with Regulatory Guide 1.100, "Seismic Qualification of Electric Equipment for Nuclear Power Plants." Instrumentation should continue to read within the required accuracy : "lowing but not necessarily during, a safe shutdown earthquake.

Seismic qualification provisions should comply with IEEE Std. 344-1975 subject to the comments noted under the regulatory position contained in R.G. 1.100.

Design Evaluation Criteria

associated hardware, and isolation devices as applicable) which are located in harsh environments will be evaluated to determine if they comply with the DOR Guidelines or NUREG-0588 and seismic qualification guidelines. For all Category 1 instrumentation channels where the R.G. 1.97 display device is a direct-reading indicator or recorder, the instrument loop devices (including sensors, isolation devices, power supplies, indicators, and recorders as applicable) which are located in mild environments will be evaluated to determine if they comply with seismic qualification guidelines. For all Category 1 instrumentation channels where the R.G. 1.97 display is a computer-generated display, the instrument loop devices (including sensors, isolation devices, and power supplies as applicable) which are located in mild environments will be evaluated from the sensors up to and including the isolation devices to determine if they comply with seismic qualification guidelines.

As the seismic qualification licensing basis for Class 1E instrumentation in Farley Nuclear Plant is IEEE 344-1971 as described in FSAR Chapter 3.10, all Category 1 instrumentation devices will not be evaluated for compliance to R.G. 1.100 and will not be in compliance with the seismic qualification guidelines of R.G. 1.97 Rev. 3. However, as the existing licensing basis is justifiable for existing installed Category 1 instrumentation, an evaluation will be performed to determine if instrumentation channel devices designated as Category 1 comply with the seismic provisions as described in FSAR Chapter 3.10. Devices installed after plant operation as a part of plant modifications may have been qualified to IEEE 344-1975. The evaluation of seismic

1. EQUIPMENT QUALIFICATION (CONTINUED)
Interpretation of R.C. 1.97 Rev. 3

Design Evaluation Criteria

provisions will consider this fact if applicable.

Non-compliance to either IEEE 344-1971 or IEEE 344-1975

will be determined for the Category 1 instrumentation.

R.G. 1.97 Rev. 3 Guidelines

No single failure within either the accident-monitoring instrumentation, its auxiliary supporting features, or its power sources concurrent with the failures that are a condition or result of a specific accident should prevent the operators from being presented the information necessary for them to determine the safety status of the plant and to bring the plant to and maintain it in a safe condition following that accident. Where failure of one accident-monitoring channel results in information ambiguity (that is, the redundant displays disagree) that could lead operators to defeat or fail to accomplish a required safety function, additional information should be provided to allow the operators to deduce the actual conditions in the plant. This may be accomplished by providing additional independent channels of information of the same variable (addition of an identical channel) or by providing an independent channel to monitor a different variable that bears a known relationship to the multiple channels (addition of a diverse channel). Redundant or diverse channels should be electrically independent and physically separated from each other and from equipment not classified important to safety in accordance with Regulatory Guide 1.75, "Physical Independence of Electric Systems," up to and including any isolation device. Within each redundant division of a safety system, redundant monitoring channels are not needed except for steam generator level instrumentation in two-loop plants.

2. REDUNDANCY

Interpretation of R.G. 1.97 Rev. 3

To comply with the single failure guideline, a minimum of two redundant or diverse instrumentation channels shall be provided for each Category 1 variable. If a failure of one of the two redundant instrumentation channels can result in information ambiguity that could lead operators to defeat or fail to accomplish the required safety function, a third instrumentation channel shall be provided which either monitors the same Category 1 variable or bears a known relationship to the Category 1 variable. Within each redundant division of a safety system, redundant monitoring channels are not needed. Examples of redundant divisions are the three reactor coolant loops or the two redundant trains of safety equipment. Redundant or diverse channels shall be electrically independent and physically separated from each other and from systems not important to safety in accordance with R.G. 1.75. For low level analog and digital signal loops where the R.G. 1.97 display is a direct-reading indicator, recorder, or computer-based display, the separation guidelines of R.G. 1.75 apply to the instrument loop from the sensor up to and including the isolation device. For ON-OFF, OPEN-CLOSE status indication where the R.G. 1.97 display is provided by indicating lights associated with valve or breaker control circuitry, the separation guidelines of R.G. 1.75 which were applied to the control circuitry are applicable to the position status indication circuitry.

Design Evaluation Criteria

Redundancy of Category 1 Instrumentation: For each Category 1 variable, the existing plant instrumentation will be evaluated to demonstrate that two redundant or diverse instrumentation channels (loops) exist for monitoring of the Category 1 variable. For this evaluation diverse instrumentation loops will be treated the same as redundant instrumentation loops. For low level analog and digital signal loops when the R.G. 1.97 display device is a direct-reading indicator, recorder, or computer-based display, the separation guidelines of R.G. 1.75 will be used to evaluate each instrumentation loop from the sensor up to and including the isolation device. For ON-OFF, OPEN-CLOSE status indication where the R.G. 1.97 display is provided by indicating lights associated with valve or breaker control circuitry, the separation guidelines of R.G. 1.75 which were applied to the design of the control circuitry will be used to evaluate the R.G. 1.97 position status indication circuitry. Redundancy will be demonstrated for each Category 1 variable if complete train separation* in accordance with R.G. 1.75 exists between all required redundant instrumentation loop devices and power supplies. If redundancy cannot be demonstrated, the Category 1 variable will be considered not to be in compliance with R.G. 1.97 Rev. 3 redundancy guidelines. *For FNP, complete redundant train separation will consist of maintaining R.G. 1.75 separation between Train A and Train B redundant instrumentation loops including sensors, electronic processing cards, isolators, cable/raceway, electrical penetrations, and power supplies and maintaining R.G. 1.75 separation between train oriented (Class 1E) circuitry and non-Class 1E circuitry as discussed in PSAR Appendix 3A. Channel 1 and 2 instrumentation loops will be considered

2. REDUNDANCY (CONTINUED)
Interpretation of R.G. 1.97 Rev. 3

Design Evaluation Criteria

as Train A; channel 3 and 4 instrumentation loops will be considered as Train B.

Instrumentation Ambiguity: For each Category 1 variable, the evaluation will determine if a third identical instrumentation channel exists which can be used to resolve information ambiguity due to failure in one of the two redundant Category 1 instrumentation channels. If a third identical instrumentation channel is not available for each Category 1 variable the evaluation will determine if:

(a) There are other additional instrumentation channel(s) which bear a known relationship to the Category 1 variable which can be used as information channel(s) to resolve the ambiguity. OR

(b) The ambiguous information would not cause the operator to defeat or fail to accomplish a safety function. OR

(c) The two redundant Category 1 instrumentation channels each have built-in diagnostic circuitry which can indicate to the operator the cause of the ambiguity between the two redundant Category 1 channels and clarify which of the two redundant channels is functioning properly.

If instrumentation ambiguity cannot be resolved by one of the above listed means, the Category 1 variable will be considered not in compliance with R.G. 1.97 Rev. 3 redundancy guidelines.

Redundancy of the Third or Other Additional Instrumentation Channel(s): If a third or other additional instrumentation channel(s) are required to resolve ambiguity between two redundant Category 1 instrumentation channels, the third or additional instrumentation channel(s) are not subject to R.G. 1.97 Category 1 redundancy guidelines. However, the design of the third

2. REDUNDANCY (CONTINUED)
Interpretation of R.G. 1.97 Rev. 3

Redundant Category 1 instrumentation channels shall be powered from redundant train oriented power supplies which are electrically and physically separated in accordance with the guidelines of R.G. 1.75 so that no single failure in the power supply system will prevent the display of a Category 1 variable to the operator.

Design Evaluation Criteria

or additional channel(s) used to resolve operator ambiguity will be reviewed to determine their electrical independence and physical separation from at least one of the other two redundant channels in accordance with R.G. 1.75.

Power Supply Redundancy: For all Category 1 variables, the redundant instrumentation loops related to each Category 1 variable will be evaluated to determine if train oriented power supplies in compliance with R.G. 1.75 as described in PSAR Appendix 3A, Page 3A-1.75-1, are provided, and that the following criteria are satisfied:

- (a) Devices in redundant instrumentation loops must be powered from opposite train power supplies.
- (b) When Category 1 variable redundancy is provided by diverse instrumentation loops, the power supplies for the diverse loops must be provided from opposite train power supplies.
- (c) When evaluating items a and b above, the evaluator must take into consideration that Channel 1 and 2 instrumentation is powered from Train A, and channel 3 and 4 instrumentation is powered from Train B.
- (d) For Category 1 variables where a third or additional channel(s) are required to resolve ambiguity between the two redundant Category 1 instrumentation channels, the power supplies for the third or additional channel(s) must be either Train A or Train B. All devices in the third or additional instrumentation channel(s) must be powered from the same train oriented power supply and meet the power supply requirements for Category 1 variables described in item A.3 of this document.

2. REDUNDANCY (CONTINUED)
Interpretation of R.G. 1.97 Rev. 3

Design Evaluation Criteria

(e) All devices (components) required for an instrumentation loop to function must be powered from the same train of power.

If power supply redundancy is not satisfied by meeting the above criteria, the Category 1 variable will be considered not in compliance with the redundancy guidelines of R.G. 1.97 Rev. 3.

R.C. 1.97 Rev. 3 Guidelines

The instrumentation should be energized from station standby power sources as provided in Regulatory Guide 1.32, "Criteria for Safety-Related Electric Power Systems for Nuclear Power Plants," and should be backed up by batteries where momentary interruption is not tolerable.

3. POWER SOURCES
Interpretation of R.C. 1.97 Rev. 3

All Category 1 instrumentation channels (loops) shall be powered from onsite standby power sources which comply with the guidelines of R.C. 1.32. R.C. 1.32 endorses IEEE Std. 308-1971 subject to the comments in the regulatory position section of R.C. 1.32. As onsite standby power is required for Category 1 instrumentation channels, a "momentary interruption of power" is interpreted to be the time required for a diesel generator to supply power to the instrumentation power supply bus following a loss-of-offsite power (LOSP).

Design Evaluation Criteria

The PNP design basis for onsite standby power systems is in compliance with R.C. 1.32 and IEEE 308 as described in FSAR Appendix 3A, Page 3A-1.32-1. For all Category 1 variables, the redundant instrumentation loops related to each Category 1 variable will be evaluated to determine if onsite standby power sources which are in compliance with the guidelines of R.C. 1.32 are provided to each instrumentation loop. Also for Category 1 instrumentation loops which do not have battery backup, the effects of the momentary interruption associated with an LOSP will be evaluated on a case-by-case basis to determine if the resulting momentary loss of the display instrumentation would lead operators to defeat or fail to accomplish a required safety function. If the momentary loss of the display information could result in the operators' failure to accomplish a required safety function, the onsite power supply design will be considered not to be in compliance with R.C. 1.97.

R.C. 1.97 Rev. 3 Guidelines

The instrumentation channel should be available prior to an accident except as provided in Paragraph 4.11, "Exception," as defined in IEEE Std. 279-1971, "Criteria for Protection Systems for Nuclear Power Generating Stations," or as specified in the technical specifications.

4. CHANNEL AVAILABILITY

Interpretation of R.C. 1.97 Rev. 3

Category 1 instrumentation channels should be available prior to an accident except as provided in Paragraph 4.11 of IEEE Std. 279-1971 or as specified in the technical specifications. IEEE Std. 279-1971 Paragraph 4.11, "Exception," states: "One-out-of-two" systems are permitted to violate the single failure criteria during channel bypass provided that acceptable reliability of operation can be otherwise demonstrated. For example, the bypass time interval required for a test, calibration, or maintenance operation can be shown to be so short that the probability of failure of the active channel would be commensurate with the probability of failure of the "one-out-of-two" system during its normal interval between tests.

Design Evaluation Criteria

Category 1 instrumentation channel availability should be in accordance with Section 3/4.3, Instrumentation, or Section 3/4.6.4, Combustible Gas Control-Hydrogen Analyzers, Limiting Condition for Operation of the Technical Specification except where the "Exception" in Paragraph 4.11 of IEEE Std. 279-1971 applies. Each Category 1 instrumentation loop will be reviewed to determine if the loop is included in the Limiting Condition for Operation of Technical Specification, Section 3/4.3 or 3/4.6.4. The evaluation will determine the presence or absence of each Category 1 instrumentation loop in these sections of the technical specification. For the Category 1 instruments not specified in these sections of the technical specification, the compliance with R.C. 1.97 will be interpreted as not applicable (N/A).

R.C. 1.47 Rev. 3 Guidelines

The recommendations of the following regulatory guides pertaining to quality assurance should be followed:

- Regulatory Guide 1.29 - "Quality Assurance Program Requirements (Design and Construction)"
- Regulatory Guide 1.30 (Safety Guide 30) - "Quality Assurance Requirements for the Installation, Inspection and Testing of Instrumentation and Electric Equipment"
- Regulatory Guide 1.39 - "Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Water-Cooled Nuclear Power Plants"
- Regulatory Guide 1.58 - "Qualification of Nuclear Power Plant Inspection, Examination, and Testing Personnel"
- Regulatory Guide 1.64 - "Quality Assurance Requirements for the Design of Nuclear Power Plants"
- Regulatory Guide 1.74 - "Quality Assurance Terms and Definitions"
- Regulatory Guide 1.88 - "Collection, Storage, and Maintenance of Nuclear Power Plant Quality Assurance Records"
- Regulatory Guide 1.123 - "Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants"
- Regulatory Guide 1.144 - "Auditing of Quality Assurance Programs for Nuclear Power Plants"
- Regulatory Guide 1.145 - "Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants"
- Reference to the above regulatory guides (except Regulatory Guides 1.30 and 1.38) is being made pending issuance of a revision to Regulatory Guide 1.29 that is under development (Draft NUREG-51) and that will endorse REGULATORY GUIDE 1-1517, "Quality Assurance Program Requirements for Nuclear Power Plants."

QUALITY ASSURANCE

Interpretation of R.C. 1.47 Rev. 3

The recommendations of the regulatory guides pertaining to quality assurance or their associated ANSI Standards should be addressed. The specific edition of the regulatory guide or its associated ANSI Standard should be that edition specified in the design basis of the plant as provided in the Farley FSAR.

Design Evaluation Criteria

Each of the specified regulatory guides will be evaluated to determine whether the Farley FSAR utilizes their provisions for the APCo QA program. For those regulatory guides for which no FSAR reference exists, the ANSI Standard upon which the regulatory guide is based will be utilized to evaluate Farley FSAR compliance equivalence.

R.G. 1.97 Rev. 3 Guidelines

Continuous real-time display should be provided. The indication may be on a dial, digital display, CRT, or stripchart recorder. Recording of instrumentation should be provided for at least one redundant channel.

If direct and immediate trend or transient information is essential for operator information or action, the recording should be continuously available on redundant dedicated recorders. Otherwise, it may be continuously updated, stored in computer memory, and displayed on demand. Intermittent displays such as data loggers and scanning recorders may be used if no significant transient response information is likely to be lost by such devices.

6. DISPLAY AND RECORDING
Interpretation of R.G. 1.97 Rev. 3

Each instrument loop or channel shall be displayed, continuous real time, on a dial (indicator), digital display, CRT, or stripchart recorder. For variables where dedicated redundant recorders are not required, at least one redundant channel shall be recorded. This recording may be computer based with display on demand. If a third or additional channel(s) are required to resolve an ambiguity between two redundant loops for a given variable, the third or additional channel(s) are not required to have recording capability unless recording capability is essential to resolving the ambiguity. For OPEN-CLOSE, ON-OFF status indication of valve or breaker positions, recording of the position status information is not required as only two possible position states exist for each variable, and the position status is displayed continuously for operator observance by the position indicating lights.

Dedicated redundant recorders shall be provided where direct and immediate trend or transient information is essential for operator information or action. If redundant dedicated recorders are not provided, the direct and immediate trend or transient information from both redundant channels may be recorded by a computer with display on demand or, if sufficient information would be provided to the operator to detect a trend or transient, recording may be provided by data loggers, scanning recorders, or manually if directed by the EOPs.

Design Evaluation Criteria

For each Category 1 variable, the evaluation will determine if both of the two redundant instrumentation loops (and the third or additional channel(s) when required) are provided with continuous real-time displays (indicators, digital or dial, CRTs, or stripchart recorders) in the main control room, and if at least one of the two redundant instrumentation loops is provided with a recording device (recorder or computer based with display on demand) in the main control room. For variables which provide OPEN-CLOSE or ON-OFF status indication of valve or breaker positions, recording of the position status is not required. If the evaluation determines that these display and recording criteria are not satisfied, the Category 1 variable will be considered not in compliance with the display and recording guidelines of R.G. 1.97 Rev. 3. The evaluation will document the location of the Category 1 displays.

Each Category 1 variable will be evaluated to determine if redundant dedicated recorders (one dedicated recording device for each of the two redundant instrumentation loops for the Category 1 variable) or other means of recording both redundant channels are essential to provide immediate trend or transient information for operator action. An essential parameter that may need redundant dedicated recorders or other means of recording both redundant channels is defined as a parameter:

- 1) required for operator actions or information to mitigate the consequences of design basis events, and
- 2) for which no emergency operating procedure exists to direct the operator in manually plotting the instrument output (e.g., containment hydrogen concentration). A parameter will not be considered as essential if the planned operator actions are identified in the current

6. DISPLAY AND RECORDING (CONTINUED)
Interpretation of R.G. 1.97 Rev. 3

Design Evaluation Criteria

EOPs or ERGs, Rev. 0, as corrective measures for multiple failures or other nondesign basis events, or as measures for improved safety system(s) performance over the accepted minimum. For those variables that are considered essential, redundant dedicated recorders or other means of recording both redundant channels will not be necessary if the instrument trend can be identified by brief operator observation of the dial indication, digital display, CRT or other nontrending indication in accordance with standard operator practice and training, or if a transient is indicated by an MCB annunciator. An indication will be considered transient if the indication is a brief, one-time occurrence that the operator cannot detect without constant observation of the associated instrumentation. A transient variable requiring redundant dedicated recorders or other means of recording both redundant channels will not be the direct result of operator actions such as the initiation of pump flow or re-alignment of a valve since standard operator training and practice will direct the operator to observe the instrument as the operator takes control of the component.

From this evaluation, a list of Category 1 variables requiring redundant dedicated recorders or other means of recording both redundant channels will be developed. If redundant recording means do not exist for these Category 1 variables, they will be considered not in compliance with the display and recording guidelines of R.G. 1.97 Rev. 3.

R.G. 1.97 Rev. 3 Guidelines

If two or more instruments are needed to cover a particular range, overlapping of instrument span should be provided. If the required range of monitoring instrumentation results in a loss of instrumentation sensitivity in the normal operating range, separate instruments should be used.

7. RANGE
Interpretation of R.G. 1.97 Rev. 3

The range of indication for Category 1 instrumentation loops shall be as specified in Table 2 of R.G. 1.97 Rev. 2 for each Category 1 variable. If the range indicated in R.G. 1.97 Rev. 2 cannot be achieved by one instrumentation loop, and two or more instrumentation loops are required to cover the required range for the variable, overlapping of instrument span should be provided between the instrumentation loops. If changing the range of indication for an existing Category 1 instrumentation loop in order to comply with the range guidelines of Table 2 of R.G. 1.97 results in an unacceptable degradation of the instrumentation accuracy and readability in the normal operating range, separate instrumentation loops should be provided to cover the normal operating and required range for the variable.

Design Evaluation Criteria

The existing redundant instrumentation loops (and third or additional instrumentation channel(s) when required) for each Category 1 variable will be evaluated to determine if they are in compliance with the range guidelines of Table 2 of R.G. 1.97 Rev. 2, the overlapping span requirements of R.G. 1.97 Rev. 3, if applicable, and that the instrumentation sensitivity, accuracy, and readability are suitable for the normal operating range. If compliance to these guidelines cannot be demonstrated, the Category 1 variable will be considered not in compliance with the range guidelines of R.G. 1.97 Rev. 2.

R.G. 1.97 Rev. 3 Guidelines

Types A, B, and C instruments designated as Categories 1 and 2 should be specifically identified with a common designator on the control panels so that the operator can easily discern that they are intended for use under accident conditions.

8. EQUIPMENT IDENTIFICATION
Interpretation of R.G. 1.97 Rev. 3

A unique designator should be provided for all R.G. 1.97 Category 1 and 2 display devices in the main control room to allow operators to easily discern that the displays are intended for use under accident conditions.

Design Evaluation Criteria

Each existing display device for a Category 1 or 2 variable will be evaluated to determine if a unique designator exists at the location of the display device on the main control board panels, which identifies to the operator that the display device is intended for use under accident conditions. If display devices for Category 1 or 2 variables are not uniquely identified for this purpose, the Category 1 and 2 variables will be considered not in compliance with the equipment identification guidelines of R.G. 1.97 Rev. 3.

R.G. 1.97 Rev. 3 Guidelines

The transmission of signals for other uses should be through isolation devices that are designated as part of the monitoring instrumentation and that meet the provisions of this document.

9. INTERFACES

Interpretation of R.G. 1.97 Rev. 3

Interfaces between the Class 1E portions of instrumentation loop circuitry and the Non-Class 1E portions of instrumentation loop circuitry shall be in compliance with the electrical independence and physical separation guidelines of R.G. 1.75 and Section 4.5 of IEEE Std. 384-1974. All Category 1 instrumentation loops shall be considered as Class 1E circuitry up to and including the isolation device. Non-Class 1E portions of Category 1 instrumentation loops will not require electrical independence, isolation, or physical separation from other Non-Class 1E loop devices.

Design Evaluation Criteria

The redundant instrumentation loops for each Category 1 variable will be evaluated to demonstrate that interfaces with Non-Class 1E devices are in compliance with the guidelines of R.G. 1.75 and Section 4.5 of IEEE Std. 384-1974 subject to the comments in the regulatory position of R.G. 1.75 up to and including the isolation device. If compliance to these guidelines cannot be demonstrated, the Category 1 variable will be considered not in compliance with the interfaces guidelines of R.G. 1.97 Rev. 3.

R.G. 1.97 Rev. 3 Guidelines

Servicing, testing, and calibration programs should be specified to maintain the capability of the monitoring instrumentation. If the required interval between testing is less than the normal time interval between plant shutdowns, a capability for testing during power operation should be provided. Whenever means for removing channels from service are included in the design, the design should facilitate administrative control of the access to such removal means. The design should facilitate administrative control of the access to all set point adjustments, module calibration adjustments, and test points.

Periodic checking, testing, calibration, and calibration verification should be in accordance with the applicable portions of Regulatory Guide 1.118, "Periodic Testing of Electric Power and Protection Systems," pertaining to testing of instrument channels. (Note: Response time testing not usually needed.)

The location of the isolation device should be such that it would be accessible for maintenance during accident conditions.

10. SERVICING, TESTING, AND CALIBRATION
Interpretation of R.G. 1.97 Rev. 3

Servicing, testing, and calibration programs which require testing at intervals less than the normal interval between plant shutdowns, shall be capable of being performed at power. Administrative control over the removal of channels from service for servicing, testing, and calibration should be provided. Portable instrumentation does not require any administrative controls. Administrative control over access to all set point adjustments, module calibration adjustments, and test points should be provided.

Periodic checking, testing, calibration, and calibration verification should be in accordance with the applicable portions of Regulatory Guide 1.118 or its associated IEEE Standard.

Isolation devices shall be accessible for maintenance during accident conditions if operation of the isolation devices is required for the operation of R.G. 1.97 variable displays.

Design Evaluation Criteria

A review of the servicing, testing, and calibration (repetitive tasks of FNP-D-AP-52) programs and interval requirements specified in FNP STPs, IMPs, and the PM program for Category 1, 2, and 3 instruments will be performed. If the required interval between testing is less than the normal interval between plant shutdowns, procedures will be determined to be available for testing during power. Where a means for removing channels from service is included in the design, verification will be performed to ensure that procedures exist which incorporate the control of the access to such removal means. Additionally, it will be verified that a procedure exists which incorporates the control of the access to all set point adjustments, module calibration adjustments, and test points.

The FSAR will be reviewed to determine the conformance of periodic checking, testing, calibration, and calibration verification to the applicable portions of Regulatory Guide 1.118 or its associated IEEE Standard.

The instrumentation loops for each Category 1 variable will be evaluated to determine if the display devices are dependent upon the operation of isolation devices. If isolation devices are required for the operation of the R.G. 1.97 display devices, the isolation devices will be evaluated to determine if they are accessible for maintenance during an accident condition. If accessibility for maintenance is not possible during accident conditions, the Category 1 variable will be considered not in compliance with the servicing, testing, and calibration guidelines of the R.G. 1.97 Rev. 3. [Isolation devices located in areas identified

10. SERVICING, TESTING, AND CALIBRATION (CONTINUED)
Interpretation of R.G. 1.97 Rev. 3

Design Evaluation Criteria

by APCo response to NUREG-0737, Item II.B.2 dated February 23, 1981, are considered accessible. For required isolation devices not located in these areas, the evaluation will determine accessibility (with respect to radiation levels) of the isolation device for maintenance during accident conditions.]

R.G. 1.97 Rev. 3 Guidelines

The instrumentation should be designed to facilitate the recognition, location, replacement, repair, or adjustment of malfunctioning components or modules.

The monitoring instrumentation design should minimize the development of conditions that would cause meters, annunciators, recorders, alarms, etc., to give anomalous indications potentially confusing to the operator.

Human factors analysis should be used in determining type and location of displays.

To the extent practicable, the same instruments should be used for accident monitoring as are used for the normal operations of the plant to enable the operators to use, during accident situations, instruments with which they are most familiar.

11. HUMAN FACTORS
Interpretation of R.G. 1.97 Rev. 3

It is interpreted that an instrument is adequately designed to facilitate the recognition, location, replacement, repair, or adjustment of malfunctioning components or modules when procedures, drawings, and personnel training provide for accomplishing these actions.

The monitoring instrumentation should be designed to minimize conditions which could cause anomalous indications which may be potentially confusing to the operator.

Human factors principles should be applied in the determination of the type, use, and location of displays to comply with the guidelines of R.G. 1.97 Rev. 3.

To the extent practical, accident monitoring instruments should also be used for normal plant operations.

Design Evaluation Criteria

The existing document procedures, drawings, and personnel training used to recognize, locate, replace, repair, or adjust malfunctioning components or modules will be reviewed to determine the adequacy of the existing procedures, drawings, and personnel training in facilitating the recognition, location, replacement, or adjustment of malfunctioning components or modules.

Category 1, 2, and 3 instruments will be evaluated to determine those instruments that provide clear indications to the operator of off-normal readings (such as falling "offset zero," high or low) and those instruments that fail as-is. If the instrumentation design does not provide for operator recognition of off-normal readings, it will be considered not in compliance with the human factors guidelines of R.G. 1.97 Rev. 3.

The evaluation will address past CRDRs and the human factors principles to be applied in determination of type, use, and location of new displays which may be added to comply with the guidelines of R.G. 1.97 to determine the adequacy of the layout of the main control board and the types and location of the instruments based on the original design.

The Category 1, 2, and 3 instruments that will not be used during normal operations will be determined. APCo has defined normal operations as any nonaccident operational mode such as power operation, start-up, refueling, etc.

R.G. 1.97 Rev. 3 Guidelines

To the extent practicable, monitoring instrumentation inputs should be from sensors that directly measure the desired variables. An indirect measurement should be made only when it can be shown by analysis to provide unambiguous information.

12. DIRECT MEASUREMENT

Interpretation of R.G. 1.97 Rev. 3

No interpretation is required. The R.G. 1.97 Rev. 3 guideline is clearly stated. Examples of direct measurement are pressure transmitters used to measure pressure and level transmitters used to measure level. An example of indirect measurement would be subtracting flow into a tank from flow out of a tank to determine tank level.

Design Evaluation Criteria

Review each R.G. 1.97 variable to determine if the variable is measured directly. If a direct measurement technique is not used, justification for the technique used must be provided. If the variable is not measured directly, and justification for an indirect measurement cannot be developed, the variable will be considered not in compliance with the R.G. 1.97 Rev. 3 direct measurement guidelines.

B. CATEGORY 2 INSTRUMENTATION

R.G. 1.97 Rev. 3 Guidelines

The instrumentation should be qualified in accordance with Regulatory Guide 1.89, "Qualification of Class 1E Equipment for Nuclear Power Plants," and the methodology described in NUREG-0588, "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment."

Instrumentation whose ranges are required to extend beyond those ranges calculated in the most severe design basis accident event for a given variable should be qualified using the guidance provided in Paragraph 6.3.6 of ANS-4.5.

1. EQUIPMENT QUALIFICATION

Interpretation of R.G. 1.97 Rev. 3

All Category 1 or 2 instrumentation channel devices which are located in harsh plant environments shall be qualified in accordance with Regulatory Guide 1.89, "Qualification of Class 1E Equipment for Nuclear Power Plants," and the methodology described in NUREG-0588, "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment."

When the instrument range is required to extend beyond the range calculated for the most severe design basis accident as defined in Chapter 15 of the PSAR, the qualification environment should be established in accordance with the following criteria of ANS-4.5: "The qualification environment for Type C instrumentation components shall be based on the design basis accident events, except the assumed maximum of the value of the monitored variable shall be the value equal to the

Design Evaluation Criteria

All existing instrumentation channel devices identified as Category 1 or 2 will be evaluated to determine if the devices are located in a harsh environment (radiation exposure from recirculated post-LOCA fluids outside of the containment will be considered a harsh environment). If the Category 1 or 2 instrumentation devices are located in harsh environments, the evaluation will consider that the environmental qualification guidelines of R.G. 1.89 and R.G. 1.97 Rev. 3 are not complied with since the Category 1 and 2 instrumentation will not be evaluated to the guidelines of R.G. 1.89. However, the evaluation will determine whether or not the existing instrumentation devices are included in the IEB 79-01B and NUREG-0588 submittals. Category 1 or 2 existing instrumentation devices which are located in a harsh environment, and are not included in the existing IEB 79-01B or NUREG-0588 submittals, will be reviewed for compliance to IEB 79-01B or NUREG-0588 requirements.

For extended range Category 1 or 2 instruments located in harsh environments, the qualification documentation for each instrument will be reviewed against the guidelines provided in Paragraph 6.3.6 of ANS-4.5. If compliance to the guidelines in ANS-4.5 cannot be demonstrated, the instrument will be considered not in compliance with R.G. 1.97 Rev. 3 Equipment Qualification Requirements. (Paragraph 6.3.6 of ANS-4.5-1980 has been reviewed and it has been determined that ANS-4.5 is

1. EQUIPMENT QUALIFICATION (CONTINUED)
Interpretation of R.G. 1.97 Rev. 3

maximum range for the variable (as specified in Table 3 of R.G. 1.97 Rev. 3). The monitored variable shall be assumed to approach this peak by extrapolating the most severe initial ramp associated with the Design Basis Accident Events. The decay for this variable shall be considered proportional to the decay for this variable associated with the Design Basis Accident Events. No additional qualification margin needs to be added to the extended range variable. All environmental envelopes except that pertaining to the variable measured by the instrumentation channel shall be those associated with the Design Basis Accident Event."

Qualification applies to the complete instrumentation channel from sensor to display where the display is a direct-indicating meter or recording device. If the instrumentation channel signal is to be used in a computer based display, recording, or diagnostic program, qualification applies from the sensor up to and including the channel isolation device.

For R.G. 1.97 instrumentation displays which consist of direct-reading indicators/meters or recording devices (recorders), the qualification requirements apply to the complete instrumentation channel from the sensor to the display device. Qualification applies to at least one instrument channel having direct-reading or indicating devices. If the R.G. 1.97 instrumentation display for an instrumentation channel consists of a computer-based display, the qualification guidelines apply from the sensor up to and including the channel isolation device which isolates the signal for use by the computer system.

Design Evaluation Criteria

applicable only to extended range Type C variables. An extended range variable is defined as one whose range exceeds that postulated in the most severe design basis event by a significant magnitude in excess of the normal design margin. The only instruments at PNP that would be considered extended range Type C variables are the extended range containment pressure instruments, PT0950Y and 950Z; however, as these pressure instruments are located in the auxiliary building and are not subject to a LOCA or HELB, the qualification requirements of ANS-4.5 do not apply. The other extended range variables specified by R.G. 1.97 are the primary coolant radiation level and the high range containment area radiation. However, neither is considered within the scope of ANS-4.5 since the high range containment area radiation is a Type E variable, not a Type C, and the primary coolant radiation level will not be determined by an instrument but by analysis of a sample obtained through the post-accident sampling system.)

For all Category 2 instrumentation channels where the R.G. 1.97 display device is a direct-reading indicator/recorder or computer-generated display, the instrument loop devices (including the sensor, cabling and associated hardware, and isolation devices as applicable) which are located in harsh environments will be evaluated to determine if they comply with the DOR Guidelines or NUREG-0588 and the seismic qualification guidelines of R.G. 1.97 Rev. 2. For all Category 2 instrumentation channels where the R.G. 1.97 display device is a direct-reading indicator or recorder, the instrument loop devices (including sensors, isolation devices, power supplies, indicators, and recorders as applicable) which are located in mild environments will be evaluated to determine if they comply with the

1. EQUIPMENT QUALIFICATION (CONTINUED)
Interpretation of R.G. 1.97 Rev. 3

No specific guidelines in R.G. 1.97 Rev. 3. R.G. 1.97 Rev. 2 states that seismic qualification according to the provisions of Regulatory Guide 1.100 may be needed provided the instrumentation is part of a safety-related system.

Seismic qualification provisions should comply with IEEE Std. 344-1975 subject to the comments noted under the regulatory position contained in R.G. 1.100 for all R.G. 1.97 instrumentation which is part of a safety-related system.

Design Evaluation Criteria

seismic qualification guidelines of R.G. 1.97 Rev. 2. For all Category 2 instrumentation channels where the R.G. 1.97 display is a computer-generated display, the instrument loop devices (including sensors, isolation devices, and power supplies as applicable) which are located in mild environments will be evaluated from the sensors up to and including the isolation devices to determine if they comply with the seismic qualification guidelines of R.G. 1.97 Rev. 2.

As the seismic qualification licensing basis for Class 1E instrumentation in Farley Nuclear Plant is IEEE 344-1971 as described in FSAR Chapter 3.10, all Category 2 instrumentation devices, which are part of a safety-related system, will not be evaluated for compliance to R.G. 1.100 and will not be in compliance with the seismic qualification guidelines of R.G. 1.97 Rev. 2. However, as the existing licensing basis is justifiable for existing installed Category 2 instrumentation which is part of a safety-related system, an evaluation will be performed to determine if instrumentation channel devices designated as Category 2 which are part of a safety-related system comply with the seismic provisions as described in FSAR Chapter 3.10. Devices installed after plant operation as a part of plant modifications may have been qualified to IEEE 344-1975. The evaluation of seismic provisions will consider this fact if applicable. Non-compliance to either IEEE 344-1971 or IEEE 344-1975 will be determined for the Category 2 instrumentation which is part of a safety-related system.

2. REDUNDANCY

Interpretation of R.C. 1.97 Rev. 3

Redundancy is not required.

Design Evaluation Criteria

R.G. 1.97 Rev. 3 Guidelines

The instrumentation should be energized from a high-reliability power source, not necessarily standby power, and should be backed up by batteries where momentary interruption is not tolerable.

3. POWER SOURCES
Interpretation of R.G. 1.97 Rev. 3

It is preferred but not necessarily required that Category 2 instrumentation channels (loops) be powered from an uninterruptible battery-backed power supply such as an inverter or an onsite standby power source such as a diesel generator. A "momentary interruption of power" is interpreted to be the time required for a diesel generator to supply power to the instrumentation power supply bus following a loss-of-offsite power (LOSP).

Design Evaluation Criteria

For all Category 2 variables, the instrumentation loop related to each Category 2 variable will be evaluated to determine if the instrumentation loop devices are powered from an inverter or diesel generator-backed power supply. For Category 2 instrumentation loops which do not have battery backup, the effects of the momentary interruption associated with an LOSP will be evaluated on a case-by-case basis to determine if the resulting momentary loss of the display instrumentation would lead operators to defeat or fail to accomplish a required safety function. If the momentary loss of the display information could result in the operators' failure to accomplish a required safety function, the onsite power supply design will be considered not to be in compliance with R.G. 1.97.

R.G. 1.97 Rev. 3 Guidelines

The out-of-service interval should be based on normal technical specification requirements on out-of-service instrumentation for the system it serves, where applicable or where specified by other requirements.

4. CHANNEL AVAILABILITY
Interpretation of R.G. 1.97 Rev. 3

The out-of-service interval should be based on technical specification requirements when applicable.

Design Evaluation Criteria

The channel availability of Category 2 instrumentation channels will be based on the out-of-service interval specified in the technical specification requirements for the system the instrument serves. The evaluation will determine whether or not the associated systems which the instrument serves are addressed in the technical specifications.

R.G. 1.97 Rev. 3 Guidelines

Same as Category 1 as modified by the following: Since some instrumentation is less important to safety than other instrumentation, it may not be necessary to apply the same quality assurance measures to all instrumentation. The quality assurance requirements that are implemented should provide control over activities affecting quality to an extent consistent with the importance to safety of the instrumentation. These requirements should be determined and documented by personnel knowledgeable in the end use of the instrumentation.

5. QUALITY ASSURANCE
Interpretation of R.G. 1.97 Rev. 3

The recommendations of the regulatory guides pertaining to quality assurance or their associated ANSI Standards should be addressed. The specific edition of the regulatory guide or its associated ANSI Standard should be that edition specified in the design basis of the plant as provided in the Farley FSAR.

Design Evaluation Criteria

Each of the specified regulatory guides will be evaluated to determine whether the Farley FSAR utilizes their provisions for the APCo QA program. For those regulatory guides for which no FSAR reference exists, the ANSI Standard upon which the regulatory guide is based will be utilized to evaluate Farley FSAR compliance equivalence.

R.G. 1.97 Rev. 3 Guidelines

The instrumentation signal may be displayed on an individual instrument or it may be processed for display on demand.

If direct and immediate trend or transient information is essential for operator information or action, the recording should be continuously available on redundant dedicated recorders. Otherwise, it may be continuously updated, stored in computer memory, and displayed on demand. Intermittent displays such as data loggers and scanning recorders may be used if no significant transient response information is likely to be lost by such devices.

6. DISPLAY AND RECORDING
Interpretation of R.G. 1.97 Rev. 3

Each instrument loop (channel) shall be either displayed on a continuous real-time display (dial indicator, digital display, CRT, or stripchart recorder) or on a demand display such as a computer-based display.

With the exception of effluent radioactivity and area radiation monitors, continuous recording instrumentation readout information shall be provided only if direct and immediate trend or transient information for the loops is essential for operator information or action.

Design Evaluation Criteria

Each instrumentation loop will be evaluated to determine if a continuous real-time display (dial indicator, digital display, CRT, or stripchart recorder) or a demand-type display is available for operator monitoring of the instrumentation loop. The plant location and type of display device for each instrumentation loop will be evaluated. If the evaluation determines that a continuous real-time or demand-display device is not available for operator monitoring, the R.G. 1.97 variable will be considered not in compliance with the R.G. 1.97 Rev. 3 display and recording guidelines.

Each Category 2 instrumentation loop, except for loops related to effluent radioactivity and area radiation variables, will be evaluated to determine if continuous recording of instrumentation readout information is required to provide immediate trend or transient information for operator information or action. An essential parameter that may need continuous recording capability is defined as a parameter: 1) required for operator actions or information to mitigate the consequences of design basis events, and 2) for which no emergency operating procedure exists to direct the operator in manually plotting the instrument output (e.g., containment hydrogen concentration). A parameter will not be considered as essential if the associated planned operator actions are identified in the current EOPs or ERGs, Rev. 0, as corrective measures for multiple failures or other nondesign basis events, or as measures for improved safety system(s) performance over the

6. DISPLAY AND RECORDING (CONTINUED)
Interpretation of R.G. 1.97 Rev. 3

Signals from effluent radioactivity monitors and area monitors should be recorded.

Signals from effluent radioactivity monitors and area radiation monitors shall be recorded on stripchart recorders or stored in computer-based memory for display or trending on demand.

Design Evaluation Criteria

accepted minimum. For those variables that are considered essential, continuous recording capability will not be necessary if the instrument trend can be identified by brief operator observation of the dial indication, digital display, CRT or other nontrending indication in accordance with standard operator practice and training, or if a transient is indicated by an MCB annunciator. An indication will be considered transient if the indication is a brief, one-time occurrence that the operator cannot detect without constant observation of the associated instrumentation. A transient variable requiring continuous recording capability will not be the direct result of operator actions such as the initiation of pump flow or re-alignment of a valve since standard operator training and practice will direct the operator to observe the instrument as the operator takes control of the component.

If a Category 2 variable not related to effluent radioactivity or area radiation monitoring was determined to require a recording device, and these recording devices are not existing, the Category 2 variable will be considered not in compliance with the display and recording guidelines of R.G. 1.97 Rev. 3.

Each Category 2 instrumentation loop for effluent and area radiation monitoring variables will be evaluated to determine if the variable is recorded on a stripchart recorder or stored in computer-based memory and can be displayed or trending values can be produced on demand. If these criteria cannot be satisfied for Category 2 effluent and area radiation monitoring variables, the variables will be considered not in compliance with the display and recording guidelines of R.G. 1.97 Rev. 3.

R.G. 1.97 Rev. 3 Guidelines

If two or more instruments are needed to cover a particular range, overlapping of instrument span should be provided. If the required range of monitoring instrumentation results in a loss of instrumentation sensitivity in the normal operating range, separate instruments should be used.

7. RANGE
Interpretation of R.G. 1.97 Rev. 3

The range of indication for Category 2 instrumentation loops shall be as specified in Table 2 of R.G. 1.97 Rev. 2 for each Category 2 variable. If the range indicated in R.G. 1.97 Rev. 2 cannot be achieved by one instrumentation loop, and two or more instrumentation loops are required to cover the required range for the variable, overlapping of instrument span should be provided between the instrumentation loops. If changing the range of indication for an existing Category 2 instrumentation loop in order to comply with the range guidelines of Table 2 of R.G. 1.97 results in an unacceptable degradation of the instrumentation accuracy and readability in the normal operating range, separate instrumentation loops should be provided to cover the normal operating and required range for the variable.

Design Evaluation Criteria

The existing instrumentation loops for each Category 2 variable will be evaluated to determine if they are in compliance with the range guidelines of Table 2 of R.G. 1.97 Rev. 2, the overlapping span guidelines of R.G. 1.97 Rev. 3, if applicable, and that the instrumentation sensitivity, accuracy, and readability are suitable for the normal operating range. If compliance to these guidelines cannot be demonstrated, the Category 2 variable will be considered not in compliance with the range guidelines of R.G. 1.97 Rev. 2.

R.G. 1.97 Rev. 3 Guidelines

Types A, B, and C instruments designated as Categories 1 and 2 should be specifically identified with a common designator on the control panels so that the operator can easily discern that they are intended for use under accident conditions.

B. EQUIPMENT IDENTIFICATION

Interpretation of R.G. 1.97 Rev. 3

A unique designator should be provided for all R.G. 1.97 Category 1 and 2 display devices in the main control room to allow operators to easily discern that the displays are intended for use under accident conditions.

Design Evaluation Criteria

Each existing display device for a Category 1 or 2 variable will be evaluated to determine if a unique designator exists at the location of the display device on the main control board panels, which identifies to the operator that the display device is intended for use under accident conditions. If display devices for Category 1 and 2 variables are not uniquely identified for this purpose, the Category 1 or 2 variables will be considered not in compliance with the equipment identification guidelines of R.G. 1.97 Rev. 3.

R.G. 1.97 Rev. 3 Guidelines

The transmission of signals for other use should be through isolation devices that are designated as part of the monitoring instrumentation and that meet the provision of this document.

9. INTERFACES

Interpretation of R.G. 1.97 Rev. 3

Interfaces between the Class 1E portions of instrumentation loop circuitry and the Non-Class 1E portions of instrumentation loop circuitry shall be in compliance with the electrical independence and physical separation guidelines of R.G. 1.75 and Section 4.5 of IEEE Std. 384-1974 up to and including the isolation device. Non-Class 1E portions of Category 2 instrumentation loops will not require electrical independence, isolation, or physical separation from other Non-Class 1E loop devices.

Design Evaluation Criteria

The redundant instrumentation loops for each Category 2 variable will be evaluated to demonstrate that interfaces between the Class 1E and Non-Class 1E portions of the loops are in compliance with the guidelines of R.G. 1.75 and Section 4.5 of IEEE Std. 384-1974 subject to the comments in the regulatory position of R.G. 1.75. If compliance to these guidelines cannot be demonstrated, the Category 2 variable will be considered not in compliance with the interfaces guidelines of R.G. 1.97 Rev. 3.

R.G. 1.97 Rev. 3 Guidelines

Servicing, testing, and calibration programs should be specified to maintain the capability of the monitoring instrumentation. If the required interval between testing is less than the normal time interval between plant shutdowns, a capability for testing during power operation should be provided. Whenever means for removing channels from service are included in the design, the design should facilitate administrative control of the access to such removal means. The design should facilitate administrative control of the access to all set point adjustments, module calibration adjustments, and test points.

Periodic checking, testing, calibration, and calibration verification should be in accordance with the applicable portions of Regulatory Guide 1.118, "Periodic Testing of Electric Power and Protection Systems," pertaining to testing of instrument channels. (Note: Response time testing not usually needed.)

The location of the isolation device should be such that it would be accessible for maintenance during accident conditions.

10. SERVICING, TESTING, AND CALIBRATION
Interpretation of R.G. 1.97 Rev. 3

Servicing, testing, and calibration programs which require testing at intervals less than the normal interval between plant shutdowns, shall be capable of being performed at power. Administrative control over the removal of channels from service for servicing, testing, and calibration should be provided. Portable instrumentation does not require any administrative controls. Administrative control over access to all set point adjustments, module calibration adjustments, and test points should be provided.

Periodic checking, testing, calibration, and calibration verification should be in accordance with the applicable portions of Regulatory Guide 1.118 or its associated IEEE standard.

Isolation devices shall be accessible for maintenance during accident conditions if operation of the isolation devices is required for the operation of R.G. 1.97 variable displays.

Design Evaluation Criteria

A review of the servicing, testing, and calibration (repetitive tasks of FNP-D-AP-52) programs and interval requirements specified in FNP STPs, IHPs, and the PM program for Category 1, 2, and 3 instruments will be performed. If the required interval between testing is less than the normal interval between plant shutdowns, procedures will be determined to be available for testing during power. Where a means for removing channels from service is included in the design, verification will be performed to ensure that procedures exist which incorporate the control of the access to such removal means. Additionally, it will be verified that a procedure exists which incorporates the control of the access to all set point adjustments, module calibration adjustments, and test points.

The FSAR will be reviewed to determine the conformance of periodic checking, testing, calibration, and calibration verification to the applicable portions of Regulatory Guide 1.118 or its associated IEEE Standard.

The instrumentation loops for each Category 1 variable will be evaluated to determine if the display devices are dependent upon the operation of isolation devices. If isolation devices are required for the operation of the R.G. 1.97 display devices, the isolation devices will be evaluated to determine if they are accessible for maintenance during an accident condition. If accessibility for maintenance is not possible during accident conditions, the Category 1 variable will be considered not in compliance with the servicing, testing, and calibration guidelines of the R.G. 1.97 Rev. 3. [Isolation devices located in areas identified

10. SERVICING, TESTING, AND CALIBRATION (CONTINUED)
Interpretation of R.G. 1.97 Rev. 3

Design Evaluation Criteria

by APCo response to NUREG-0737, Item II.B.2 dated February 23, 1981, are considered accessible. For required isolation devices not located in these areas, the evaluation will determine accessibility (with respect to radiation levels) of the isolation device for maintenance during accident conditions.)

R.G. 1.97 Rev. 3 Guidelines

The instrumentation should be designed to facilitate the recognition, location, replacement, repair, or adjustment of malfunctioning components or modules.

The monitoring instrumentation design should minimize the development of conditions that would cause meters, annunciators, recorders, alarms, etc., to give anomalous indications potentially confusing to the operator.

Human factors analysis should be used in determining type and location of displays.

To the extent practicable, the same instruments should be used for accident monitoring as are used for the normal operations of the plant to enable the operators to use, during accident situations, instruments with which they are most familiar.

11. HUMAN FACTORS
Interpretation of R.G. 1.97 Rev. 3

It is interpreted that an instrument is adequately designed to facilitate the recognition, location, replacement, repair, or adjustment of malfunctioning components or modules when procedures, drawings, and personnel training provide for accomplishing these actions.

The monitoring instrumentation should be designed to minimize conditions which could cause anomalous indications which may be potentially confusing to the operator.

Human factors principles should be applied in the determination of the type, use, and location of displays to comply with the guidelines of R.G. 1.97 Rev. 3.

To the extent practical, accident monitoring instruments should also be used for normal plant operations.

Design Evaluation Criteria

The existing document procedures, drawings, and personnel training used to recognize, locate, replace, repair, or adjust malfunctioning components or modules will be reviewed to determine the adequacy of the existing procedures, drawings, and personnel training in facilitating the recognition, location, replacement, or adjustment of malfunctioning components or modules.

Category 1, 2, and 3 instruments will be evaluated to determine those instruments that provide clear indications to the operator of off-normal readings (such as failing "offset zero," high or low) and those instruments that fail as-is. If the instrumentation design does not provide for operator recognition of off-normal readings it will be considered not in compliance with the human factors guidelines of R.G. 1.97 Rev. 3.

The evaluation will address past CRDRs and the human factors principles to be applied in determination of type, use, and location of new displays which may be added to comply with the guidelines of R.G. 1.97 to determine the adequacy of the layout of the main control board and the types and location of the instruments based on the original design.

The Category 1, 2, and 3 instruments that will not be used during normal operations will be determined. APCo has defined normal operations as any nonaccident operational mode such as power operation, start-up, refueling, etc.

R.G. 1.97 Rev. 3 Guidelines

To the extent practicable, monitoring instrumentation inputs should be from sensors that directly measure the desired variables. An indirect measurement should be made only when it can be shown by analysis to provide unambiguous information.

12. DIRECT MEASUREMENT
Interpretation of R.G. 1.97 Rev. 3

No interpretation is required. The R.G. 1.97 Rev. 3 guideline is clearly stated. Examples of direct measurement are pressure transmitters used to measure pressure and level transmitters used to measure level. An example of indirect measurement would be subtracting flow into a tank from flow out of a tank to determine tank level.

Design Evaluation Criteria

Review each R.G. 1.97 variable to determine if the variable is measured directly. If a direct measurement technique is not used, justification for the technique used must be provided. If the variable is not measured directly, and justification for an indirect measurement cannot be developed, the variable will be considered not in compliance with the R.G. 1.97 Rev. 3 direct measurement guidelines.

C. CATEGORY 3 INSTRUMENTATION

R.C. 1.97 Rev. 3 Guidelines

1. EQUIPMENT QUALIFICATION

Interpretation of R.C. 1.97 Rev. 3

Design Evaluation Criteria

No Requirements for Equipment Qualification.

2. REDUNDANCY

Interpretation of R.C. 1.97 Rev. 3

No Requirements for Redundancy.

3. POWER SOURCES
Interpretation of R.C. 1.97 Rev. 3

Design Evaluation Criteria

N.) Power Source Requirements.

4. CHANNEL AVAILABILITY
Interpretation of R.G. 1.97 Rev. 3

Design Evaluation Criteria

No Requirements for Channel Availability.

R.C. 1.97 Rev. 3 Guidelines

The instrumentation should be high-quality commercial grade and should be selected to withstand the specified service environment.

5. QUALITY ASSURANCE
Interpretation of R.C. 1.97 Rev. 3

Quality industrial or commercial grade instrumentation from a historically proven and reputable manufacturer is required. The applicable plant service conditions to which the instrumentation will be exposed should be considered in the selection and procurement of Category 3 instrumentation equipment.

Design Evaluation Criteria

The evaluation considers the quality industrial or commercial grade instrumentation from a historically proven and reputable manufacturer has been utilized. Category 3 instrumentation will be considered to be in compliance with the R.C. 1.97 guidelines if the instrumentation has been manufactured by a historically proven and reputable manufacturer of quality industrial or commercial grade products. Personnel knowledgeable in the capabilities of instrumentation equipment consider the applicable plant service conditions in the selection and procurement of instrumentation.

R.G. 1.97 Rev. 3 Guidelines

The instrumentation signal may be displayed on an individual instrument or it may be processed for display on demand.

If direct and immediate trend or transient information is essential for operator information or action, the recording should be continuously available on redundant dedicated recorders. Otherwise, it may be continuously updated, stored in computer memory, and displayed on demand. Intermittent displays such as data loggers and scanning recorders may be used if no significant transient response information is likely to be lost by such devices.

6. DISPLAY AND RECORDING
Interpretation of R.G. 1.97 Rev. 3

Each instrument loop (channel) shall be either displayed on a continuous real-time display (dial indicator, digital display, CRT, or stripchart recorder) or on a demand display such as a computer-based display.

With the exception of effluent radioactivity, area radiation and meteorological monitors, continuous recording instrumentation readout information shall be provided only if direct and immediate trend or transient information for the loops is essential for operator information or action.

Design Evaluation Criteria

Each instrumentation loop will be evaluated to determine if a continuous real-time display (dial indicator, digital display, CRT, or stripchart recorder) or a demand-type display is available for operator monitoring of the instrumentation loop. The plant location and type of display device for each instrumentation loop will be evaluated. If the evaluation determines that a continuous real-time or demand-display device is not available for operator monitoring, the R.G. 1.97 variable will be considered not in compliance with the R.G. 1.97 Rev. 3 display and recording guidelines.

Each Category 3 instrumentation loop, except for loops related to effluent radioactivity, area radiation, and meteorological variables, will be evaluated to determine if continuous recording of instrumentation readout information is required to provide immediate trend or transient information for operator information or action. An essential parameter that may need continuous recording capability is defined as a parameter:

- 1) required for operator actions or information to mitigate the consequences of design basis events, and
- 2) for which no emergency operating procedure exists to direct the operator in manually plotting the instrument output (e.g., containment hydrogen concentration). A parameter will not be considered as essential if the associated planned operator actions are identified in the current EOPs or ERGs, Rev. 0, as corrective measures for multiple failures or other nondesign basis events, or as measures for improved safety system(s) performance over the accepted minimum. For those variables that are considered essential, continuous recording capability will not be necessary if the instrument trend can be

6. DISPLAY AND RECORDING (CONTINUED)
Interpretation of R.G. 1.97 Rev. 3

Signals from effluent radioactivity monitors, area monitors, and meteorology monitors should be recorded.

Signals from effluent radioactivity monitors, area radiation monitors, and meteorological monitors shall be recorded on stripchart recorders or stored in computer-based memory for display or trending on demand.

Design Evaluation Criteria

identified by brief operator observation of the dial indication, digital display, CRT or other nontrending indication in accordance with standard operator practice and training, or if a transient is indicated by an MCB annunciator. An indication will be considered transient if the indication is a brief, one-time occurrence that the operator cannot detect without constant observation of the associated instrumentation. A transient variable requiring continuous recording capability will not be the direct result of operator actions such as the initiation of pump flow or re-alignment of a valve since standard operator training and practice will direct the operator to observe the instrument as the operator takes control of the component.

If a Category 3 variable not related to effluent radioactivity or area radiation and meteorological monitoring was determined to require a recording device, and these recording devices are not existing, the Category 3 variable will be considered not in compliance with the display and recording guidelines of R.G. 1.97 Rev. 3.

Each Category 3 instrumentation loop for effluent and area radiation monitoring and meteorological monitoring variables will be evaluated to determine if the variable is recorded on a stripchart recorder or stored in computer-based memory and can be displayed or trending values can be produced on demand.

If these criteria cannot be satisfied for Category 3 radiation and meteorological monitoring variables, the variables will be considered not in compliance with the display and recording guidelines of R.G. 1.97 Rev. 3.

R.G. 1.97 Rev. 3 Guidelines

If two or more instruments are needed to cover a particular range, overlapping of instrument span should be provided. If the required range of monitoring instrumentation results in a loss of instrumentation sensitivity in the normal operating range, separate instruments should be used.

7. RANGE

Interpretation of R.G. 1.97 Rev. 3

The range of indication for Category 3 instrumentation loops shall be as specified in Table 2 of R.G. 1.97 Rev. 2 for each Category 3 variable. If the range indicated in R.G. 1.97 Rev. 2 cannot be achieved by one instrumentation loop, and two or more instrumentation loops are required to cover the required range for the variable, overlapping of instrument span should be provided between the instrumentation loops. If changing the range of indication for an existing Category 3 instrumentation loop in order to comply with the range guidelines of Table 2 of R.G. 1.97 results in an unacceptable degradation of the instrumentation accuracy and readability in the normal operating range, separate instrumentation loops should be provided to cover the normal operating and required range for the variable.

Design Evaluation Criteria

The existing instrumentation loops for each Category 3 variable will be evaluated to determine if they are in compliance with the range guidelines of Table 2 of R.G. 1.97 Rev. 2, the overlapping span guidelines of R.G. 1.97 Rev. 3, if applicable, and that the instrumentation sensitivity, accuracy, and readability are suitable for the normal operating range. If compliance to these requirements cannot be demonstrated, the Category 3 variable will be considered not in compliance with the range guidelines of R.G. 1.97 Rev. 2.

8. EQUIPMENT IDENTIFICATION
Interpretation of R.C. 1.97 Rev. 3

Design Evaluation Criteria

No Requirements for Equipment Identification.

9. INTERFACES

Interpretation of R.G. 1.97 Rev. 3

Design Evaluation Criteria

No Requirements for Interfaces.

R.G. 1.97 Rev. 3 Guidelines

Servicing, testing, and calibration programs should be specified to maintain the capability of the monitoring instrumentation. If the required interval between testing is less than the normal time interval between plant shutdowns, a capability for testing during power operation should be provided.

Whenever means for removing channels from service are included in the design, the design should facilitate administrative control of the access to such removal means.

The design should facilitate administrative control of the access to all set point adjustments, module calibration adjustments, and test points.

Periodic checking, testing, calibration, and calibration verification should be in accordance with the applicable portions of Regulatory Guide 1.118, "Periodic Testing of Electric Power and Protection Systems," pertaining to testing of instrument channels.
(Note: Response time testing not usually needed.)

10. SERVICING, TESTING, AND CALIBRATION
Interpretation of R.G. 1.97 Rev. 3

Servicing, testing, and calibration programs which require testing at intervals less than the normal interval between plant shutdowns, shall be capable of being performed at power. Administrative control over the removal of channels from service for servicing, testing, and calibration should be provided. Portable instrumentation does not require any administrative controls. Administrative control over access to all set point adjustments, module calibration adjustments, and test points should be provided.

Periodic checking, testing, calibration, and calibration verification should be in accordance with the applicable portions of Regulatory Guide 1.118 or its associated IEEE Standard.

Design Evaluation Criteria

A review of the servicing, testing, and calibration (repetitive tasks of FNP-O-AP-52) programs and interval requirements specified in FNP SIPs, IMPs, and the PM program for Category 1, 2, and 3 instruments will be performed. If the required interval between testing is less than the normal interval between plant shutdowns, procedures will be determined to be available for testing during power. Where a means for removing channels from service is included in the design, verification will be performed to ensure that procedures exist which incorporate the control of the access to such removal means. Additionally, it will be verified that a procedure exists which incorporates the control of the access to all set point adjustments, module calibration adjustments, and test points.

The PSAR will be reviewed to determine the conformance of periodic checking, testing, calibration, and calibration verification to the applicable portions of Regulatory Guide 1.118 or its associated IEEE Standard.

11. HUMAN FACTORS

Interpretation of R.G. 1.97 Rev. 3

R.G. 1.97 Rev. 3 Guidelines

Design Evaluation Criteria

The instrumentation should be designed to facilitate the recognition, location, replacement, repair, or adjustment of malfunctioning components or modules.

It is interpreted that an instrument is adequately designed to facilitate the recognition, location, replacement, repair, or adjustment of malfunctioning components or modules when procedures, drawings, and personnel training provide for accomplishing these actions.

The existing document procedures, drawings, and personnel training used to recognize, locate, replace, repair, or adjust malfunctioning components or modules will be reviewed to determine the adequacy of the existing procedures, drawings, and personnel training in facilitating the recognition, location, replacement, or adjustment of malfunctioning components or modules.

The monitoring instrumentation design should minimize the development of conditions that would cause meters, annunciators, recorders, alarms, etc., to give anomalous indications potentially confusing to the operator.

The monitoring instrumentation should be designed to minimize conditions which could cause anomalous indications which may be potentially confusing to the operator.

Category 1, 2, and 3 instruments will be evaluated to determine those instruments that provide clear indications to the operator of off-normal readings (such as falling "offset zero," high or low) and those instruments that fail *as-is*. If the instrumentation design does not provide for operator recognition of off-normal readings it will be considered not in compliance with the human factors guidelines of R.G. 1.97 Rev. 3.

Human factors analysis should be used in determining type and location of displays.

Human factors principles should be applied in the determination of the type, use, and location of displays to comply with the guidelines of R.G. 1.97 Rev. 3.

The evaluation will address past CENRA and the human factors principles to be applied in determination of type, use, and location of new displays which may be added to comply with the guidelines of R.G. 1.97 to determine the adequacy of the layout of the main control board and the types and location of the instruments based on the original design.

To the extent practicable, the same instruments should be used for accident monitoring as are used for the normal operations of the plant to enable the operators to use, during accident situations, instruments with which they are most familiar.

To the extent practical, accident monitoring instruments should also be used for normal plant operations.

The Category 1, 2, and 3 instruments that will not be used during normal operations will be determined. APCo has defined normal operations as any nonaccident operational mode such as power operation, start-up, refueling, etc.

R.G. 1.97 Rev. 3 Guidelines

To the extent practicable, monitoring instrumentation inputs should be from sensors that directly measure the desired variables. An indirect measurement should be made only when it can be shown by analysis to provide unambiguous information.

12. DIRECT MEASUREMENT

Interpretation of R.G. 1.97 Rev. 3

No interpretation is required. The R.G. 1.97 Rev. 3 guideline is clearly stated. Examples of direct measurement are pressure transmitters used to measure pressure and level transmitters used to measure level. An example of indirect measurement would be subtracting flow into a tank from flow out of a tank to determine tank level.

Design Evaluation Criteria

Review each R.G. 1.97 variable to determine if the variable is measured directly. If a direct measurement technique is not used, justification for the technique used must be provided. If the variable is not measured directly, and justification for an indirect measurement cannot be developed, the variable will be considered not in compliance with the R.G. 1.97 Rev. 3 direct measurement requirements.

TABLE 1: REGULATORY GUIDE VARIABLE CROSS REFERENCE TO VARIABLE NUMBER

TYPE A Variables

REGULATORY GUIDE VARIABLES			ALABAMA POWER COMPANY'S POSITION		
Variable	Category	Purpose	Variable No.	Variable Description	Category
Plant Specific	1	Information required for operator action	1	RCS Pressure (Wide Range)	1
			2	RCS Hot Leg Temperature (Wide Range)	1
			3	RCS Cold Leg Temperature (Wide Range)	1
			4	Steam Generator Level (Wide Range)	1
			5	Steam Generator Level (Narrow Range)	1
			6	Pressurizer Level	1
			7	Containment Pressure (Normal Range)	1
			8	Main Steam Line Pressure	1
			9	Refueling Water Storage Tank Level	1
			10	Containment Water Level	1
			11	Condensate Storage Tank Level	1
			12	Auxiliary Feedwater Flow	1
			15	Core Exit Temperature	1
132	Core Subcooling Monitor	2			

TABLE 1-1

TABLE 1 (CONTINUED)

TYPE B Variables

REGULATORY GUIDE VARIABLES			ALABAMA POWER COMPANY'S POSITION		
Variable	Category	Purpose	Variable No.	Variable Description	Category
<u>REACTIVITY CONTROL</u>					
Neutron Flux	1	Function detection; accomplishment of mitigation	17	Neutron Flux (Intermediate Range)	1
Control Rod Position	3	Verification	1009	Control Rod Position	3
RCS Soluble Boron Concentration	3	Verification	1017	Post Accident Sample	3
RCS Cold Leg Water Temperature	3	Verification	3	RCS Cold Leg Temperature (Wide Range)	1
<u>CORE COOLING</u>					
RCS Hot Leg Water Temperature	1	Function detection; accomplishment of mitigation; verification; long-term surveillance	2	RCS Hot Leg Temperature (Wide Range)	1
RCS Cold Leg Water Temperature	1	Function detection; accomplishment of mitigation; verification; long-term surveillance	3	RCS Cold Leg Temperature (Wide Range)	1
RCS Pressure	1	Function detection; accomplishment of mitigation; verification; long-term surveillance	1	RCS Pressure (Wide Range)	1
Core Exit Temperature	3	Verification	15	Core Exit Temperature	1
Coolant Inventory	1	Verification, accomplishment of mitigation	18	Reactor Water Level	1
Degrees of Subcooling	2	Verification and analysis of plant conditions	132	Core Subcooling Monitor	2
<u>MAINTAINING REACTOR COOLANT SYSTEM INTEGRITY</u>					
RCS Pressure	1	Function detection; accomplishment of mitigation	1	RCS Pressure (Wide Range)	1

TABLE 1-2

TABLE 1 (CONTINUED)
TYPE B Variables

REGULATORY GUIDE VARIABLES			ALABAMA POWER COMPANY'S POSITION		
Variable	Category	Purpose	Variable No.	Variable Description	Category
Containment Sump Water Level (Narrow Range)	2	Function detection; accomplishment of mitigation; verification	111	Reactor Cavity Sump Level	2
Containment Sump Water Level (Wide Range)	1	Function detection; accomplishment of mitigation; verification	10	Containment Water Level	1
Containment Pressure	1	Function detection; accomplishment of mitigation; verification	7	Containment Pressure (Normal Range)	1
MAINTAINING CONTAINMENT INTEGRITY					
Containment Isolation Valve Position (excluding check valves)	1	Accomplishment of isolation	19	Containment Isolation Valve Position	1
Containment Pressure	1	Function detection; accomplishment of mitigation; verification	7	Containment Pressure (Normal Range)	1

TABLE 1 (CONTINUED)

TYPE C Variables

REGULATORY GUIDE VARIABLES			ALABAMA POWER COMPANY'S POSITION		
Variable	Category	Purpose	Variable No.	Variable Description	Category
<u>FUEL CLADDING</u>					
Core Exit Temperature	1	Detection of potential for breach; accomplishment of mitigation; long-term surveillance	15	Core Exit Temperature	1
Radioactivity Concentration or Radiation Level in Circulating Primary Coolant	1	Detection of breach	14	Primary Coolant Radioactivity Concentration.	1
Analysis of Primary Coolant (Gamma Spectrum)	3	Detail analysis; accomplishment of mitigation; verification; long-term surveillance	1017	Post Accident Sample	3
<u>REACTOR COOLANT PRESSURE BOUNDARY</u>					
RCS Pressure	1	Detection of potential for or actual breach; accomplishment of mitigation; long-term surveillance	1	RCS Pressure (Wide Range)	1
Containment Pressure	1	Detection of breach; accomplishment of mitigation; verification; long-term surveillance	7	Containment Pressure (Normal Range)	1
Containment Sump Water Level (Narrow Range)	2	Detection of breach; accomplishment of mitigation; verification; long-term surveillance	111	Reactor Cavity Sump Level	2
Containment Sump Water Level (Wide Range)	1	Detection of breach; accomplishment of mitigation; verification; long-term surveillance	10	Containment Water Level	1
Containment Area Radiation	3	Detection of breach; verification	13	Containment Radiation (High Range)	1
Effluent Radioactivity - Noble Gas Effluent from Condenser Air Removal System Exhaust	3	Detection of breach; verification	120	Condenser SJAE Radiation	2

TABLE 1-4

TABLE 1 (CONTINUED)

TYPE C Variables

REGULATORY GUIDE VARIABLES			ALABAMA POWER COMPANY'S POSITION		
Variable	Category	Purpose	Variable No.	Variable Description	Category
<u>CONTAINMENT</u>					
RCS Pressure	1	Detection of potential for breach; accomplishment of mitigation	1	RCS Pressure (Wide Range)	1
Containment Hydrogen Concentration	1	Detection of potential for breach; accomplishment of mitigation; long-term surveillance	1006	Containment Hydrogen Concentration	3*
Containment Pressure	1	Detection of potential for or actual breach; accomplishment of mitigation	16	Containment Pressure (Extended Range)	1
Containment Effluent Radio-Activity-Noble Gases from Identified Release Points	2	Detection of breach; accomplishment of mitigation; verification	121	Plant Vent Effluent Radiation	2
Effluent Radioactivity - Noble Gases (from buildings or areas where penetrations and hatches are located, e.g., secondary containment and auxiliary buildings and fuel handling buildings that are in direct contact with primary containment)	2	Indication of breach	121	Plant Vent Effluent Radiation	2

*The category downgrade from the Regulatory Guide Category is justified in a discussion provided on the Compliance Report checklist.

TABLE 1 (CONTINUED)

TYPE D Variables

REGULATORY GUIDE VARIABLES			ALABAMA POWER COMPANY'S POSITION		
Variable	Category	Purpose	Variable No.	Variable Description	Category
<u>RESIDUAL HEAT REMOVAL (RHR) OR DECAY HEAT REMOVAL SYSTEM</u>					
RHR System Flow	2	To monitor operation	101	RHR/LHSI Flow	2
RHR Heat Exchanger Outlet Temperature	2	To monitor operation and for analysis	114	RHR HX Discharge Temperature	2
<u>SAFETY INJECTION SYSTEMS</u>					
Accumulator Tank Level and Pressure	2	To monitor operation	125 1018	Accumulator Tank Pressure Accumulator Tank Level	2 3*
Accumulator Isolation Valve Position	2	Operation status	126	Accumulator Tank Isolation Valve Position	2
Boric Acid Charging Flow	2	To monitor operation	102	Boric Acid Flow	2
Flow in HPI System	2	To monitor operation	103	HHSI Flow	2
Flow in LPI System	2	To monitor operation	101	RHR/LHSI Flow	2
Refueling Water Storage Tank Level	2	To monitor operation	9	Refueling Water Storage Tank Level	1
<u>PRIMARY COOLANT SYSTEM</u>					
Reactor Coolant Pump Status	3	To monitor operation	1011	RCP Motor Current	3
Primary System Safety Relief Valve Positions (including PORV and code valves) or Flow Through or Pressure in Relief Valve Lines	2	Operation status; to monitor for loss of coolant	127 128	Pressurizer PORV Position Pressurizer Safety Valve Position	2 2

*The category downgrade from the Regulatory Guide Category is justified in a discussion provided on the Compliance Report checklist.

TABLE 1 (CONTINUED)

TYPE D Variables

REGULATORY GUIDE VARIABLES			ALABAMA POWER COMPANY'S POSITION		
Variable	Category	Purpose	Variable No.	Variable Description	Category
Pressurizer Level	1	To ensure proper operation of pressurizer	6	Pressurizer Level	1
Pressurizer Heater Status	2	To determine operating status	130 112	Pressurizer Heater Breaker Position Pressurizer Pressure	2 2
Quench Tank Level	3	To monitor operation	1002	Pressurizer Relief Tank Level	3
Quench Tank Temperature	3	To monitor operation	1004	Pressurizer Relief Tank Temperature	3
Quench Tank Pressure	3	To monitor operation	1007	Pressurizer Relief Tank Pressure	3
<u>SECONDARY SYSTEM (STEAM GENERATOR)</u>					
Steam Generator Level	1	To monitor operation	4	Steam Generator Level (Wide Range)	1
Steam Generator Pressure	2	To monitor operation	8	Main Steam Line Pressure	1
Safety/Relief Valve Positions or Main Steam Flow	2	To monitor operation	104	Main Steam Flow	2
Main Feedwater Flow	3	To monitor operation	1001	Main Feedwater Flow	3
<u>AUXILIARY FEEDWATER OR EMERGENCY FEEDWATER SYSTEM</u>					
Auxiliary or Emergency Feedwater Flow	2	To monitor operation	12	Auxiliary Feedwater Flow	1
Condensate Storage Tank Water Level	1	To ensure water supply for auxiliary feedwater (Can be Category 3 if not primary source of AFW. Then whatever is primary source of AFW should be listed and should be Category 1).	11	Condensate Storage Tank Level	1

TABLE 1 (CONTINUED)

TYPE D Variables

REGULATORY GUIDE VARIABLES			ALABAMA POWER COMPANY'S POSITION		
Variable	Category	Purpose	Variable No.	Variable Description	Category
<u>CONTAINMENT COOLING SYSTEMS</u>					
Containment Spray Flow	2	To monitor operation	105	Containment Spray Flow	2
Heat Removal by the Containment Fan	2	To monitor operation	115	Temperature of Service Water to Aux. Bldg.	2
Heat Removal System			116	CTMT Cooler Service Water Outlet Temperature	2
Containment Atmosphere Temperature	2	To indicate accomplishment of cooling	133	Service Water Flow to CTMT Coolers	2
Containment Sump Water Temperature	2	To monitor operation	117	Containment Atmosphere Temperature	2
			118	RHR HX Inlet Temperature	2
<u>CHEMICAL AND VOLUME CONTROL SYSTEM</u>					
Makeup Flow - In	2	To monitor operation	106	Charging Line Flow	2
			110	RCP Seal Injection Flow	2
Letdown Flow - Out	2	To monitor operation	107	Letdown Flow	2
Volume Control Tank Level	2	To monitor operation	113	Volume Control Tank Level	2
<u>COOLING WATER SYSTEM</u>					
Component Cooling Water Temperature to ESF System	2	To monitor operation	119	Component Cooling Water Heat Exchanger Discharge Temperature	2
Component Cooling Water Flow to ESF System	2	To monitor operation	108	CCW HX Inlet Flow	2
<u>RADWASTE SYSTEMS</u>					
High-Level Radioactive Liquid Tank Level	3	To indicate storage volume	1003	Radioactive Liquid Tank Levels	3

TABLE 1 (CONTINUED)

TYPE D Variables

REGULATORY GUIDE VARIABLES			ALABAMA POWER COMPANY'S POSITION		
Variable	Category	Purpose	Variable No.	Variable Description	Category
Radioactive Gas Holdup Tank Pressure	3	To indicate storage capacity	1008	Waste Gas Decay Tank Pressure	3
<u>VENTILATION SYSTEMS</u>					
Emergency Ventilation Damper Position	2	To indicate damper status	129	HVAC Emergency Damper Position	2
<u>POWER SUPPLIES</u>					
Status of Standby Power and Other Energy Sources Important to Safety (electric, hydraulic, pneumatic) (voltages, currents, pressures)	2	To indicate system status	131	Emergency Power Status	2

TABLE 1 (CONTINUED)

TYPE E Variables

REGULATORY GUIDE VARIABLES			ALABAMA POWER COMPANY'S POSITION		
Variable	Category	Purpose	Variable No.	Variable Description	Category
<u>CONTAINMENT RADIATION</u>					
Containment Area Radiation - High Range	1	Detection of significant releases; release assessment; long-term surveillance, emergency plan actuation	13	Containment Radiation (High Range)	1
<u>AREA RADIATION</u>					
Radiation Exposure Rate (inside buildings or areas where access is required to service equipment important to safety)	3	Detection of significant releases; release assessment; long-term surveillance	122	Accessible Area Radiation	2
			1005	Portable Plant/Environs Radiation	3
<u>AIRBORNE RADIOACTIVE MATERIALS RELEASED FROM PLANT</u>					
<u>Noble Gases and Vent Flow Rate</u>					
- Containment or Purge Effluent	2	Detection of significant releases; release assessment		Not Applicable, see Common Plant Vent	
- Reactor Shield Building Annulus (if in design)	2	Detection of significant releases; release assessment		Not Applicable, not in design	
- Auxiliary Building (including any building containing primary system gases, e.g., waste gas decay tank)	2	Detection of significant releases; release assessment; long-term surveillance		Not Applicable, see Common Plant Vent	
- Condenser Air Removal System Exhaust	2	Detection of significant releases; release assessment	120	Condenser SJAE Radiation	2
- Common Plant Vent or Multi-purpose Vent Discharging Any of Above Releases (if containment purge is included)	2	Detection of significant release; release assessment; long-term surveillance	121 109	Plant Vent Effluent Radiation Plant Vent Stack Flow	2 2

TABLE 1 (CONTINUED)

TYPE E Variables

REGULATORY GUIDE VARIABLES			ALABAMA POWER COMPANY'S POSITION		
Variable	Category	Purpose	Variable No.	Variable Description	Category
- Vent From Steam Generator Safety Relief Valves or Atmospheric Dump Valves	2	Detection of significant releases; release assessment	104 123 124	Main Steam Flow Main Steam Effluent Radiation TDAFW Effluent Radiation	2 2 2
- All Other Identified Release Points	2	Detection of significant release; release assessment; long-term surveillance		Not Applicable	
<u>PARTICULATES AND HALOGENS</u>					
- All Identified Plant Release Points (except steam generator safety relief valves or atmospheric steam dump valves and condenser air removal system exhaust). Sampling with Onsite Analysis Capability	3	Detection of significant releases; release assessment; long-term surveillance	1012	Particulates and Halogens Sampling (Vent Stack)	3
<u>ENVIRONS RADIATION AND RADIOACTIVITY</u>					
Airborne Radiohalogens and Particulates (portable sampling with onsite analysis capability)	3	Release assessment; analysis	1013	Airborne Radio-Halogens and Particulates (Environs)	3
Plant and Environs Radiation (portable instrumentation)	3	Release assessment; analysis	1005	Portable Plant/Environs Radiation	3
Plant and Environs Radioactivity (portable instrumentation)	3	Release assessment; analysis	1019	Portable Plant/Environs Radioactivity (Gamma-Ray Spectrometer)	3
<u>METEOROLOGY</u>					
Wind Direction	3	Release assessment	1014	Wind Direction	3

TABLE 1 (CONTINUED)

TYPE E Variables

REGULATORY GUIDE VARIABLES			ALABAMA POWER COMPANY'S POSITION		
Variable	Category	Purpose	Variable No.	Variable Description	Category
Wind Speed	3	Release assessment	1015	Wind Speed	3
Estimation of Atmospheric Stability	3	Release assessment	1016	Estimation of Atmospheric Stability	3
<u>ACCIDENT SAMPLING CAPABILITY (ANALYSIS CAPABILITY ON SITE)</u>					
Primary Coolant and Sump	3	Release assessment; verification; analysis	1017	Post Accident Sample	3
- Gross Activity					
- Gamma Spectrum					
- Boron Content					
- Chloride Content					
- Dissolved Hydrogen or Total Gas					
- Dissolved Oxygen					
- pH					
Containment Air	3	Release assessment; verification; analysis	1010	Post Accident Sample - CTMT AIR	3
- Hydrogen Content					
- Oxygen Content					
- Gamma Spectrum					

TABLE 2: R.G. 1.97 CATEGORY AND TYPE CROSS REFERENCE

VARIABLE NO.	DESCRIPTION	TYPE A	TYPE B	TYPE C	TYPE D	TYPE E
1	RCS Pressure (Wide Range)	1	1	1		
2	RCS Hot Leg Temperature (Wide Range)	1	1			
3	RCS Cold Leg Temperature (Wide Range)	1	3,1			
4	Steam Generator Level (Wide Range)	1			1	
5	Steam Generator Level (Narrow Range)	1				
6	Pressurizer Level	1			1	
7	Containment Pressure (Normal Range)	1	1	1		
8	Main Steam Line Pressure	1			2	
9	Refueling Water Storage Tank Level	1			2	
10	Containment Water Level	1	1	1		
11	Condensate Storage Tank Level	1			1	
12	Auxiliary Feedwater Flow	1			2	
13	Containment Radiation (High Range)			3		1
14	Primary Coolant Radioactivity Concentration			1		
15	Core Exit Temperature	1	3	1		
16	Containment Pressure (Extended Range)			1		

TABLE 2-1

TABLE 2: R.G. 1.97 CATEGORY AND TYPE CROSS REFERENCE

VARIABLE NO.	DESCRIPTION	TYPE A	TYPE B	TYPE C	TYPE D	TYPE E
17	Neutron Flux (Intermediate Range)		1			
18	Reactor Water Level		1			
19	Containment Isolation Valve Status		1			
101	RHR/LHSI Flow				2	
102	Boric Acid Flow				2	
103	HHSI Flow				2	
104	Main Steam Flow				2	2
105	Containment Spray Flow				2	
106	Charging Line Flow				2	
107	Letdown Flow				2	
108	CCW HX Inlet Flow				2	
109	Plant Vent Stack Flow					2
110	RCP Seal Injection Flow				2	
111	Reactor Cavity Sump Level		2	2		
112	Pressurizer Pressure				2	
113	Volume Control Tank Level				2	

TABLE 2-2

TABLE 2: R.G. 1.97 CATEGORY AND TYPE CROSS REFERENCE

VARIABLE NO.	DESCRIPTION	TYPE A	TYPE B	TYPE C	TYPE D	TYPE E
114	RHR HX Discharge Temperature				2	
115	Temperature of Service Water to Aux. Bldg.				2	
116	CTMT Cooler Service Water Outlet Temperature				2	
117	Containment Atmosphere Temperature				2	
118	RHR HX Inlet Temperature				2	
119	Component Cooling Water Heat Exchanger Discharge Temperature				2	
120	Condenser SJAЕ Radiation			3		2
121	Plant Vent Effluent Radiation			2		2
122	Accessible Area Radiation					2,3*
123	Main Steam Effluent Radiation					2
124	TDAFW Effluent Radiation					2
125	Accumulator Tank Pressure				2	
126	Accumulator Tank Isolation Valve Position				2	
127	Pressurizer PORV Position				2	
128	Pressurizer Safety Valve Position				2	
129	HVAC Emergency Damper Position				2	

*Category 2 per R.G. 1.97 Rev. 2
 Category 3 per R.G. 1.97 Rev. 3

TABLE 2: R.G. 1.97 CATEGORY AND TYPE CROSS REFERENCE

VARIABLE NO.	DESCRIPTION	TYPE A	TYPE B	TYPE C	TYPE D	TYPE E
130	Pressurizer Heater Breaker Position				2	
131	Emergency Power Status				2	
132	Core Subcooling Monitor	2	2			
133	Service Water Flow to CTMT Coolers				2	
1001	Main Feedwater Flow				3	
1002	Pressurizer Relief Tank Level				3	
1003	Radioactive Liquid Tank Levels				3	
1004	Pressurizer Relief Tank Temperature				3	
1005	Portable Plant/Environs Radiation					3
1006	CTMT Hydrogen Concentration			1		
1007	Pressurizer Relief Tank Pressure				3	
1008	Waste Gas Decay Tank Pressure				3	
1009	Control Rod Position		3			
1010	Post Accident Sample - CTMT Air					3
1011	RCP Motor Current				3	
1012	Particulates and Halogens Sampling (Vent Stack)					3

TABLE 2-4

TABLE 2: R.G. 1.97 CATEGORY AND TYPE CROSS REFERENCE

VARIABLE NO.	DESCRIPTION	TYPE A	TYPE B	TYPE C	TYPE D	TYPE E
1013	Airborne Radio-Halogens and Particulates (Environs)					3
1014	Wind Direction					3
1015	Wind Speed					3
1016	Estimation of Atmospheric Stability					3
1017	Post Accident Sample		3	3		3
1018	Accumulator Tank Level				2	
1019	Portable Plant/Environs Radioactivity (Gamma-Ray Spectrometer)					3

TABLE 3: ROOM IDENTIFICATIONS

The Compliance Report identifies equipment locations outside the containment by room identification numbers. These room identification numbers are correlated below to room names and floor elevations:

Room 102	Valve Compartment Room E. 83'-0"
Room 111	CTMT Spray Pump Room E1. 77'-0"
Room 113	CTMT Spray Valve Encapsulation E1. 77'-0"
Room 120	Corridor E1. 83'-0"
Room 124	CTMT Spray Valve Encapsulation E1. 77'-0"
Room 125	CTMT Spray Pump Room E1. 77'-0"
Room 128	RHR Heat Exchangers Rm. E1. 83'-0"
Room 129	RHR Low Head Pump Room E1. 77'-0"
Room 131	RHR Low Head Pump Room E1. 77'-0"
Room 156	Hold-Up Tank Room E1. 100'-0"
Room 161	Corridor E1. 100'-0"
Room 162	Hallway E1. 100'-0"
Room 163	WDS Control Panel Room E1. 100'-0"
Room 168	Chemical & Laundry Drain Tank Room E1. 100'-0"
Room 170	Letdown Heat Exchanger Room E1. 100'-0"
Room 172	Hallway E1. 100'-0"
Room 175	Hallway E1. 100'-0"
Room 182	Contaminated Storage Rm. E1. 100'-0"
Room 184	Piping Penetration Room E1. 100'-0"
Room 185	Component Cooling Water Heat Exchanger Rm. E1. 100'-0"
Room 186	Boric Acid Area E1. 100'-0"
Room 189	Plant Heating Equip. Room E1. 100'-0"
Room 190	MCC Panel Room E1. 100'-0"
Room 192	Aux. FW. Pump Room E1. 100'-0"

TABLE 3-1

Room 193	Aux. FW. Pump Room E1. 100'-0"
Room 194	Lower Equipment Room E1. 100'-0"
Room 2201	Computer Room E1. 121'-0"
Room 202	Hot Shutdown Panel Room E1. 121'-0"
Room 218	Chiller Unit Room E1. 121'-0"
Room 222	Corridor E1. 121'-0"
Room 223	Pipe Penetration Room E1. 121'-0"
Room 229	Switchgear Room E1. 121'-0"
Room 241	Main Steam and Feedwater Valve Room E1. 127'-0"
Room 317	Penetration Room & Filtration System Equipment Room E1. 139'-0"
Room 323	Sample Room E1. 139'-0"
Room 333	Electrical Penetration Rm. E1. 139'-0"
Room 334	Electrical Penetration Rm. E1. 139'-0"
Room 335	Load Center Room E1. 139'-0"
Room 343	Load Center Room E. 139'-0"
Room 346	CRDM Control System Cabinets Room E1. 139'-0"
Room 347	Electrical Penetration Room E1. 139'-0"
Room 501	Control Room HVAC Equipment Room E1. 175'-0"
Room 2501	Control Room HVAC Equipment Room E1. 175'-0"

TABLE 3-2

TABLE 4: REGULATORY GUIDE 1.97 COMPLIANCE SUMMARY

VARIABLE NUMBER	DESCRIPTION	1A	1B	2	3	4	5	6A	6B	7	8	9	10	11	12
		EQU VA IL RON	SQU EUA SL MIC	RED UND ANCY	PS OUP EPLY	CA HY AA NML EAL BIL LITY	QA US AS LU IR TAN CE	DIS PL AY	REC ORD ING	RAN GE	EIQ UE IN PT MEN T	INT ER FAC ES	STC A RSL VTI BNC RIG A TION	HUA MCA TORS	DM IER ES CUR EM ENT
1	RCS Pressure (Wide Range)	NO	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES
2	RCS Hot Leg Temperature (Wide Range)	NO	NO	NO	YES	YES	YES	YES	YES	NO	YES	YES	YES	NO	YES
3	RCS Cold Leg Temperature (Wide Range)	NO	NO	NO	YES	YES	YES	YES	YES	NO	YES	YES	YES	NO	YES
4	Steam Generator Level (Wide Range)	NO	NO	NO	YES	YES	YES	YES	YES	NO	NO	YES	YES	NO	YES
5	Steam Generator Level (Narrow Range)	NO	NO	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES
6	Pressurizer Level	NO	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES
7	Containment Pressure (Normal Range)	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8	Main Steam Line Pressure	N/A	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES
9	Refueling Water Storage Tank Level	N/A	NO	NO	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES
10	Containment Water Level	NO	NO	NO	YES	YES	YES	YES	YES	NO	NO	NO	YES	NO	YES
11	Condensate Storage Tank Level	N/A	NO	NO	YES	N/A	YES	YES	NO	YES	YES	NO	YES	YES	YES
12	Auxiliary Feedwater Flow	NO	NO	NO	YES	YES	YES	YES	NO	YES	NO	NO	YES	YES	YES

TABLE 4-1

TABLE 4: REGULATORY GUIDE 1.97 COMPLIANCE SUMMARY

VARIABLE NUMBER	DESCRIPTION	TA	1B	2	3	4	5	6A	6B	7	8	9	10	11	12
13	Containment Radiation (High Range)	EQ NU VA IL R O N	SQ EU IA SL MI C	RED UN D AN CY	PS OU P EP RL Y	CA HV AA NI LA EA LB IL IT Y	QA US AS LU LI RA Y NC E	DI SP LA Y	RE CO RD IN G	RA NG E	EI QU E INT M EN T	IN TE RF AC ES	ST CA EE RS LI VI IB CN RA IG TT IO N	HU MC AT NO RS	DM IE RA ES CU RE ME NT
14	Primary Coolant Radioactivity Concentration														
15	Core Exit Temperature	NO	NO	NO	YES	YES	YES	NO	YES	YES	NO	NO	YES	YES	YES
16	Containment Pressure (Extended Range)	NO	NO	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES
17	Neutron Flux (Intermediate Range)	NO	NO	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES
18	Reactor Water Level														
19/1	Pen No. 29 - Accumulator Test Line	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/2	Pen No. 63 - Nitrogen Supply to Accumulators	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/3	Pen No. 64 - Nitrogen Supply to PRT	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/4	Pen No. 30 - Pressurizer Relief Tank Makeup	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/5	Pen No. 31 - Reactor Coolant Drain Tank	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/6	Pen No. 70 - CTMT Differential Press. Inst.	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES

TABLE 4: REGULATORY GUIDE 1.97 COMPLIANCE SUMMARY

VARIABLE NUMBER	DESCRIPTION	1A	1B	2	3	4	5	6A	6B	7	8	9	10	11	12
		EQU NU VA IL R O N	SQU EUA ISL M IC	RED UND DAN CY	PSO WPE RLY	CAH VAA NIN LEA LBI LIT Y	QAS SLU IRTA NCE	DIS PLA Y	REC ORD ING	RAN GE	EIQ UEIN PT ME NT	INT ERFA CES	STE RSL VTIB ICNR GAT ION	HFA MCT ORS	DM IRA ESCT RE ME NT
19/7	Pen No. 16 - Residual Heat Removal-Out	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/8	Pen No. 18 - Residual Heat Removal-Out	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/9	Pen No. 15 - Residual Heat Removal-In	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/10	Pen No. 17 - Residual Heat Removal-In	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/11	Pen No. 23 - Normal Letdown Line	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/12	Pen No. 28 - Excess Letdown and Seal Water	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/13	Pen No. 24 - Normal Charging Line	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/14	Pen No. 56 - Pressurizer Steam Sample Line	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	NO	YES	YES	YES
19/15	Pen No. 57 - Pressurizer Liquid Sample Line	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	NO	YES	YES	YES
19/16	Pen No. 58 - Hot Leg Sample Line	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	NO	YES	YES	YES
19/17	Pen No. 48 - Instrument Air	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/18	Pen No. 55 - Containment Air Sample-In	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES

TABLE 4: REGULATORY GUIDE 1.97 COMPLIANCE SUMMARY

VARIABLE NUMBER	DESCRIPTION	1A	1B	2	3	4	5	6A	6B	7	8	9	10	11	12
19/19	Pen No. 54 - Containment Air Sample-Out	EQ NU VA IL R ON	SQ EU IA SL M IC	RE DU ND AN CY	PS OU WP EP RL Y	CA HV AA NI LA EL LI TI TY	QA AS LU LI TA Y CE	DI SP LA Y	RE CO RD IN G	RA NG E	EI QE UE IN PT ME NT	IN TE RF AC ES	ST EA RS LV TI IB CN RA IG TI ON	HF UA MC AT NR S	DM IE RA ES CU RE ME NT
19/20	Pen No. 12 - CTMT Purge Supply (Main and Min1)	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/21	Pen No. 13 - CTMT Purge Exhaust (Main and Min1)	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/22	Pen No. 78 - Containment Sump Pumps	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/23	Pen No. 34 - Serv. Wtr to CTMT CLR 1A	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/24	Pen No. 35 - Serv. Wtr to CTMT CLR 1B	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/25	Pen No. 36 - Serv. Wtr to CTMT CLR 1C	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/26	Pen No. 37 - Serv. Wtr to CTMT CLR 1D	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/27	Pen No. 38 - Serv. Wtr from CTMT CLR 1A	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/28	Pen No. 39 - Serv. Wtr from CTMT CLR 1B	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/29	Pen No. 40 - Serv. Wtr from CTMT CLR 1C	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/30	Pen No. 41 - Serv. Wtr from CTMT CLR 1C	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES

TABLE 4: REGULATORY GUIDE 1.97 COMPLIANCE SUMMARY

VARIABLE NUMBER	DESCRIPTION	1A	1B	2	3	4	5	6A	6B	7	8	9	10	11	12
		EQU VA IL RO N	SQU EUA ISL MIC	RED UND DAN CY	PS OU WEP RLY	CA HVA ANN LE LIL ITY	QA US AS LU IR TAN CE	DIS PL AY	REC ORD ING	RAN GE	EIQ UE INT M ENT	INT ER FAC ES	ST EER VTC ING	SL IB CN GAT ION	HFA MAT NORS
19/31	Pen No. 42 - RCP Cooling Water Supply	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/32	Pen No. 71 - Leak Rate Test	NO	NO	YES	NO	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/33	Pen No. 72 - Leak Rate Test	NO	NO	YES	NO	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/34	Pen No. 44 - RCP Cooling Water Return	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/35	Pen No. 43 - RCP Thermal Barrier CLG Wtr Ret.	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/36	Pen No. 45 - Excess Letdown HX & RC Drain Tnk HX CCM Supply	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/37	Pen No. 46 - Excess Letdown HX & RC Drain Tnk HX CCM Return	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/38	Pen No. 80 - High Head Safety Injection	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/39	Pen No. 20 - High Head Safety Injection	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/40	Pen No. 81 - High Head Safety Injection	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/41	Pen No. 21 - Containment Spray Line	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES

TABLE 4: REGULATORY GUIDE 1.97 COMPLIANCE SUMMARY

VARIABLE NUMBER	DESCRIPTION	1A	1B	2	3	4	5	6A	6B	7	8	9	10	11	12
19/42	Pen No. 22 - Containment Spray Line	NO	SQUASH :U IA SL M I C	YES	POU W P E R L Y	CA H V A A N I L E A L B I L I T Y	Q A S A S L U R I T A N C E	D I S P L A Y	R E C O R D I N G	R A N G E	E I D Q U E I P T M E N T	I N T E R F A C E S	S T C E R S L I B R A R Y I G N G I O N	H F U M C A T O R S	D I E R A R E C T R E M E N T
19/43	Pen No. 10 - CTMT Sump Recirculation Line	NO		NO	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/44	Pen No. 11 - CTMT Sump Recirculation Line	NO		NO	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/45	Pen No. 93 - CTMT Sump Spray Recirculation	NO		NO	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/46	Pen No. 94 - CTMT Sump Spray Recirculation	NO		NO	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/47	Pen No. 49 - Accumulator Makeup Line	NO		YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/48	Pen No. 50 - Accumulator Sample Line	NO		YES	YES	N/A	YES	YES	YES	YES	NO	NO	YES	YES	YES
19/49	Pen No. 62 - Reactor Coolant Drzin Tank Vent	NO		YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/50	Pen No. 19 - Boron Injection Line	NO		YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/51	Pen No. 101 - Low Head Safety Inj.	NO		YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/52	Pen No. 60 - Serv Wtr to RCP Motor Coolers	NO		YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/53	Pen No. 32 - Serv Wtr From RCP Motor Coolers	NO		YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES

TABLE 4: REGULATORY GUIDE 1.97 COMPLIANCE SUMMARY

VARIABLE NUMBER	DESCRIPTION	1A	1B	2	3	4	5	6A	6B	7	8	9	10	11	12
19/54	Pen No. 33 - CTMT Sump Pump Sample Recirc.	NO	S Q E U I A S L	R E D U N D A N C Y	P S O U P P E R L Y	C A H V A A N I N L E A L I L I T Y	Q A S A S L U R I T A Y N C E	D I S P L A Y	R E C O R D I N G	R A N G E	E I Q U E N T M E N T	I N T E R F A C E S	S T C A R S L L V I I B C M R A T I O N	H F U A M C A T M O R S	D M I E R A R E S C R E M E N T
19/55	Pen No. 67 - Post LOCA CTMT Sample-Out	NO	NO	NO	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/56	Pen No. 61 - Post LOCA CTMT Sample-Out	NO	NO	NO	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/57	Pen No. 61 - Post LOCA CTMT Sample-In	NO	NO	NO	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/58	Pen No. 66 - Post LOCA CTMT Sample-In	NO	NO	NO	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/59	Pen No. 103 - Post LOCA CTMT Venting	NO	NO	NO	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
19/60	Pen No. 82 - Demineralized Water	NO	NO	YES	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
101	RHR/LHSI Flow	NO	N/A	N/A	YES	YES	YES	YES	N/A	YES	YES	YES	YES	YES	YES
102	Boric Acid Flow	NO	N/A	N/A	YES	YES	YES	YES	N/A	YES	NO	YES	YES	NO	YES
103	HHSI Flow	NO	N/A	N/A	YES	YES	YES	YES	N/A	YES	YES	YES	YES	YES	YES
104	Main Steam Flow	NO	NO	N/A	YES	N/A	YES	YES	YES	YES	NO	YES	YES	YES	YES
105	Containment Spray Flow	NO	N/A	N/A	YES	YES	YES	YES	N/A	YES	YES	YES	YES	YES	YES

TABLE 4: REGULATORY GUIDE 1.97 COMPLIANCE SUMMARY

VARIABLE NUMBER	DESCRIPTION	1A	1B	2	3	4	5	6A	6B	7	8	9	10	11	12
106	Charging Line Flow	EQ NUVA IL RORON	SQU EUIA SL SMIC	RED UND DANC Y	PS OUP WEP RLY	CA HVA AA NIA NLE ABL LIT TY	QA SAS LUR LIT ANCE	DIS PLA Y	REC ORD ING	RAN GE	EIQ UEIN TPT MENT	INT ERFA CES	SEA RSL VIB RRA TIO N	HUA MC AN RS	DM IER AS RES CT RE ME NT
107	Letdown Flow	NO	N/A	N/A	YES	N/A	YES	YES	N/A	YES	NO	YES	YES	YES	YES
108	CCW HX Inlet Flow	NO	N/A	N/A	YES	YES	YES	NO	N/A	YES	NO	YES	YES	YES	YES
109	Plant Vent Stack Flow	N/A	N/A	N/A	YES	YES	YES	YES	YES	YES	NO	YES	YES	NO	YES
110	RCP Seal Injection Flow	NO	N/A	N/A	YES	YES	YES	YES	N/A	YES	NO	YES	YES	YES	YES
111	Reactor Cavity Sump Level	NO	NO	N/A	YES	YES	YES	YES	N/A	YES	NO	YES	YES	NO	YES
112	Pressurizer Pressure	NO	NO	N/A	YES	YES	YES	YES	N/A	N/A	YES	NO	YES	YES	YES
113	Volume Control Tank Level	NO	N/A	N/A	YES	N/A	YES	YES	N/A	NO	NO	YES	YES	YES	YES
114	RHR HX Discharge Temperature	NO	N/A	N/A	YES	YES	YES	YES	N/A	NO	NO	YES	YES	NO	YES
115	Temperature of Service Water to Aux. Bldg.	NO	N/A	N/A	YES	YES	YES	YES	N/A	YES	NO	YES	YES	YES	YES
116	CTMT Cooler Service Water Outlet Temperature	NO	N/A	N/A	YES	YES	YES	YES	N/A	YES	NO	YES	YES	YES	YES
117	Containment Atmosphere Temperature	NO	N/A	N/A	YES	YES	YES	YES	N/A	NO	NO	YES	YES	NO	YES

TABLE 4-8

TABLE 4: REGULATORY GUIDE 1.97 COMPLIANCE SUMMARY

VARIABLE NUMBER	DESCRIPTION	1A	1B	2	3	4	5	6A	6B	7	8	9	10	11	12
118	RHR HX Inlet Temperature	NO	S Q U E I A S L M I C	R E D U N D A N C Y	P S O U P W E P R L Y	C A H V A A N L E A B I L I T Y	Q A S A S L I R A T I O N	D I S P L A Y	R E C O R D I N G	R A N G E	E I Q U E I N T M E N T	I N T E R F A C E S	S T C E E R S L V T I I B R A N G I O N	H F U A M C T A N R S	D M I E R A S C U R E M E N T
119	Component Cooling Water Heat Exchanger Discharge Temperature	NO		N/A	YES	YES	YES	YES	N/A	NO	NO	YES	YES	YES	YES
120	Condenser SJA E Radiation	N/A		N/A	NO	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES
121	Plant Vent Effluent Radiation	N/A		N/A	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES
122	Accessible Area Radiation	N/A		N/A	YES	N/A	YES	YES	YES	NO	NO	YES	YES	YES	YES
123	Main Steam Effluent Radiation	N/A		N/A	NO	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES
124	TDAFM Effluent Radiation	N/A		N/A	NO	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES
125	Accumulator Tank Pressure	NO		N/A	YES	YES	YES	YES	N/A	YES	NO	YES	YES	YES	YES
126	Accumulator Tank Isolation Valve Position	NO		N/A	YES	YES	YES	YES	N/A	YES	NO	YES	YES	YES	YES
127	Pressurizer PORV Position	NO		N/A	YES	YES	YES	YES	N/A	YES	NO	YES	YES	YES	YES
128	Pressurizer Safety Valve Position	NO		N/A	YES	YES	YES	YES	N/A	YES	NO	YES	YES	YES	YES
129/1	HVAC Emergency Damper Position-Piping Penetration Room	NO		N/A	YES	YES	YES	YES	N/A	YES	NO	YES	YES	YES	YES

TABLE 4-9

TABLE 4: REGULATORY GUIDE 1.97 COMPLIANCE SUMMARY

VARIABLE NUMBER	DESCRIPTION	1A	1B	2	3	4	5	6A	6B	7	8	9	10	11	12
		EQUATION NUMBER	SEQUENTIAL SLM C	REDUNDANCY	PSOUPEPLY	CAVANA HAIL NEAL BILITY	QAS ASL IRTA YCE	DIS PLAY	RE COR DING	R ANGE	EI DUE IN PT MENT	I N T E R F A C E S	S T E E R V I C I N G	C E A L I B R A T I O N	H F U M I D I T Y
129/2	HVAC Emergency Damper Position-Control Room	N/A	NO	N/A	YES	YES	YES	YES	N/A	YES	NO	YES	YES	YES	YES
130	Pressurizer Heater Breaker Position	N/A	NO	N/A	YES	YES	YES	YES	N/A	NO	NO	YES	YES	YES	YES
131/1	Offsite Power	N/A	NO	N/A	YES	YES	YES	YES	N/A	YES	NO	YES	YES	YES	YES
131/2	Diesel Generator Breakers	N/A	NO	N/A	YES	YES	YES	YES	N/A	YES	NO	YES	YES	YES	YES
131/3	Diesel Generator Voltage and Frequency	N/A	N/A	N/A	YES	YES	YES	YES	N/A	YES	NO	YES	YES	YES	YES
131/4	Diesel Generator Watts	N/A	N/A	N/A	YES	YES	YES	YES	N/A	YES	NO	YES	YES	YES	YES
131/5	Diesel Generator Fuel and Day Tank Level	N/A	N/A	N/A	YES	YES	YES	YES	N/A	YES	NO	YES	YES	YES	YES
132	RCS Core Subcooling Monitor	NO	NO	N/A	YES	YES	YES	YES	N/A	YES	NO	YES	YES	YES	YES
133	Service Water Flow to CTMT Coolers	NO	N/A	N/A	YES	YES	YES	YES	N/A	N/A	NO	YES	YES	YES	YES
1001	Main Feedwater Flow	N/A	N/A	N/A	N/A	N/A	YES	YES	N/A	YES	N/A	N/A	YES	YES	YES

TABLE 4: REGULATORY GUIDE 1.97 COMPLIANCE SUMMARY

VARIABLE NUMBER	DESCRIPTION	1A	1B	2	3	4	5	6A	6B	7	8	9	10	11	12
1002	Pressurizer Relief Tank Level	EQ VAL IRON	SQ EUA ISL SMIC	REDUNDANCY	PS WEP ERY	CH AA NL EA LL ITY	QA SAS LIR TY CE	DIS PLA Y	RE COR DIN G	RAN GE	EIQ UEI MPT MENT	INT ERF ACE S	STE ESL RVI IBI CNR AIG TIG IOM	HFA UMC ATN ORS	DM IEA RAC SUC TREM ENT
1003	Radioactive Liquid Tank Levels	N/A	N/A	N/A	N/A	N/A	YES	NO	N/A	NO	N/A	N/A	YES	YES	YES
1004	Pressurizer Relief Tank Temperature	N/A	N/A	N/A	N/A	N/A	YES	YES	N/A	NO	N/A	N/A	YES	YES	YES
1005	Portable Plant/Enviorns Radiation	N/A	N/A	N/A	N/A	N/A	YES	YES	YES	NO	N/A	N/A	YES	N/A	YES
1006	Containment Hydrogen Concentration	N/A	N/A	N/A	N/A	N/A	YES	YES	N/A	NO	N/A	N/A	YES	YES	YES
1007	Pressurizer Relief Tank Pressure	N/A	N/A	N/A	N/A	N/A	YES	YES	N/A	YES	N/A	N/A	YES	YES	YES
1008	Waste Gas Decay Tank Pressure	N/A	N/A	N/A	N/A	N/A	YES	NO	N/A	NO	N/A	N/A	YES	YES	YES
1009	Control Rod Position	N/A	N/A	N/A	N/A	N/A	YES	YES	N/A	YES	N/A	N/A	YES	YES	YES
1010	Post Accident Sample - CTMT Air	N/A	N/A	N/A	N/A	N/A	YES	YES	N/A	NO	N/A	N/A	YES	N/A	YES
1011	RCP Motor Current	N/A	N/A	N/A	N/A	N/A	YES	YES	N/A	YES	N/A	N/A	YES	YES	YES
1012	Particulates and Halogens Sampling (Vent Stack)	N/A	N/A	N/A	N/A	N/A	YES	YES	YES	YES	N/A	N/A	YES	N/A	YES
1013	Airborne Radio-Halogens and Particulates (Enviorns)	N/A	N/A	N/A	N/A	N/A	YES	YES	YES	YES	N/A	N/A	YES	N/A	YES

TABLE 4: REGULATORY GUIDE 1.97 COMPLIANCE SUMMARY

VARIABLE NUMBER	DESCRIPTION	1A	1B	2	3	4	5	6A	6B	7	8	9	10	11	12
		EQ MVA VIL IRON	SQ EIA SSL SMIC	RED UND DAN C Y	PS OUP WEP RL Y	CA HVA ANI NLE ABL L I L I I T Y	QA US AS LIR TAN C E	DI SP LA Y	RE CO RD IN G	RA NG E	EI QE INT ME NT	IN TE RF ACE S	ST EE SL VT IB CR IG TI ON	HU MC T AT MOS P H ER E S C UR E M E NT	
1014	Wind Direction	N/A	N/A	N/A	N/A	N/A	YES	YES	YES	YES	N/A	N/A	YES	YES	YES
1015	Wind Speed	N/A	N/A	N/A	N/A	N/A	YES	YES	YES	NO	N/A	N/A	YES	YES	YES
1016	Estimation of Atmospheric Stability	N/A	N/A	N/A	N/A	N/A	YES	YES	YES	YES	N/A	N/A	YES	YES	YES
1017	Post Accident Sample	N/A	N/A	N/A	N/A	N/A	YES	YES	N/A	NO	N/A	N/A	YES	N/A	YES
1018	Accumulator Tank Level	N/A	N/A	N/A	N/A	N/A	YES	YES	N/A	NO	N/A	N/A	YES	YES	YES
1019	Portable Plant/Enviorns Radioactivity (Gamma-Ray Spectrometer)														

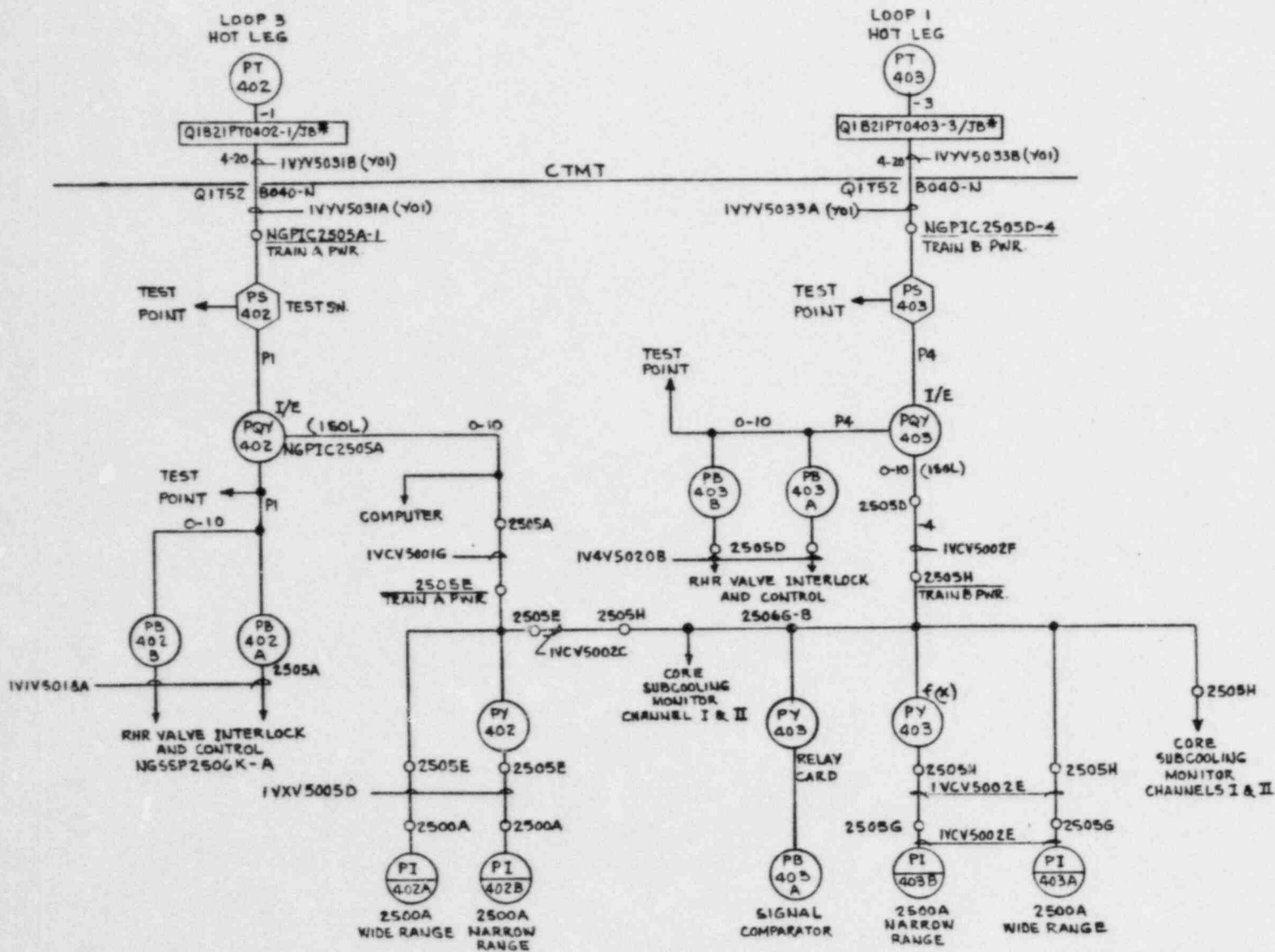
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 1: RCS PRESSURE (WIDE RANGE)

TPNS No(s): PT402-1, PT403-3

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	NO	MODIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	NO	MODIFY
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	YES	
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
VARIABLE I: RCS PRESSURE (WIDE RANGE)



EQUIPMENT LOCATIONS:

- PT402 CTMT
- PT403 CTMT
- 2505A, D, E, H, G CONTROL ROOM
- 2500A CONTROL ROOM

REFERENCE DWGS.

- W 7377D10 PT402
- W 7377D09 PT402
- W 7378D37 PT403
- W 7378D57 PT403
- W 7377D73 PT403
- W 7377D61 PT402/PT403
- # PCNB-84-1-2593

SENSOR AND DISPLAY LOCATIONS

VARIABLE 1: RCS PRESSURE (WIDE RANGE)

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
PT402	CTMT	PI402A	Control Room
PT403	CTMT	PI403A	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 1: RCS PRESSURE (WIDE RANGE)

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 1: RCS PRESSURE (WIDE RANGE)

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

2. REDUNDANCY

VARIABLE 1: RCS PRESSURE (WIDE RANGE)

EXISTING CONDITIONS

Adequate physical separation is not provided between the redundant loops due to the following existing conditions:

- The cables between the sensors and the isolation devices pertaining to both instrument loops are routed as non-safeguard cables using common raceways and a common non-safeguard penetration.

Adequate physical separation is not provided between HHSI flow-loop FT943 and loop PT402 of the subject variable due to the following existing conditions:

- Cables pertaining to Loop FT943 and PT402 use common raceways.

PROPOSED MODIFICATION

Adequate physical separation will be provided by the following modifications:

Loop PT402:

- Install new channel 1 cables between the sensor and process cabinet 1 (channel 1). Route these cables through a channel 1 penetration.

Loop PT403:

- Install new channel 4 cables between the sensor and process cabinet 4 (channel 4). Route these cables through a channel 4 penetration.

As a result of the proposed modification, loop PT402 could be considered redundant to loop PT403, and loop FT943 will be used to resolve an ambiguity between the redundant loops PT402 and PT403.

6. DISPLAY AND RECORDING

VARIABLE 1: RCS PRESSURE (WIDE RANGE)

EXISTING CONDITION

Although the loop associated with PT402 is presently monitored by the plant computer, the variable is not logged or recorded in any way. The plant computer does not have the capacity to record this variable.

PROPOSED MODIFICATIONS

Add the loop associated with PT402 to the SPDS computer following the installation of the SPDS equipment. The SPDS computer will then be programmed to record this variable.

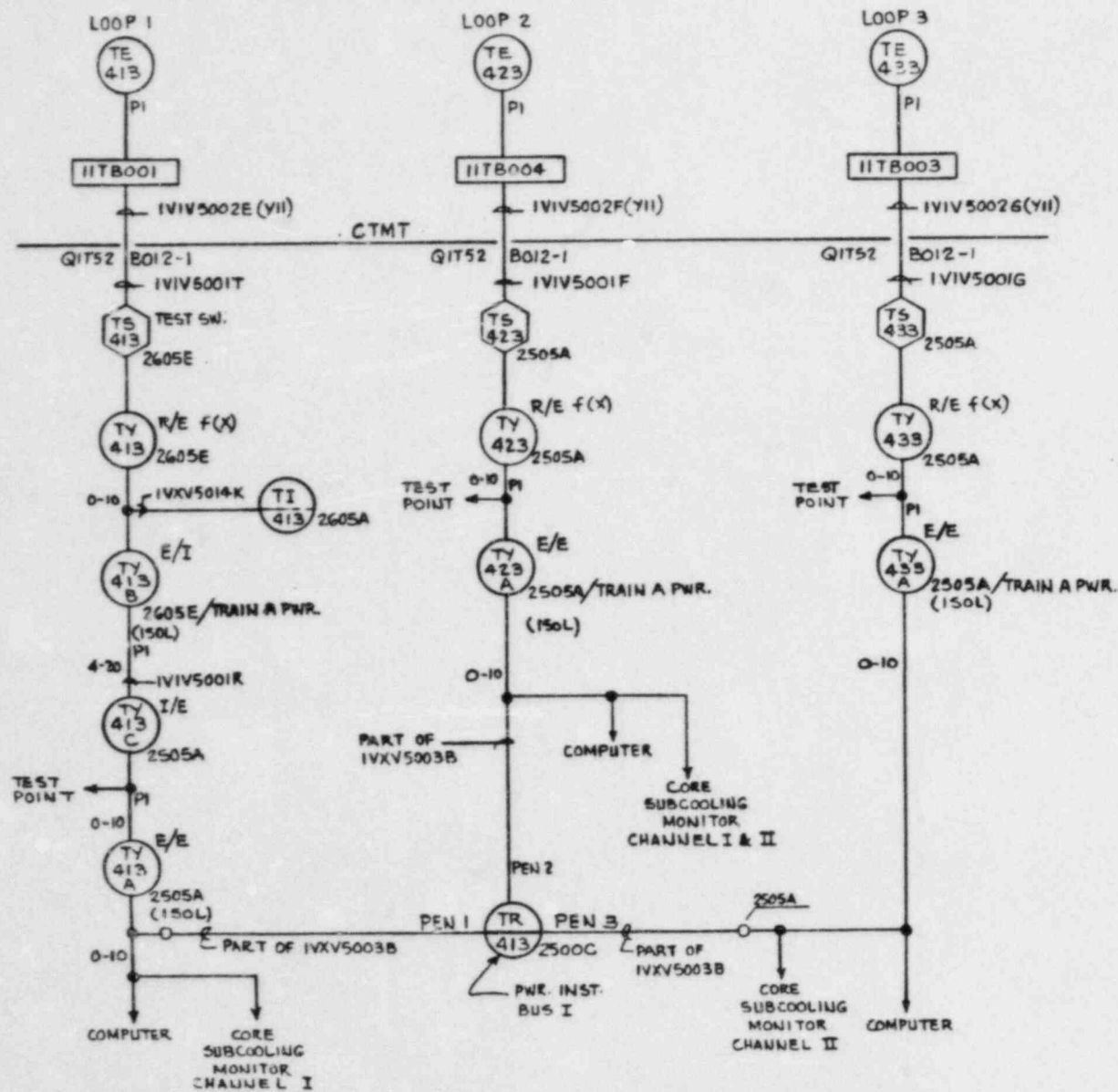
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 2: RCS HOT LEG TEMPERATURE (WIDE RANGE)

TPNS No(s): TE413-P1, TE423-P1, TE433-P1

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	NO	MODIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	YES	
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	NO	MODIFY
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
VARIABLE 2: HOT LEG TEMPERATURE (WIDE RANGE)



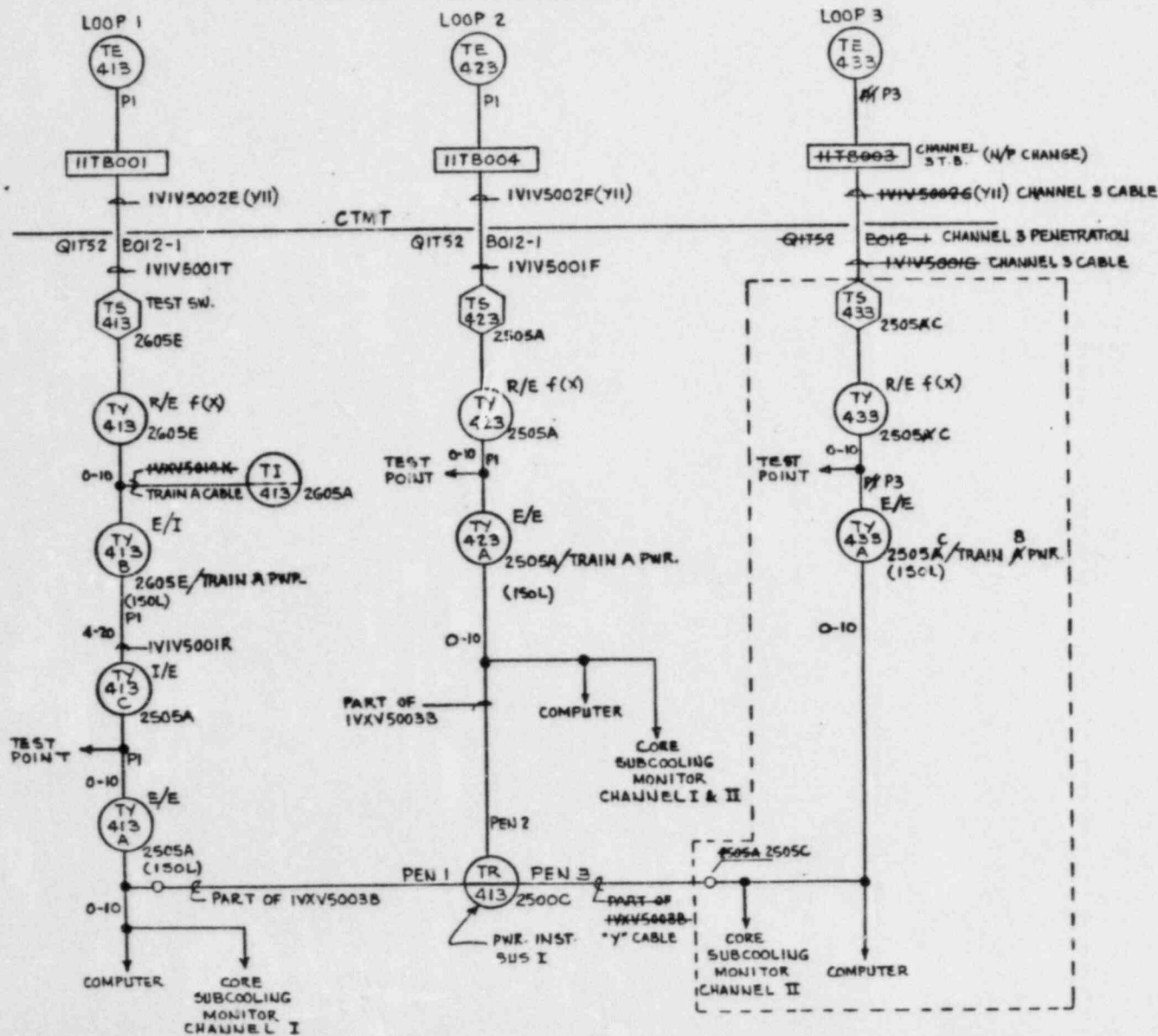
EQUIPMENT LOCATIONS:

TE 413	CTMT
TE 423	CTMT
TE 433	CTMT
2605E	RM. 202
2505A	CONTROL ROOM
2500C	CONTROL ROOM

REFERENCE DWGS:

- W 7377D13
- W 1095E87 RECORDER CONNECTIONS
- W 2249D23

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 2: HCT LEG TEMPERATURE (WIDE RANGE)
 PROPOSED MODIFICATIONS



WESTINGHOUSE SCOPE - - -

EQUIPMENT LOCATIONS:

TE 413	CTMT
TE 423	CTMT
TE 433	CTMT
2605E	RM. 202
2505A	CONTROL ROOM
2500C	CONTROL ROOM

REFERENCE DWGS:

- W 7377D13
- W 2249D25
- W 1095E87 RECORDER CONNECTIONS

SENSOR AND DISPLAY LOCATIONS

VARIABLE 2: HOT LEG TEMPERATURE (WIDE RANGE)

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
TE413	CTMT	TR413	Control Room
TE423	CTMT	TR413	Control Room
TE433	CTMT	TR413	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 2: RCS HOT LEG TEMPERATURE (WIDE RANGE)

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 2: RCS HOT LEG TEMPERATURE (WIDE RANGE)

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: N5M5B25G0C-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

2. REDUNDANCY

VARIABLE 2: RCS HOT LEG TEMPERATURE (WIDE RANGE)

EXISTING CONDITIONS

Adequate physical separation and electrical independence is not provided between the redundant loops due to the following existing conditions:

- The cables between the sensors and the isolation devices pertaining to all three instrument loops are routed as channel 1 cables using common raceways and a common channel 1 penetration.
- All three loops are powered from the same train power supply (train A).

PROPOSED MODIFICATION

Adequate physical separation and electrical independence will be provided by the following modifications:

Loop TE433:

- Relocate the electronics and auxiliary outputs from process cabinet 1 (channel 1) to process cabinet 3 (channel 3).
- Install new channel 3 cables between the sensor and process cabinet 3. Route these cables through a channel 3 penetration.

As a result of the proposed modification, loop TE413 or TE423 could be considered redundant to loop TE433, and the remaining loop will be used to resolve an ambiguity between the redundant loops.

7. RANGE

VARIABLE 2: RCS HOT LEG TEMPERATURE (WIDE RANGE)

EXISTING CONDITION

The maximum indication of the existing instrumentation is 50 degrees F less than the R. G. 1.97 Rev. 2 range guidelines. The minimum indication satisfies R. G. 1.97 guidelines.

JUSTIFICATION

The range of the existing instrumentation is acceptable based on its compliance with R. G. 1.97 Revision 3 guidelines.

11. HUMAN FACTOR

VARIABLE 2: RCS HOT LEG TEMPERATURE (WIDE RANGE)

EXISTING CONDITION

Temperature indication is by an indicating strip chart recorder that fails as-is on loss of power.

PROPOSED MODIFICATION

To minimize the potential for operator confusion caused by the fail-as-is display, it is proposed to add a power available indicator to the recorder. No additional changes are required for this variable to satisfy the Human Factor Guidelines.

REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 3: RCS COLD LEG TEMPERATURE (WIDE RANGE)

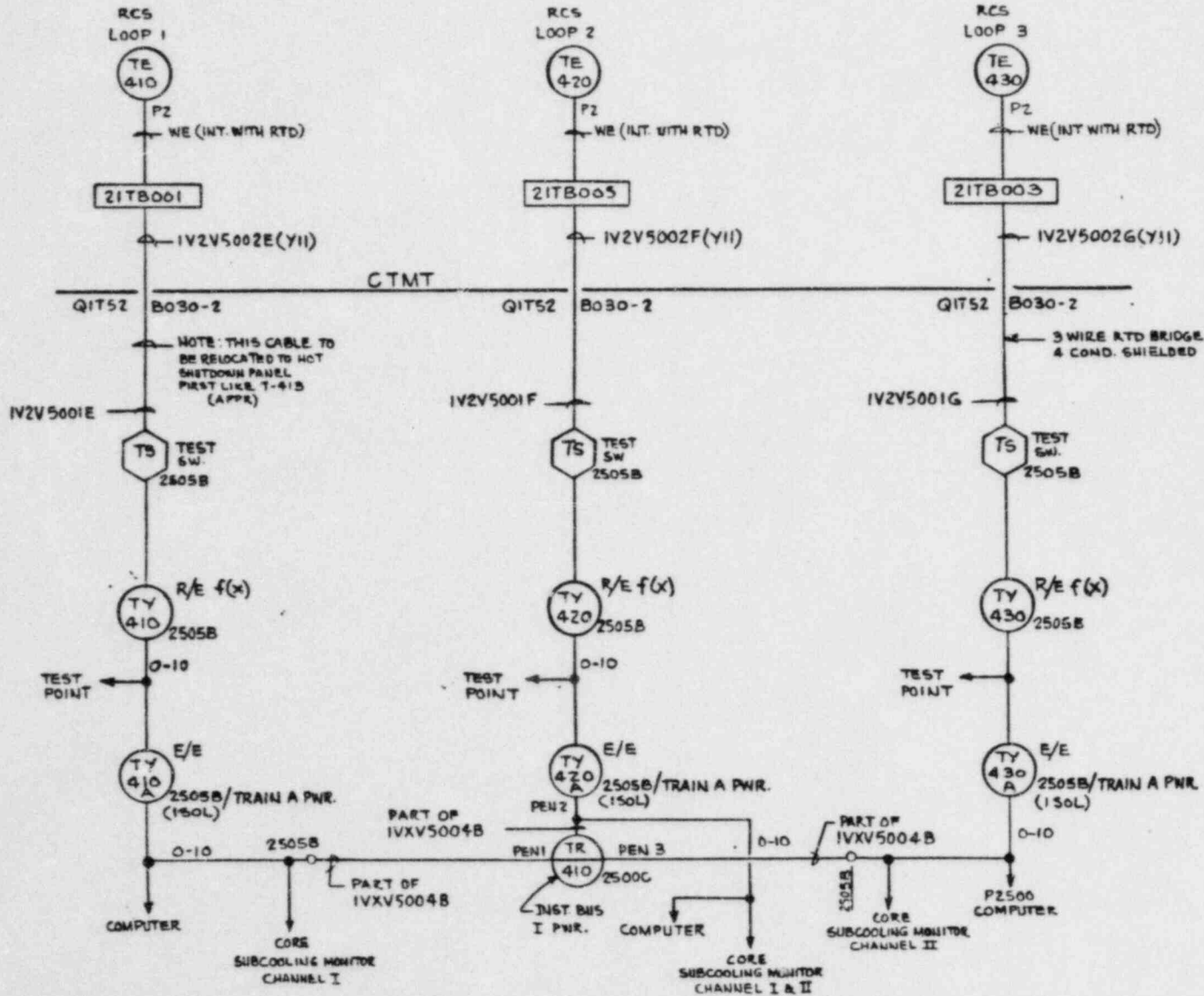
TPNS No(s): TE410-P2, TE420-P2, TE430-P2

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	NO	MODIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	YES	
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	NO	MODIFY
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 3: COLD LEG TEMPERATURE (WIDE RANGE)

EQUIPMENT LOCATIONS

TE 410	CTMT
TE 420	CTMT
TE 430	CTMT
2505B	CONTROL ROOM
2500C	CONTROL ROOM

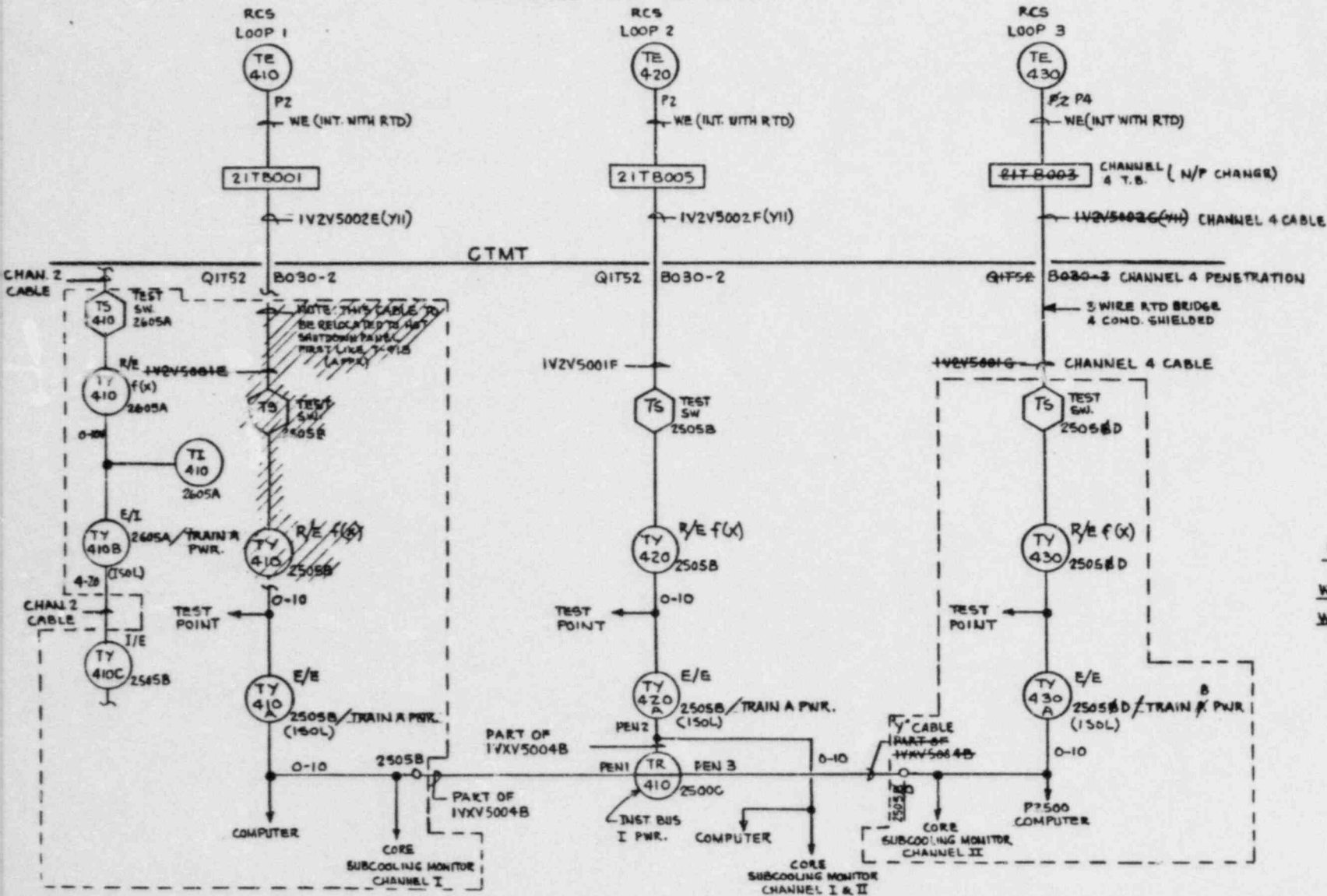


REFERENCE DWGS

- W 7377D29
- W 1095E87 RECORDER CONNECTION

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 3: COLD LEG TEMPERATURE (WIDE RANGE)
 PROPOSED MODIFICATIONS

WESTINGHOUSE SCOPE — — —



REFERENCE D'INGS

W 7377D29

W 1095E87 RECORDER CONNECTION

SENSOR AND DISPLAY LOCATIONS

VARIABLE 3: RCS COLD LEG TEMPERATURE (WIDE RANGE)

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
TE410	CTMT	TR410	Control Room
TE420	CTMT	TR410	Control Room
TE430	CTMT	TR410	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 3: RCS COLD LEG TEMPERATURE (WIDE RANGE)

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 3: RCS COLD LEG TEMPERATURE (WIDE RANGE)

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500C-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

2. REDUNDANCY

VARIABLE 3: RCS COLD LEG TEMPERATURE (WIDE RANGE)

EXISTING CONDITIONS

Adequate physical separation and electrical independence is not provided between the redundant loops due to the following existing conditions:

- The cables between the sensors and the isolation devices pertaining to all three instrument loops are routed as channel 2 cables using common raceways and a common channel 2 penetration.
- All three loops are powered from the same train power supply (train A).

PROPOSED MODIFICATION

Adequate physical separation and electrical independence will be provided by the following modifications:

Loop TE410:

- Relocate electronic cards TS410 and TY410 from process cabinet 2 (channel 2) to the train A HSP, install a new electronic card TY410B (E/I) in the train A HSP and a new electronic card TY410C (I/E) in process cabinet 2.
- Install a new temperature indicator in the train A HSP.
- Install a new channel 2 cable between the penetration and the train A HSP, and a new channel 2 cable between the train A HSP and process cabinet 2.

Note: In addition to complying with the redundancy guidelines of R. G. 1.97, the proposed modification covers the requirements of 10 CFR 50 Appendix R (temperature indicator on HSP).

Loop TE430:

- Relocate the electronics and auxiliary outputs from process cabinet 2 (channel 2) to process cabinet 4 (channel 4).
- Install new channel 4 cables between the sensor and process cabinet 4. Route these cables through a channel 4 penetration.

As a result of the proposed modification loop, TE410 or TE420 could be considered redundant to loop TE430, and the remaining loop will be used to resolve an ambiguity between the redundant loops.

7. RANGE

VARIABLE 3: RCS COLD LEG TEMPERATURE (WIDE RANGE)

EXISTING CONDITION

The maximum indication of the existing instrumentation is 50 degrees F less than the R. G. 1.97 Rev. 2 range guidelines. The minimum indication satisfies R. G. 1.97 guidelines.

JUSTIFICATION

The range of the existing instrumentation is acceptable based on its compliance with R. G. 1.97 Revision 3 guidelines.

11. HUMAN FACTOR

VARIABLE 3: RCS COLD LEG TEMPERATURE (WIDE RANGE)

EXISTING CONDITION

Temperature indication is by an indicating strip chart recorder that fails as-is on loss of power.

PROPOSED MODIFICATION

To minimize the potential for operator confusion caused by the fail-as-is display, it is proposed to add a power available indicator to the recorder. No additional changes are required for this variable to satisfy the Human Factor Guidelines.

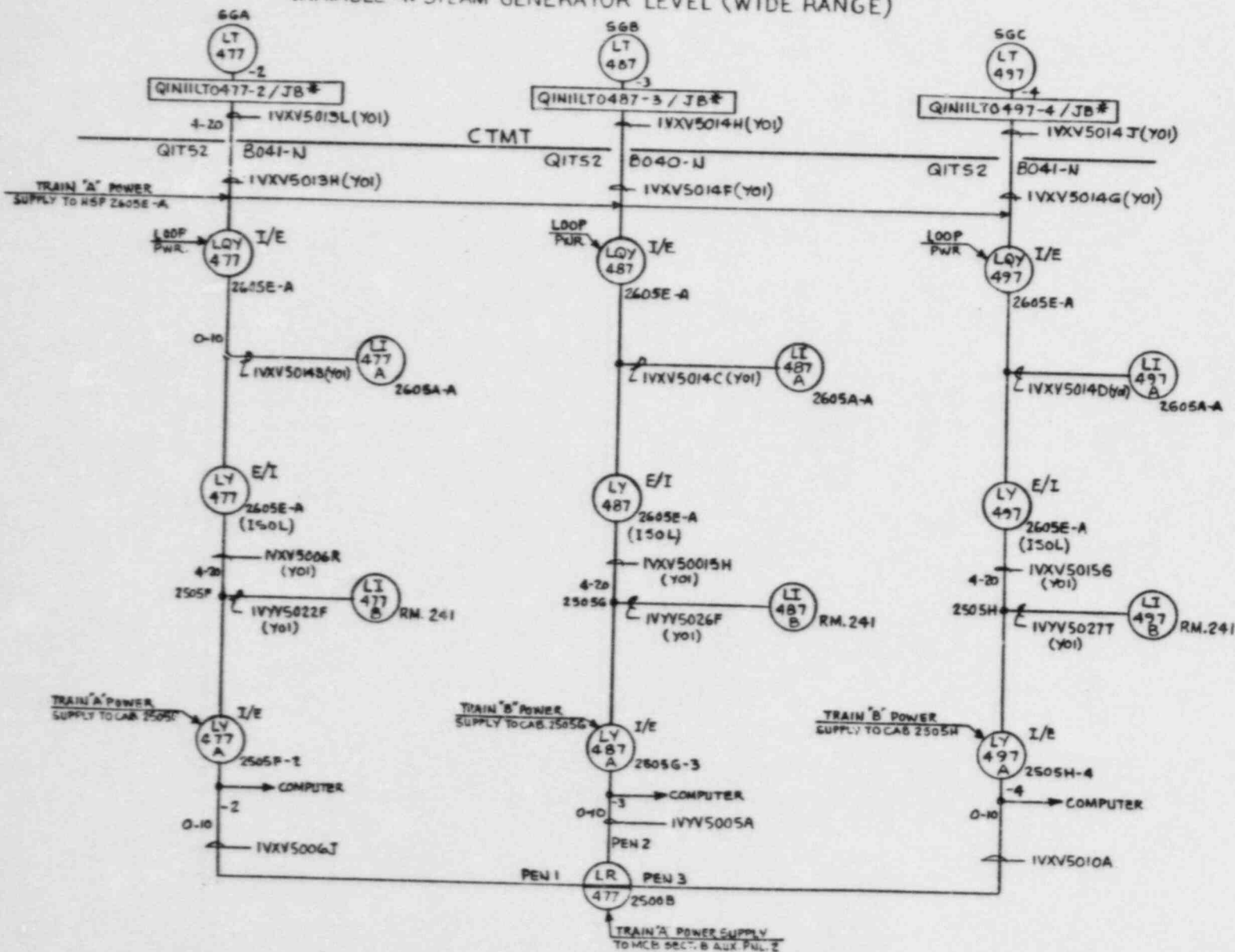
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 4: STEAM GENERATOR LEVEL (WIDE RANGE)

TPNS No(s): LT477-2, LT487-3, LT497-4

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	NO	MODIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	NO	MODIFY
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 4: STEAM GENERATOR LEVEL (WIDE RANGE)



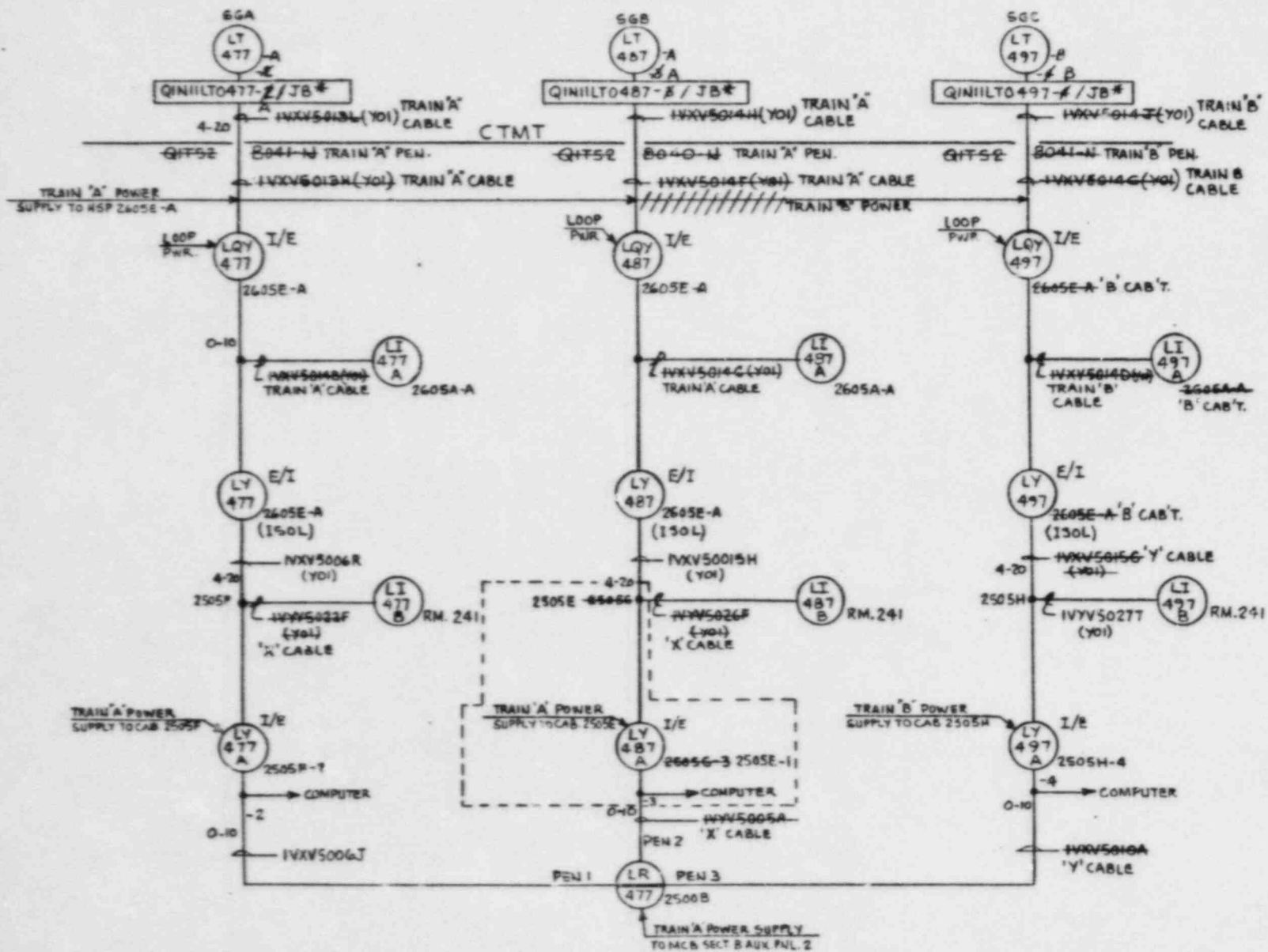
EQUIPMENT LOCATIONS

LT 477	CTMT
LT 487	CTMT
LT 497	CTMT
2605E-A	RM. 202
2605A-A	RM. 202
2505F, G, H	CONTROL ROOM
2500B	CONTROL ROOM

REFERENCE DWGS.

- W 108D501, SHT. 24
- W 737B D09
- W 737B D45
- W 737B D59
- W 2249D25
- * PCN B-84-1-2593

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 4 STEAM GENERATOR LEVEL (WIDE RANGE)
 PROPOSED MODIFICATION



WESTINGHOUSE SCOPE - - -

EQUIPMENT LOCATIONS

LT 477	CTMT
LT 487	CTMT
LT 497	CTMT
2605E-A	RM. 202
2605A-A	RM. 202
2505F, G, H	CONTROL ROOM
2500B	CONTROL ROOM

REFERENCE DWGS.

- N 108D501, SHT. 24
- N 7378D09
- N 7378D45
- N 7378D59
- N 2749D25
- * PCN B-84-1-2593

SENSOR AND DISPLAY LOCATIONS

VARIABLE 4: STEAM GENERATOR LEVEL (WIDE RANGE)

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
LT477	CTMT	LR477	Control Room
LT487	CTMT	LR477	Control Room
LT497	CTMT	LR477	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 4: STEAM GENERATOR LEVEL (WIDE RANGE)

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 4: STEAM GENERATOR LEVEL (WIDE RANGE)

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500B-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

2. REDUNDANCY

VARIABLE 4: STEAM GENERATOR LEVEL (WIDE RANGE)

EXISTING CONDITIONS

Adequate physical separation and electrical independence is not provided between the redundant loops due to the following existing conditions:

- The cables between the sensors and the isolation devices pertaining to all three instrument loops are routed as non-safeguard cables using common raceways and non-safeguard penetrations. Loops LT477 and LT497 use the same penetration.
- Some components in loops LT487 and LT497 are powered from train A, and some components are powered from train B.

PROPOSED MODIFICATION

Adequate physical separation and electrical independence will be provided by the following modifications:

Loop LT477:

- Install new train A cables between the sensor and the train A HSP. Route these cables through a train A penetration.
- Install a new train X cable for level indicator LI477B

Loop LT487:

- Relocate the electronics and auxiliary outputs from process cabinet 7 (channel 3) to process cabinet 5 (channel 1).
- Install new train A cables between the sensor and the train A HSP. Route these cables through a train A penetration.
- Install a new train X cable for level indicator LI487B.

Loop LT497:

- Install new electronics with an isolated output in a new train B hot shutdown cabinet.
- Relocate indicator LI497A from the train A HSP to the train B HSP.
- Install new train B cables between the sensor and the new train B hot shutdown cabinet. Route these cables through a train B penetration.
- Install a new train B cable for indicator LI497A.
- Install a new train Y cable between the new train B shutdown cabinet and process cabinet 8 (channel 4).

2. REDUNDANCY

VARIABLE 4: STEAM GENERATOR LEVEL (WIDE RANGE)

As a result of the proposed modification, loop LT477 or LT487 could be considered redundant to loop LT497, and the remaining loop will be used to resolve an ambiguity between the redundant loops.

7. RANGE

VARIABLE 4: STEAM GENERATOR LEVEL (WIDE RANGE)

EXISTING CONDITION

The minimum level indication of the existing instrumentation is 12 inches above the minimum specified by R. G. 1.97. The maximum level indication satisfies R. G. 1.97 guidelines.

JUSTIFICATION

The range of the existing instrumentation is acceptable because:

1. The range is limited only by the location of the instrument connections on the steam generators. The transmitters measure the full range between the instrument connections.
2. The specific range deviation is that the 12 inches between the top of the tube sheet and the centerline of the lower instrument connection is not measured. This is less than 2% of the volume between the tube sheet and the upper instrument connection. Therefore the volume not measured is insignificant.
3. It is not considered practical to perform modifications to satisfy R.G. 1.97 since new steam generator wide range instrument taps would have to be added.

8. EQUIPMENT IDENTIFICATION

VARIABLE 4: STEAM GENERATOR LEVEL (WIDE RANGE)

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

11. HUMAN FACTOR

VARIABLE 4: STEAM GENERATOR LEVEL (WIDE RANGE)

EXISTING CONDITION

Level indication is by an indicating strip chart recorder that fails as-is on loss of power.

PROPOSED MODIFICATION

To minimize the potential for operator confusion caused by the fail-as-is display, it is proposed to add a power available indicator to the recorder. No additional changes are required for this variable to satisfy the Human Factor Guidelines.

REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 5: STEAM GENERATOR LEVEL (NARROW RANGE)

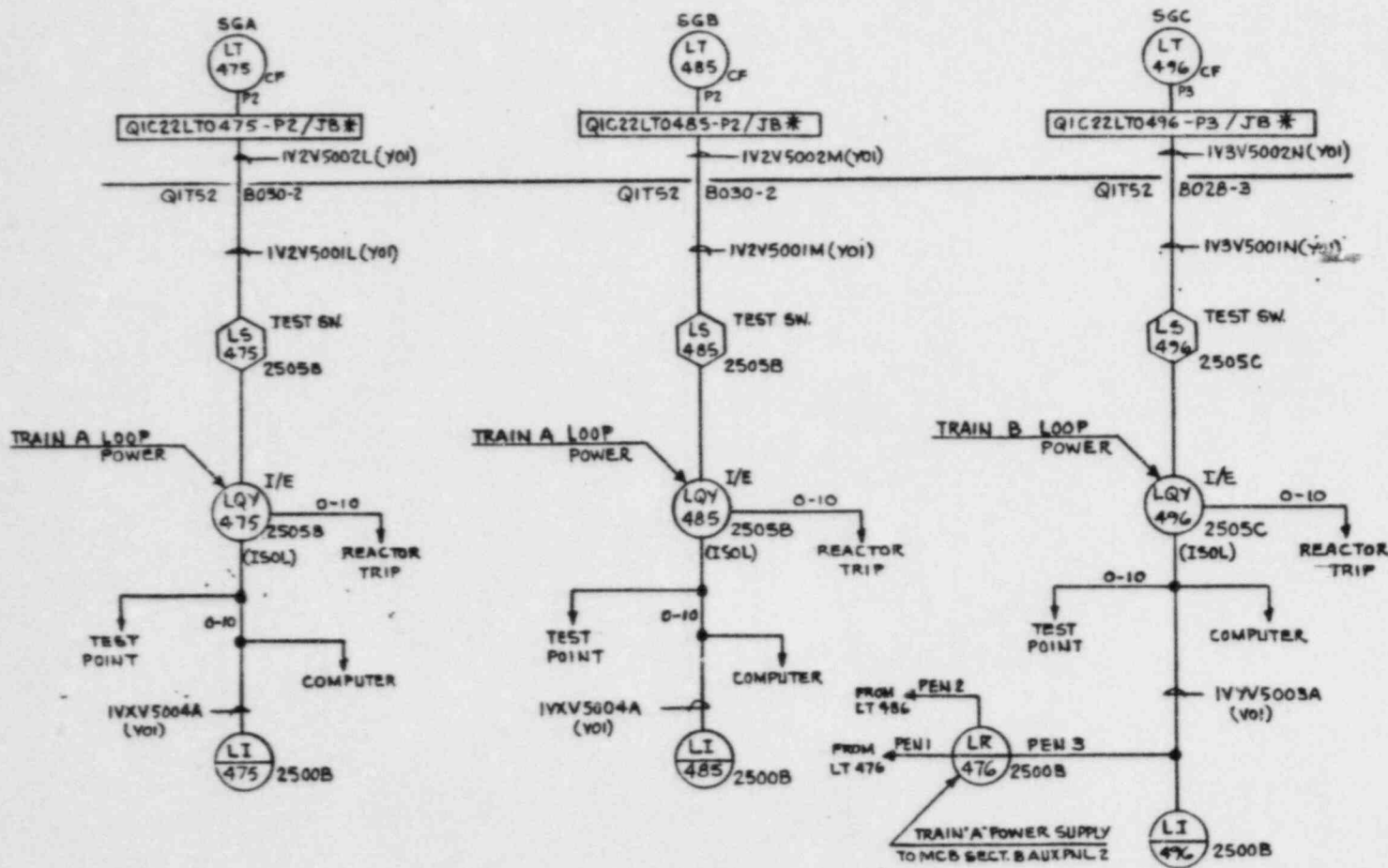
TPNS No(s): LT475-2, LT485-2, LT496-3

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 5: STEAM GENERATOR LEVEL (NARROW RANGE)

EQUIPMENT LOCATIONS

LT 475	CTMT
LT 485	CTMT
LT 496	CTMT
2505B, C	CONTROL ROOM
2500B	CONTROL ROOM



REFERENCE DWGS:

- * PCN B-84-1-2593
- W 7377D23
- W 7377D43
- W 108D501, SH. 7

SENSOR AND DISPLAY LOCATIONS

VARIABLE 5: STEAM GENERATOR LEVEL (NARROW RANGE)

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
LT475	CTMT	LI475	Control Room
LT485	CTMT	LI485	Control Room
LT496	CTMT	LI496	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 5: STEAM GENERATOR LEVEL (NARROW RANGE)

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 5: STEAM GENERATOR LEVEL (NARROW RANGE)

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500B-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

8. EQUIPMENT IDENTIFICATION

VARIABLE 5: STEAM GENERATOR LEVEL (NARROW RANGE)

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 6: PRESSURIZER LEVEL

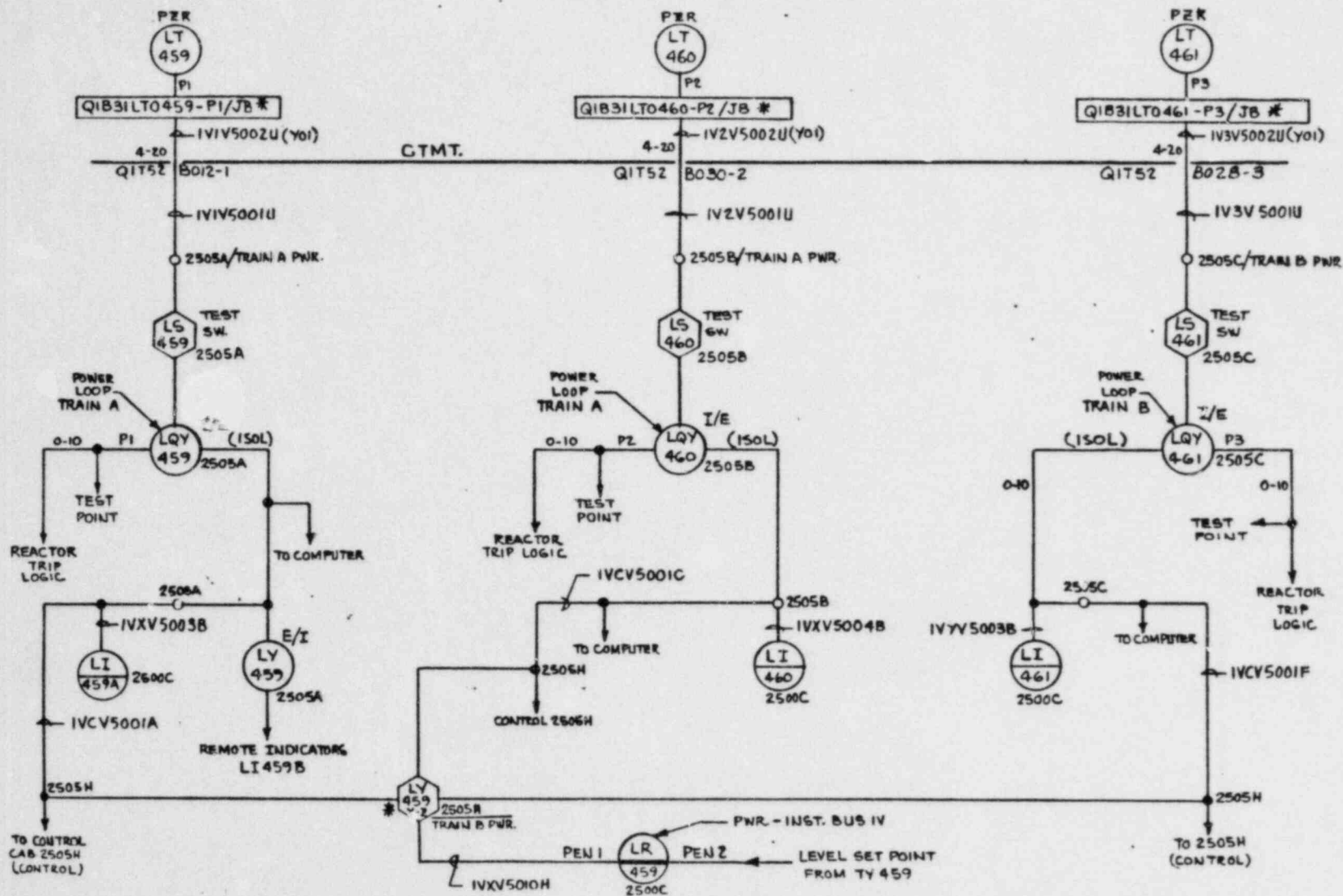
TPNS No(s): LT459-P1, LT460-P2, LT461-P3

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	YES	
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTION LOOP BLOCK DIAGRAM
VARIABLE 6: PRESSURIZER LEVEL

EQUIPMENT LOCATIONS

LT 459	CTMT
LT 460	CTMT
LT 461	CTMT
2505A, B, G, H	CONTROL ROOM
2500C	CONTROL ROOM



* SWITCH OR MCB AUTUATES RELAYS IN CABINET 2505H

REFERENCE DWGS.

- W 7377D14 (LT 459)
 - W 7377D30 (LT 460)
 - W 7377D48 (LT 461)
 - W 7378D53 (LY 459Y-2)
- * PCB-83-1548

SENSOR AND DISPLAY LOCATIONS
VARIABLE 6: PRESSURIZER LEVEL

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
LT459	CTMT	LI459A	Control Room
LT460	CTMT	LI460	Control Room
LT461	CTMT	LI461	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 6: PRESSURIZER LEVEL

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 6: PRESSURIZER LEVEL

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500C-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

7. RANGE

VARIABLE 6: PRESSURIZER LEVEL

EXISTING CONDITION

The minimum level indication of the existing instrumentation is above the minimum level specified by R. G. 1.97 and the maximum level indication is below the maximum level specified by R. G. 1.97.

JUSTIFICATION

The range of the existing instrumentation is acceptable because:

1. The range is limited only by the location of the instrument connections on the pressurizer. The transmitters measure the full range between the instrument connections.
2. The specific range deviation is that the volumes enclosed by the bottom hemispherical head and the upper hemispherical head are not measured. The volume measured represents approximately 89% of the pressurizer.
3. It is not practical to perform modifications to satisfy R. G. 1.97 since new pressurizer instrument taps would have to be added.
4. The volume measured is sufficient for the operator to take required manual actions and to ensure the proper operation of the pressurizer.

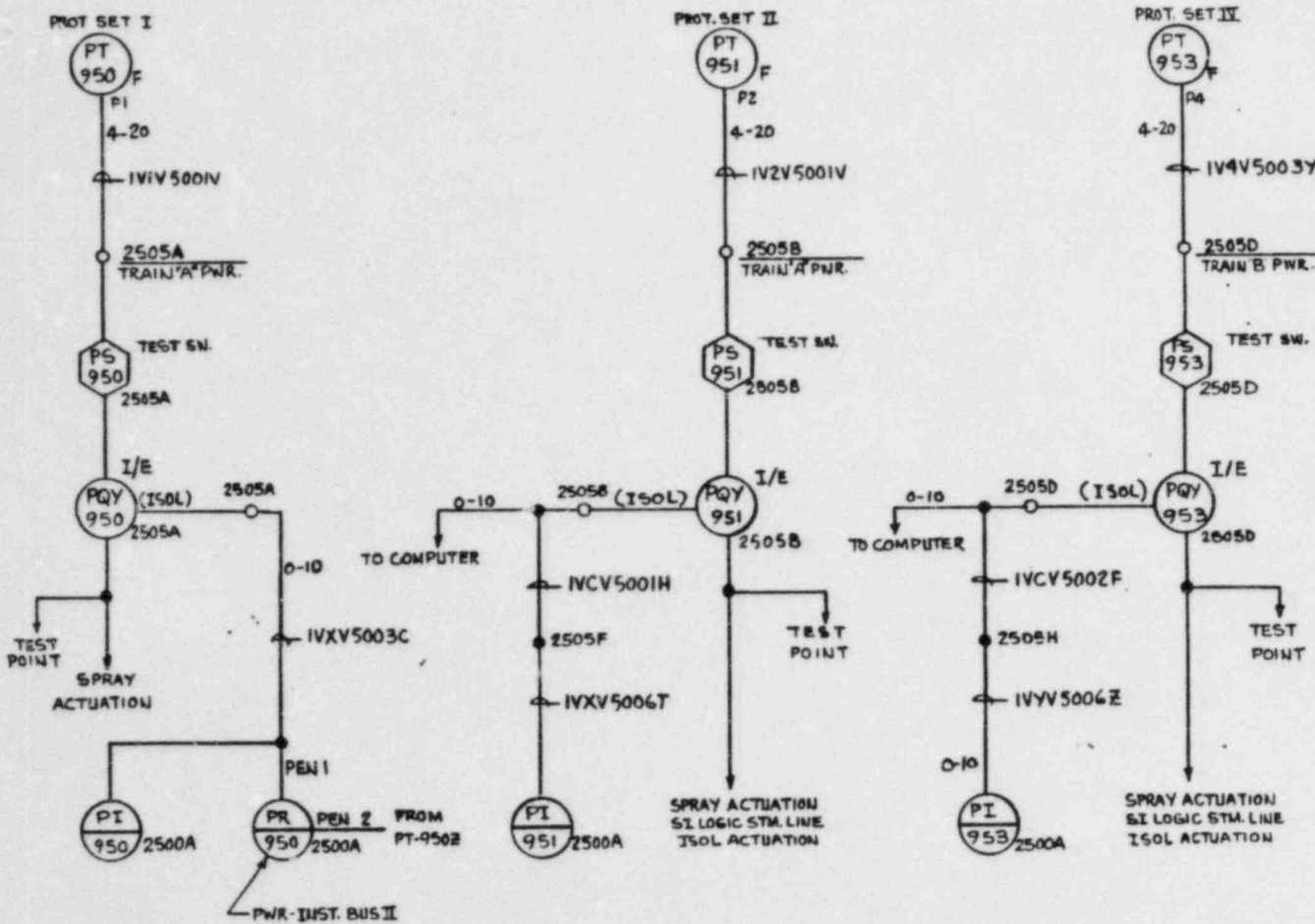
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 7: CONTAINMENT PRESSURE (NORMAL RANGE)

TPNS No(s): PT950-1, PT951-2, PT953-4

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY/MODIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	YES	
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 7: CONTAINMENT PRESSURE (NORMAL RANGE)



EQUIPMENT LOCATIONS

PT 950	RM. 223
PT 951	RM. 223
PT 953	RM. 223
2505A, B, D, F, H	CONTROL ROOM
2500A	CONTROL ROOM

REFERENCE DWGS:

- W 7377 D16
- W 7377 D33
- W 7377 D72
- W 108D501 SHT. 14
- W 1095E85 RECORDER
- D-175142

SENSOR AND DISPLAY LOCATIONS

VARIABLE 7: CONTAINMENT PRESSURE (NORMAL RANGE)

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
PT950	RM. 223	PI950	Control Room
PT951	RM. 223	PI951	Control Room
PT953	RM. 223	PI953	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 7: CONTAINMENT PRESSURE (NORMAL RANGE)

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The containment pressure transmitters Q1E13PT0950-P1, Q1E13PT0951-P2, and Q1E13PT0953-P4, Barton Model 396, do not have radiation qualification documentation.

PROPOSED MODIFICATION

The existing transmitters will be replaced with environmentally qualified transmitters.

1.B SEISMIC QUALIFICATION

VARIABLE 7: CONTAINMENT PRESSURE (NARROW RANGE)

Components identified on the Seismic Qualification Compliance Review Sheet(s) for this variable which have "IEEE 344-1971" referenced, have not been reviewed for compliance to R.G. 1.100 (requirement of R.G. 1.97). Justification for non-compliance to R.G. 1.100 (IEEE 344-1975) is provided in Appendix B.

The installed components identified on the Seismic Qualification Compliance Review Sheet(s) as having insufficient seismic documentation are addressed below.

EXISTING CONDITION

No seismic qualification documentation is available for the pressure transmitters Q1E13PT950-P1, Q1E13PT951-P2, and Q1E13PT953-P4.

PROPOSED MODIFICATION

The existing transmitters will be replaced with seismically qualified transmitters.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

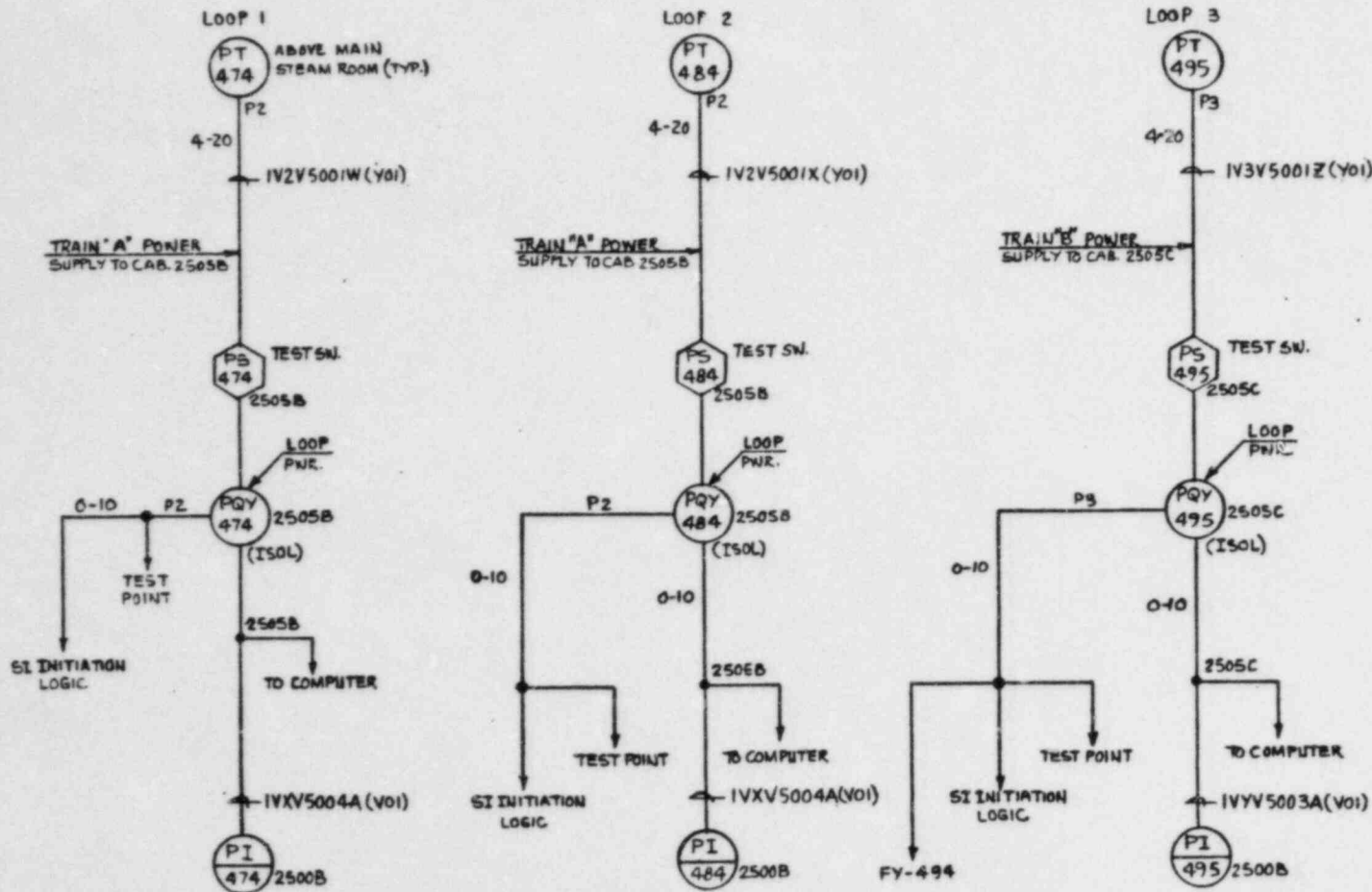
VARIABLE 8: MAIN STEAM LINE PRESSURE

TPNS No(s): PT474-2, PT484-2, PT495-3

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	N/A	
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	YES	
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
VARIABLE 8: MAIN STEAM LINE PRESSURE

EQUIPMENT LOCATIONS	
PT 474	RM. 462
PT 484	RM. 462
PT 495	RM. 464
2505B,C	CONTROL ROOM
2500B	CONTROL ROOM



REFERENCE DWGS:

- Y 108D501
- W 7377D31
- W 7377D55

SENSOR AND DISPLAY LOCATIONS

VARIABLE 8: MAIN STEAM LINE PRESSURE

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
PT474	Rm. 462	PI474	Control Room
PT484	Rm. 462	PI484	Control Room
PT495	Rm. 464	PI495	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.B SEISMIC QUALIFICATION

VARIABLE 8: MAIN STEAM LINE PRESSURE

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500B-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

7. RANGE

VARIABLE 8: MAIN STEAM LINE PRESSURE

EXISTING CONDITION

The maximum pressure indication is 90.5 psig below the R. G. 1.97 Type D range guidelines. The minimum pressure indication satisfies R. G. 1.97. The range of pressure indication satisfies the R. G. 1.97 Type A requirements.

JUSTIFICATION

The range of the existing instrumentation is acceptable because the highest actuation setpoint of the Main Steam Safety valves is 1129 psig. Allowing for 3% accumulation above this actuation point (1129 psig) the maximum credible steam line pressure is 1163 psig which is within the indicated range of the existing instrumentation.

REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 9: REFUELING WATER STORAGE TANK LEVEL

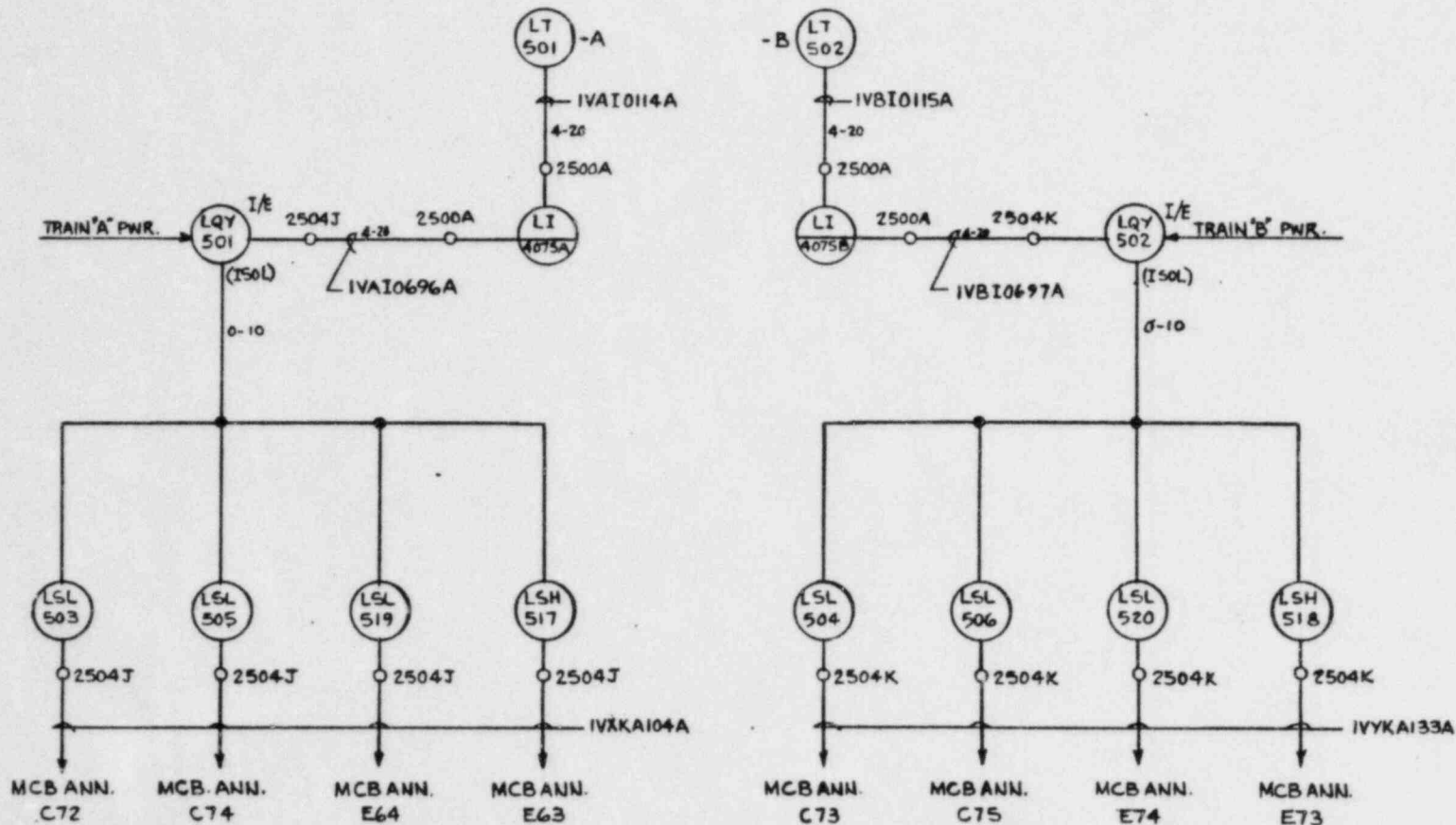
TPNS No(s): LT501-A, LT502-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	N/A NO	JUSTIFY/MODIFY
2. REDUNDANCY	NO	MODIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES NO	MODIFY
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	YES	
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
VARIABLE 9: RWST LEVEL

EQUIPMENT LOCATIONS

LT 501	YARD
LT 502	YARD
2500A	CONTROL ROOM
2504J, K	CONTROL ROOM



REFERENCE DWGS:

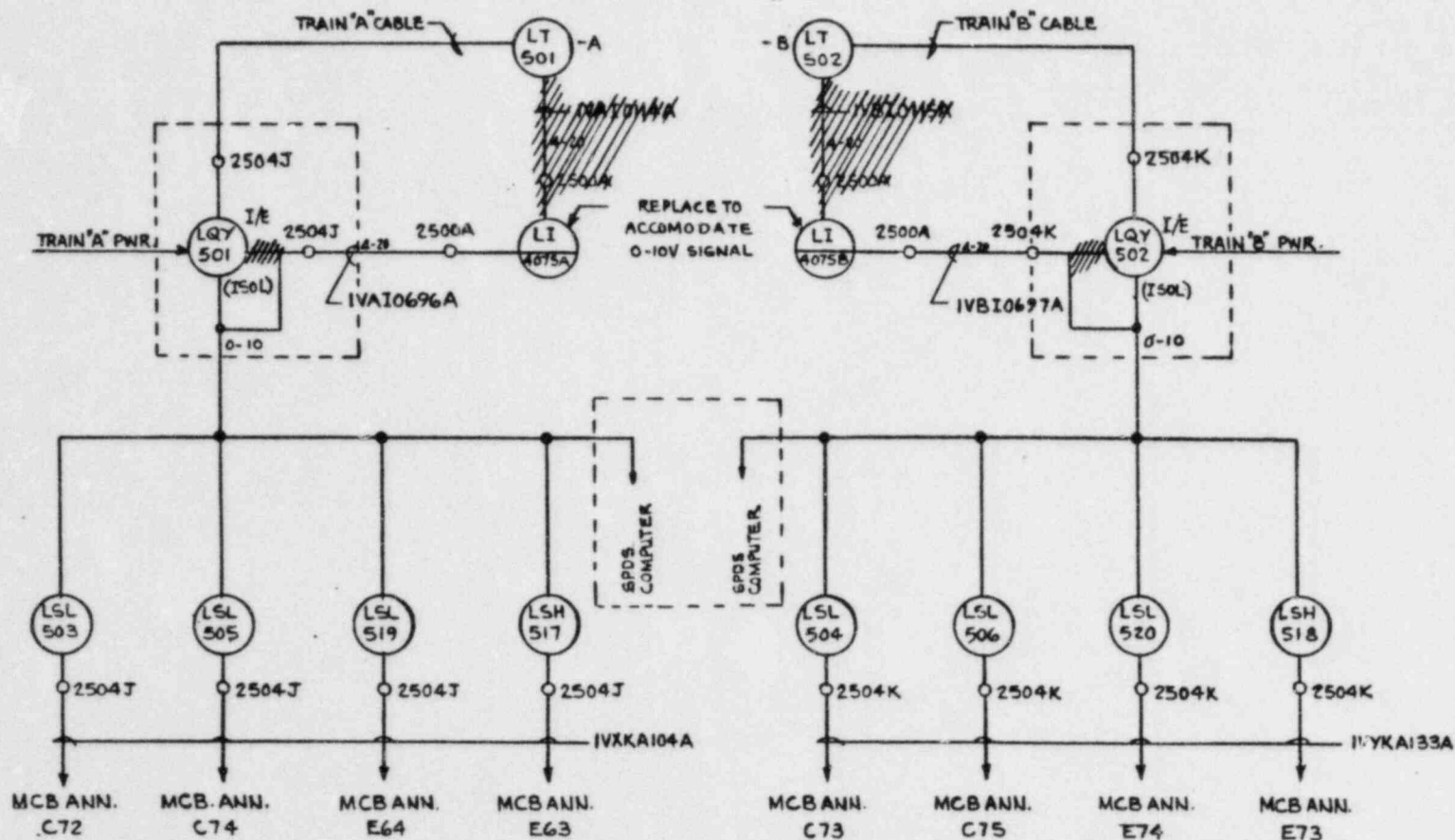
W 7408D13 (LT501)
W 7408D47 (LT502)
PCNS-82-1215.

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 9: RWST LEVEL
 PROPOSED MODIFICATIONS

WESTINGHOUSE SCOPE ---

EQUIPMENT LOCATIONS

LT 501	YARD
LT 502	YARD
2500A	CONTROL ROOM
2504J, K	CONTROL ROOM



REFERENCE DWGS:

- W 7408013 (LT501)
- W 7406047 (LT502)
- PCNS-82-1215.

SENSOR AND DISPLAY LOCATIONS

VARIABLE 9: REFUELING WATER STORAGE TANK LEVEL

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
LT501	Yard	LI4075A	Control Room
LT502	Yard	LI4075B	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.B SEISMIC QUALIFICATION

VARIABLE 9: REFUELING WATER STORAGE TANK LEVEL

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

2. REDUNDANCY

VARIABLE 9: REFUELING WATER STORAGE TANK LEVEL

EXISTING CONDITIONS

Adequate physical separation is not provided between the redundant loops due to the following existing conditions:

- The cables between the sensors and the isolation devices pertaining to both instrument loops are terminated in the MCB, and as such, they are not separated from miscellaneous cables inside the MCB.

PROPOSED MODIFICATION

Adequate physical separation will be provided by the following modifications:

Loop LT501:

- Delete the cable between the sensor and the MCB indicator and install a new train A cable between the sensor and BOP panel J.
- Rewire the MCB indicator to the isolated output of LQY501 in BOP panel J.
- Replace or modify the MCB indicator to accommodate a 0-10V signal.

Loop LT502:

- Delete the cable between the sensor and the MCB indicator and install a new train B cable between the sensor and BOP panel K.
- Rewire the MCB indicator to the isolated output of LQY502 in BOP panel K.
- Replace or modify the MCB indicator to accommodate a 0-10V signal.

As a result of the proposed modification, loop LT501 can be considered redundant to loop LT502.

6. DISPLAY AND RECORDING

VARIABLE 9: REFUELING WATER STORAGE TANK LEVEL

EXISTING CONDITION

The variable is not recorded in any way.

PROPOSED MODIFICATION

Add at least one instrument loop to the SPDS computer following the installation of the SPDS equipment. The SPDS computer will then be programmed to record this variable.

7. RANGE

VARIABLE 9: REFUELING WATER STORAGE TANK LEVEL

EXISTING CONDITION

The maximum level indication of the existing instrumentation is 1 ft. below the maximum level specified by R. G. 1.97. The minimum level indication satisfies the R. G. 1.97 guidelines.

JUSTIFICATION

The range of the existing instrumentation is acceptable because:

1. The 0-40 foot level indication envelops the Technical Specification volume requirement which is sufficient to mitigate any design basis event.
2. The indicated range provides the operator with information to verify water volume for normal operation and to perform ECCS switchover from injection to recirculation.

REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 10: CONTAINMENT WATER LEVEL

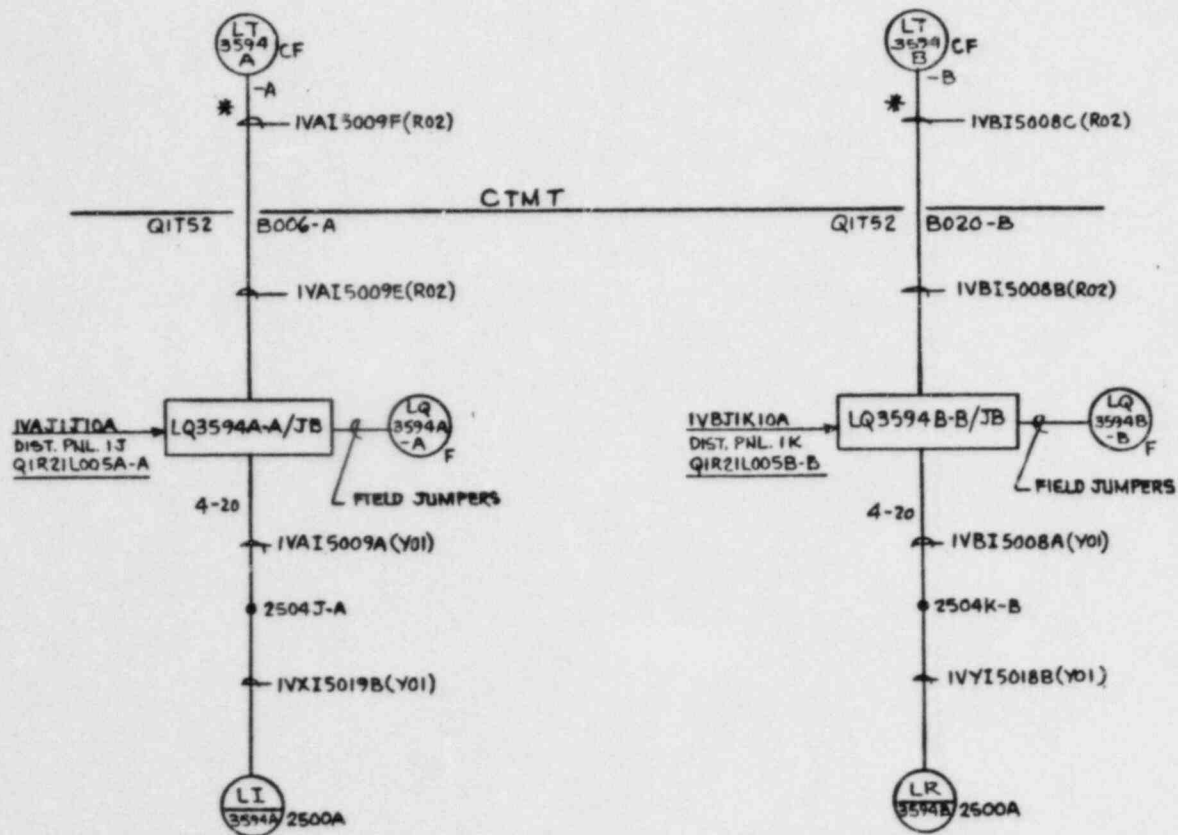
TPNS No(s): LT3594A-A, LT3594B-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	NO	MODIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	NO	MODIFY
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	NO	MODIFY
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE IO: POST ACCIDENT CONTAINMENT WATER LEVEL

EQUIPMENT LOCATIONS

LT3594A	CTMT
LT3594B	CTMT
2504 J, K	CONTROL ROOM
2500A	CONTROL ROOM



* NON-STANDARD SIGNAL LEVEL.

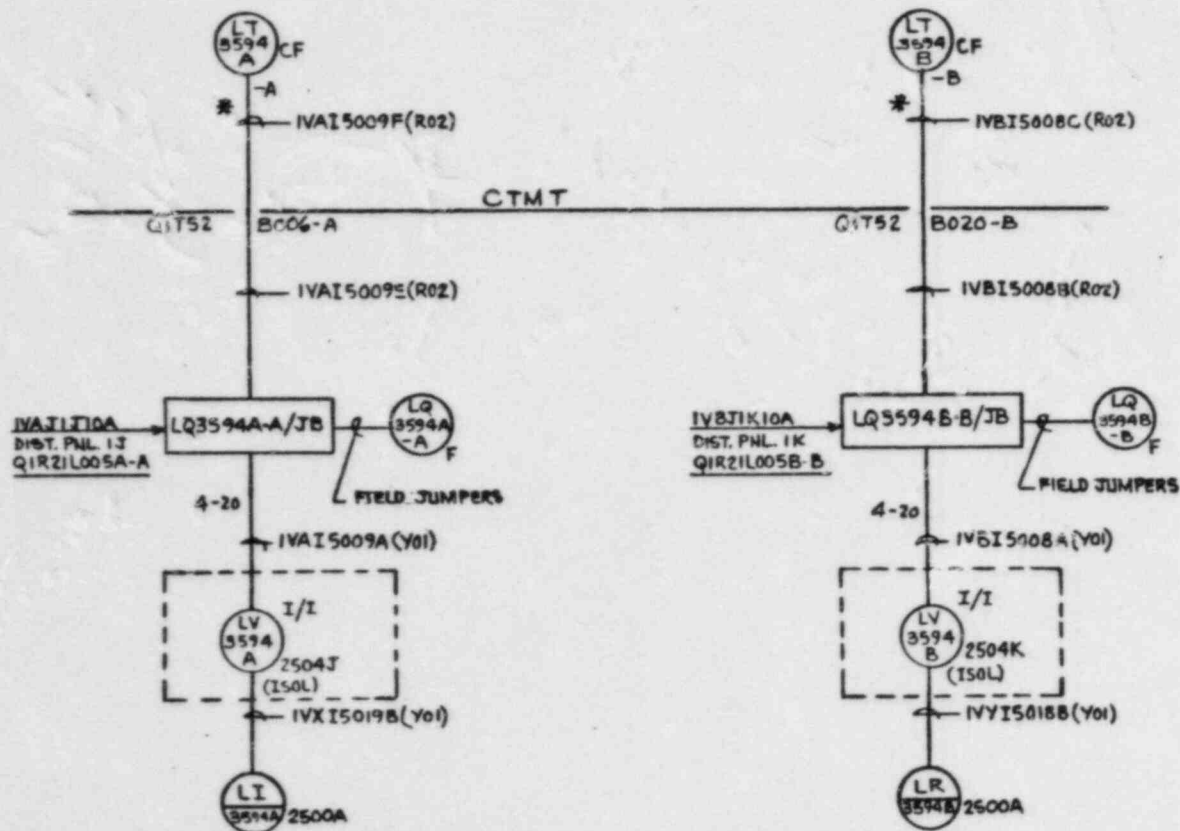
REFERENCE DWGS.

- W 7408D11
- W 1095E85/SH. 2
- PCN B-79-539
- D-177076, SH. 5215 (LT-3594A)
- D-181627 (LT-3594A)
- D-177076, SH. 5216 (LR-3594B)
- D-181628 (LR-3594B)

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE ID: POST ACCIDENT CONTAINMENT WATER LEVEL
 PROPOSED MODIFICATIONS

EQUIPMENT LOCATIONS

LT3594A	CTMT
LT3594B	CTMT
2504J,K	CONTROL ROOM
2500A	CONTROL ROOM

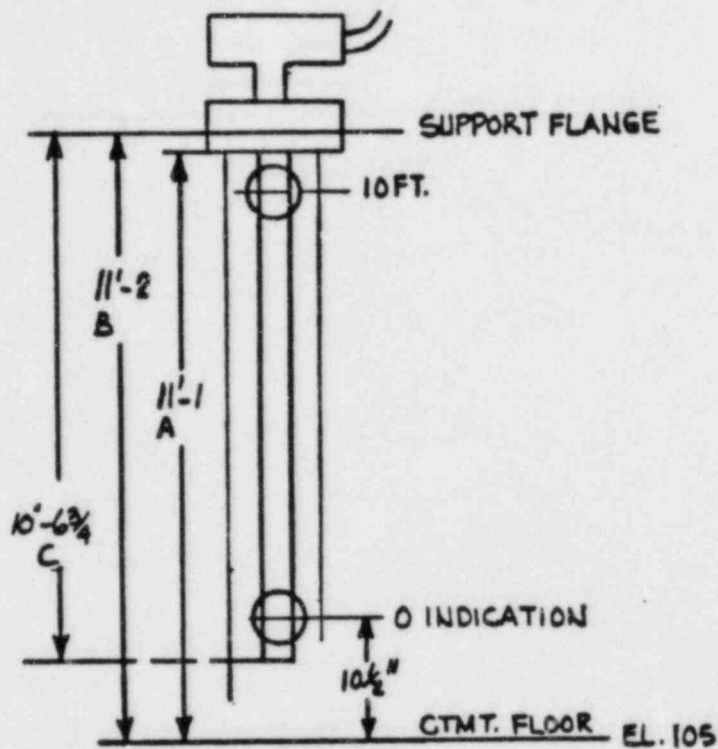


* NON-STANDARD SIGNAL LEVEL.

REFERENCE DWGS.

- W 7408DII
- W 1095E85/SH. 2
- PCN B-79-539
- D-177076, SH. 5215 (LI-3594A)
- D-181627 (LT-3594A)
- D-177076, SH. 5216 (LR-3594B)
- D-181628 (LT-3594B)

INSTALLATION SKETCH VARIABLE 10: CONTAINMENT WATER LEVEL



NOTE:

A - DWG. D-180120.

B - CALCULATED, ALLOWING 1" FLANGE THICKNESS.

C - CALCULATED PER VENDOR DWG. XM.36495 (U-258321)
VENDOR DIMENSION "B" = INST. SPAN 10' + 6³/₄ INCHES.

SENSOR AND DISPLAY LOCATIONS

VARIABLE 10: CONTAINMENT WATER LEVEL

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
LT3594A	CTMT	LI3594A	Control Room
LT3594B	CTMT	LR3594B	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 10: CONTAINMENT WATER LEVEL

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 10: CONTAINMENT WATER LEVEL

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

2. REDUNDANCY

VARIABLE 10: CONTAINMENT WATER LEVEL

EXISTING CONDITIONS

Adequate physical separation is not provided between the redundant loops due to the following existing conditions:

- The wiring of the MCB level indicators pertaining to both instrument loops are bundled together in the MCB. None of the loops are provided with an isolation device between the sensor and the MCB indicator.

PROPOSED MODIFICATION

Adequate physical separation will be provided by the following modifications:

Loop LT3594A:

- Install new electronics with an isolated output in BOP panel J.

Loop LT3594B:

- Install new electronics with an isolated output in BOP panel K.

As a result of the proposed modification, loop LT3594A can be considered redundant to loop LT3594B.

7. RANGE

VARIABLE 10: CONTAINMENT WATER LEVEL

EXISTING CONDITION

The minimum level indication of the existing instrumentation is 62,000 gallons above the minimum level specified by R. G. 1.97. The maximum level indication satisfies R. G. 1.97 guidelines.

JUSTIFICATION

The range of the existing instrumentation is acceptable since this is a float type level measurement device and therefore the minimum level indication is limited by physical installation constraints to 62,000 gallons. There is no need to monitor the containment water level below 62,000 gallons since no operator actions are required below the 62,000 gallon level.

8. EQUIPMENT IDENTIFICATION

VARIABLE 10: CONTAINMENT WATER LEVEL

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

9. INTERFACE

VARIABLE 10: CONTAINMENT WATER LEVEL

EXISTING CONDITIONS

- Interfaces between the class 1E and non-class 1E portions of each instrument loop are made without an isolation device.

PROPOSED MODIFICATION

Class 1E isolators will be added to each loop as described below:

<u>LOOP</u>	<u>LOCATION OF ISOLATOR</u>	<u>ROOM</u>
LT 3594A	NGB2504J	Control Room
LT 3594B	NGB2504K	Control Room

See the Redundancy section, Page 10.2-1.

11. HUMAN FACTOR

VARIABLE 10: CONTAINMENT WATER LEVEL

EXISTING CONDITION

A loss of power to the level receivers (LQ3594A,B) would cause the level indicators to read zero, the normal indication.

PROPOSED MODIFICATION

The plant computer will be used to alarm on loss of signal. The computer input, added as an input to the Safety Parameter Display System, will have a live zero so that a loss of signal due to instrument failure or power failure can be detected by the computer.

REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 11: CONDENSATE STORAGE TANK LEVEL

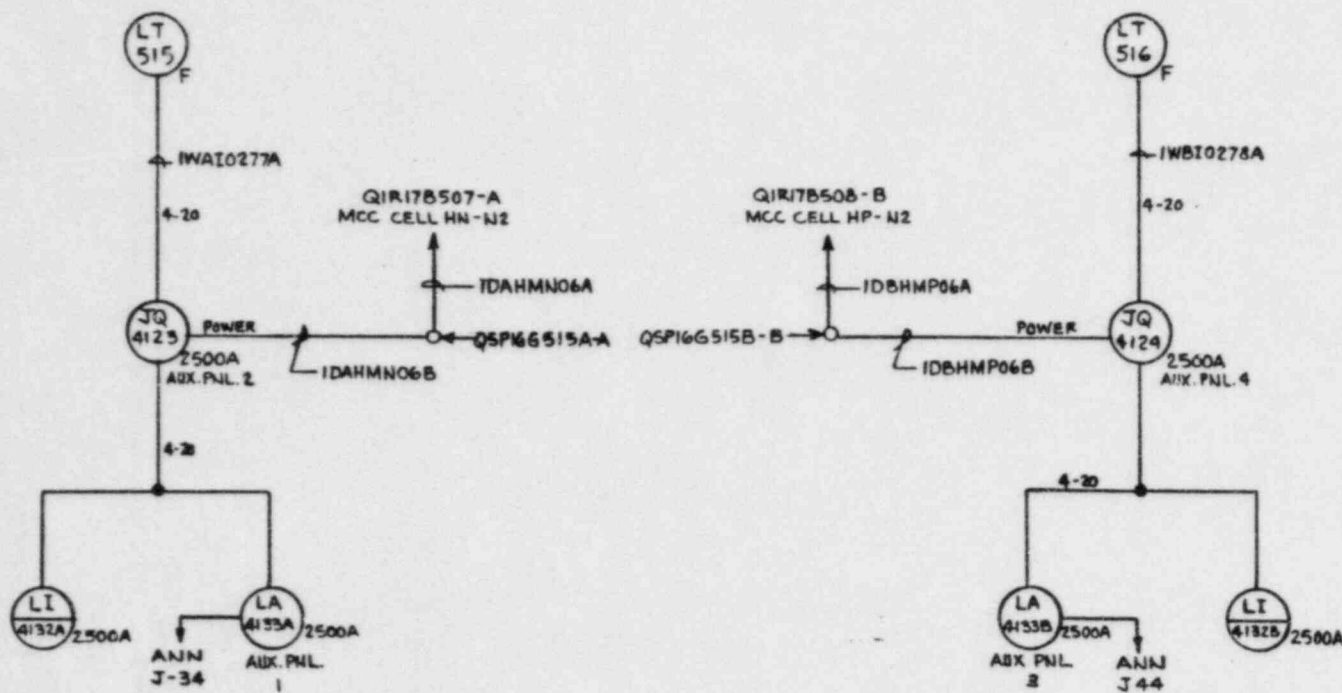
TPNS No(s): LT515-A, LT516-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	N/A NO	JUSTIFY/MODIFY
2. REDUNDANCY	NO	MODIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES NO	MODIFY
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	YES	
9. INTERFACES (isolation)	NO	MODIFY
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE II: CONDENSATE STORAGE LEVEL

EQUIPMENT LOCATIONS

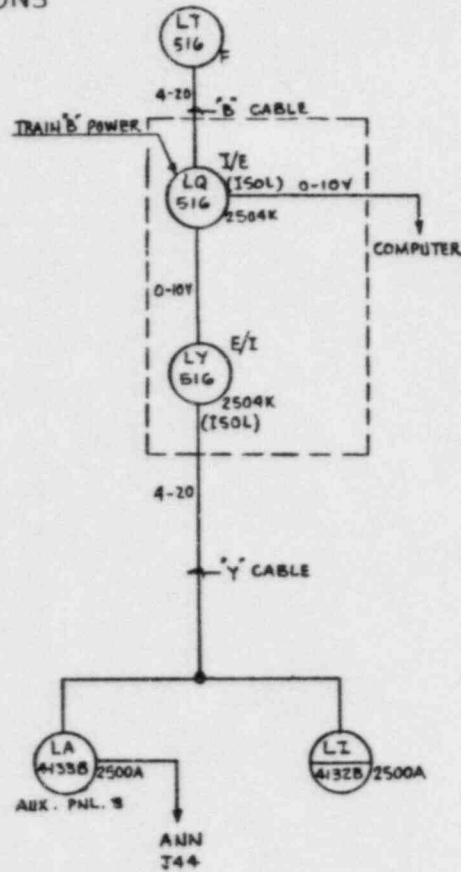
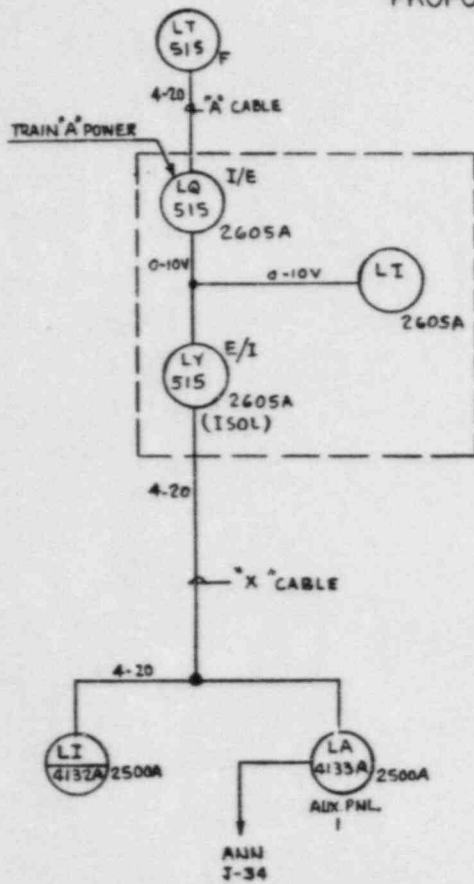
LT 515	YARD
LT 516	YARD
2500A	CONTROL ROOM



REFERENCE DWGS:

D-181861, 6HT. 1 & 2
 U-169836
 D-172544

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE II: CONDENSATE STORAGE LEVEL
 PROPOSED MODIFICATIONS



REFERENCE DWGS:

- D-181861, SH. 1 & 2
- U169836
- D-172544

SENSOR AND DISPLAY LOCATIONS

VARIABLE 11: CONDENSATE STORAGE TANK LEVEL

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
LT515	Yard	LI4132A	Control Room
LT516	Yard	LI4132B	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.B SEISMIC QUALIFICATION

VARIABLE 11: CONDENSATE STORAGE TANK LEVEL

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

2. REDUNDANCY

VARIABLE 11: CONDENSATE STORAGE TANK LEVEL

EXISTING CONDITIONS

Adequate physical separation is not provided between the redundant loops due to the following existing conditions:

- The wiring of the MCB level indicators pertaining to both instrument loops is routed inside the MCB, with the power supply modules of both loops located inside the MCB. None of the loops are provided with an isolation device between the sensor and the MCB indicator.

PROPOSED MODIFICATION

Adequate physical separation will be provided by the following modifications:

Loop LT515:

- Install new electronics with an isolated output in the train A HSP.
- Install a new level indicator in the train A HSP.
- Install a new train A cable between the sensor and the train A HSP, and a new train X cable between the train A HSP and the MCB.
- Rewire the MCB indicator and alarm module to the isolated output in the train A HSP through the new train X cable.

Note: In addition to complying with redundancy guidelines of R. G. 1.97, the proposed modification covers the requirements of 10CFR50 Appendix R (level indicator on HSP).

Loop LT516:

- Install new electronics with an isolated output in BOP panel K.
- Install a new train B cable between the sensor and BOP panel K, and a new train Y cable between BOP panel K and the MCB.
- Rewire the MCB indicator and alarm module to the isolated output in BOP panel K through the new train Y cable.

As a result of the proposed modification, loop LT515 can be considered redundant to loop LT516.

6. DISPLAY AND RECORDING

VARIABLE 11: CONDENSATE STORAGE TANK LEVEL

EXISTING CONDITION

The variable is not recorded in any way.

PROPOSED MODIFICATION

Add the instrument loop associated with LT516 to the SPDS computer following the installation of the SPDS equipment. The SPDS computer will then be programmed to record this variable.

9. INTERFACE

VARIABLE 11: CONDENSATE STORAGE TANK LEVEL

EXISTING CONDITION

- Interfaces between the class 1E and non-class 1E portions of each instrument loop are made without an isolation device.

PROPOSED MODIFICATION

Class 1E isolators will be added to each loop as described below:

<u>LOOP</u>	<u>LOCATION OF ISOLATOR</u>	<u>ROOM</u>
LT 515	HSP-A	202
LT 516	NGB2504K	Control Room

See the Redundancy section, Page 11.2-1.

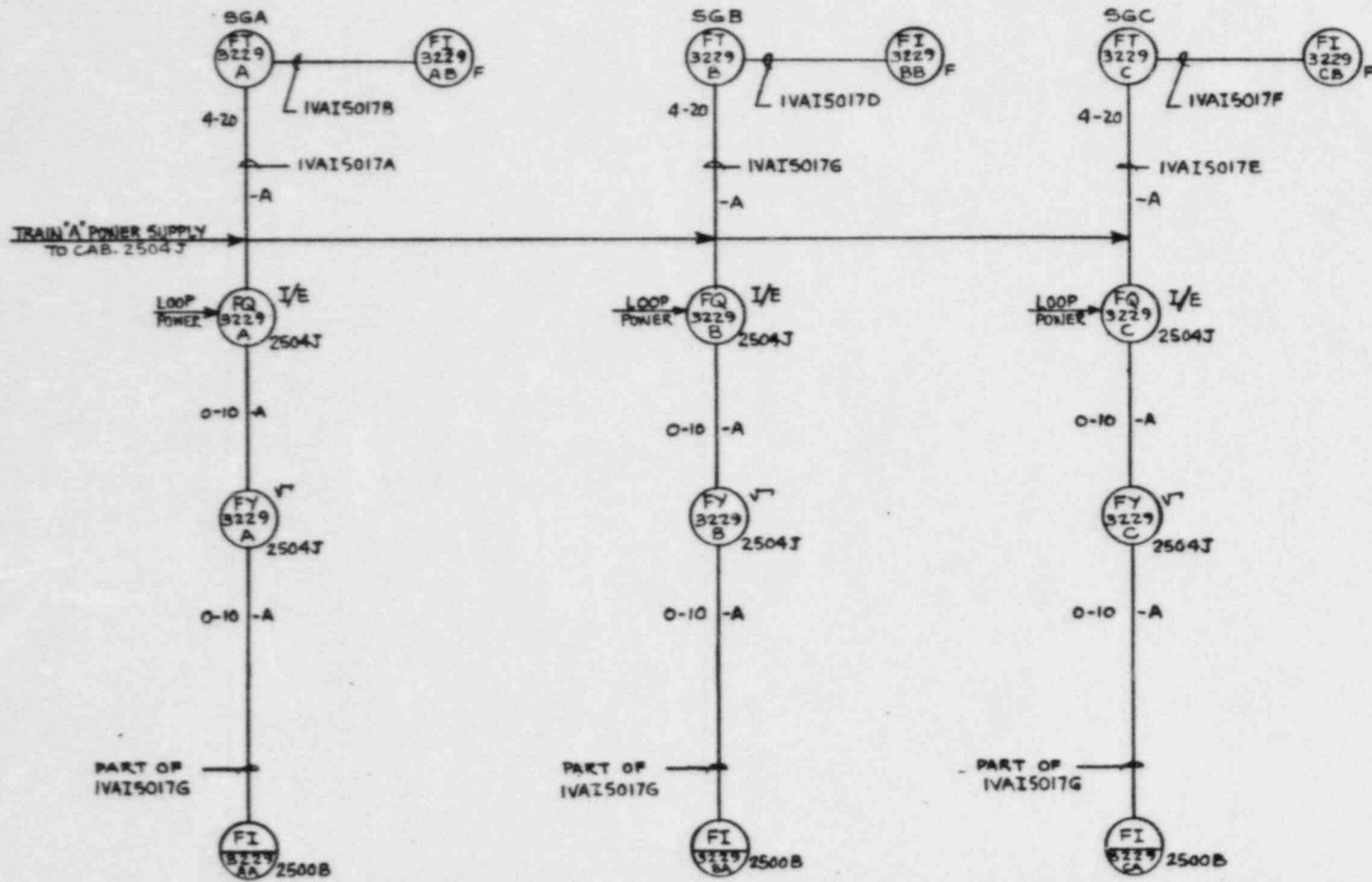
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 12: AUXILIARY FEEDWATER FLOW

TPNS No(s): FT3229A, FT3229B, FT3229C

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	NO	MODIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	NO	MODIFY
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	NO	MODIFY
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 12: AUXILIARY FEEDWATER FLOW



EQUIPMENT LOCATIONS

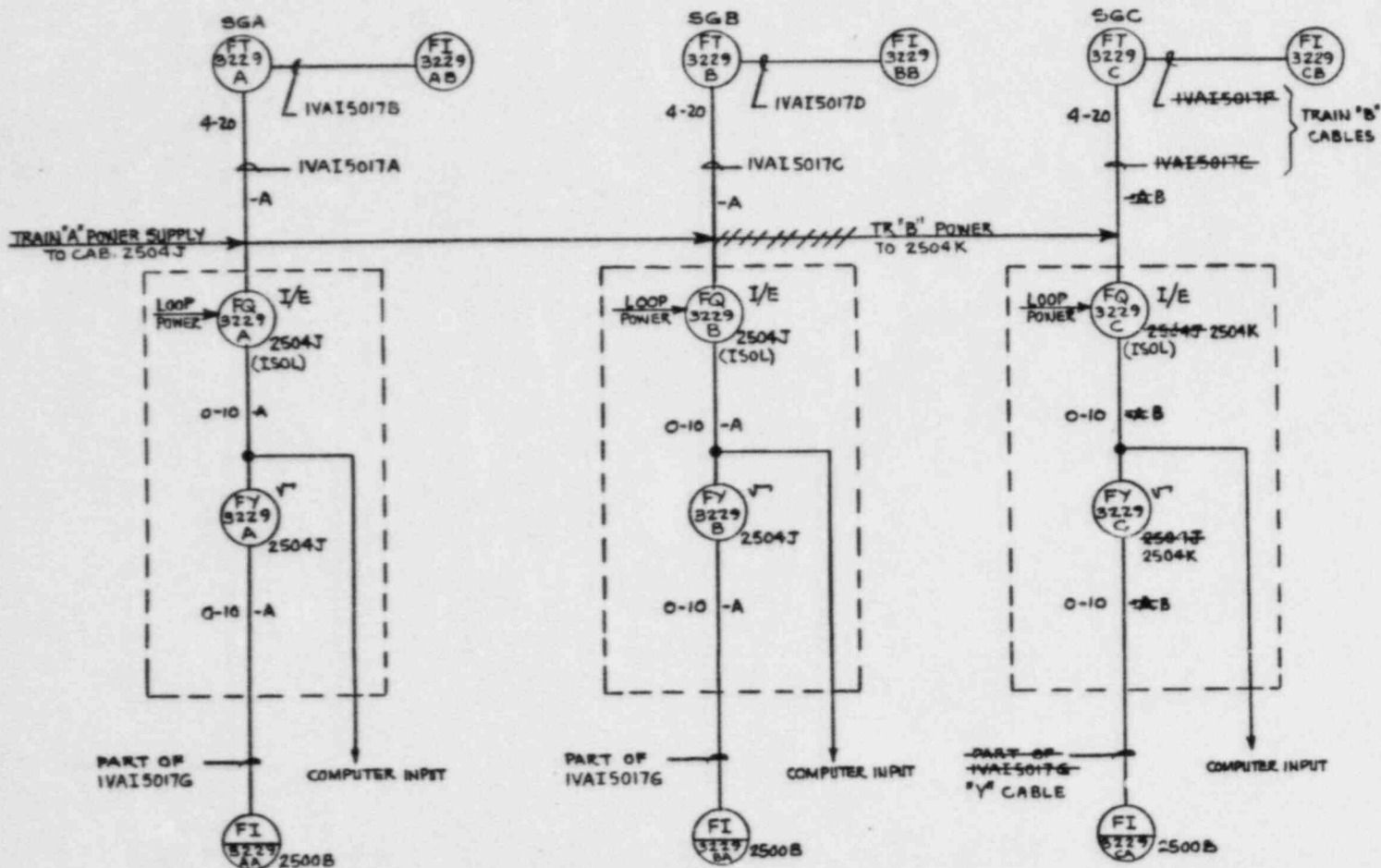
FT3229A	RM. 189
FI3229AB	RM. 190
FT3229B	RM. 189
FI3229BB	RM. 190
FT3229C	RM. 194
FI3229CB	RM. 190
2504J	CONTROL ROOM
2500B	CONTROL ROOM

REFERENCE DWGS.

W 7408D17
 D-175007

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 12: AUXILIARY FEEDWATER FLOW
 PROPOSED MODIFICATIONS

WESTINGHOUSE SCOPE - - - -



REFERENCE DWGS.

W 7408D17
 D - 175007

SENSOR AND DISPLAY LOCATIONS

VARIABLE 12: AUXILIARY FEEDWATER FLOW

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
FT3229A	RM. 189	FI3229AA	Control Room
FT3229B	RM. 189	FI3229BA	Control Room
FT3229C	RM. 194	FI3229CA	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 12: AUXILIARY FEEDWATER FLOW

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 12: AUXILIARY FEEDWATER FLOW

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

No seismic qualification documentation is available for the local flow indicators N1N23FI3229AB-N, N1N23FI3229BB-N, and N1N23FI3229CB-N.

PROPOSED MODIFICATION

The existing local indicators will be replaced with seismically qualified indicators.

EXISTING CONDITION

Reference: NGMCB2500B-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

2. REDUNDANCY

VARIABLE 12: AUXILIARY FEEDWATER FLOW

EXISTING CONDITIONS

Adequate physical separation and electrical independence is not provided between the redundant loops due to the following existing conditions:

- The cables associated with the sensors in all three instrument loops are routed as Train A cables using common raceways.
- The signals to the MCB flow indicators pertaining to all three loops use a common cable and the associated wiring is bundled together in the MCB. None of the loops are provided with an isolation device between the sensor and the MCB indicator.
- All three loops are powered from the same train power supply (Train A).

PROPOSED MODIFICATION

Adequate physical separation and electrical independence will be provided by the following modifications:

Loop FT3229A:

- Replace the existing loop power supply in BOP panel J with a loop power supply equipped with an isolated output.
- Rewire the computer input in BOP panel J to the isolated output of the loop power supply.

Loop FT3229B:

- Replace the existing loop power supply in BOP panel J with a loop power supply equipped with an isolated output.
- Rewire the computer input in BOP panel J to the isolated output of the loop power supply.

Loop FT3229C:

- Relocate the electronics and auxiliary outputs from BOP panel J to BOP panel K, and replace the existing loop power supply with a loop power supply equipped with an isolated output.
- Wire the computer input in BOP panel K to the isolated output of the loop power supply.
- Install a new train B cable between the sensor and BOP panel K.
- Install a new train B cable between the sensor and the flow indicator FI3229CB.

2. REDUNDANCY

VARIABLE 12: AUXILIARY FEEDWATER FLOW

As a result of the proposed modification, loop FT3229A or FT3229B can be considered redundant to loop FT3229C, and the remaining loop will be used to resolve an ambiguity between the redundant loops.

6. DISPLAY AND RECORDING

VARIABLE 12: AUXILIARY FEEDWATER FLOW

EXISTING CONDITION

The variable is not recorded in any way.

PROPOSED MODIFICATION

Add at least one instrument loop to the SPDS computer following the installation of the SPDS equipment. The SPDS computer will then be programmed to record this variable.

8. EQUIPMENT IDENTIFICATION

VARIABLE 12: AUXILIARY FEEDWATER FLOW

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

9. INTERFACE

VARIABLE 12: AUXILIARY FEEDWATER FLOW

EXISTING CONDITION

The class 1E flow transmitters are connected without isolation devices to local flow indicators which are not known to be seismically qualified.

PROPOSED MODIFICATION

The existing local flow indicators will be replaced with class 1E seismically qualified flow indicators (Reference Page 12.1B-1, Section 1.B Seismic Qualification Proposed Modification).

REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 13: CONTAINMENT RADIATION (HIGH RANGE)

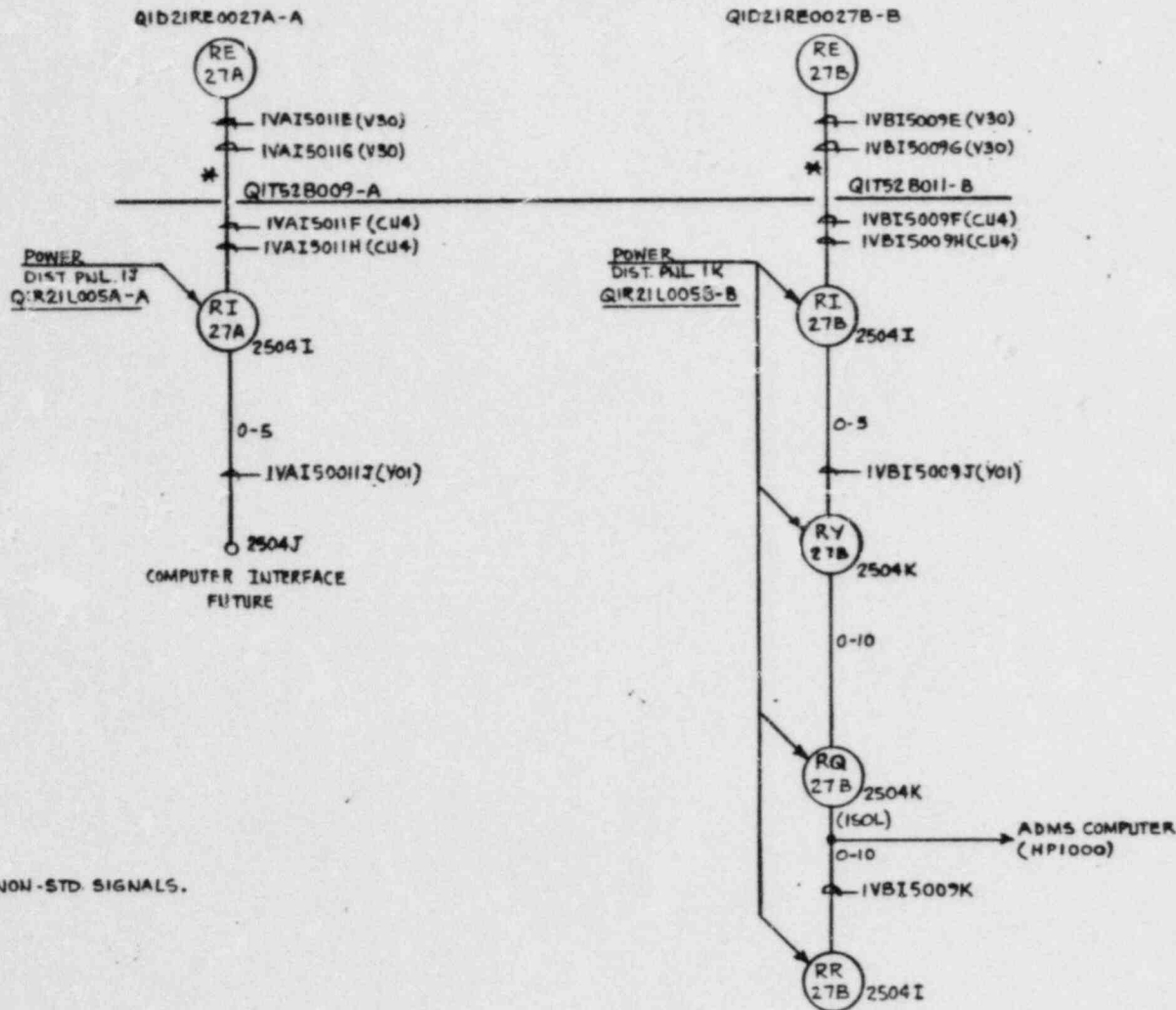
TPNS No(s): Q1D21RE0027A-A, Q1D21RE0027B-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY/MODIFY
b) SEISMIC	NO	JUSTIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 13: CONTAINMENT RADIATION (HIGH RANGE)

EQUIPMENT LOCATIONS

RE 27A	CTMT
RE 27B	CTMT
2504 I, J, K	CONTRL ROOM



REFERENCE DWGS.

- W 7408D24 (RE27A)
- W 7408D46 (RE27B)
- PCN B-79-53B (UNIT 1)
- D-181658 CONN DIAG.

* NON-STD. SIGNALS.

SENSOR AND DISPLAY LOCATIONS

VARIABLE 13: CONTAINMENT RADIATION (HIGH RANGE)

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
RE27A	CTMT	RI27A	Control Room
RE27B	CTMT	RI27B	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 13: CONTAINMENT RADIATION (HIGH RANGE)

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

Belden cables, code (model) CU4, do not have qualification documentation.

PROPOSED MODIFICATION

The existing cables will be replaced with qualified cables.

1.B SEISMIC QUALIFICATION

VARIABLE 13: CONTAINMENT RADIATION (HIGH RANGE)

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

8. EQUIPMENT IDENTIFICATION

VARIABLE 13: CONTAINMENT RADIATION (HIGH RANGE)

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 14: PRIMARY COOLANT RADIOACTIVITY CONCENTRATION

The Farley Nuclear Plant does not have an instrument to measure this variable which meets the Category 1 Guidelines. The post accident sample system (Variable 1017), which is Category 3, can be used to measure this parameter. The following justification addresses this issue:

R.G. 1.97 classifies the function of this variable as Type C since it should indicate a breach of the first barrier (fuel cladding) designed to contain fission products. The Westinghouse Owner's Group has developed a methodology to estimate core damage. This methodology addresses the NRC supplement to the post-accident sampling criteria of NUREG-0737. The primary interest of the NRC was, in the event of an accident, to have a means of realistically differentiating between four major fuel conditions: no damage, cladding failures, fuel overheating and core melt. The methodology developed by the Westinghouse Owner's Group is intended to enable qualified personnel to provide an estimate of this damage.

The approach utilized in this methodology of core damage assessment is the measurement of fission product concentrations in the primary coolant system and containment, when applicable, which are obtained with the post-accident sampling system. Greater release of fission products into the primary coolant can occur if sufficient cooling is not provided to the fuel elements. Those fission products contained in the fuel pellet - fuel cladding interfaces are presumed to be completely released upon failure of the cladding. Additional fission products from the fuel pellet are assumed to be released during overtemperature and fuel melt conditions. These radionuclide measurements together with auxiliary readings of core exit thermocouples, containment radiation monitors, and containment hydrogen concentration are used to develop indicators of the various categories of fuel damage.

In letter dated February 17, 1984, Alabama Power Company stated that procedures exist which relate radionuclide concentrations to core damage. These procedures consider physical parameters such as core temperature and sample locations. Alabama Power Company will implement the Westinghouse Owner's Group calculational method to assess the extent of core damage within approximately six months of their receipt. This method will utilize the Category 3 RCS post-accident sampling system (Variable 1017) in the determination of the status of fuel cladding and the magnitude of any core damage.

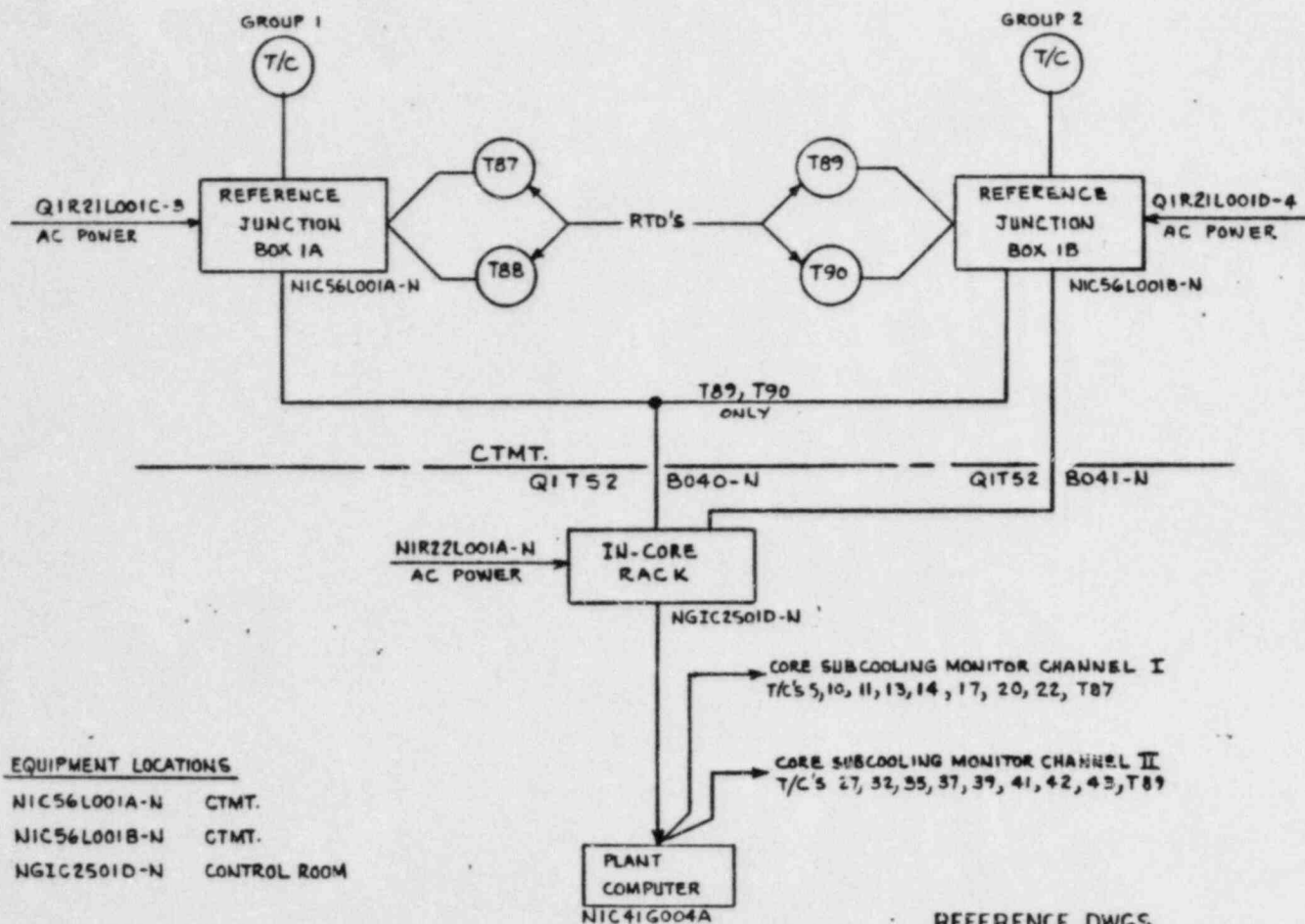
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 15: CORE EXIT TEMPERATURE

TPNS No(s): T/C 1 THRU T/C 52

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY/MODIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	NO	MODIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	NO	JUSTIFY
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	NO	MODIFY
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM.
VARIABLE 15: CORE EXIT TEMPERATURE



EQUIPMENT LOCATIONS

NIC56L001A-N CTMT.
NIC56L001B-N CTMT.
NGIC2501D-N CONTROL ROOM

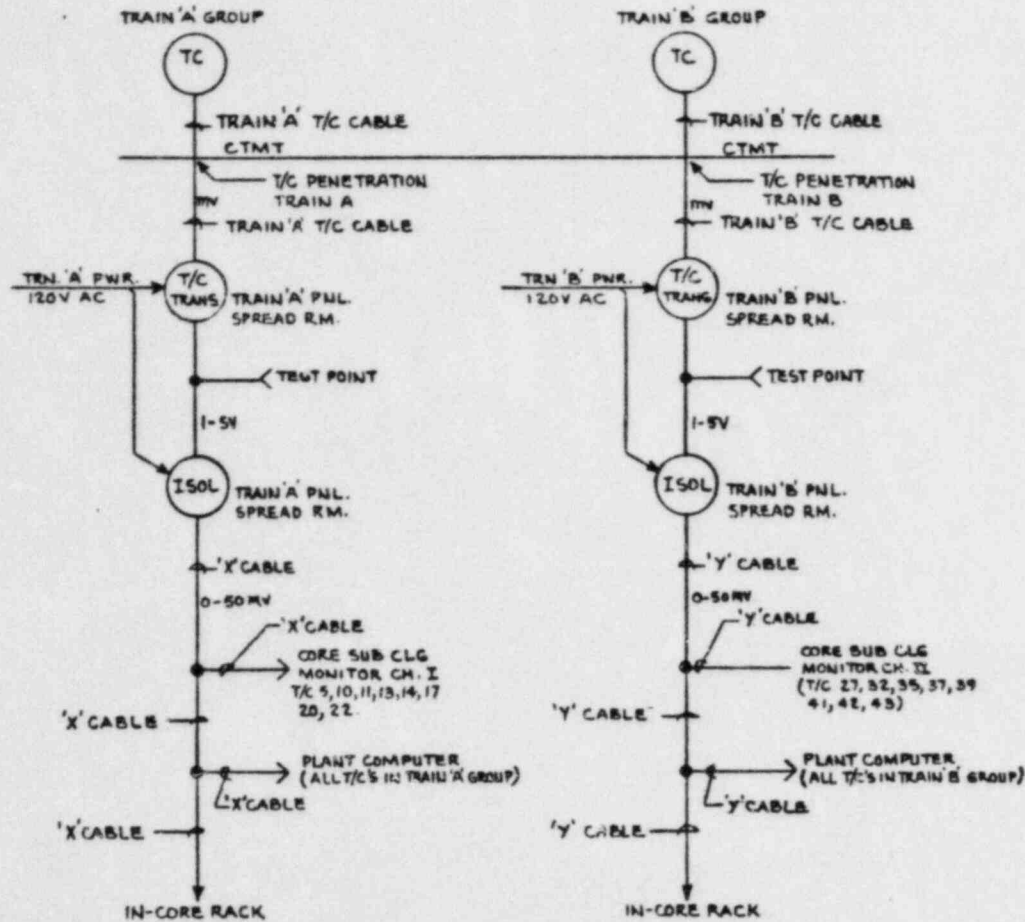
NIC41G004A

REFERENCE DWGS.

SK-E-4277 THRU 4282, SK-E-4284 THRU 4288,
SK-E-4319, SK-E-4507, & SK-E-4508.
W 108D504, SH. 8
PCN B-79-532

GROUP 1		GROUP 2	
T/C 1		T/C 1	
2		T/C 27	
3		28	
4		29	
5		30	
6		31	
7		32	
8		33	
9		34	
10		35	
11		36	
12		37	
13		38	
14		39	
15		40	
16		41	
17		42	
18		43	
19		44	
20		45	
21		46	
22		47	
23		48	
24		49	
25		50	
26		51	
52			

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 15: CORE EXIT TEMPERATURE
 PROPOSED MODIFICATIONS



TRAIN 'A' GROUP	TRAIN 'B' GROUP
T/C 02	T/C 01
03	27
04	29
05	30
06	31
07	32
08	33
09	34
10	35
11	36
12	37
13	38
14	39
15	40
16	41
17	42
18	43
19	44
20	46
21	47
22	49
23	50
24	51
25	
26	
28	
45	
48	
52	

SENSOR AND DISPLAY LOCATIONS

VARIABLE 15: CORE EXIT TEMPERATURE

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
T/C 1 CIRU T/C 52	CTMT	Plant Computer Terminal	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 15: CORE EXIT TEMPERATURE

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

Footnote 3 of R.G. 1.97, Rev. 3 states:

"Instrumentation that is a part of the final ICC detection system should meet the design requirements specified in Item II.F.2 of NUREG-0737. (When Type K thermocouples become part of the system, they are considered to meet the requirements. However, the remainder of the detection system that is outside the reactor vessel should meet the requirements specified).

In letter dated March 10, 1983, Alabama Power Company stated that the thermocouple system is presently qualified to IEEE-323-1971. The thermocouples installed within the reactor vessel at Farley Nuclear Plant are Type K and are considered to meet the requirements of NUREG-0737, Item II.F.2 and R.G. 1.97. To clarify the March 10, 1983 letter, the core exit monitoring instrumentation that is outside the reactor vessel consisting of the reference junction boxes, reference temperature RTDs and thermocouple connectors do not have environmental qualification documents.

PROPOSED MODIFICATION

The thermocouple reference junction boxes and reference temperature RTD's will be deleted from the system. New thermocouple transmitters, functioning as reference junctions, will be installed in the cable spreading room, which is a mild environment. The thermocouple connectors will be replaced with environmentally qualified connectors.

1.B SEISMIC QUALIFICATION

VARIABLE 15: CORE EXIT TEMPERATURE

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

No seismic qualification documentation is available for the thermocouple reference junction boxes N1C56L001A-N and N1C56L001B-N.

PROPOSED MODIFICATION

The thermocouple reference junction boxes and related power supplies will be deleted when the system is modified. (Refer to description of proposed modification on Page 15.2-1 under Redundancy).

EXISTING CONDITION

No seismic qualification documentation is available for the Westinghouse P2500 Computer (N1C41G004-N), core subcooling monitor (NGTMP2521A-AB), in-core rack (NGIC2501D-N).

PROPOSED MODIFICATION

Class 1E isolation devices will be added to each thermocouple signal prior to the signal going to the P2500 computer, the core subcooling monitor and in-core rack. (Refer to description of proposed modification on Page 15.2-1, Redundancy, and Page 15.9-1, Interface).

EXISTING CONDITION

No seismic qualification documentation is available for the thermocouple connectors N1C56G001A-N thru N1C56G052A-N and N1C56G001B-N thru N1C56G052B-N.

PROPOSED MODIFICATION

The existing thermocouple connectors will be replaced with seismically qualified connectors.

EXISTING CONDITION

No seismic qualification documentation is available for the computer power supply (N1R21L004-N) or the in-core rack power supply (N1R22L001A-N).

PROPOSED MODIFICATION

Isolation of the thermocouple signals to the computer and in-core rack eliminates the need for qualified power supplies to these components. (Refer to the description of the proposed modification on page 15.2-1.)

2. REDUNDANCY

VARIABLE 15: CORE EXIT TEMPERATURE

EXISTING CONDITIONS

Adequate physical separation and electrical independence is not provided between the redundant T/C's groups due to the following existing conditions:

- All cable and equipment in the core exit temperature monitoring system are treated as non-safety related. As a result, redundancy is not achievable with the existing design.

PROPOSED MODIFICATION

Adequate physical separation and electrical independence will be provided by the following modification:

- Divide the 52 core exit thermocouples into two train oriented groups. These groups are defined on the proposed functional loop block diagram provided in the front of this section. The train orientation of each thermocouple was selected in a way that maximizes the coverage of each train over the core.
- Install train oriented cabinets in the Cable Spreading Room to house a qualified thermocouple transmitter and signal isolator for each thermocouple. The thermocouple transmitters function as reference junctions, thereby eliminating the need for the reference junction boxes inside the containment. The isolators permit connection of the train oriented thermocouple loops to non-train oriented displays and non-class 1E devices such as the plant computer and core subcooling monitor.

As a result of the proposed modification, T/C's Group A can be considered redundant to T/C's Group B.

6. DISPLAY AND RECORDING

VARIABLE 15: CORE EXIT TEMPERATURE

EXISTING CONDITION

The existing temperature displays are display on demand.

JUSTIFICATION

The existing computer based display is acceptable because various on-demand, real-time temperature displays are available. Displays available on the plant computer are: temperature for each thermocouple, trending of selected thermocouple temperatures, the Emergency Operating CRT displays. The plant computer also has an alarm. This plant computer alarm alerts the operator if the core exit thermocouples exceed a predetermined value. These display methods are desirable because by using the plant computer to process the data, the temperature information is presented to the operators in the most useful format.

Additionally, when installed, the SPDS will provide a continuous real-time display of the status of core cooling. The core exit thermocouples provide input to the SPDS for the core cooling status display. If the status of core cooling were to exceed predetermined values, the operator would be directed to check the core exit thermocouple indicators.

In the opinion of Alabama Power Company, the proposed continuous real-time SPDS display for core cooling and the plant computer display-on-demand and alarm are sufficient to provide the operator with an adequate display of core exit temperature.

8. EQUIPMENT IDENTIFICATION

VARIABLE 15: CORE EXIT TEMPERATURE

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

9. INTERFACE

VARIABLE 15: CORE EXIT TEMPERATURE

EXISTING CONDITION

The core exit temperature monitoring system interfaces directly, without isolation, with the plant computer and core subcooling monitor which are non-safety related.

PROPOSED MODIFICATIONS

Provide a qualified isolator for each thermocouple loop. The plant computer, core subcooling monitor and the non-class 1E core exit temperature display will be connected to the output of these isolators. (Refer to the description of the proposed modification on page 15.2-1.)

REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

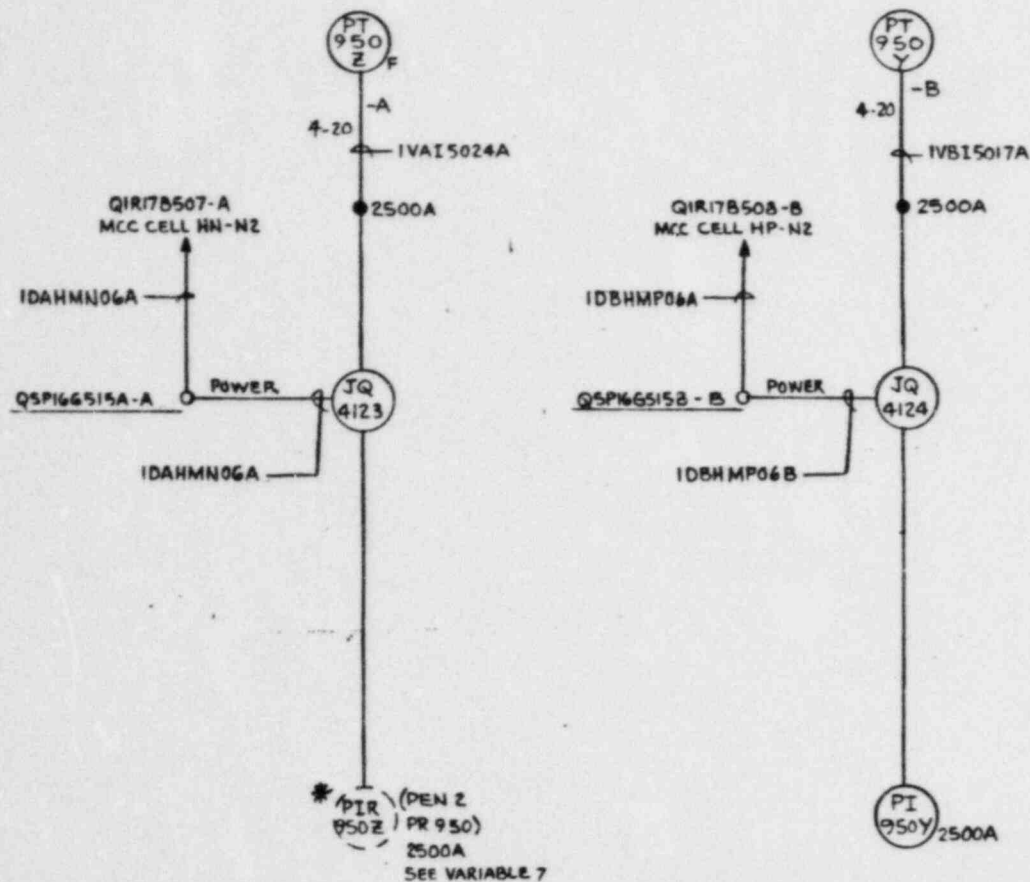
VARIABLE 16: CONTAINMENT PRESSURE (EXTENDED RANGE)

TPNS No(s): PT950Y, PT950Z

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY/MODIFY JUSTIFY/MODIFY
2. REDUNDANCY	NO	MODIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 16: CONTAINMENT PRESSURE (EXTENDED RANGE)

EQUIPMENT LOCATIONS	
PT950Z	RM. 223
PT950Y	RM. 223
Z500A	CONTROL ROOM



REFERENCE DWGS.

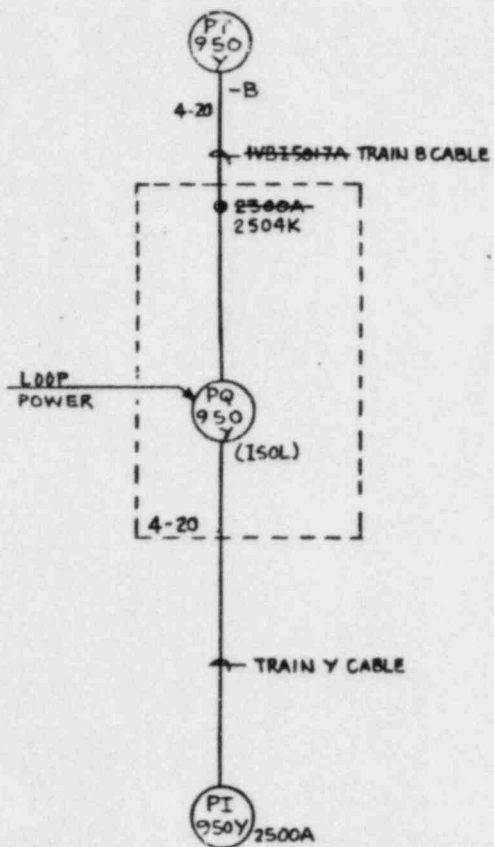
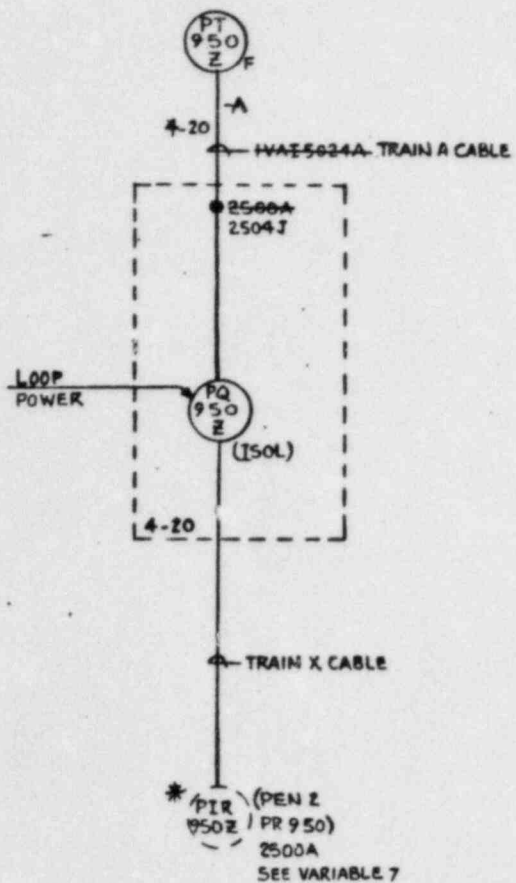
- # PCN B-79-546
- U-169836
- D-181861

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 16: CONTAINMENT PRESSURE (EXTENDED RANGE)
 PROPOSED MODIFICATIONS

WESTINGHOUSE SCOPE ---

EQUIPMENT LOCATIONS

PT950Z	RM. 223
PT950Y	RM. 223
2500A	CONTROL ROOM



REFERENCE DWGS.

- * PCN B-79-546
- U-169836
- D-181861

SENSOR AND DISPLAY LOCATIONS

VARIABLE 16: CONTAINMENT PRESSURE (EXTENDED RANGE)

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
PT950Z	RM. 223	PIR950Z	Control Room
PT950Y	RM. 223	PI950Y	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 16: CONTAINMENT PRESSURE (EXTENDED RANGE)

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The containment pressure transmitters Q1T14PT0950Z-A and Q1T14PT0950Y-B, Barton model 752, do not have radiation qualification documentation.

PROPOSED MODIFICATION

The existing transmitters will be replaced with environmentally qualified transmitters.

1.B SEISMIC QUALIFICATION

VARIABLE 16: CONTAINMENT PRESSURE (EXTENDED RANGE)

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

No seismic qualification documentation is available for pressure transmitters Q1T14PT0950Y-B and Q1T14PT0950Z-A.

PROPOSED MODIFICATION

The existing pressure transmitters will be replaced with seismically qualified transmitters.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

2. REDUNDANCY

VARIABLE 16: CONTAINMENT PRESSURE (EXTENDED RANGE)

EXISTING CONDITIONS

Adequate physical separation is not provided between the redundant loops due to the following existing conditions:

- The power supply modules for both instrument loops are located in the MCB where adequate separation is not achievable. In addition, separation is not provided in the MCB for cables carrying unisolated signals from both transmitters.

PROPOSED MODIFICATION

Adequate physical separation will be provided by the following modifications:

Loop PT950Z:

- Install a new loop power supply with an isolated output in BOP panel J.
- Rework the existing train A cable coming from the sensor into BOP panel J.
- Install a new train X cable between BOP panel J and the MCB.

Loop PT950Y:

- Install a new loop power supply with an isolated output in BOP panel K.
- Rework the existing train A cable coming from the sensor into BOP panel K.
- Install a new train Y cable between BOP panel K and the MCB.

As a result of the proposed modification, loop PT950Y can be considered redundant to loop PT950Z.

8. EQUIPMENT IDENTIFICATION

VARIABLE 16: CONTAINMENT PRESSURE (EXTENDED RANGE)

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 17: NEUTRON FLUX (INTERMEDIATE RANGE)

TPNS No(s): N1C55NE0035-P1, N1C55NE0036-P2

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY/MODIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	NO	JUSTIFY/MODIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

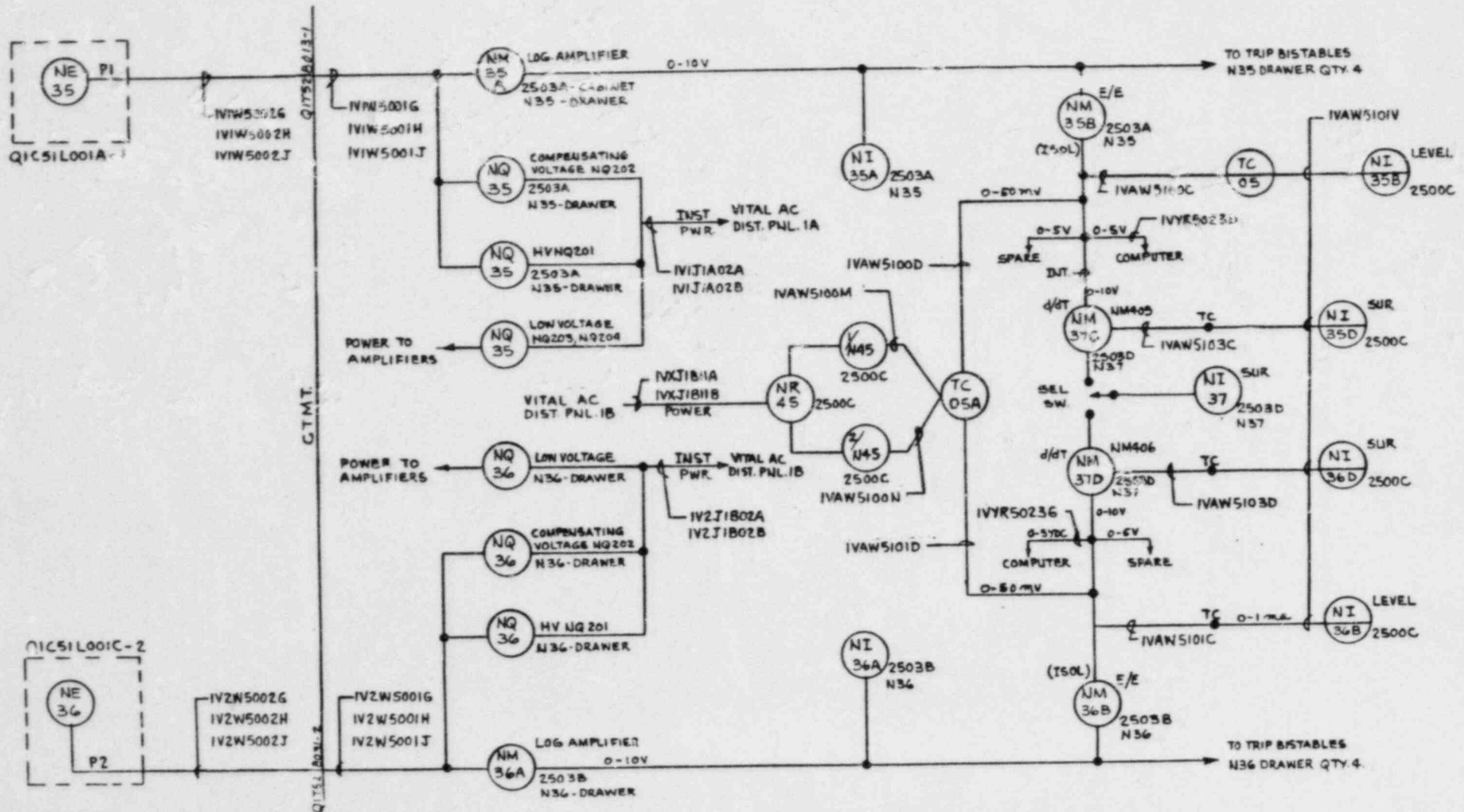
EQUIPMENT LOCATIONS

NE 35	CTMT
NE 36	CTMT
2505	CONTROL ROOM
2500C	CONTROL ROOM

FUNCTIONAL LOOP BLOCK DIAGRAM
VARIABLE 17: NEUTRON FLUX (INTERMEDIATE RANGE)

REFERENCE DWGS

5K-E-4220, 5K-E-4221, 5K-E-4223,
5K-E-4330, 5K-E-4331, 5K-E-4333,
5K-E-4253, 5K-E-4313.
W 108D494, SH-4
U-169826



SENSOR AND DISPLAY LOCATIONS

VARIABLE 17: NEUTRON FLUX (INTERMEDIATE RANGE)

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
NE35	CTMT	NI35B	Control Room
NE36	CTMT	NI36B	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 17: NEUTRON FLUX MONITOR (INTERMEDIATE RANGE)

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

Neutron detectors N1C55NE0035-P1 and N1C55NE0036-P2, and neutron detector junction boxes Q1C51L001A-1 and Q1C51L001C-2 do not have qualification documentation.

PROPOSED MODIFICATION

A new single channel wide range neutron flux monitoring system will be added to meet the requirements of R.G. 1.97 and 10CFR Part 50 Appendix R, which is environmentally qualified by the following documents from Gamma-Metrics.

1. Gamma-Metrics RCS series neutron flux monitoring system qualification test report No. 010 Revision 0.
2. Seismic and MSLB/LOCA test report for the RCS series neutron flux monitoring system, test report No. 012 Revision 0.

1.B SEISMIC QUALIFICATION

VARIABLE 17: NEUTRON FLUX MONITOR (INTERMEDIATE RANGE)

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Some of the components for this variable have insufficient seismic documentation.

PROPOSED MODIFICATION

A new seismically qualified single channel wide range power monitor will be added to meet the requirements of R.G. 1.97 and appendix R of 10CFR50.

2. REDUNDANCY

VARIABLE 17: NEUTRON FLUX (INTERMEDIATE RANGE)

EXISTING CONDITION

Both instrument loops NE35 and NE36 are powered from the same train power supply (Train A).

JUSTIFICATION

The power supplies to instrument loops NE35 and NE36 are provided by separate channelized inverters: inverter 1A (Channel 1) for loop NE35 and inverter 1B (Channel 2) for loop NE36. The outputs of these inverters are physically separated in accordance with the requirements of R.G. 1.75. The AC source to these inverters is backed-up by a Train A diesel generator in the event of an LOSP. If the AC source to the inverters fails, the Train A emergency battery instantly feeds power to the inverters until the AC source returns, and as such, each inverter constitutes an uninterruptible source of power to the subject instrument loops.

In addition, an alternate source of power, other than the inverters, is provided to both instrument loops from a solatron regulator. The AC source to the solatron regulator is back-up by a Train A diesel generator. Although the AC and DC power supplies to the channelized inverters 1A and 1B are provided from the same Train A emergency MCC 1A and the same Train A emergency battery 1A, AC power circuits to inverters 1A and 1B and DC power circuits to inverters 1A and 1B are provided through independent AC and DC circuit breakers. These breakers are coordinated to prevent faults on the load side of the breakers from affecting the supply side of the breakers. Therefore, a failure of either of the two inverters would not affect the power supply to the other inverter, and consequently one loop of the neutron flux monitors will be available with any single inverter failure.

A failure mode analysis has been performed to determine the potential for the simultaneous loss of power to both instrument loops. It has been determined that only the failure of one of the following components: Train A emergency battery, cable between the battery and its associated switchgear, battery breaker or the 125 V DC switchgear, coincident with an LOSP event could result in the simultaneous loss of both instrument loops of the neutron flux monitors. This is considered to be a very low probability event, since the failure of the battery, cable between the battery and 125 V DC switchgear, or battery breaker would have to occur within 40 sec. from the LOSP initiation in order to prevent the starting of the Train A diesel generator. The 125 V DC switchgear is a metal enclosed assembly, and as such, failure of this switchgear has a very low probability.

The existing neutron monitors provide input to the main control board display and the reactor protection system. The existing electrical independence of the neutron monitors is consistent with the design criteria of the reactor protection system, which is used to trip the reactor and mitigate an accident. The re-alignment of one of the neutron monitor instrument loops to Train B would result in a major change to the original design of the nuclear instrumentation and reactor protection

2. REDUNDANCY

VARIABLE 17: NEUTRON FLUX (INTERMEDIATE RANGE)

systems, as well as cause a re-evaluation of the design basis event accident analysis of FSAR Chapter 15. It is the opinion of Alabama Power Company that the imposition of instrumentation design criteria for accident monitoring, which is more stringent than the instrumentation design criteria for accident mitigation, is not justified.

Consequently, the existing degree of electrical independence is adequate because the simultaneous loss of both neutron flux monitoring loops is a very low probability, and therefore, no modifications are proposed.

EXISTING CONDITION

No identical channel of information or variable(s) bearing a known relationship to the neutron flux channels, that could be used to resolve an ambiguity between the redundant instrument loops NE35 and NE36, are available.

PROPOSED MODIFICATION

A new channel wide range neutron flux monitoring system (Gamma-Metrics RCS series neutron flux monitoring system) will be added.

The instrument loop associated with this new channel will be physically separated from either of the existing instrument loops NE35 and NE36 in accordance with the guidelines of R.G. 1.75. This new instrument loop, however, will be powered from the same Train A as the two existing neutron flux monitoring loops, which is not consistent with the electrical independence guidelines for instrumentation ambiguity of R.G. 1.97. The new instrument loop will be installed to satisfy the guidelines of R.G. 1.97 as well as the fire protection provisions of 10CFR50, Appendix R. The instrumentation displays of this new loop will be provided in the MCB for R.G. 1.97 and the hot shutdown panel for Appendix R. Existing instrumentation on the hot shutdown panel is Train A oriented. It has been determined that assigning a Train B orientation to the new neutron flux monitoring loop would be excessively costly due to present space limitation in the hot shutdown panel room. The power supply to the new instrument loop will be provided by Train A inverter 1F. The output of this inverter is physically separated from the output of either inverter 1A or 1B in accordance with the requirements of R.G. 1.75. The AC source to inverter 1F is backed-up by a Train A diesel generator in the event of an LOSP. If the AC source to inverter 1F fails, the Train A emergency battery instantly feeds power to inverter 1F until the AC source returns, and as such, inverter 1F constitutes an uninterruptible source of power to the subject instrument loop. In addition, an alternate source of power, other than the inverter, is provided to the new instrument loop from Train A emergency MCC 1A, backed-up by a Train A diesel generator.

2. REDUNDANCY

VARIABLE 17: NEUTRON FLUX (INTERMEDIATE RANGE)

Although the AC and DC power supplies to the channelized inverters 1A and 1B, and the Train A inverter 1F are provided from the same Train A emergency MCC 1A and the same Train A emergency battery 1A, the coordination of the associated circuit breakers will prevent faults on the load side of the breakers from affecting the supply side of the breakers. Therefore, a failure of either of the three subject inverters would not affect the power supplies to the other two inverters, and consequently two instrument loops of neutron flux monitors will be available with any single inverter failure. A failure mode analysis has been performed to determine the potential for the simultaneous loss of power to all three instrument loops. It has been determined that only the failure of one of the following components: Train A emergency battery, cable between the battery and its associated switchgear, battery breaker or the 125 V DC switchgear, coincident with an LOSP event could result in the simultaneous loss of all three instrument loops of the neutron flux monitors. This is considered to be a very low probability event, since the failure of the battery, cable between the battery and 125 V DC switchgear, or battery breaker would have to occur within 40 sec. from the LOSP initiation in order to prevent the starting of the Train A diesel generator. The 125 V DC switchgear is a metal enclosed assembly, and as such, failure of this switchgear has a very low probability.

Therefore, the degree of electrical independence between the new instrument loop and either of the existing instrument loops NE35, NE36 is such that the probability of losing more than one instrument loop simultaneously is very low.

It is the opinion of Alabama Power Company that the proposed modification provides an adequate means to resolve an ambiguity between the two existing instrument loops NE35 and NE36.

8. EQUIPMENT IDENTIFICATION

VARIABLE 17: NEUTRON FLUX (INTERMEDIATE RANGE)

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

REGULATORY GUIDE 1.97 CATEGORY 1
JUSTIFICATIONS AND MODIFICATIONS

VARIABLE 18: REACTOR WATER LEVEL

In response to NRC Generic Letter No. 82-28, Alabama Power Company provided in a letter dated March 10, 1983, its position regarding instrumentation used to detect inadequate core cooling, including the reactor vessel level instrumentation.

Alabama Power Company concurs with and is committed to the objectives of NUREG-0737 to ensure that the Farley Nuclear Plant - Units 1 and 2 can detect the approach to inadequate core cooling. This commitment has been demonstrated by Alabama Power Company's participation in a pilot project for the non-invasive reactor vessel level system. The unsuccessful demonstration of the non-invasive reactor vessel level system led Alabama Power Company to take the initiative and conduct a detailed review of the commercially available reactor vessel level systems.

As a result of this detailed review APCO committed in letter dated May 11, 1984 to install either a Combustion Engineering or Technology for Energy Corp. reactor vessel water level system in Farley Nuclear Plant Unit 1 within three refueling outages.

REGULATORY GUIDE 1.97
COMPLIANCE REPORT
FOR
FARLEY NUCLEAR PLANT
UNIT 1

VOLUME II

INTRODUCTION

VARIABLE 19: CONTAINMENT ISOLATION VALVE STATUS

Variable 19 addresses Containment Isolation Valve Status. The variable is divided into subsections 19/1-19/60. Each subsection covers a particular piping penetration or related group of piping penetrations.

Noncompliances are addressed individually with the exception of the Equipment Identification noncompliance. Since none of the containment isolation valve position indicating lights are marked with a common designator, a generic justification covering all of the Variable 19 subsections is provided on the following page.

GENERIC JUSTIFICATION FOR VARIABLE 19
8. EQUIPMENT IDENTIFICATION

VARIABLE 19: CONTAINMENT ISOLATION VALVE STATUS

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The emergency operating procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

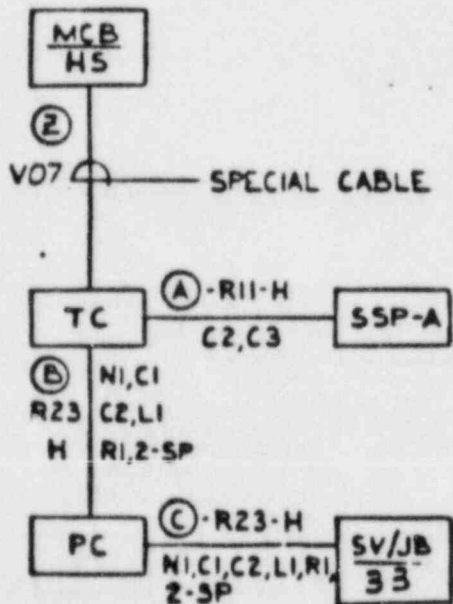
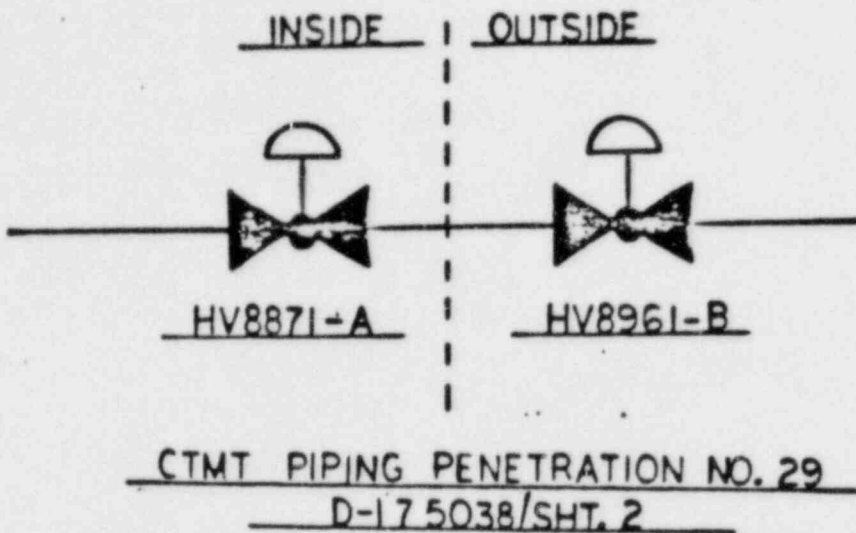
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/1: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 29 - ACCUMULATOR TEST LINE

TPNS No(s) - INSIDE: N1E21ZS8871-A
OUTSIDE: N1E21ZS8961-B

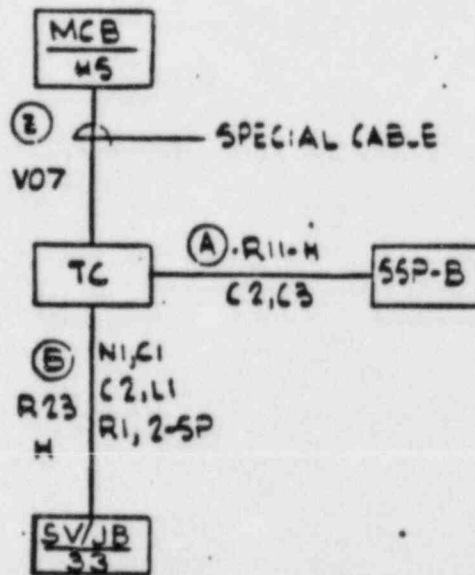
GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/1 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 29



BLOCK DIAGRAM
- AL 8049

FOR HV8871-A
D-177368



BLOCK DIAGRAM
BL 5030

FOR HV8961-B
D-177364

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/1: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 29

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8871-A	CTMT	MCB ITEM A2-111	Control Room
ZS8961-B	RM. 223	MCB ITEM A2-112	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/1: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 29

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/1: CONTAINMENT ISOLATION VALVE STATUS PENETRATION NO. 29

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L008-A and Q1H25L029-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/2: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 63 - NITROGEN SUPPLY TO ACCUMULATORS

TPNS No(s) - INSIDE: CHECK VALVE
OUTSIDE: N7E21ZS8880-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/2: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 63

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8880-B	RM. 223	MCB ITEM A2-58	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/2: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 63

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/2: CONTAINMENT ISOLATION VALVE STATUS PENETRATION NO. 63

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L029-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

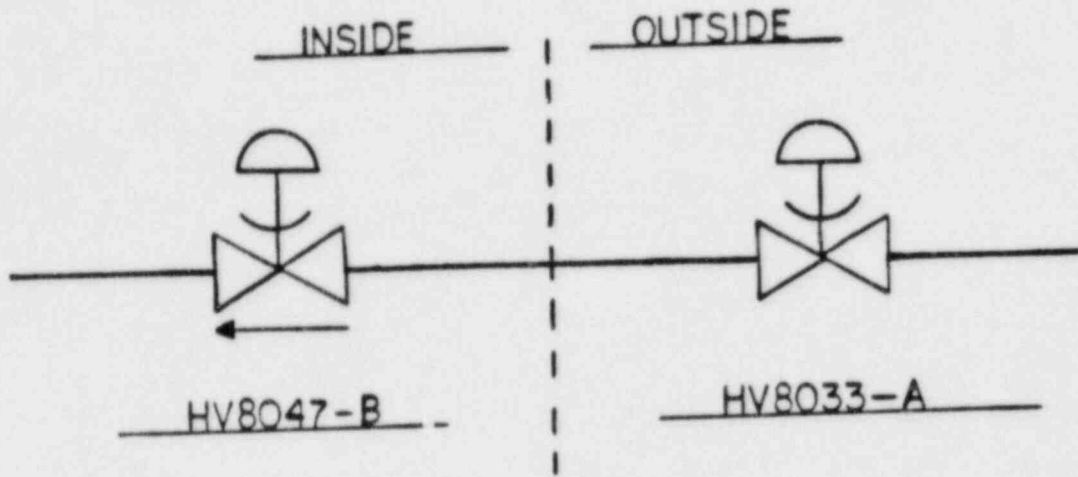
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/3: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 64 - NITROGEN SUPPLY-PRESSURIZER
RELIEF TANK

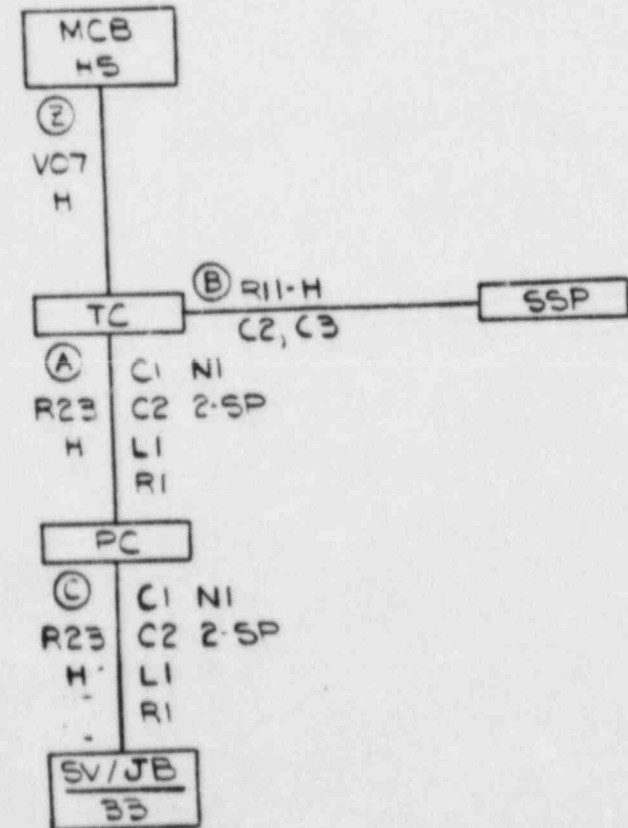
TPNS No(s) - INSIDE: N1B31ZS8047-B
OUTSIDE: N1B31ZS8033-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/3 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 64

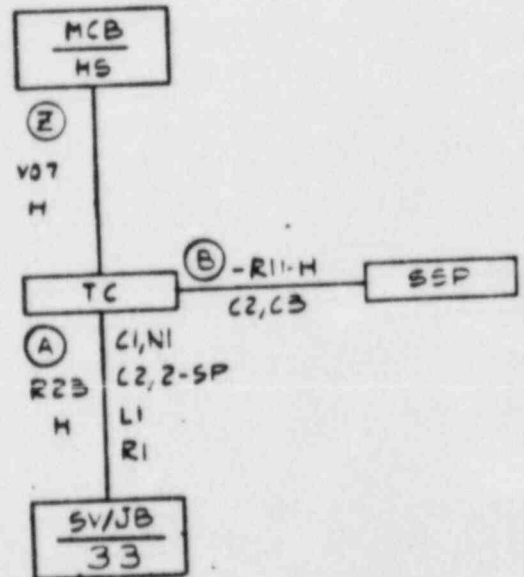


CTMT PIPING PENETRATION NO. 64
D-175037/SHT. 2



BLOCK DIAGRAM
BL 5078

FOR HV8047-B
D-177593



BLOCK DIAGRAM
AL5022

FOR HV8033-A
D-177593

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/3: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 64

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8047-B	CTMT	MCB ITEM C-150	Control Room
ZS8033-A	RM. 223	MCB ITEM C-117	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/3: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 64

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/3: CONTAINMENT ISOLATION VALVE STATUS PENETRATION NO. 64

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500C-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L005-A and Q1H25L025-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

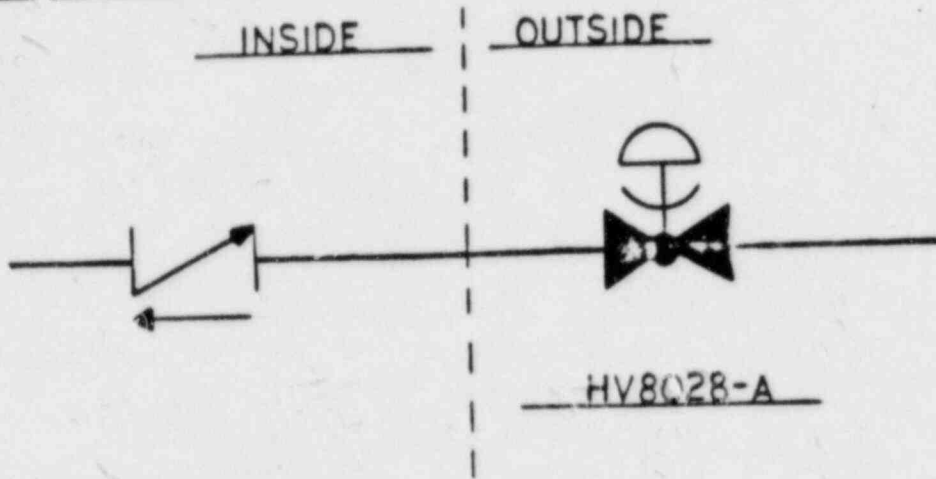
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/4: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 30 - PRESSURIZER RELIEF TANK MAKEUP

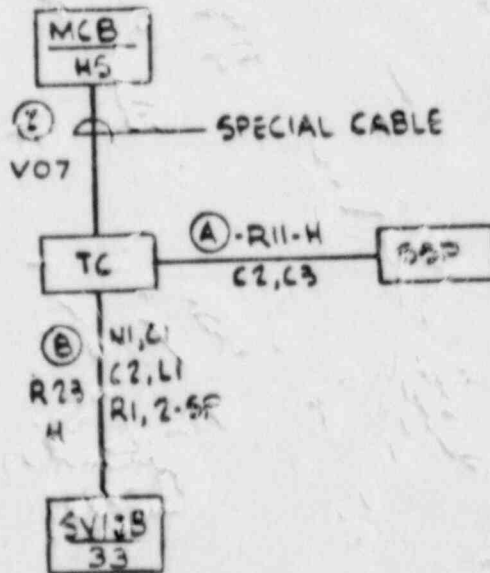
TPNS No(s) - INSIDE: CHECK VALVE
OUTSIDE: NTB31ZS8028-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/4 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 30



CTMT PIPING PENETRATION NO. 30
D-175037/SHT. 2



BLOCK DIAGRAM
AL5080

FOR HV8028-A
D-177382

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/4: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 30

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8028-A	RM. 223	MCB ITEM C-127	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/4: CONTAINMENT ISOLATION VALVE STATUS PENETRATION NO. 30

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/4 : CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 30

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500C-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L005-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

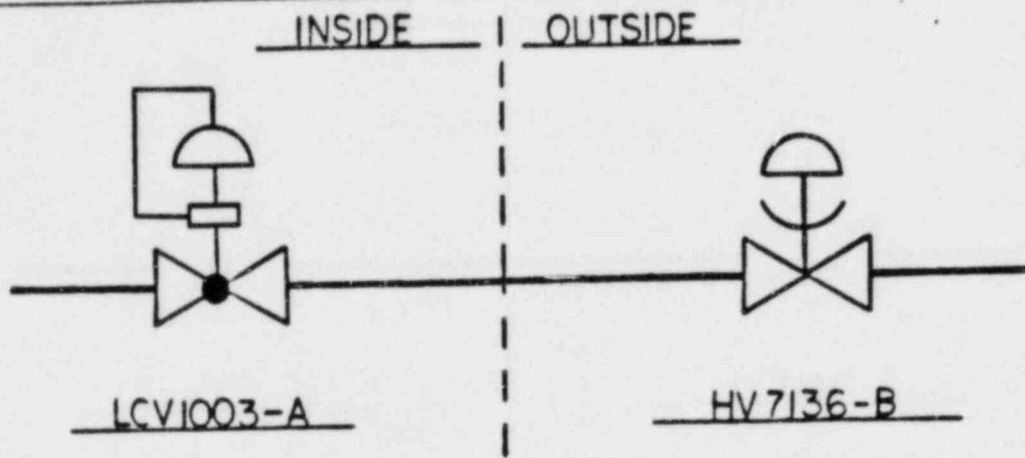
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/5: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 31 - REACTOR COOLANT DRAIN TANK LCV

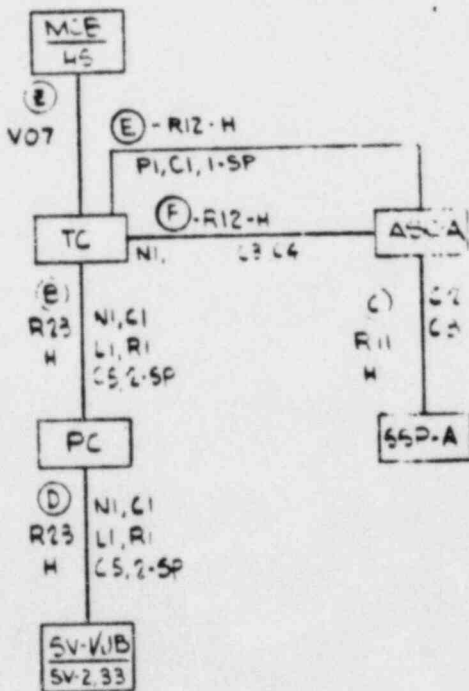
TPNS No(s) - INSIDE: N1G21ZS1003-A
OUTSIDE: N1G21ZS7136-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/5 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 31

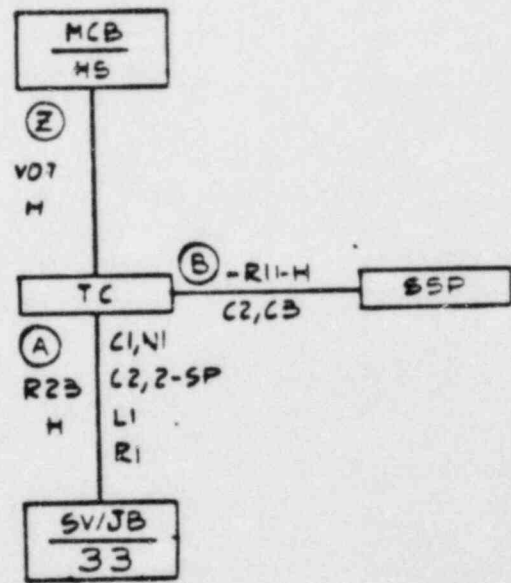


CTMT PIPING PENETRATION NO. 31
D-175042/SHT. 1



BLOCK DIAGRAM
AL 5037

FOR LCV1003-A
D-177383



BLOCK DIAGRAM
BL 5013

FOR HV7136-B
D-177593

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/5: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 31

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS1003-A	CTMT	MCB ITEM C-118	Control Room
ZS7136-B	RM. 184	MCB ITEM C-119	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/5: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 31

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/5: CONTAINMENT ISOLATION VALVE STATUS PENETRATION NO. 31

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500C-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L005-A and Q1H25L025-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

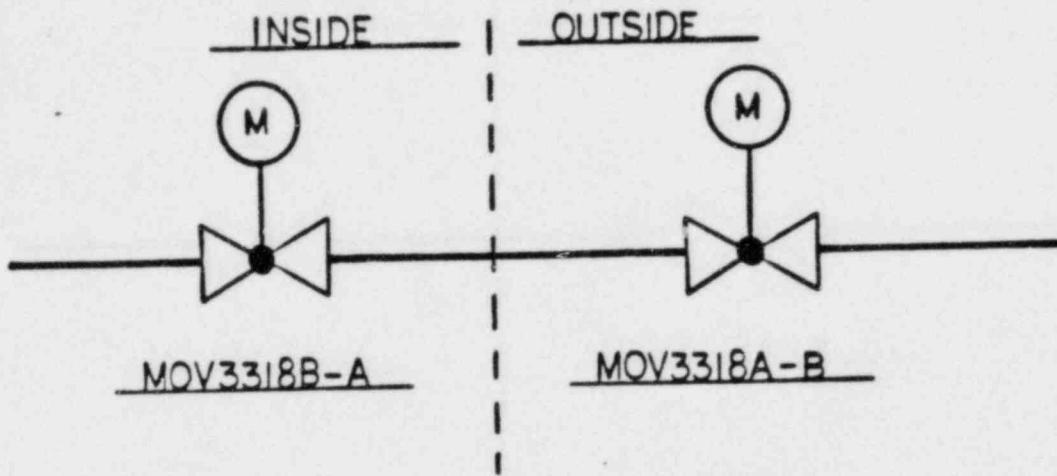
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/6: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 70 - CONTAINMENT DIFFERENTIAL
PRESSURE INSTRUMENT

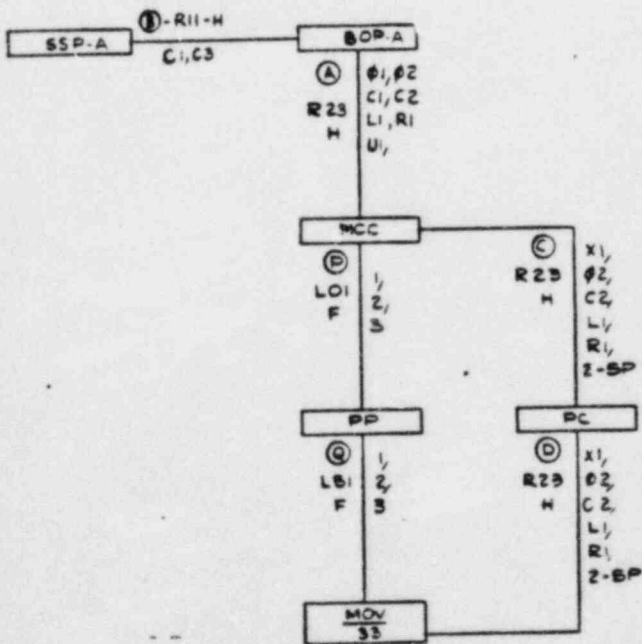
TPNS No(s) - INSIDE: Q1E14ZS3318B-A
OUTSIDE: Q1E14ZS3318A-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/6 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N° 70

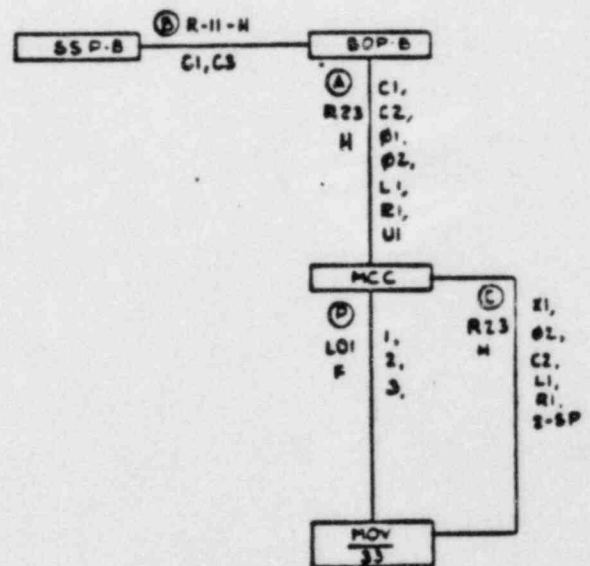


CTMT PIPING PENETRATION NO. 70
D-175010/SHT. 2



BLOCK DIAGRAM
AFU-J4

FOR MOV3318B-A
D-177688



BLOCK DIAGRAM
BFV-W5

FOR MOV3318A-B
D-177689

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/6: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 70

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3318B-A	CTMT	-	Control Room
ZS3318A-B	RM. 184	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/6: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 70

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/6: CONTAINMENT ISOLATION VALVE STATUS PENETRATION NO. 70

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

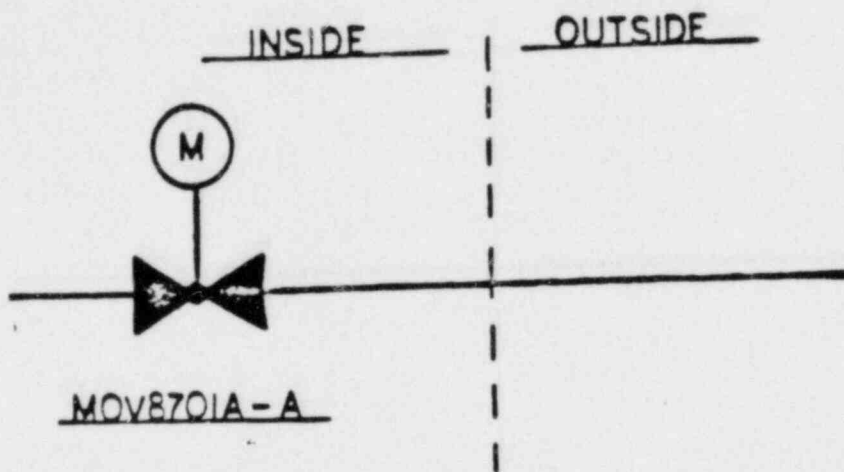
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/7: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 16 - RESIDUAL HEAT REMOVAL
LOOP OUT

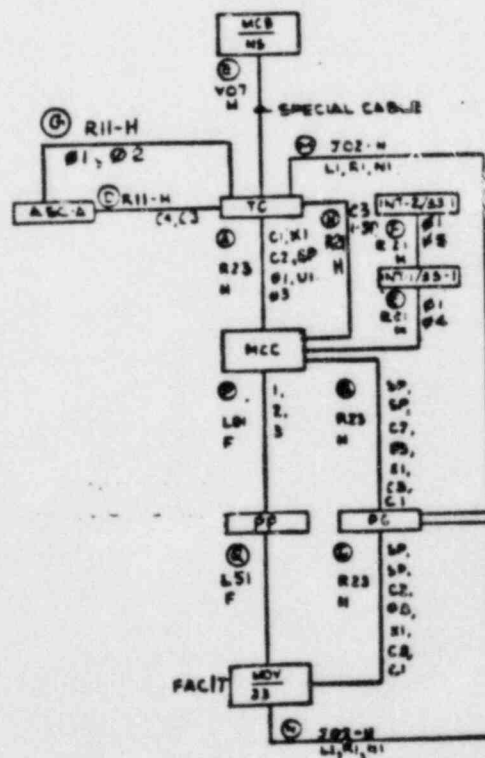
TPNS No(s) - INSIDE: N1E11ZS8701A-A
OUTSIDE: WATER SEAL

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/7 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 16



CTMT PIPING PENETRATION NO. 16
D-175041



BLOCK DIAGRAM
AFU-T5

FOR MOV8701A-A
D-177572

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/7: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 16

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8701A-A	CTMT	MCB ITEM A3-127	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/7: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 16

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/7: CONTAINMENT ISOLATION VALVE STATUS PENETRATION NO. 16

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L006-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

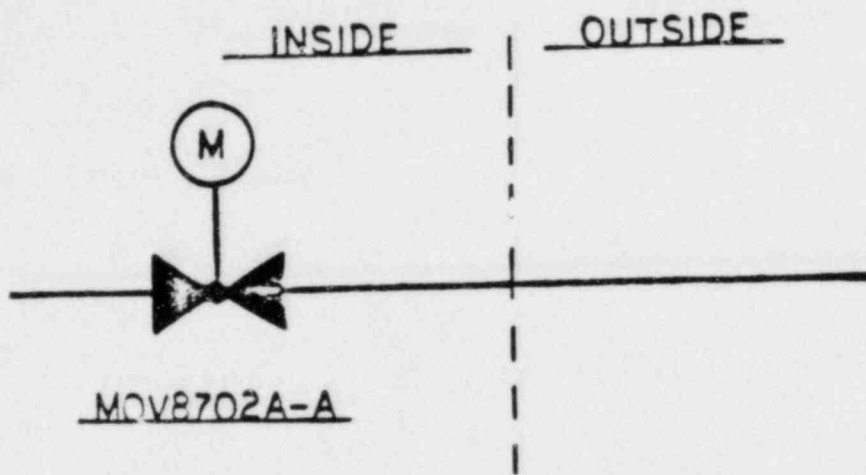
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/8: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 18 - RESIDUAL HEAT REMOVAL
LOOP OUT

TPNS No(s) - INSIDE: N1E11ZS8702AA-A
OUTSIDE: WATER SEAL

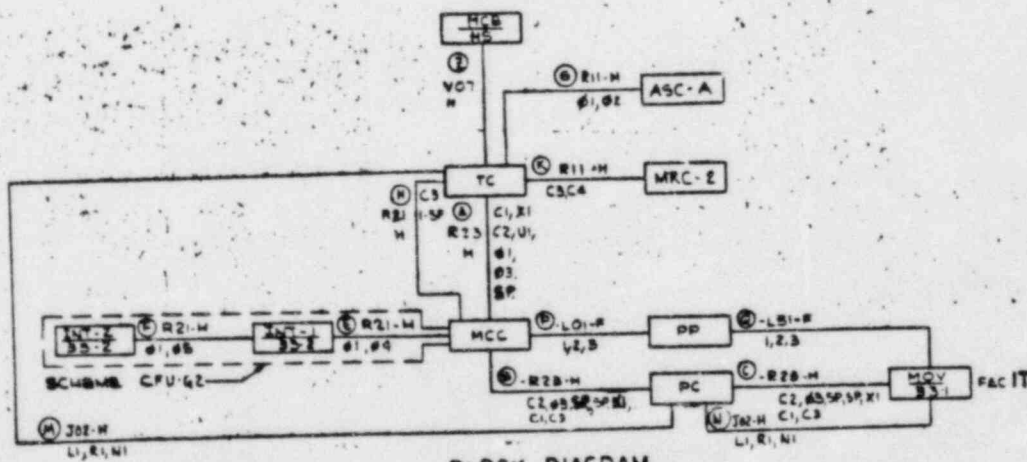
GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/8 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO. 18



CTMT PIPING PENETRATION NO. 18
D-175041

NOTE: BPE-1064 CHANGES
 TRAIN 'C' SCHEME WITH
 TRAIN 'A' SCHEME.



BLOCK DIAGRAM
AFU-G2

FOR MOV8702A-A
D-177569

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/8: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 18

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8702AA-A	CTMT	MCB ITEM A3-146	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/8: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 18

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/8: CONTAINMENT ISOLATION VALVE STATUS PENETRATION NO. 18

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L006-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

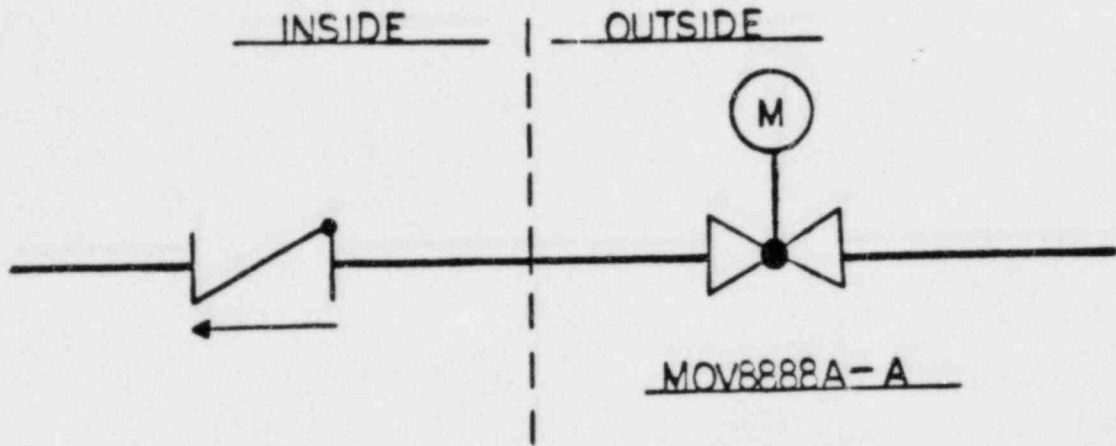
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/9: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 15 - RESIDUAL HEAT REMOVAL
LOOP - IN/LOW HEAD SAFETY INJECTION

TPNS No(s) - INSIDE: Check Valve
OUTSIDE: N1E11ZS8888A-A

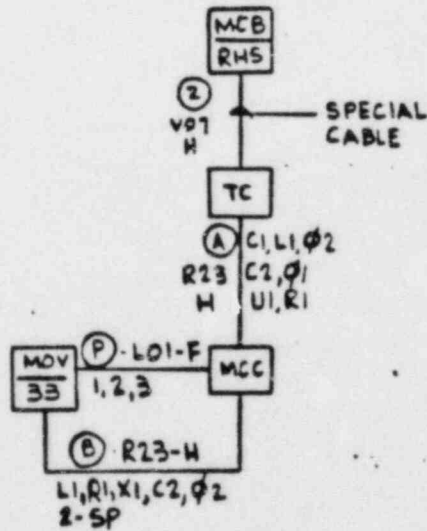
GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/9 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 15



CTMT PIPING PENETRATION NO. 15

D-175038 / SHT. 2



BLOCK DIAGRAM
AFU-B6

FOR MOV8888A-A

C-177607

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/9: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 15

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8888A-A	RM. 223	MCB ITEM A2-65	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/9: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 15

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.6 SEISMIC QUALIFICATION

VARIABLE 19/9: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 15

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCR2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L008-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

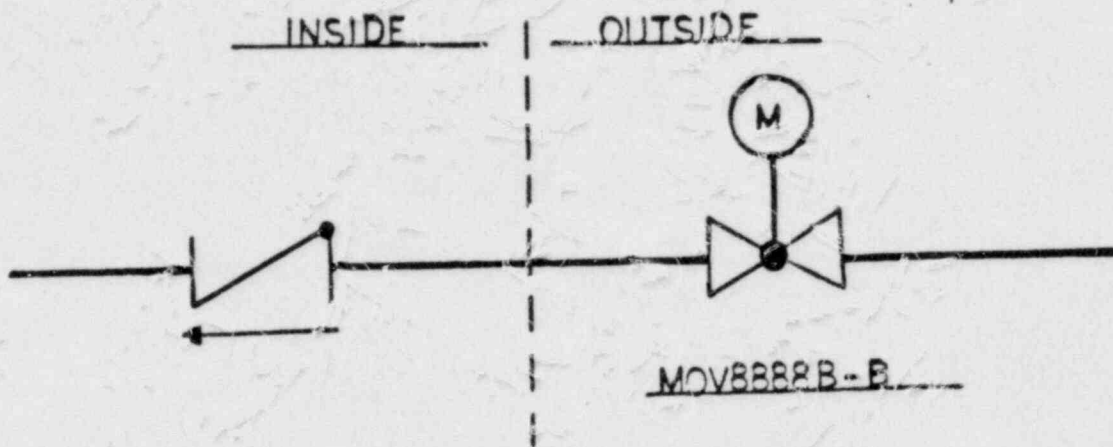
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/10: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 17 - RESIDUAL HEAT REMOVAL
LOOP - IN/LOW HEAD SAFETY INJECTION

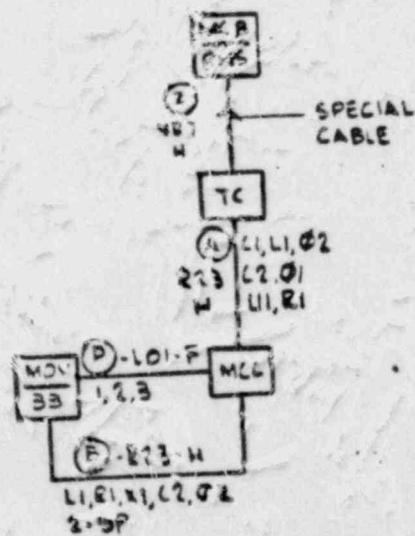
TPNS No(s) - INSIDE: Check Valve
OUTSIDE: N1E11ZS8888B-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/10 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 17



CTMT PIPING PENETRATION NO. 17
D-175038/SHT. 2



BLOCK DIAGRAM
BFV-A5

FOR MOV8888B-B

C-177601

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/10: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 17

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8888B-B	RM. 223	MCB ITEM A2-66	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/10: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 17

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/10: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 17

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L029-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

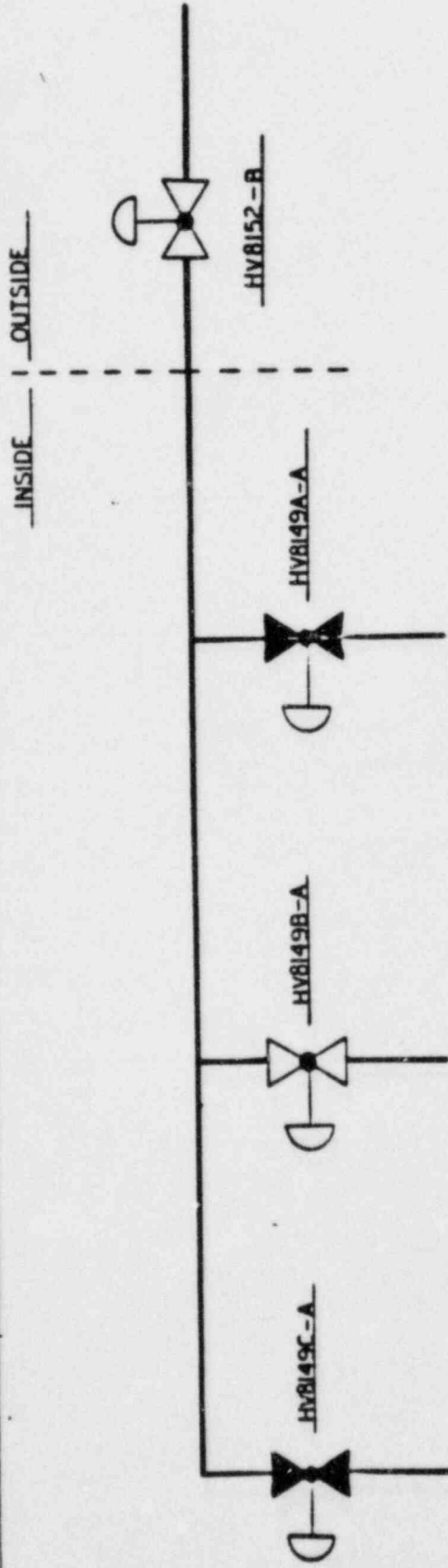
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/11: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 23 - NORMAL LETDOWN LINE

TPNS No(s) - INSIDE: N1E21ZS8149A-A, N1E21ZS8149B-A, N1E21ZS8149C-A
OUTSIDE: N1E21ZS8152-B

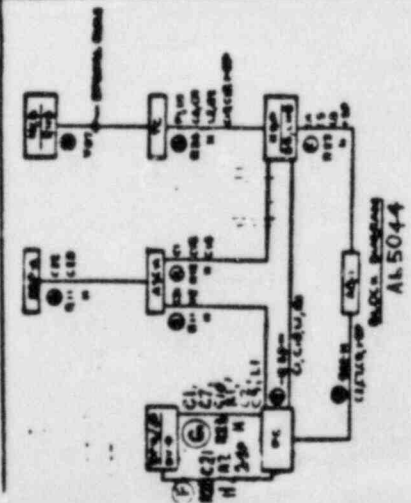
GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/11 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N° 23

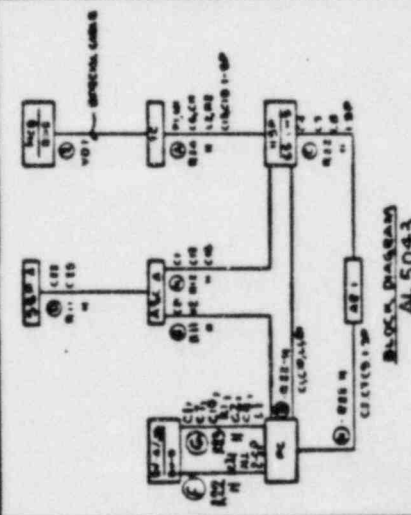


CIMT PIPING PENETRATION NO. 23

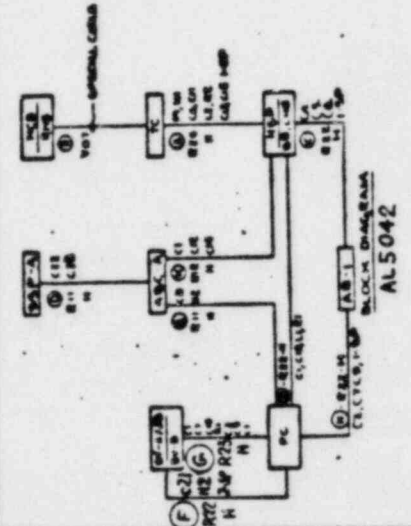
D-175039/SHT. 1



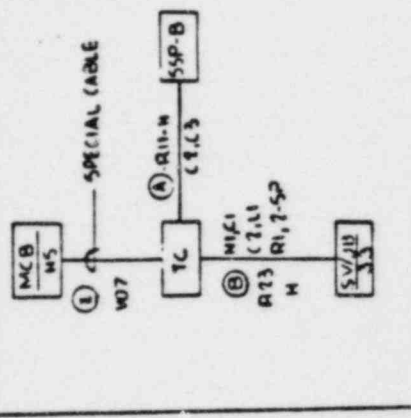
FOR HV8149C-A
 D-177378



FOR HV8149B-A
 D-177377



FOR HV8149A-A
 D-177376



BLOCK DIAGRAM
 BL 5027
 FOR HV8152-B
 D-177364

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/11: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 23

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8149A-A	CTMT	MCB ITEM A3-149	Control Room
ZS8149B-A	CTMT	MCB ITEM A3-134	Control Room
ZS8149C-A	CTMT	MCB ITEM A3-114	Control Room
ZS8152-R	RM. 184	MCB ITEM A3-113	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/11: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 23

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/11: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 23

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L006-A and Q1H25L027-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

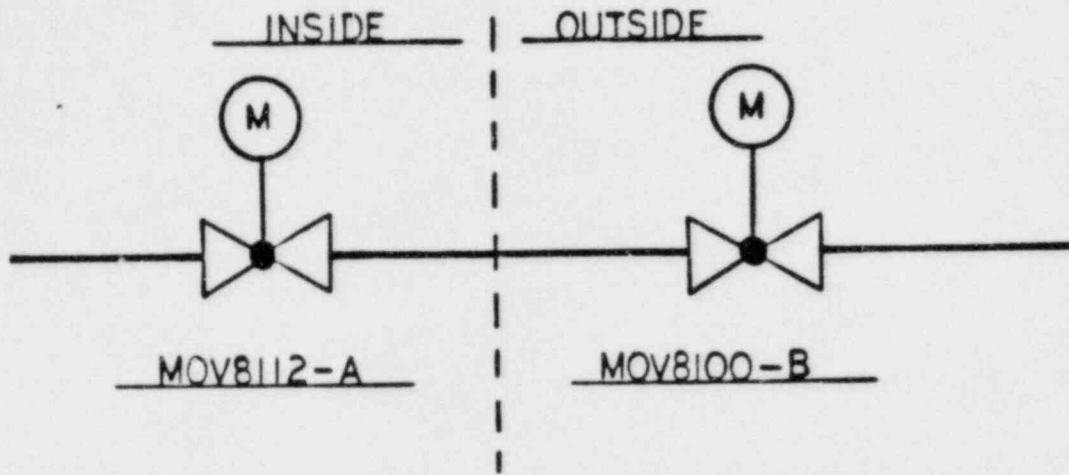
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/12: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 28 - EXCESS LETDOWN AND SEAL
WATER

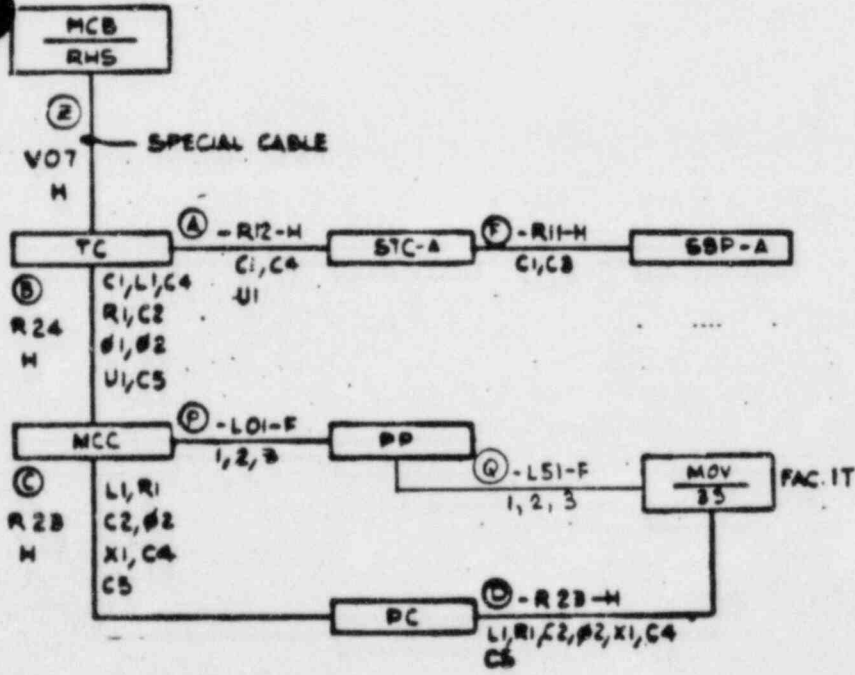
TPNS No(s) - INSIDE: N1E21ZS8112-A
OUTSIDE: N1E21ZS8100-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/12 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 28

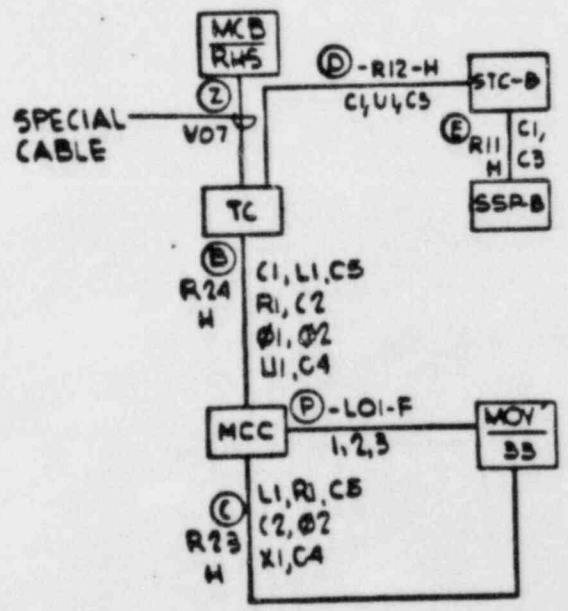


CTMT PIPING PENETRATION NO. 28
D-175039/SHT. 1



BLOCK DIAGRAM
AFU-T4

FOR MOV8112-A
D-177567



BLOCK DIAGRAM
DFV-E5

FOR MOV8100-B
D-177634

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/12: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 28

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8112-A	CTMT	MCB ITEM A3-73	Control Room
ZS8100-B	RM. 223	MCB ITEM A3-74	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/12: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 28

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/12: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 28

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L006-A and Q1H25L027-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

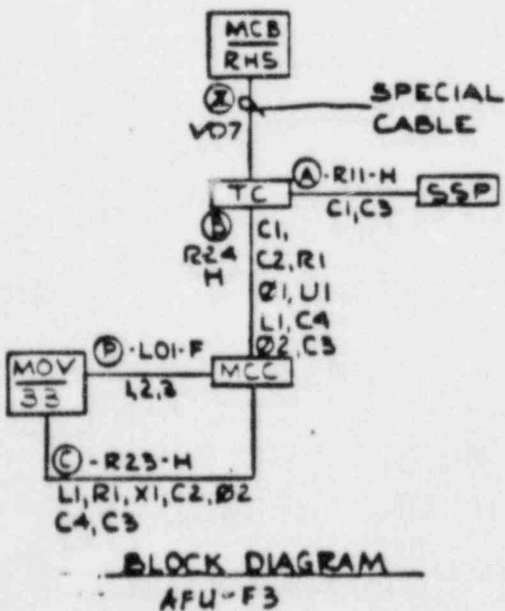
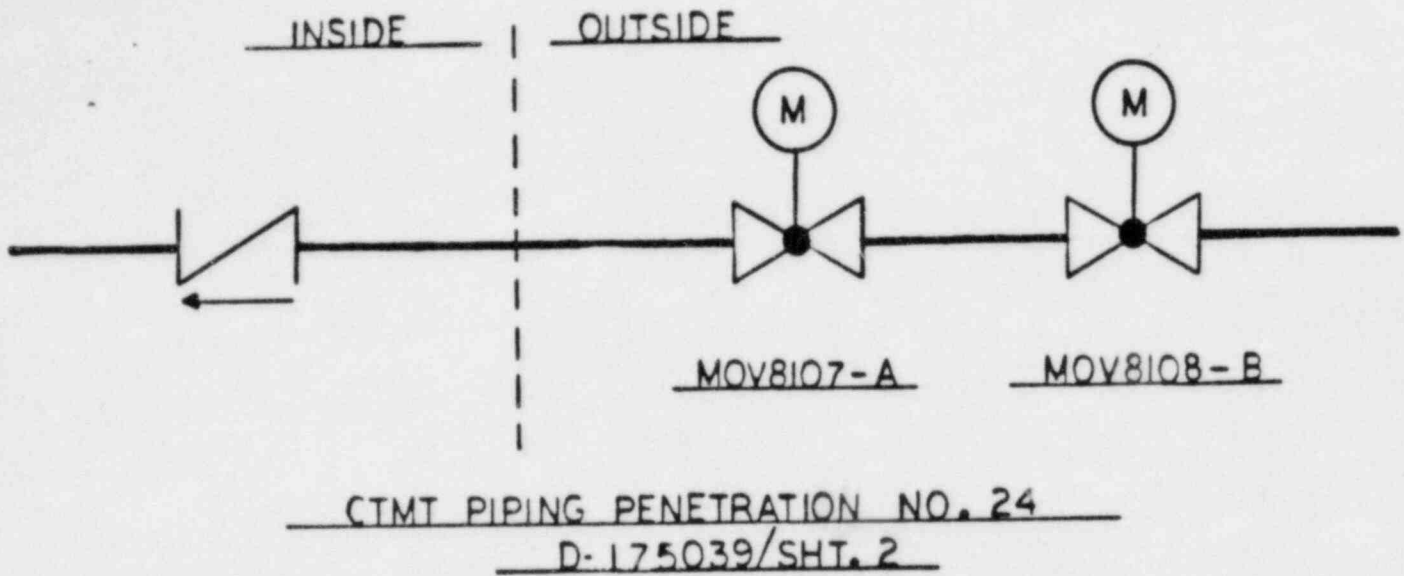
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/13: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 24 - NORMAL CHARGING LINE

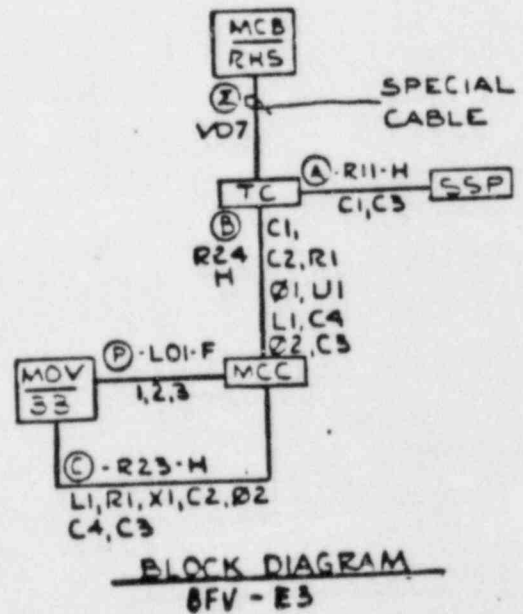
TPNS No(s) - INSIDE: Check Valve
OUTSIDE: N1E21ZS8107-A, N1E21ZS8108-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/13 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 24



FOR MOV8107-A
C-177608



FOR MOV8108-B
C-177608

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/13: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 24

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8107-A	RM. 223	MCB ITEM A3-103	Control Room
ZS8108-B	RM. 223	MCB ITEM A3-104	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/13: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 24

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/13: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 24

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.1C is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L006-A and Q1H25L027-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

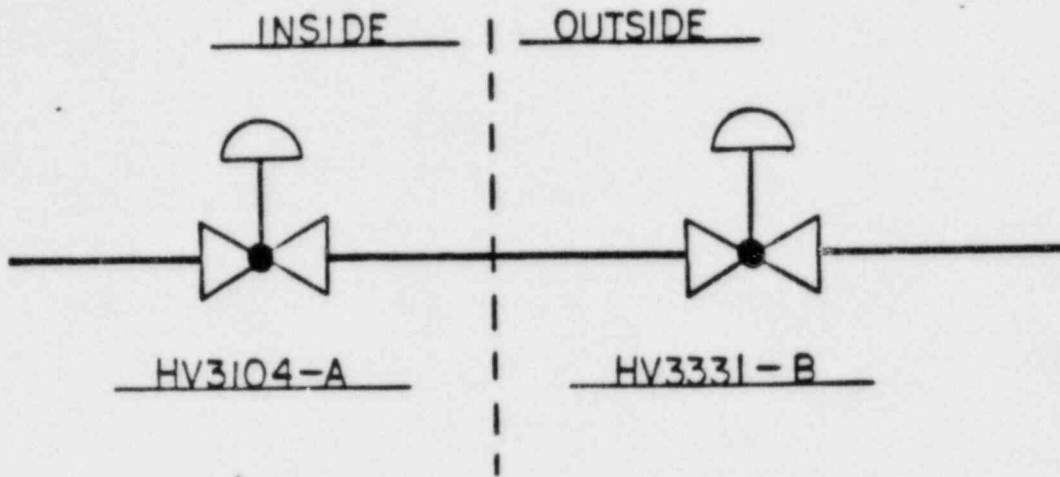
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/14: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 56 - PRESSURIZER STEAM SAMPLE
LINE

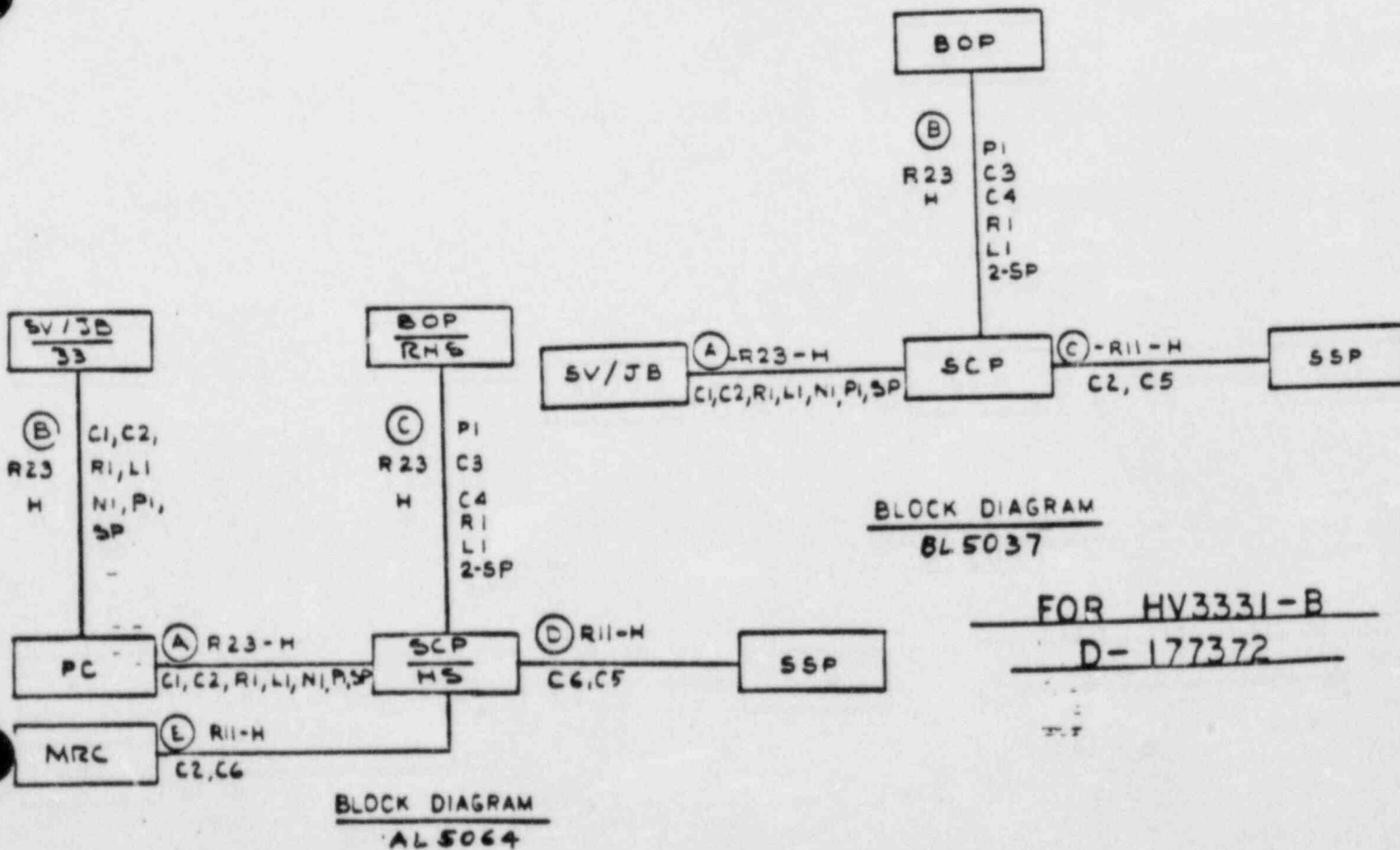
TPNS No(s) - INSIDE: Q1P15ZS3104-A
OUTSIDE: Q1P15ZS3331-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY/MODIFY JUSTIFY
b) SEISMIC	NO	
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	NO	MODIFY
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/14 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 56



CTMT PIPING PENETRATION NO. 56
D-175009/SHT. 2



FOR HV3331-B
D-177372

FOR HV3104-A
D-177371

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/14: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 56

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3104-A	CTMT	-	Control Room
ZS3331-B	RM. 223	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/14: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 56

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The position indicating lights in the control room for the isolation valves covering this penetration, are connected in parallel with the indicating lights located on the sampling control panels, and as such the cables between the valve limit switches and the control room display are routed through circuitry contained in the sampling control panels.

The sampling control panels Q1P15NFSS2607A-A and Q1P15NFSS2607B-B do not have radiation qualification documentation. Therefore, the exposure of these panels to post-accident radiation may result in the loss of the control room valve status indication.

PROPOSED MODIFICATION

The position indicating lights in the control room, for each isolation valve, will be rewired to environmentally qualified limit switch contacts, independent from the limit switch contacts used for the indicating lights located on the sampling control panels. In addition, the position indicating lights in the control room will be powered from an existing power supply located in a BOP panel in the control room. New cables will be installed and routed directly between the valve limit switches and the control room display.

1.B SEISMIC QUALIFICATION

VARIABLE 19/14: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 56

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

9. INTERFACE

VARIABLE 19/14: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 56

EXISTING CONDITION

The class 1E indicating circuits of each isolation valve interface with the position indicating lights located on the sampling control panel. The sampling control panel has no radiation qualification documentation, and as such, it is non-class 1E.

PROPOSED MODIFICATION

Adequate interfaces will be provided by the modifications described in Section 1.A Environmental Qualification.

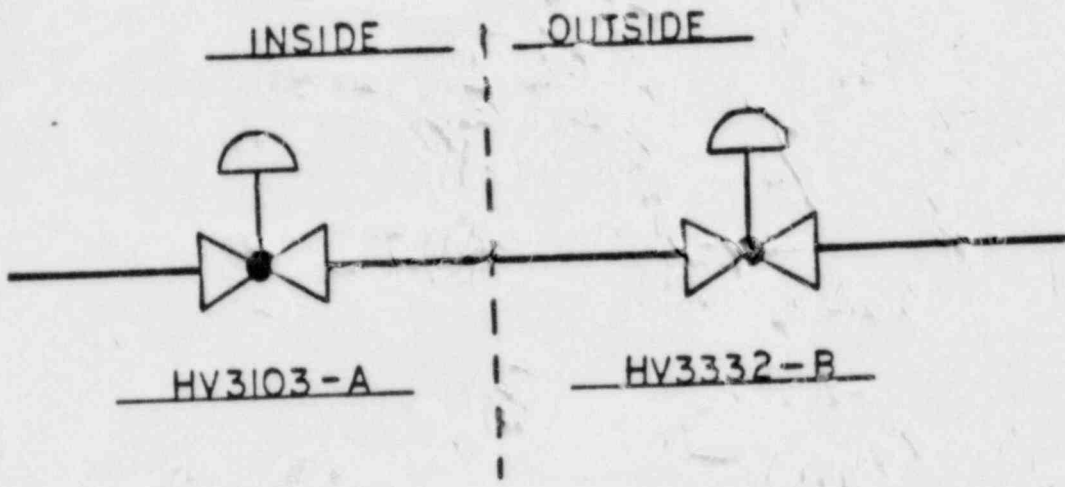
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/15: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 57 - PRESSURIZER LIQUID SAMPLE
LINE

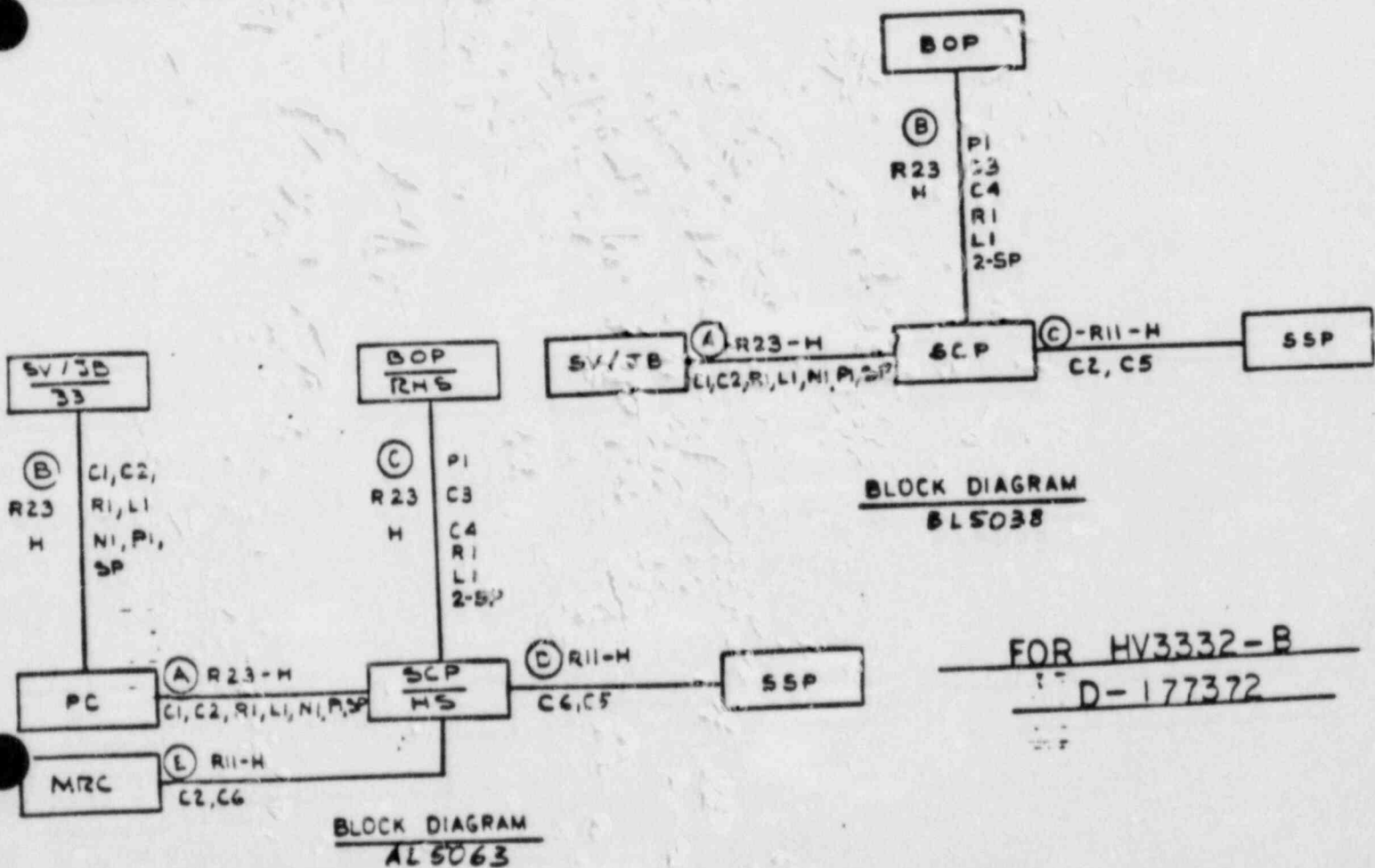
TPNS No(s) - INSIDE: Q1P15ZS3103-A
OUTSIDE: Q1P15ZS3332-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY/MODIFY
b) SEISMIC	NO	JUSTIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	NO	MODIFY
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/15 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO. 57



CONT. PIPING PENETRATION NO. 57
D-175009/SHT. 1



FOR HV3332-B
D-177372

FOR HV3103-A
D-177371

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/15: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 57

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3103-A	CTMT	-	Control Room
ZS3332-B	RM. 223	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/15: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 57

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The position indicating lights in the control room for the isolation valves covering this penetration, are connected in parallel with the indicating lights located on the sampling control panels, and as such the cables between the valve limit switches and the control room display are routed through circuitry contained in the sampling control panels.

The sampling control panels Q1P15NFSS2607A-A and Q1P15NFSS2607B-B do not have radiation qualification documentation. Therefore, the exposure of these panels to post-accident radiation may result in the loss of the control room valve status indication.

PROPOSED MODIFICATION

The position indicating lights in the control room, for each isolation valve, will be rewired to environmentally qualified limit switch contacts, independent from the limit switch contacts used for the indicating lights located on the sampling control panels. In addition, the position indicating lights in the control room will be powered from an existing power supply located in a BOP panel in the control room. New cables will be installed and routed directly between the valve limit switches and the control room display.

1.B SEISMIC QUALIFICATION

VARIABLE 19/15: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 57

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

9. INTERFACE

VARIABLE 19/15: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 57

EXISTING CONDITION

The class 1E indicating circuits of each isolation valve interface with the position indicating lights located on the sampling control panel. The sampling control panel has no radiation qualification documentation, and as such, it is non-class 1E.

PROPOSED MODIFICATION

Adequate interfaces will be provided by the modifications described in Section 1.A Environmental Qualification.

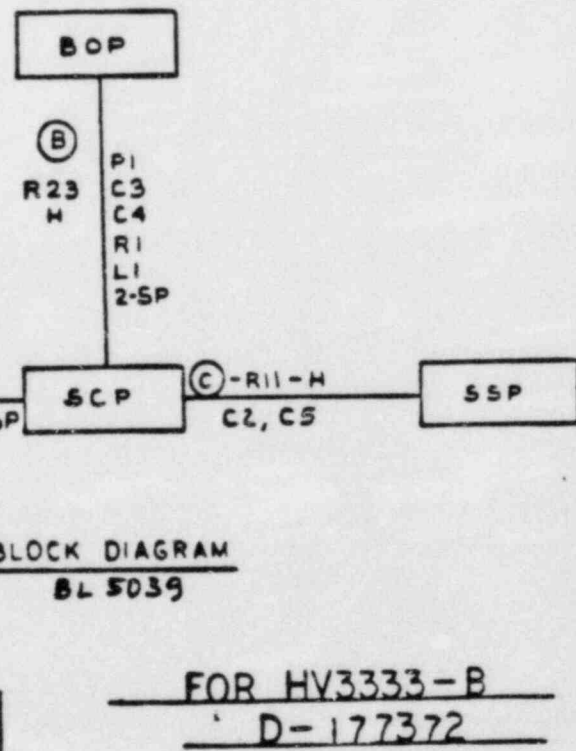
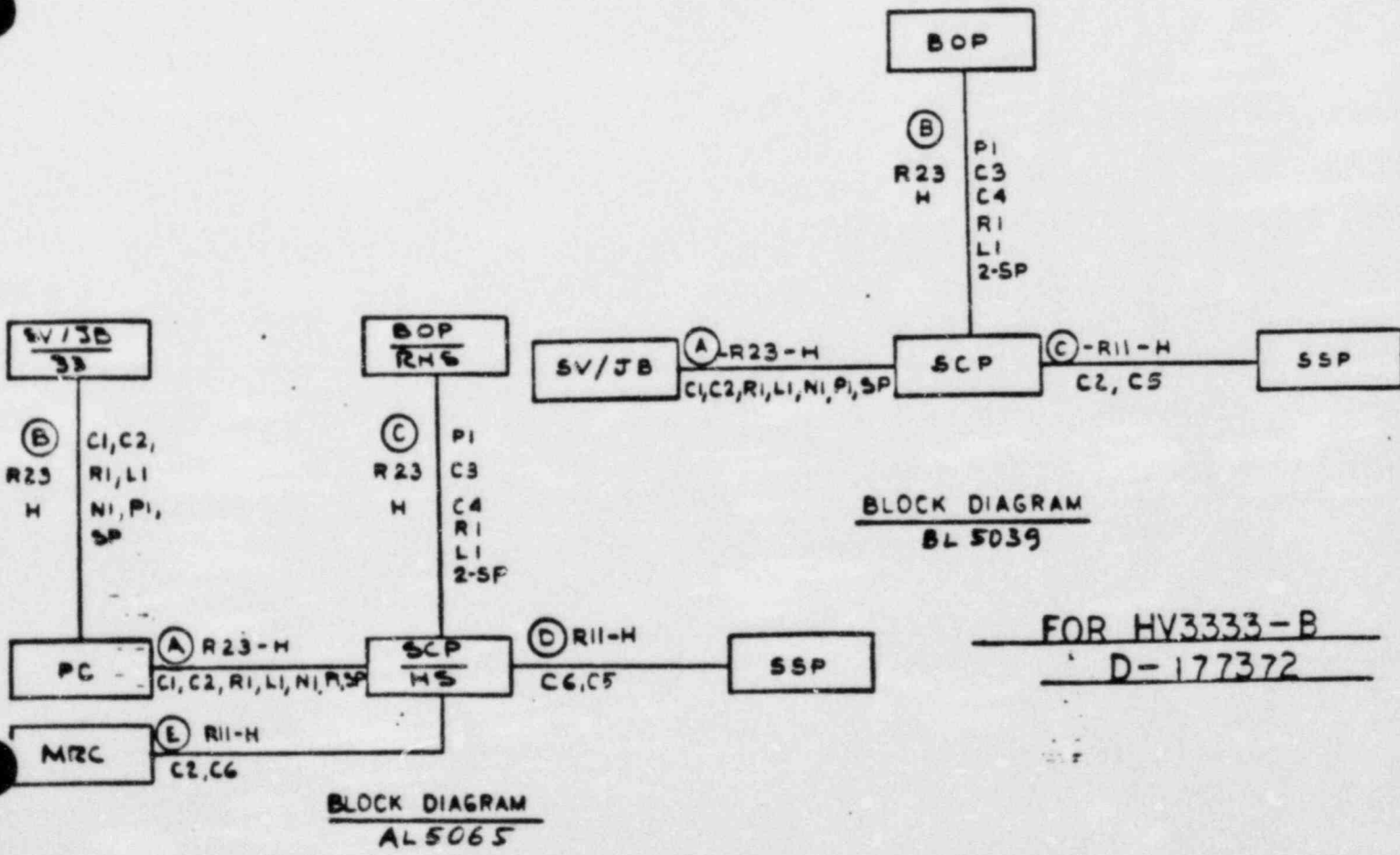
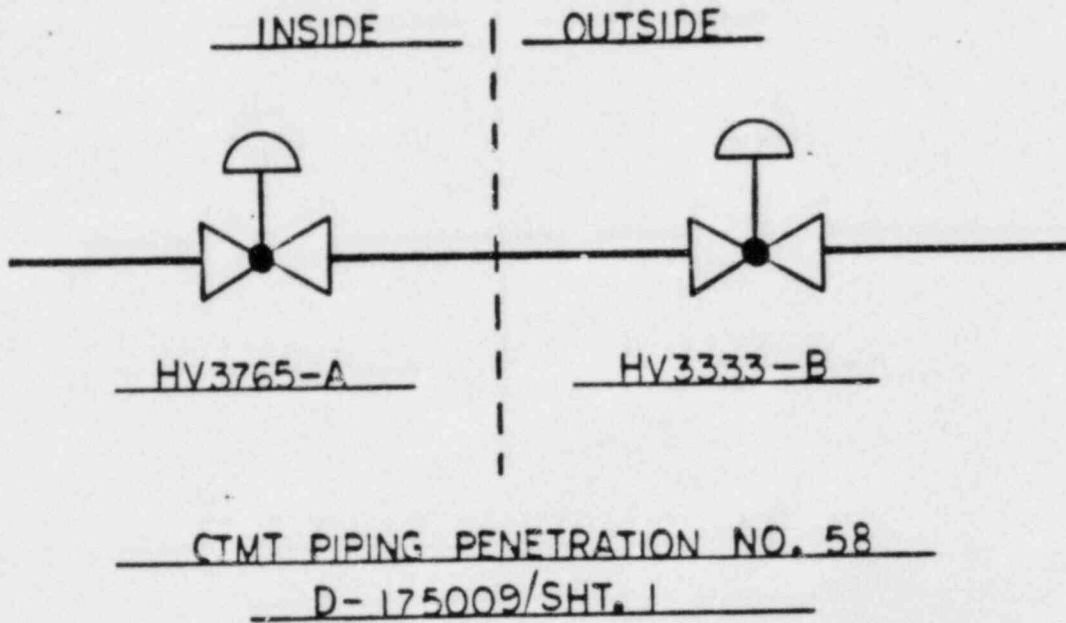
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/16: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 50 - HOT LEG SAMPLE LINE

TPNS No(s) - INSIDE: Q1P15ZS3765-A
OUTSIDE: Q1P15ZS3333-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY/MODIFY JUSTIFY
b) SEISMIC	NO	
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	NO	MODIFY
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/16 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 58



SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/16: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 58

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3765-A	CTMT	-	Control Room
ZS3333-B	RM. 223	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/16: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 58

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The position indicating lights in the control room for the isolation valves covering this penetration, are connected in parallel with the indicating lights located on the sampling control panels, and as such the cables between the valve limit switches and the control room display are routed through circuitry contained in the sampling control panels.

The sampling control panels Q1P15NFSS2607A-A and Q1P15NFSS2607B-B do not have radiation qualification documentation. Therefore, the exposure of these panels to post-accident radiation may result in the loss of the control room valve status indication.

PROPOSED MODIFICATION

The position indicating lights in the control room, for each isolation valve, will be rewired to environmentally qualified limit switch contacts, independent from the limit switch contacts used for the indicating lights located on the sampling control panels. In addition, the position indicating lights in the control room will be powered from an existing power supply located in a BOP panel in the control room. New cables will be installed and routed directly between the valve limit switches and the control room display.

1.B SEISMIC QUALIFICATION

VARIABLE 19/16: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 58

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

9. INTERFACE

VARIABLE 19/16: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 58

EXISTING CONDITION

The class 1E indicating circuits of each isolation valve interface with the position indicating lights located on the sampling control panel. The sampling control panel has no radiation qualification documentation, and as such, it is non-class 1E.

PROPOSED MODIFICATION

Adequate interfaces will be provided by the modifications described in Section 1.A Environmental Qualification.

REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/17: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 48 - INSTRUMENT AIR

TPNS No(s) - INSIDE: Check Valve
OUTSIDE: Q1P19ZS3611-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/17: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 48

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3611-A	RM. 184	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/17: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 48

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/17: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 48

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

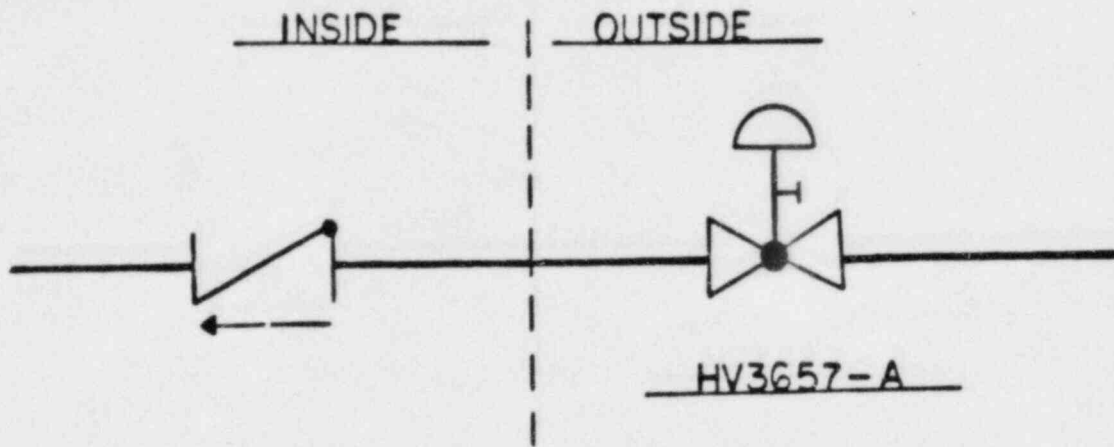
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/18: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 55 - CONTAINMENT AIR SAMPLE IN

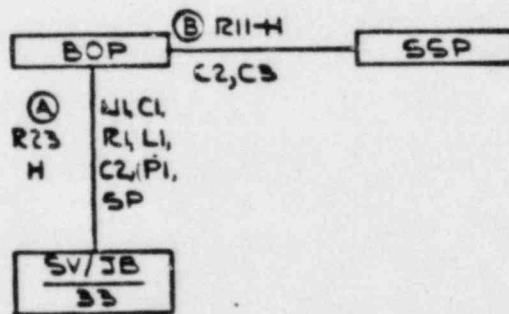
TPNS No(s) - INSIDE: Check Valve
OUTSIDE: Q1E14ZS3657-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/18 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 55



CTMT PIPING PENETRATION NO. 55
D-175010/SHT. 2



BLOCK DIAGRAM
 AL 5083

FOR HV3657-A
D-177373/SHT. 1

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/18: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 55

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3657-A	RM. 223	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/18: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 55

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/18: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 55

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

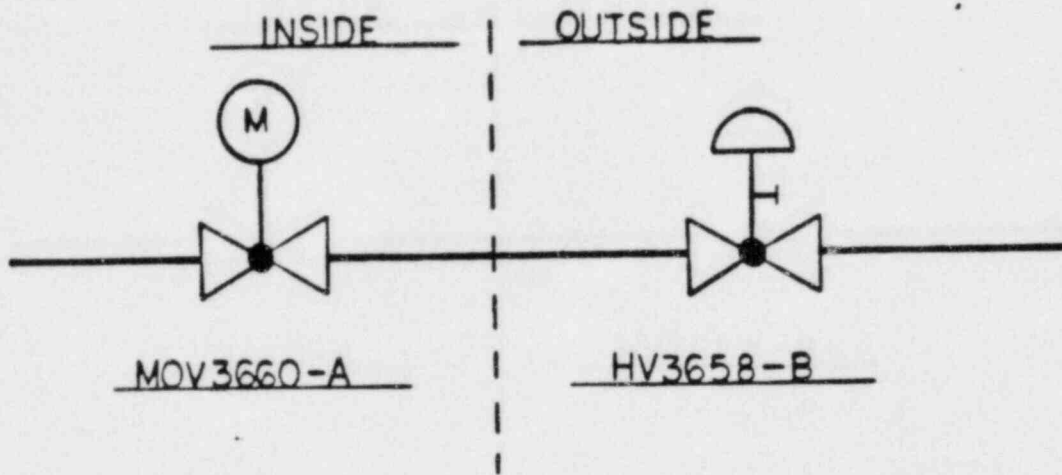
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/19: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 54 - CONTAINMENT AIR SAMPLE OUT

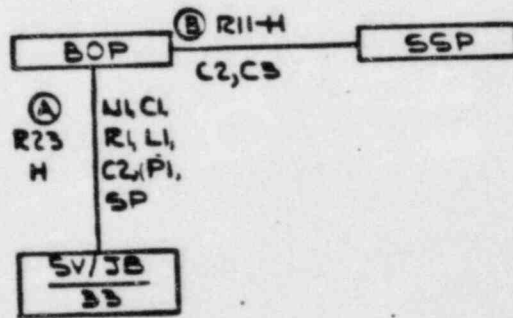
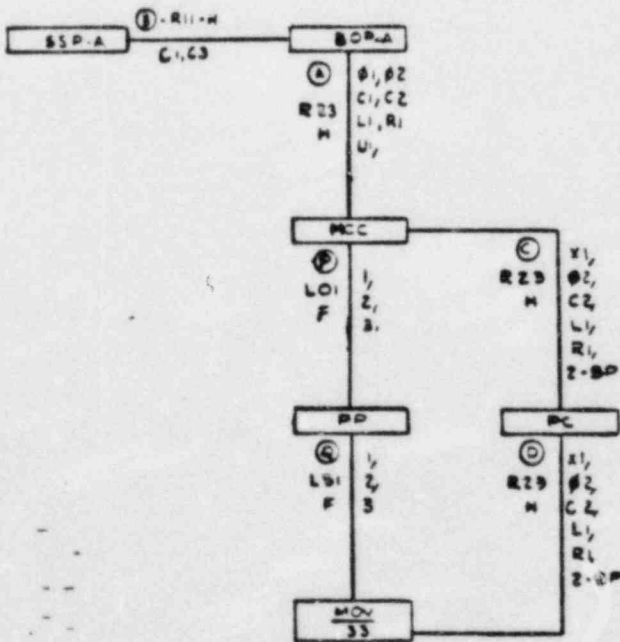
TPNS No(s) - INSIDE: Q1E14ZS3660-A
OUTSIDE: Q1E14ZS3658-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/19 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 54



CTMT PIPING PENETRATION NO. 54
D-175010/SHT. 2



FOR HV3658-B
D-177373/SHT. 1

FOR MOV3660-A
D-177688

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/19: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 54

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3660-A	CTMT	-	Control Room
ZS3658-B	RM. 223	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/19: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 54

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/19: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 54

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

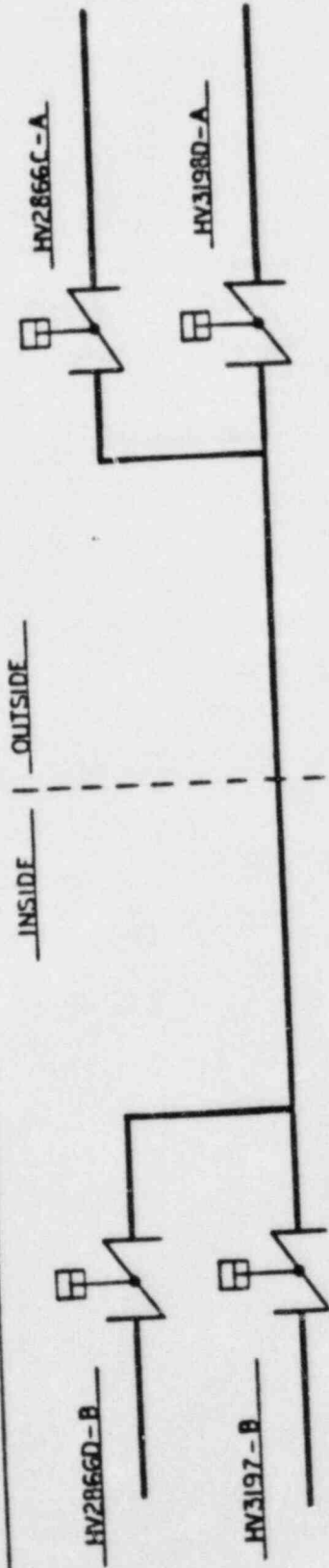
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/20: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 12 - CONTAINMENT PURGE SUPPLY
(MAIN & MINI)

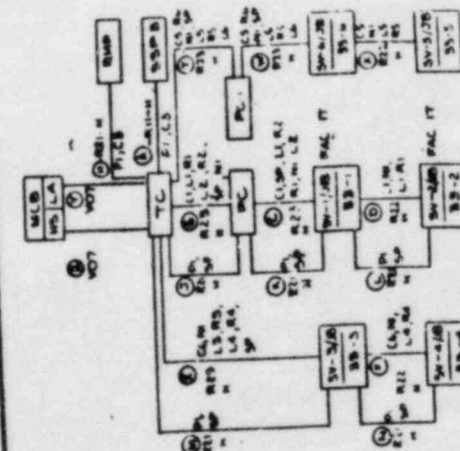
TPNS No(s) - INSIDE: Q1P13ZS2866D-B, Q1P13ZS3197-B
OUTSIDE: Q1P13ZS2866C-A, Q1P13ZS3198D-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

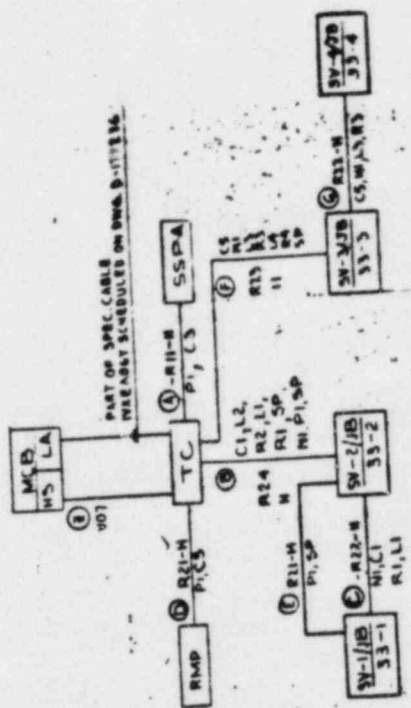
PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/ 20: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N° 12



CIMT PIPING PENETRATION NO. 12
 D-175010/SHIS. LAND 2



BLOCK DIAGRAM
 AL 5008
 FOR HV2866D-B & HV3197-B
 D-177199



BLOCK DIAGRAM
 AL 5006
 FOR HV2866C-A & HV3198D-A
 D-177204

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/20: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 12

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS2866D-B	CTMT	MCB ITEM A2-79	Control Room
ZS3197-B	CTMT	MCB ITEM A2-128	Control Room
ZS2866C-A	RM. 223	MCB ITEM A2-68	Control Room
ZS3198D-A	RM. 223	MCB ITEM A2-128	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/20: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 12

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/20: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 12

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L008-A and Q1H25L029-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

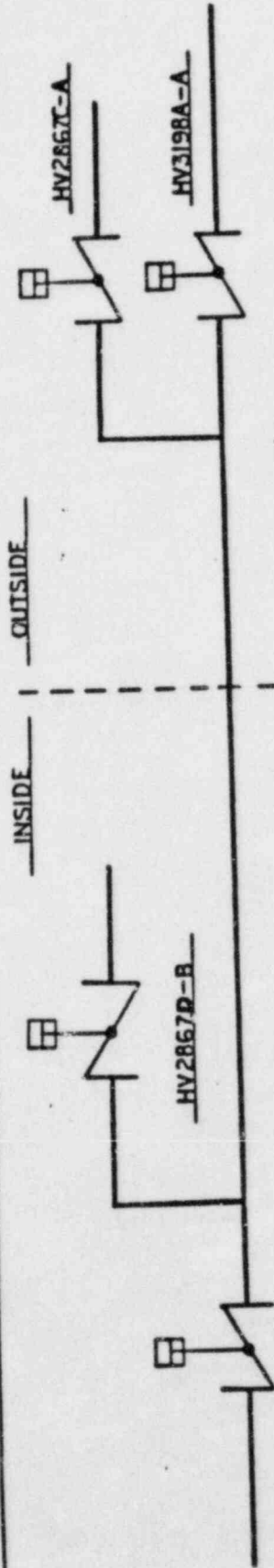
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/21: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 13 - CONTAINMENT PURGE EXHAUST
(MAIN & MINI)

TPNS No(s) - INSIDE: Q1P13ZS2867D-B, Q1P13ZS3196-B
OUTSIDE: Q1P13ZS3198A-A, Q1P13ZS2867C-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

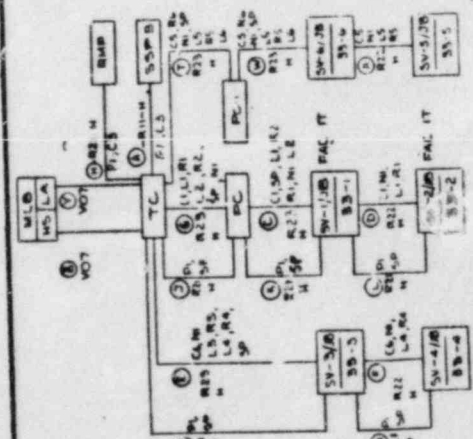
PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/21: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO. 13



 HV3196-B

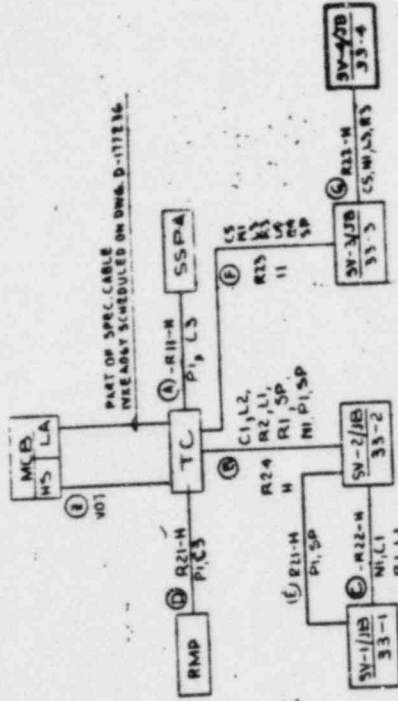
 CTMT PIPING PENETRATION NO. 13

 D-175010/SHTS. 1 AND 2



 FOR HV2867B-B & HV3196-B

 D-17199



 FOR HV2867C-A & HV3198A-A

 D-177204

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/21: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 13

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS2867D-B	CTMT	MCB ITEM A2-79	Control Room
ZS3196-B	CTMT	MCB ITEM A2-128	Control Room
ZS3198A-A	RM. 223	MCB ITEM A2-128	Control Room
ZS2867C-A	RM. 223	MCB ITEM A2-68	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/21: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 13

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/21: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 13

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L008-A and Q1H25L029-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

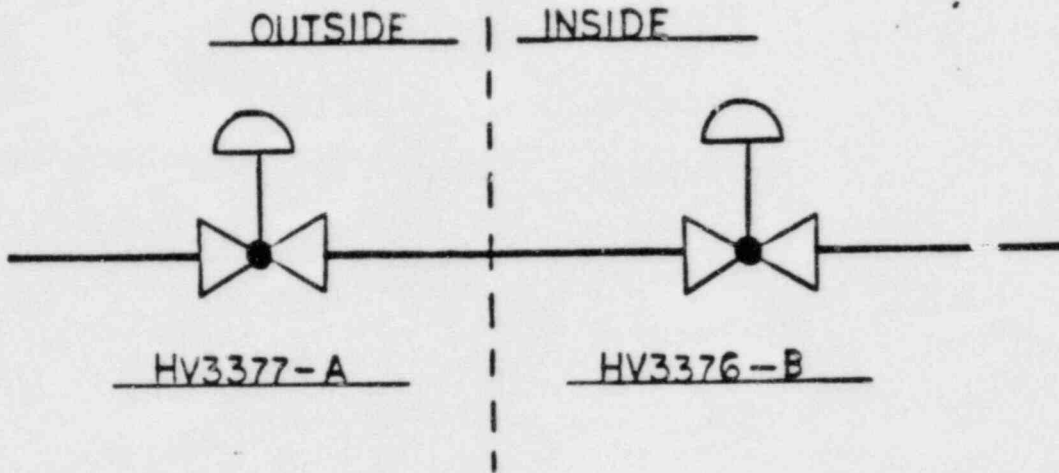
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/22: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 78 - CONTAINMENT SUMP PUMPS
DISCHARGE

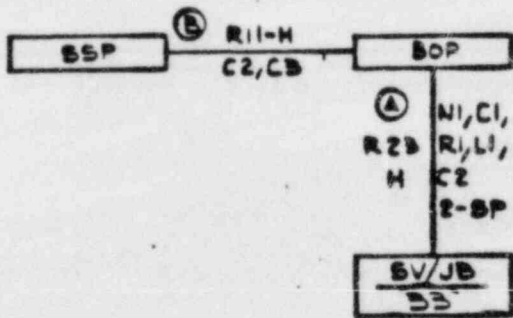
TPNS No(s) - INSIDE: Q1G21ZS3376-B
OUTSIDE: Q1G21ZS3377-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/22: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 78

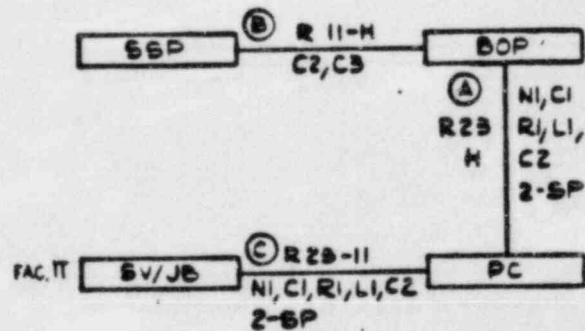


CTMT PIPING PENETRATION NO. 78
D-175004/SHT. 1



BLOCK DIAGRAM
AL5070

FOR HV3377-A
D-177373/SHT. 1



BLOCK DIAGRAM
BL5045

FOR HV3376-B
D-177362

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/22: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 78

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3376-B	CTMT	-	Control Room
ZS3377-A	RM. 184	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/22: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 78

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/22: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 78

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

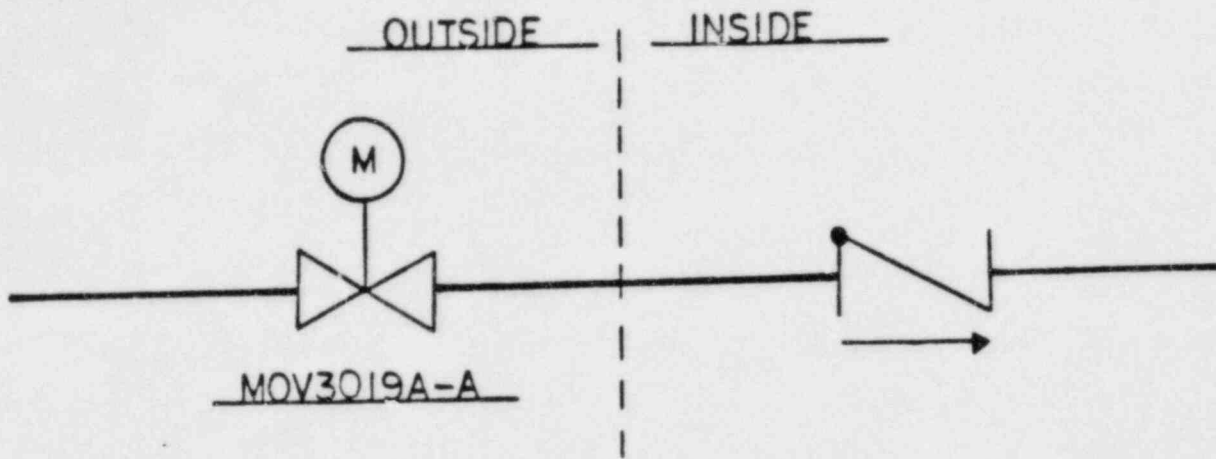
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/23: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 34 - SERVICE WATER SUPPLY TO
CONTAINMENT COOLER 1A

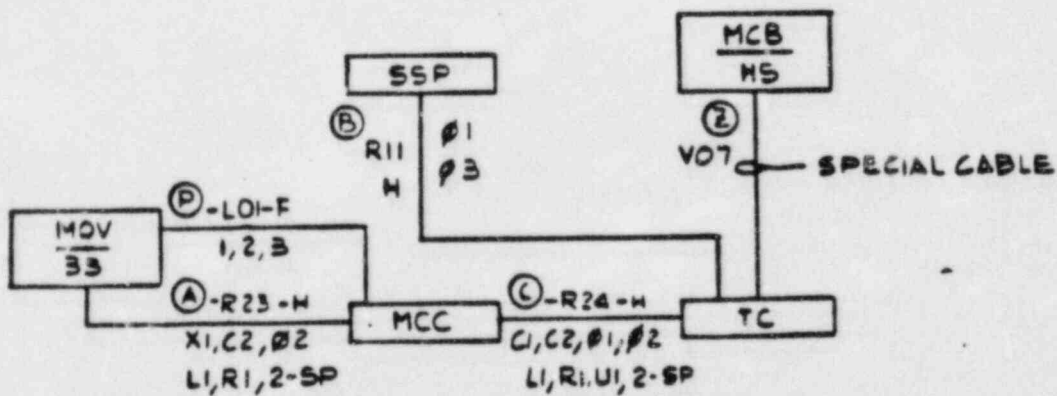
TPNS No(s) - INSIDE: Check Valve
OUTSIDE: Q1P16ZS3019A-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECCORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/23 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION Nº 34



CTMT PIPING PENETRATION NO. 34
D-175003/SHT. 1



BLOCK DIAGRAM
 APU-32

FOR MOV3019A-A
C-177613

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/23: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 34

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3019A-A	RM. 223	MCB Item A1-115	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/23: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 34

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/23: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 34

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L009-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

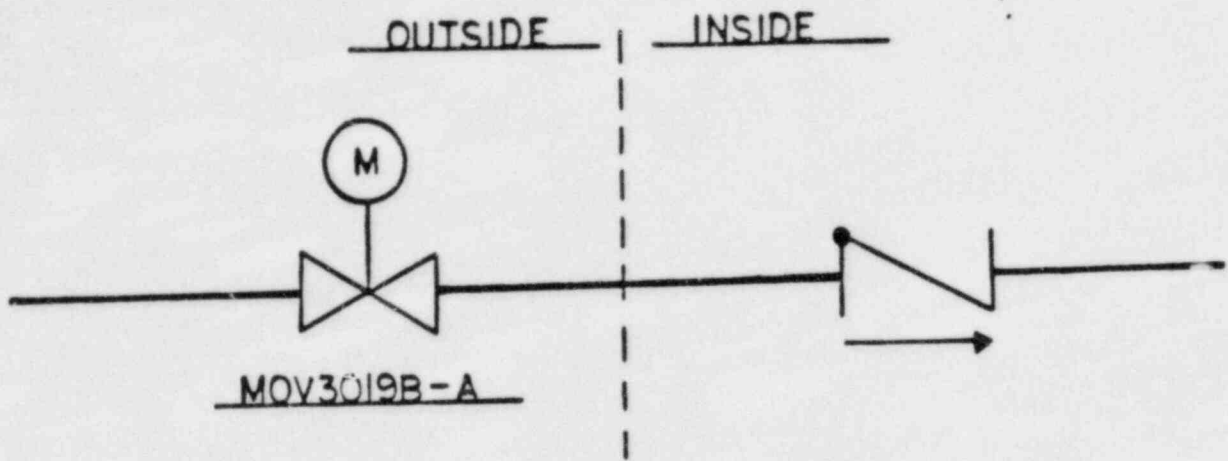
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/24: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 35 - SERVICE WATER SUPPLY TO
CONTAINMENT COOLER 1B

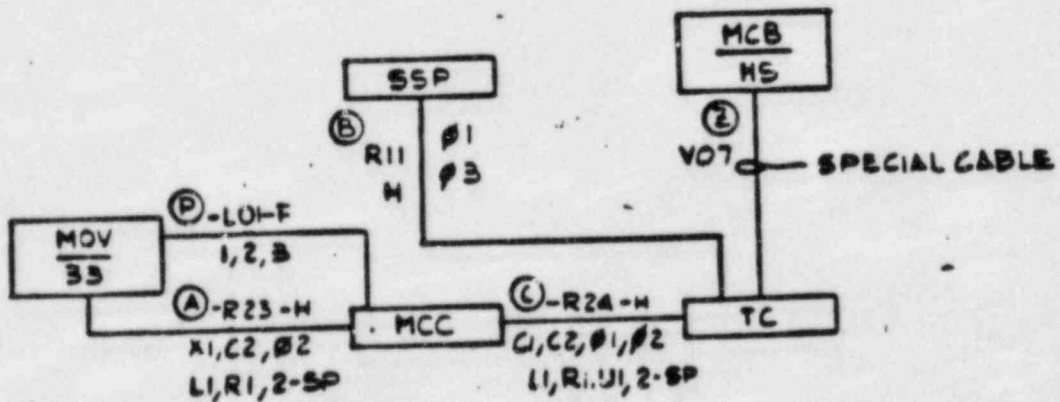
TPNS No(s) - INSIDE: Check Valve
OUTSIDE: Q1P16ZS3019B-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/ 24: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 35



CTMT PIPING PENETRATION NO. 35
D-175003/SHT. 1



BLOCK DIAGRAM
APU-53

FOR MOV3019B-A
C-177613

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/24: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 35

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3019B-A	RM. 223	MCB ITEM A1-116	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/24: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 35

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/24: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 35

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L009-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

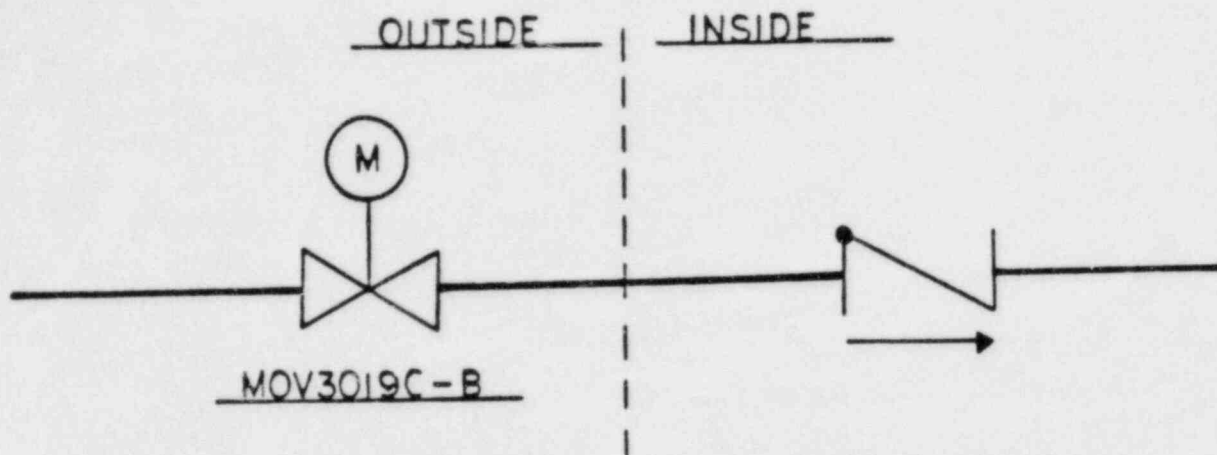
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/25: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 36 - SERVICE WATER SUPPLY TO
CONTAINMENT COOLER 1C

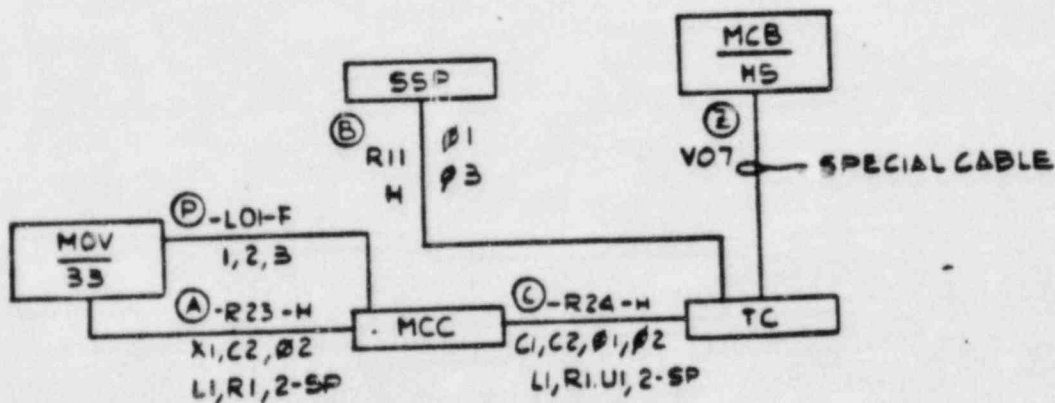
TPNS No(s) - INSIDE: Check Valve
OUTSIDE: Q1P16ZS3019C-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/25: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 36



CTMT PIPING PENETRATION NO. 36
D-175003/SHT. 1



BLOCK DIAGRAM
 BFV-C4

FOR MOV3019C-B
C-177613

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/25: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 36

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3019C-B	RM. 223	MCB ITEM A2-107	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/25: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 36

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/25: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 36

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L030-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

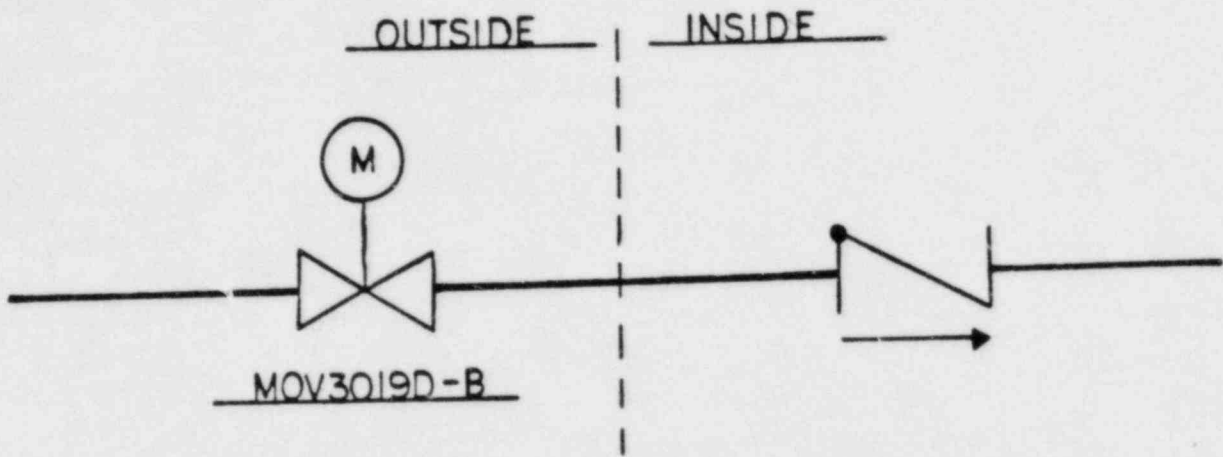
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/26: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 37 - SERVICE WATER SUPPLY TO
CONTAINMENT COOLER 1D

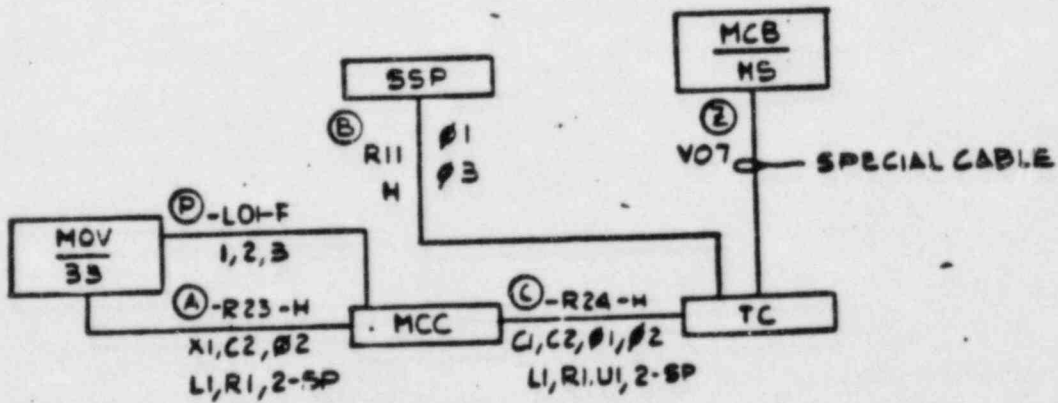
TPNS No(s) - INSIDE: Check Valve
OUTSIDE: Q11P16ZS3019D-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/26 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N° 37



CTMT PIPING PENETRATION NO. 37
D-175003/SHT. 1



BLOCK DIAGRAM
 BFT-05

FOR MOV3019D-B
C-177613

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/26: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 37

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3019D-B	RM. 223	MCB ITEM A2-108	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/26: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 37

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/26: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 37

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Documentation for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L030-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

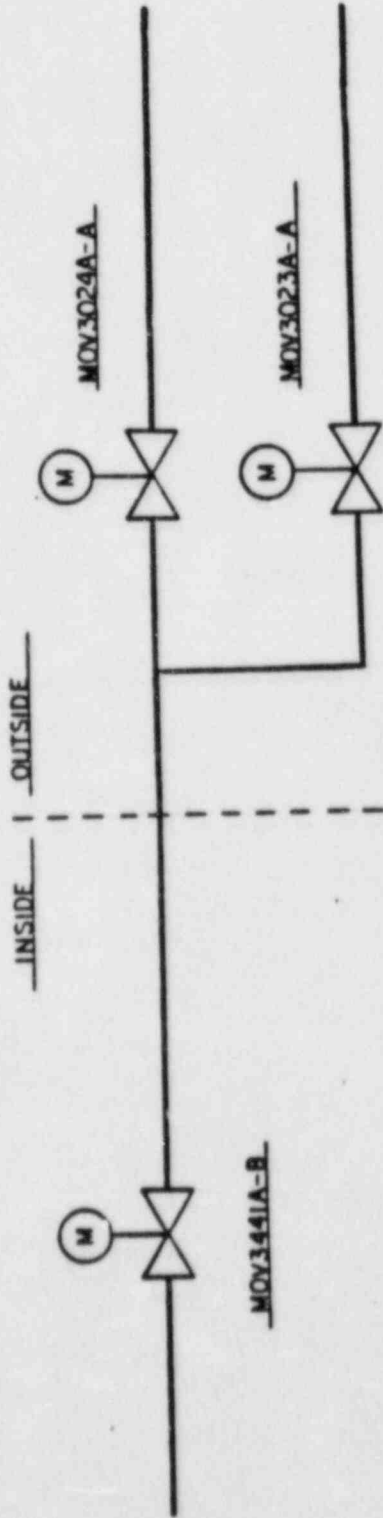
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/27: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 38 - SERVICE WATER RETURN FROM
CONTAINMENT COOLER 1A

TPNS No(s) - INSIDE: Q1P16ZS3441A-B
OUTSIDE: Q1P16ZS3023A-A, Q1P16ZS3024A-A

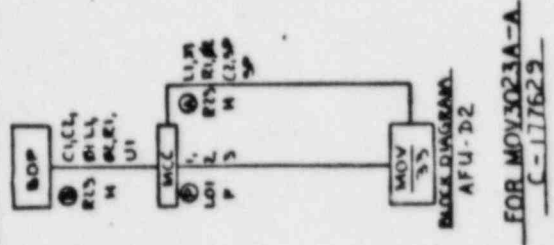
GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/27: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N° 38



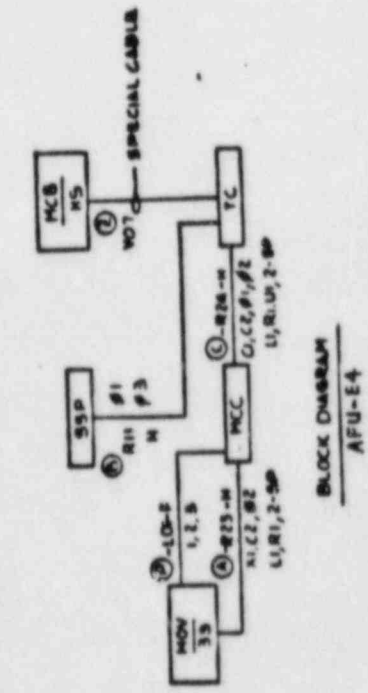
CTMT PIPING PENETRATION NO. 38

D-115003, RT.1



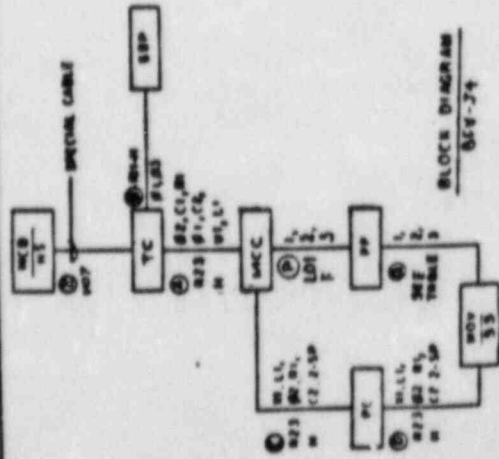
MOV 35
 BLOCK DIAGRAM
 AFU-D2

FOR MOV3023A-A
 C-117629



MOV 35
 BLOCK DIAGRAM
 AFU-E4

FOR MOV3024A-A
 C-117613



MOV 35
 BLOCK DIAGRAM
 AFU-F4

FOR MOV3441A-B
 D-117633

19/27.0-2

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/27: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 38

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3441A-B	CTMT	MCB ITEM A1-92	Control Room
ZS3023A-A	RM. 223	-	Control Room
ZS3024A-A	RM. 223	MCB ITEM A1-74	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/27: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 38

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/27: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 38

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L030-B and Q1H25L009-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

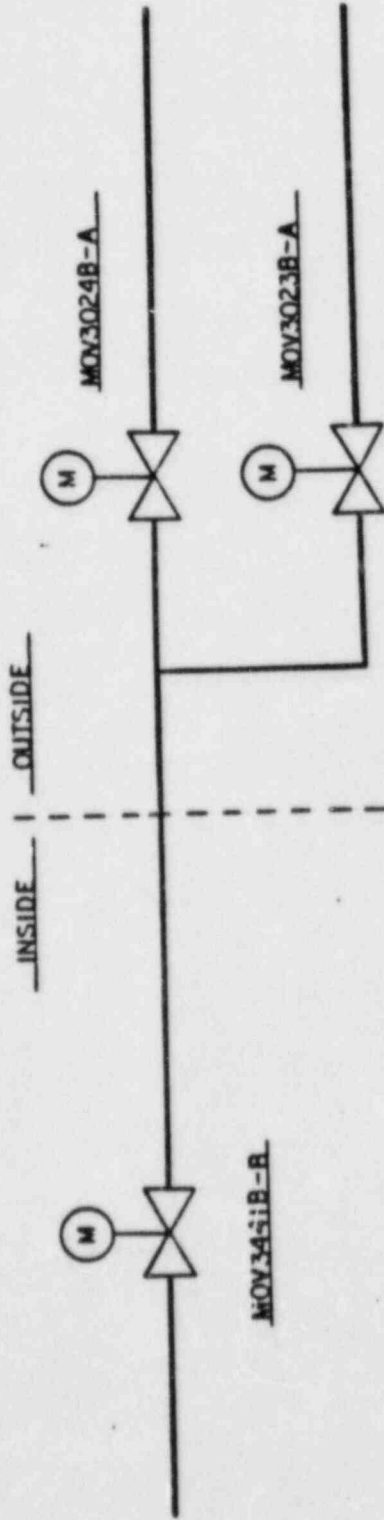
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/28: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 39 - SERVICE WATER RETURN FROM
CONTAINMENT COOLER 1B

TPNS No(s) - INSIDE: Q1P16ZS3441B-B
OUTSIDE: Q1P16ZS3023B-A, Q1P16ZS3024B-A

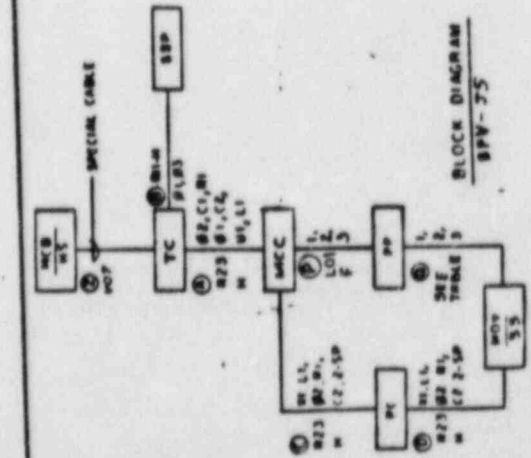
GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/28 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 39



CTMT PIPING PENETRATION NO. 39

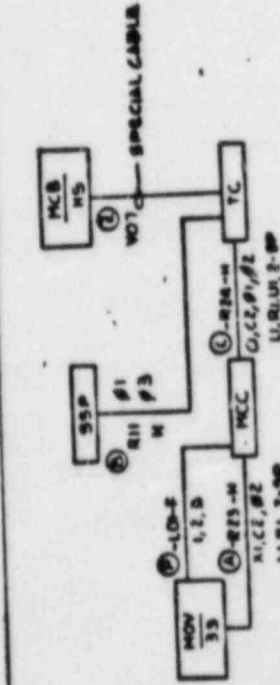
D-175003/SHT. 1



BLOCK DIAGRAM
 89V-75

FOR MOV3441B-B

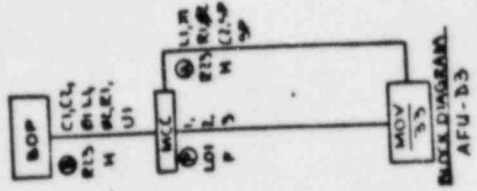
D-177633



BLOCK DIAGRAM
 AFU-E5

FOR MOV3024B-A

C-177613



BLOCK DIAGRAM
 AFU-B5

FOR MOV3023B-A

C-177629

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/28: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 39

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3441B-B	CTMT	MCB ITEM A1-93	Control Room
ZS3023B-A	RM. 223	-	Control Room
ZS3024B-A	RM. 223	MCB ITEM A1-75	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/28: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 39

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/28: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 39

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L030-B and Q1H25L009-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/29: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 40 - SERVICE WATER RETURN FROM
CONTAINMENT COOLER 1D

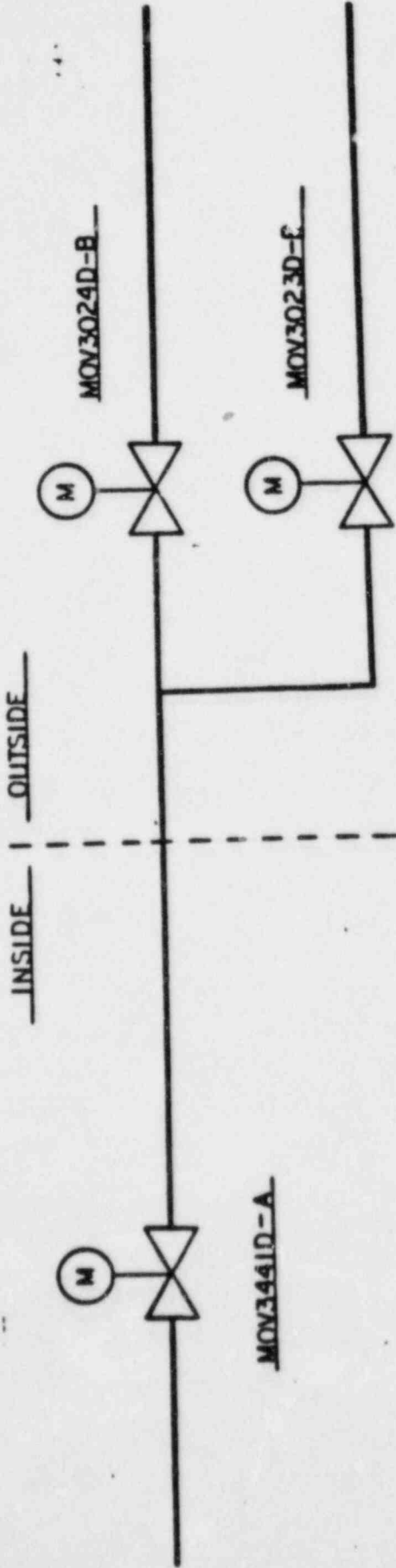
TPNS No(s) - INSIDE: Q1P16ZS3441D-A
OUTSIDE: Q1P16ZS3023D-B, Q1P16ZS3024D-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS

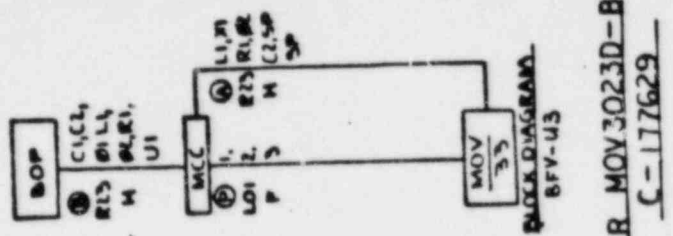
VARIABLE 19/29: CONTAINMENT ISOLATION VALVE STATUS

PENETRATION NO. 40

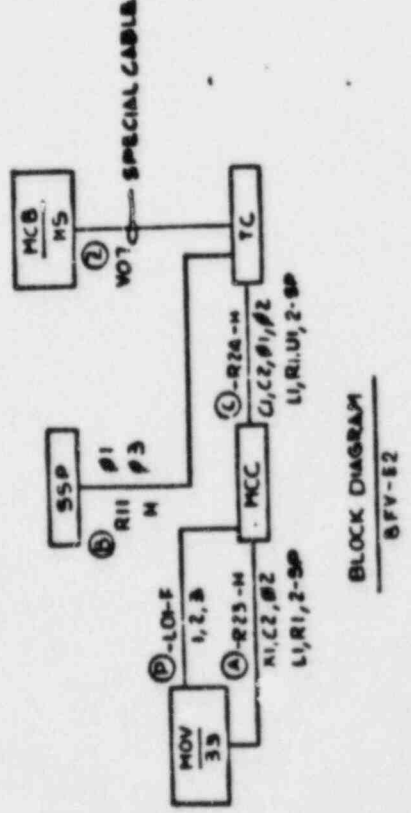


CIMT PIPING PENETRATION NO. 40

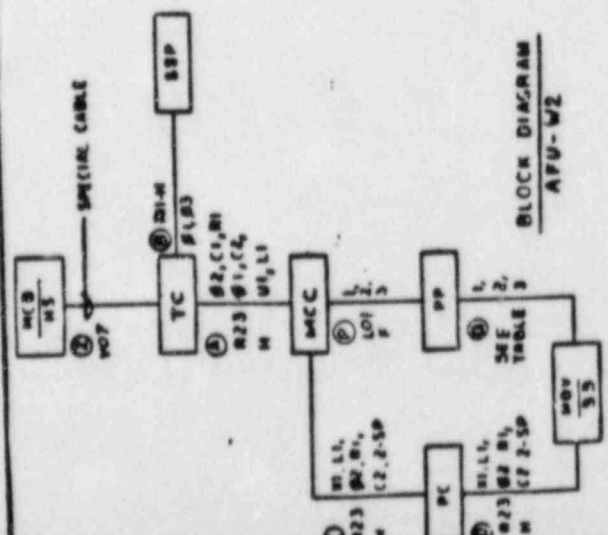
D-175003/SHL-1



FOR MOV3023D-B
C-177629



FOR MOV3024D-B
C-177613



FOR MOV3441D-A
D-177633

19/29.0-2

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/29: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 40

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3441D-A	CTMT	MCB ITEM A2-106	Control Room
ZS3023D-B	RM. 223	-	Control Room
ZS3024D-B	RM. 223	MCB ITEM A2-95	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/29: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 40

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/29: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 40

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L030-B and Q1H25L009-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

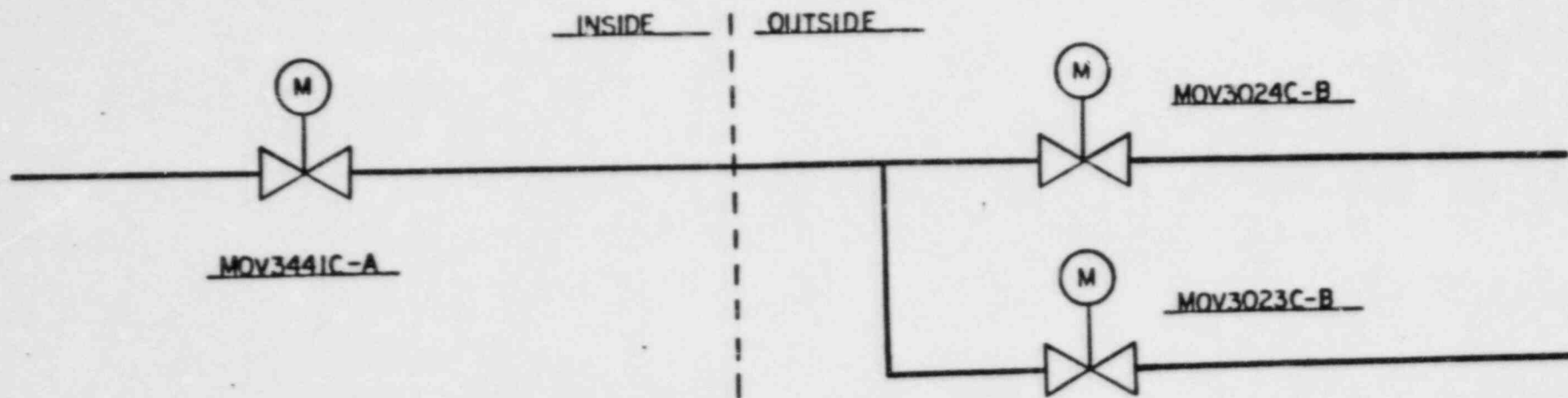
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/30: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 41 - SERVICE WATER RETURN FROM
CONTAINMENT COOLER 1C

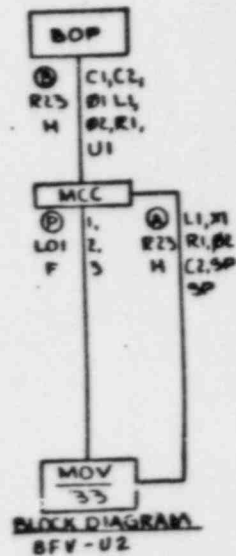
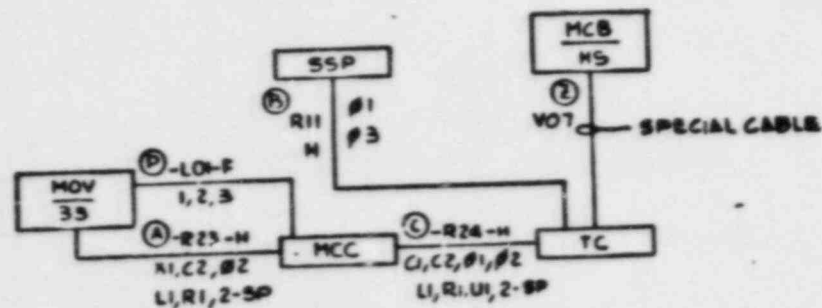
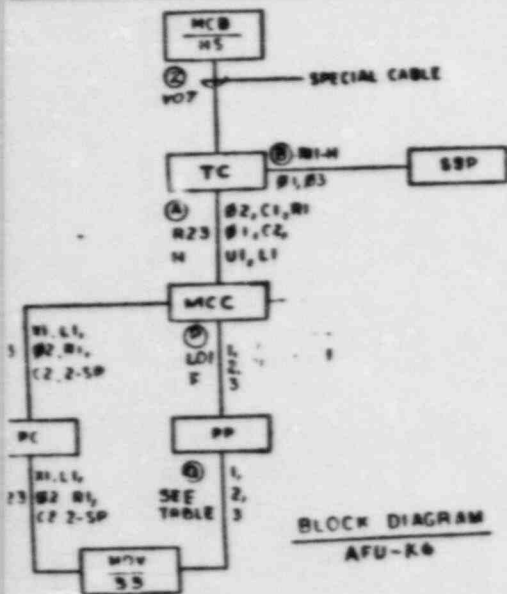
TPNS No(s) - INSIDE: Q1P16ZS3441C-A
OUTSIDE: Q1P16ZS3023C-B, Q1P16ZS3024C-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/30: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO. 41



CTMT PIPING PENETRATION NO. 41
D-175003/SHT. 1



SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/30: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 41

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3441C-A	CTMT	MCB ITEM A2-105	Control Room
ZS3023C-B	RM. 223	-	Control Room
ZS3024C-B	RM. 223	MCB ITEM A2-94	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/30: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 41

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/30: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 41

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L030-B and Q1H25L009-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

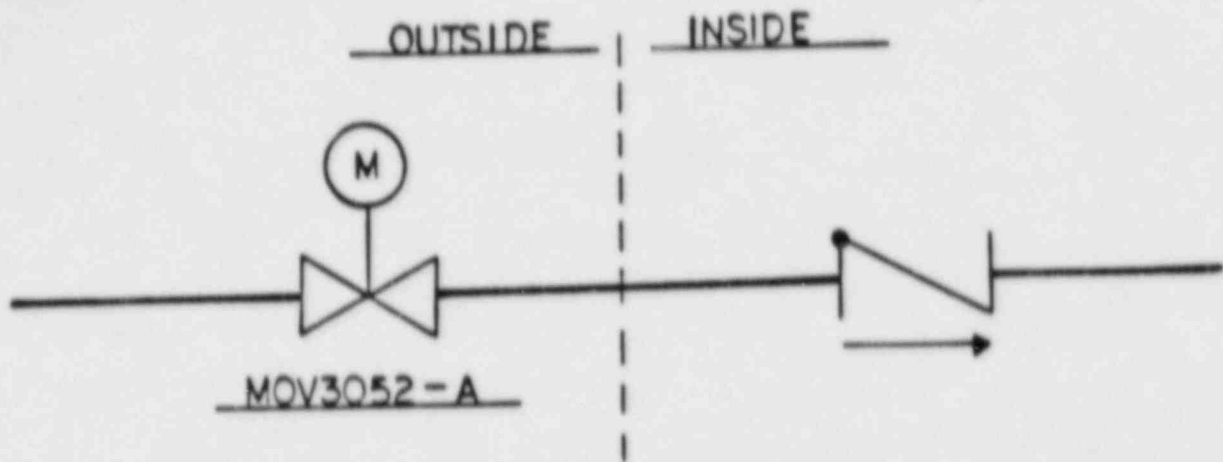
REGULATORY GUIDE 1.97 CATEGORY I
COMPLIANCE REPORT

VARIABLE 19/31: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 42 - REACTOR COOLANT PUMP
COOLING WATER SUPPLY

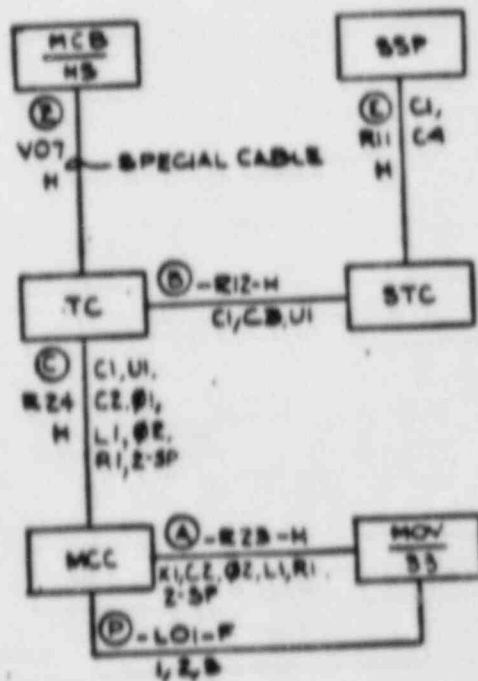
TPNS No(s) - INSIDE: Check Valve
OUTSIDE: Q1P17ZS3052-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/31: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 42



CTMT PIPING PENETRATION NO. 42
D-175002/SHT. 2



BLOCK DIAGRAM
AFU-D5

FOR MOV3052-A
C-177625

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/31: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 42

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3052-A	RM. 223	MCB ITEM A1-62	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/31: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 42

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/31: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 42

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L010-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

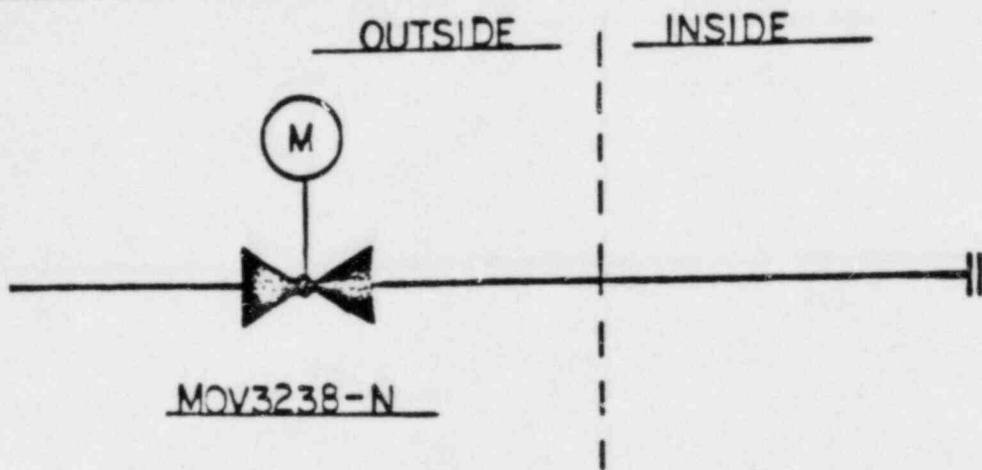
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/32: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 71 - LEAK RATE TEST

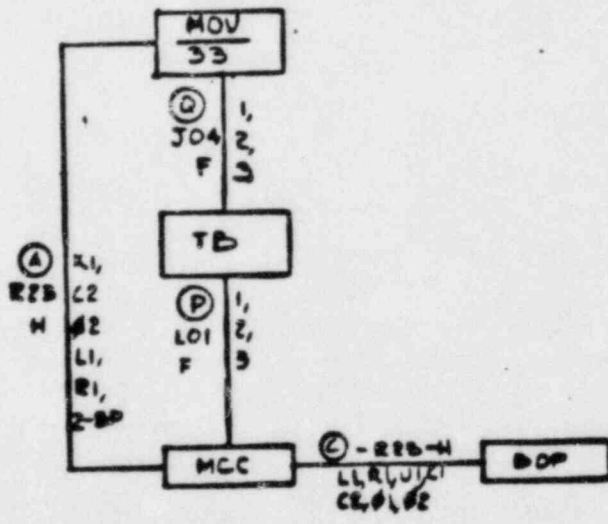
TPNS No(s) - INSIDE: Blind Flange
OUTSIDE: Q1P23ZS3238-N

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	NO	JUSTIFY
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/32: CONFINEMENT ISOLATION VALVE STATUS
 PENETRATION NO 71



CTMT PIPING PENETRATION NO. 71
D-175010/SHT. 1



BLOCK DIAGRAM
XFC-LB

FOR MOV3238-N
C-177620

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/32: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 71

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3238-N	RM. 241	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/32: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 71

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/32: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 71

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

No seismic qualification documentation is available for 600 volt motor control center 1C.

JUSTIFICATION

The motor operated isolation valve for this penetration is used only during integrated leak rate testing. During normal plant operation this valve is maintained in the closed position and the penetration is flanged-off by a blind flange inside the containment. Seismic induced failure in the MCC could be postulated to result in failure of the position status indication for motor operated isolation valve Q1P23MOV3238-N. A failure of the motor operated valve position indication would be recognized by a loss of the position indicating lights even though redundant penetration status indication is not provided.

In addition, if valve maloperation did occur, the blind flange will maintain containment penetration isolation. Therefore, the operator would not be led to defeat or fail to accomplish a required safety function.

3. POWER SUPPLY

VARIABLE 19/32: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 71

EXISTING CONDITION

The position indicating circuit for valve MOV3238-N is powered from an MCC which is not provided with onsite standby power from a diesel generator and is not backed-up by battery.

JUSTIFICATION

Power for the valve position indicating circuit is derived from the same source as the operating power for the valve. During a loss of power, the valve position indication would be disabled, but at the same time, the valve would not be functional.

The motor operated isolation valve for this penetration is normally closed and would remain closed in an accident condition. The penetration is used only during integrated leak-rate testing and this valve would not be opened during normal power operation. The penetration is also flanged-off inside the containment by a blind flange. If the power to the valve were to fail, the resulting loss of position indication would be recognized, and therefore, the operator would not be led to defeat or fail to accomplish a required safety function. In addition, the blind flange inside containment would maintain containment penetration isolation in the event of valve failure.

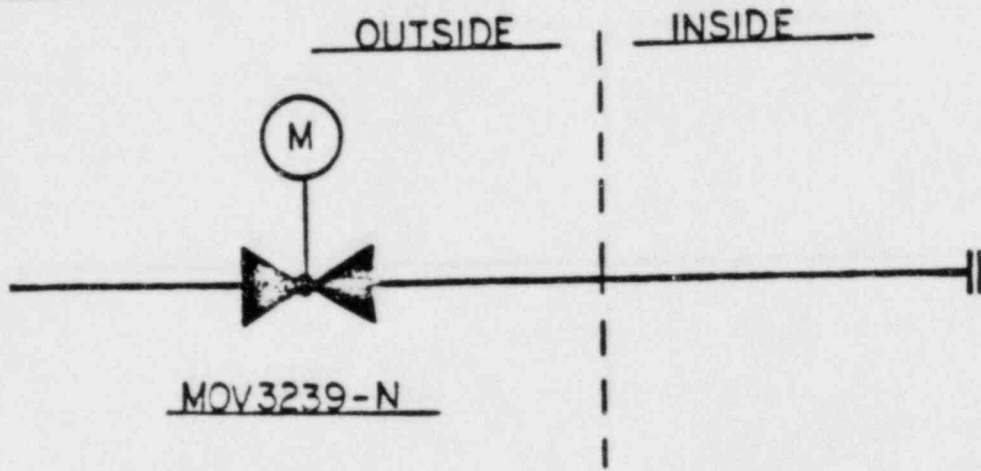
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/33: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 72 - LEAK RATE TEST

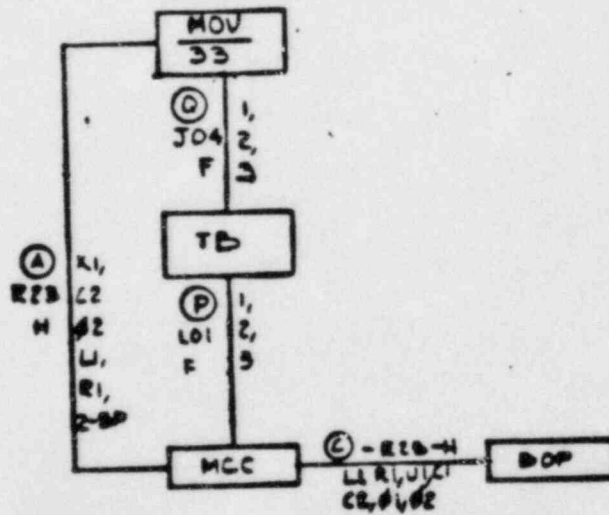
TPNS No(s) - INSIDE: BLIND FLANGE
OUTSIDE: Q1P23ZS3239-N

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	NO	JUSTIFY
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/33: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 72



CTMT PIPING PENETRATION NO. 72
D-175010/SHT. 1



BLOCK DIAGRAM
 XFC-L4

FOR MOV3239-N
C-177620

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/33: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 72

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3239-N	RM. 241	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/33: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 72

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/33: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 72

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

No seismic qualification documentation is available for 600 volt motor control center 1C.

JUSTIFICATION

The motor operated isolation valve for this penetration is used only during integrated leak rate testing. During normal plant operation, this valve is maintained in the closed position and the penetration is flanged-off by a blind flange inside the containment. Seismic induced failure in the MCC could be postulated to result in failure of the position status indication for motor operated isolation valve Q1P23MOV3239-N. A failure of the motor operated valve position indication would be recognized by a loss of the position indicating lights even though redundant penetration status indication is not provided.

In addition, if valve maloperation did occur, the blind flange will maintain containment penetration isolation. Therefore, the operator would not be led to defeat or fail to accomplish a required safety function.

3. POWER SUPPLY

VARIABLE 19/33: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 72

EXISTING CONDITION

The position indicating circuit for valve MOV3239-N is powered from an MCC which is not provided with onsite standby power from a diesel generator and is not backed-up by a battery.

JUSTIFICATION

Power for the valve position indicating circuit is derived from the same source as the operating power for the valve. During a loss of power, the valve position indication would be disabled, but at the same time, the valve would not be functional.

The motor operated isolation valve for this penetration is normally closed and would remain closed in an accident condition. The penetration is used only during integrated leak-rate testing and the valve would not be opened during normal power operation. The penetration is also flanged-off inside the containment by a blind flange. If the power to the valve were to fail, the resulting loss of position indication would be recognized, and therefore, the operator would not be led to defeat or fail to accomplish a required safety function. In addition, the blind flange inside containment would maintain containment penetration isolation in the event of valve failure.

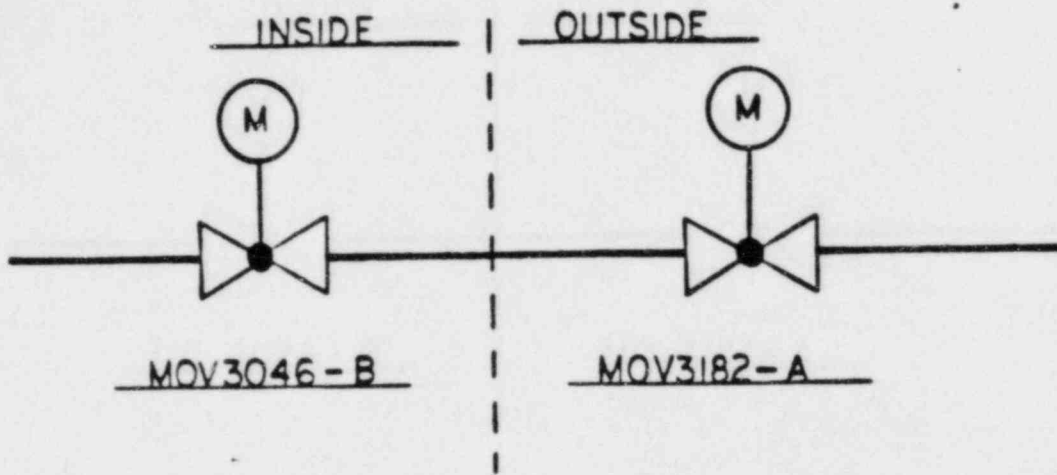
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/34: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 44 - REACTOR COOLANT PUMP
COOLING WATER RETURN

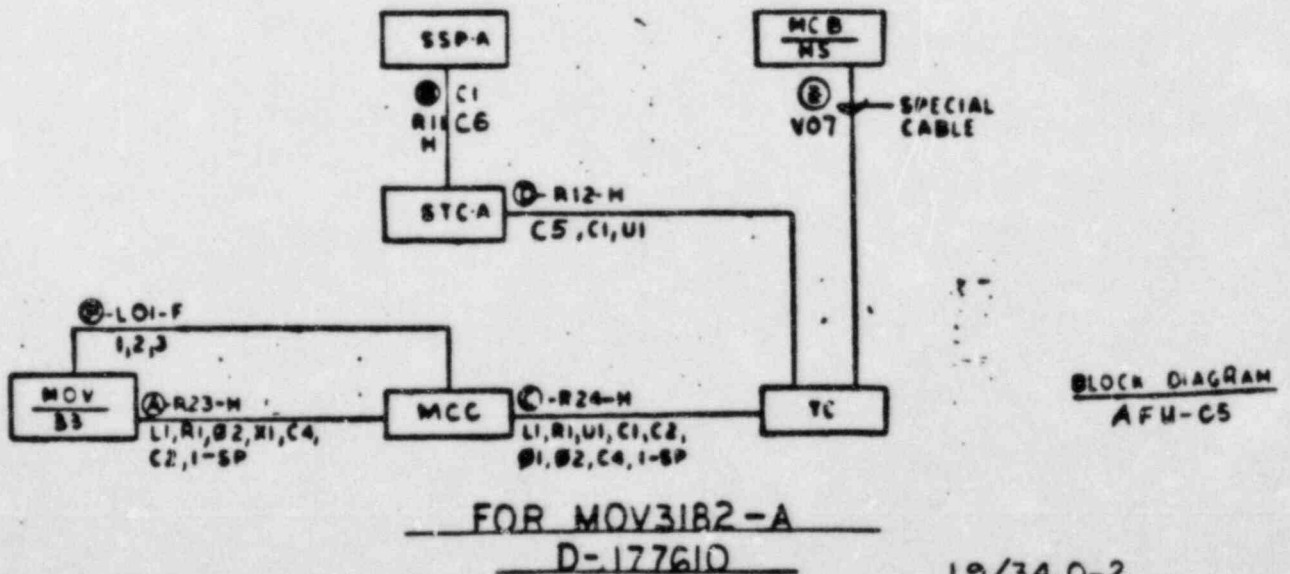
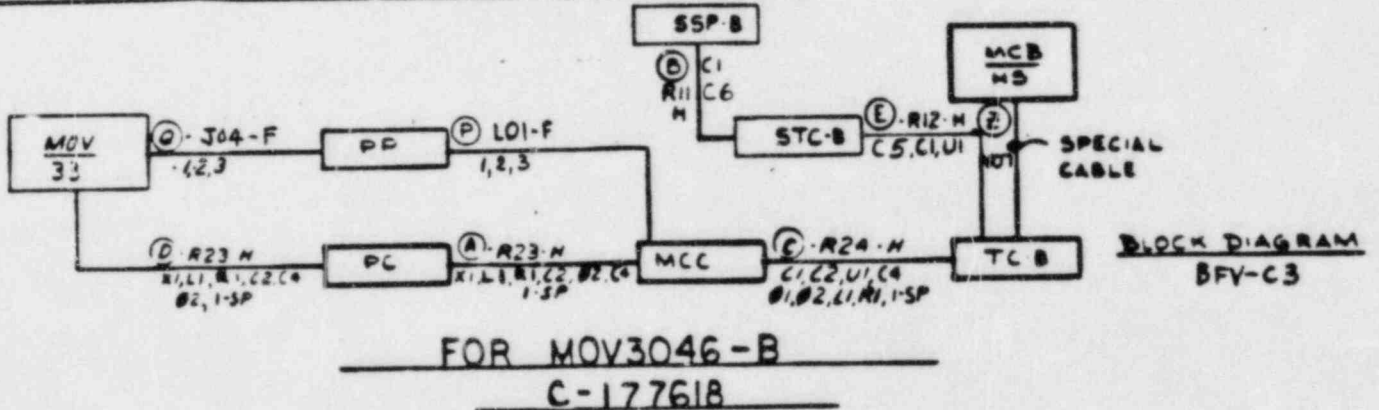
TPNS No(s) - INSIDE: Q1P17ZS3046-B
OUTSIDE: Q1P17ZS3182-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/ 34: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 44



CTMT PIPING PENETRATION NO. 44
D-175002/SHT. 2



SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/34: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 44

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3046-B	CTMT	MCB ITEM A1-48	Control Room
ZS3182-A	RM. 223	MCB ITEM A1-47	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/34: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 44

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/34: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 44

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L031-B and Q1H25L010-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

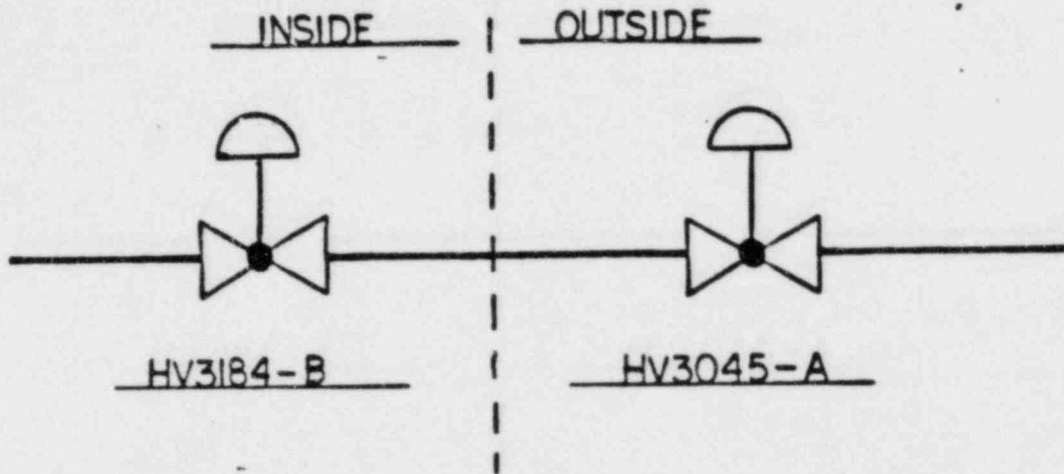
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/35: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 43 - REACTOR COOLANT PUMP
THERMAL BARRIER COOLING WATER RETURN

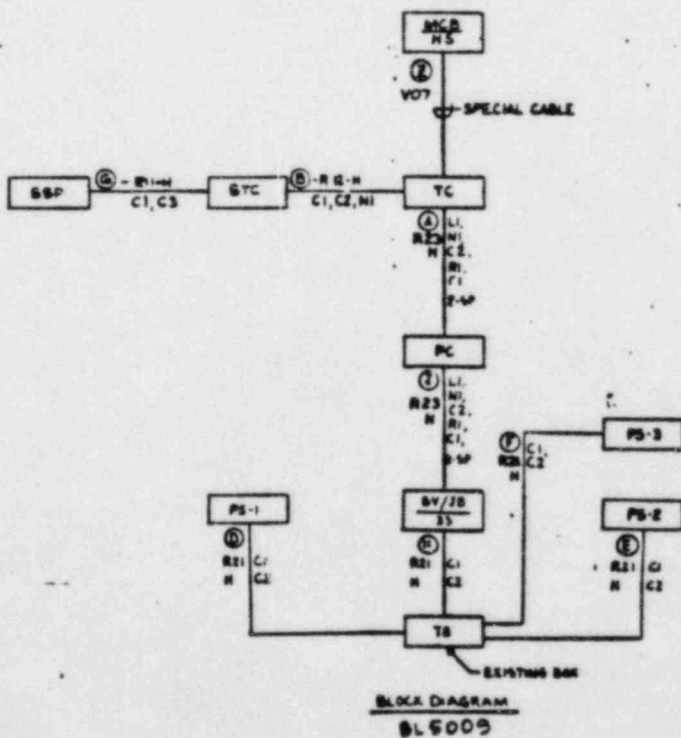
TPNS No(s) - INSIDE: Q1P17ZS3184-B
OUTSIDE: Q1P17ZS3045-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

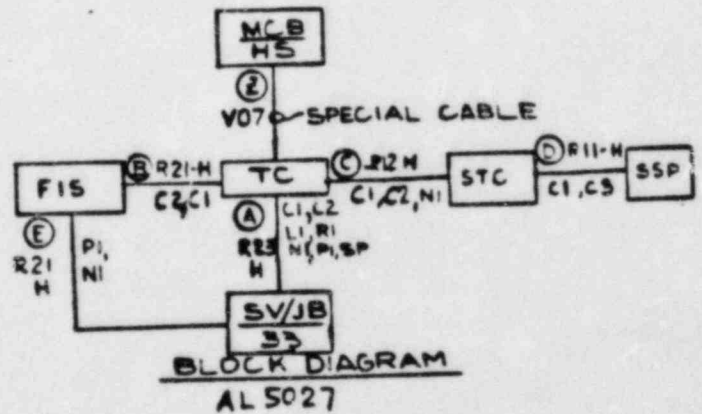
PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/ 35: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO. 43



CTMT PIPING PENETRATION NO. 43
D-175002/SHT. 2



FOR HV3184-B
D-177855



FOR HV3045-A
D-177854

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/35: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 43

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3184-B	CTMT	MCB ITEM A1-32	Control Room
ZS3045-A	RM. 223	MCB ITEM A1-31	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/35: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 43

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/35: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 43

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L031-B and Q1H25L010-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

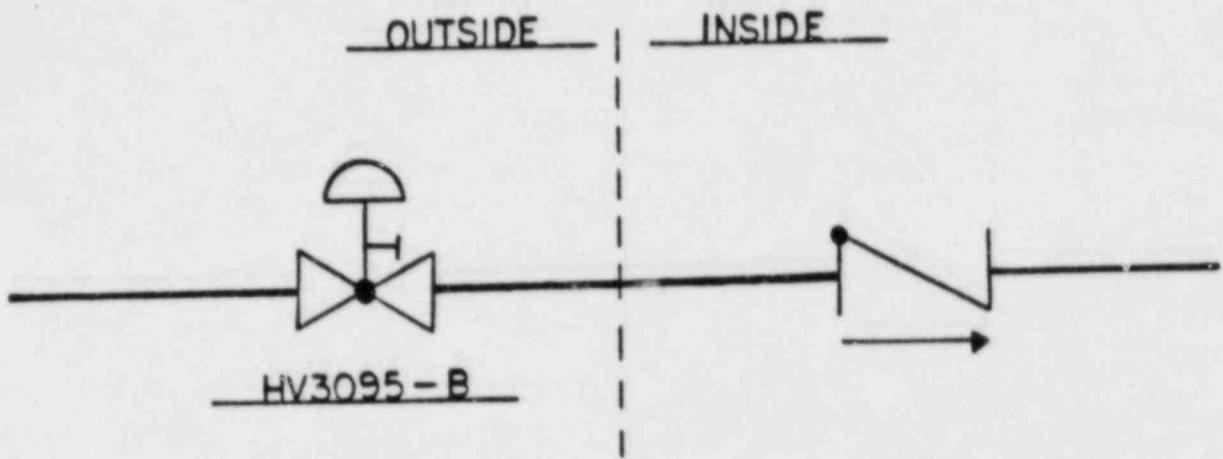
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/36: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 45 - EXCESS LETDOWN HEAT EXCHANGER
AND RC DRAIN TANK HEAT EXCHANGER COMPONENT
COOLING WATER SUPPLY

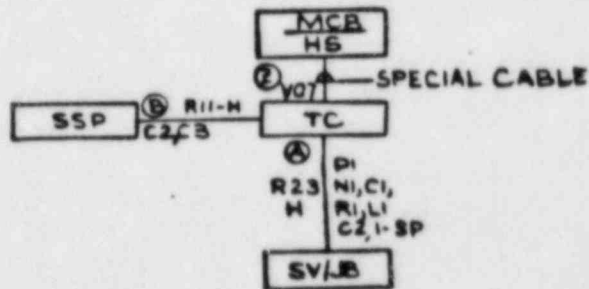
TPNS No(s) - INSIDE: Check Valve
OUTSIDE: Q1P17ZS3095-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/36 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N° 45



CTMT PIPING PENETRATION NO. 45
D-175002/SHT. 2



BLOCK DIAGRAM
DL 5033

FOR HV3095-B
F-177851

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/36: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 45

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3095-B	RM. 223	MCB ITEM A1-61	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/36: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 45

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/36: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 45

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L031-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

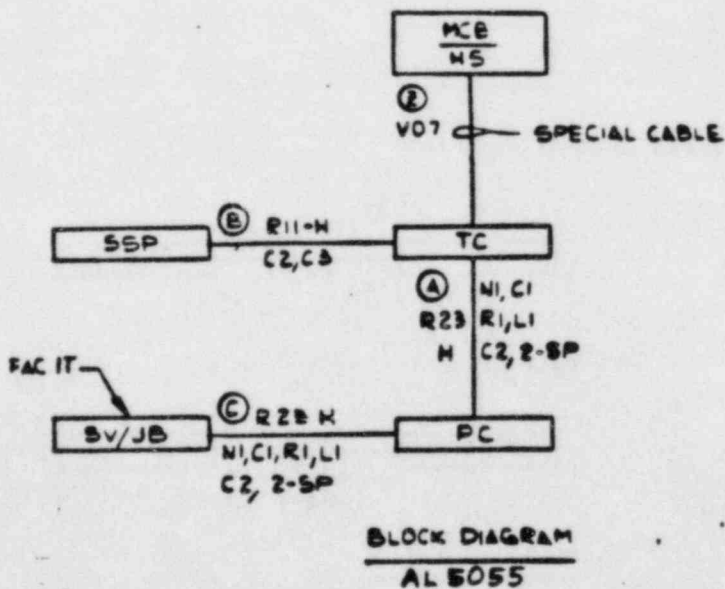
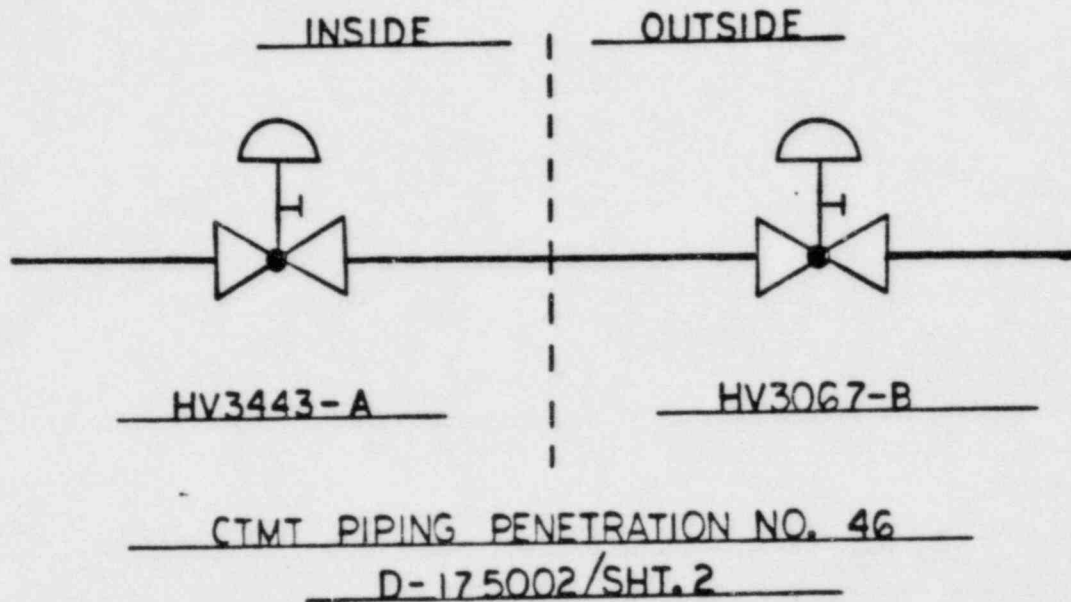
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/37: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 46 - EXCESS LETDOWN HEAT EXCHANGER
AND RC DRAIN TANK HEAT EXCHANGER, COMPONENT
COOLING WATER RETURN

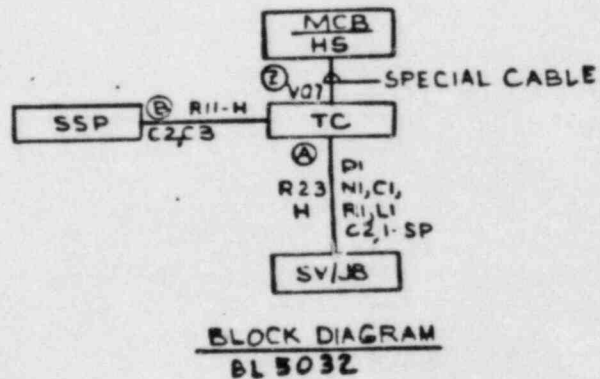
TPNS No(s) - INSIDE: Q1P17ZS3443-A
OUTSIDE: Q1P17ZS3067-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/37 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N° 46



FOR HV3443 - A
 D-177374



FOR HV3067-B
 F-177851

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/37: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 46

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3443-A	CTMT	MCB ITEM A1-120	Control Room
ZS3067-B	RM. 223	MCB ITEM A1-46	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/37: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 46

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/37: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 46

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L009-A and Q1H25L031-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

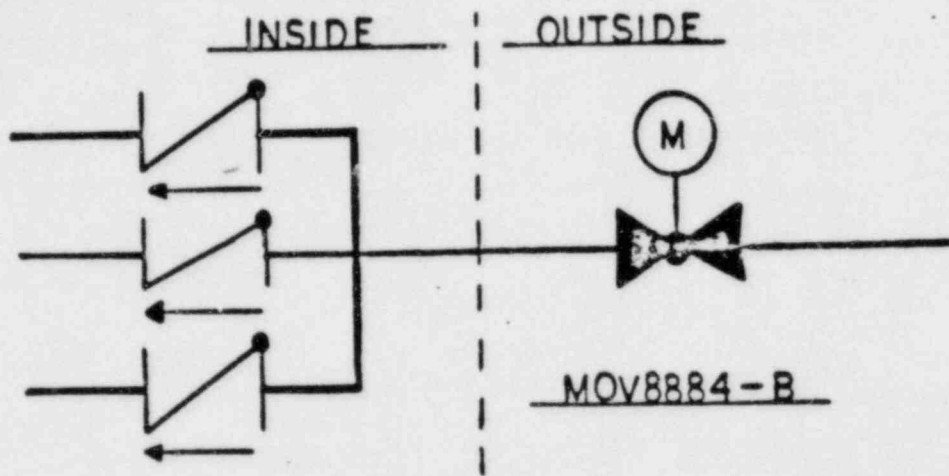
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/38: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 80 - HIGH HEAD SAFETY INJECTION
LINE

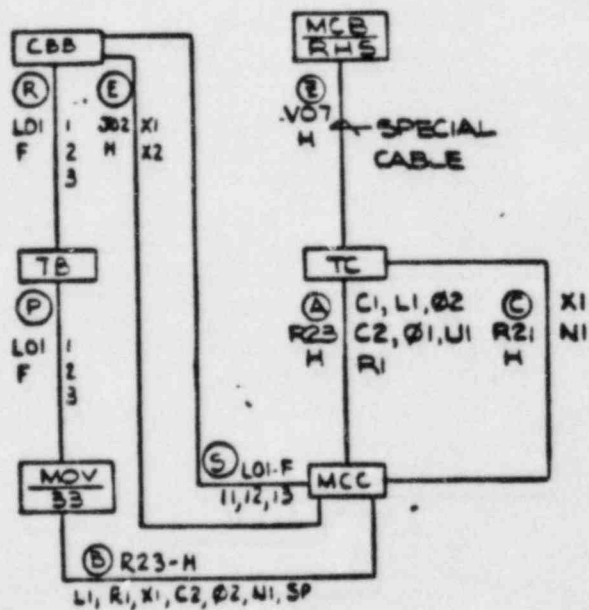
TPNS No(s) - INSIDE: Check Valve
OUTSIDE: N1E21ZS8884-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/38 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 80



CTMT PIPING PENETRATION NO. 80
D-175038/SHT. 1



BLOCK DIAGRAM
BFV-T2

FOR MOV8884-B
D-177782

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/38: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 80

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8884-B	RM. 184	MCB ITEM A2-89	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/38: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 80

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/38: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 80

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L029-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

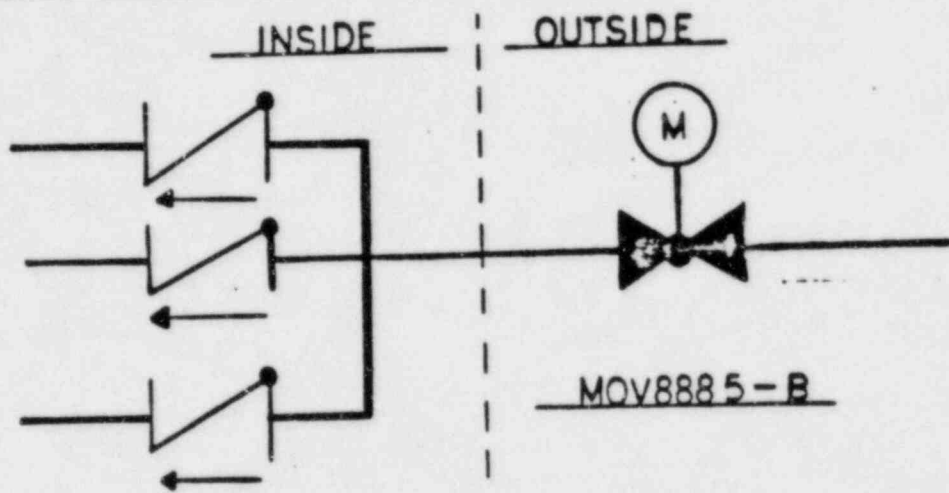
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/39: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 20 - HIGH HEAD SAFETY INJECTION
LINE

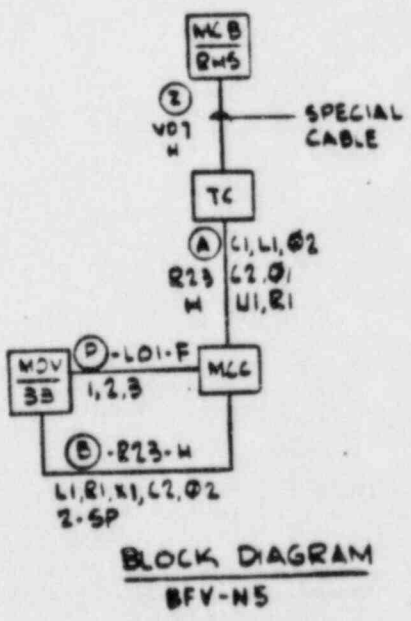
TPNS No(s) - INSIDE: Check Valves
OUTSIDE: N1E21ZS8885-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/39 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 20



CTMT PIPING PENETRATION NO. 20
D-175038/SHT. 1



FOR MOV8885-B
C-177607

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/39: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 20

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8885-B	RM. 184	MCB ITEM A2-64	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/39: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 20

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/39: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 20

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L029-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

REGULATORY GUIDE 1.97
COMPLIANCE REPORT
FOR
FARLEY NUCLEAR PLANT
UNIT 1

VOLUME III

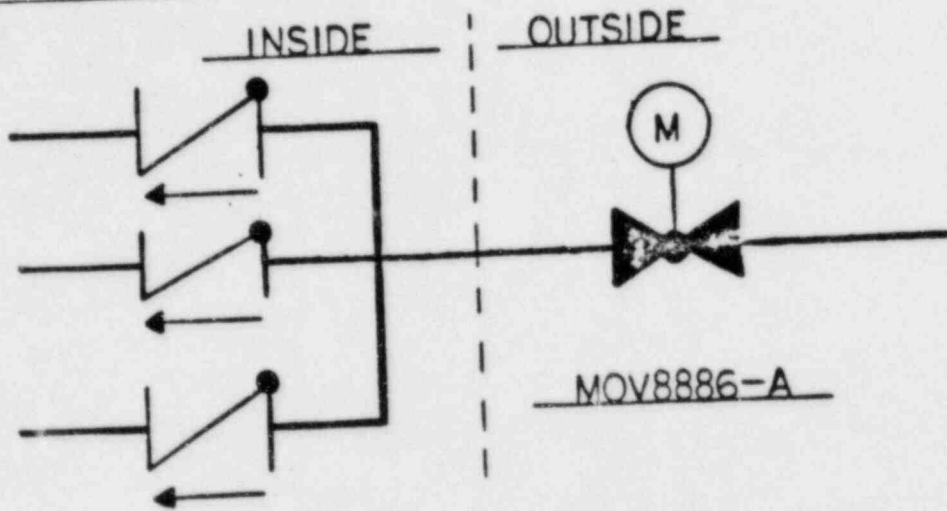
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/40: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 81 - HIGH HEAD SAFETY INJECTION

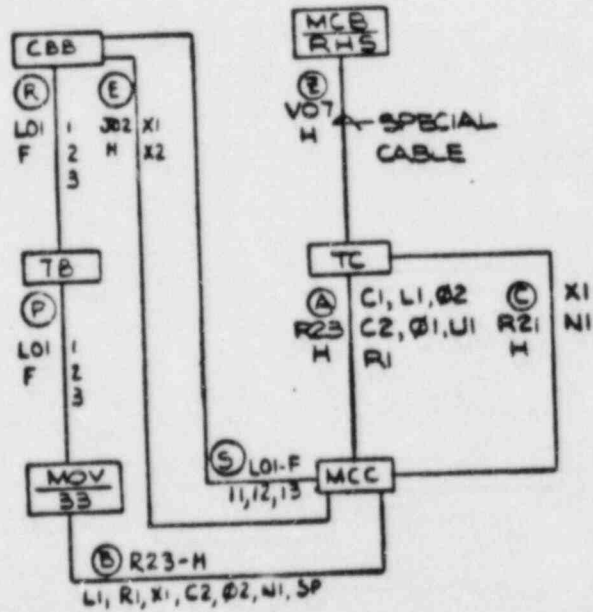
TPNS No(s) - INSIDE: Check Valves
OUTSIDE: N1E21ZS8886-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/40 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 81



CTMT PIPING PENETRATION NO. 81
D-175038/SHT. 1



BLOCK DIAGRAM
AFU-R2

FOR MOV8886-A
D-177782

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/40: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 81

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8886-A	RM. 223	MCB ITEM A2-90	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/40: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 81

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/40: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 81

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L008-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/41: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 21 - CONTAINMENT SPRAY LINE

TPNS No(s) - INSIDE: Check Valve
OUTSIDE: N1E13ZS8820A-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/41: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 21

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8820A-A	RM. 111	MCB ITEM A2-56	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/41: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 21

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/41: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 21

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L008-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

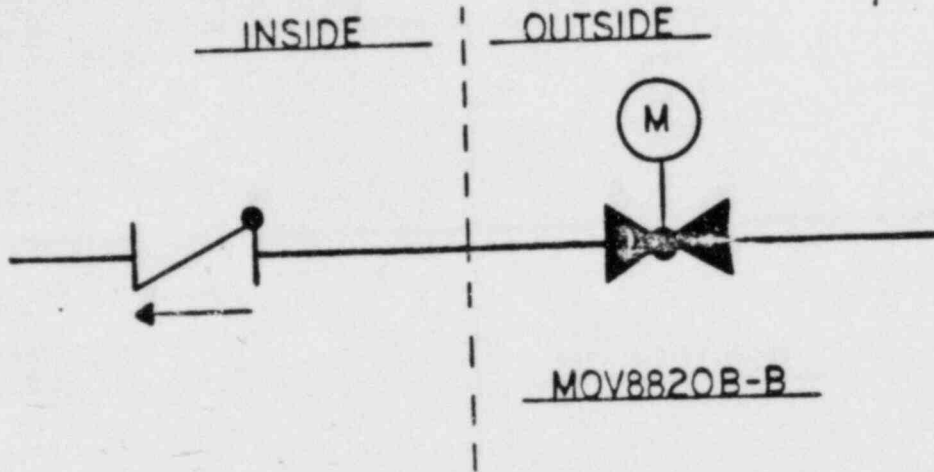
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/42: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 22 - CONTAINMENT SPRAY LINE

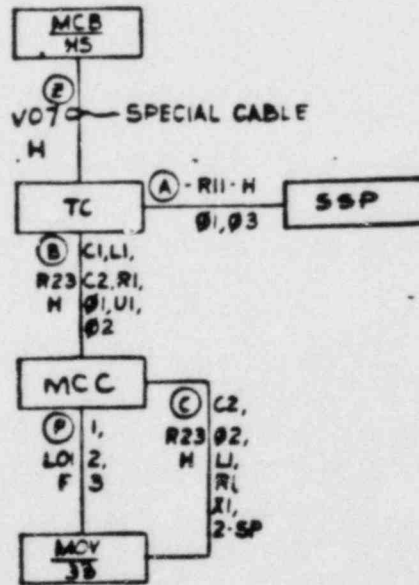
TPNS No(s) - INSIDE: Check Valve
OUTSIDE: N1E13ZS8820B-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/42 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N° 22



CTMT PIPING PENETRATION NO. 22
D-175038/SHT. 3



BLOCK DIAGRAM
 SCHEME BFV-V4

FOR MOV8820B-B
D-177568

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/42: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 22

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8820B-B	RM. 125	MCB ITEM A2-57	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/42: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 22

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/42: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 22

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L029-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

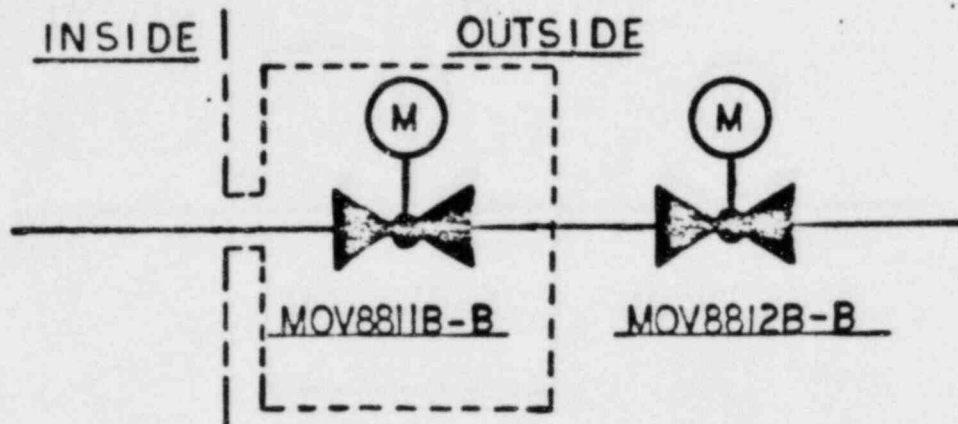
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/43: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 10 - CONTAINMENT SUMP
RECIRCULATION LINES

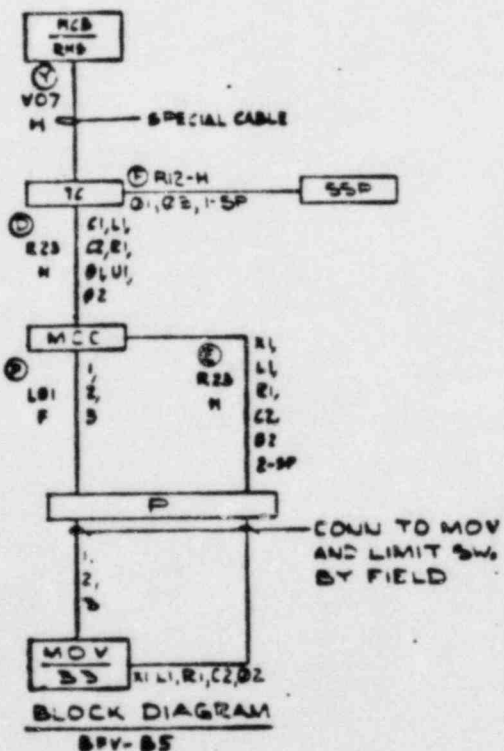
TPNS No(s) - INSIDE: N1E11ZS8811B-B
OUTSIDE: N1E11ZS8812B-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	NO	JUSTIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

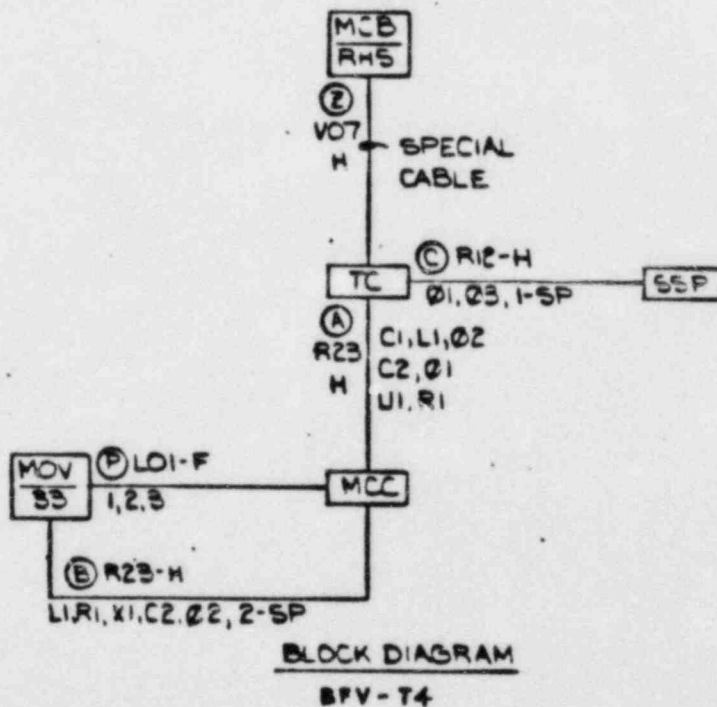
PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/43 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N° 10



CTMT PIPING PENETRATION NO. 10
D-175038/SHT. 2



FOR MOV8811B-B
D-177134



FOR MOV8812B-B
D-177773

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/43: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 10

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8811B-B	RM. 129	MCB ITEM A3-145	Control Room
ZS8812B-B	RM. 129	MCB ITEM A3-126	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/43: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 10

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/43: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 10

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L027-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

2. REDUNDANCY

VARIABLE 19/43: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 10

EXISTING CONDITION

The isolation valves inside and outside containment covering this penetration are of the same train orientation, and therefore, redundant penetration status indication is not provided.

JUSTIFICATION

These valves are normally closed valves and would remain closed in an accident condition until remotely opened by the operator. The power supply to these valves is for position indication as well as power operation of the valve motor operators. The valves are part of a piping system which is redundant to the piping system for penetration Number 11, Variable 19/44. At least one of these redundant piping systems must be operational in certain accident conditions. Therefore, the power supply for both containment isolation valves of each redundant piping system is from the same train power supply in order to ensure its operation with a single power supply failure. The operational needs for the same train of power to both the inside and outside containment isolation valves prevail over the use of position indications which satisfy R.G. 1.97 redundancy provisions. Opposite train power supplies for series valves could precipitate a condition where loss of power to one power train could preclude operation of both redundant piping systems.

If, during an accident condition, a single train of power were to fail resulting in a loss of position indications, the operator could verify that the outside containment isolation valve is closed and, therefore, containment integrity is maintained.

A failure of the isolation valves associated with this penetration or their indication would be recognized even though redundant penetration status indication is not provided, and therefore, the operator would not be led to defeat or fail to accomplish a required safety function.

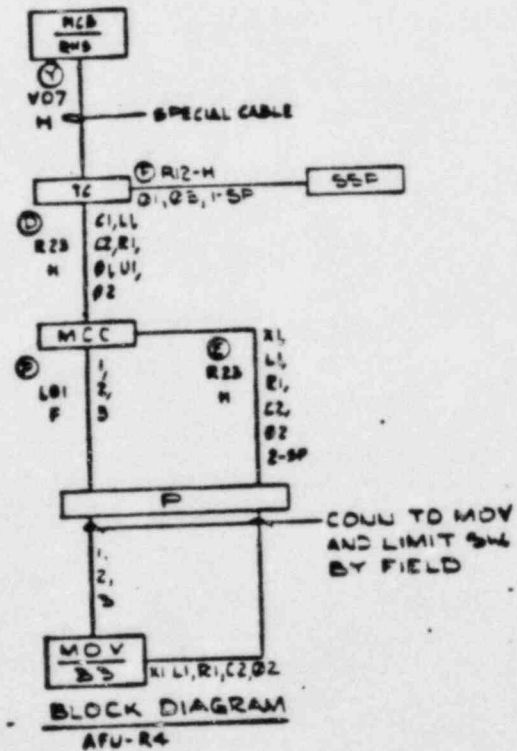
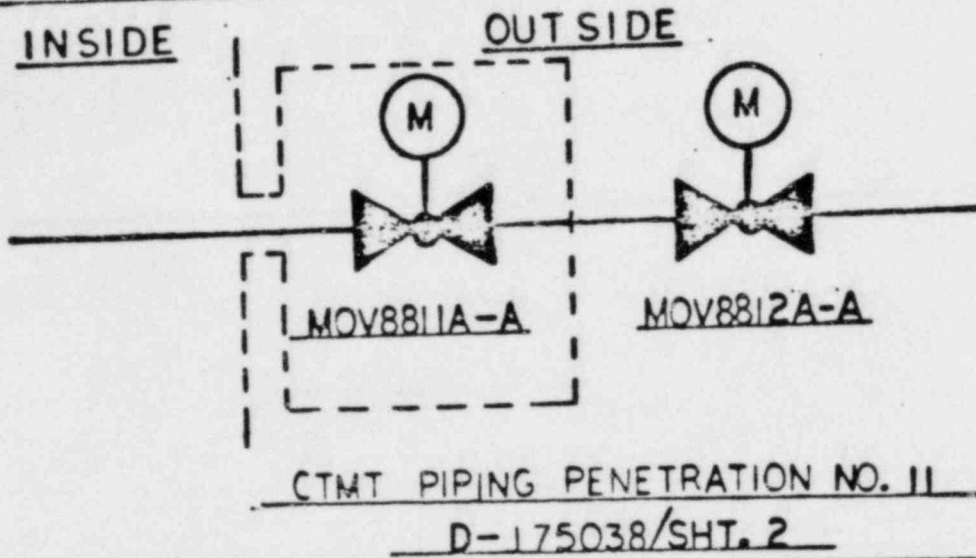
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/44: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 11 - CONTAINMENT SUMP
RECIRCULATION LINES

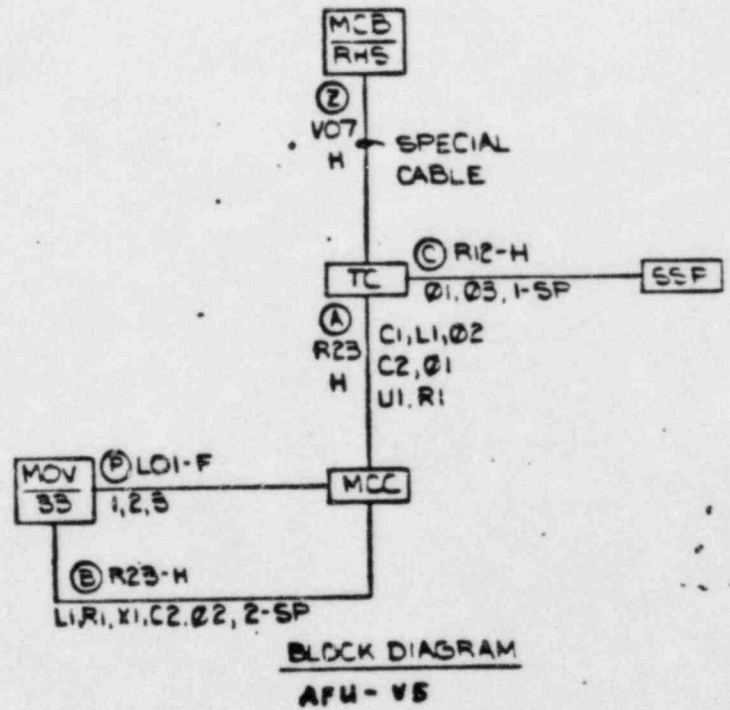
TPNS No(s) - INSIDE: N1E11ZS8811A-A
OUTSIDE: N1E11ZS8812A-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	NO	JUSTIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/44 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N° 11



FOR MOV8811A-A
D-177132



FOR MOV8812A-A
D-177773

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/44: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 11

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8811A-A	RM. 131	MCB ITEM A3-144	Control Room
ZS8812A-A	RM. 131	MCB ITEM A3-125	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/44: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 11

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/44: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 11

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L006-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

2. REDUNDANCY

VARIABLE 19/44: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 11

EXISTING CONDITION

The isolation valves inside and outside containment covering this penetration are of the same train orientation, and therefore, redundant penetration status indication is not provided.

JUSTIFICATION

These valves are normally closed valves and would remain closed in an accident condition until remotely opened by the operator. The power supply to these valves is for position indication as well as power operation of the valve motor operators. The valves are part of a piping system which is redundant to the piping system for penetration Number 10, Variable 19/43. At least one of these redundant piping systems must be operational in certain accident conditions. Therefore, the power supply for both containment isolation valves of each redundant piping system is from the same train power supply in order to ensure its operation with a single power supply failure. The operational needs for the same train of power to both the inside and outside containment isolation valves prevail over the use of position indications which satisfy R.G. 1.97 redundancy provisions. Opposite train power supplies for series valves could precipitate a condition where loss of power to one power train could preclude operation of both redundant piping systems.

If, during an accident condition, a single train of power were to fail resulting in a loss of position indications, the operator could verify that the outside containment isolation valve is closed and, therefore, containment integrity is maintained.

A failure of the isolation valves associated with this penetration or their indication would be recognized even though redundant penetration status indication is not provided, and therefore, the operator would not be led to defeat or fail to accomplish a required safety function.

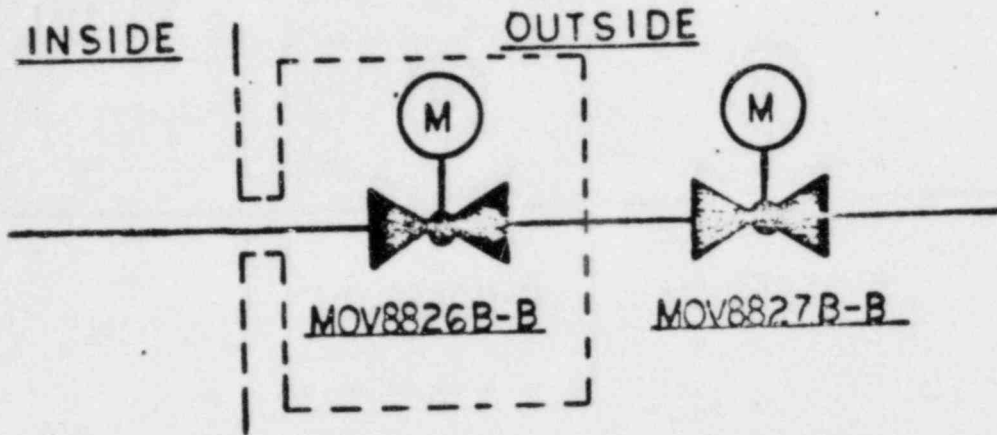
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/45: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 93 - CONTAINMENT SUMP SPRAY
RECIRCULATION LINES

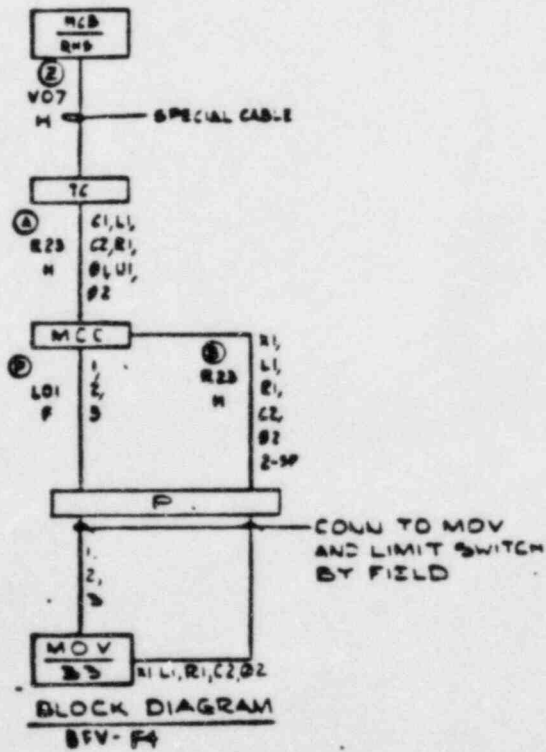
TPNS No(s) - INSIDE: Q1E13ZS8826B-B
OUTSIDE: Q1E13ZS8827B-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	NO	JUSTIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

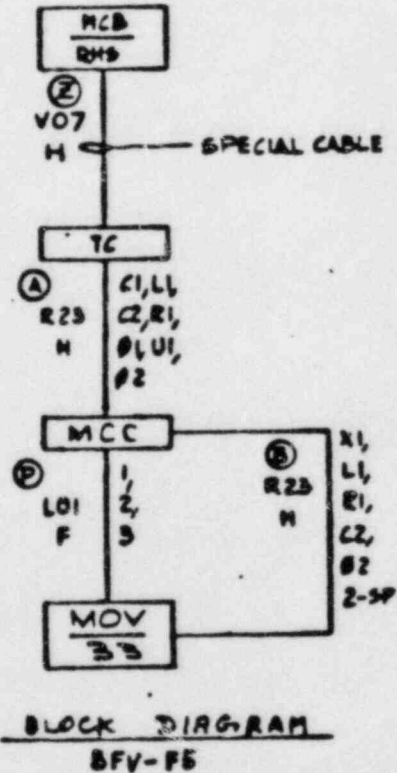
PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/45: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 93



CTMT PIPING PENETRATION NO. 93
D-175038/SHT. 3



FOR MOV8826B-B
D-177190



FOR MOV8827B-B
D-177192

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/45: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 93

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8826B-B	RM. 124	MCB ITEM A2-110	Control Room
ZS8827B-B	RM. 124	MCB ITEM A2-97	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/45: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 93

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/45: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 93

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L029-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

2. REDUNDANCY

VARIABLE 19/45: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 93

EXISTING CONDITION

The isolation valves inside and outside containment covering this penetration are of the same train orientation, and therefore, redundant penetration status indication is not provided.

JUSTIFICATION

These valves are normally closed valves and would remain closed in an accident condition until remotely opened by the operator. The power supply to these valves is for position indication as well as power operation of the valve motor operators. The valves are part of a piping system which is redundant to the piping system for penetration Number 94, Variable 19/46. At least one of these redundant piping systems must be operational in certain accident conditions. Therefore, the power supply for both containment isolation valves of each redundant piping system is from the same train power supply in order to ensure its operation with a single power supply failure. The operational needs for the same train of power to both the inside and outside containment isolation valves prevail over the use of position indications which satisfy R.G. 1.97 redundancy provisions. Opposite train power supplies for series valves could precipitate a condition where loss of power to one power train could preclude operation of both redundant piping systems.

If, during an accident condition, a single train of power were to fail resulting in a loss of position indications, the operator could verify that the outside containment isolation valve is closed and, therefore, containment integrity is maintained.

A failure of the isolation valves associated with this penetration or their indication would be recognized even though redundant penetration status indication is not provided, and therefore, the operator would not be led to defeat or fail to accomplish a required safety function.

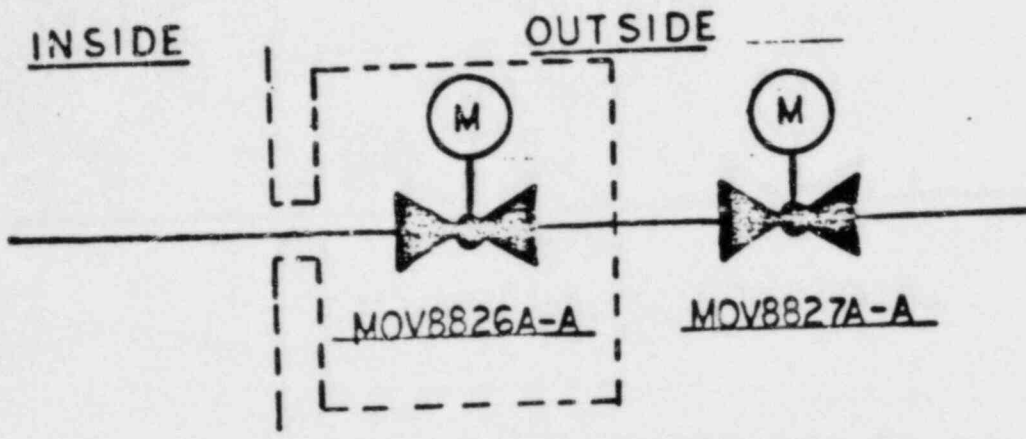
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/46: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 94 - CONTAINMENT SUMP SPRAY
RECIRCULATION LINES

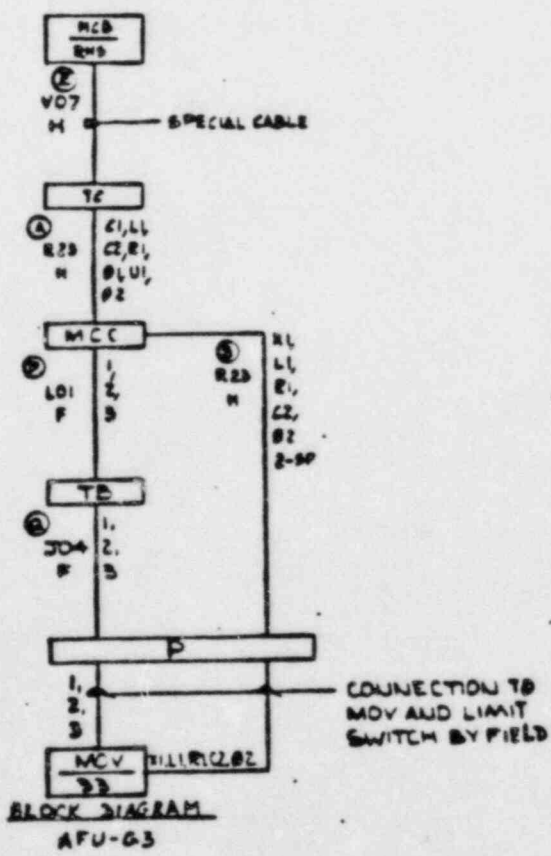
TPNS No(s) - INSIDE: Q1E13ZS8826A-A
OUTSIDE: Q1E13ZS8827A-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	NO	JUSTIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
9. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

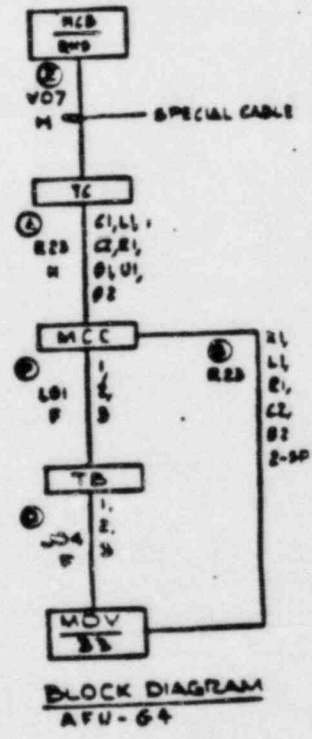
PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/46 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 94



CTMT PIPING PENETRATION NO. 94
D-175038/SHT. 3



FOR MOV8826A-A
D-177639



FOR MOV8827A-A
D-177191

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/46: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 94

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8826A-A	RM. 113	MCB ITEM A2-109	Control Room
ZS8827A-A	RM. 113	MCB ITEM A2-96	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/46: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 94

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-0.B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/46: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 94

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L008-A

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

2. REDUNDANCY

VARIABLE 19/46: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 94

EXISTING CONDITION

The isolation valves inside and outside containment covering this penetration are of the same train orientation, and therefore, redundant penetration status indication is not provided.

JUSTIFICATION

These valves are normally closed valves and would remain closed in an accident condition until remotely opened by the operator. The power supply to these valves is for position indication as well as power operation of the valve motor operators. The valves are part of a piping system which is redundant to the piping system for penetration Number 93, Variable 19/45. At least one of these redundant piping systems must be operational in certain accident conditions. Therefore, the power supply for both containment isolation valves of each redundant piping system is from the same train power supply in order to ensure its operation with a single power supply failure. The operational needs for the same train of power to both the inside and outside containment isolation valves prevail over the use of position indications which satisfy R.G. 1.97 redundancy provisions. Opposite train power supplies for series valves could precipitate a condition where loss of power to one power train could preclude operation of both redundant piping systems.

If, during an accident condition, a single train of power were to fail resulting in a loss of position indications, the operator could verify that the outside containment isolation valve is closed and, therefore, containment integrity is maintained.

A failure of the isolation valves associated with this penetration or their indications would be recognized by a loss of position indicating lights even though redundant penetration status indication is not provided, and therefore, the operator would not be led to defeat or fail to accomplish a required safety function.

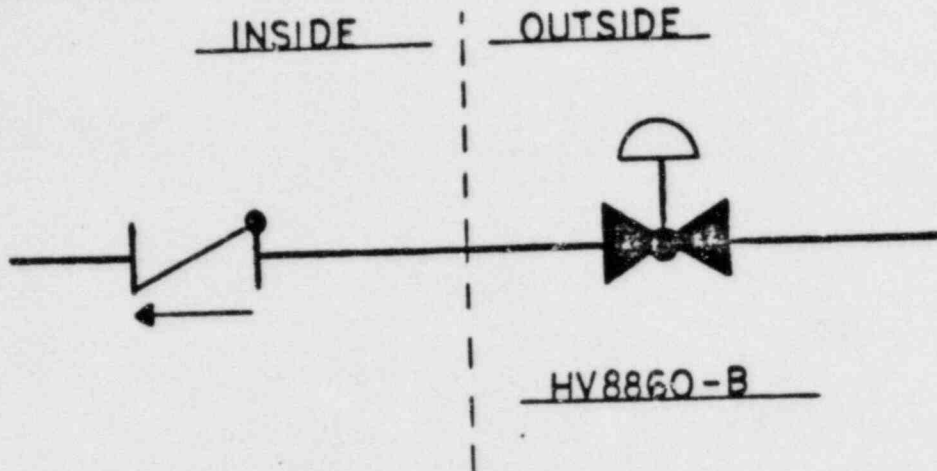
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/47: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 49 - ACCUMULATOR MAKEUP LINE

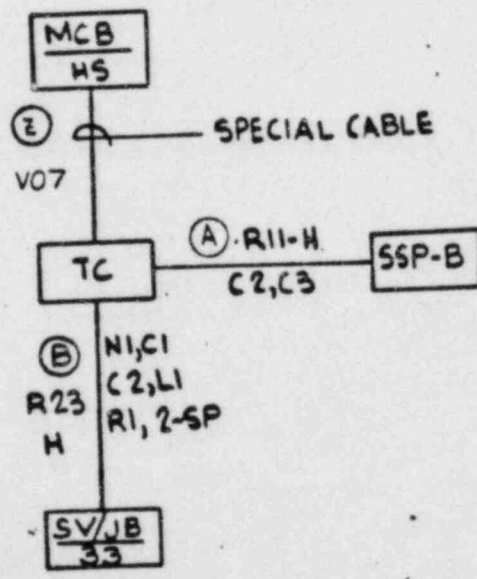
TPNS No(s) - INSIDE: Check Valve
OUTSIDE: N1E21ZS8860-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/47 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 49



CTMT PIPING PENETRATION NO. 49
D-175038/SHT. 2



BLOCK DIAGRAM
 BL 5028

FOR HV8860-B
D-177364

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/47: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 49

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8860-B	RM. 223	MCB ITEM A2-73	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/47: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 49

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/47: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 49

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L029-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

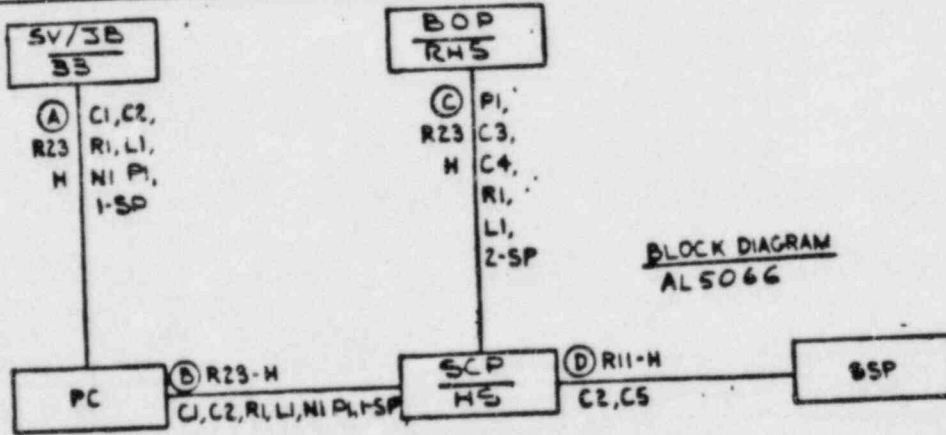
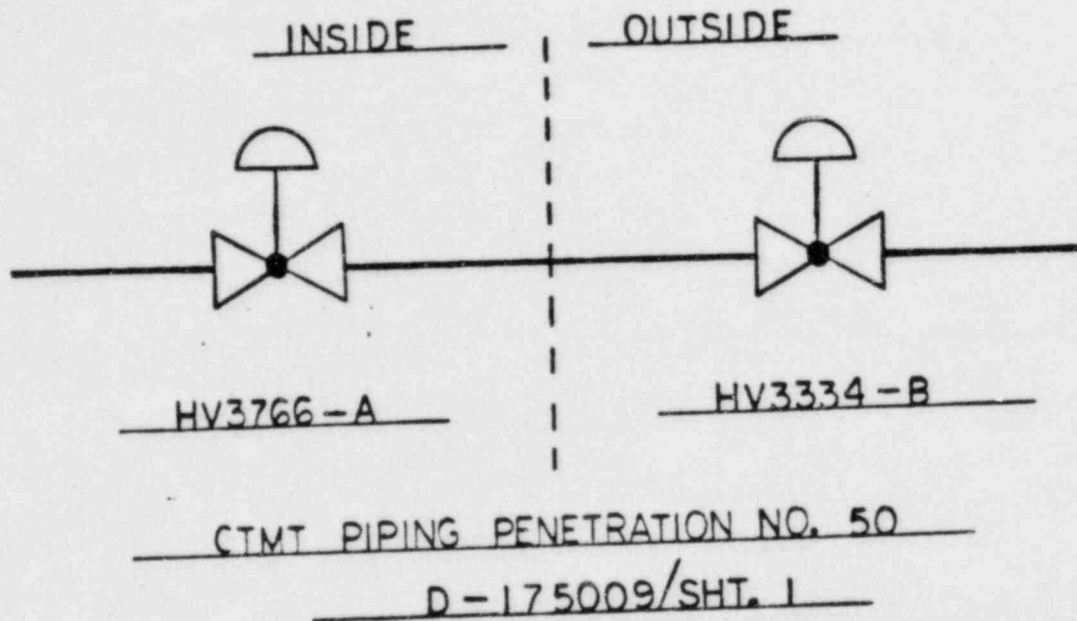
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/48: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 50 - ACCUMULATOR SAMPLE LINE

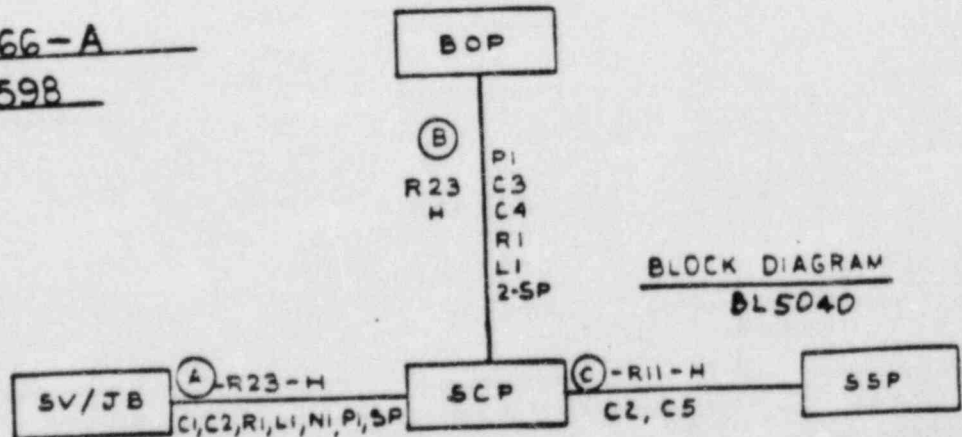
TPNS No(s) - INSIDE: Q1P15ZS3766-A
OUTSIDE: Q1P15ZS3334-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY/MODIFY
b) SEISMIC	NO	JUSTIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	NO	MODIFY
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/48 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N° 50



FOR HV3766-A
D-177598



FOR HV3334-B
D-177372

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/48: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 50

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3766-A	CTMT	-	Control Room
ZS3334-B	RM. 223	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/48: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 50

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The position indicating lights in the control room, for the isolation valves covering this penetration, are connected in parallel with the indicating lights located on the sampling control panels, and as such the cables between the valve limit switches and the control room display are routed through circuitry contained in the sampling control panels.

The sampling control panels Q1P15NFSS2607A-A and Q1P15NFSS2607B-B do not have radiation qualification documentation. Therefore, the exposure of these panels to post-accident radiation may result in the loss of the control room valve status indication.

PROPOSED MODIFICATION

The position indicating lights in the control room, for each isolation valve, will be rewired to environmentally qualified limit switch contacts, independent from the limit switch contacts used for the indicating lights located on the sampling control panels. In addition, the position indicating lights in the control room will be powered from an existing power supply located in a BOP panel in the control room. New cables will be installed and routed directly between the valve limit switches and the control room display.

1.B SEISMIC QUALIFICATION

VARIABLE 19/48: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 50

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

9. INTERFACE

VARIABLE 19/48: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 50

EXISTING CONDITION

The class 1E indicating circuits of each isolation valve interface with the position indicating lights located on the sampling control panels. The sampling control panels have no radiation qualification documentation, and as such, are non-class 1E.

PROPOSED MODIFICATION

Adequate interfaces will be provided by the modifications described in Section 1.A Environmental Qualification.

REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/49: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 62 - REACTOR COOLANT
DRAIN TANK VENT.

TPNS No(s) - INSIDE: N1G21ZS7126-A
OUTSIDE: N1G21ZS7150-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/49: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 62

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS7126-A	CTMT	MCB ITEM C-129	Control Room
ZS7150-B	RM. 223	MCB ITEM C-130	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/49: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 62

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/49: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 62

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500C-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L005A and Q1H25L025-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

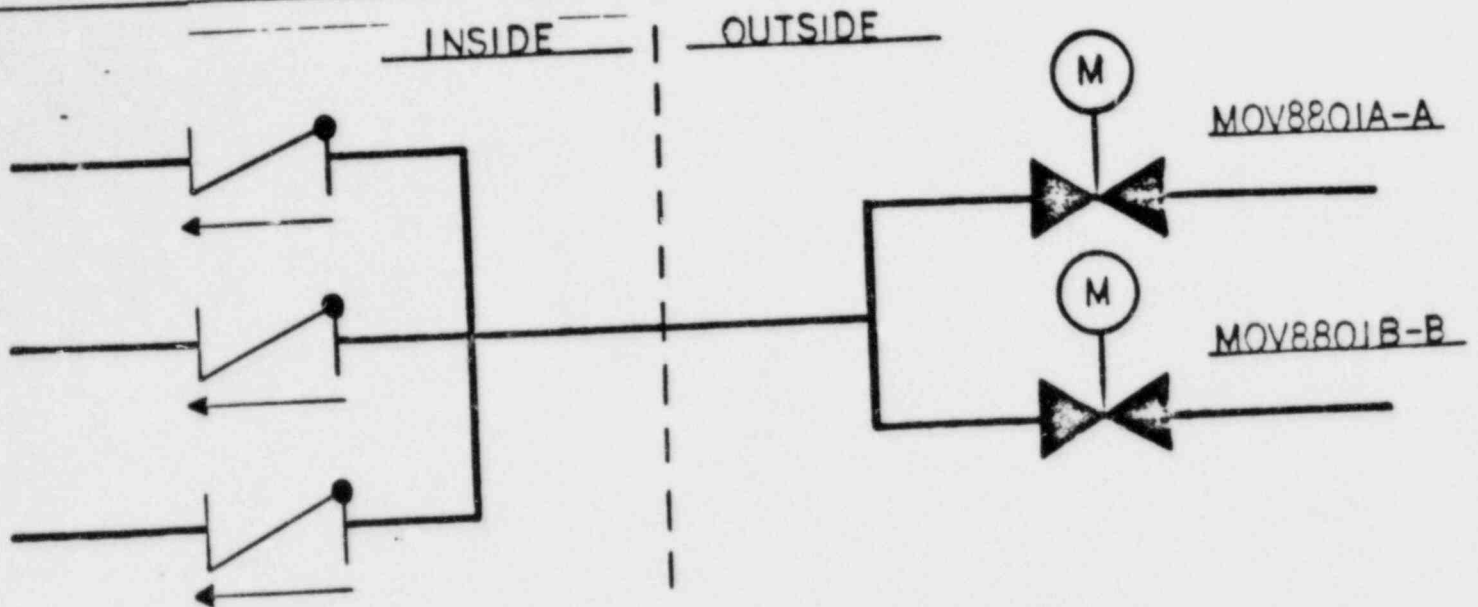
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/50: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 19 - BURON INJECTION LINE

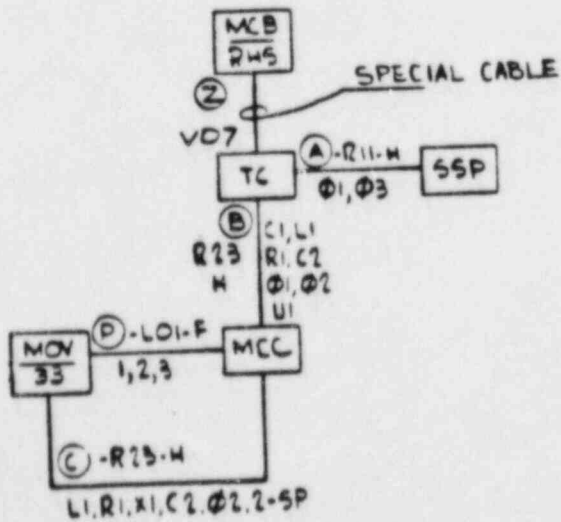
TPNS No(s) - INSIDE: Check Valves
OUTSIDE: N1E21ZS8801A-A, N1E21ZS8801B-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/ 50: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N° 19

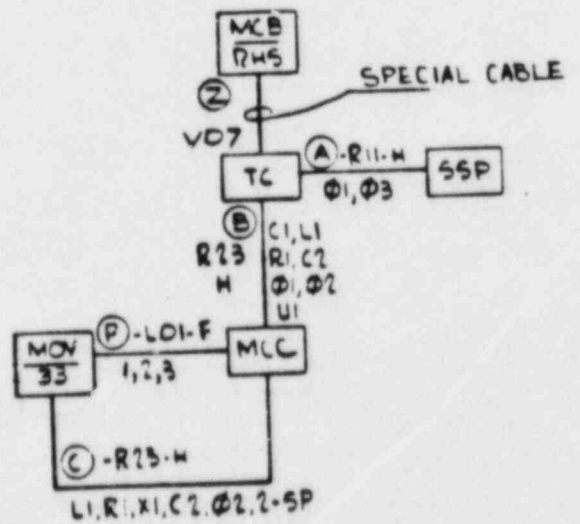


CTMT PIPING PENETRATION NO. 19
D-175038/SHT. 1



BLOCK DIAGRAM
AFU-R3

FOR MOV8801A-A
D-177614



BLOCK DIAGRAM
BFV-B4

FOR MOV8801B-B
D-177614

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/50: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 19

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8801A-A	RM. 223	MCB ITEM A2-62	Control Room
ZS8801B-B	RM. 223	MCB ITEM A2-63	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/50: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 19

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/50: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 19

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L008-A and Q1H25L029-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

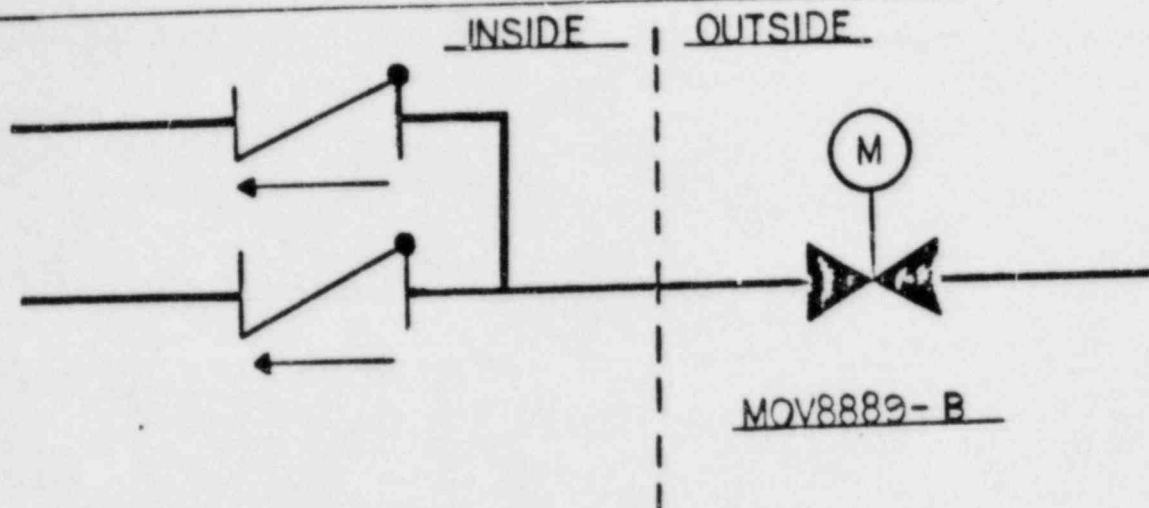
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/51: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 101 - LOW HEAD SAFETY INJECTION

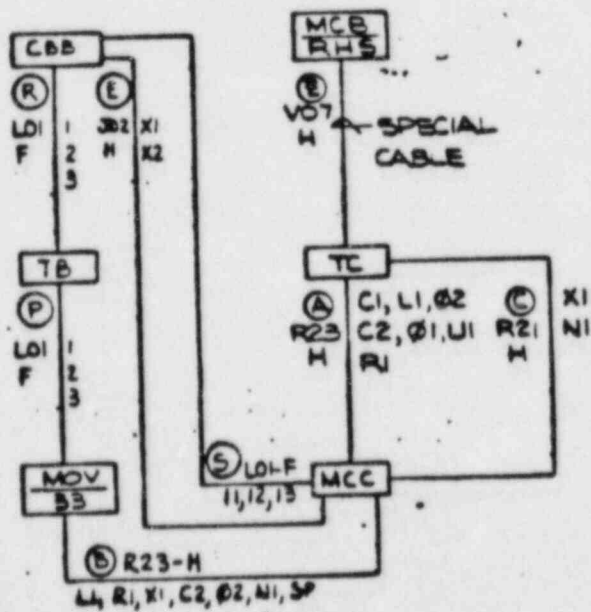
TPNS No(s) - INSIDE: Check Valves
OUTSIDE: Q1E11ZS8889-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/51 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N° 101



CTMT PIPING PENETRATION NO. 101
D-175038/SHT. 2



BLOCK DIAGRAM
BFY-B2

FOR MOV8889-B
D-177782

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/51: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 101

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8889-B	RM. 223	MCB ITEM A2-91	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/51: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 101

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/51: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 101

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L029-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

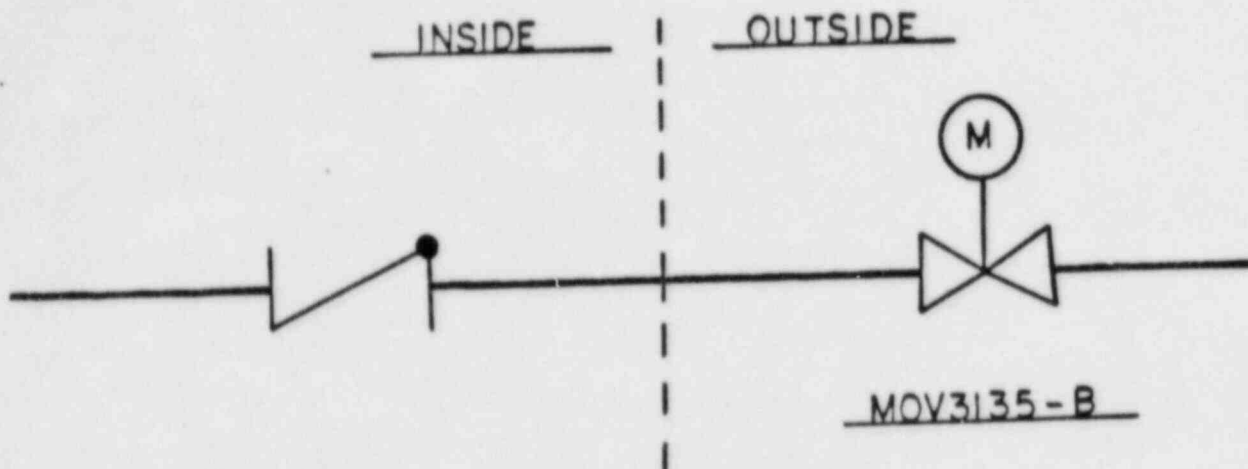
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/52: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 60 - SERVICE WATER TO REACTOR
COOLANT PUMP MOTOR AIR COOLERS

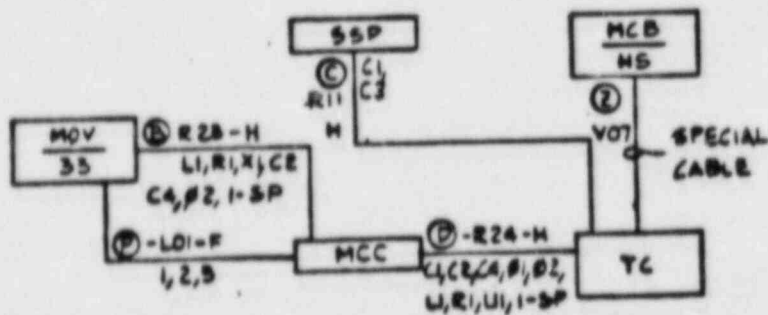
TPNS No(s) - INSIDE: Check Valve
OUTSIDE: Q1F16ZS3135-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/52: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N° 60



CTMT PIPING PENETRATION NO. 60
D-175003/SHT.2



BLOCK DIAGRAM
BFV-02

FOR MOV3135-B
D-177636

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/52: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 60

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3135-B	RM. 223	MCB ITEM A1-64	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/52: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 60

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/52: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 60

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L031-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

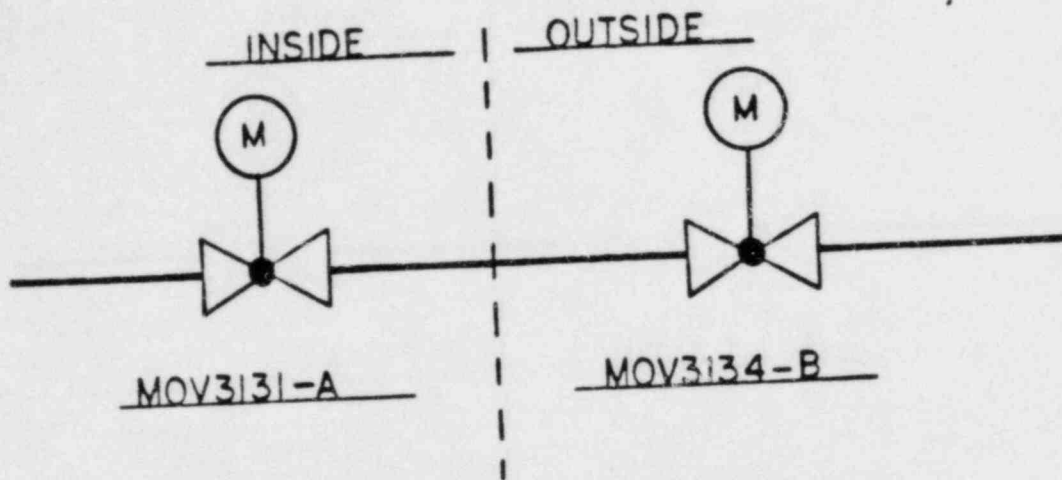
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/53: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 32 - SERVICE WATER FROM REACTOR
COOLANT PUMP MOTOR AIR COOLERS

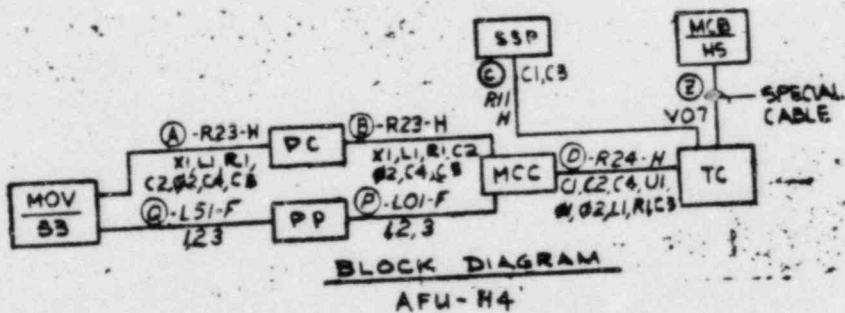
TPNS No(s) - INSIDE: Q1P16ZS3131-A
OUTSIDE: Q1P16ZS3134-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY/MODIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

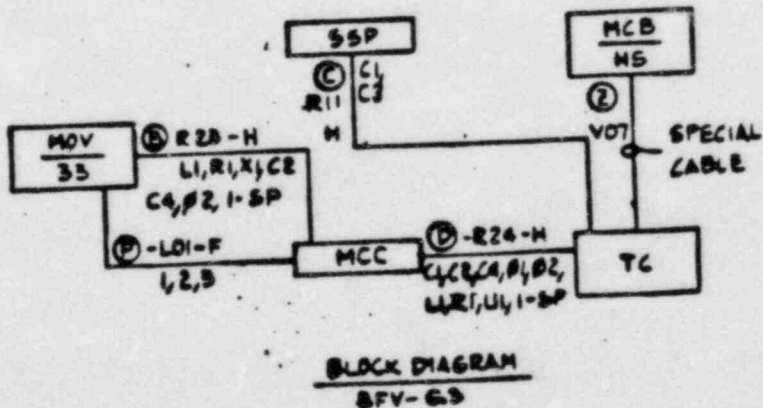
PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/53: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 32



CTMT PIPING PENETRATION NO. 32
D-175003/SHT. 2



FOR MOV3131-A
C-177612



FOR MOV3134-B
D-177636

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/53: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 32

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3131-A	CTMT	MCB ITEM A1-51	Control Room
ZS3134-B	RM. 223	MCB ITEM A1-35	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/53: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 32

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/53: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 32

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L010-A and Q1H25L031-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

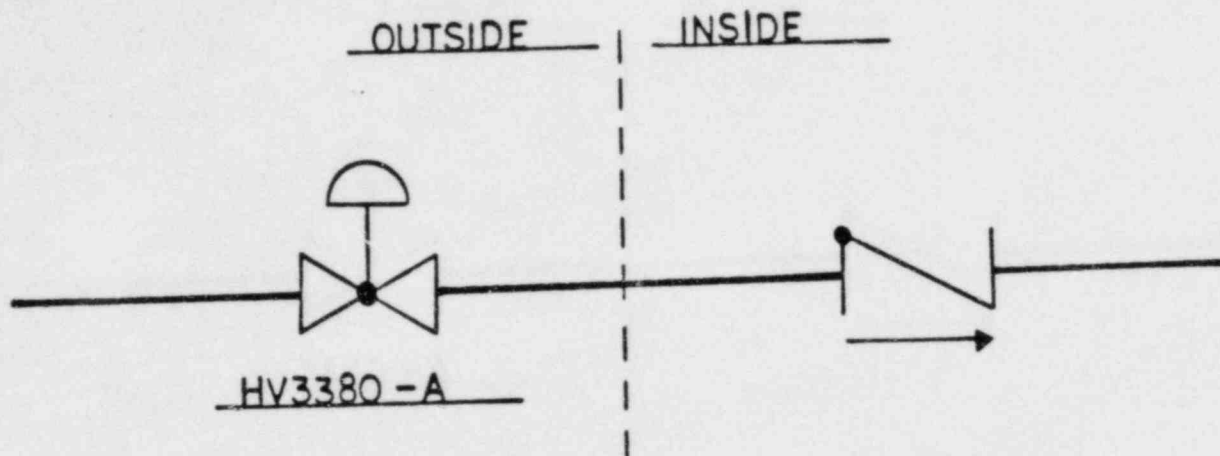
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/54: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 33 - CONTAINMENT SUMP PUMP
SAMPLE RECIRCULATION LINE

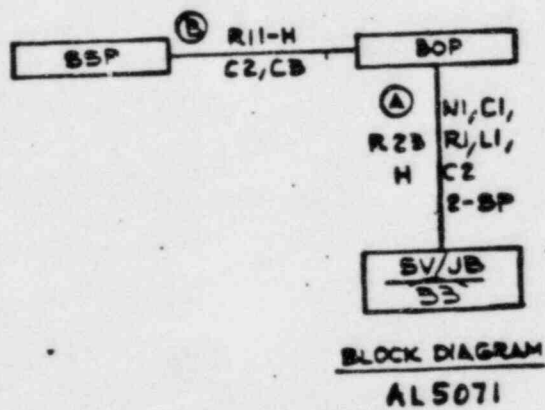
TPNS No(s) - INSIDE: Check Valve
OUTSIDE: Q1G21ZS3380-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/54 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 33



CTMT PIPING PENETRATION NO. 33
D-175004/SHT. 1



FOR HV3380-A
D-177373/SHT. 1

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/54: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 33

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3380-A	RM. 184	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/54: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 33

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/54: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 33

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

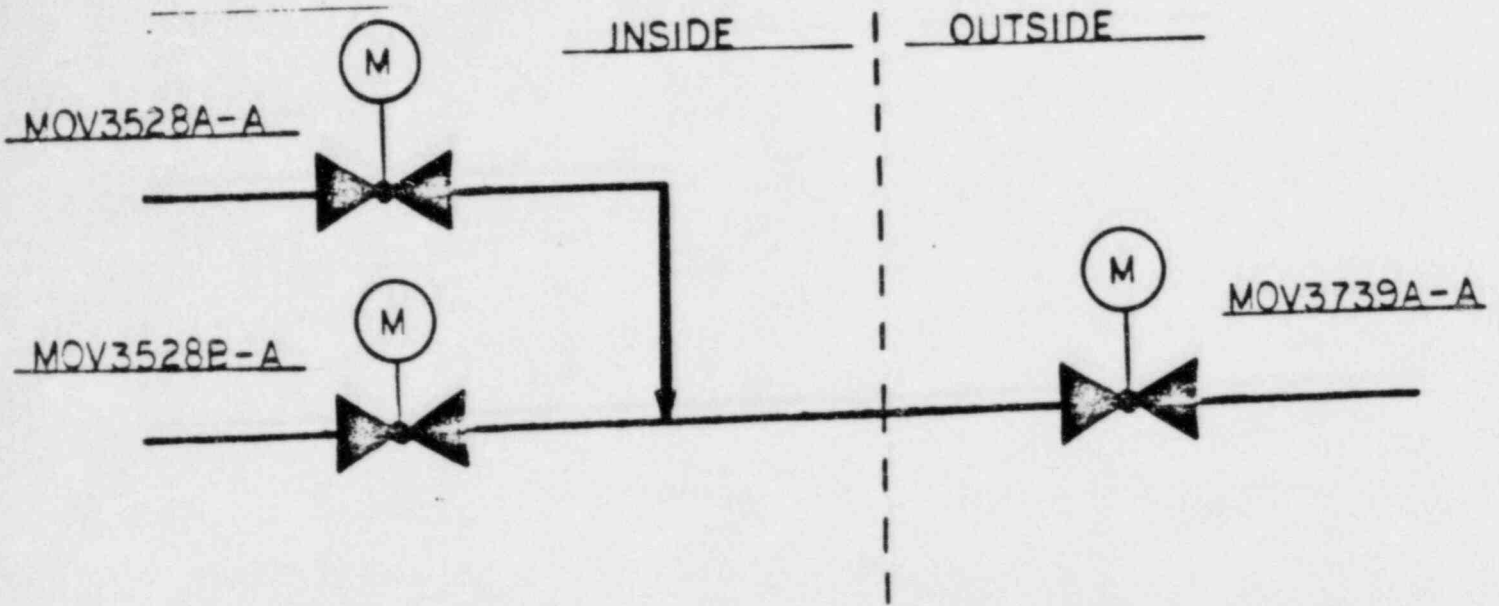
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/55: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 67 - POST LOCA CONTAINMENT
SAMPLE OUT

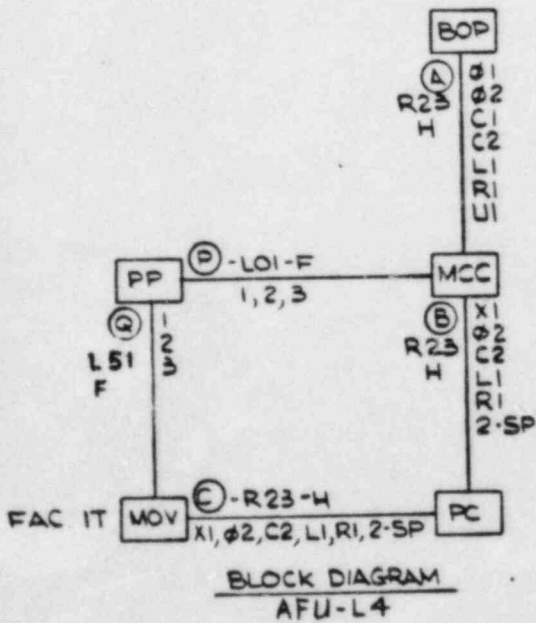
TPNS No(s) - INSIDE: Q1E23ZS3528A-A, Q1E23ZS3528B-A
OUTSIDE: Q1E23ZS3739A-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY
2. REDUNDANCY	NO	JUSTIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

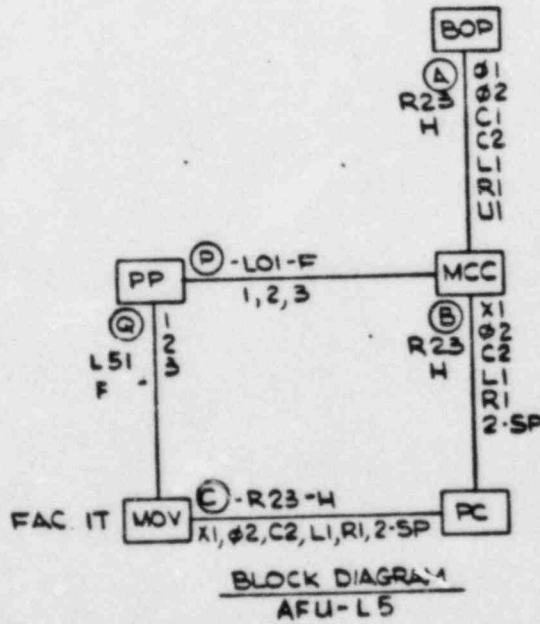
PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/55: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 67



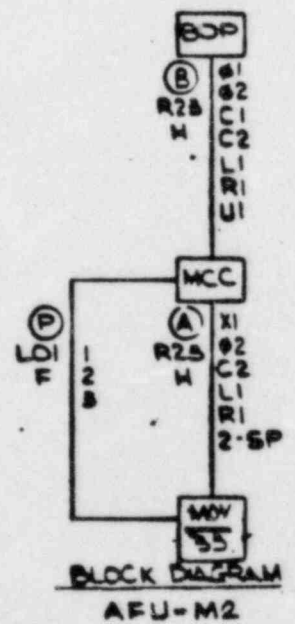
CTMT PIPING PENETRATION NO. 67
D-175019



FOR MOV3528A-A
D-177635



FOR MOV3528B-A
D-177635



FOR MOV3739A-A
D-177626

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/55: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 67

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3528A-A	CTMT	-	Control Room
ZS3528B-A	CTMT	-	Control Room
ZS3739A-A	RM. 223	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/55: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 67

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/55: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 67

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

2. REDUNDANCY

VARIABLE 19/55: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 67

EXISTING CONDITION

The isolation valves inside and outside containment covering this penetration are of the same train orientation, and therefore, redundant penetration status indication is not provided.

JUSTIFICATION

These valves are normally locked closed valves and would remain closed in an accident condition until remotely opened by the operator. They may be opened only on an intermittent basis under administrative controls, as defined in the Plant Technical Specifications Table 3.6-1. The power supply to these valves is for position indication as well as power operation of the valve motor operators. The valves are part of a piping system which is redundant to the piping system for penetration Number 61, Variable 19/56. At least one of these redundant piping systems must be operational in certain accident conditions. Therefore, the power supply for both containment isolation valves of each redundant piping system is from the same train power supply in order to ensure its operation with a single power supply failure. The operational needs for the same train of power to both the inside and outside containment isolation valves prevail over the use of position indications which satisfy R.G. 1.97 redundancy provisions. Opposite train power supplies for series valves could precipitate a condition where loss of power to one power train could preclude operation of both redundant piping systems.

If, during an accident condition, a single train of power were to fail resulting in a loss of position indications, the operator could verify that the outside containment isolation valve is closed and, therefore, containment integrity is maintained.

A failure of the isolation valves associated with this penetration or their indication would be recognized even though redundant penetration status indication is not provided, and therefore, the operator would not be led to defeat or fail to accomplish a required safety function.

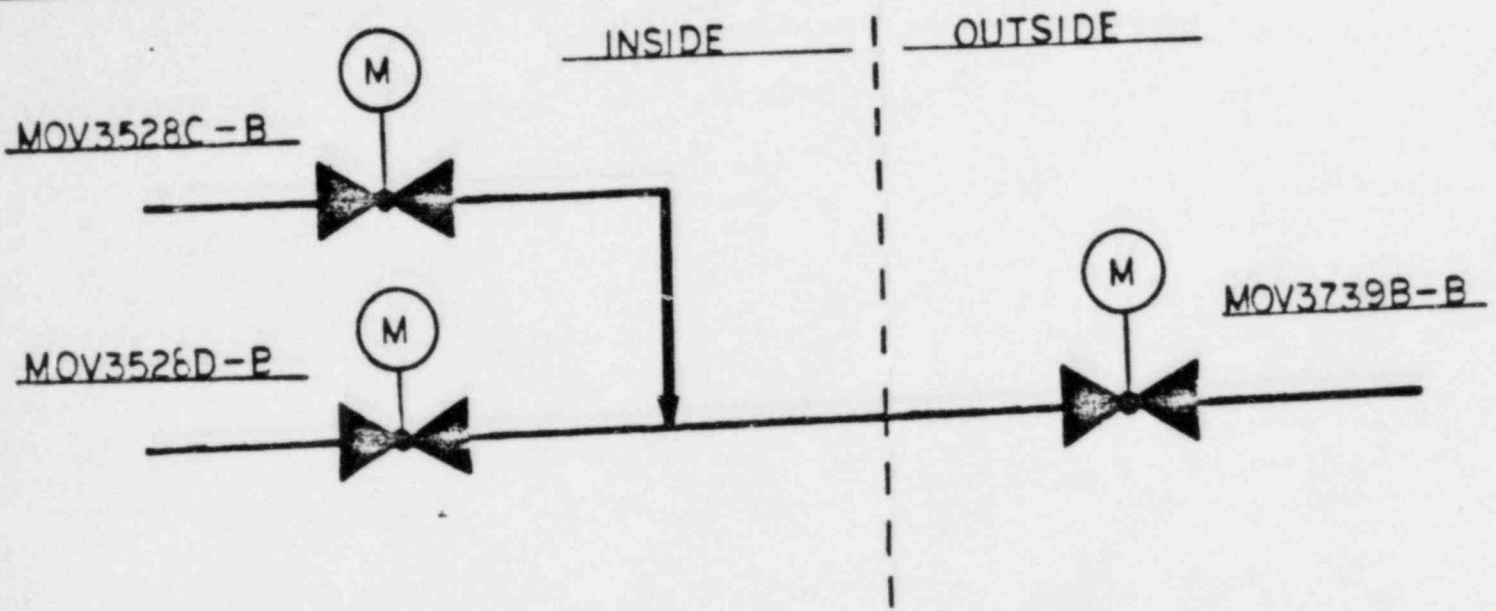
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/56: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 61 - POST LOCA CONTAINMENT
SAMPLE OUT

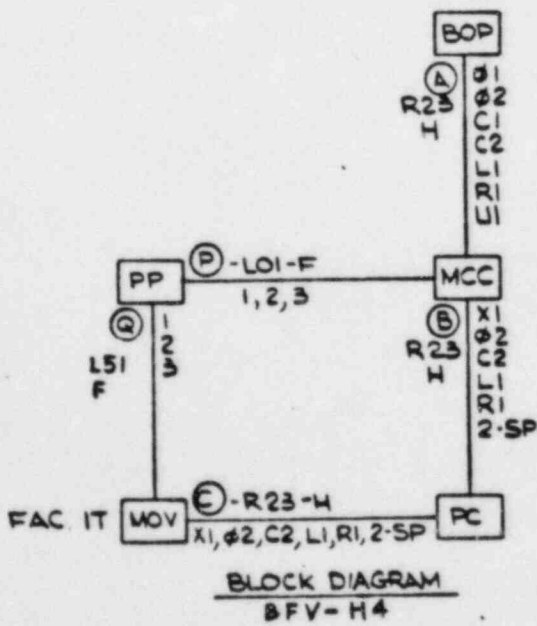
TPNS No(s) - INSIDE: Q1E23ZS3528C-B, Q1E23ZS3528D-B
OUTSIDE: Q1E23ZS3739B-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY
2. REDUNDANCY	NO	JUSTIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

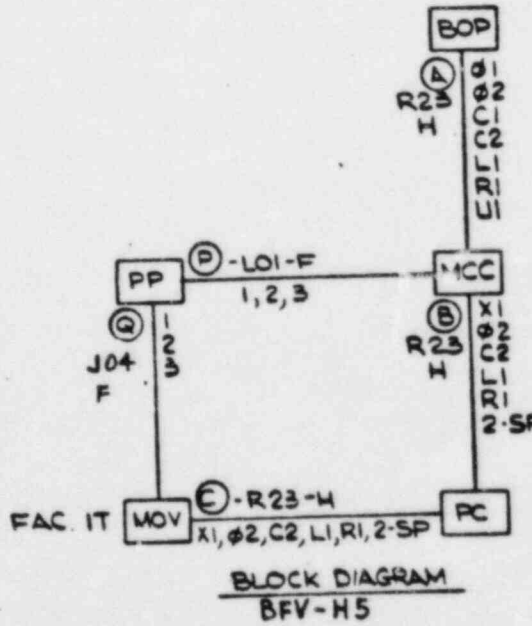
PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/56: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION NO 61



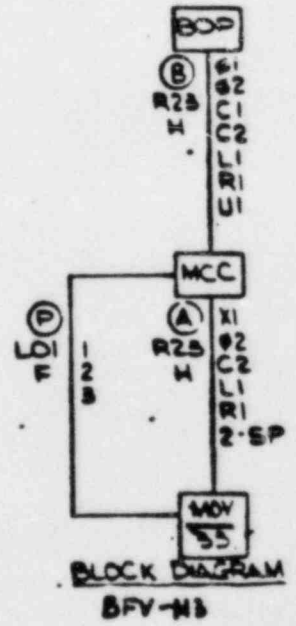
CTMT PIPING PENETRATION NO. 61
D-175019



FOR MOV3528C-B
D-177635



FOR MOV3528D-B
D-177635



FOR MOV3739B-B
D-177626

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/56: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 61

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3528C-B	CTMT	-	Control Room
ZS3528D-B	CTMT	-	Control Room
ZS3739B-B	RM. 223	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/56: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 61

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/56: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 61

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

2. REDUNDANCY

VARIABLE 19/56: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 61

EXISTING CONDITION

The isolation valves inside and outside containment covering this penetration are of the same train orientation, and therefore, redundant penetration status indication is not provided.

JUSTIFICATION

These valves are normally locked closed valves and would remain closed in an accident condition until remotely opened by the operator. They may be opened only on an intermittent basis under administrative controls, as defined in the Technical Specifications Table 3.6-1. The power supply to these valves is for position indication as well as power operation of the valve motor operators. The valves are part of a piping system which is redundant to the piping system for penetration Number 67, Variable 19/55. At least one of these redundant piping systems must be operational in certain accident conditions. Therefore, the power supply for both containment isolation valves of each redundant piping system is from the same train power supply in order to ensure its operation with a single power supply failure. The operational needs for the same train of power to both the inside and outside containment isolation valves prevail over the use of position indications which satisfy R.G. 1.97 redundancy provisions. Opposite train power supplies for series valves could precipitate a condition where loss of power to one power train could preclude operation of both redundant piping systems.

If, during an accident condition, a single train of power were to fail resulting in a loss of position indications, the operator could verify that the outside containment isolation valve is closed and, therefore, containment integrity is maintained.

A failure of the isolation valves associated with this penetration or their indications would be recognized by a loss of position indicating lights even though redundant penetration status indication is not provided, and therefore, the operator would not be led to defeat or fail to accomplish a required safety function.

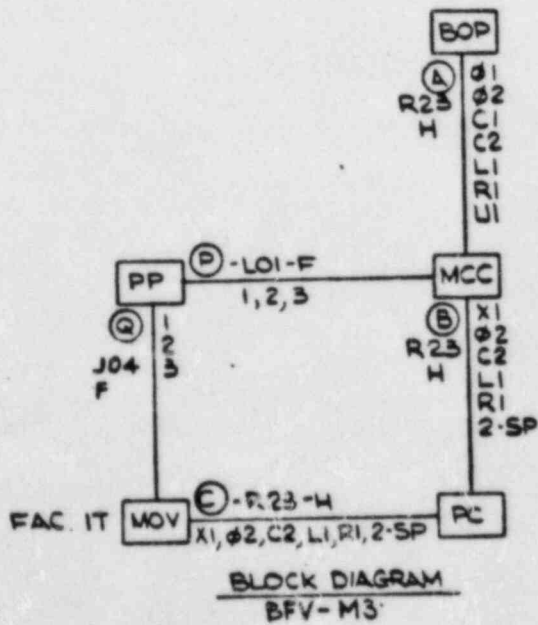
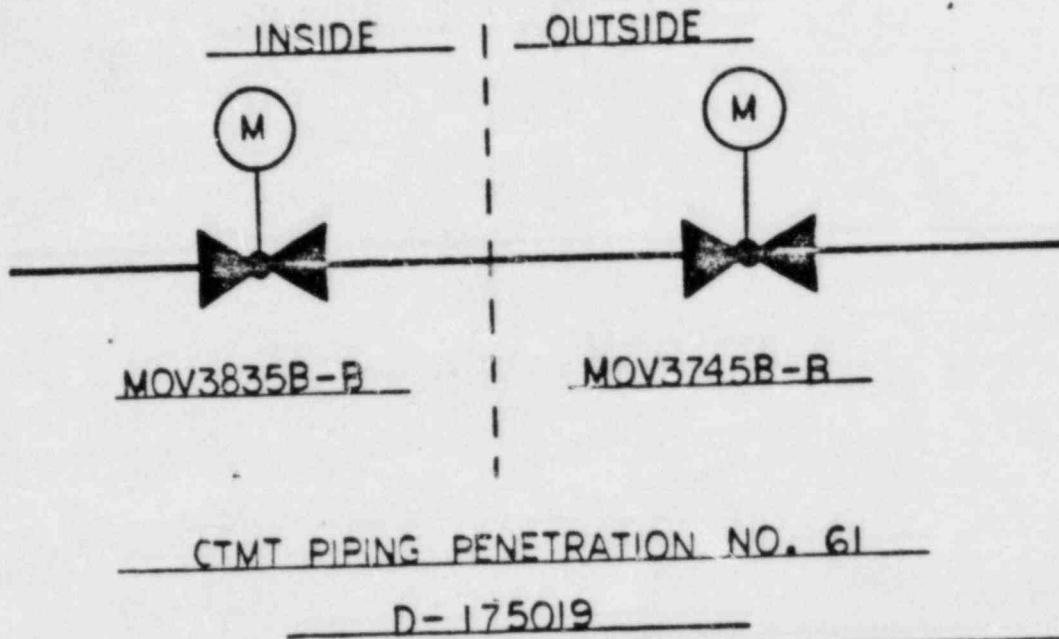
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/57: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 61 - POST LOCA CONTAINMENT
SAMPLE IN

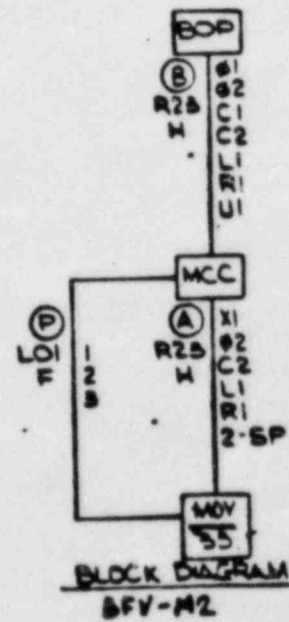
TPNS No(s) - INSIDE: Q1E23ZS3835B-B
OUTSIDE: Q1E23ZS3745B-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY
2. REDUNDANCY	NO	JUSTIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/57: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N^o 61



FOR MOV3835B-B
D-177635



FOR MOV3745B-B
D-177626

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/57: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 61

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3835B-B	CTMT	-	Control Room
ZS3745B-B	RM. 223	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/57: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 61

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/57: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 61

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

2. REDUNDANCY

VARIABLE 19/57: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 61

EXISTING CONDITION

The isolation valves inside and outside containment covering this penetration are of the same train orientation, and therefore, redundant penetration status indication is not provided.

JUSTIFICATION

These valves are normally locked closed valves and would remain closed in an accident condition until remotely opened by the operator. They may be opened only on an intermittent basis under administrative controls, as defined in the Plant Technical Specifications Table 3.6-1. The power supply to these valves is for position indication as well as power operation of the valve motor operators. The valves are part of a piping system which is redundant to the piping system for penetration Number 66, Variable 19/58. At least one of these redundant piping systems must be operational in certain accident conditions. Therefore, the power supply for both containment isolation valves of each redundant piping system is from the same train power supply in order to ensure its operation with a single power supply failure. The operational needs for the same train of power to both the inside and outside containment isolation valves prevail over the use of position indications which satisfy R.G. 1.97 redundancy provisions. Opposite train power supplies for series valves could precipitate a condition where loss of power to one power train could preclude operation of both redundant piping systems.

If, during an accident condition, a single train of power were to fail resulting in a loss of position indications, the operator could verify that the outside containment isolation valve is closed and, therefore, containment integrity is maintained.

A failure of the isolation valves associated with this penetration or their indication would be recognized even though redundant penetration status indication is not provided, and therefore, the operator would not be led to defeat or fail to accomplish a required safety function.

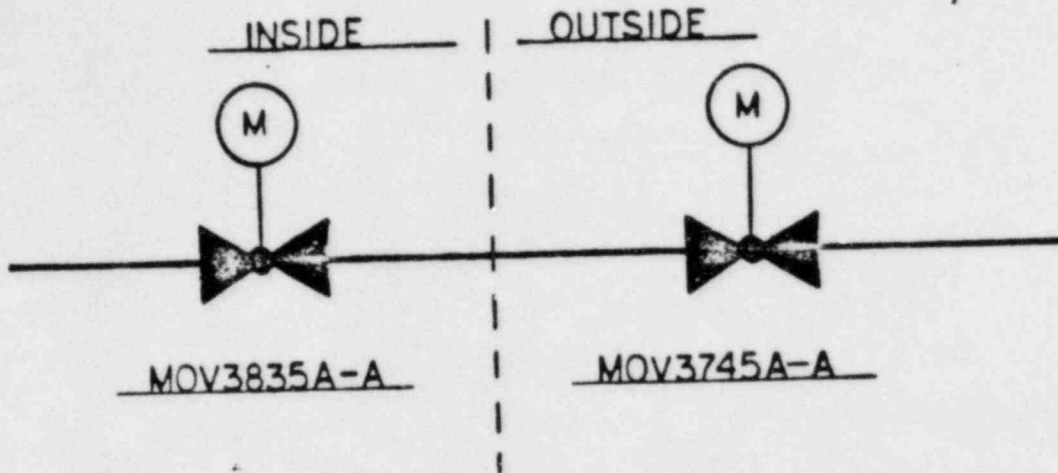
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/58: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 66 - POST LOCA CONTAINMENT
SAMPLE IN

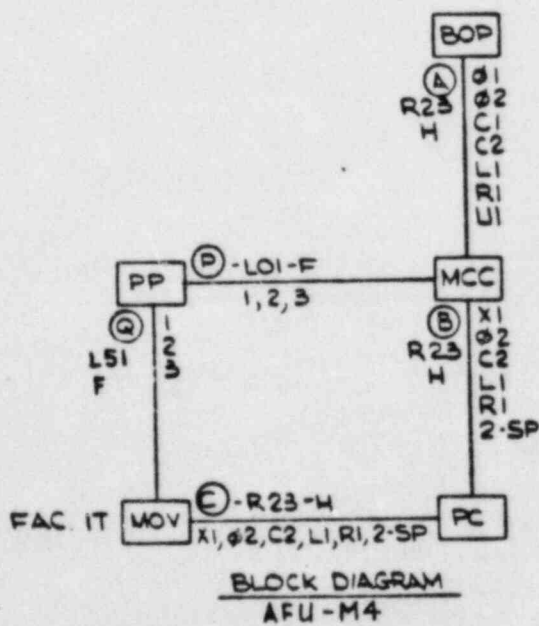
TPNS No(s) - INSIDE: Q1E23ZS3835A-A
OUTSIDE: Q1E23ZS3745A-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY
2. REDUNDANCY	NO	JUSTIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

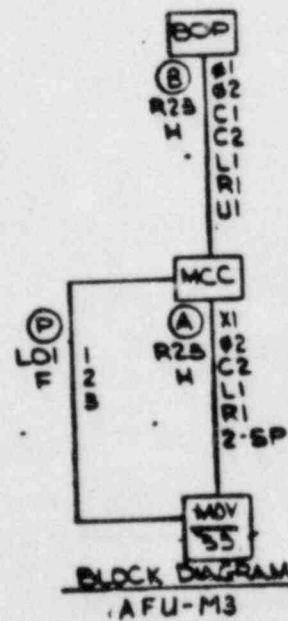
PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/58 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N° 66



CTMT PIPING PENETRATION NO. 66
D-175019



FOR MOV3835A-A
D-177635



FOR MOV3745A-A
D-177626

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/58: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 66

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3835A-A	CTMT	-	Control Room
ZS3745A-A	RM. 223	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/58: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 66

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/58: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 66

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

2. REDUNDANCY

VARIABLE 19/58: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 66

EXISTING CONDITION

The isolation valves inside and outside containment covering this penetration are of the same train orientation, and therefore, redundant penetration status indication is not provided.

JUSTIFICATION

These valves are normally locked closed valves and would remain closed in an accident condition until remotely opened by the operator. They may be opened only on an intermittent basis under administrative controls, as defined in the Plant Technical Specifications Table 3.6-1. The power supply to these valves is for position indication as well as power operation of the valve motor operators. The valves are part of a piping system which is redundant to the piping system for penetration Number 61, Variable 19/57. At least one of these redundant piping systems must be operational in certain accident conditions. Therefore, the power supply for both containment isolation valves of each redundant piping system is from the same train power supply in order to ensure its operation with a single power supply failure. The operational needs for the same train of power to both the inside and outside containment isolation valves prevail over the use of position indications which satisfy R.G. 1.97 redundancy provisions. Opposite train power supplies for series valves could precipitate a condition where loss of power to one power train could preclude operation of both redundant piping systems.

If, during an accident condition, a single train of power were to fail resulting in a loss of position indications, the operator could verify that the outside containment isolation valve is closed and, therefore, containment integrity is maintained.

A failure of the isolation valves associated with this penetration or their indication would be recognized even though redundant penetration status indication is not provided, and therefore, the operator would not be led to defeat or fail to accomplish a required safety function.

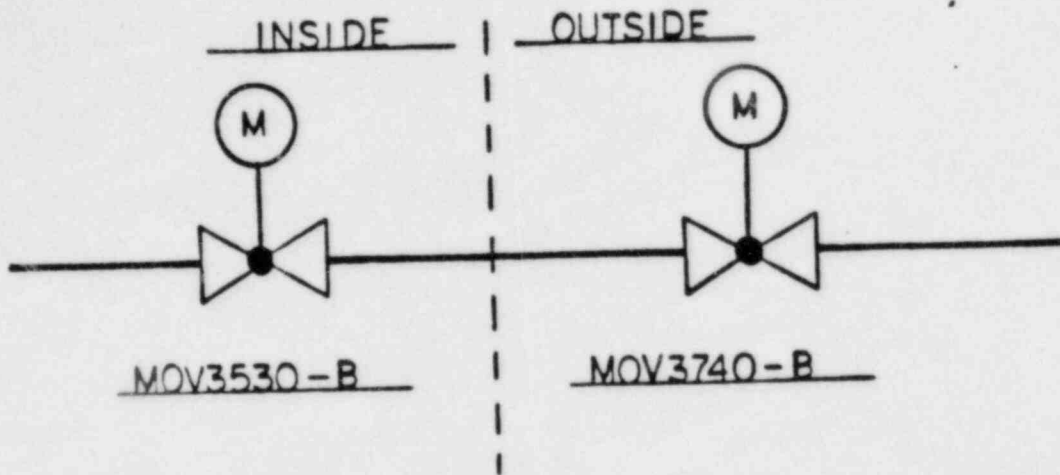
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/59: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 103 - POST LOCA CONTAINMENT
VENTING

TPNS No(s) - INSIDE: Q1E23ZS3530-B
OUTSIDE: Q1E23ZS3740-B

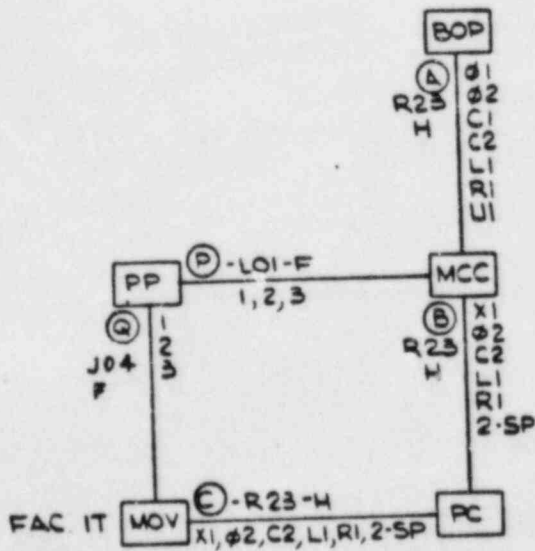
GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY
2. REDUNDANCY	NO	JUSTIFY
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/59: CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N^o 103



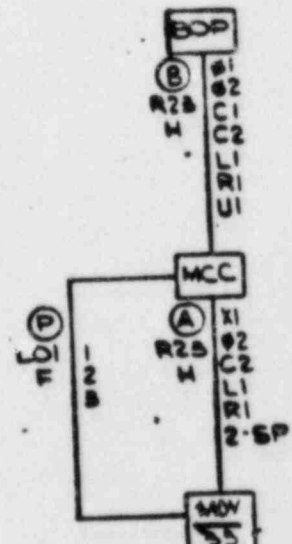
CTMT PIPING PENETRATION NO. 103

D-175019



FOR MOV3530-B

D-177635



FOR MOV3740-B

D-177626

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/59: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 103

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3530-B	CTMT	-	Control Room
ZS3740-B	RM. 223	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/59: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 103

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/59: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 103

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

2. REDUNDANCY

VARIABLE 19/59: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 103

EXISTING CONDITION

The isolation valves inside and outside containment covering this penetration are of the same train orientation, and therefore, redundant penetration status indication is not provided.

JUSTIFICATION

These valves are normally locked closed valves and would remain closed in an accident condition until remotely opened by the operator. They may be opened only on an intermittent basis under administrative controls, as defined in the Plant Technical Specifications Table 3.6-1. The power supply to these valves is for position indication as well as power operation of the valve motor operators. This piping system is a back-up to the hydrogen recombiners. This piping system must be operational in certain accident conditions. The power supply for both containment isolation valves is from the same train "B" power supply in order to ensure its operation with a train "A" power supply failure. Opposite train power supplies for series valves could precipitate a condition where loss of power to any one power train could preclude operation of this piping system.

If, during an accident condition, the "B" train of power were to fail resulting in a loss of position indications, the operator could verify that the outside containment isolation valve is closed and, therefore, containment integrity is maintained.

A failure of the isolation valves associated with this penetration or their indication would be recognized even though redundant penetration status indication is not provided, and therefore, the operator would not be led to defeat or fail to accomplish a required safety function.

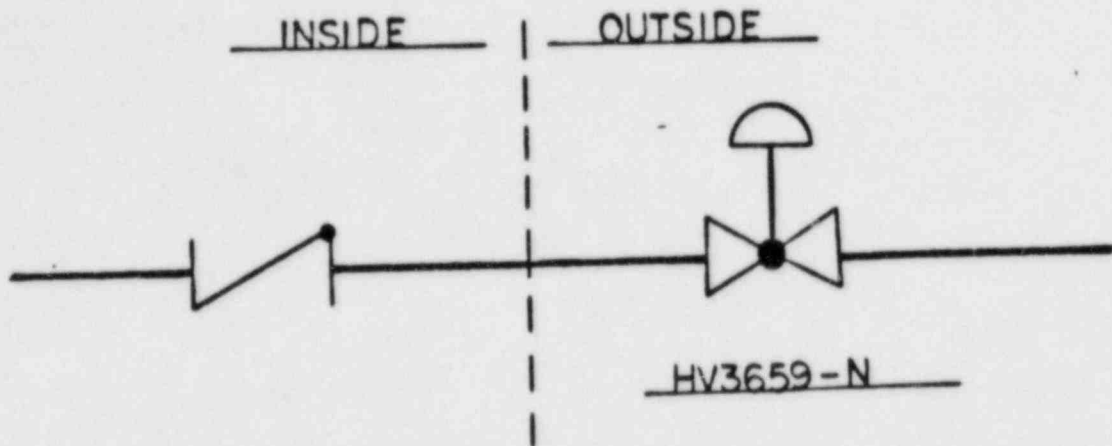
REGULATORY GUIDE 1.97 CATEGORY 1
COMPLIANCE REPORT

VARIABLE 19/60: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 82 - DEMINERALIZED WATER

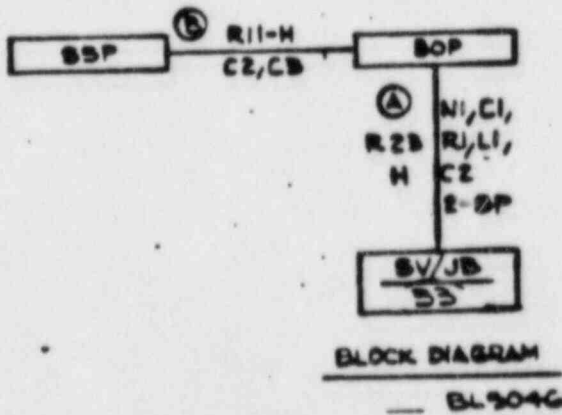
TPNS No(s) - INSIDE: Check Valve
OUTSIDE: Q1P11ZS3659-N

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY
b) SEISMIC	NO	JUSTIFY
2. REDUNDANCY	YES	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

PIPING AND BLOCK DIAGRAMS
 VARIABLE 19/60 : CONTAINMENT ISOLATION VALVE STATUS
 PENETRATION N° 82



CTMT PIPING PENETRATION NO. 82
D-175047



FOR HV3659-N
D-177373/SHT.1

SENSOR AND DISPLAY LOCATIONS

VARIABLE 19/60: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION NO. 82

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3659-N	RM. 223	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 19/60: CONTAINMENT ISOLATION VALVE STATUS PENETRATION No. 82

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 19/60: CONTAINMENT ISOLATION VALVE STATUS
PENETRATION No. 82

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

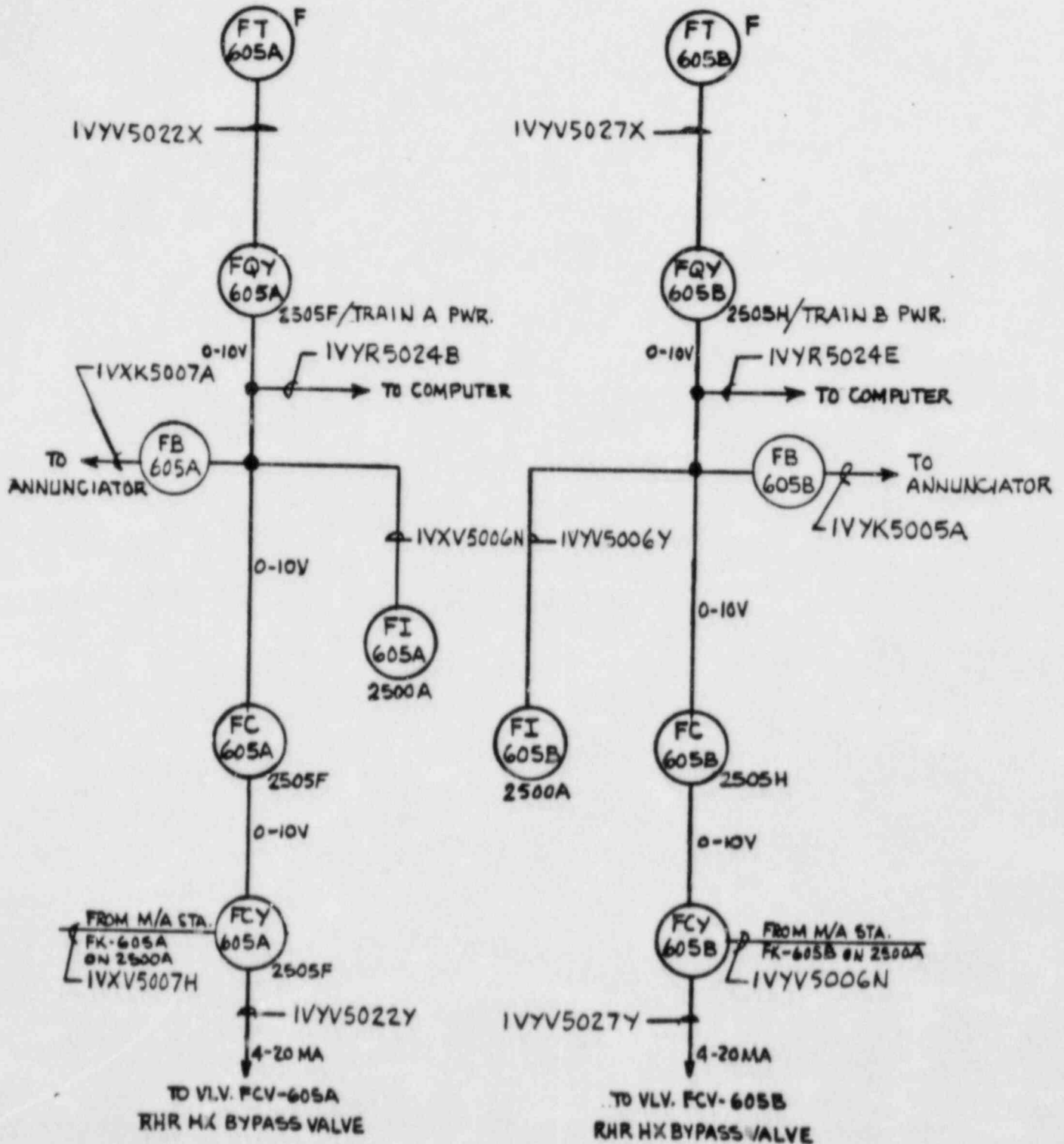
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 101: RHR/LHSI FLOW

TPNS No(s): FT605A, FT605B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO N/A	JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	YES	
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE IOI: RHR/LHSI FLOW



EQUIPMENT LOCATIONS

FT605A	RM. 120
FT605B	RM. 120
2505F, H	CONTROL ROOM
2500A	CONTROL ROOM

REFERENCE DWGS.

W 7878D17	CF 4
W 7378D56	CF 8

SENSOR AND DISPLAY LOCATIONS

VARIABLE 101: RHR/LHSI FLOW

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
FT605A	RM. 120	FI605A	Control Room
FT605B	RM. 120	FI605B	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 101: RHR/LHSI FLOW

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

Existing Condition

The existing residual heat exchanger discharge flow transmitters Q1E11FT0605A-2 and Q1E11FT0605B-4, are not qualified for the post-accident environment.

PROPOSED MODIFICATION

The existing transmitters will be replaced with environmentally qualified transmitters.

REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

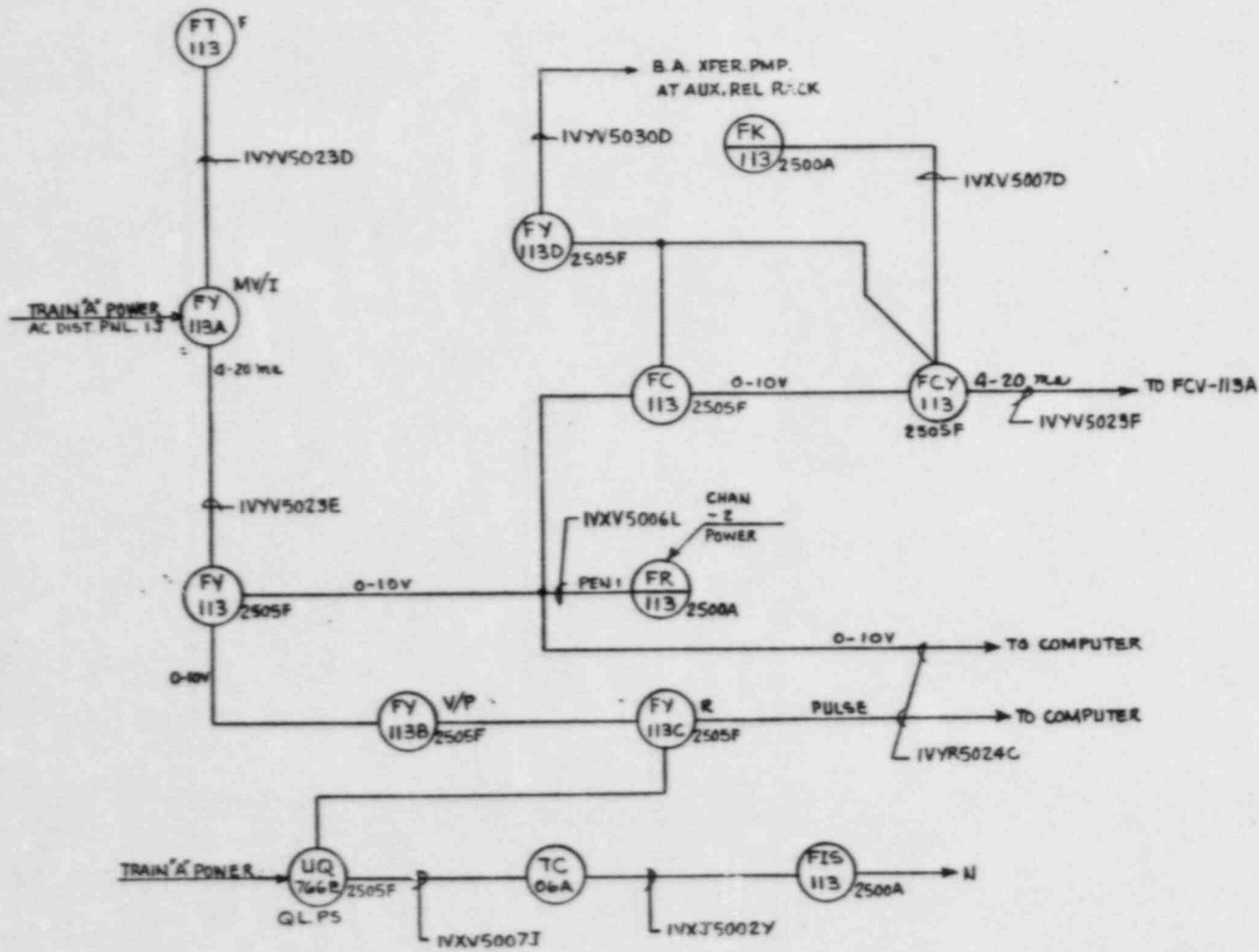
VARIABLE 102: BORIC ACID FLOW

TPNS No(s): FT113, FT110

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO N/A	JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	NO	MODIFY
12. DIRECT MEASUREMENT	YES	

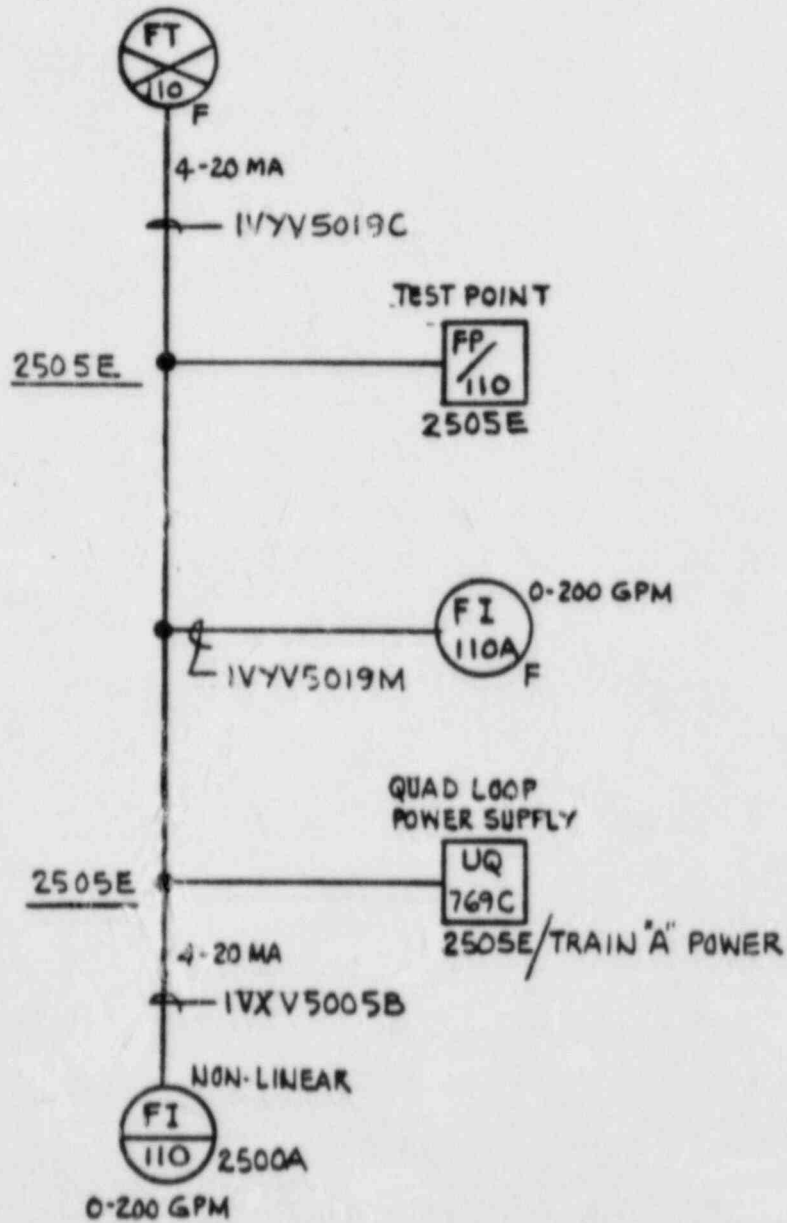
FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE IO2: BORIC ACID FLOW

EQUIPMENT LOCATIONS	
FT 113	RM. 186
2505F	CONTROL ROOM
2500A	CONTROL ROOM



REFERENCE DWGS
 7378 D27 BORIC ACID BLEND SYSTEM

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE IO2: BORIC ACID FLOW



EQUIPMENT LOCATIONS

FT 110	RM. 172
2505E	CONTROL ROOM
2500A	CONTROL ROOM

REFERENCE DWGS:

SV 7377D91

SENSOR AND DISPLAY LOCATIONS

VARIABLE 102: BORIC ACID FLOW

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
FT110	RM. 172	F1110	Control Room
FT113	RM. 186	FR113	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 102: BORIC ACID FLOW

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R. G. 1.89 which is a provision of R. G. 1.97. The installed components associated with the variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification Compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The existing flow transmitters N1E21FT0113-2 (Barton model 7101-1) and N1E21FT0110-N (Foxboro model E13DM) and pulse to current converter N1E21FY0113A-2 (Barton model 981-2) do not have radiation qualification documentation.

PROPOSED MODIFICATION

The existing devices will be replaced with environmentally qualified devices.

EXISTING CONDITION

The local flow indicator N1E21FI0110A-N (Westinghouse model 252) does not have radiation qualification documentation. Its failure may adversely affect performance of the remote flow indicator in the main control room.

PROPOSED MODIFICATION

An isolation device will be provided to isolate the local indicator from the remote indicator in the main control room.

8. EQUIPMENT IDENTIFICATION

VARIABLE 102: BORIC ACID FLOW

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

11. HUMAN FACTOR

VARIABLE 102: BORIC ACID FLOW

EXISTING CONDITION

The display for FT113 is an indicating strip chart recorder and fails as-is on loss of power.

PROPOSED MODIFICATION

To minimize the potential for operator confusion caused by the fail-as-is display, it is proposed to add a power available indicator adjacent to the recorder. No additional changes are required for this variable to satisfy the R.G. 1.97 Human Factors Guidelines.

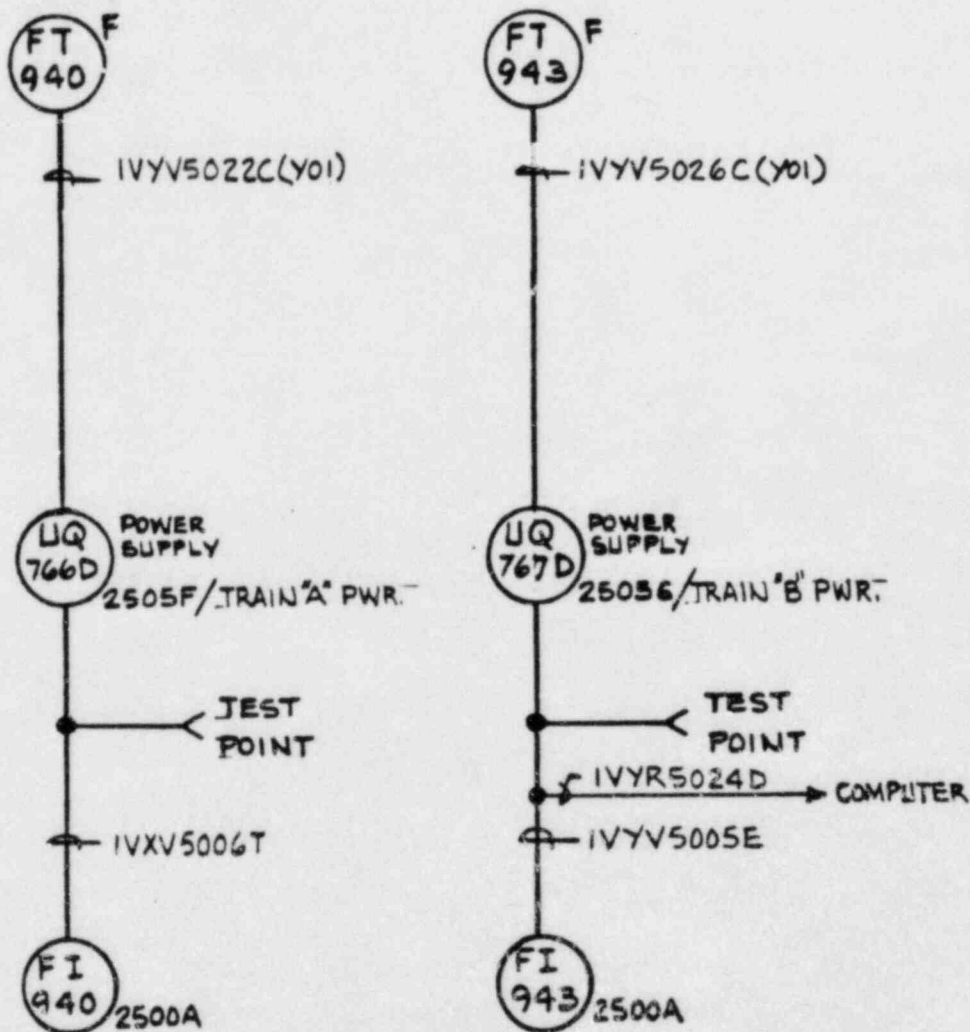
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 103: HHSI FLOW

TPN^s No(s): FT940, FT943

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO N/A	JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	YES	
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE IO3:HH SI FLOW



EQUIPMENT LOCATION

FT 940	RM. 111
FT 943	RM. 175
2505F, G	CONTROL ROOM
2500A	CONTROL ROOM

REFERENCE DWGS:

- W 7378D08
- W 7378D43
- D- 175038/1
- U- 216488
- D- 175143/47

SENSOR AND DISPLAY LOCATIONS

VARIABLE 103: HHSI FLOW

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
FT940	RM. 111	FI940	Control Room
FT943	RM. 175	FI943	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 103: HI HEAD SAFETY INJECTION FLOW

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The existing flow transmitters N1E21FT0940-2 and N1E21FT0943-3, Barton Model 396 do not have radiation qualification documentation.

PROPOSED MODIFICATION

The existing transmitters will be replaced with environmentally qualified transmitters.

REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 104: MAIN STEAM FLOW

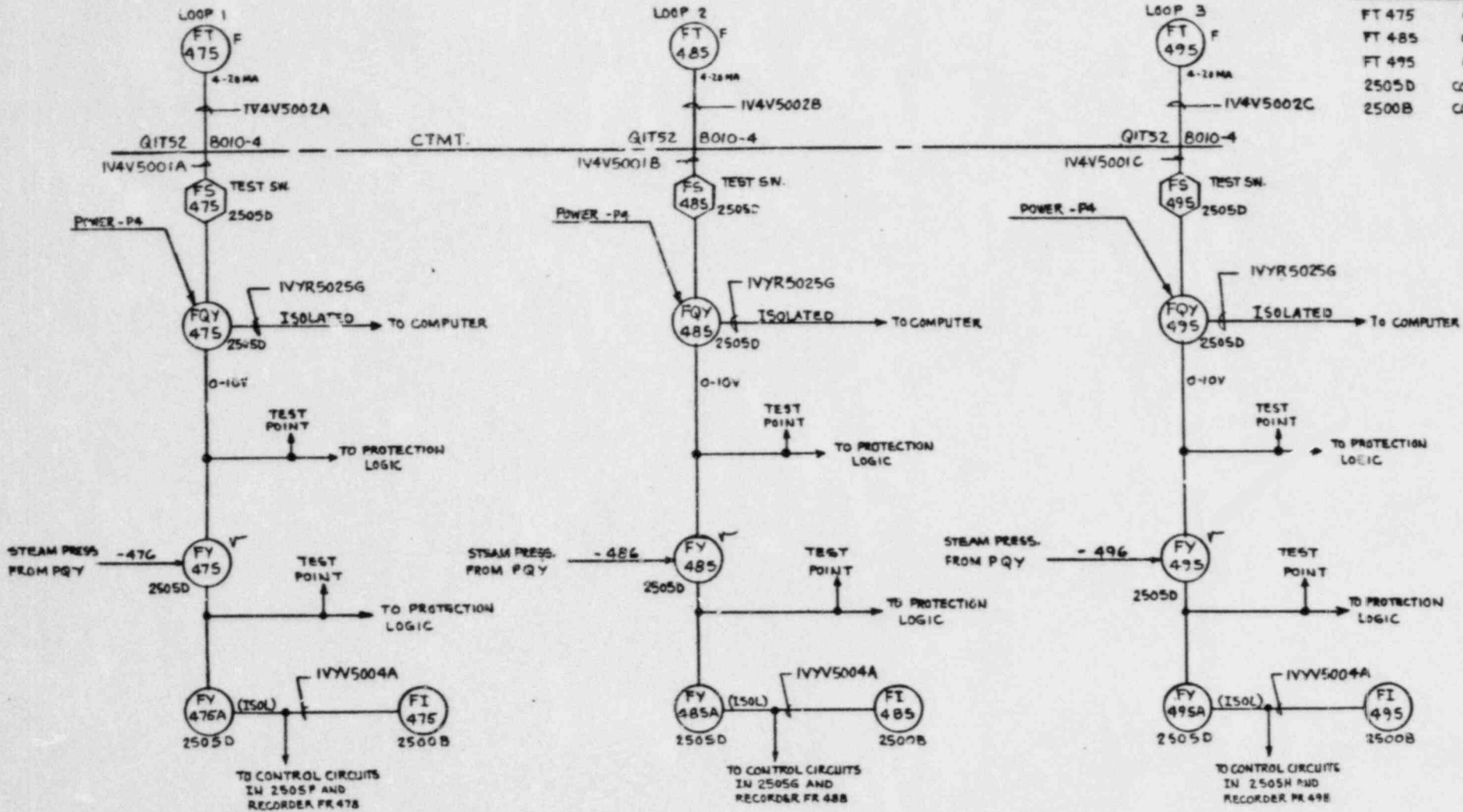
TPNS No(s): FT475, FT485, FT495

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
VARIABLE 104: MAIN STEAM FLOW

EQUIPMENT LOCATIONS

FT 475	CTMT
FT 485	CTMT
FT 495	CTMT
2505D	CONTROL ROOM
2500B	CONTROL ROOM



REFERENCE DWGS:

- W 7377J63 (FT 475)
- W 7377D68 (FT 485)
- W 7377D69 (FT 495)

SENSOR AND DISPLAY LOCATIONS
VARIABLE 104: MAIN STEAM FLOW

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
FT475	CTMT	FI475	Control Room
FT485	CTMT	FI485	Control Room
FT495	CTMT	FI495	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 104: MAIN STEAM FLOW

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 104: MAIN STEAM FLOW

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500B-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

8. EQUIPMENT IDENTIFICATION

VARIABLE 104: MAIN STEAM FLOW

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

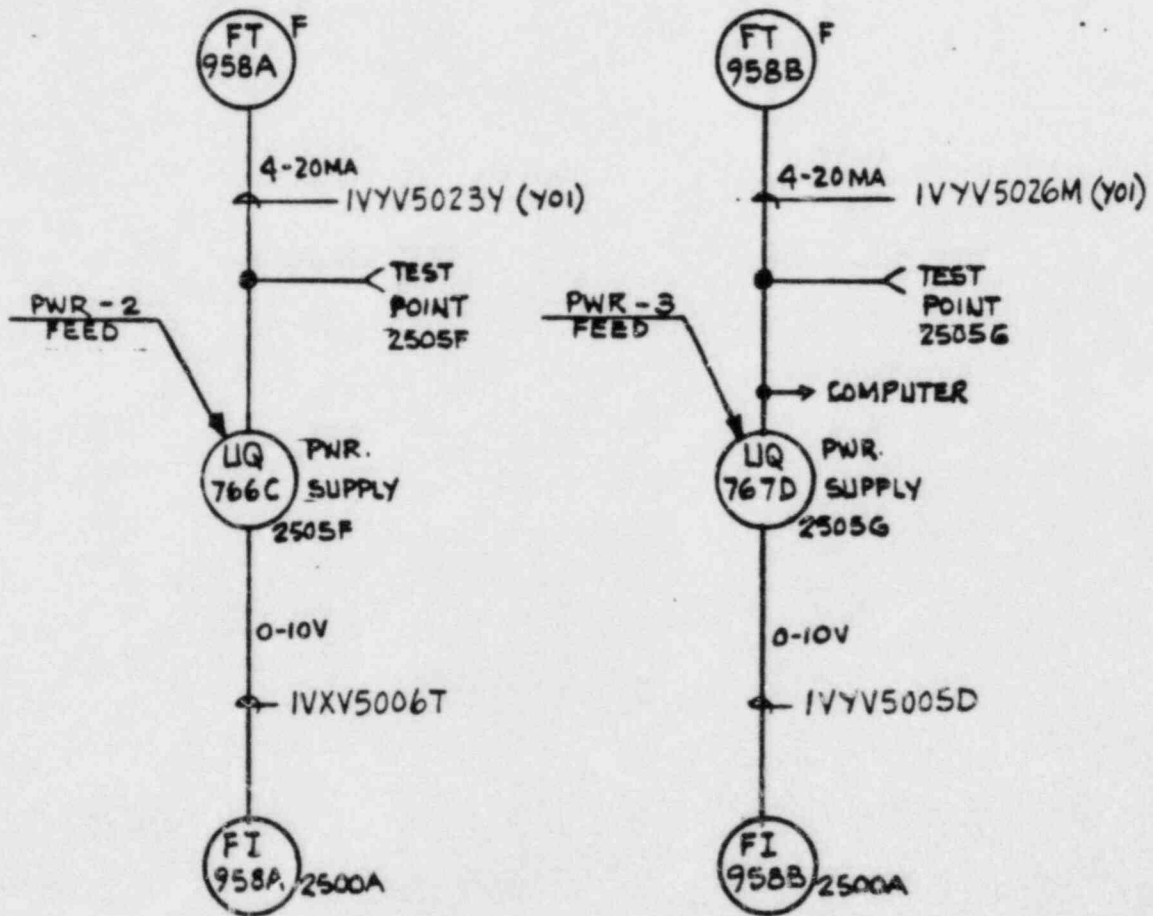
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 105: CONTAINMENT SPRAY FLOW

TPNS No(s): FT958A, FT958B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO N/A	JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	YES	
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE IO5: CONTAINMENT SPRAY FLOW



EQUIPMENT LOCATIONS

FT958A	RM. 172
FT958B	RM. 184
2505F,G	CONTROL ROOM
2500A	CONTROL ROOM

REFERENCE DWGS:

W	7378D024	FT 958A
W	7378D043	FT 958B
D-	175038/3	
U-	260326	
D-	175147/43	

SENSOR AND DISPLAY LOCATIONS

VARIABLE 105: CONTAINMENT SPRAY FLOW

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
FT958A	RM. 172	FI958A	Control Room
FT958B	RM. 184	FI958B	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 105: CTMT SPRAY FLOW

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The existing containment spray flow transmitters N1E13FT0958A-2 and N1E13FT0958B-3 are not qualified for the post-accident environment.

PROPOSED MODIFICATION

The existing transmitters will be replaced with environmentally qualified transmitters.

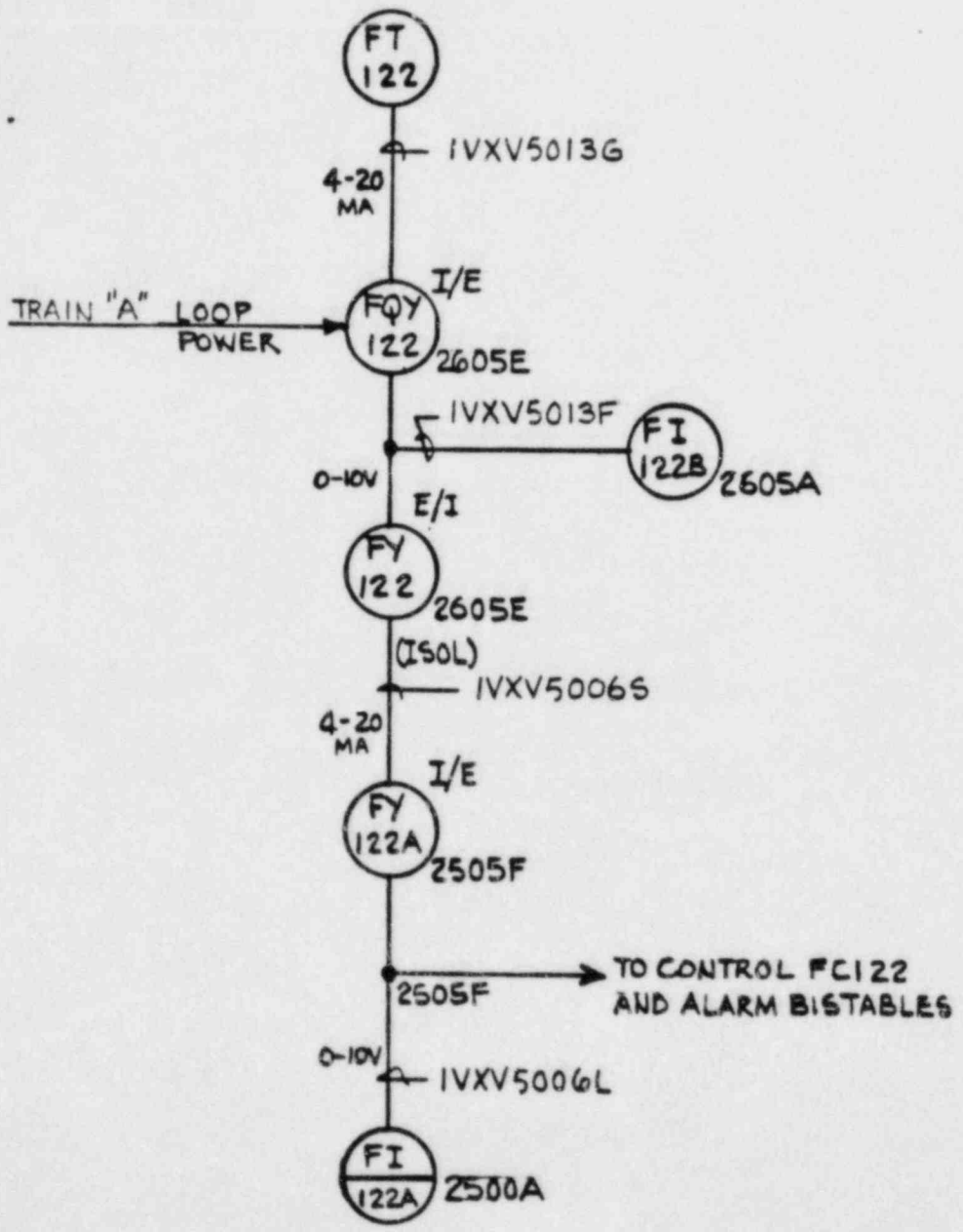
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 106: CHARGING LINE FLOW

TPNS No(s): FT122

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO N/A	JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE 106: CHARGING LINE FLOW (VIA REGEN. HX)



EQUIPMENT LOCATIONS

FT 122	RM. 182
2605E	RM. 202
2505F	CONTROL ROOM
2500A	CONTROL ROOM

REFERENCE DWGS:

- W 7378D25
- W 2249D26
- D- 175147
- D- 175039
- U- 260324A

SENSOR AND DISPLAY LOCATIONS

VARIABLE 106: CHARGING LINE FLOW

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
FT122	RM. 182	FI122A	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 106: CHARGING LINE FLOW

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The existing charging line flow transmitter N1E21FT0122-2 is not qualified for the post-accident environment.

PROPOSED MODIFICATION

The existing transmitter will be replaced with an environmentally qualified transmitter.

8. EQUIPMENT IDENTIFICATION

VARIABLE 106: CHARGING LINE FLOW

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

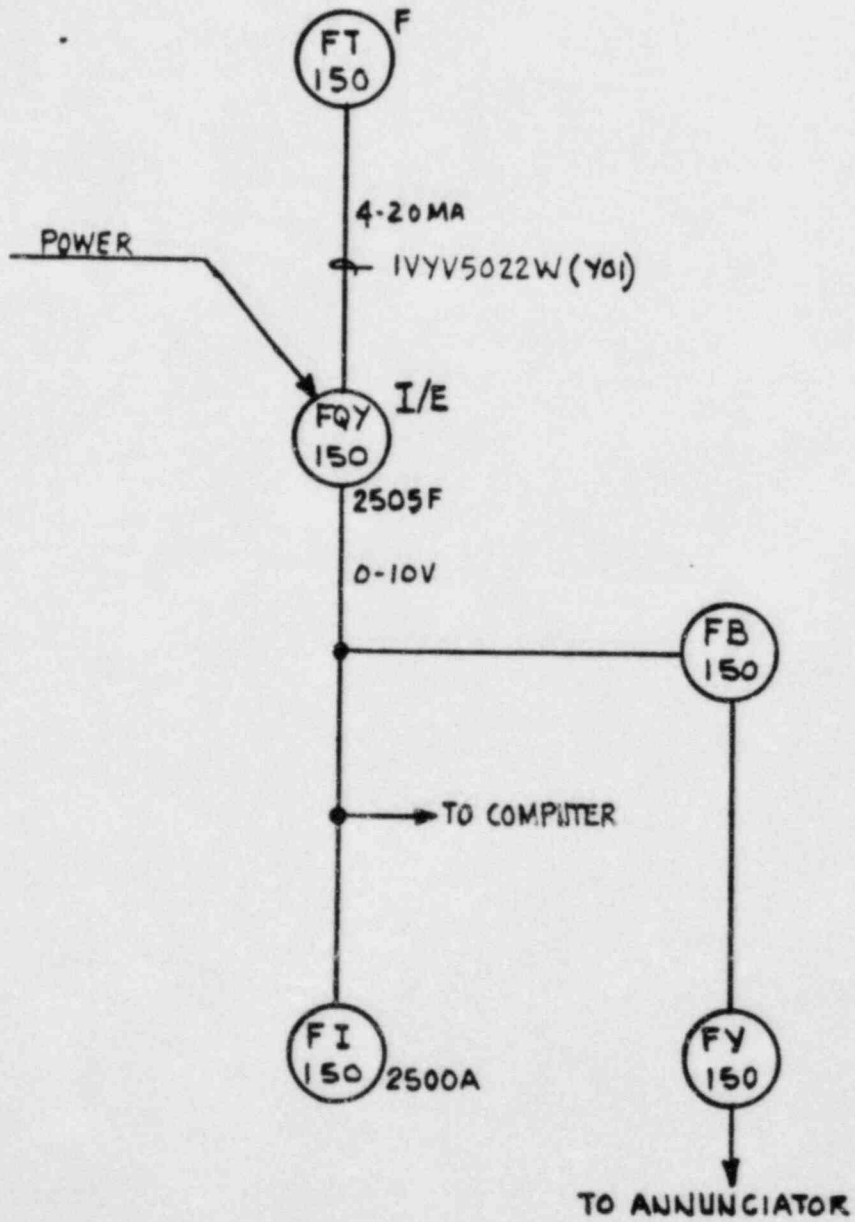
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 107: LETDOWN FLOW

TPNS No(s): FT150

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO N/A	JUSTIFY/MODIFY
2. REDUNDANCY	No Category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE 107: LETDOWN FLOW



EQUIPMENT LOCATIONS

FT 150	RM. 161
2505F	CONTROL ROOM
2500A	CONTROL ROOM

REFERENCE DWGS:

- W 7378D19
- D- 175039/2
- U- 260326
- D- 175147

SENSOR AND DISPLAY LOCATIONS

VARIABLE 107: LETDOWN FLOW

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
FT150	RM. 161	FI150	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 107: LET DOWN FLOW

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The existing let down flow transmitter Q1E21FT0150-2 is not qualified for the post-accident environment.

PROPOSED MODIFICATION

The existing transmitter will be replaced with an environmentally qualified transmitter.

8. EQUIPMENT IDENTIFICATION

VARIABLE 107: LETDOWN FLOW

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

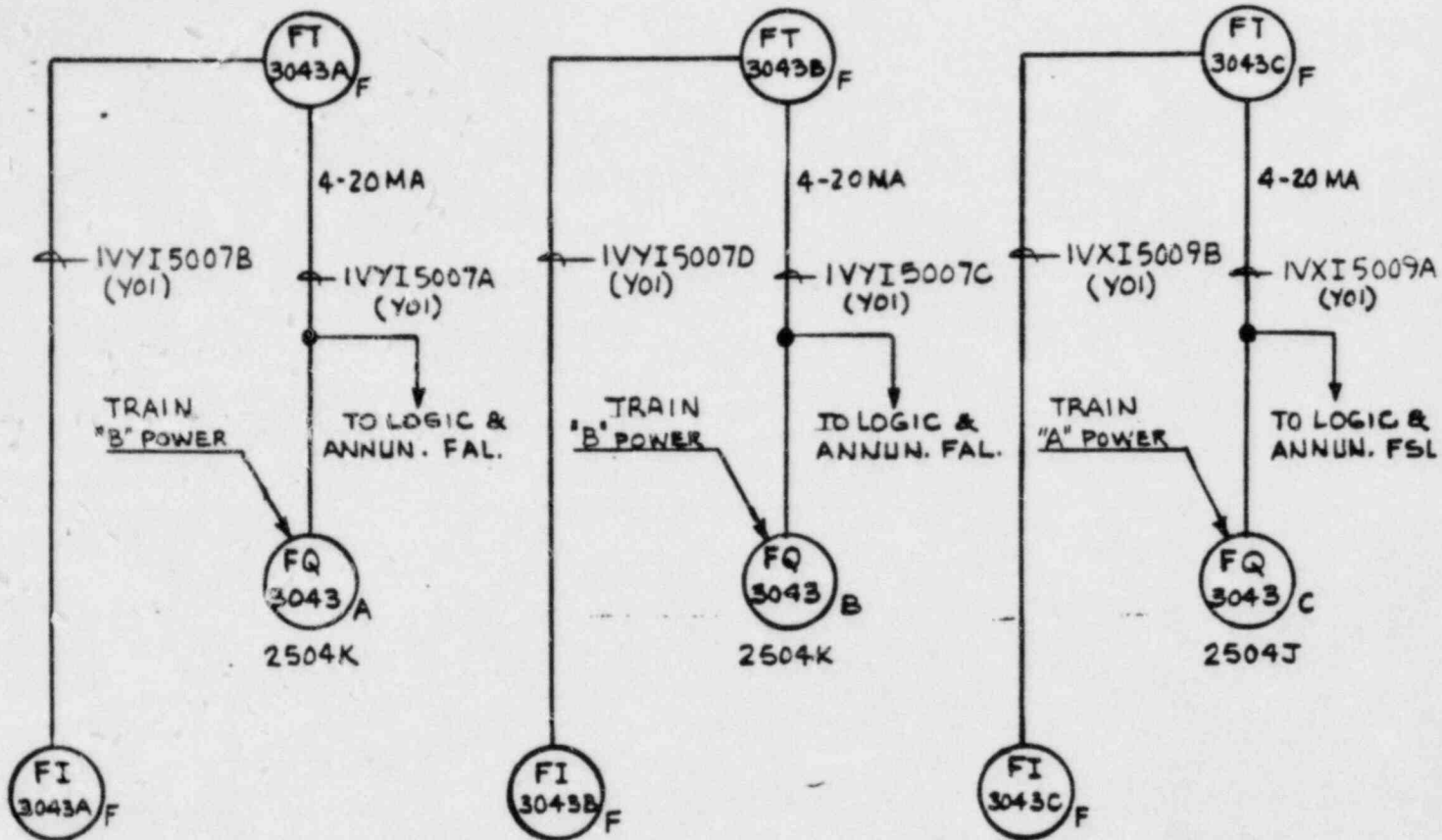
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 108: CCW HX INLET FLOW

TPNS No(s): FT3043A, FT3043B, FT3043C

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO N/A	JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	NO N/A	MODIFY
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE 108: CCW HX INLET FLOW



EQUIPMENT LOCATIONS

FT3043A	RM. 185
FT3043B	RM. 185
FT3043C	RM. 185
2504K, J	CONTROL ROOM
FI3043A	RM. 185
FI3043B	RM. 185
FI3043C	RM. 185

REFERENCE DWGS:

- W 7408D02
- W 7408D25
- W 7408D30
- "BLOCK" 4832
- D-175002/1
- U-258024
- D-175143

SENSOR AND DISPLAY LOCATIONS
VARIABLE 108: CCW HX INLET FLOW

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
FT3043A	RM. 185	FI3043A	RM. 185
FT3043B	RM. 185	FI3043B	RM. 185
FT3043C	RM. 185	FI3043C	RM. 185

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 108: CCW HX INLET FLOW

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The component cooling water heat exchanger inlet local flow indicators N1P17FI3043A-N, N1P17FI3043B-N, and N1P17FI3043-C-N, Veritrak Model 55S105 do not have radiation qualification documentation.

PROPOSED MODIFICATION

The existing local indicators will be replaced with differential pressure gauges for local indication of CCW heater exchanger inlet flow. In addition, remote displays will be installed in the main control room.

6. DISPLAY AND RECORDING

VARIABLE 108: CCW HX INLET FLOW

EXISTING CONDITION

Flow indication is available only in the CCW heat exchanger room, which is not an accessible area post accident.

PROPOSED MODIFICATION

Delete the local electronic indicators and add new indicators in the control room. In addition provide differential pressure gauges for use as local flow indicators.

8. EQUIPMENT IDENTIFICATION

VARIABLE 108: CCW HX INLET FLOW

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

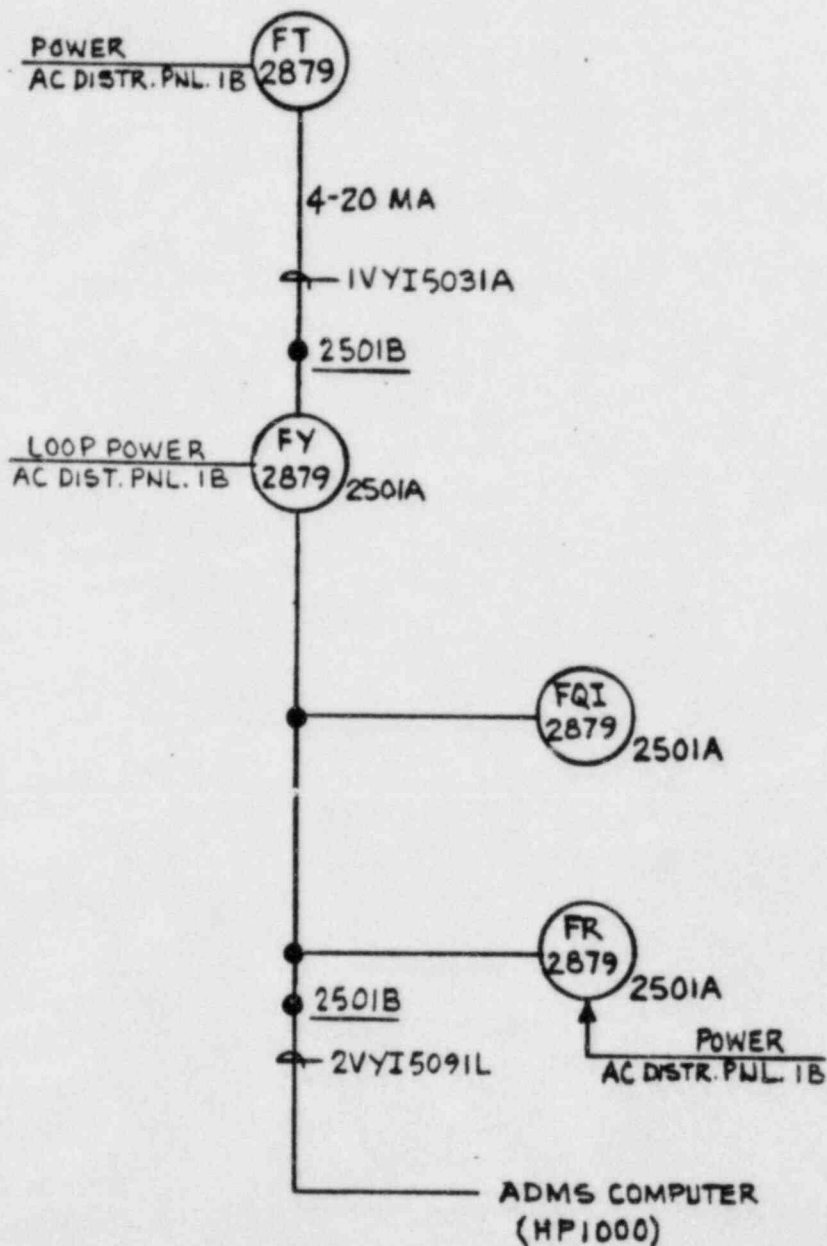
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 109: PLANT VENT STACK FLOW

TPNS No(s): FT2879

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	N/A N/A	
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	NO	MODIFY
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE 109: PLANT VENT STACK FLOW



EQUIPMENT LOCATIONS

FT 2879 AUX. BLDG. ROOF
2501A CONTROL ROOM

REFERENCE DWGS:

D-175045
D-181782
PCN B-82-1219

SENSOR AND DISPLAY LOCATIONS
VARIABLE 109: PLANT VENT STACK FLOW

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
FT2879	Aux. Bldg. Roof	FR2879	Control Room

Table 3 correlates room numbers with room names and floor elevations.

8. EQUIPMENT IDENTIFICATION

VARIABLE 109: PLANT VENT STACK FLOW

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

11. HUMAN FACTOR

VARIABLE 109: PLANT VENT STACK FLOW

EXISTING CONDITION

Flow indication is by an indicating strip chart recorder that fails as-is on loss of power.

PROPOSED MODIFICATION

To minimize the potential for operator confusion caused by the fail-as-is display, it is proposed to add a power available indicator to the recorder. No additional changes are required for this variable to satisfy the Human Factor Guidelines.

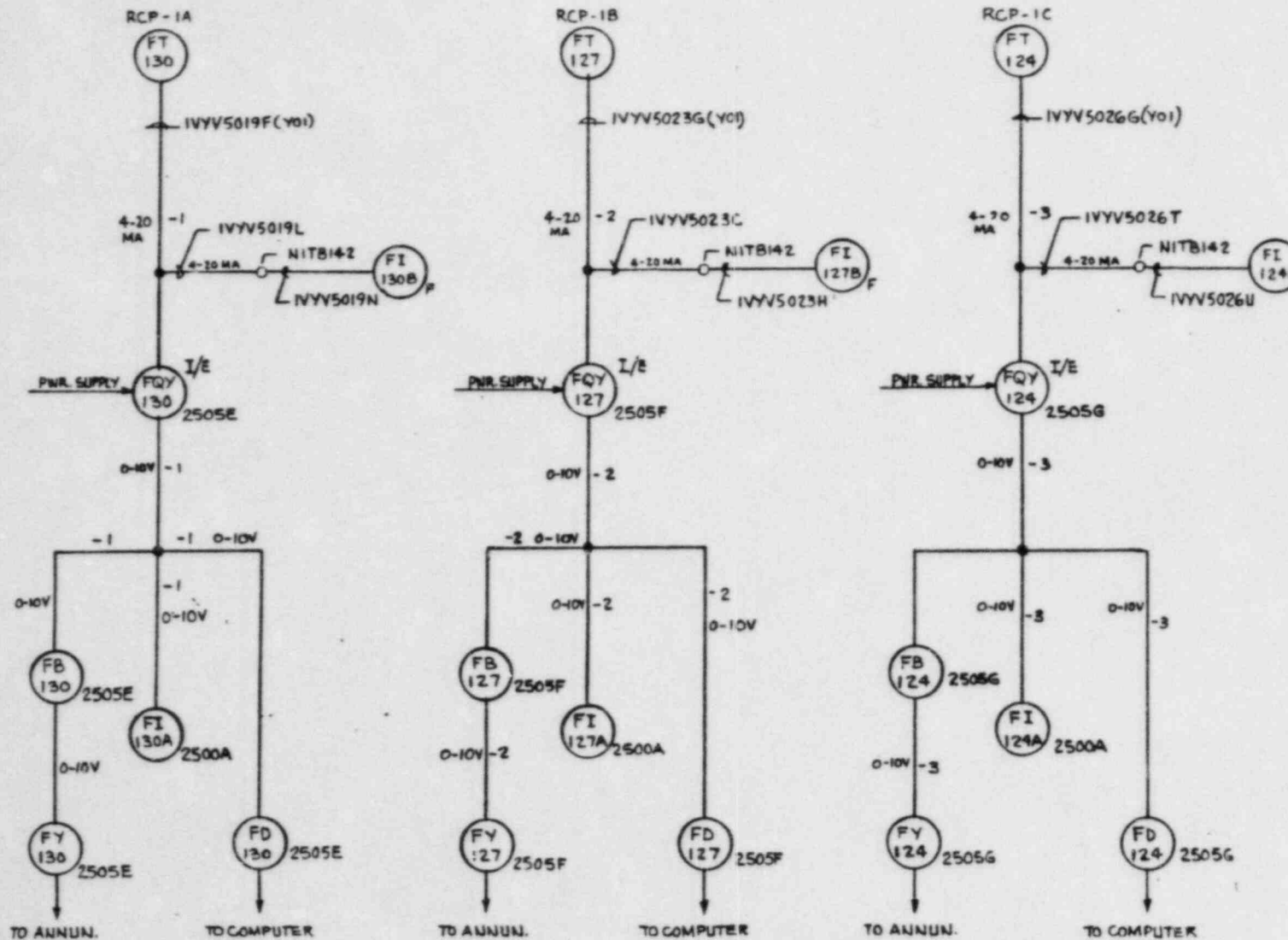
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 110: RCP SEAL INJECTION FLOW

TPNS No(s): FT130, FT127, FT124

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO N/A	JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 110: REACTOR COOLANT PUMP SEAL INJECTION FLOW



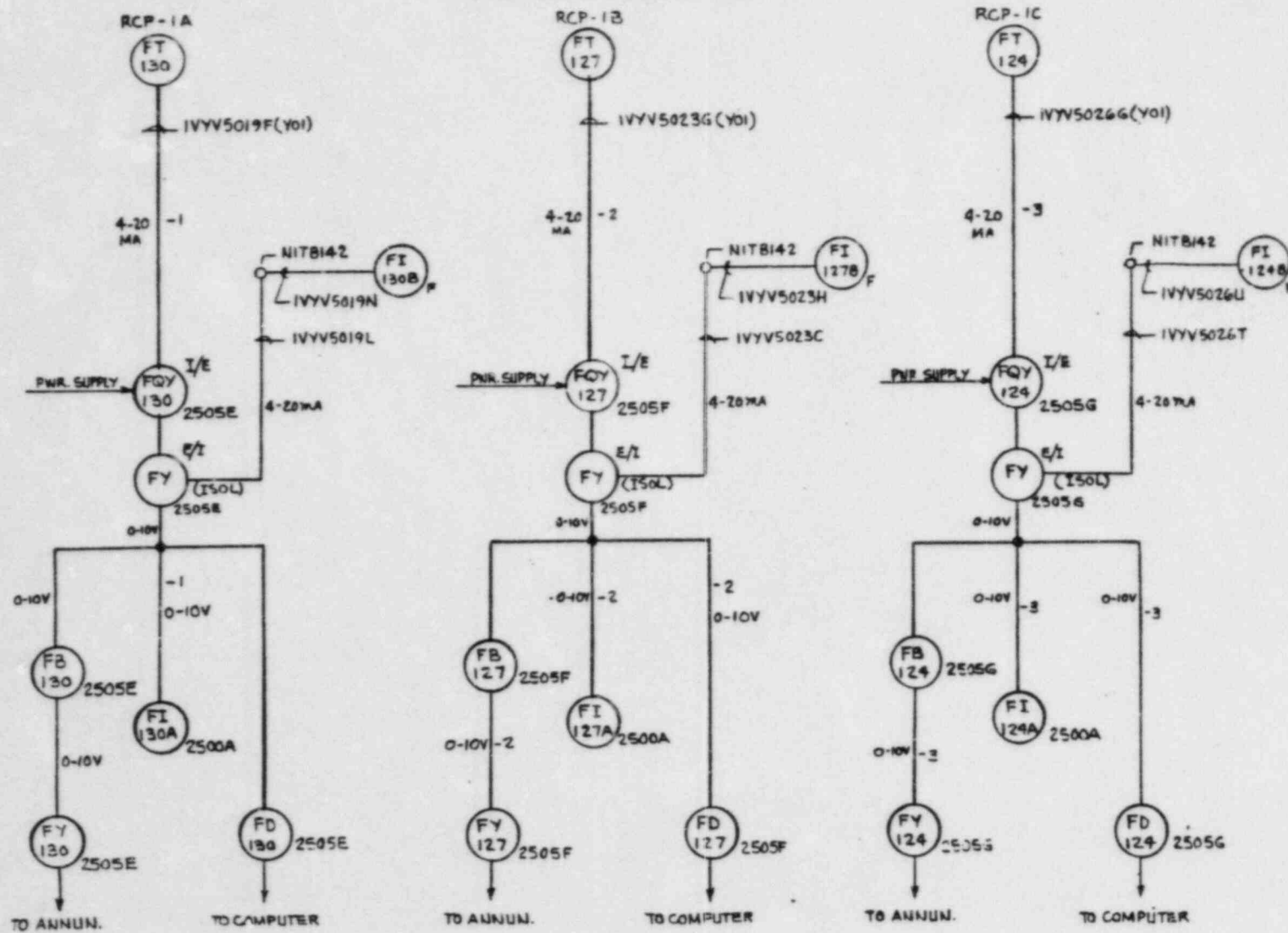
EQUIPMENT LOCATIONS

FT 130	RM. 223
FT 127	RM. 223
FT 124	RM. 223
FI 130B	RM. 222
FI 127B	RM. 222
FI 124B	RM. 222
2505E, F, G	CONTROL ROOM
2500A	CONTROL ROOM

REFERENCE DWGS:

- W 7377D77
- W 7377D97
- W 7377D35
- D - 175039/1
- D - 175146
- U - 260324

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 110: REACTOR COOLANT PUMP SEAL INJECTION FLOW
 PROPOSED MODIFICATION



EQUIPMENT LOCATIONS

FT130	RM. 223
FT127	RM. 223
FT124	RM. 223
FI130B	RM. 222
FI127B	RM. 222
FI124B	RM. 222
2505E,F,G	CONTROL ROOM
2500A	CONTROL ROOM

REFERENCE DWGS:

W 7377D77
 W 7377D97
 W 7377D35
 D - 175039 / 1
 D - 175146
 U - 260324

SENSOR AND DISPLAY LOCATIONS

VARIABLE 110: RCP SEAL INJECTION FLOW

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
FT130	RM. 223	FI130A	Control Room
FT127	RM. 223	FI127A	Control Room
FT124	RM. 223	FI124A	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 110: RCP SEAL INJECTION FLOW

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The existing RCP seal injection flow transmitters N1E21FT0124-3, N1E21FT0127-2 and N1E21FT0130-1 are not qualified for the post-accident environment.

PROPOSED MODIFICATION

The existing transmitters will be replaced with environmentally qualified transmitters.

EXISTING CONDITION

Local flow indicators N1E21FI0130B-N, N1E21FI0127B-N, and N1E21FI0124B-N, which are International Instruments' Model 1251, do not have radiation qualification documentation.

PROPOSED MODIFICATION

The local flow indicators will be electrically isolated so that an environmentally induced failure of the local indicators will not adversely affect the operation of the remote display in the main control room or the local flow indicators will be relocated to a mild environment.

8. EQUIPMENT IDENTIFICATION

VARIABLE 110: RCP SEAL INJECTION FLOW

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

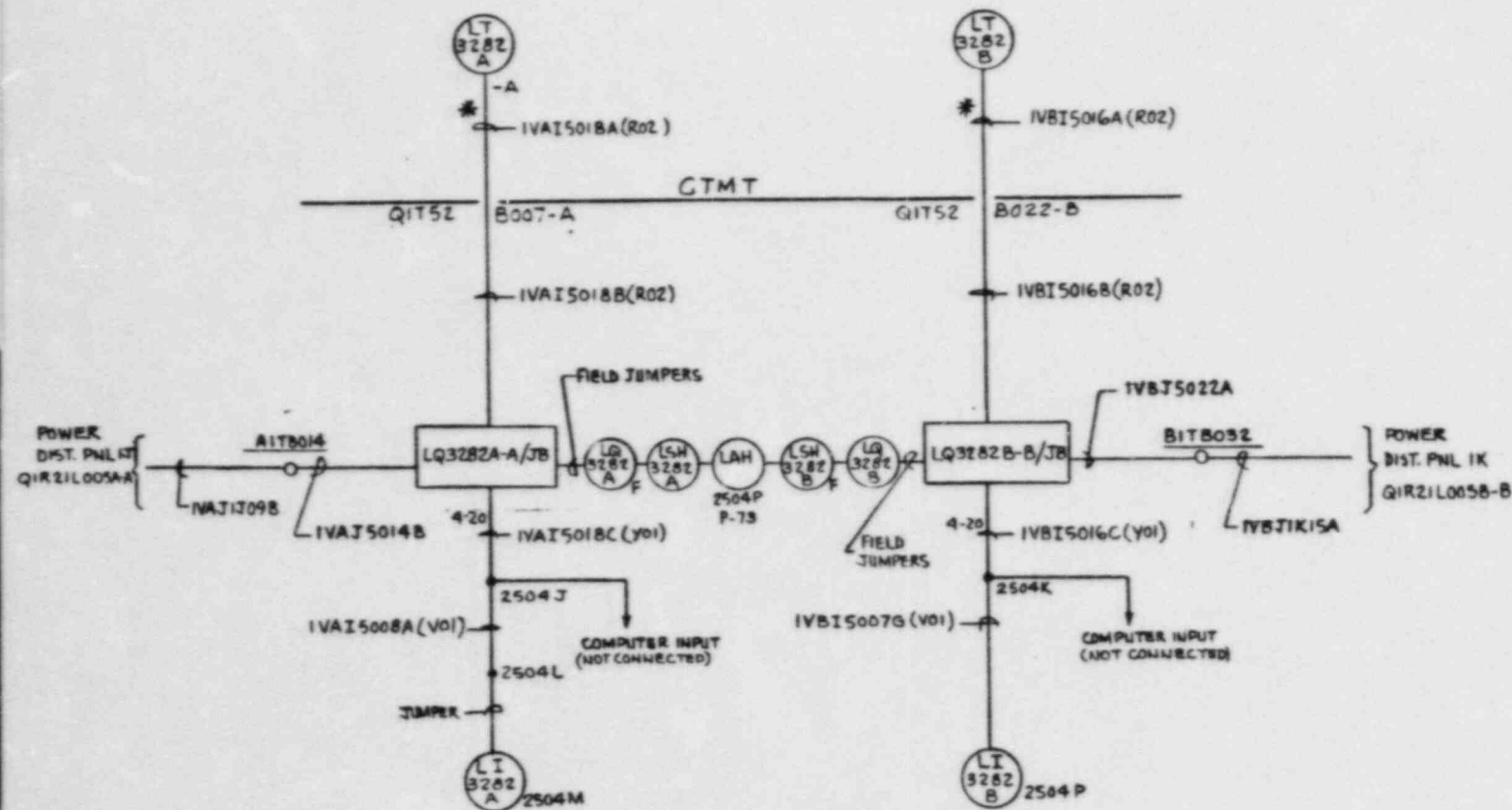
VARIABLE 111: REACTOR CAVITY SUMP LEVEL

TPNS No(s): LT3282A, LT3282B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	NO	JUSTIFY/MODIFY JUSTIFY
b) SEISMIC	NO	
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	NO	MODIFY
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE III: REACTOR CAVITY SUMF LEVEL

EQUIPMENT LOCATIONS
 LT 3282A CTMT
 LT 3282B CTMT
 2504 J, K, L, M, P CONTROL ROOM



REFERENCE DWGS.

- D-177076, SH 6401 (LT 3282A)
- D-181627
- D-177076, SH 6402 (LT 3282B)
- D-181628

INDICATOR SCALE 0-3 FT.

* NON-STANDARD SIGNAL LEVEL

SENSOR AND DISPLAY LOCATIONS

VARIABLE 111: REACTOR CAVITY SUMP LEVEL

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
LT3282A	CTMT	LI3282A	Control Room
LT3282B	CTMT	LI3282B	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 111: REACTOR CAVITY SUMP LEVEL

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The existing reactor cavity sump level receivers Q1G21LQ3282A-A and Q1G21LQ3282B-B, do not have qualification documents for the post-accident environment.

PROPOSED MODIFICATION

The existing receivers will be relocated.

1.B SEISMIC QUALIFICATION

VARIABLE 111: REACTOR CAVITY SUMP LEVEL

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

8. EQUIPMENT IDENTIFICATION

VARIABLE 111: REACTOR CAVITY SUMP LEVEL

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

11. HUMAN FACTOR

VARIABLE 111: REACTOR CAVITY SUMP LEVEL

EXISTING CONDITION

A loss of power to the level receivers (LQ-3282A&B), which are not in the control room, would cause the level indicators to read zero, the same as an empty sump.

PROPOSED MODIFICATION

Recalibrate the receiver output to provide a live zero indication. Therefore, with a power failure, the indicator would read below zero alerting the operator to the failure.

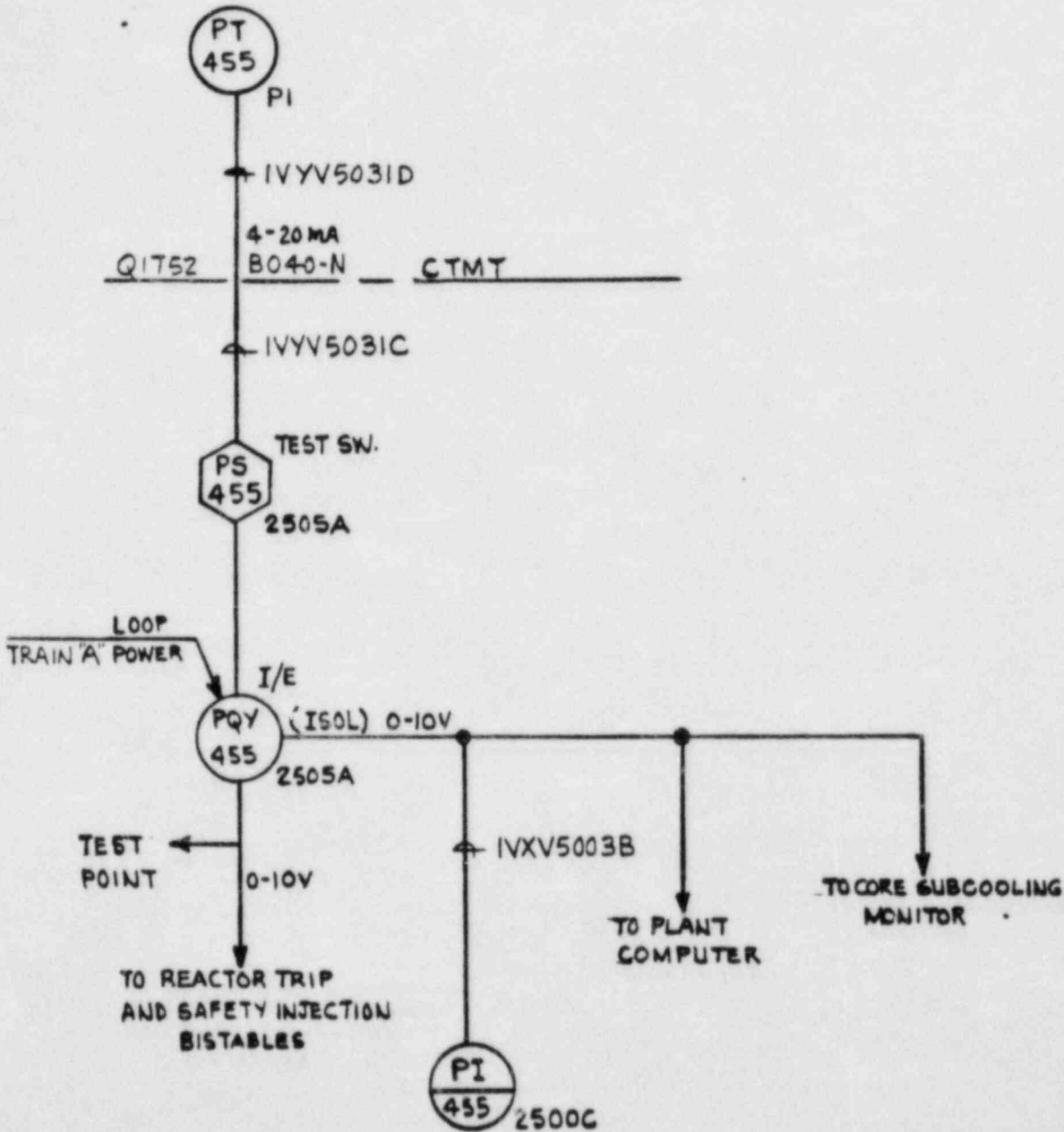
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 112: PRESSURIZER PRESSURE

TPNS NO(s): PT455

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	N/A	
8. EQUIPMENT IDENTIFICATION	YES	
9. INTERFACES (isolation)	NO	MODIFY
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE 112: PRESSURIZER PRESSURE



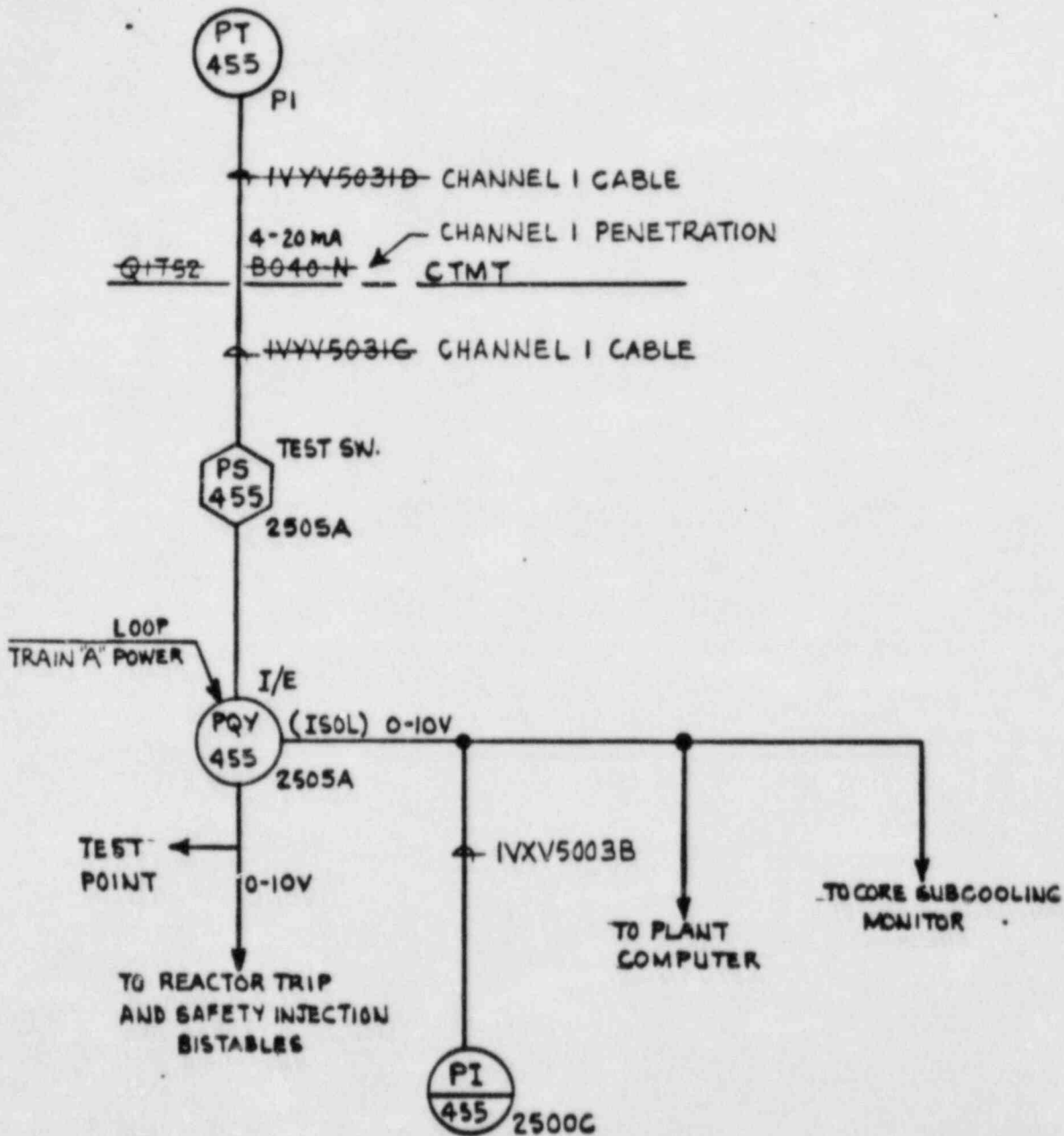
EQUIPMENT LOCATIONS

PT 455	CTMT.
2505A	CONTROL ROOM
2500C	CONTROL ROOM

REFERENCE DWGS:

W 108D501 SH. 5
W 7377004

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE 1: 2: PRESSURIZER PRESSURE PROPOSED MODIFICATIONS



EQUIPMENT LOCATIONS

PT 455	CTMT.
2505A	CONTROL ROOM
2500C	CONTROL ROOM

REFERENCE DWGS:

W 108D501 SH. 5
W 7377D04

SENSOR AND DISPLAY LOCATIONS

VARIABLE 112: PRESSURIZER PRESSURE

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
PT455	CTMT	PI455	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 112: PRESSURIZER PRESSURE

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 112: PRESSURIZER PRESSURE

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMC82500C-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

9. INTERFACE

VARIABLE 112: PRESSURIZER PRESSURE

EXISTING CONDITION

Non-class 1E cables and a non-class 1E penetration are used to interconnect class 1E portions of the loop between the sensor and isolator.

PROPOSED MODIFICATION

Adequate interface will be provided by the following modification:

- Install new channel 1 cables between the sensor and process cabinet 1 (channel 1). Route these cables through a channel 1 penetration.

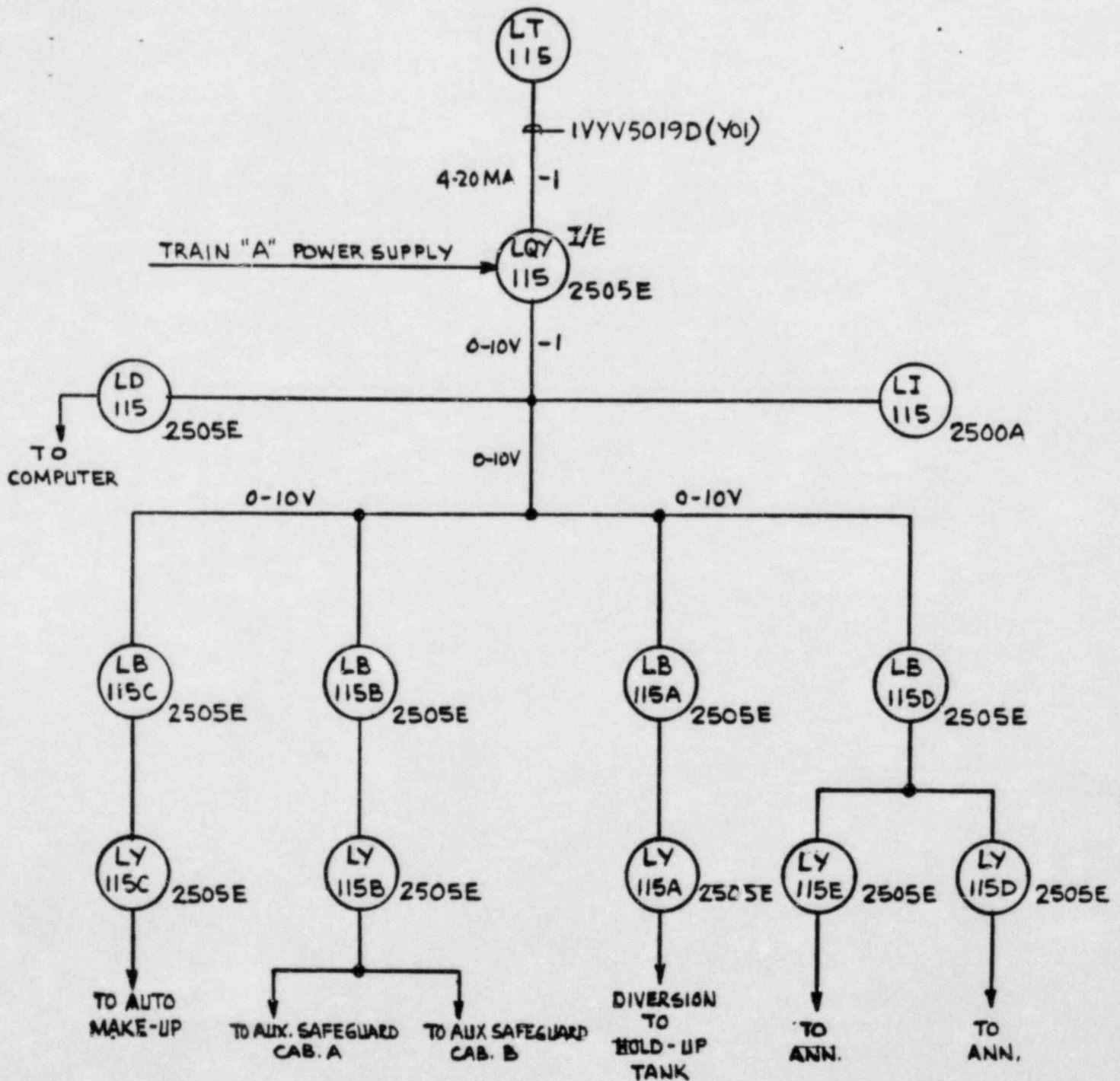
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 113: VOLUME CONTROL TANK LEVEL

TPNS No(s): LT115

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO N/A	JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE 113: VOLUME CONTROL TANK LEVEL



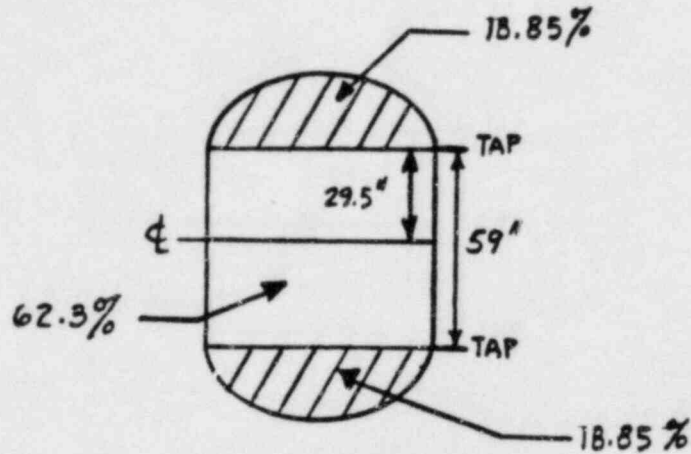
EQUIPMENT LOCATIONS

LT 115	RM 218
2505E	CONTROL ROOM
2500A	CONTROL ROOM

REFERENCE DWGS:

W 7377D81 (LT 115)
 D-175039/2
 U-260930
 D-175146
 BLOCK 4042

VOLUME CONTROL TANK



NORMAL TANK VOLUME = 300 FT³
 TANK O.D. = 84 IN (PER REF.)
 TANK I.D. = 83.5 IN (CALC)

VOLUME BETWEEN TAPS:

$$V = \pi r^2 h$$

$$r = 83.5 / 24 = 3.479 \text{ FT.}$$

$$h = 59 / 12 = 4.917 \text{ FT.}$$

$$V = 187 \text{ FT.}^3 \text{ OR } V = 187 / 300 = 62.3\%$$

THE REMAINING VOLUME (37.7%)
 IS SPLIT BETWEEN THE TOP & BOTTOM

REFERENCE DWGS:

U 169443

SENSOR AND DISPLAY LOCATIONS

VARIABLE 113: VOLUME CONTROL TANK LEVEL

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
LT115	RM. 218	LI115	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 113: VOLUME CONTROL TANK LEVEL

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The existing level transmitter Q1E21LT0115-1, Barton Model 396 does not have radiation qualification documentation.

PROPOSED MODIFICATION

The existing transmitter will be replaced with an environmentally qualified transmitter.

7. RANGE

VARIABLE 113: VOLUME CONTROL TANK LEVEL

EXISTING CONDITION

The maximum level indication of the existing instrumentation is below the maximum level specified by R.G. 1.97 and the minimum level indication is above the minimum level specified by Regulatory Guide 1.97.

JUSTIFICATION:

The range of the existing instrumentation is acceptable because:

1. The range is limited only by the location of the instrument connections on the Volume Control Tank. The transmitters measure the full range between the instrument connections.
2. For operational purposes, level indication at either end of the scale is considered full or empty.
3. Due to the volume control tank design it is not considered practical to provide a wider range of level measurement.
4. The existing range of Volume Control Tank level envelopes all automatic action of the level control system.

8. EQUIPMENT IDENTIFICATION

VARIABLE 113: VOLUME CONTROL TANK LEVEL

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

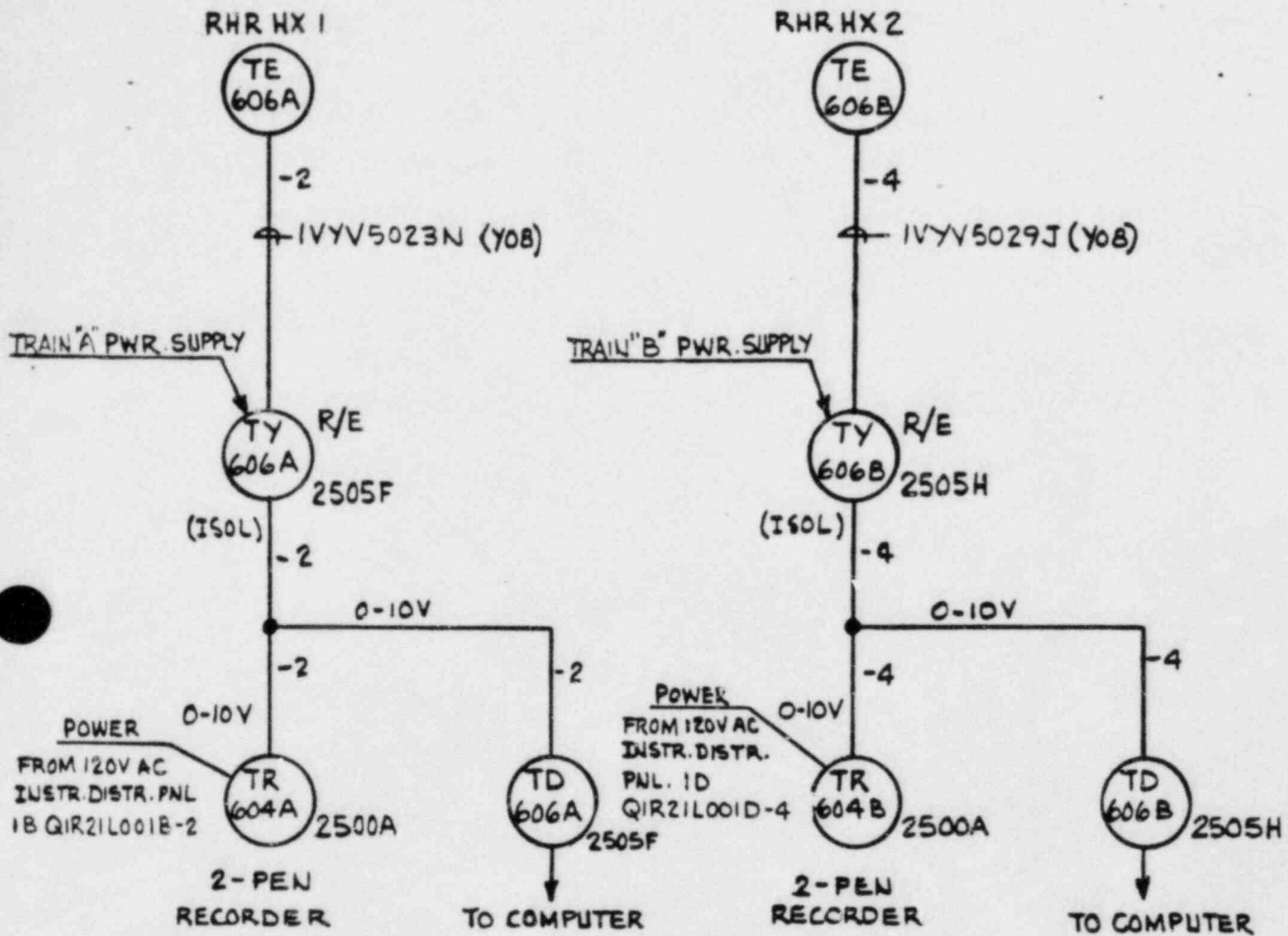
VARIABLE 114: RHR HX DISCHARGE TEMPERATURE

TPNS No(s): TE606A, TE606B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO N/A	JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	NO	MODIFY
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM

VARIABLE 114: RHR. HX. DISCHARGE TEMPERATURE



EQUIPMENT LOCATIONS

TE 606A	RM. 128
TE 606B	RM. 128
2505F, H	CONTROL ROOM
2500A	CONTROL ROOM

REFERENCE DWGS:

W 7378D16	(TE 606A)
D-175041	
W 7378D57	(TE 606B)

SENSOR AND DISPLAY LOCATIONS

VARIABLE 114: RHR HX DISCHARGE TEMPERATURE

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
TE606A	RM. 128	TR604A	Control Room
TE606B	RM. 128	TR604B	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 114: RHR HX DISCHARGE TEMPERATURE

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The existing temperature elements N1E11TE0606A-2 and N1E11TE0606B-4, manufactured by Burns Engineering do not have radiation qualification documentation.

PROPOSED MODIFICATION

The temperature elements will be replaced with environmentally qualified temperature elements.

7. RANGE

VARIABLE 114: RHR HX DISCHARGE TEMPERATURE

EXISTING CONDITION

The minimum temperature indication of the existing instrumentation is 18 degrees F above the minimum specified by R.G. 1.97. The maximum temperature indication satisfies the R.G. 1.97 guidelines.

JUSTIFICATION:

It is not necessary to provide temperature indication below 50°F since the existing range of this instrumentation envelops the RHR system design parameters.

8. EQUIPMENT IDENTIFICATION

VARIABLE 114: RHR HX DISCHARGE TEMPERATURE

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

11. HUMAN FACTORS

VARIABLE 114: RHR HX DISCHARGE TEMPERATURE

EXISTING CONDITION

Temperature indication is by an indicating strip chart recorder that fails as-is on loss of power.

PROPOSED MODIFICATION

To minimize the potential for operator confusion caused by the fail-as-is display, it is proposed to add a power available indicator to the recorder. No additional changes are required for this variable to satisfy the Human Factors Guidelines.

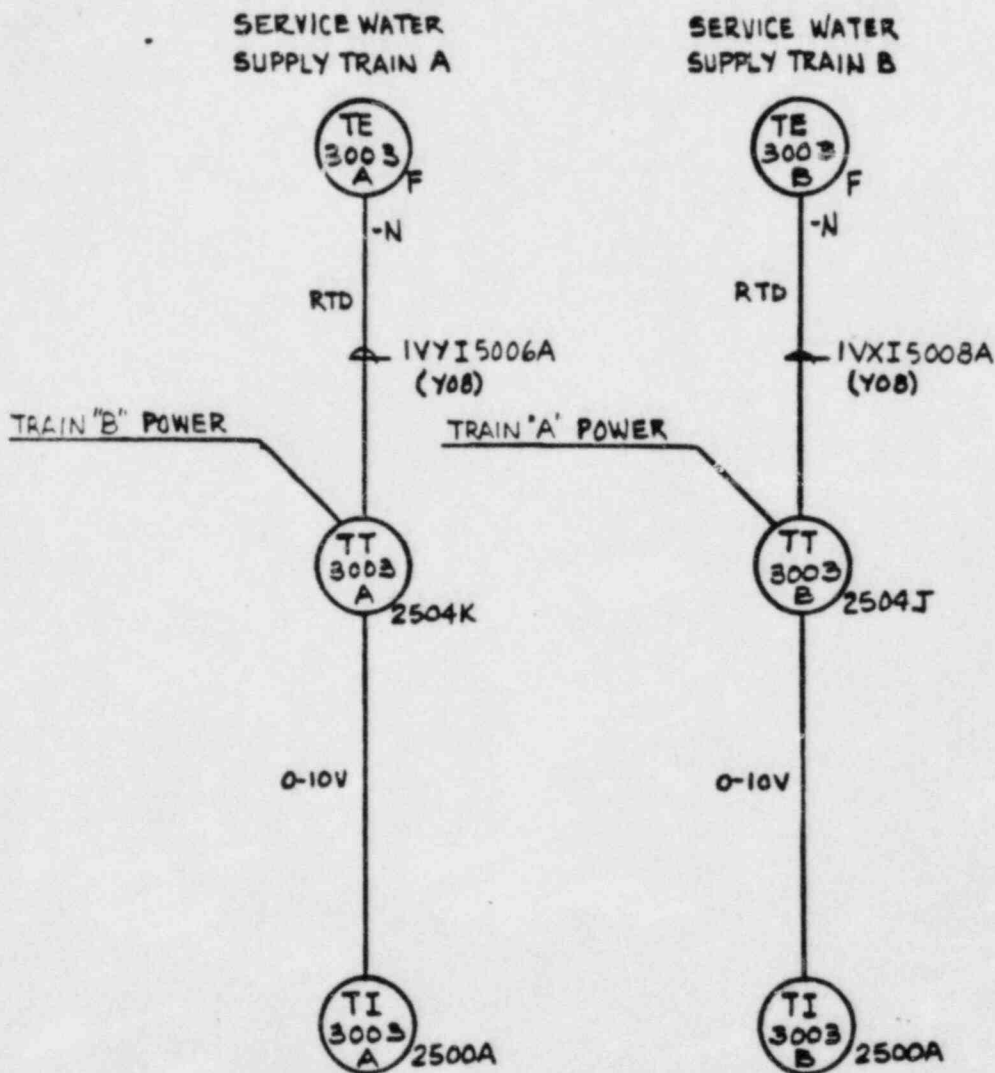
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 115: TEMPERATURE OF SERVICE WATER TO AUX BLDG.

TPNS No(s): TE3003A, TE3003B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO N/A	JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 115: TEMP. OF SERVICE WATER TO AUX. BLDG.



EQUIPMENT LOCATIONS

TE 3003A	RM. 190/193
TE 3003B	OUTSIDE RM. 192/193
Z504K, J	CONTROL ROOM
2500A	CONTROL ROOM

REFERENCE DWGS:

W 7408D03
 W 7408D26
 D-175003/1
 D-175143
 BLOCK 4830 (TE 3003A)
 BLOCK 4831 (TE 3003B)

SENSOR AND DISPLAY LOCATIONS

VARIABLE 115: TEMPERATURE OF SERVICE WATER TO AUX. BLDG.

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
TE3003A	RM. 190	TI3003A	Control Room
TE3003B	Outside RM. 192/193	TI3003B	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 115: TEMPERATURE OF SERVICE WATER TO AUX BLDG

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The existing temperature element N1P16TE3003B-N, manufactured by Burns Engineering does not have radiation qualification documentation.

PROPOSED MODIFICATION

The temperature element will be replaced with an environmentally qualified temperature element.

8. EQUIPMENT IDENTIFICATION

VARIABLE 115: TEMPERATURE OF SERVICE WATER TO AUX. BLDG.

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

REGULATORY GUIDE 1.97
COMPLIANCE REPORT
FOR
FARLEY NUCLEAR PLANT
UNIT 1

VOLUME IV

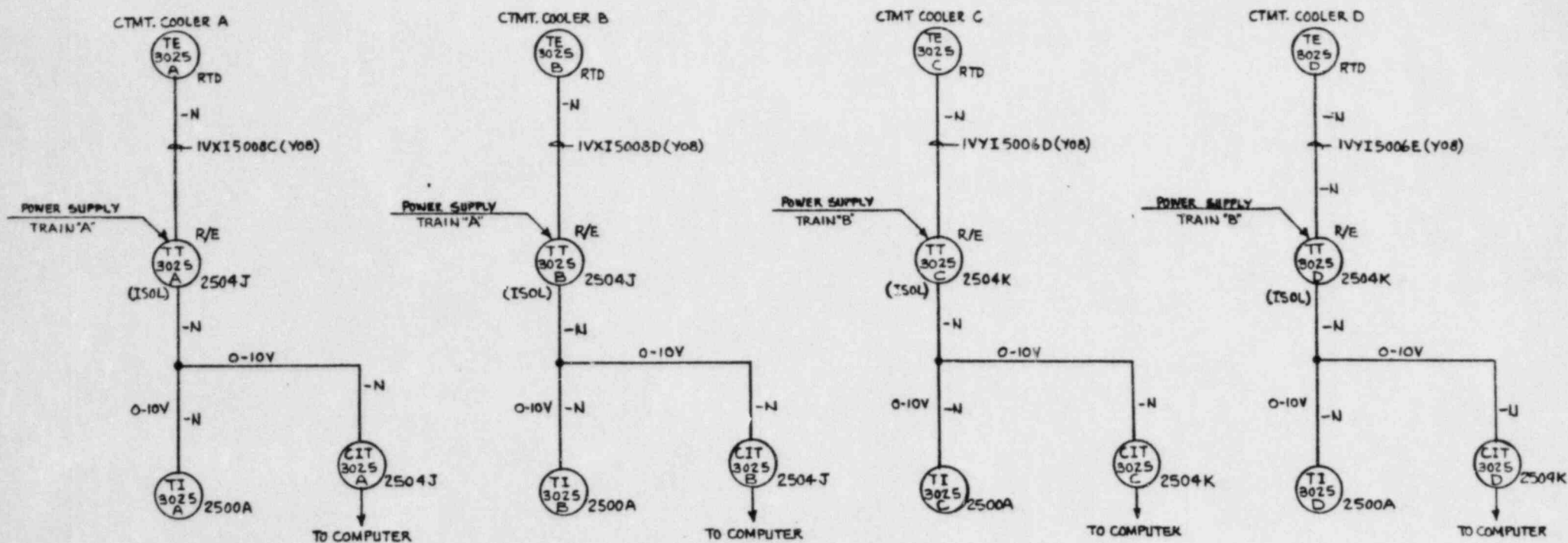
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 116: CTMT COOLER SERVICE WATER OUTLET TEMPERATURE

TPNS No(s): TE3025A, TE3025B, TE3025C, TE3025D

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO N/A	JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 116: CTMT COOLER SERVICE WATER OUTLET TEMPERATURE



EQUIPMENT LOCATIONS

TE 3025A	RM. 223
TE 3025B	RM. 223
TE 3025C	RM. 223
TE 3025D	RM. 223
2504J, K	CONTROL ROOM
2500A	CONTROL ROOM

REFERENCE DWGS:

W 7408D06 (TE 3025A)(TE 3025B)
 W 7408D29 (TE 3025C)(TE 3025D)
 D-175003 / 1

SENSOR AND DISPLAY LOCATIONS

VARIABLE 116: CTMT COOLER SERVICE WATER OUTLET TEMPERATURE

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
TE3025A	RM. 223	TI3025A	Control Room
TE3025B	RM. 223	TI3025B	Control Room
TE3025C	RM. 223	TI3025C	Control Room
TE3025D	RM. 223	TI3025D	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 116: CTMT COOLER SERVICE WATER OUTLET TEMPERATURE

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The existing temperature elements Q1P16TE3025A-N, Q1P16TE3025C-N, Q1P16TE3025B-N, and Q1P16TE3025D-N, manufactured by Burns Engineering, do not have radiation qualification documentation.

PROPOSED MODIFICATION

The temperature elements will be replaced with environmentally qualified temperature elements.

8. EQUIPMENT IDENTIFICATION

VARIABLE 116: ~~COND~~ COOLER SERVICE WATER OUTLET TEMPERATURE

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

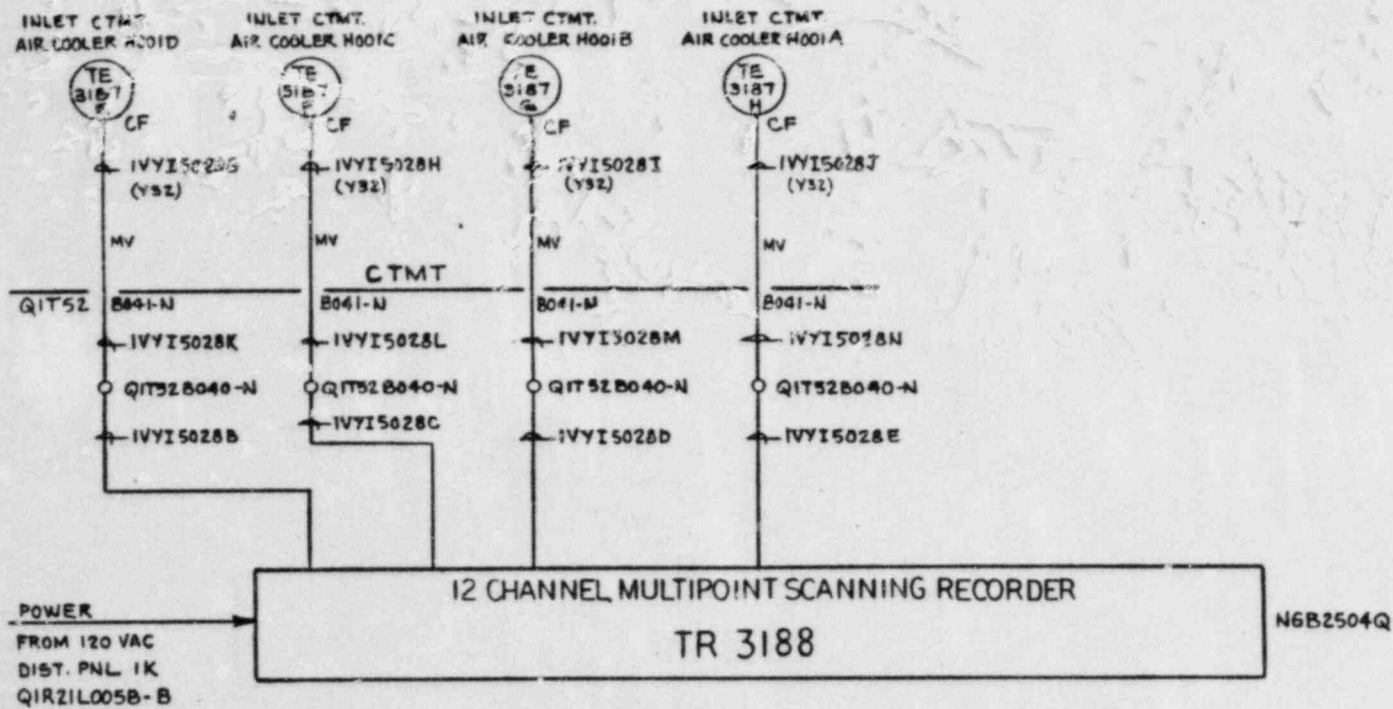
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 117: CONTAINMENT ATMOSPHERE TEMPERATURE

TPNS No(s): TE3187E, TE3187F, TE3187G, TE3187H

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO N/A	JUSTIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	NO	MODIFY
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	NO	MODIFY
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE W. CONTAINMENT ATMOSPHERE TEMPERATURE



EQUIPMENT LOCATIONS

TE 3187E	CTMT
TE 3187F	CTMT
TE 3187G	CTMT
TE 3187H	CTMT
2504Q	CONTROL ROOM

REFERENCE DWGS:

03-M240-15
 03-M240-8
 03-M240-12
 03-M240-20
 U-264936A
 D-181972/2

SENSOR AND DISPLAY LOCATIONS

VARIABLE 117: CONTAINMENT ATMOSPHERE TEMPERATURE

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
TE3187E	CTMT	TR3188	Control Room
TE3187F	CTMT	TR3188	Control Room
TE3187G	CTMT	TR3188	Control Room
TE3187H	CTMT	TR3188	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 117: CTMT ATMOSPHERE TEMPERATURE

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

7. RANGE

VARIABLE 117: CONTAINMENT ATMOSPHERE TEMPERATURE

EXISTING CONDITION

The maximum temperature indication of the existing instrumentation is below the maximum specified by R.G. 1.97. The minimum temperature indication satisfies R.G. 1.97 guidelines.

PROPOSED MODIFICATION

Recalibrate the display device, TR3188, to the specified R.G. 1.97 range of 40 to 400 degrees F. Note: The range is limited only by the scaling and calibration of the display device.

8. EQUIPMENT IDENTIFICATION

VARIABLE 117: CONTAINMENT ATMOSPHERE TEMPERATURE

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

11. HUMAN FACTORS

VARIABLE 117: CONTAINMENT ATMOSPHERE TEMPERATURE

EXISTING CONDITION

Temperature indication is by an indicating strip chart recorder that fails as-is on loss of power.

PROPOSED MODIFICATION

To minimize the potential for operator confusion caused by the fail-as-is display, it is proposed to add a power available indicator to the recorder. No additional changes are required for this variable to satisfy the Human Factors Guidelines.

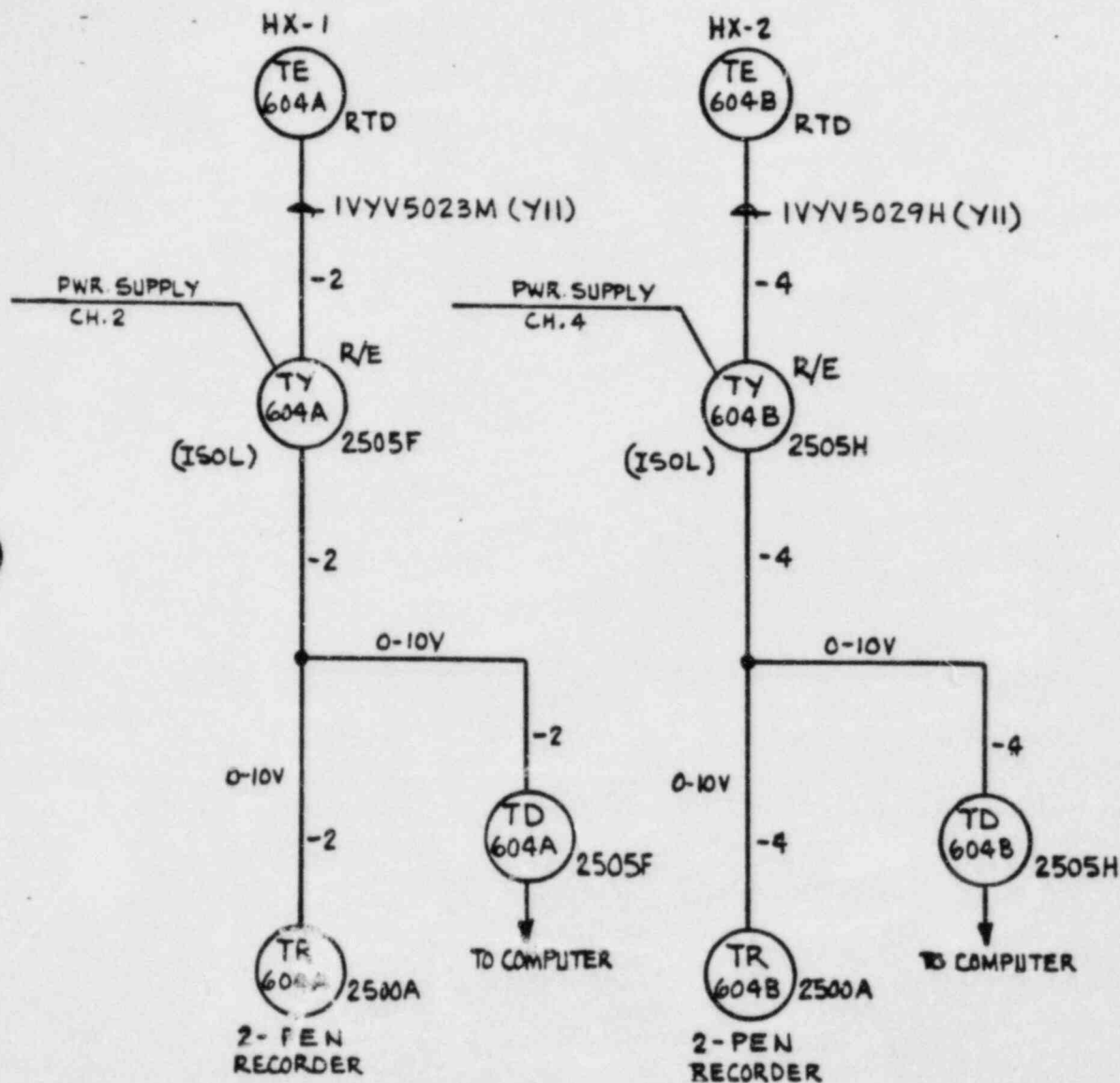
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 118: RHR HX INLET TEMPERATURE

TPNS No(s): TE604A, TE604B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO N/A	JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	NO	MODIFY
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE 118: RHR HEAT EXCHANGER INLET TEMPERATURE



EQUIPMENT LOCATIONS

TE 604A	RM. 128
TE 604B	RM. 128
2505F,H	CONTROL ROOM
2500A	CONTROL ROOM

REFERENCE DWGS:

W 7378D16 (TE 604A)
W 7378D57 (TE 604B)
 D- 175041
 □ 198904

SENSOR AND DISPLAY LOCATIONS

VARIABLE 118: RHR HX INLET TEMPERATURE

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
TE604A	RM. 128	TR604A	Control Room
TE604B	RM. 128	TR604B	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 118: RHR HX INLET TEMPERATURE

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R. G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The existing residual heat removal heat exchanger inlet temperature elements N1E11TE0604A-2 and N1E11TE0604B-4, manufactured by Burns Engineering, do not have radiation qualification documentation.

PROPOSED MODIFICATION

The temperature elements will be replaced with environmentally qualified temperature elements.

8. EQUIPMENT IDENTIFICATION

VARIABLE 118: RHR HX INLET TEMPERATURE

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

11. HUMAN FACTORS

VARIABLE 118: RHR HX INLET TEMPERATURE

EXISTING CONDITION

Temperature indication is by an indicating strip chart recorder that fails as-is on loss of power.

PROPOSED MODIFICATION

To minimize the potential for operator confusion caused by the fail-as-is display, it is proposed to add a power available indicator to the recorder. No additional changes are required for this variable to satisfy the Human Factors Guidelines.

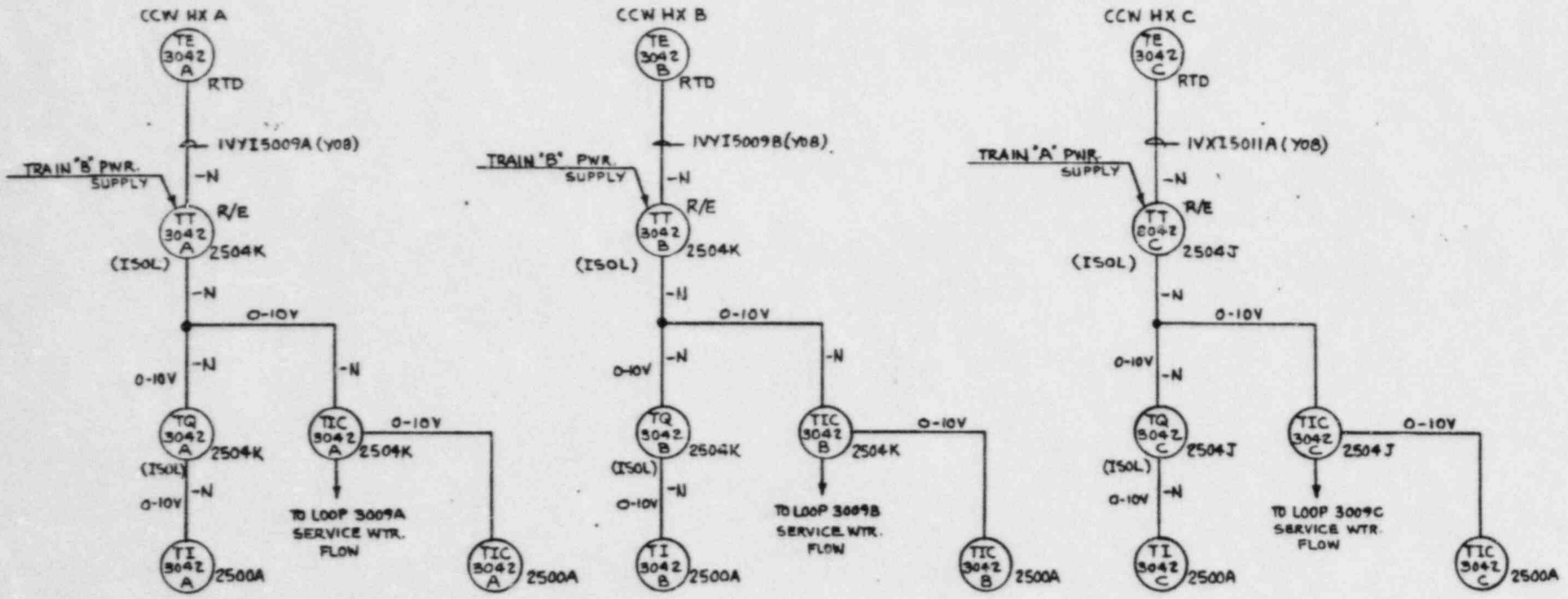
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 119: COMPONENT COOLING WATER HEAT EXCHANGER DISCHARGE TEMPERATURE

TPNS No(s): TE3042A, TE3042B, TE3042C

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO N/A	JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	NO	MODIFY
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE I19: COMPONENT COOLING WATER HEAT EXCHANGER DISCHARGE TEMPERATURE



EQUIPMENT LOCATIONS

TE 3042A	RM. 185
TE 3042B	RM. 185
TE 3042C	RM. 185
2504K, J	CONTROL ROOM
2500A	CONTROL ROOM

REFERENCE DWGS

W 7408D27	(TE 3042A)
W 7408D28	(TE 3042B)
W 7408D04	(TE 3042C)
D-175002/1	
D-175143	
U 259180	

SENSOR AND DISPLAY LOCATIONS

VARIABLE 119: COMPONENT COOLING WATER HEAT EXCHANGER
DISCHARGE TEMPERATURE

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
TE3042A	RM. 185	TI3042A	Control Room
TE3042B	RM. 185	TI3042B	Control Room
TE3042C	RM. 185	TI3042C	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 119: COMPONENT COOLING WATER HEAT EXCHANGER DISCHARGE TEMPERATURE

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IE Bulletin 79-01B are addressed below.

EXISTING CONDITION

The existing component cooling water heat exchanger discharge temperature elements N1P17TE3042A-N, N1P17TE3042B-N, and N1P17TE3042C-N manufactured by Burns Engineering do not have radiation qualification documentation.

PROPOSED MODIFICATION

The temperature elements will be replaced with environmentally qualified temperature elements.

7. RANGE

VARIABLE 119: COMPONENT COOLING WATER HEAT EXCHANGER
DISCHARGE TEMPERATURE

EXISTING CONDITION

The maximum temperature indication of the existing instrumentation is below the maximum specified by R.G. 1.97. The minimum temperature indication satisfies R.G. 1.97 range guidelines.

PROPOSED MODIFICATION

Recalibrate the temperature instrumentation and provide new display scales for a range of 32 to 200°F as per the R.G. 1.97 guidelines. The existing temperature sensor is satisfactory for the new range.

8. EQUIPMENT IDENTIFICATION

VARIABLE 119: COMPONENT COOLING WATER HEAT EXCHANGER DISCHARGE TEMPERATURE

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

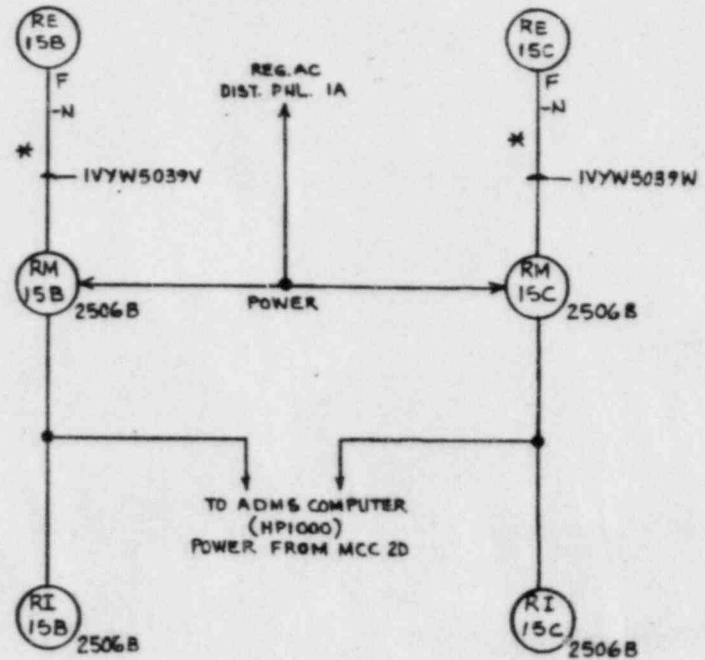
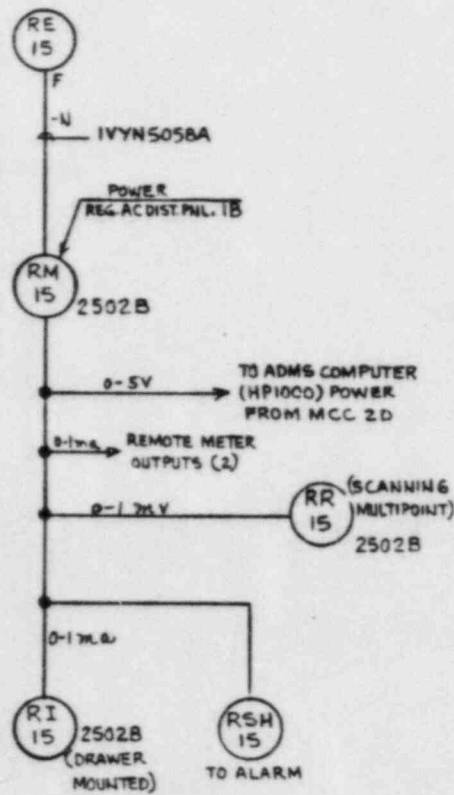
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 120: CONDENSER SJAE RADIATION

TPNS No(s): RE15, RE15B, RE15C

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	N/A N/A	
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	NO	MODIFY
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isulation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL FLOW BLOCK DIAGRAM
 VARIABLE 120: CONDENSER SJAE FLOW AND RADIATION



* SIGNAL AND POWER

EQUIPMENT LOCATIONS

2506B,	CONTROL ROOM
2502B	CONTROL ROOM
RE 15	TURB BLDG. ROOF
RE 15B	TURB BLDG. ROOF
RE 15C	TURB BLDG. ROOF

REFERENCE DWGS:

EBERLINE TECHNICAL MANUAL.
 W. RMS TECHNICAL MANUAL.
 D-175027 (RE 15B, RE 15C)
 D-181755/2

SENSOR AND DISPLAY LOCATIONS

VARIABLE 120: CONDENSER SJAE RADIATION

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
RE15	Turb. Bldg.	RI15	Control Room
RE15B	Turb. Bldg.	RI15B	Control Room
RE15C	Turb. Bldg.	RI15C	Control Room

Table 3 correlates room numbers with room names and floor elevations.

3. POWER SUPPLY

VARIABLE 120: CONDENSER SJAE RADIATION

EXISTING CONDITION

The recording device (ADMS Computer) is not backed-up by a diesel generator.

PROPOSED MODIFICATION

The ADMS Computer will be powered from the power source that is presently being designed for the SPDS computer. This power source will be backed-up by a diesel generator.

7. RANGE

VARIABLE 120: CONDENSER SJAE RADIATION

EXISTING CONDITION

A flow meter does not exist to measure SJAE exhaust flow.

JUSTIFICATION

The Emergency Dose Calculational Method (EDCM) utilizing computer techniques adequately considers offsite doses from the SJAE release path.

The Farley EDCM includes provisions for calculating isotopic concentration and release rates for several release paths including SJAEs. The design vent flowrate for the SJAE is included in the EDCM which would be conservative in the calculation of dose projections for virtually all accident conditions. The plume is modeled as being emitted from a single virtual release point located on the centerline between the Unit 1 and 2 containments. The distance from the virtual release point to the actual release point is small (less than 100 meters) and does not significantly influence the distribution points of interest. Real time plume tracking is performed using 15 minute time intervals. The following data is available for each plume segment:

- plume position
- plume dimensions
- location of peak relative concentration
- relative concentrations
- arrival times of each plume segment (1 through 10, 20, 30, 40 and 50 miles)
- whole body, thyroid, and critical organ identification and dose rate at the centroid of each segment.

Since the EDCM includes the SJAE design flow rate and the actual flow rate would not significantly change the offsite dose calculations, installation of an exhaust flow meter is not justified.

8. EQUIPMENT IDENTIFICATION

VARIABLE 120: CONDENSER SJAE RADIATION

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

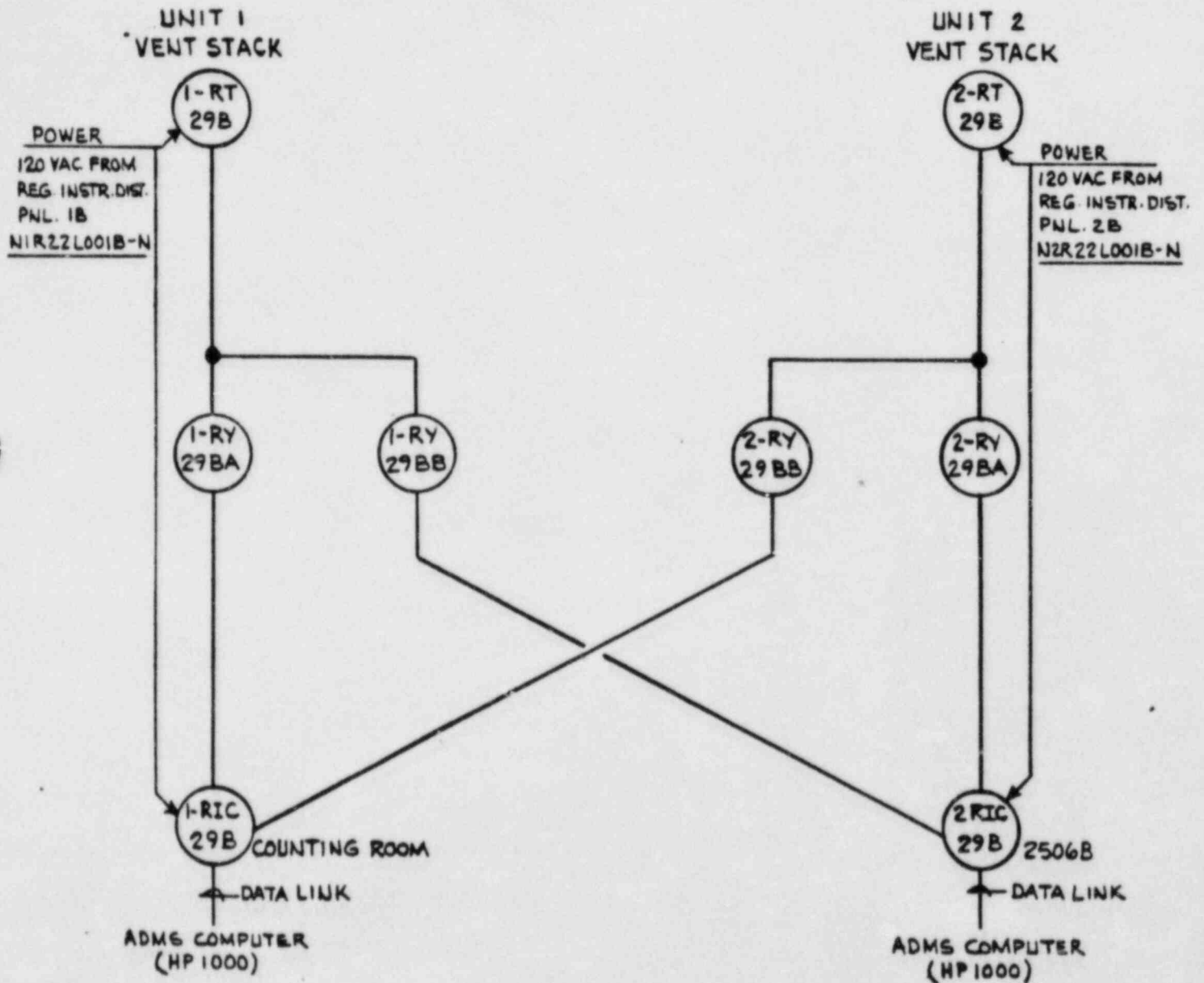
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 121: PLANT VENT EFFLUENT RADIATION

TPNS NO(s): 1-RT29B

REQUIREMENTS	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	N/A N/A	
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE 121: PLANT VENT EFFLUENT RADIATION



EQUIPMENT LOCATIONS

1-RT29B	AUX. BLDG. ROOF
2-RT29B	AUX. BLDG. ROOF
1-RIC29B	COUNTING ROOM
2506B	CONTROL ROOM

REFERENCE DWGS:

D-175059
D-204755/2

SENSOR AND DISPLAY LOCATIONS

VARIABLE 121: PLANT VENT EFFLUENT RADIATION

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
1-RT29B	Aux. Bldg. Roof	Digital Display Printer	Control Room Control Room

Table 3 correlates room numbers with room names and floor elevations.

8. EQUIPMENT IDENTIFICATION

VARIABLE 121: PLANT VENT EFFLUENT RADIATION

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

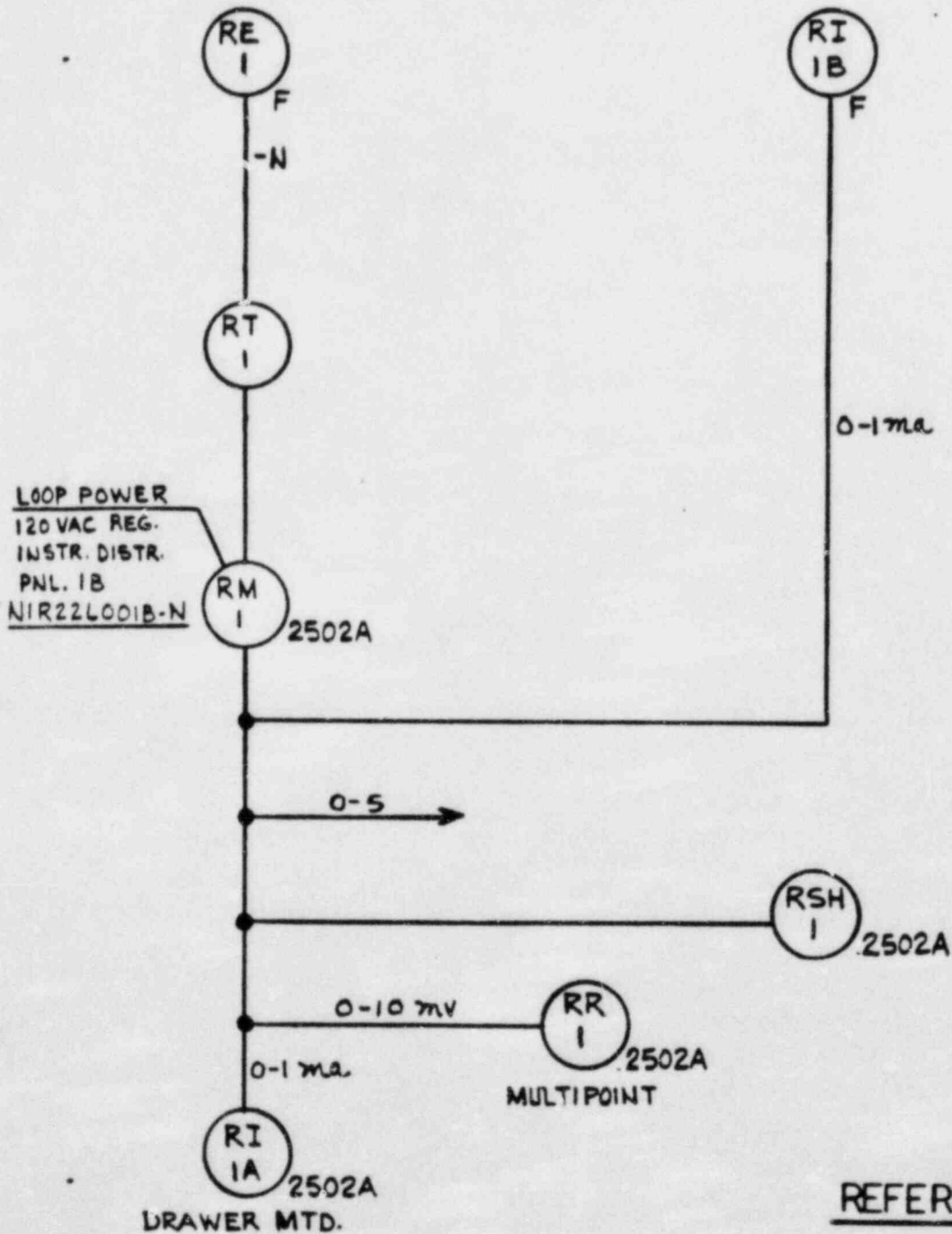
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 122: ACCESSIBLE AREA RADIATION

TPNS No(s): RE01

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	N/A N/A	
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	N/A	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 122: ACCESSIBLE AREA RADIATION (CONTROL ROOM)



EQUIPMENT LOCATIONS

RE 1	CONTROL ROOM
RI 1B	CONTROL ROOM
2502A	CONTROL ROOM

REFERENCE DWGS:

D-175012

SENSOR AND DISPLAY LOCATIONS

VARIABLE 122: ACCESSIBLE AREA RADIATION

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
RE01	Control Room	NGRM2502A	Control Room

Table 3 correlates room numbers with room names and floor elevations.

7. RANGE

VARIABLE 122: ACCESSIBLE AREA RADIATION

EXISTING CONDITION

Of the plant areas which are accessible post accident, only the control room has a permanently installed radiation monitor.

The maximum radiation level indication of the control room radiation monitor is below the maximum specified by R.G. 1.97.

The minimum radiation level indication meets R.G. 1.97 guidelines.

JUSTIFICATION

The existing instrumentation is acceptable because portable instrumentation is available to survey areas where personnel access is required. For the control room the maximum calculated post accident radiation level is 0.015 Rem/HR, therefore, the range of the control radiation monitor is acceptable. The upper range specified by R.G. 1.97 is not reasonable for this area which is continuously manned since a person would not be expected to function in an environment that has a radiation exposure above the existing range. For a description of portable radiation monitoring equipment, see variable 1005.

8. EQUIPMENT IDENTIFICATION

VARIABLE 122: ACCESSIBLE AREA RADIATION

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

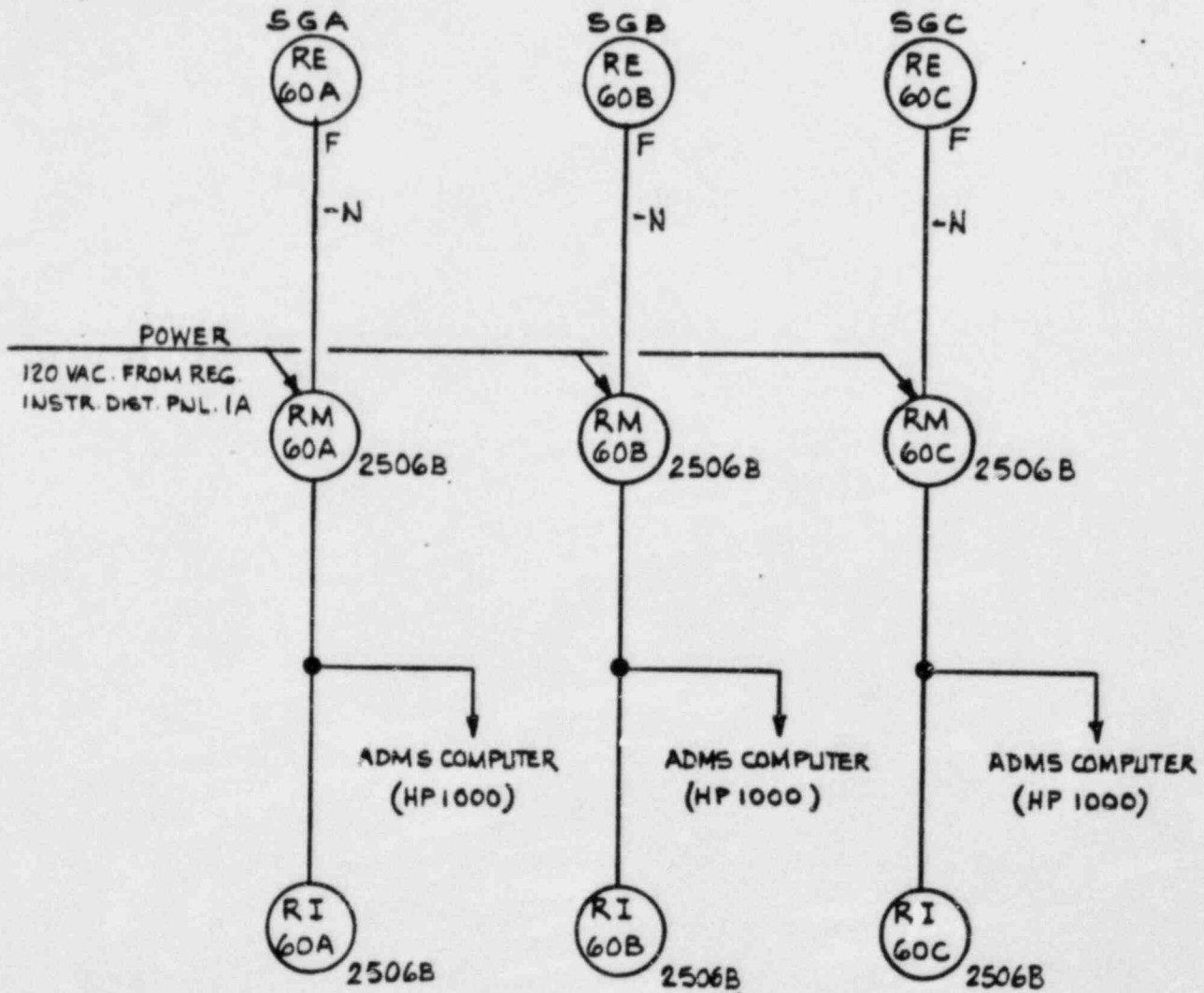
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 123: MAIN STEAM EFFLUENT RADIATION

TPNS No(s): RE60A, RE60B, RE60C

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	N/A N/A	
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	NO	MODIFY
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE I23: MAIN STEAM EFFLUENT RADIATION



EQUIPMENT LOCATIONS

RE 60A	AUX. BLDG. ROOF
RE 60B	AUX. BLDG. ROOF
RE 60C	AUX. BLDG. ROOF
2506B	CONTROL ROOM

REFERENCE DWGS:

P & ID D-175033
 D-175064
 D-181755/2

SENSOR AND DISPLAY LOCATIONS

VARIABLE 123: MAIN STEAM EFFLUENT RADIATION

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
RE60A	Aux. Bldg. Roof	RI60A	Control Room
RE60B	Aux. Bldg. Roof	RI60B	Control Room
RE60C	Aux. Bldg. Roof	RI60C	Control Room

Table 3 correlates room numbers with room names and floor elevations.

3. POWER SUPPLY

VARIABLE 123: MAIN STEAM EFFLUENT RADIATION

EXISTING CONDITION

The recording device (ADMS computer) is not backed-up by a diesel generator.

PROPOSED MODIFICATION

The ADMS computer will be powered from the power source that is presently being designed for the SPDS computer. This power source will be backed-up by a diesel generator.

8. EQUIPMENT IDENTIFICATION

VARIABLE 123: MAIN STEAM EFFLUENT RADIATION

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

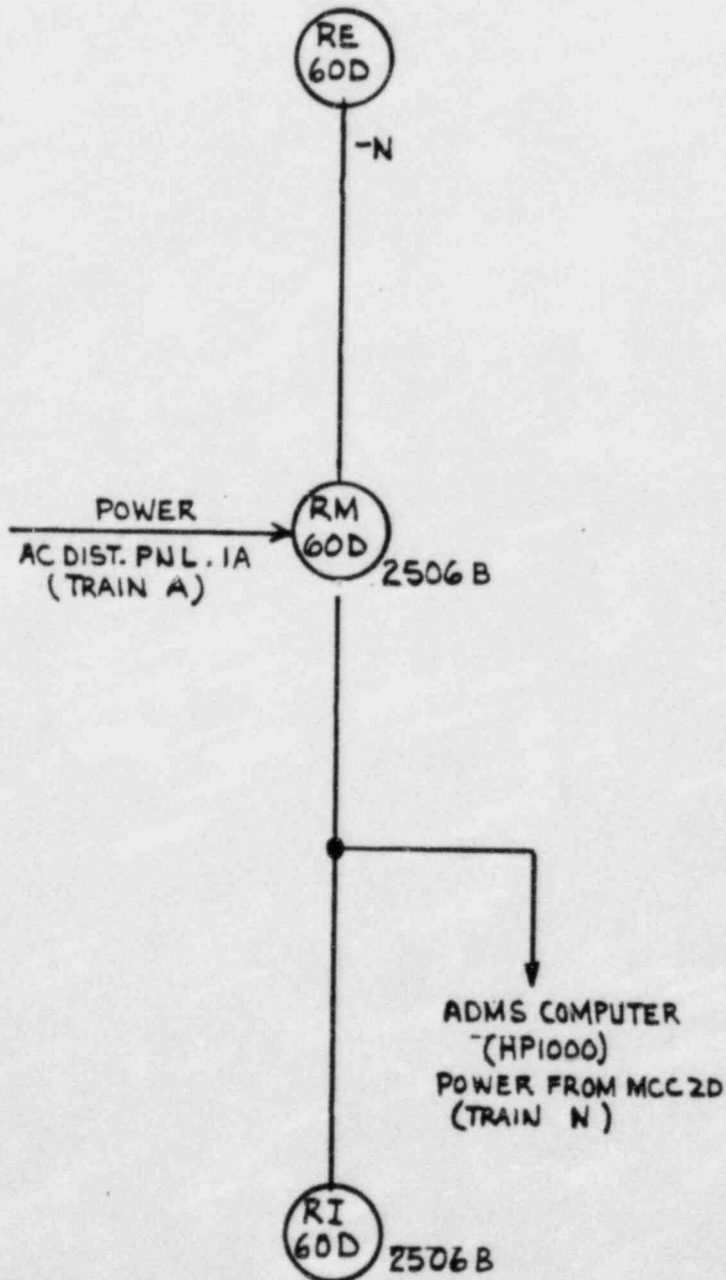
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 124: TDAFW EFFLUENT RADIATION

TPNS No(s): RE60D

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION		
a) ENVIRONMENTAL	N/A	
b) SEISMIC	N/A	
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	NO	MODIFY
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING		
a) DISPLAY	YES	
b) RECORDING	YES	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE I24: TDAFW VENT. RADIATION



EQUIPMENT LOCATIONS

RE 60D	AUX. BLDG. ROOF
2506 B	CONTROL ROOM

REFERENCE DWGS:

D-181755 / 2

SENSOR AND DISPLAY LOCATIONS

VARIABLE 124: TDAFW EFFLUENT RADIATION

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
RE60D	Aux. Bldg. Roof	RI60D	Control Room

Table 3 correlates room numbers with room names and floor elevations.

3. POWER SUPPLY

VARIABLE 124: TDAFW EFFLUENT RADIATION

EXISTING CONDITION

The recording device (ADMS computer) is not backed-up by a diesel generator.

PROPOSED MODIFICATION

The ADMS computer will be powered from the power source that is presently being designed for the SPDS computer. This power source will be backed-up by a diesel generator.

7. RANGE

VARIABLE 124: TDAFW EFFLUENT RADITION

EXISTING CONDITION

A flow meter does not exist to measure TDAFW effluent flow.

JUSTIFICATION

The Emergency Dose Calculational Method (EDCM) utilizing computer techniques adequately considers offsite doses from the TDAFW effluent path.

The Farley EDCM includes provisions for calculating isotopic concentration and release rates for several release paths including TDAFW effluent. The design vent flowrate for the TDAFW effluent is included in the EDCM which would be conservative in the calculation of dose projections for virtually all accident conditions. The plume is modeled as being emitted from a single virtual release point located on the centerline between the Unit 1 and 2 containments. The distance from the virtual release point to the actual release point is small (less than 100 meters) and does not significantly influence the distribution points of interest. Real time plume tracking is performed using 15 minute time intervals. The following data is available for each plume segment:

- plume position
- plume dimensions
- location of peak relative concentration
- relative concentrations
- arrival times of each plume segment (1 through 10, 20, 30, 40 and 50 miles)
- whole body, thyroid, and critical organ identification and dose rate at the centroid of each segment.

Since the EDCM includes the TDAFW effluent design flow rate and the actual flow rate would not significantly change the offsite dose calculations, installation of an exhaust flow meter is not justified.

8. EQUIPMENT IDENTIFICATION

VARIABLE 124: TDAFW EFFLUENT RADIATION

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

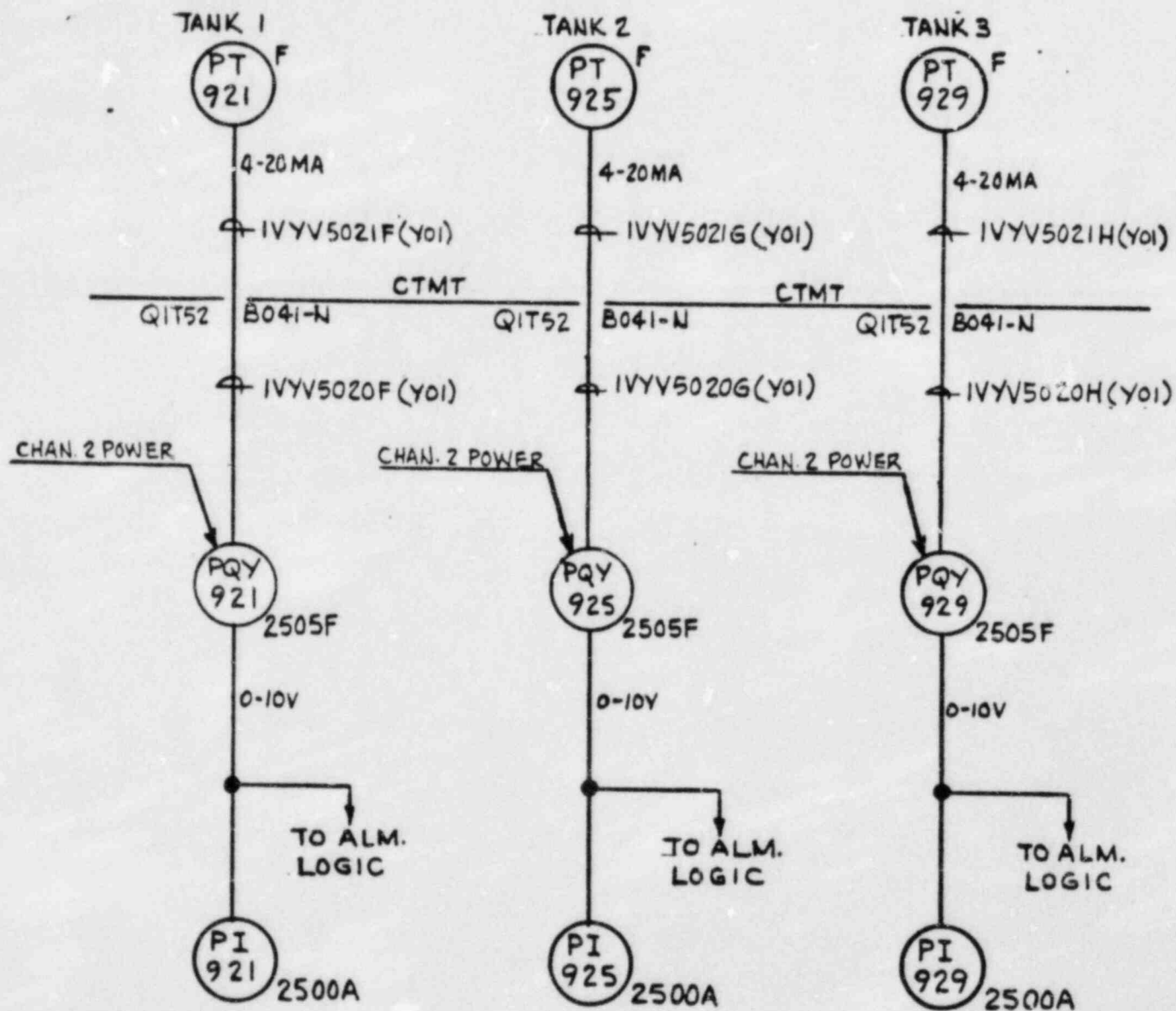
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 125: ACCUMULATOR TANK PRESSURE

TPNS No(s): PT921, PT925, PT929

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO N/A	JUSTIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE I25: ACCUMULATOR TANK PRESSURE



EQUIPMENT LOCATION

PT921	CTMT
PT925	CTMT
PT929	CTMT
2505F	CONTROL ROOM
2500A	CONTROL ROOM

REFERENCE DRAWING

<u>W</u>	7378D06 (PT 921)(PT 925)
<u>W</u>	7378D07 (PT 929)
	D- 175038 / 6h. 2
	D- 175149

SENSOR AND DISPLAY LOCATIONS

VARIABLE 125: ACCUMULATOR TANK PRESSURE

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
PT921	CTMT	PI921	Control Room
PT925	CTMT	PI925	Control Room
PT929	CTMT	PI929	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 125: ACCUMULATOR TANK PRESSURE

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

8. EQUIPMENT IDENTIFICATION

VARIABLE 125: ACCUMULATOR TANK PRESSURE

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

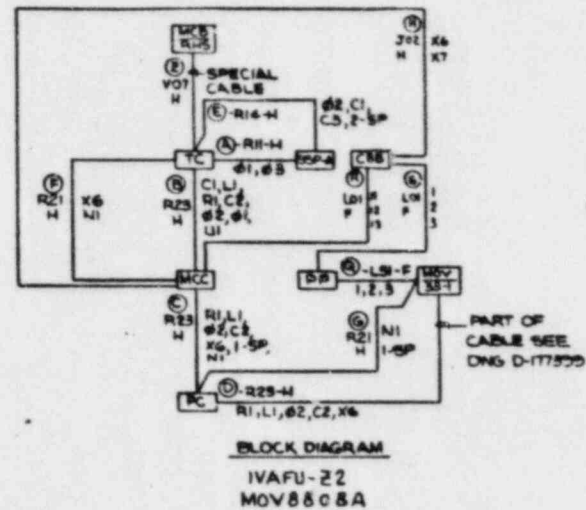
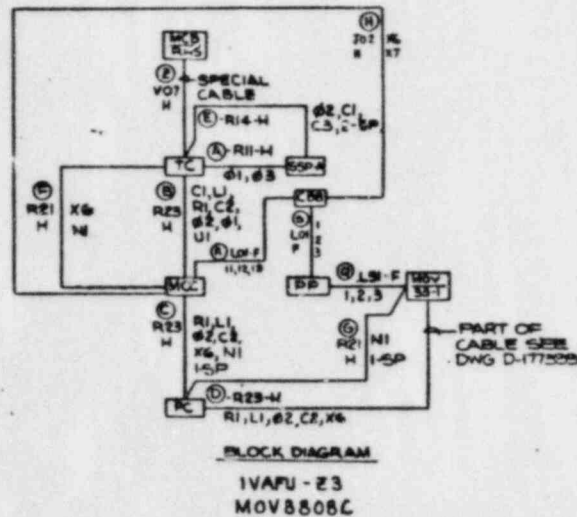
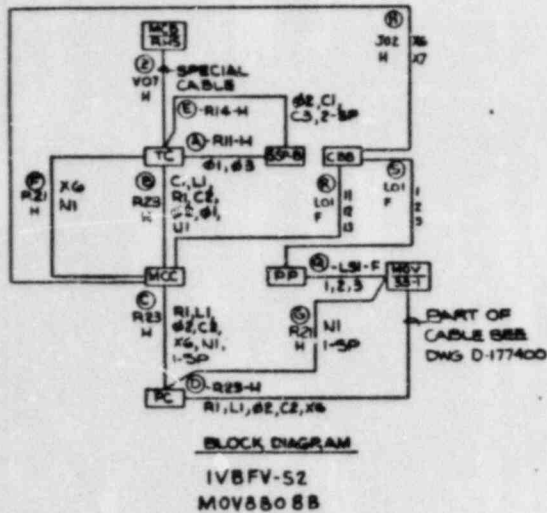
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 126: ACCUMULATOR TANK ISOLATION VALVE POSITION

TPNS No(s): ZS8808AA-A, ZS8808BA-B, ZS8808CA-A

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 126: ACCUMULATOR TANK ISOLATION VALVE POSITION



EQUIPMENT LOCATION

MOV8808A CTMT
 MOV8808B CTMT
 MOV8808C CTMT

REFERENCE DWGS.

D-177051 MOV8808A
 D-177052 MOV8808B
 D-177053 MOV8808C
 D-177038/2

SENSOR AND DISPLAY LOCATIONS

VARIABLE 126: ACCUMULATOR TANK ISOLATION VALVE POSITION

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS8808AA-A	CTMT	MCB Item A2-59	Control Room
ZS8808BA-B	CTMT	MCB Item A2-60	Control Room
ZS8808CA-A	CTMT	MCB Item A2-61	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 126: ACCUMULATOR TANK ISOLATION VALVE POSITION

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 126: ACCUMULATOR TANK ISOLATION VALVE POSITION

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L008-A and Q1H25L029-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

8. EQUIPMENT IDENTIFICATION

VARIABLE 126: ACCUMULATOR TANK ISOLATION VALVE POSITION

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

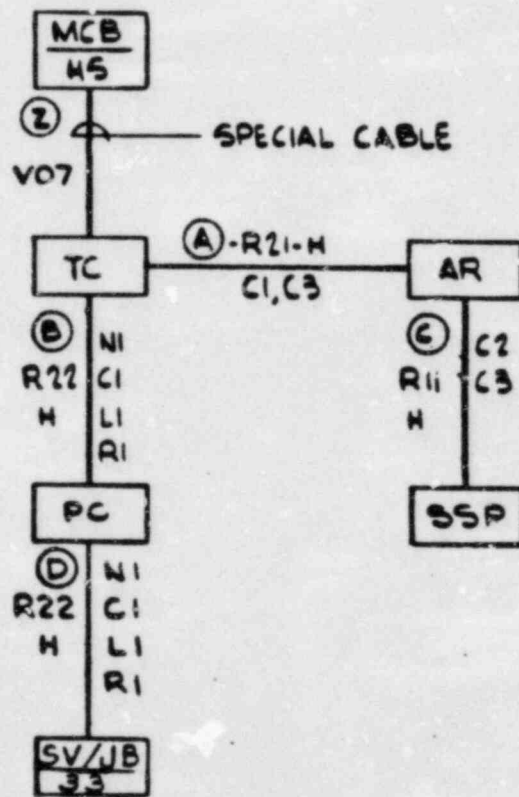
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 127: PRESSURIZER PORV POSITION

TPNS No(s): ZS0445A-A, ZS0444B-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE I27: PRESSURIZER PORV. POSITION



BLOCK DIAGRAM

SCHEME: IVAL5035 & IVBL5020
 ZS0445A-A, ZS0444B-B

EQUIPMENT LOCATIONS

ZS0445A-A CTMT.
 ZS0444B-B CTMT.

REFERENCE DWGS:

D-177381 /1
 D-175037 /2

SENSOR AND DISPLAY LOCATIONS

VARIABLE 127: PRESSURIZER PORV POSITION

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS0445A-A	CTMT	MCB Item C-116	Control Room
ZS0444B-B	CTMT	MCB Item C-115	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 127: PRESSURIZER PORV POSITION

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 127: PRESSURIZER PORV POSITION

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500C-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L005-A and Q1H25L025-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

8. EQUIPMENT IDENTIFICATION

VARIABLE 127: PRESSURIZER PORV POSITION

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

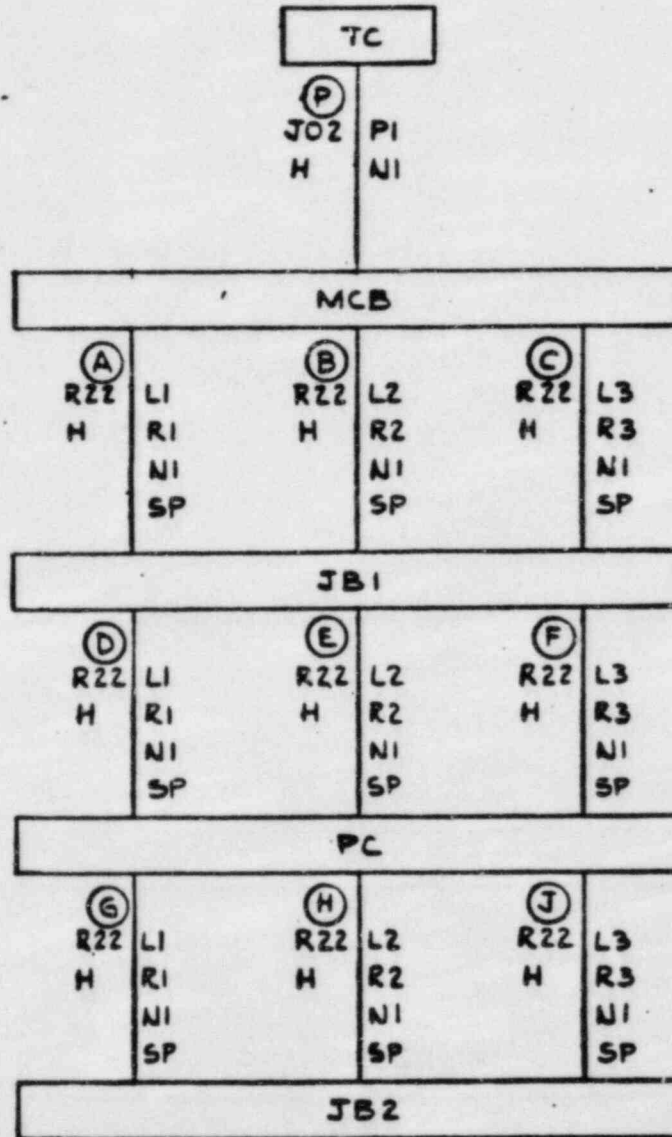
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 128: PRESSURIZER SAFETY VALVE POSITION

TPNS No(s): ZS2034, ZS2035, ZS2036

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE 128: PRESSURIZER SAFETY VALVE POSITION



BLOCK DIAGRAM
SCHEME: IVBL5099
ZS2034, ZS2035, ZS2036

EQUIPMENT LOCATIONS

ZS2034	CTMT
ZS2035	CTMT
ZS2036	CTMT

REFERENCE DWGS:

D-177381 / 2
D-175037 / 2

SENSOR AND DISPLAY LOCATIONS

VARIABLE 128: PRESSURIZER SAFETY VALVE POSITION

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS2034	CTMT	MCB Item C-152	Control Room
ZS2035	CTMT	MCB Item C-153	Control Room
ZS2036	CTMT	MCB Item C-154	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 128: PRESSURIZER SAFETY VALVE POSITION INDICATION

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 128: PRESSURIZER SAFETY VALVE POSITION

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NGMCB2500C-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L025-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

8. EQUIPMENT IDENTIFICATION

VARIABLE 128: PRESSURIZER SAFETY VALVE POSITION

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 129: HVAC EMERGENCY DAMPER POSITION

Emergency ventilation dampers in two distinct areas of the plant, the control room and the piping penetration room, have been reviewed for compliance to R.G. 1.97. Variable 129 is divided into two subsections, 129/1 and 129/2, to specifically address these areas.

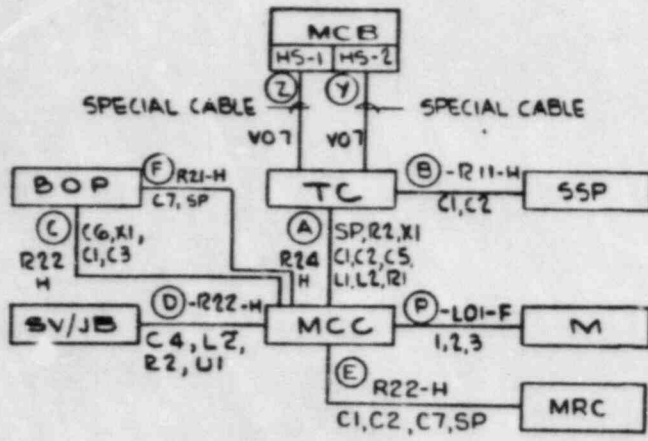
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 129/1: HVAC EMERGENCY DAMPER POSITION
PIPING PENETRATION ROOM

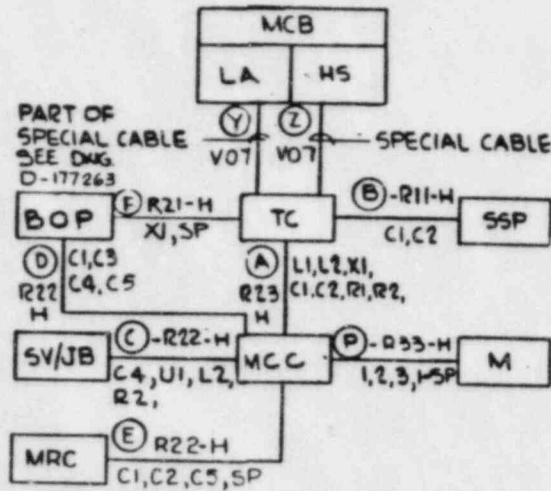
TPNS No(s): ZS3356A, ZS3356B, ZS3357A, ZS3357B, ZS3361A, ZS3361B,
ZS3362A, ZS3362B, ZS3538A, ZS3538B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

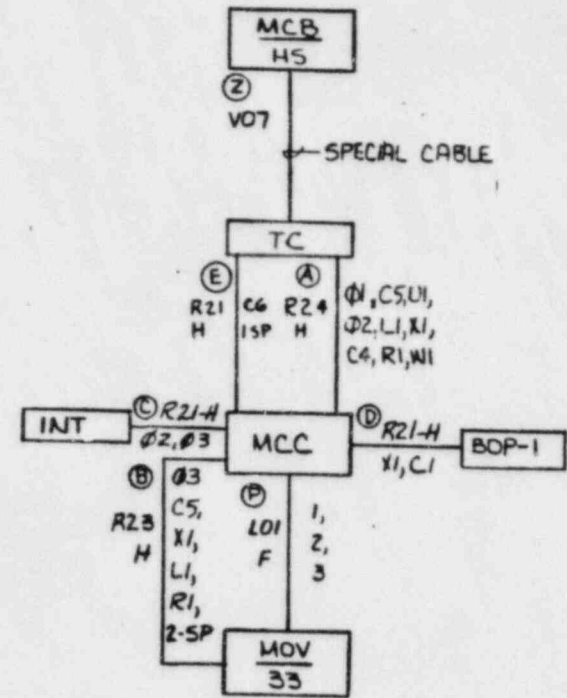
FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE I29/I: HVAC EMERGENCY DAMPER POSITION
 PIPING PENETRATION ROOM



BLOCK DIAGRAM
 SCHEME: IVAFB-B3 & IVBFB-D3
 ZS3356A-A, ZS3356B-B



BLOCK DIAGRAM
 SCHEME: IVAHA-O2 & IVBHB-N2
 ZS3357A-A, ZS3357B-B



BLOCK DIAGRAM
 SCHEME: AFU-L3
 ZS3361A-A

EQUIPMENT LOCATIONS

ZS3356A-A	RM. 317
ZS3356B-B	RM. 317
ZS3357A-A	RM. 317
ZS3357B-B	RM. 317
ZS3361A-A	RM. 317

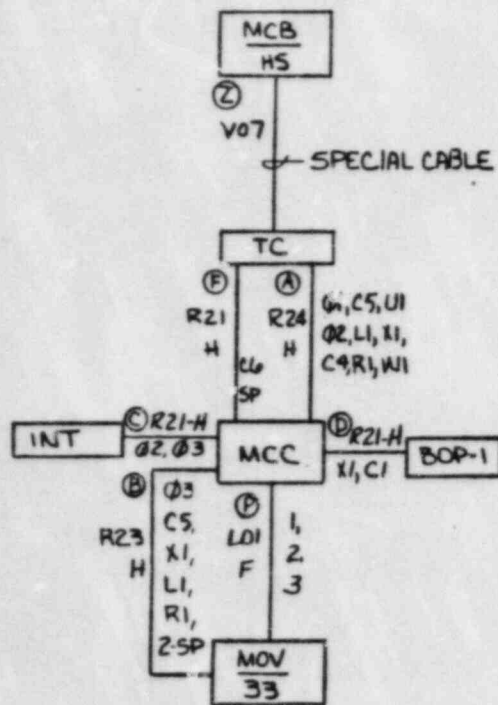
REFERENCE DWGS:

D-177238	ZS3357A, B
D-177239/1	ZS3356A, B
D-177283	ZS3361A, B
D-177281	ZS3362A, B
D-177589/1	ZS3358A, B
D-175022	

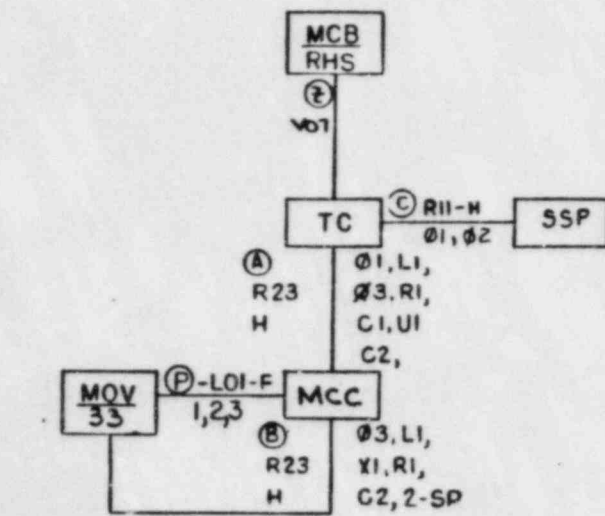
FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 129/1: HVAC EMERGENCY DAMPER POSITION
 PIPING PENETRATION ROOM

EQUIPMENT LOCATIONS

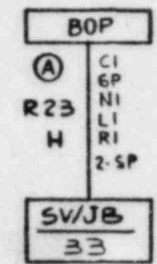
Z63361B-B	RM. 317
Z53362A-A	RM. 317
Z53362B-B	RM. 317
Z53538A-A	RM. 317
Z53538B-B	RM. 317



BLOCK DIAGRAM
 SCHEME: IVBFV-03
 ZS3361B-B



BLOCK DIAGRAM
 SCHEME: IVAFU-N5 & IVBFV-04
 ZS3362A-A, ZS3362B-B



BLOCK DIAGRAM
 SCHEME: IVAL5097 & IVBL5063
 ZS3538A-A, ZS3538B-B

SENSOR AND DISPLAY LOCATIONS

VARIABLE 129/1: HVAC EMERGENCY DAMPER POSITION
PIPING PENETRATION ROOM

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3356A	RM. 317	MCB Item A2-127	Control Room
ZS3356B	RM. 317	MCB Item A2-127	Control Room
ZS3357A	RM. 317	MCB Item A2-127	Control Room
ZS3357B	RM. 317	MCB Item A2-127	Control Room
ZS3361A	RM. 317	MCB Item A2-127	Control Room
ZS3361B	RM. 317	MCB Item A2-127	Control Room
ZS3362A	RM. 317	MCB Item A2-127	Control Room
ZS3362B	RM. 317	MCB Item A2-127	Control Room
ZS3358A	RM. 317	-	Control Room
ZS3358B	RM. 317	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 129/1: HVAC EMERGENCY DAMPER POSITION PIPING PENETRATION ROOM

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 129/1: HVAC EMERGENCY DAMPER POSITION PIPING PENETRATION ROOM

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: N1H11NGMCB2500A-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L008-A and Q1H25L029-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

8. EQUIPMENT IDENTIFICATION

VARIABLE 129/1: HVAC EMERGENCY DAMPER POSITION
PIPING PENETRATION ROOM

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 129/2: HVAC EMERGENCY DAMPER POSITION
CONTROL ROOM

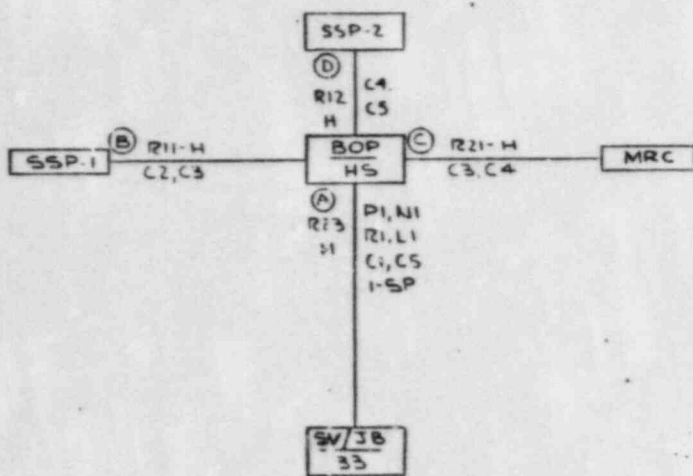
TPNS No(s): ZS3649A, ZS3649B, ZS3649C, ZS3478A, ZS3478B, ZS2769A,
ZS2769B, ZS3628, ZS3629

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NON-COMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	N/A NO	JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

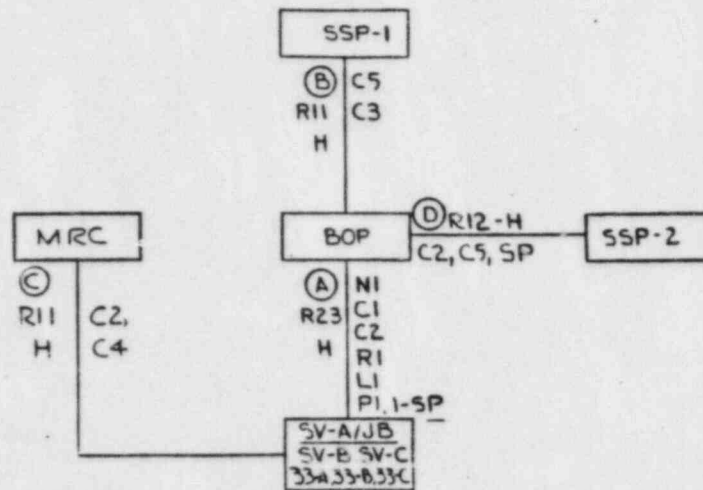
FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 129/2: HVAC EMERGENCY DAMPER POSITION
 CONTROL ROOM

EQUIPMENT LOCATIONS

Z53628	RM. 501
Z53629	RM. 2501
Z53649A	RM. 501
Z53649B	RM. 501
Z53649C	RM. 501



BLOCK DIAGRAM
 SCHEME: IVAL5119 & IVBL5091
 Z53628 & Z53629



BLOCK DIAGRAM
 SCHEME: IVAL5079
 Z53649A, B, C

REFERENCE DWGS:

- D-175012 P & ID
- D-205012 P & ID
- D-177883 HV3649A, B & C
- D-177280/1 MOV3478A, B
- D-177280/2 MOV2769A, B
- D-177279/2 HV3628, HV5629

SENSOR AND DISPLAY LOCATIONS

VARIABLE 129/2: HVAC EMERGENCY DAMPER POSITION
CONTROL ROOM

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
ZS3649A-A	RM. 501	-	Control Room
ZS3649B-A	RM. 501	-	Control Room
ZS3649C-A	RM. 501	-	Control Room
ZS3478A-A	RM. 501	-	Control Room
ZS3478B-B	RM. 2501	-	Control Room
ZS2769A-A	RM. 501	-	Control Room
ZS2769B-B	RM. 2501	-	Control Room
ZS3628-A	RM. 501	-	Control Room
ZS3629-B	RM. 2501	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.B SEISMIC QUALIFICATION

VARIABLE 129/2: HVAC EMERGENCY DAMPER POSITION CONTROL ROOM

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

There is no seismic qualification documentation available for limit switches provided on Bettis-actuators for damper valves HV3649A, HV3649E, HV3649C, HV3628 and HV3629.

PROPOSED MODIFICATION

Seismically qualified NAMCO model EA-170 limit switches will be provided on these damper valves for position indication.

8. EQUIPMENT IDENTIFICATION

VARIABLE 129/2: HVAC EMERGENCY DAMPER POSITION
CONTROL ROOM

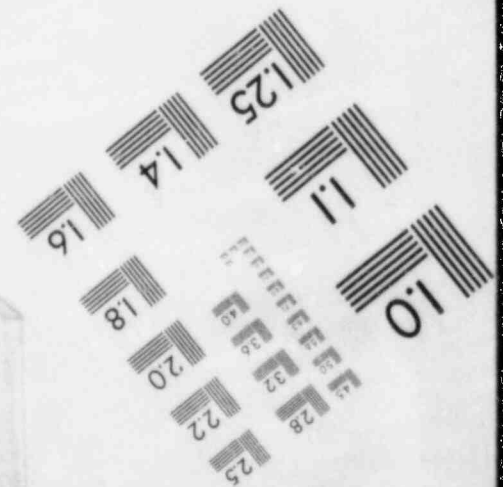
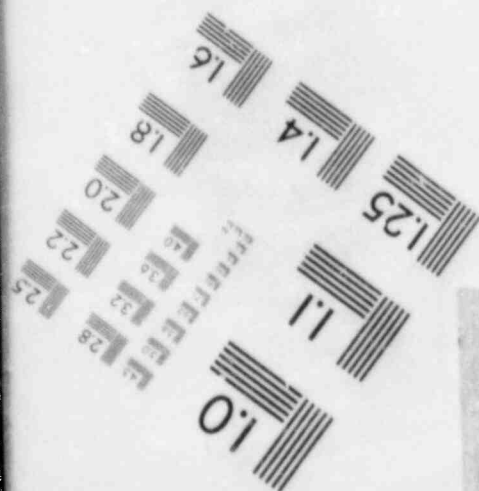
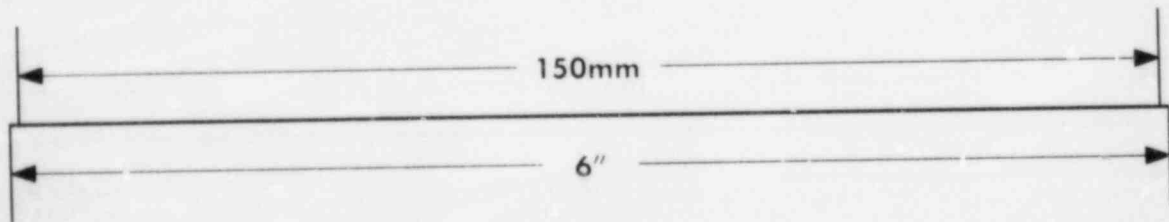
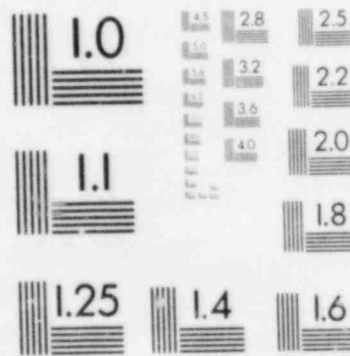
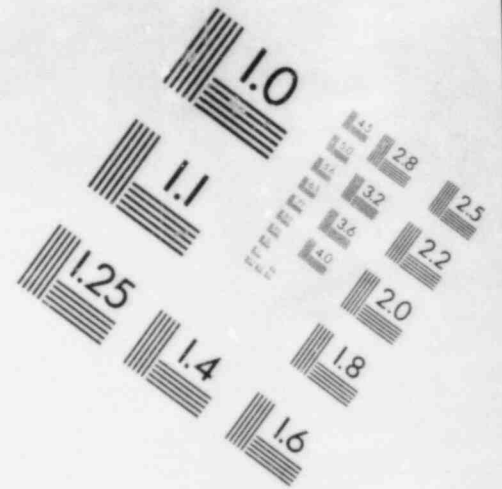
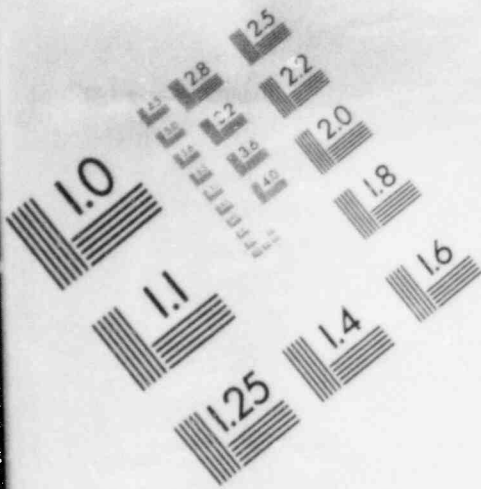
EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

IMAGE EVALUATION
TEST TARGET (MT-3)



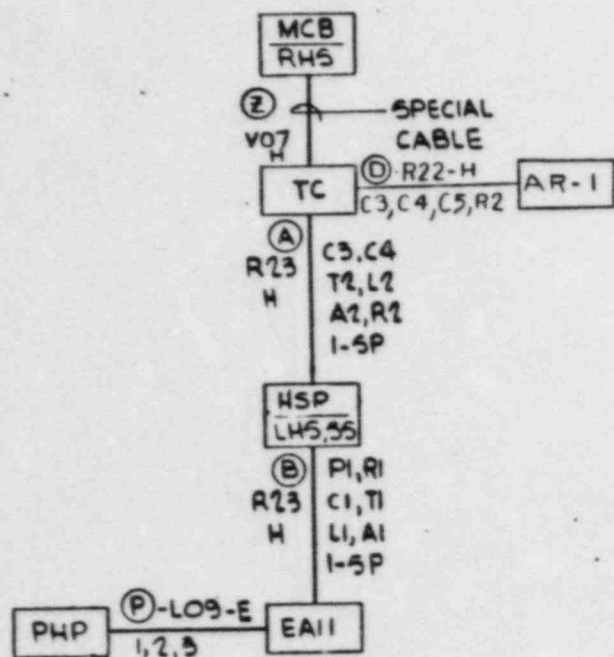
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 130: PRESSURIZER HEATER BREAKER POSITION

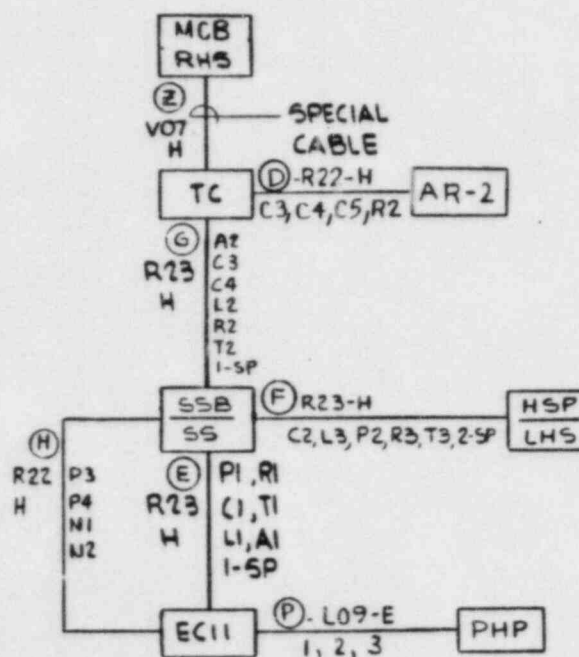
TPNS No(s): 600V load center breakers EA11 and tC11

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	N/A NO	JUSTIFY/MODIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 130: PRESSURIZER HEATER BREAKER POSITION



BLOCK DIAGRAM
 SCHEME: IVAEAI
 PRESSURIZER HEATER GROUP 1A



BLOCK DIAGRAM
 SCHEME: IVBECII
 PRESSURIZER HEATER GROUP 1B

EQUIPMENT LOCATIONS

EAII RM. 335
 ECII RM. 229

REFERENCE DWGS:

D-177109
 D-177111

SENSOR AND DISPLAY LOCATIONS

VARIABLE 130: PRESSURIZER HEATER BREAKER POSITION

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
EA11	RM. 335	MCB Item C-100	Control Room
EC11	RM. 229	MCB Item C-101	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.B SEISMIC QUALIFICATION

VARIABLE 130: PRESSURIZER HEATER BREAKER POSITION

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The installed components having insufficient documentation to demonstrate compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 are addressed below.

EXISTING CONDITION

Reference: NTH11NGMCB2500C-AB

A seismic qualification program to verify the seismic structural adequacy of the main control board and the R.G. 1.97 display devices mounted on the main control board has been completed. The seismic qualification program concluded that the structure of the main control board is seismically qualified for use in Farley Nuclear Plant Unit 1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

The seismic qualification program identified some devices on the main control board whose mounting does not meet seismic mounting requirements and some devices which must be replaced. Devices which require mounting modifications or replacement are tabulated in Appendix D.

PROPOSED MODIFICATION

Perform the modifications identified in Appendix D.

EXISTING CONDITION

Reference: Q1H25L005-A and Q1H25L025-B

A seismic qualification program to verify the seismic structural adequacy of the main control board termination cabinets has been completed. The seismic qualification program concluded that additional fasteners for the internal device mounting panel are required to bring the cabinets in compliance with the seismic requirements of Farley Nuclear Plant Unit 1.

PROPOSED MODIFICATION

Perform the modifications necessary to bring the main control board termination cabinets in compliance with the seismic qualification provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

7. RANGE

VARIABLE 130: PRESSURIZER HEATER BREAKER POSITION

EXISTING CONDITION

The Regulatory Guide range guideline states that pressurizer heater current should be used to monitor the status of the pressurizer heaters. Instrumentation is not available to monitor this current.

JUSTIFICATION

The status of the pressurizer heaters can be adequately determined using a combination of Pressurizer Heater Breaker Position and Pressurizer Pressure (Variable 112).

8. EQUIPMENT IDENTIFICATION

VARIABLE 130: PRESSURIZER HEATER BREAKER POSITION

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

Variable 131 is divided into five subsections, 131/1 through 131/5, to provide more detail on the instruments comprising the variable. The five parts of variable 131 are:

- 131/1 Offsite Power
- 131/2 Diesel Generator Breakers
- 131/3 Diesel Generator Voltage and Frequency
- 131/4 Diesel Generator Watts
- 131/5 Diesel Generator Fuel and Day Tank Level

In response to the guidelines of the Regulatory Guide, the five parts should be viewed collectively as one instrumentation package which provides the status of emergency power in the plant.

REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 131/1: EMERGENCY POWER STATUS
OFFSITE POWER
4 KV BREAKERS: DF01, DF15, DG01, DG15

TPNS No(s): Q1R15A006-A, Q1R15A007-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	N/A NO	JUSTIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

SENSOR AND DISPLAY LOCATIONS

VARIABLE 131/1: EMERGENCY POWER STATUS
OFFSITE POWER

4 KV BREAKERS: DF01, DF15, DG01, DG15

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
DF01	RM. 335	-	Control Room
DF15	RM. 335	-	Control Room
DG01	RM. 229	-	Control Room
DG15	RM. 229	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.B SEISMIC QUALIFICATION

VARIABLE 131/1: EMERGENCY POWER STATUS-OFFSITE POWER
4KV BREAKERS: DF01, DF15, DG01, DG15

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

8. EQUIPMENT IDENTIFICATION

VARIABLE 131/1: EMERGENCY POWER STATUS
OFFSITE POWER
4 KV BREAKERS: DF01, DF15, DG01, DG15

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

RIABLE 131/2: EMERGENCY POWER STATUS
DIESEL GENERATORS 1-2A, 1B, 1C, 2C
4 KV BREAKERS: DF08, DG08, DH07, DJ06

TPNS No(s): Q1R15A006-A, Q1R15A007-B, Q1R15A503-A, Q1R15A504-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	N/A NO	JUSTIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

SENSOR AND DISPLAY LOCATIONS

VARIABLE 131/2: EMERGENCY POWER STATUS
DIESEL GENERATORS 1-2A, 1B, 1C, 2C
4 KV BREAKERS: DF08, DG08, DH07, DJ06

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
DF08	RM. 335	-	Control Room
DG08	RM. 229	-	Control Room
DH07	Diesel Bldg.	-	Control Room
DJ06	Diesel Bldg.	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.B SEISMIC QUALIFICATION

VARIABLE 131/2: EMERGENCY POWER STATUS
DIESEL GENERATORS 1-2A, 1B, 1C, 2C
4KV BREAKERS: DF08, DG08, DH07, DJ06

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

All installed components associated with this variable are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

8. EQUIPMENT IDENTIFICATION

VARIABLE 131/2: EMERGENCY POWER STATUS
DIESEL GENERATORS 1-2A, 1B, 1C, 2C
4KV BREAKERS: DF08, DG08, DH07, DJ06

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 131/3: EMERGENCY POWER STATUS
DIESEL GENERATORS 1-2A, 1B, 1C, 2C
VOLTAGE & FREQUENCY

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	N/A N/A	
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

SENSOR AND DISPLAY LOCATIONS

VARIABLE 131/3: EMERGENCY POWER STATUS
DIESEL GENERATORS 1-2A, 1B, 1C, 2C
VOLTAGE & FREQUENCY

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
4 KV Bus 2F	RM. 335	-	Control Room
4 KV Bus 2G	RM. 229	-	Control Room
4 KV Bus 2H	Diesel Bldg.	-	Control Room
4 KV Bus 2J	Diesel Bldg.	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

8. EQUIPMENT IDENTIFICATION

VARIABLE 131/3: EMERGENCY POWER STATUS
DIESEL GENERATORS 1-2A, 1B, 1C, 2C
VOLTAGE & FREQUENCY

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 131/4: EMERGENCY POWER STATUS
DIESEL GENERATORS 1-2A, 1B, 1C, 2C
WATTS

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	N/A N/A	
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

SENSOR AND DISPLAY LOCATIONS

VARIABLE 131/4: EMERGENCY POWER STATUS
DIESEL GENERATORS 1-2A, 1B, 1C, 2C
WATTS

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
4 KV Bus 2F	RM. 335	-	Control Room
4 KV Bus 2G	RM. 229	-	Control Room
4 KV Bus 2H	Diesel Bldg.	-	Control Room
4 KV Bus 2J	Diesel Bldg.	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

8. EQUIPMENT IDENTIFICATION

VARIABLE 131/4: EMERGENCY POWER STATUS
DIESEL GENERATORS 1-2A, 2B, 1C, 2C
WATTS

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 131/5: EMERGENCY POWER STATUS
DIESEL GENERATORS 1-2A, 1B, 1C, 2C
FUEL STORAGE AND DAY TANK LEVEL

TPNS No(s): NSY52LT504-N & NSR43LT501-N
N1Y52LT505-N & N1R43LT502-N
NSY52LT506-N & NSR43LT503-N
NSY52LT508-N & NSR43LT505-N

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	N/A N/A	
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

SENSOR AND DISPLAY LOCATIONS

VARIABLE 131/5: EMERGENCY POWER STATUS
 DIESEL GENERATORS 1-2A, 1B, 1C, 2C
 FUEL STORAGE AND DAY TANK LEVEL

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
NSY52LT504	Diesel Bldg.	-	Control Room
N2Y52LT507	Diesel Bldg.	-	Control Room
NSY32LT506	Diesel Bldg.	-	Control Room
NSY52LT508	Diesel Bldg.	-	Control Room
NSR43LT501	Diesel Bldg.	-	Control Room
N2R43LT504	Diesel Bldg.	-	Control Room
NSR43LT503	Diesel Bldg.	-	Control Room
NSR43LT505	Diesel Bldg.	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

8. EQUIPMENT IDENTIFICATION

VARIABLE 131/5: EMERGENCY POWER STATUS
DIESEL GENERATORS 1-2A, 1B, 1C, 2C
FUEL STORAGE AND DAY TANK LEVEL

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

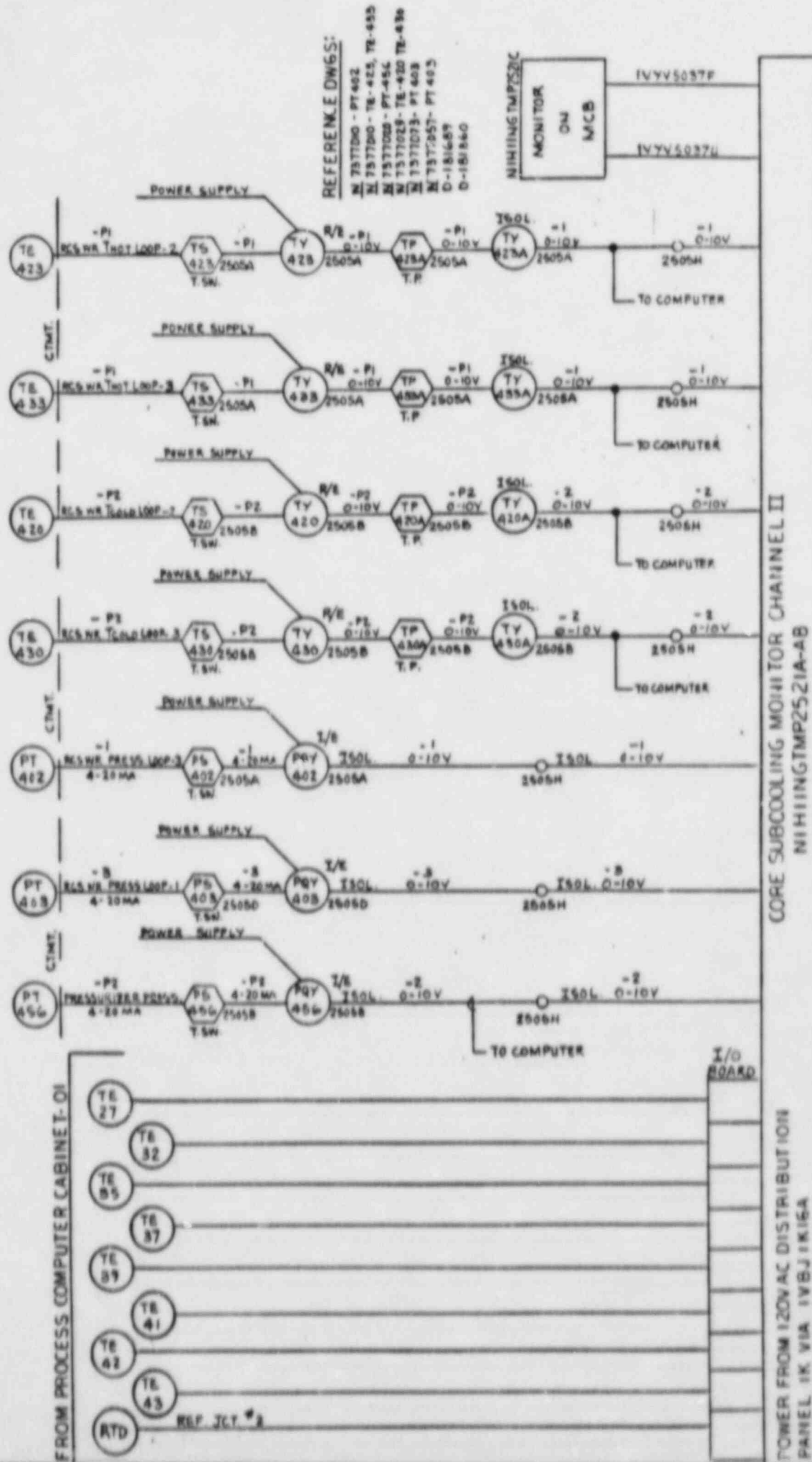
REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 132: CORE SUBCOOLING MONITOR

TPNS No(s): NTH11NGTMP2521A-AB

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO NO	JUSTIFY JUSTIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
VARIABLE I32: CORE SUBCOOLING MONITOR



SENSOR AND DISPLAY LOCATIONS

VARIABLE 132: CORE SUBCOOLING MONITOR

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
<u>Channel I</u>			
Core Exit T/C's	CTMT		
PT455	CTMT		
PT403	CTMT		
PT402	CTMT	NGTMP25213	Control Room
TE420	CTMT		
TE410	CTMT		
TE423	CTMT		
TE413	CTMT		
<u>Channel II</u>			
Core Exit T/C's	CTMT		
PT456	CTMT		
PT402	CTMT		
PT403	CTMT	NGTMP2521C	Control Room
TE420	CTMT		
TE430	CTMT		
TE423	CTMT		
TE433	CTMT		

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 132: CORE SUBCOOLING MONITOR

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

The Environmental Qualification of instruments which are inputs to the core subcooling monitor, with the exception of pressure transmitter PT456, is addressed under Variable 1, 2, 3, 15 and 112. All installed components associated with PT456 are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

1.B SEISMIC QUALIFICATION

VARIABLE 132: CORE SUBCOOLING MONITOR

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.100 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10. Justification for performing the Seismic Qualification compliance review to the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10 is provided in Appendix B.

The core subcooling monitor is a computer based display and as such seismic qualification of the monitor itself (NGTMP2521A, NGTMP2521B, NGTMP2521C) is not required. The Seismic Qualification of instruments which are inputs to the core subcooling monitor, with the exception of pressure transmitter PT456, is addressed under Variable 1, 2, 3, 15 and 112. All installed components associated with PT456 are considered to be seismically qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IEEE 344-1971 as described in FSAR Chapter 3.10.

8. EQUIPMENT IDENTIFICATION

VARIABLE 132: CORE SUBCOOLING MONITOR

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

REGULATORY GUIDE 1.97 CATEGORY 2
COMPLIANCE REPORT

VARIABLE 133: SERVICE WATER FLOW TO CTMT COOLERS

TPNS NO(s): FT3013AB-N, FT3013BB-N

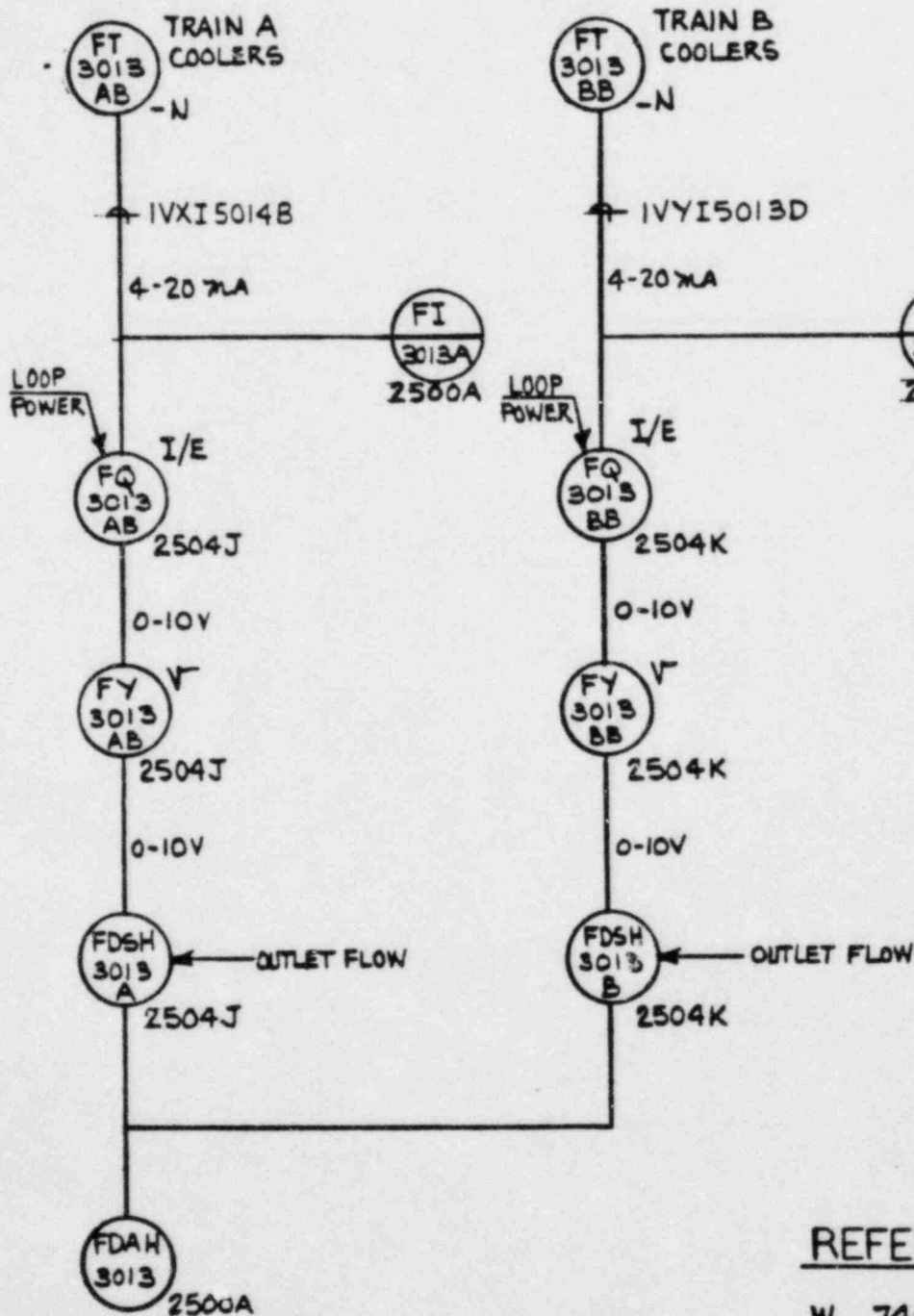
GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	NO N/A	JUSTIFY
2. REDUNDANCY	No category 2 requirements	
3. POWER SUPPLY	YES	
4. CHANNEL AVAILABILITY	YES	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	N/A	
8. EQUIPMENT IDENTIFICATION	NO	JUSTIFY
9. INTERFACES (isolation)	YES	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM

VARIABLE 133: SERVICE WATER FLOW TO CTMT COOLERS

EQUIPMENT LOCATIONS

FT3013AB	RM. 223
ET3013BB	RM. 223
2504J, K	CONTROL ROOM
2500A	CONTROL ROOM



REFERENCE DWGS:

- W 7408D21
- W 7408D44

SENSOR AND DISPLAY LOCATIONS

VARIABLE 133: SERVICE WATER FLOW TO CTMT COOLERS

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
FT3013AB	RM. 223	FI3013A	Control Room
FT3013BB	RM. 223	FI3013B	Control Room

Table 3 correlates room numbers with room names and floor elevations.

1.A ENVIRONMENTAL QUALIFICATION

VARIABLE 133: SERVICE WATER FLOW TO CTMT COOLERS

R.G. 1.97 Category I and II instrumentation has not been reviewed for compliance to R.G. 1.89 which is a provision of R.G. 1.97. The installed components associated with this variable have been reviewed for compliance to IE Bulletin 79-01B. Justification for performing the Environmental Qualification compliance review to the provisions of IE Bulletin 79-01B is provided in Appendix A.

All installed components associated with this variable are considered to be qualified for use in Farley Nuclear Plant Unit #1 in accordance with the provisions of IE Bulletin 79-01B.

8. EQUIPMENT IDENTIFICATION

VARIABLE 133: SERVICE WATER FLOW TO CTMT COOLERS

EXISTING CONDITION

The indicator(s) associated with this variable are not marked with a common designator.

JUSTIFICATION

The Emergency Operating Procedures (EOP's) direct the operator to monitor specific plant parameters during accident conditions. The EOP parameters include certain R.G. 1.97 variables; however all R.G. 1.97 variables are not EOP parameters. It is the EOP parameters that are intended for use under accident conditions. Certain EOP parameters used to assess the severity and nature of an accident and to monitor the proper operation of the safety systems are designated with an orange bar on the main control board. The combination of the orange bar designation and the specificity of the EOP's is sufficient for the operator to monitor accident conditions. It is the opinion of Alabama Power Company that the addition of common designators to all R.G. 1.97 Category 1 and 2 display devices would degrade the operators ability to easily discern necessary EOP parameters.

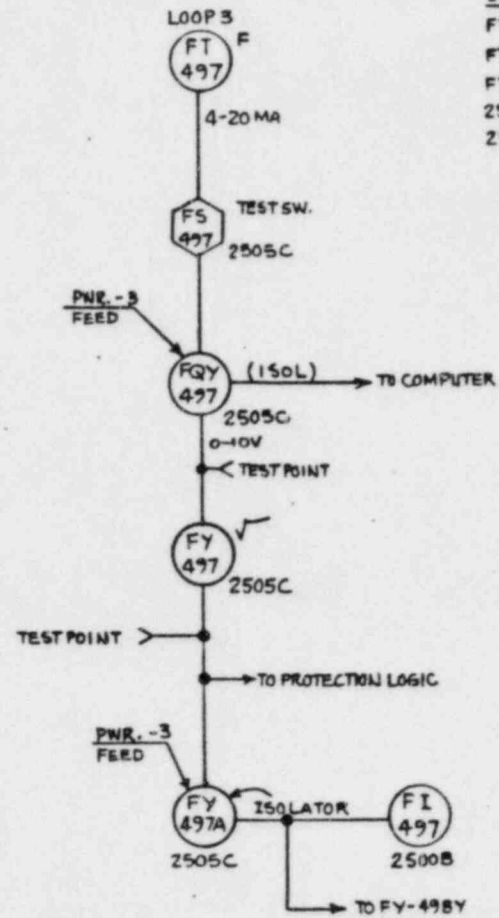
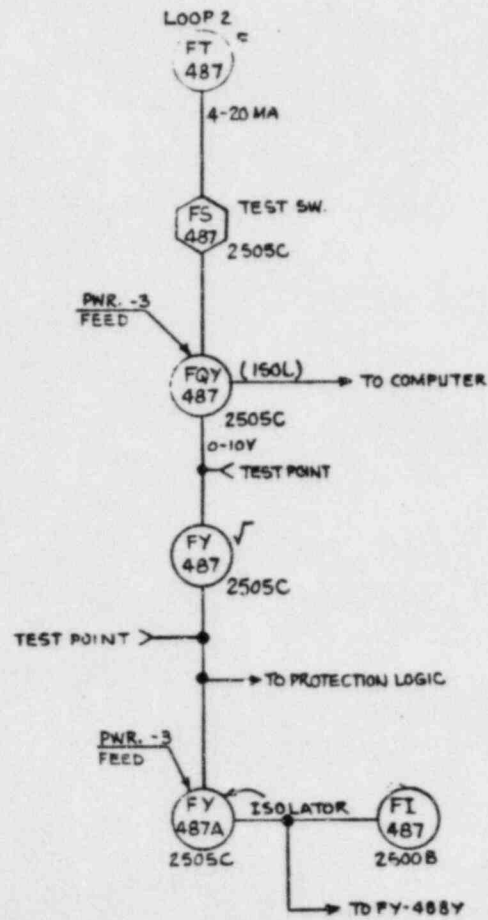
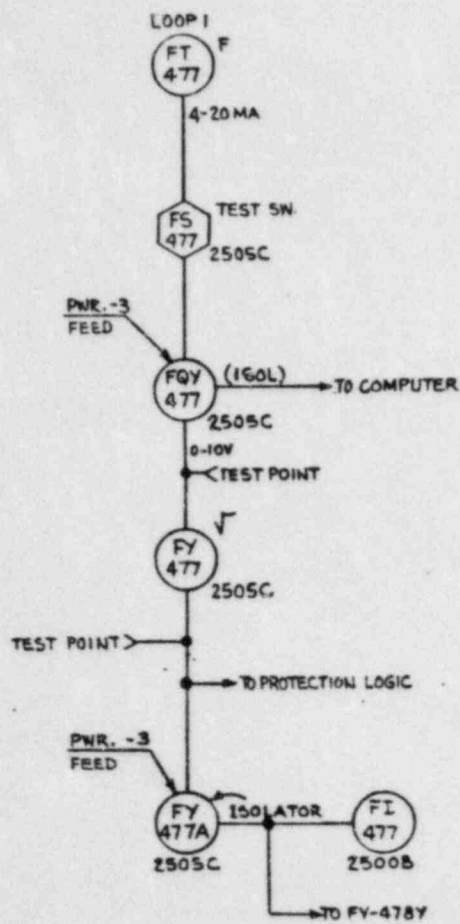
REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1001: MAIN FEEDWATER FLOW

TPNS NO(s): FT477, FT487, FT497

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
VARIABLE 1001: MAIN FEEDWATER FLOW



EQUIPMENT LOCATIONS

FT 477	TURBINE BLDG.
FT 487	TURBINE BLDG.
FT 497	TURBINE BLDG.
2505C	CONTROL ROOM
2500B	CONTROL ROOM

REFERENCE DWGS:

W	7377D53	FT 477
W	7377D58	FT 487
W	7377D59	FT 497

SENSOR AND DISPLAY LOCATIONS

VARIABLE 1001: MAIN FEEDWATER FLOW

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
FT477	Turbine Bldg.	FI477	Control Room
FT487	Turbine Bldg.	FI487	Control Room
FT497	Turbine Bldg.	FI497	Control Room

Table 3 correlates room numbers with room names and floor elevations.

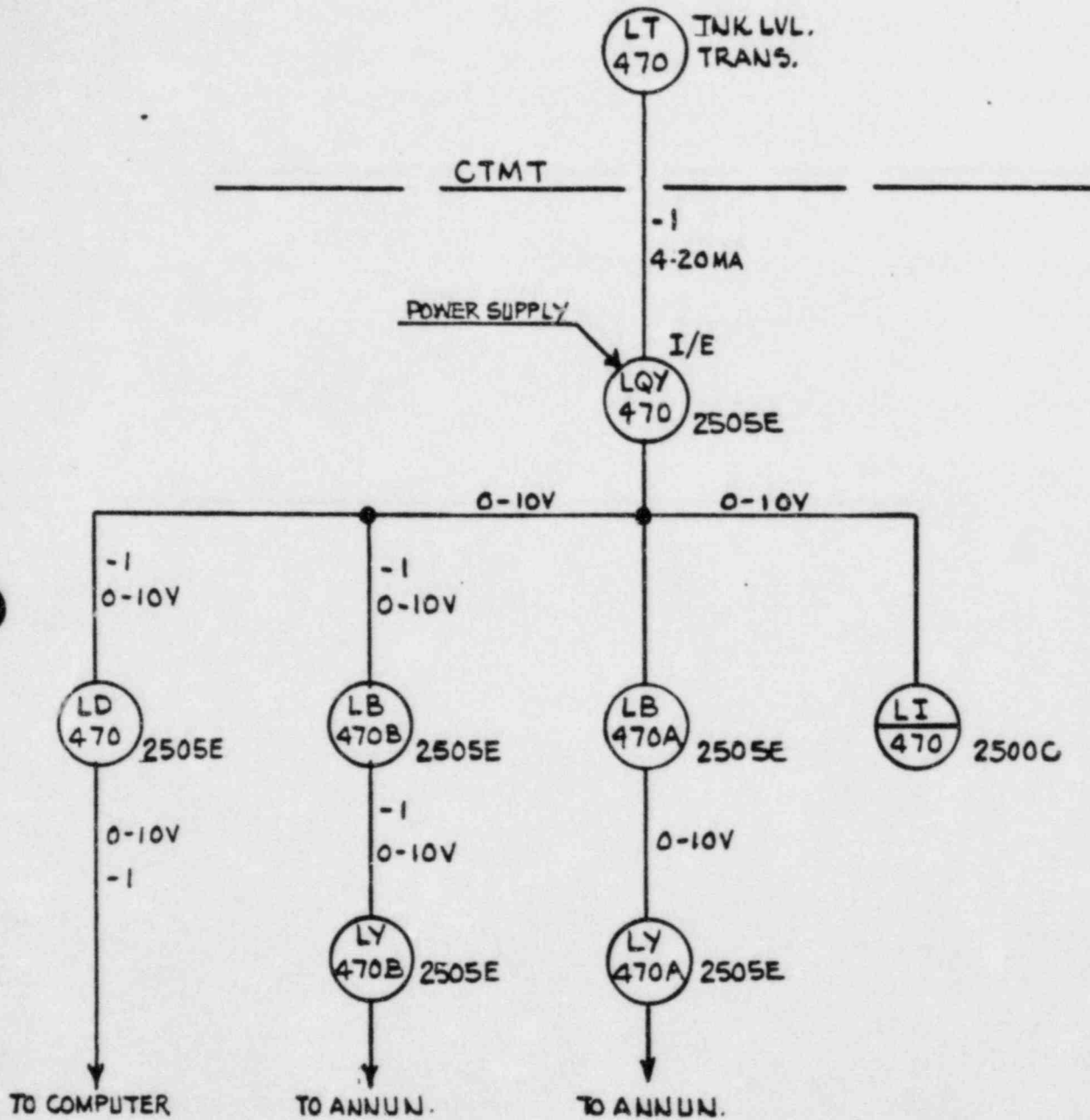
REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1002: PRESSURIZER RELIEF TANK LEVEL

TPNS No(s): LT470

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No Category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE 1002:PRESSURIZER RELIEF TANK LEVEL



EQUIPMENT LOCATIONS

LT 470	CTMT
2505E	CONTROL ROOM
2500C	CONTROL ROOM

REFERENCE DWGS:

W 7377D88

D-175037/2

SENSOR AND DISPLAY LOCATIONS

VARIABLE 1002: PRESSURIZER RELIEF TANK LEVEL

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
LT470	CTMT	LI470	Control Room

Table 3 correlates room numbers with room names and floor elevations.

7. RANGE

VARIABLE 1002: PRESSURIZER RELIEF TANK LEVEL

EXISTING CONDITION

The maximum level indication of the existing instrumentation is below the maximum specified by R.G. 1.97. The minimum level indication is above the minimum specified by R.G. 1.97.

JUSTIFICATION

The range of the existing instrumentation is acceptable because:

1. The level transmitters measure the entire range between the installed instrument connections.
2. Only 5% of the total tank volume is not measured.
3. The existing range is sufficient to provide the operator with the necessary information for accident monitoring and it is not necessary or practical to relocate the instrument connection.

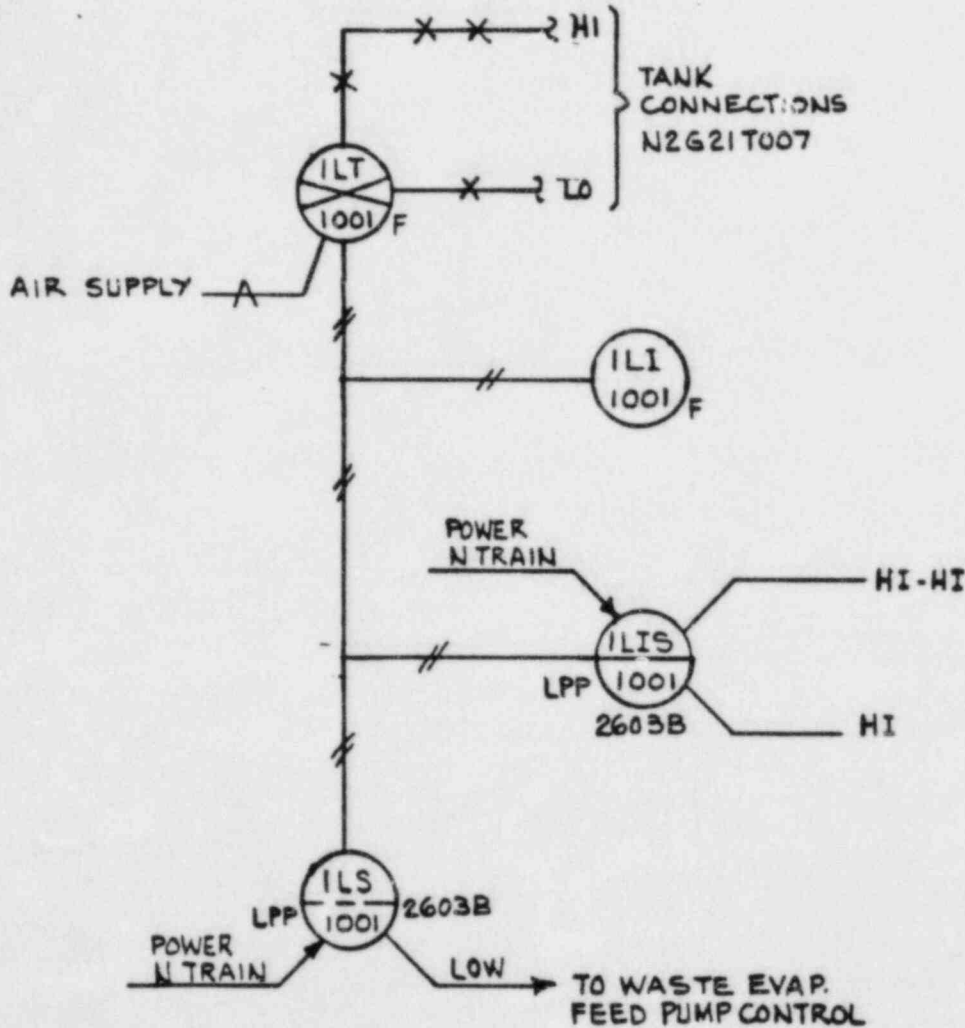
REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1003: RADIOACTIVE LIQUID TANK LEVELS

TPNS No(s): LT1001, LT1002, LT1003, LT261, LT262, LT263

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	NO N/A	MODIFY
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE 1003: RADIOACTIVE LIQUID TANK LEVELS



LT 1001 - WASTE HOLDUP TANK

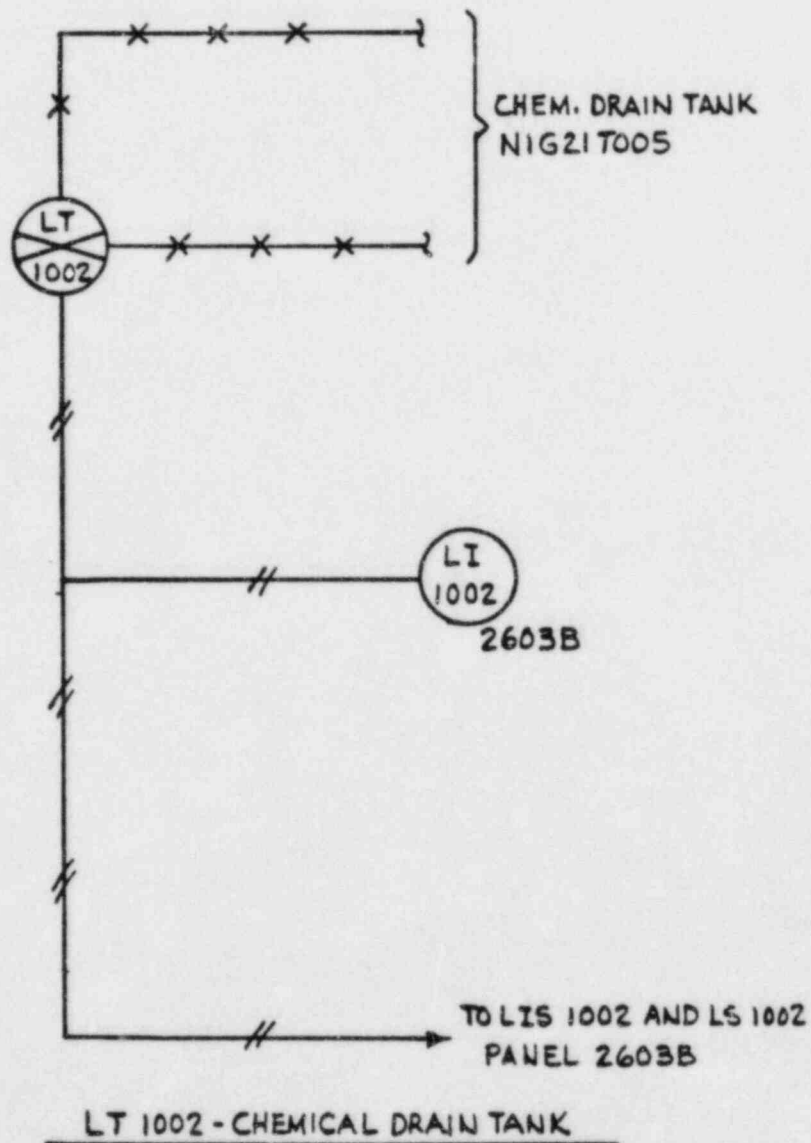
REFERENCE DWGS:

D-175042/1	LT 1003
D-175042/2	LT 1001
D-175042/3	LT 1002
D-175039/4	} LT 261, LT 262, LT 263
U-167265	
W 271C597	} LIQUID PROCESSING PANEL (LPP)
E46.5-13	
E46.5-14	

EQUIPMENT LOCATIONS

ILT-1001	RM. 128
ILI-1001	RM. 128
2603B	RM. 163

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 1003: RADIOACTIVE LIQUID TANK LEVELS



EQUIPMENT LOCATIONS

LT-1002 RM. 168
 2603B RM. 163

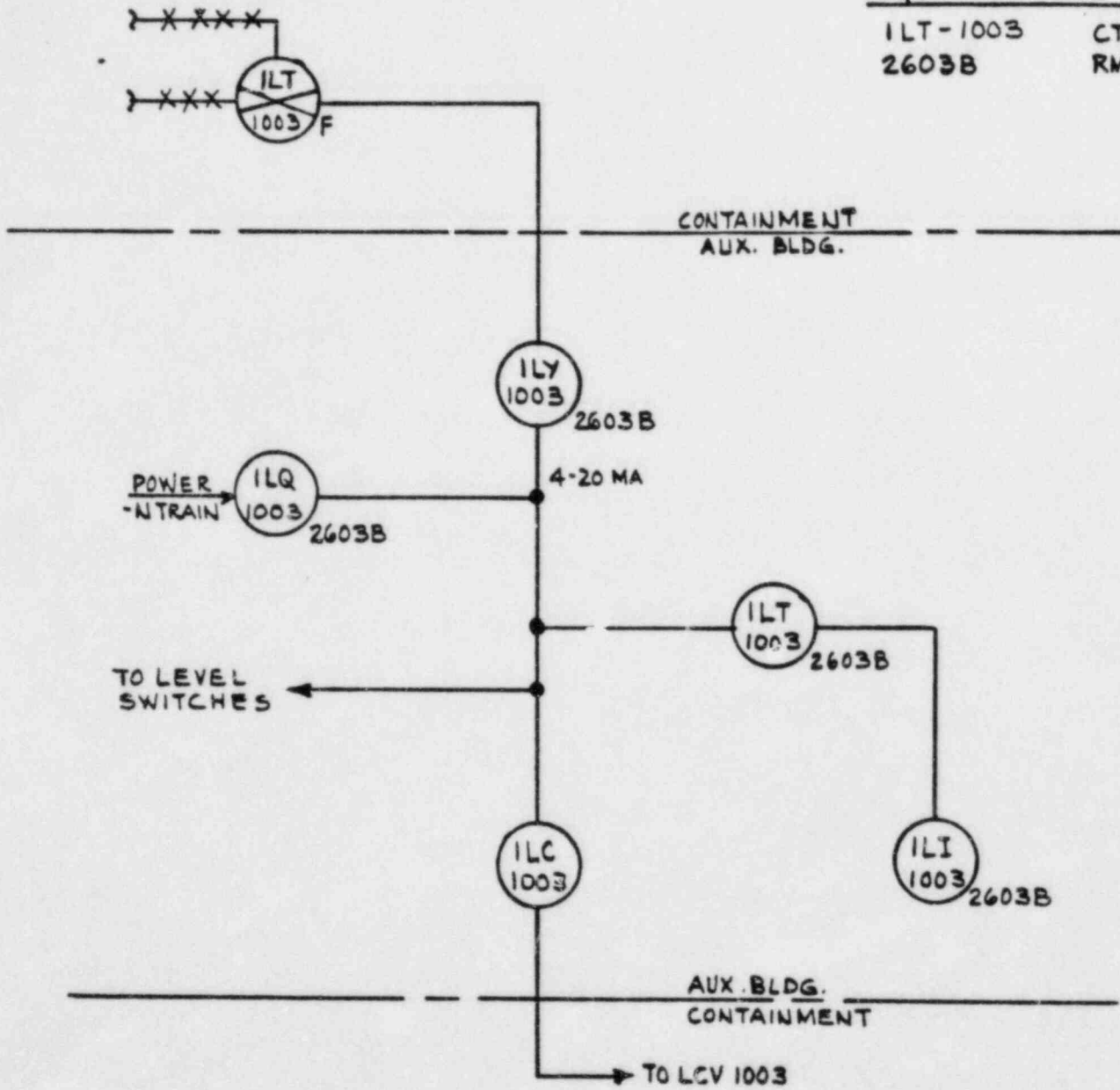
REFERENCE DWGS:

SEE SHEET 1

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE 1003: RADIOACTIVE LIQUID TANK LEVELS

EQUIPMENT LOCATIONS

ILT-1003	CTMT
2603B	RM. 163

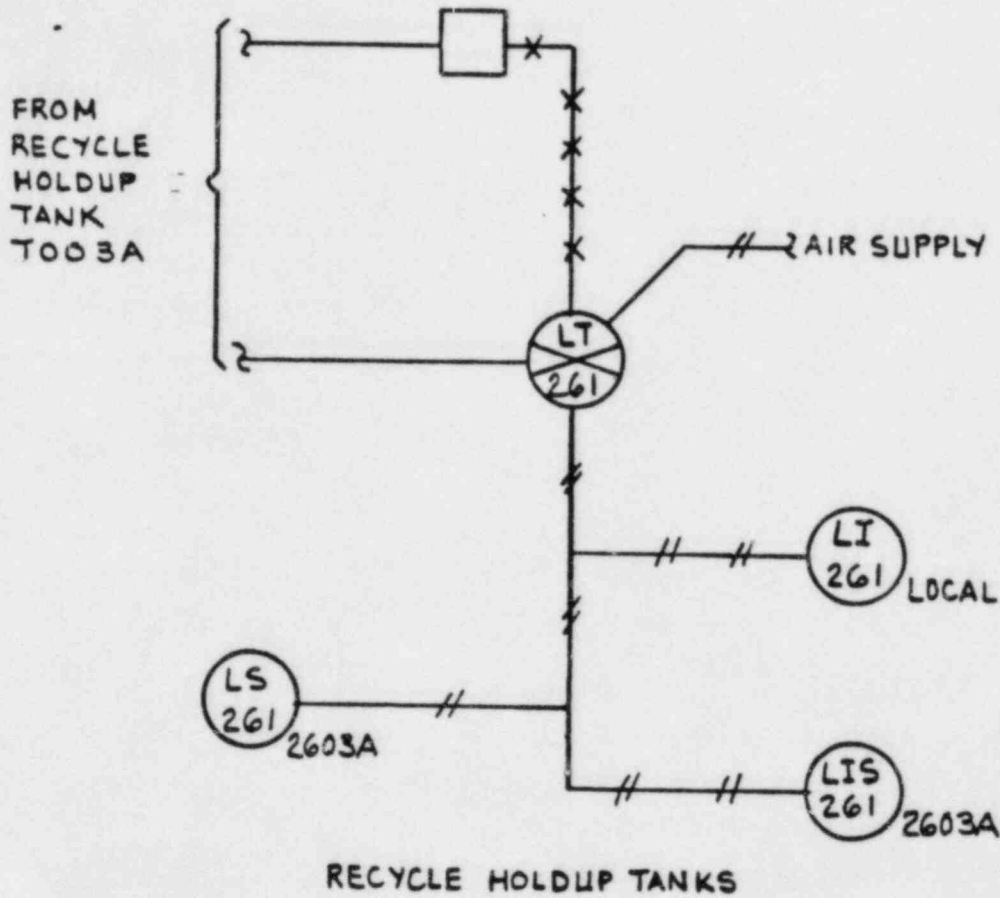


LT 1003- REACTOR COOLANT DRAIN TANK

REFERENCE DWGS:

SEE SHEET 1

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE 1003; RADIOACTIVE LIQUID TANK LEVELS



TANK	INSTRUMENTS			
T003A	LT-261	LI-261	LIS-261	LS-261
T003B	LT-262	LI-262	LIS-262	LS-262
T003C	LT-263	LI-263	LIS-263	LS-263

EQUIPMENT LOCATIONS

LT-261 RM. 161
 LI-261 RM. 161
 LT-262 RM. 161
 LI-262 RM. 161
 LT-263 RM. 161
 LI-263 RM. 161
 2603A RM. 163

REFERENCE DWGS:

P & ID 175039/4
 U-167265

SENSOR AND DISPLAY LOCATIONS

VARIABLE 1003: RADIOACTIVE LIQUID TANK LEVELS

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
LT1001	RM. 128	LIS1001	RM. 163
LT1002	RM. 168	LIS1002	RM. 163
LT1003	CTMT	LI1003	RM. 163
LT261	RM. 161	LIS261	RM. 163
LT262	RM. 161	LIS262	RM. 163
LT263	RM. 161	LIS263	RM. 163

Table 3 correlates room numbers with room names and floor elevations.

6. DISPLAY AND RECORDING

VARIABLE 1003: RADIOACTIVE LIQUID TANK LEVELS

EXISTING CONDITION

The existing level indicators are located in an area that may not be accessible post accident.

PROPOSED MODIFICATION

Provide remote level indication in the control room in addition to the existing local indication.

7. RANGE

VARIABLE 1003: RADIOACTIVE LIQUID TANK LEVELS

EXISTING CONDITION

LT1001-Waste Holdup Tank; LT1002-Chemical Drain Tank

The minimum level indication of the existing instrumentation is above the minimum specified by R.G. 1.97. The maximum level indication satisfies the R.G. 1.97 guidelines.

LT1003 - Reactor Coolant Drain Tank; LT261, LT262, LT263 - Recycle Holdup Tanks

The minimum level indication of the existing instrumentation is above the minimum specified by R.G. 1.97. The maximum level indication is below the maximum specified by R.G. 1.97.

JUSTIFICATION

The range of the existing instrumentation is acceptable because:

1. The transmitters measure the full range between the instrument connections.
2. It is not considered practical to relocate the instrument connections on the tanks.
3. At least 90% of the tank volume is measured by the existing instrumentation.
4. The existing range is sufficient to provide the operator with the necessary information for accident monitoring and it is not necessary or practical to relocate the instrument connection.

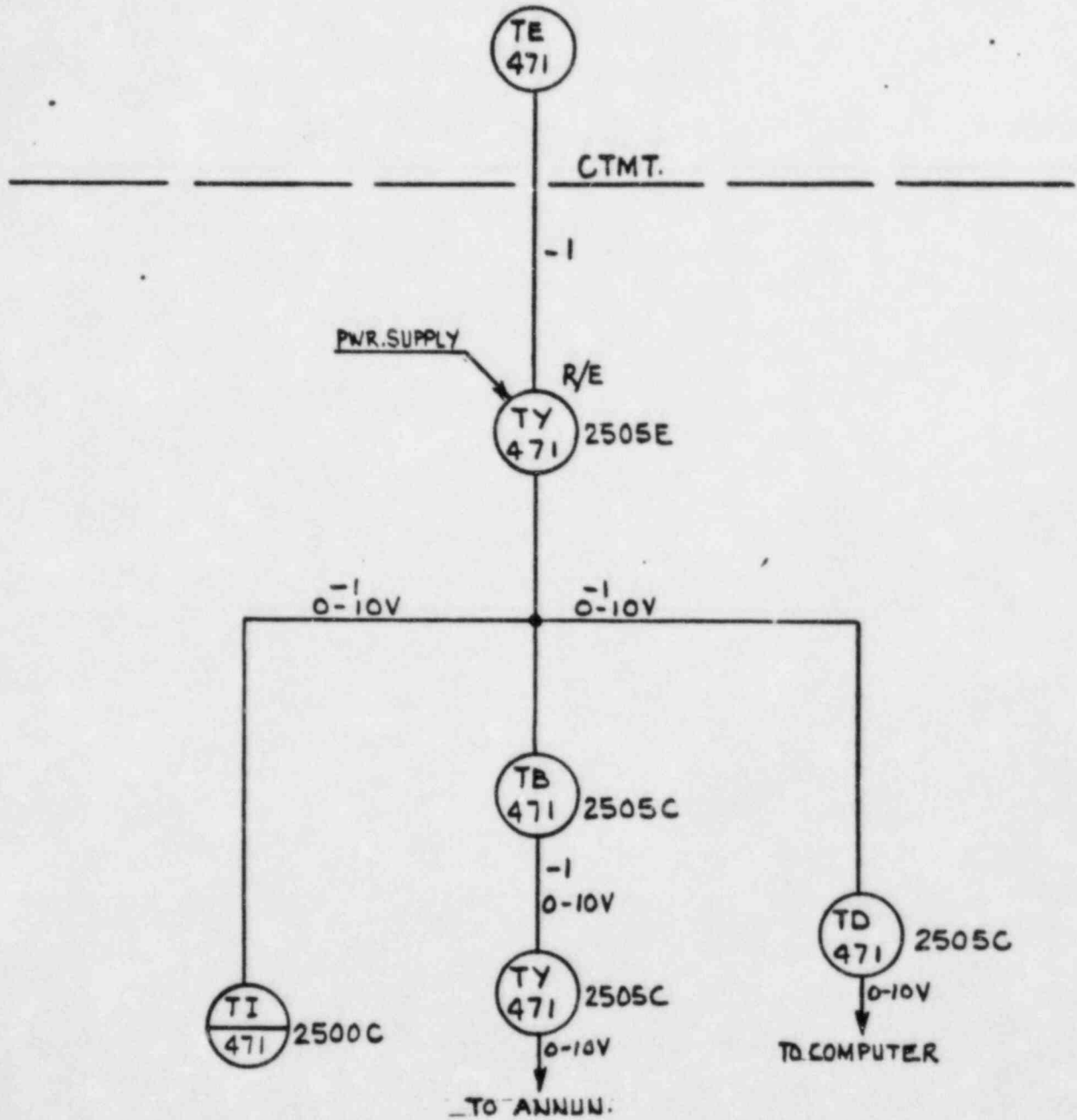
REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1004: PRESSURIZER RELIEF TANK TEMPERATURE

TPNS No(s): TE471

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No Category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	NO	MODIFY
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 1004; PRESSURIZER RELIEF TANK TEMPERATURE



EQUIPMENT LOCATIONS

TE 471	CTMT
2505E,C	CONTROL ROOM
2500C	CONTROL ROOM

REFERENCE DWGS:

W 7377D88
 D-175037/2

SENSOR AND DISPLAY LOCATIONS

VARIABLE 1004: PRESSURIZER RELIEF TANK TEMPERATURE

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
TE471	CTMT	TI471	Control Room

Table 3 correlates room numbers with room names and floor elevations.

7. RANGE

VARIABLE 1004: PRESSURIZER RELIEF TANK TEMPERATURE

EXISTING CONDITION

The maximum temperature indication of the existing instrumentation is below the maximum specified by R.G. 1.97. The minimum temperature indication meets the R.G. 1.97 guidelines.

PROPOSED MODIFICATION

Recalibrate the temperature indication circuit and replace the scale on the meter to provide 50 - 750 degrees F indication.

REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1005: PORTABLE PLANT/ENVIRONS RADIATION

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No Category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	N/A	
12. DIRECT MEASUREMENT	YES	

7. RANGE

VARIABLE 1005: PORTABLE PLANT/ENVIRONS RADIATION

EXISTING CONDITION

The range of existing portable radiation monitoring instrumentation satisfies R.G. 1.97 guidelines for gamma (photon) monitoring. For beta radiation the maximum indication of existing portable instrumentation is below the maximum level specified by R.G. 1.97. The minimum beta radiation level indication satisfies R.G. 1.97 guidelines.

JUSTIFICATION

The existing ranges of these portable instruments are sufficient to monitor the radiation levels in areas of the plant where post-accident access is necessary by plant personnel.

REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1006: CONTAINMENT HYDROGEN CONCENTRATION

TPNS No(s): Q1E23AIT2703A-A & AIT2703B-B

Basis for deviating from the category specified by the Regulatory Guide:

The installed hydrogen analyzers do not satisfy the Category 1 seismic, environmental, redundancy, range, power supply or interface criteria. These have been reviewed as Category 3 instruments on the following basis:

The release and buildup of hydrogen in the containment is a relatively slow process and would not have the potential for jeopardizing containment integrity for several hours. Control room operators utilize containment hydrogen concentration as the basis for verifying the hydrogen removal capability of the hydrogen recombiners. Operation of the hydrogen recombiner minimizes the containment hydrogen concentration during accident conditions.

The EOP's instruct the operators to energize the hydrogen recombiners based on LOCA indications. Hydrogen concentration is not a LOCA indication nor is it used to energize the containment hydrogen recombiners.

In the event that the hydrogen analyzers are unavailable to provide the control room operators with containment hydrogen concentrations, sufficient time is available to determine the containment hydrogen concentration utilizing the containment air post-accident sampling system (CAPASS). Alabama Power Company installed the CAPASS as a part of commitments made in response to the TMI Action Plan. Periodic samples can be obtained from the CAPASS such that the hydrogen recombiners can be adjusted to minimize containment hydrogen buildup. As stated in letters to the NRC dated January 14, 1981 (Unit 1) and June 20, 1980 (Unit 2), whole body and extremity doses to an individual obtaining a containment air post-accident sample will not exceed 3 and 18 3/4 rems respectively.

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	

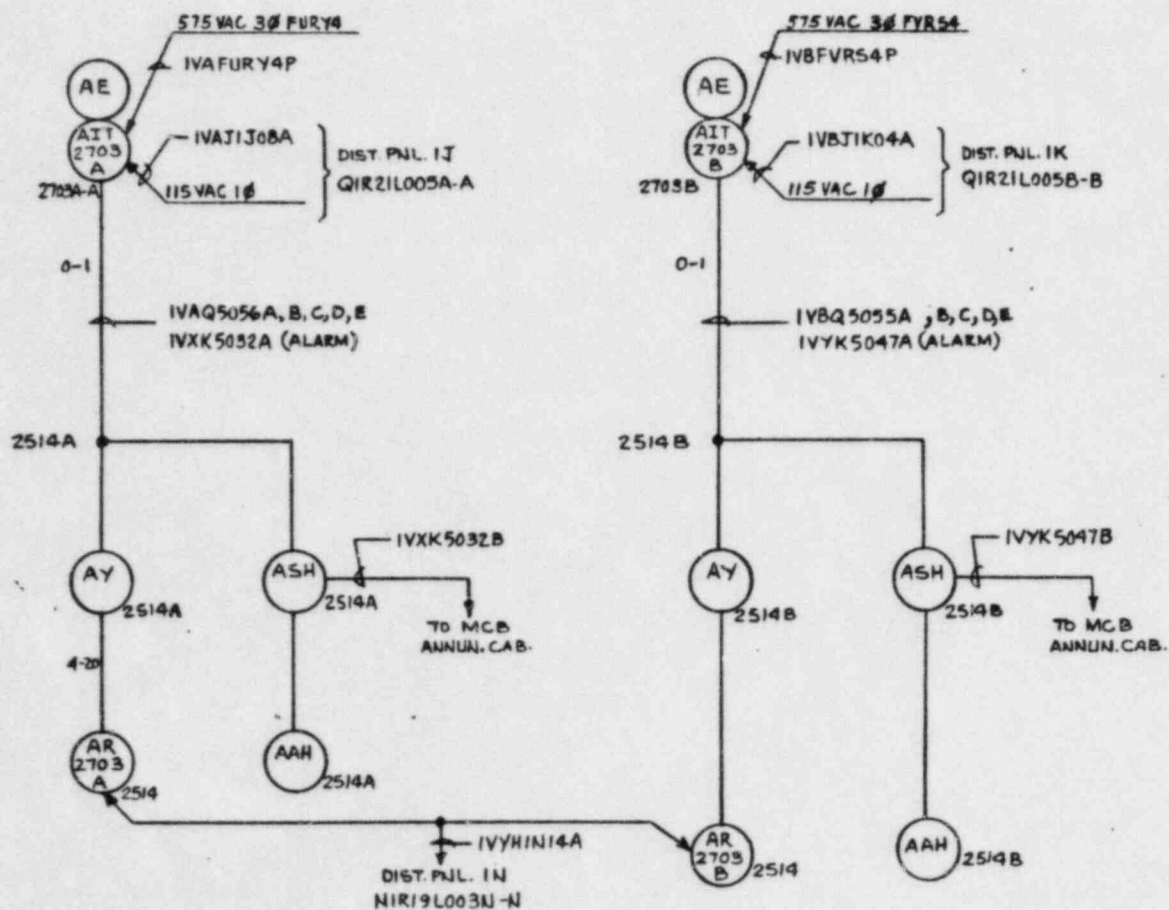
CONTINUED

REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1006: CONTAINMENT HYDROGEN CONCENTRATION

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
VARIABLE 1006: CONTAINMENT HYDROGEN CONCENTRATION



NOTE:

INTERCONNECTING CONTROL WIRING NOT SHOWN.
2514A REFERS TO A REMOTE CONTROL PANEL
IN CAB. 2514-AB.
2514B REFERS TO B REMOTE CONTROL PANEL
IN CAB. 2514-AB.
POWER TO THE 2514 RACKS IS SUPPLIED BY THE
2703 RACKS VIA THE INTERCONNECTING CABLES.
AIT 2703A-A RM. 333, D-177457
AIT 2703B-B RM. 334, D-177457

EQUIPMENT LOCATIONS

AIT2703A	RM. 333
AIT2703B	RM 334
2514	CONTROL ROOM

REFERENCE DWGS:

P & ID D-175019
D-181626 WIRING DIAG.
M254-22
M254-25

SENSOR AND DISPLAY LOCATIONS

VARIABLE 1006: CONTAINMENT HYDROGEN CONCENTRATION

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
AIT2703A	RM. 333	AR2703A	Control Room
AIT2703B	RM. 334	AR2703B	Control Room

Table 3 correlates room numbers with room names and floor elevations.

7. RANGE

VARIABLE 1006: CONTAINMENT HYDROGEN CONCENTRATION

EXISTING CONDITION

The existing instrumentation meets the R. G. 1.97 range guidelines except that the operating pressure range is deficient.

JUSTIFICATION

The operating pressure range is acceptable because it envelopes the plant specific design basis accident.

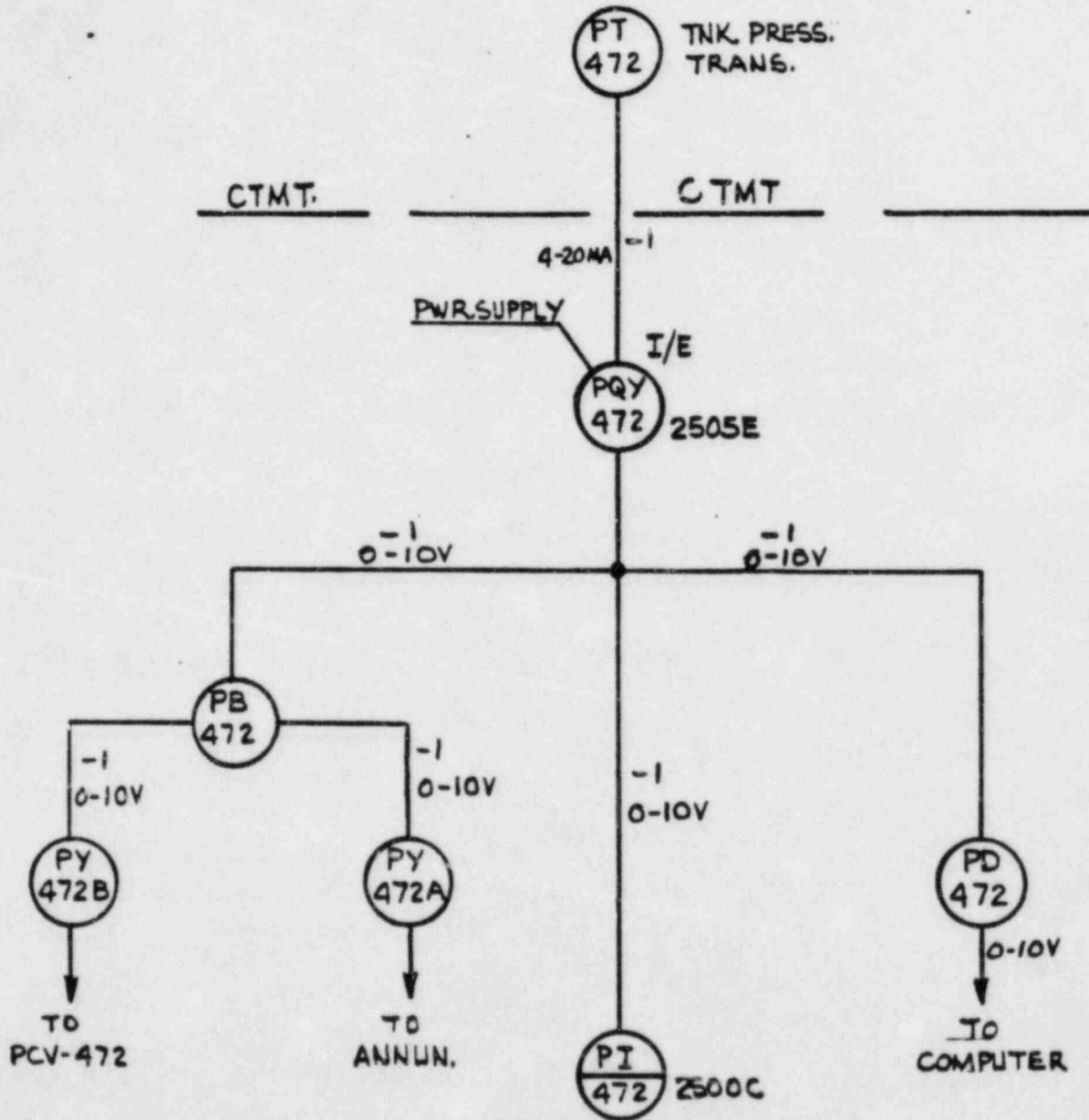
REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1007: PRESSURIZER RELIEF TANK PRESSURE

TPNS No(s): PT472

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No Category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE 1007: PRESSURIZER RELIEF TANK PRESSURE



EQUIPMENT LOCATIONS

PT 472	CTMT.
2505E	CONTROL ROOM
2500C	CONTROL ROOM

REFERENCE DWGS:

W 7377D89
D- 175037 / 2

SENSOR AND DISPLAY LOCATIONS

VARIABLE 1007: PRESSURIZER RELIEF TANK PRESSURE

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
PT472	CTMT	PI472	Control Room

Table 3 correlates room numbers with room names and floor elevations.

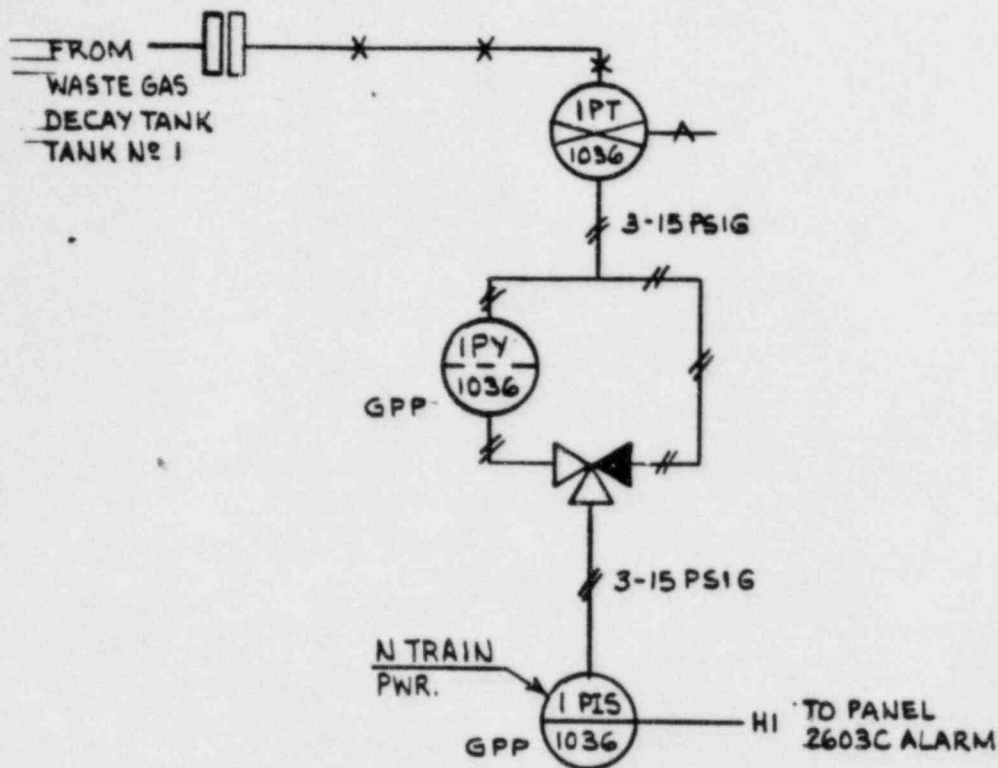
REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1008: WASTE GAS DECAY TANK PRESSURE

TPNS No(s): PT1036, PT1037, PT1038, PT1039, PT1052, PT1053, PT1054,
PT1055

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No Category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	NO N/A	MODIFY
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE 1008: WASTE GAS DECAY TANK PRESSURE



THIS ARRANGEMENT IS APPLICABLE TO THE WASTE GAS DECAY TANKS AS INDICATED BELOW.

WASTE GAS DECAY TANK	NIG22 PT	NIG22 PY	NIG22 PIS
1	1036	1036	1036
2	1037	1037	1037
3	1038	1038	1038
4	1039	1039	1039
5	1052	1052	1052
6	1053	1053	1053
7	1054	1054	1054
8	1055	1055	1055

EQUIPMENT LOCATIONS

IPT-1036 RM.163
 IPT-1037 RM.163
 IPT-1038 RM.163
 IPT-1039 RM.163
 IPT-1052 RM.163
 IPT-1053 RM.163
 IPT-1054 RM.102
 IPT-1055 RM.102
 2603C RM.162/163

REFERENCE DWGS:

W-2717C597
 D-175042/5
 D-175042/6

SENSOR AND DISPLAY LOCATIONS

VARIABLE 1008: WASTE GAS DECAY TANK PRESSURE

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
PT1036	RM. 163	PIS1036	RM. 162
PT1037	RM. 163	PIS1037	RM. 162
PT1038	RM. 163	PIS1038	RM. 162
PT1039	RM. 163	PIS1039	RM. 162
PT1052	RM. 163	PIS1052	RM. 162
PT1053	RM. 163	PIS1053	RM. 162
PT1054	RM. 102	PIS1054	RM. 162
PT1055	RM. 102	PIS1055	RM. 162

Table 3 correlates room numbers with room names and floor elevations.

6. DISPLAY AND RECORDING

VARIABLE 1008: WASTE GAS DECAY TANK PRESSURE

EXISTING CONDITION

The existing pressure indicators are located in an area that may not be accessible post accident.

PROPOSED MODIFICATION

Provide remote pressure indication in the control room in addition to the existing local indication.

7. RANGE

VARIABLE 1008: WASTE GAS DECAY TANK PRESSURE

EXISTING CONDITION

The maximum pressure indication of the existing instrumentation is below the maximum specified by R.G. 1.97. The minimum pressure indication satisfies the R.G. 1.97 guidelines.

JUSTIFICATION

The range of the existing instrumentation is acceptable because relief valves are installed on each tank to prevent pressure from exceeding the tank design value of 150 psig. The existing instrumentation can measure up to the design pressure of the tank. Measurement of tank pressures in excess of the design pressure, which is the relief valve setpoint, is not necessary.

REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

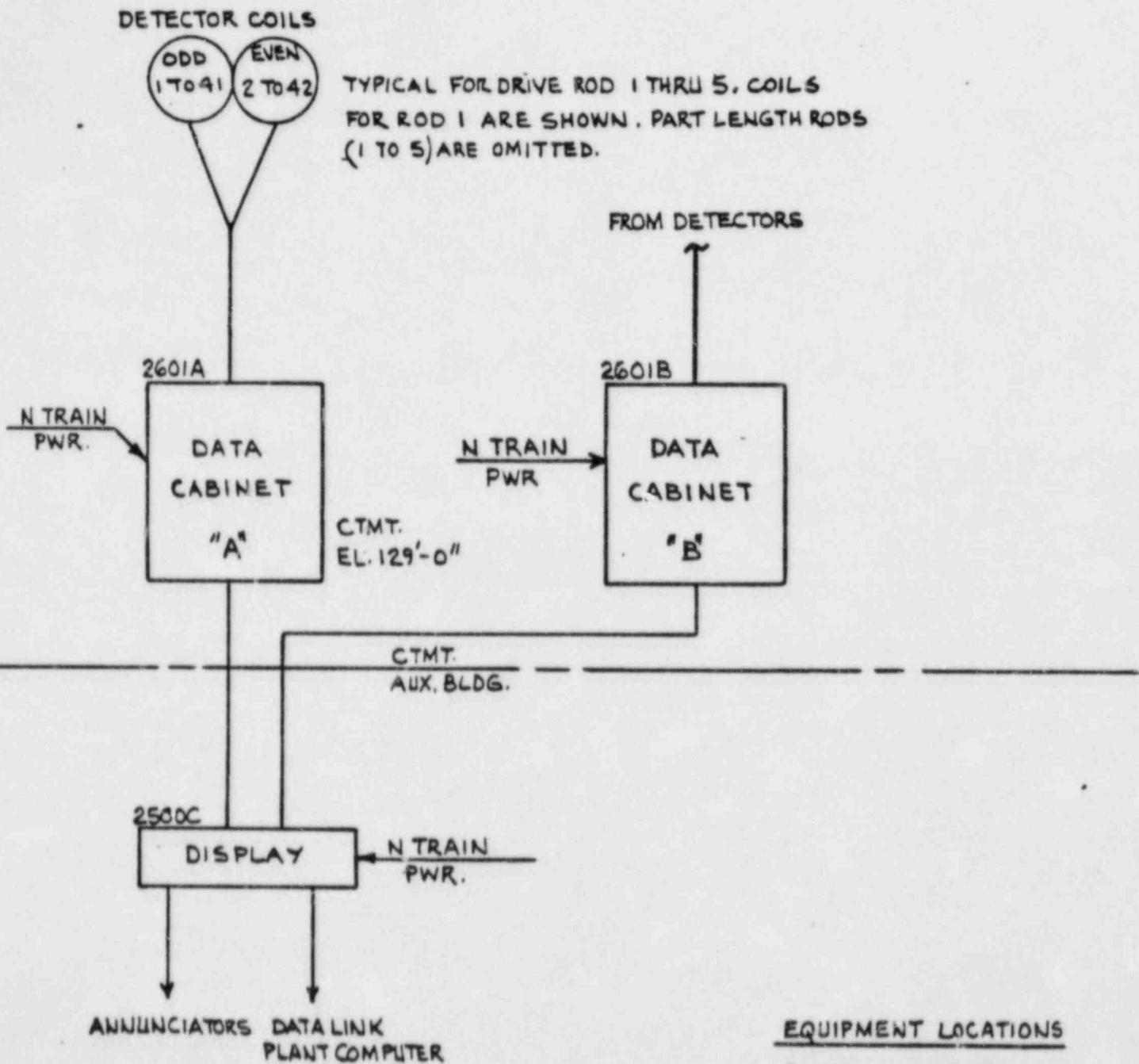
VARIABLE 1009: CONTROL ROD POSITION

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No Category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

CONTROL RODS

ROD BANK	ROD No	ROD GRID LOCATION	ROD BANK	ROD No	ROD GRID LOCATION	ROD BANK	ROD No	ROD GRID LOCATION
SHUTDOWN	1	G3	CONTROL	1	F2	CONTROL	1	D4
BANK A (SBA)	2	C9	BANK A (CBA)	2	B10	BANK C (CBC)	2	D12
	3	J13		3	K14		3	M12
	4	N7		4	P6		4	M4
	5	NO ROD		5	K2		5	H6
	6	J3		6	B6		6	F8
	7	C7		7	F14		7	H10
	8	G13		8	P10		8	K8
	9	N9	↓	9	NO ROD	↓	9	NO ROD
↓	10	NO ROD						
SHUTDOWN	1	E5	CONTROL	1	F4	CONTROL	1	H2
BANK B (SBB)	2	E11	BANK B (CBB)	2	D10	BANK D (CBD)	2	B8
	3	L11		3	K12		3	H14
	4	L5		4	M6		4	P8
	5	G7		5	K4		5	F6
	6	G9		6	D6		6	F10
	7	J9		7	F12		7	K10
	8	J7		8	M10		8	K6
↓	9	NO ROD	↓	9	NO ROD	↓	9	NO ROD

FUNCTIONAL LOOP BLOCK DIAGRAM VARIABLE 1009: CONTROL ROD POSITION



EQUIPMENT LOCATIONS	
2601A	CTMT
2601B	CTMT
2500C	CONTROL ROOM

SENSOR AND DISPLAY LOCATIONS

VARIABLE 1009: CONTROL ROD POSITION

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
Detector Coils	CTMT	-	Control Room

Table 3 correlates room numbers with room names and floor elevations.

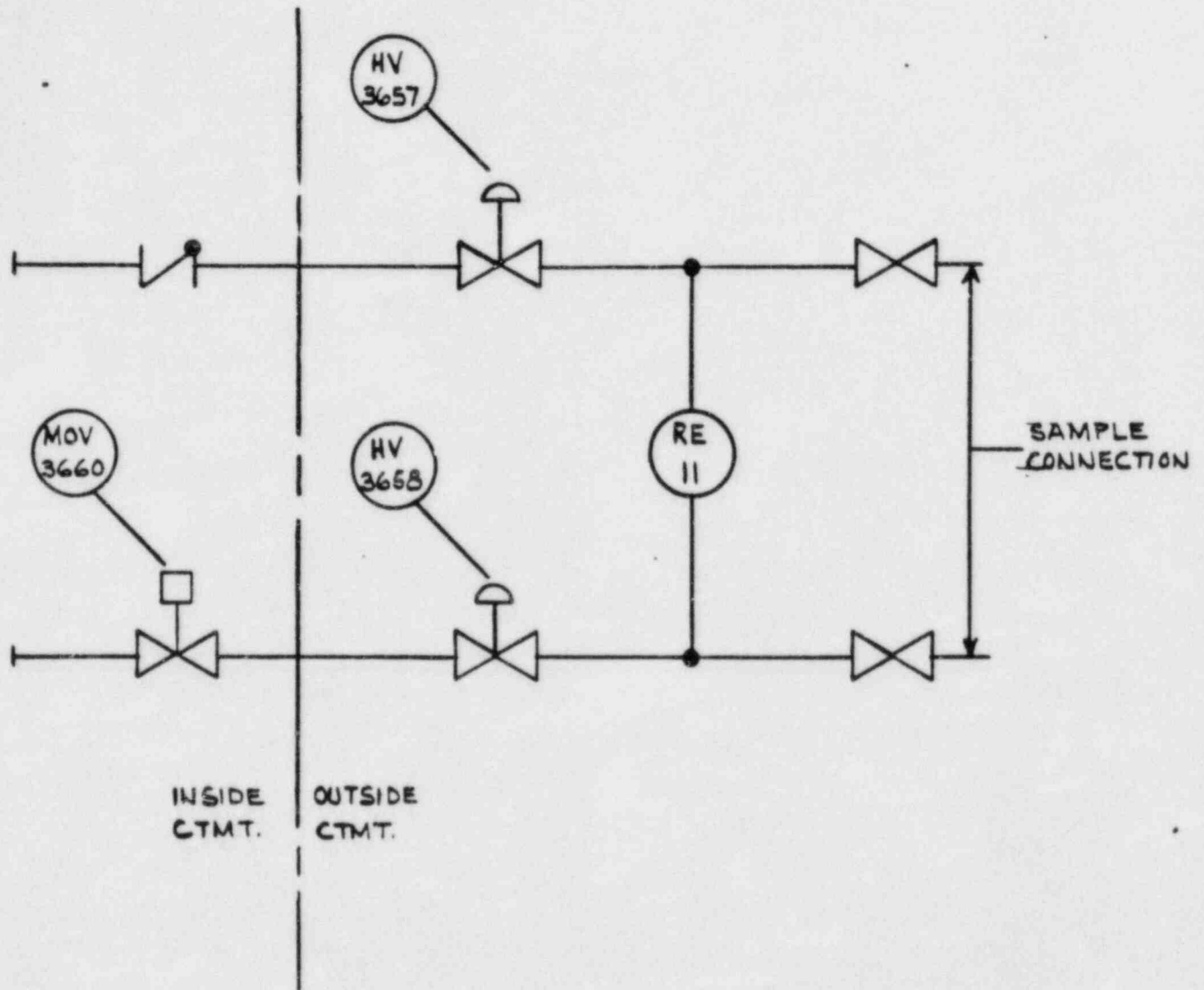
REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1010: POST ACCIDENT SAMPLE - CTMT AIR

TPNS No(s): HV3657, HV3658, MOV3660

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No Category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	N/A	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL PIPING DIAGRAM VARIABLE IOIO; POST ACCIDENT SAMPLING-CTMT.AIR



INSIDE CTMT. OUTSIDE CTMT.

REFERENCE DWGS:

D-175010/2

EQUIPMENT LOCATIONS

MOV3660	CTMT
HV3657	RM. 223
HV3658	RM. 223

SENSOR AND DISPLAY LOCATIONS

VARIABLE 1010: POST ACCIDENT SAMPLE - CTMT AIR

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
Grab Sample Connection	RM. 223	-	Lab

Table 3 correlates room numbers with room names and floor elevations.

7. RANGE

VARIABLE 1010: POST ACCIDENT SAMPLE CONTAINMENT AIR

EXISTING CONDITION

The minimum quantifiable concentrations of oxygen and hydrogen do not satisfy R.G. 1.97 guidelines. The maximum quantifiable concentrations and the capability for isotropic analysis satisfy R.G. 1.97 guidelines.

JUSTIFICATION

The range of the existing sample analysis capabilities is satisfactory because the minimum quantifiable concentrations represent the minimum detectable concentrations. Furthermore, quantification of the concentration below the minimums identified would serve no useful purpose for accident analysis, mitigation or recovery.

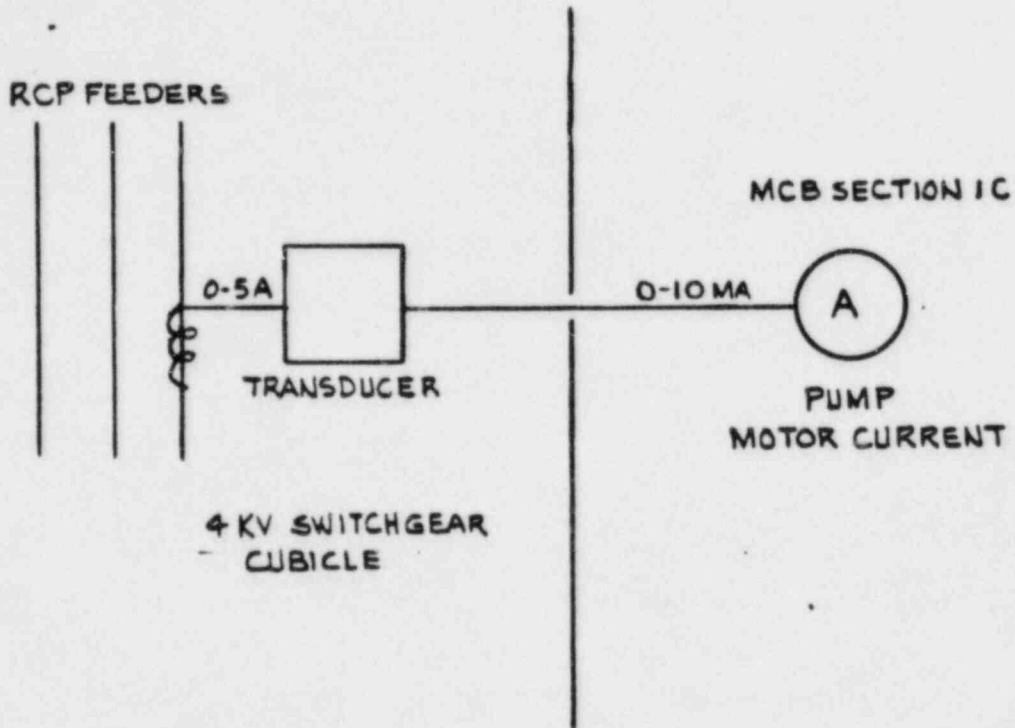
REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1011: RCP MOTOR CURRENT

TPNS No(s): DA04, DB03, DC03

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No Category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE IO11: RCP MOTOR CURRENT



4 KV SWITCHGEAR CUBICLE	RCP MOTOR
DA04	IA
DB03	IB
DC03	IC

EQUIPMENT LOCATIONS

DA04 RM. 346
 DB03 RM. 343
 DCC3 RM. 343

REFERENCE DWGS:

D-177174

SENSOR AND DISPLAY LOCATIONS

VARIABLE 1011: RCP MOTOR CURRENT

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
DA04	RM. 346	MCB Item C-43	Control Room
DB03	RM. 343	MCB Item C-44	Control Room
DC03	RM. 343	MCB Item C-45	Control Room

Table 3 correlates room numbers with room names and floor elevations.

REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1012: PARTICULATES AND HALOGENS SAMPLING (VENT STACK)

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No Category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	N/A	
12. DIRECT MEASUREMENT	YES	

SENSOR AND DISPLAY LOCATIONS

VARIABLE 1012: PARTICULATES AND HALOGENS SAMPLING (VENT STACK)

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
Vent Stack Filter	Plant Vent	-	Lab

Table 3 correlates room numbers with room names and floor elevations.

REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1013: AIRBORNE RADIO-HALOGENS AND PARTICULATES (ENVIRONS)

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No Category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	N/A	
12. DIRECT MEASUREMENT	YES	

SENSOR AND DISPLAY LOCATIONS

VARIABLE 1013: AIRBORNE RADIO-HALOGENS AND PARTICULATES (ENVIRONS)

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
Portable Sampler	-	-	Lab

Table 3 correlates room numbers with room names and floor elevations.

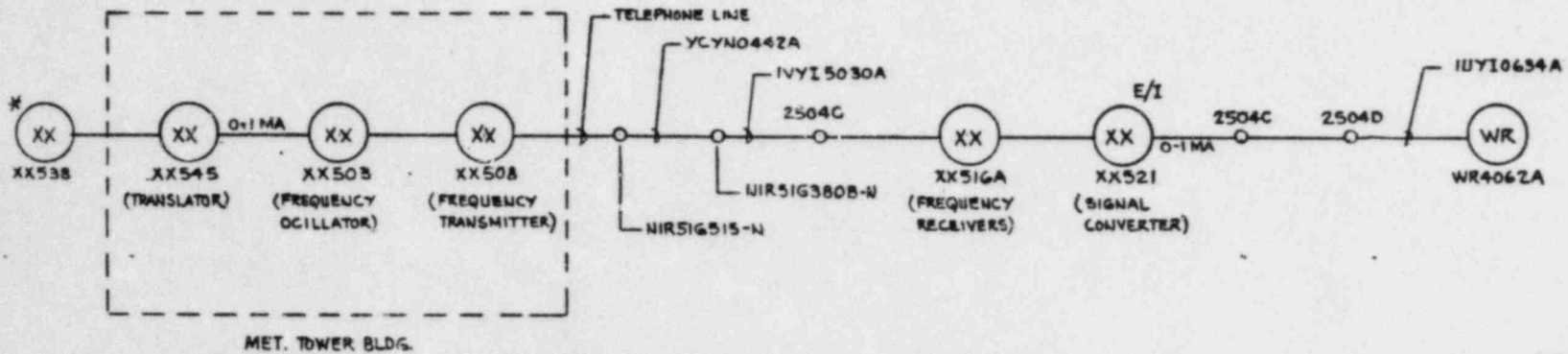
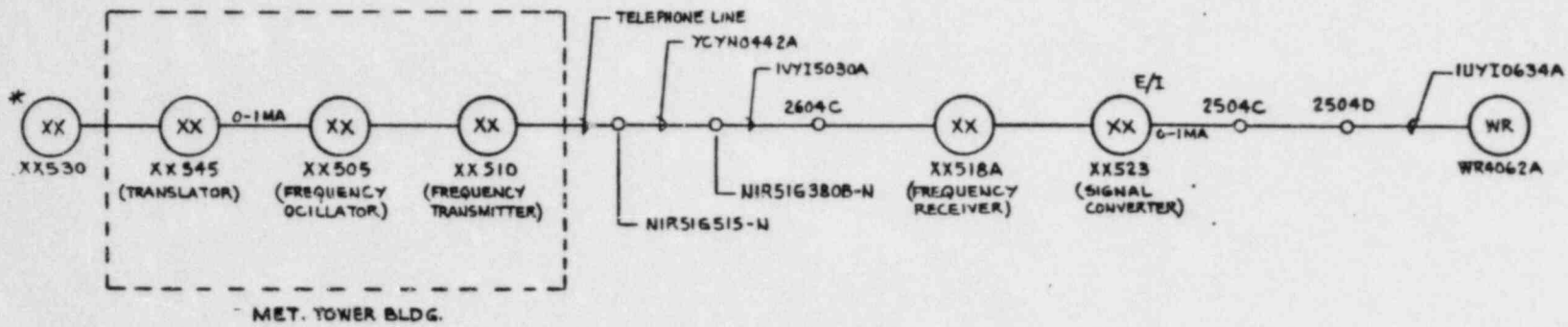
REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1014: WIND DIRECTION

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No Category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 1014: WIND DIRECTION

EQUIPMENT LOCATIONS
 WR4062A CONTROL ROOM



REFERENCE DWGS:

D-170981

* ON MET. TOWER

SENSOR AND DISPLAY LOCATIONS
VARIABLE 1014: WIND DIRECTION

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
XX530	Met. Tower Bldg.	WR4062A	Control Room
XX538	Met. Tower Bldg.	WR4062A	Control Room

Table 3 correlates room numbers with room names and floor elevations.

REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

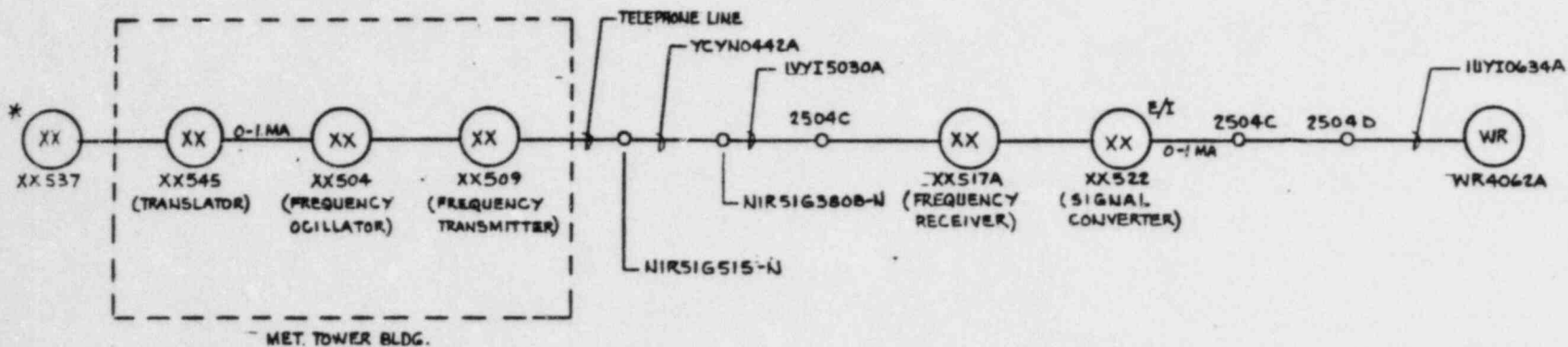
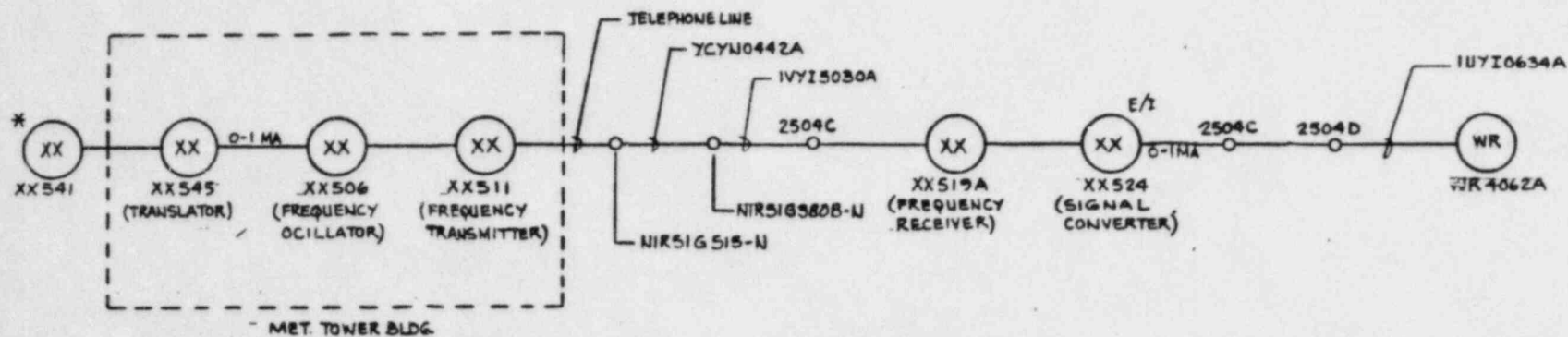
VARIABLE 1015: WIND SPEED

TPNS No(s): N1Y34XX541, N1Y34XX537

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No Category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
VARIABLE 1015: WIND SPEED

EQUIPMENT LOCATIONS
WR4062A CONTROL ROOM



* ON MET. BLDG.

REFERENCE DWGS

D-170981

SENSOR AND DISPLAY LOCATIONS

VARIABLE 1015: WIND SPEED

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
XX541	Met. Tower Bldg.	WR4062A	Control Room
XX537	Met. Tower Bldg.	WR4062A	Control Room

Table 3 correlates room numbers with room names and floor elevations.

7. RANGE COMPLIANCE REVIEW

VARIABLE 1015: WIND SPEED

EXISTING CONDITION

The maximum speed indication of the existing wind speed instrumentation is 17 mph below the R.G. 1.97 guideline.

JUSTIFICATION

The existing wind speed instrumentation has historically provided reliable monitoring of wind speed. In accordance with Supplement 1 of NUREG-0737 no changes in the existing meteorological monitoring system are necessary if they have historically provided reliable indications that are representative of meteorological conditions in the vicinity of the plant. Therefore, no wind speed instrumentation modifications are necessary.

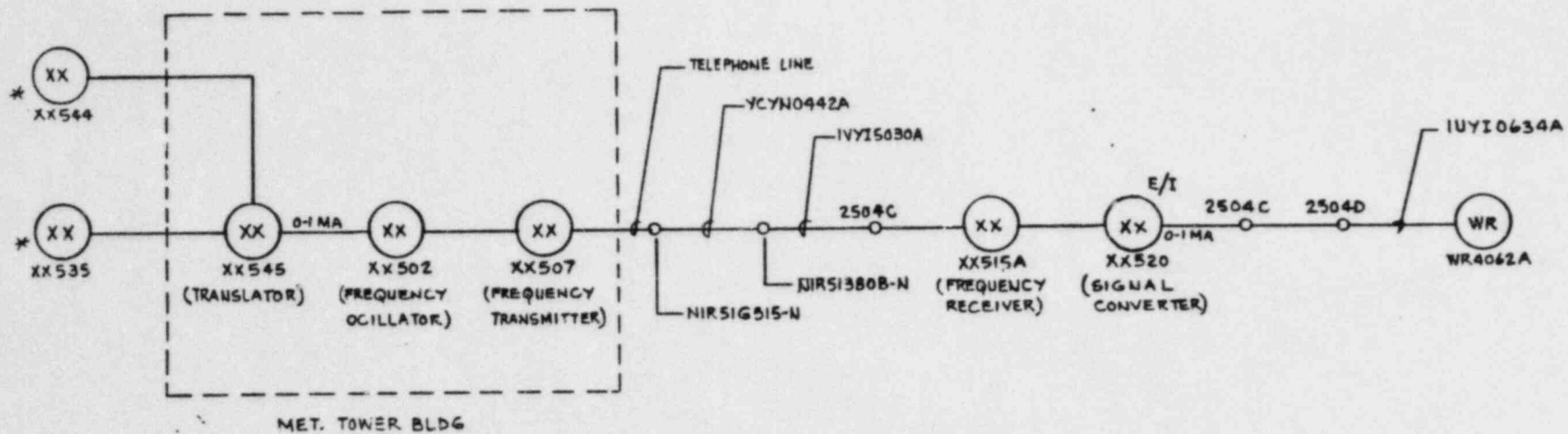
REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1016: ESTIMATION OF ATMOSPHERIC STABILITY

TPNS No(s): N1Y34XX535, N1Y34XX544

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No Category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES YES	
7. RANGE	YES	
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
 VARIABLE 1016: ESTIMATION OF ATMOSPHERIC STABILITY



REFERENCE DWGS

D-170981

* ON MET. TOWER

EQUIPMENT LOCATIONS

WR 4062A CONTROL ROOM

SENSOR AND DISPLAY LOCATIONS

VARIABLE 1016: ESTIMATION OF ATMOSPHERIC STABILITY

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
XX535	Met. Tower Bldg.	WR4062A	Control Room
XX544	Met. Tower Bldg.	WR4062A	Control Room

Table 3 correlates room numbers with room names and floor elevations.

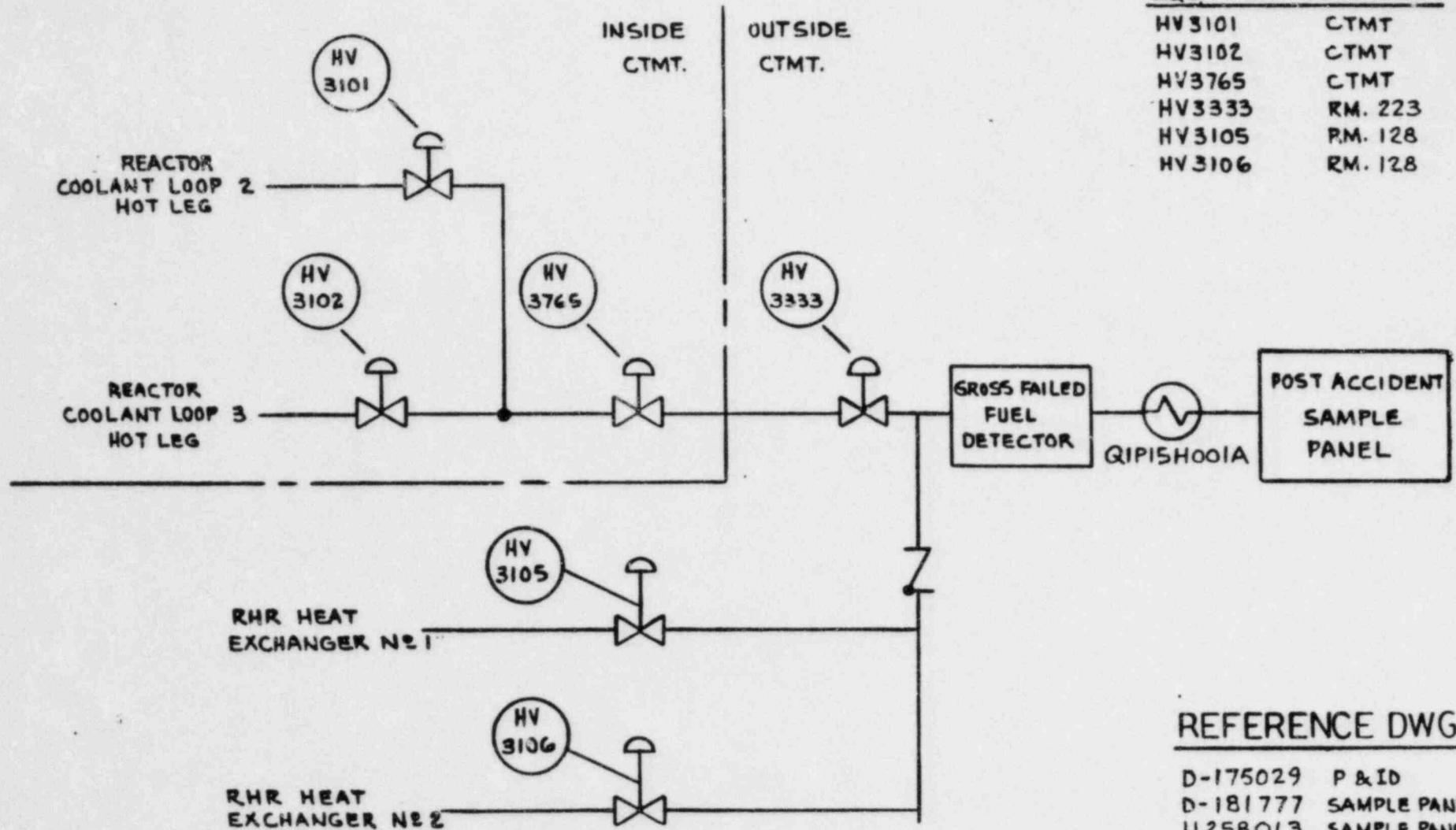
REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1017: POST ACCIDENT SAMPLE

TPNS No(s): HV3101, HV3102, HV3765, HV3333, HV3105, HV3106,
Q2P15NFSS2607B-B

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	N/A	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL PIPING DIAGRAM VARIABLE IOI7: POST ACCIDENT SAMPLE



EQUIPMENT LOCATIONS

HV3101	CTMT
HV3102	CTMT
HV3765	CTMT
HV3333	RM. 223
HV3105	RM. 128
HV3106	RM. 128

REFERENCE DWGS:

D-175029	P & ID
D-181777	SAMPLE PANEL
U 258013	SAMPLE PANEL
D-177371	HV3765
D-177372	HV3333
D-177390	HV 3101 & HV3102

SENSOR AND DISPLAY LOCATIONS

VARIABLE 1017: POST ACCIDENT SAMPLE

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
Grab Sample Connection	RM. 223	-	Lab

Table 3 correlates room numbers with room names and floor elevations.

7. RANGE

VARIABLE 1017: POST ACCIDENT SAMPLE

EXISTING CONDITION

The minimum quantifiable concentrations of boron, chlorides, dissolved H₂, total gas and O₂ do not meet R.G. 1.97 guidelines. The maximum quantifiable concentrations of all desired sample parameters and the capability for isotropic analysis meets the R.G. 1.97 guidelines.

JUSTIFICATION

The range of the existing sample analysis capabilities is satisfactory because analysis below the minimums identified would serve no useful purpose for accident analysis, mitigation or recovery.

REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1018: ACCUMULATOR TANK LEVEL

TPNS No(s): LT920, LT924, LT928

Basis for deviating from the category specified by the Regulatory Guide:

R.G. 1.97 intends that accumulator tank level be used to monitor the operation of the safety injection system (Accumulator Tank Discharge). The accumulator tank level instrumentation at FNP was designed solely to verify compliance with the technical specification volume provisions. In the event of RCS depressurization, accumulator tank discharge is verified by monitoring accumulator tank pressure (Variable 125).

The accumulator tank level instrumentation has been reviewed against the R.G. 1.97 Category 3 guidelines even though the instrumentation meets the Category 2 guidelines in all areas except Environmental Qualification and Range.

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
1. QUALIFICATION a) ENVIRONMENTAL b) SEISMIC	No category 3 requirements	
2. REDUNDANCY	No category 3 requirements	
3. POWER SUPPLY	No category 3 requirements	
4. CHANNEL AVAILABILITY	No category 3 requirements	
5. QUALITY ASSURANCE	YES	
6. DISPLAY AND RECORDING a) DISPLAY b) RECORDING	YES N/A	
7. RANGE	NO	JUSTIFY
8. EQUIPMENT IDENTIFICATION	No category 3 requirements	

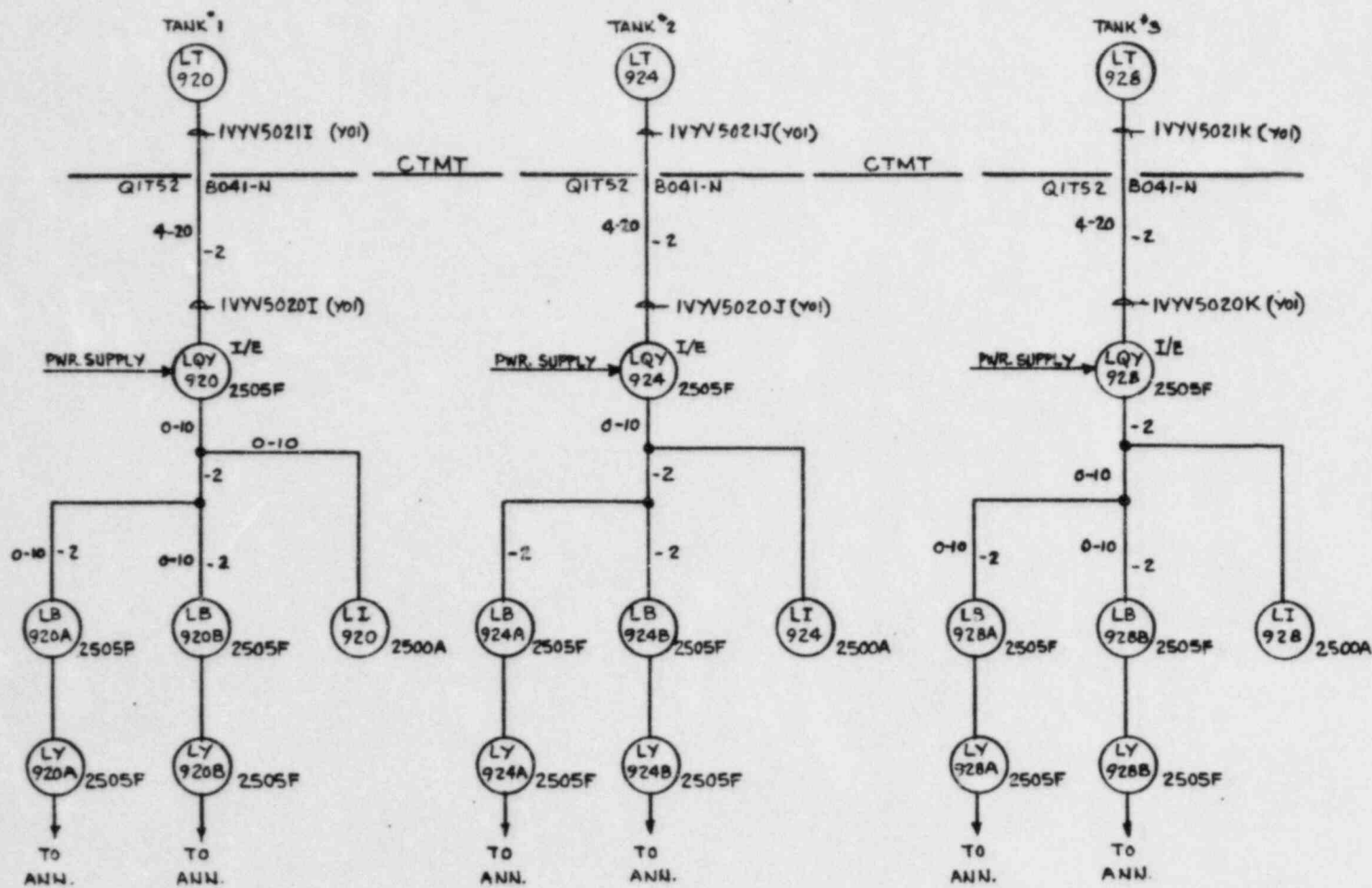
REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1018: ACCUMULATOR TANK LEVEL

GUIDELINES	MEETS R.G. 1.97	RESOLUTIONS TO NONCOMPLIANCES
9. INTERFACES (isolation)	No category 3 requirements	
10. SERVICING, TESTING, CALIBRATION	YES	
11. HUMAN FACTORS	YES	
12. DIRECT MEASUREMENT	YES	

FUNCTIONAL LOOP BLOCK DIAGRAM
VARIABLE IOIB:ACCUMULATOR TANK LEVEL

EQUIPMENT LOCATIONS	
LT 920	CTMT
LT 924	CTMT
LT 928	CTMT
2505F	CONTROL ROOM
2500A	CONTROL ROOM



REFERENCE DWGS:

W 7378D06 (LT 920)(LT 924)
W 7378D07 (LT 928)
D-175038/2
D-175149
U 260950

SENSOR AND DISPLAY LOCATIONS

VARIABLE 1018: ACCUMULATOR TANK LEVEL

<u>SENSOR NO.</u>	<u>SENSOR LOCATION</u>	<u>DISPLAY NO.</u>	<u>DISPLAY LOCATION</u>
LT920	CTMT	LI920	Control Room
LT924	CTMT	LI924	Control Room
LT928	CTMT	LI928	Control Room

Table 3 correlates room numbers with room names and floor elevations.

7. RANGE

VARIABLE 1018: ACCUMULATOR TANK LEVEL

EXISTING CONDITION

The Regulatory Guide range guideline is 10 to 90% with the intention of using accumulator tank level to monitor the operation of the safety injection system (Accumulator Tank Discharge).

JUSTIFICATION

In the event of RCS depressurization, accumulator tank discharge is verified by monitoring accumulator tank pressure (Variable 125). The existing accumulator tank level instrumentation is intended to verify compliance with the Technical Specification volume provisions and has a range which is adequate to do so.

REGULATORY GUIDE 1.97 CATEGORY 3
COMPLIANCE REPORT

VARIABLE 1019: PORTABLE PLANT/ENVIRONS RADIOACTIVITY
(GAMMA-RAY SPECTROMETER)

EXISTING CONDITION:

Farley Nuclear Plant does not have a multichannel gamma-ray spectrometer that is portable.

JUSTIFICATION:

R.G. 1.97, Rev. 3 states that portable instrumentation should be provided for isotopic analysis of plant and environs radioactivity. Footnotes 17 and 18 clarify that "a portable multichannel gamma-ray spectrometer would provide the earliest capability for scoping the radionuclide content of the source," and this instrument is "to monitor radiation and airborne radioactivity concentration throughout the facility and the site."

Farley Nuclear Plant does not have a portable multichannel gamma-ray spectrometer but does have two non-portable multichannel analyzers (MCA) located in the Counting Room of the plant. The MCAs are equipped with a germanium-lithium detector so as to provide accurate isotropic analysis of the plant and environ samples. The MCAs have the capability to analyze samples in less than 15 minutes from the time the sample is delivered to the MCAs. The MCAs located in the plant are used during normal plant operations and are instruments familiar to plant personnel.

In accordance with the Emergency Action Plan, the Health Physics Manager reporting to the TSC coordinates the sampling and analysis activities with the in-plant Radiation Monitoring Team. The Health Physics Manager is also responsible for coordination of the out-of-plant and APCo off-site Radiation Monitoring Teams until relieved by the EOF staff. At this time, the Dose Assessment Director would coordinate the sampling and analysis activities with the out-of-plant and APCo off-site Radiation Monitoring Teams.

Alabama Power Company does not believe that a portable multichannel gamma-ray spectrometer would enhance the capability to perform isotropic analysis. A portable device can only provide "scoping" of the radionuclide content and can not provide a quantitative measurement. The existing non-portable MCA's at Farley Nuclear Plant would provide a quantitative measurement of the radionuclide content.

In the opinion of Alabama Power Company, the two existing multichannel analyzers and the coordination of sampling and analysis by the TSC and EOF staffs are sufficient to provide for isotropic analysis and an adequate and timely assessment of radioactive releases.

APPENDIX A

ENVIRONMENTAL QUALIFICATION JUSTIFICATION

R. G. 1.97 states that Category 1 and 2 instrumentation should be qualified in accordance with R. G. 1.89, "Qualification of Class IE Equipment for Nuclear Power Plants". R. G. 1.89 endorses the recommendations of IEEE-323-1974 subject to supplementary provisions. IEEE-323-1974 is a revision of IEEE 323-1971, however, IE Bulletin 79-01B, which is applicable to Farley Nuclear Plant Unit 1, was not intended to provide guidelines for implementing either version of IEEE Std. 323 for operating reactors. Certain accident monitoring instruments were previously required to be qualified in accordance with IE Bulletin 79-01B. Alabama Power Company has identified this instrumentation in previous environmental qualification submittals by plant identification number, generic component name, manufacturer and model numbers as well as the applicable qualification test documentation.

In certain instances, the instrumentation previously required to be qualified by IE Bulletin 79-01B is also within the scope of R. G. 1.97. This equipment is qualified to IE Bulletin 79-01B but is not known to be qualified to R. G. 1.89. No efforts by Alabama Power Company have been expended to requalify equipment previously qualified to IE Bulletin 79-01B.

Supplement 1 to NUREG-0737, Paragraph 6.6.6 states, "Eventually, all the equipment required to monitor the course of an accident would be environmentally qualified in accordance with the pending Commission rule on environmental qualification (10CFR50.49)". The requalification of electrical equipment important to safety is not required by 10CFR50.49, Paragraph K if that equipment was previously required to be qualified in accordance with the DOR Guidelines, Enclosure 4 of IE Bulletin 79-01B. R. G. 1.97 instrumentation is interpreted by APCo to be within the scope of 10CFR50.49, Paragraph (b) (3). Accident Monitoring Instrumentation located in a harsh environment was included in APCo's response to IE Bulletin 79-01B. However, R. G. 1.97 has expanded the scope of required accident monitoring instrumentation beyond that considered in the APCo IE Bulletin 79-01B submittal. Therefore, presently installed R. G. 1.97 accident monitoring instrumentation equipment that has been or can be shown to be qualified to IE Bulletin 79-01B will not be scheduled for replacement and is in compliance with 10CFR50.49.

It should be noted that, if this equipment is replaced in future plant activities to address a design change, the replaced components will be qualified to 10CFR50.49. Additionally, component maintenance schedules have been established to ensure that these presently installed components will be refurbished in order to maintain their previous qualification standards, as specified by IE Bulletin 79-01B, in accordance with Alabama Power Company's Administrative Program for Environmental Qualification.

APPENDIX B

SEISMIC QUALIFICATION JUSTIFICATION

Regulatory Guide 1.97 states that all Category 1 variables and those Category 2 variables which are safety related should be in compliance with IEEE 344-1975 which is the requirement of R.G. 1.100.

The design basis for Seismic Category 1 and 2 equipment installed at Farley Nuclear Plant is IEEE 344-1971 as discussed in FSAR Chapter 3.10. As stated in the FSAR, an NRC audit of Westinghouse electrical equipment tested prior to May 1974 found "that adequate assurance is achieved for this equipment to sustain seismic excitations to their designated SSE levels." For equipment to be tested after May 1974, and for equipment to be installed in plants having a construction permit docketed after October 1972, Westinghouse has committed to conduct seismic qualification testing conformance with IEEE 344-1975.

Additionally, the NRC has employed several consultants in an effort to resolve the issues regarding seismic qualification of equipment in operating plants. These consultants have found that there does not appear to be any justification for upgrading the seismic qualification of equipment since such an upgrade would not reduce the risk significantly. This conclusion was based on findings that, due to the unique character of operating plants, current qualification criteria cannot be economically and safely applied; backfits with seismically qualified components cannot be justified because it will not reduce risks significantly; and upgrading equipment does not introduce a marked reduction in risk since overall seismic-induced structural failures contribute more significantly than equipment failures. (Reference: NUREG/CR-3357 and Idaho National Laboratory WCB Document ID9274E, draft E, dated September 22, 1982).

It is the opinion of Alabama Power Company that upgrading the seismic qualification of R. G. 1.97 instrumentation would not significantly enhance the emergency response capabilities of Farley Nuclear Plant. Consequently, the current Farley Nuclear Plant seismic qualification criteria as outlined in FSAR Chapter 3.10, is sufficient to ensure the operability of accident monitoring instrumentation taking into consideration the effects of seismic events.

APPENDIX C

QUALITY ASSURANCE PROVISIONS

Alabama Power Company utilizes a comprehensive Operations Quality Assurance Program to assure safe operation of the Farley Nuclear Plant. Continuing objectives of the program are to assure that quality requirements are adequately identified for use; to verify compliance with the identified requirements; and to apprise management of developing trends and problems. The program utilizes guides from the U. S. Nuclear Regulatory Commission and is formulated to comply with Title 10, United States Code of Federal Regulations, Part 50, Appendix B.

The policies that constitute the program and associated organizational responsibilities are described in the Operations Quality Assurance Policy Manual. Implementing instructions have been published in administrative procedures as shown on the Operations Quality Assurance Policy Implementation List.

The program is managed by the Manager-Safety Audit and Engineering Review reporting to the Vice President-Nuclear Generation. The Vice President-Nuclear Generation approves the program content and conducts a continuing review of program effectiveness.

Procurement documents for safety-related parts, assemblies and material are handled in accordance with approved procedures. These procedures are based upon 10CFR50, Appendix B, Criterion IV and ANSI-N45.2.13 (Draft 2, Rev. 4, April 1974). They provide for the inclusion of applicable regulatory quality requirements by knowledgeable personnel. Vendor QA programs are also reviewed by Alabama Power Company to ensure compliance with the requirements of 10CFR50, Appendix B.

The Category 1 provisions of Regulatory Guide 1.97 recommend that the guidance of Regulatory Guides 1.28, 1.30, 1.38, 1.58, 1.64, 1.74, 1.88, 1.123, 1.144 and 1.146 be followed. The Category 2 provisions are the same as Category 1 with the modification that, since some instrumentation is less important to safety, the quality assurance requirements that are implemented should provide control over activities affecting quality to an extent consistent with the importance to safety of the instrumentation. The Category 3 provisions simply state that the instrumentation be of high-quality commercial grade and be selected to withstand the specified service environment. The Operations Quality Assurance Program of Alabama Power Company does not differentiate between the three categories defined in Regulatory Guide 1.97; however, quality assurance requirements are reviewed for each individual instrument as a part of the purchasing process and the specific quality assurance requirements are imposed, as appropriate for that class of instrumentation. In addition, all quality assurance requirements are implemented in accordance with their importance to safety as determined and documented by knowledgeable personnel.

Alabama Power Company has committed to address the provisions of the regulatory guides specified in Regulatory Guide 1.97 as described in the following referenced FSAR sections.

R.G. 1.97 ProvisionAPCo
ComplianceFSAR Section

Regulatory Guide 1.28	"Quality Assurance Program Requirements (Design and Construction)"	June 1972	3A-1.28-1 17.1 17.2 3.8.1.2 3.8.4.2
Regulatory Guide 1.30 (Safety Guide 30)	"Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electric Equipment"	August 1972	3A-1.30-1 14.1 17.2.11
Regulatory Guide 1.38	"Quality Assurance Requirements for Packing, Shipping, Receiving, Storage, and Handling of Items for Water-Cooled Nuclear Power Plants"	March 1973 March 1972	17.2.13 3A-1.38-1 3.8.1.2
Regulatory Guide 1.58	"Qualification of Nuclear Power Plant Inspection, Examination, and Testing Personnel"	August 1973 September 1980 (Rev. 1)	3A-1.58-1 14.1.1.2 17.2 17.2 17.2.2
Regulatory Guide 1.64	"Quality Assurance Requirements for the Design of Nuclear Power Plants"	February 1975 October 1973	17.2 3A-1.64-1 3.8.1.2
Regulatory Guide 1.74	"Quality Assurance Terms and Definitions"	February 1974	3A-1.74-1 17.2
Regulatory Guide 1.88	"Collection, Storage, and Maintenance of Nuclear Power Plant Quality Assurance Records"	August 1974	3A-1.88-1 17.2.17

Although Alabama Power Company has not committed to comply with the following regulatory guides, equivalence may be shown in that these regulatory guides are based on standards to which Alabama Power Company has committed as described in the referenced FSAR sections.

		<u>Reference Standard</u>	<u>APCo Standard to which committed</u>	<u>FSAR Section</u>
Regulatory Guide 1.123 (October 1976)	"Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants"	ANSI N45.2.13- 1976	ANSI N45.2.13- 1974	17.2 17.2.4
Regulatory Guide 1.144 (September 1980)	"Auditing of Quality Assurance Programs for Nuclear Power Plants"	ANSI N45.2.12- 1977	ANSI N45.2.12- 1974	17.2 17.2.18 14.1
Regulatory Guide 1.146 (August 1980)	"Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants"	ANSI N45.2.23- 1978	ANSI N45.2.23- 1978	17.2 17.2.18

It is the opinion of Alabama Power Company that their comprehensive Operations Quality Assurance Program assures safe operation of the plant, and as such, satisfies the intent of the R.G. 1.97.

APPENDIX D

MAIN CONTROL BOARD MODIFICATIONS

All variables which have a display on the Main Control Board (MCB) reference the section of the MCB where the display resides on the seismic qualification sheet (Section 1.B of each variable). A variable which has a display on the MCB is not considered to be seismically qualified unless the display device is seismically mounted and seismically qualified and all other display devices on the referenced section of the board are seismically mounted. Display devices other than the R.G. 1.97 displays are considered to require seismic mounting because the mounting of these devices could fail during a seismic event and disable a R.G. 1.97 display.

This appendix identifies all devices on each section of the MCB, including R.G. 1.97 displays, which require mounting modifications or replacement to bring the section of the MCB into compliance with IEEE 344-1971 as described in J. M. Farley FSAR Chapter 3.10. Devices in this appendix which are R.G. 1.97 displays are so identified by their respective variable number(s).

NGMCB2500A-AB

MCB Section	MCB Item No.	Description	Action	R. G. 1.97 Variable No.
A1	123	MLB-3	Modify*	--
A1	124	MLB-4	Modify*	--
A1	125	MLB-5	Modify*	--
A1	126	MLB-6	Modify*	--
A2	23	NR-46	Modify*	--
A2	24	NR-47	Modify*	--
A2	127	DPLB	Modify*	129/1
A2	128	CPLB	Modify*	19/20, 19/21
A2	135	PR-950	Replace	16
A2	137	LR-3594B	Replace	10
A3	15	PI-121	Modify*	--
A3	32	TI-386, TI-389	Modify*	--
A3	165	TSLB-1	Modify*	--

NGMCB2500B-AB

MCB Section	MCB Item No.	Description	Action	R. G. 1.97 Variable No.
B1	55	FR-478	Modify*	--
B1	56	FR-488	Modify*	--
B1	58	LR-476	Modify*	--
B1	59	LR-477	replace	4
B1	87	MD-4060	Modify*	--

*Mounting Modifications

NGMCB2500C-AB

<u>MCB Section</u>	<u>MCB Item No.</u>	<u>Description</u>	<u>Action</u>	<u>R. G. 1.97 Variable No.</u>
C	50	TR-413	Replace	2
C	53	LR-459	Modify*	--
C	54	PR-444	Modify*	--
C	55	TR-410	Replace	3
C	61	RPI	Modify*	1009
C	62	YN-4056A	Modify*	--

*Mounting Modifications