

MEMORANDUM FOR: James M. Taylor  
Acting Executive Director  
for Operations

November 6, 1989

CF

FROM: Edward L. Jordan, Chairman  
Committee to Review Generic Requirements

SUBJECT: MINUTES OF CRGR MEETING NUMBER 171

The Committee to Review Generic Requirements (CRGR) met on Wednesday, October 11, 1989 from 1:00 - 5:30 p.m. The following items were addressed at the meeting:

1. The Committee reviewed proposed final Revision 3 to Reg. Guide 1.9, "Diesel Generator Reliability." The Committee was unable to complete their review of this item at this meeting, but recommended a number of changes to be considered by the staff. The staff will revise the package and resubmit it for completion of CRGR review at a future meeting. This matter is discussed in Enclosure 1.
2. Due to unforeseen time constraints, CRGR review of proposed Revision 3 to Reg. Guide 1.35 and proposed Reg. Guide 1.35.1 scheduled at this meeting was rescheduled for the next CRGR meeting.
3. The Committee considered the staff's plans to publish guidance (initially discussed with licensees in public workshops) to facilitate implementation of Generic Letter 89-04 regarding Inservice Testing Programs. The Committee determined that formal CRGR review of this guidance is not required; but the guidance should be transmitted to licensees by a generic letter that states clearly no new requirements are intended by this guidance. This matter is discussed in Enclosure 2.

In accordance with the EDO's July 18, 1983 directive concerning "Feedback and Closure of CRGR Reviews," a written response is required from the cognizant office to report agreement or disagreement with the CRGR recommendations in these minutes. The response, which is required within five working days after receipt of these minutes, is to be forwarded to the CRGR Chairman and if there is disagreement with CRGR recommendations, to the EDO for decisionmaking.

Questions concerning these meeting minutes should be referred to Jim Conran (402-9855).

Original Signed By:

C. J. Heltemes, Jr. *[Signature]*

Edward L. Jordan, Chairman  
Committee to Review Generic  
Requirements

Enclosures:  
As stated

cc: See next page

OFC	: AEOD:CRGR	: AEOD:DD	: C/CRGR:AEOD	:	:	:	:
NAME	: JConran:cg	: CJHeltemes	: EJordan	:	:	:	:
DATE	: 11/7/89	: 11/2/89	: 11/6/89	:	:	:	:

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J. Lieberman

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M. Malsch

Regional Administrators

CRGR Members

Distribution: w/o enclosures

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S. Treby

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P. Kadambi (w/enc.)

CRGR CF (w/enc.)

CRGR SF (w/enc.)

M. Taylor (w/enc.)

R.W. Houston (w/enc.)

L. Shao (w/enc.)

J.E. Richardson (w/enc.)

A. Serkiz (w/enc.)

T. Sullivan (w/enc.)

E. Jordan (w/enc.)

J. Heitemes (w/enc.)

J. Conran (w/enc.)

D. Allison (w/enc.)

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**REMARKS**

This previous Central File material can now be made publicly available.

*MATERIAL RELATED TO CR6R  
MEETING NO. 171*

*CC (LIST ONLY) JEAN RATAJE,  
PDR L STREET*

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MATERIAL RELATED TO CRGR MEETING NO. 171  
TO BE MADE PUBLICLY AVAILABLE

1. MEMO FOR J. TAYLOR FROM E. JORDAN DATED 11-6-89  
SUBJECT: MINUTES OF CRGR MEETING NUMBER 171  
INCLUDING THE FOLLOWING ENCLOSURES WHICH WERE NOT  
PREVIOUSLY RELEASED:

a. ENCLOSURE 1  
A SUMMARY OF DISCUSSIONS OF A PROPOSED Final Rev 3  
to Reg. Guide 1.9

b. ENCLOSURE \_\_\_\_\_  
A SUMMARY OF DISCUSSIONS OF A PROPOSED \_\_\_\_\_

c. ENCLOSURE 2  
A SUMMARY OF DISCUSSIONS OF A PROPOSED for  
Briefing on Guidance for Implementing IST BL

2. MEMO FOR E. JORDAN FROM Beckford, RES DATED 9/10/89  
FORWARDING REVIEW MATERIALS ON A PROPOSED Resolution  
of CRSI B-56 "Diesel Generator Reliability"

3. MEMO FOR E. JORDAN FROM Smuzek DATED 9/6/89  
FORWARDING REVIEW MATERIALS ON A PROPOSED Minutes  
of Public Mtg. on BL 89-04

4. MEMO FOR E. JORDAN FROM \_\_\_\_\_ DATED \_\_\_\_\_  
FORWARDING REVIEW MATERIALS ON A PROPOSED \_\_\_\_\_

22-141 50 SHEETS  
22-142 100 SHEETS  
22-144 200 SHEETS



Enclosure 1 to the Minutes of CRGR Meeting No. 171  
Proposed Final Revision 3 to Reg. Guide 1.9  
October 11, 1989

TOPIC

W. Minners (RES) and A. Serkiz (RES), presented for CRGR review the proposed final Rev. 3 to Reg. Guide 1.9, "Diesel Generator Reliability." The Committee also heard the differing views of a member of the NRC staff regarding several specific new positions in the proposed guidance. Briefing slides used by the staff to guide their presentations and discussions with the Committee on these matters are enclosed (Attachments 1 and 2).

BACKGROUND

1. The documents submitted initially to CRGR for review in this matter were transmitted by memorandum dated September 12, 1989, E. S. Beckjord to E. L. Jordan; that initial review package included the following documents:
  - a. Proposed final Revision 3 (dated September 12, 1989) to Reg. Guide 1.9, "Selection, Design, Qualification, Testing, and Reliability of Diesel Generator Units Used As Onsite Electric Power Systems At Nuclear Power Plants"
  - b. Draft Appendix D, "LDG Reliability Program" (dated August 28, 1989) to NUMARC 87-00, "Guidelines and Technical Basis for NUMARC Initiatives," Revision 1;
  - c. Backfit Analysis, dated August 21, 1989, for GSI B-56, "Diesel Generator Reliability";
  - d. Draft Federal Register Notice dated August 16, 1989
2. At Meeting No. 171, the Committee received revised pages for Item 1.a. above. (See Slides Nos. 1A and 3A thru 10A in Attachment 1 to this Enclosure.)

CONCLUSIONS/RECOMMENDATIONS

The Committee did not complete their review of this item at this meeting; but they identified a number of questions to be addressed and recommended a number of specific changes to be incorporated by the staff in the revised package that will be resubmitted for completion of the CRGR review of this item at a later meeting:

1. The backfit analysis for this proposed package should be revised to address the items in Section IV.B of the CRGR Charter (as required for all packages submitted to CRGR for review); for example:

- a. Proposed Rev. 3 contains many new/different staff positions (i.e., changes from existing approved guidance) on EDG reliability that constitute backfitting; these proposed backfits should be acknowledged explicitly in the backfit analysis.
- b. Proposed Rev. 3 appears to contain both relaxations and increases of existing EDG reliability requirements; these should be clearly identified for the Committee. Also, in this context, the applicable finding should be made explicitly by the sponsoring Office Director in the package, in accordance with Section IV.B.(viii)(a) or IV.B.(ix)(a), as applicable.
- c. The justification for the direct and indirect costs involved in implementing proposed Rev. 3 should be stated explicitly in the backfit analysis, in accordance with Section IV.B.(viii)(b) or IV.B.(ix)(b), as appropriate.
- d. The incremental changes between existing approved EDG reliability requirements and the specific requirements in proposed Rev. 3 should be more clearly identified in the package (i.e., one-to-one correlation between specific provisions in Rev. 3/IEEE-387-1984 and the corresponding existing requirements in Rev. 2/IEEE-387-1977, Reg. Guide 1.108, Reg. Guide 1.155, Generic Letter 84-15, etc.), so that any proposed changes can be fully understood and properly evaluated by the Committee. A revised/updated version of the table provided to the Committee in support of Rev. 3 at the draft stage would be appropriate (Attachment 3).

Also, in this context, the staff should indicate more clearly what is intended with regard to NUMARC 87-00, Appendix D. Is it the staff's intent to endorse Appendix D in Rev. 3 as an alternative acceptable means for licensees to provide an adequate EDG reliability program? Are the specific provisions of proposed Rev. 3 equivalent to the provisions of Appendix D with additions only (as indicated in Table 1 of the Reg. Guide) or will Rev. 3 also identify exceptions to Appendix D after resolution of some still-outstanding issues noted in the package?

- e. With regard to implementation of the detailed requirements contained in proposed Rev. 3, the staff should indicate more clearly in the "Implementation" section of the Reg. Guide what positions will be applied to whom; the intent of the handwritten additions to this section of the Reg. Guide in Slide 9A is not clear to the Committee in this regard. Also, the proposed method of implementation of Rev. 3 (if approved) should be indicated in the package; and the staff should include a draft of the regulatory instrument (e.g., generic letter) that will be used to formally impose the proposed new EDG reliability requirements for review by the Committee. As a final point related to implementation issues, the staff should also identify any intended implementation guidance to be developed/used by the staff (e.g., model Tech. Spec. revisions, SRP revisions, TI's, etc.) and should submit such proposed guidance to CRGR for review, as appropriate, along with estimates of the corresponding NRC staff resource commitments involved.

2. The Committee recommended a number of specific clarifying changes to the proposed Rev. 3; principal among these were the following:
  - a. The staff should revise the wording of the second paragraph on page 2 to reflect that the proposed guidance is intended to apply to diesel generators dedicated to a single, safety-related function (e.g., high pressure core spray), as well as to those that provide broader purpose emergency ac power.
  - b. At page 6, the staff should indicate clearly that Section 1. DESIGN CONSIDERATIONS, is not intended to be backfit to operating reactors, but rather represents a consolidation of existing approved guidance on design requirements. Do similarly for all sections of proposed Rev. 3.
  - c. At page 6, in paragraph 1.3, the staff should reexamine the wording regarding exceeding the short-time rating of diesel generator units, review the technical correctness and completeness of that wording, and revise the proposed Rev. 3 wording as necessary.
  - d. At page 8, the wording of paragraph 1.8 should not direct licensees to revise the wording of an IEEE standard. Instead, Rev. 3 should specify that "...the following wording be substituted for the IEEE standard Section 5.5.4:"

In that context, however, the staff should also review the intended purpose of paragraph 1.8 of proposed Rev. 3, reexamine the technical safety basis and the correctness of the current proposed wording of that section in achieving the intended safety objective, and revise as appropriate. As a specific consideration in the recommended review, address why the capability for automatic reset (of the trip bypass function) is not acceptable.

- e. At pages 9 and 10, reexamine any remaining differences between Appendix D and proposed Rev. 3 treatment of "Load Run Demands," "Load Run Failures," and "Exceptions," and either revise Rev. 3 wording to remove these remaining differences or explain why differences should remain.
- f. At page 14, clarify the intent of paragraph 2.3.2.3 (e.g., Why demonstrate EDG design capability for a refueling outage? When is maintenance done on EDG's if they are running during refueling outage?)
- g. At Table 2, the fast-start test specified in the "18 month test" column does not seem to correspond to any requirement in the text of proposed Rev. 3. Delete this test unless the staff can demonstrate that it is needed/intended.



- h. At page 14, change the first sentence to read as follows:
- "Following the occurrence and correction of a degrading situation..."
- i. At page 15, delete proposed paragraph 3.2, "Design Basis Accidents Assessment" or justify it in its present form.
- j. At page 17, the staff should reexamine the technical basis for the "14 failure-free tests" specified after major overhaul/teardown of the diesel engine or generator. Why is full endurance testing not required in such circumstances? In considering the need to revise this paragraph, the staff should also consider adding a separate paragraph (e.g., 3.5.a.) on "Requalification of EDGs" following major repair or overhaul.
- k. At pages 18 and 19, reexamine the regulatory need for any new record-keeping and reporting requirements in proposed Rev. 3. Also, review throughout proposed Rev. 3 for internal consistency in this regard (e.g., see the last paragraph on p.2).
- l. At page 21, make the following corrections in paragraph 6.2:
- i. In the fourth sentence of the first paragraph, change the word "must" to "should." Also, do not reference a Draft ANSI/ASME Standard (use current approved version or delete).
- ii. In subparagraph 6.2.4, change the word "aging" to "degradation."
- m. At page 22, in the last sentence in paragraph 6.3, change the term "developed from" to "based on."
- n. At page 22, in paragraph 6.4, delete the second sentence entirely and delete the words "Generally speaking," in the following sentence.
- o. At page 22, in paragraph 6.5, change the last sentence in the second paragraph to read as follows:
- "Figure 6 is an example of a systematic approach..."
- p. At page 23, examine the root cause elements (a through g) for consistency with NUMARC Appendix D, and revise as necessary (e.g., is "a. Management" in Appendix D?)
- q. The third paragraph of the draft Federal Register Notice for this package should be revised to indicate the proposed backfit "EDG Reliability Goals and Calculations" requirements, e.g., in position 3 of proposed Rev. 3.

**RESOLUTION OF GSI B-56  
DIESEL GENERATOR RELIABILITY**

**PRESENTATION TO THE  
COMMITTEE TO REVIEW  
GENERIC REQUIREMENTS**

**CRGR Meeting No. 171  
October 11, 1989**

**A.W. SERKIZ RES/RPSIB  
Mail Stop NL/S 324 Ext. 23942**

# BACKGROUND

1. GSI B-56 is not a new issue; resolution will complete an outstanding SBO related issue.
2. RG 1.9, Rev. 3 (Proposed) was discussed with CRGR in 9/88; issued FOR COMMENT in 11/88.
3. 15 responcees; last rec'd 7/89.
4. Staff has been meeting with NUMARC's B-56 Working Group since 7/88 to arrive at complementary guidance.
5. RG 1.9, Rev. 3 (9/12/89) has been re-structured to enhance clarity & eliminate duplicate requirements.
6. ACRS briefed on 10/2 & 6/89.
7. RG 1.9, Rev. 3 (9/12/89) presents RES & NRR management positions.

# OVERVIEW

## RG 1.9, REV. 3

1. Has been revised in response to comments received and discussions with NUMARC's B-56 working group.
2. Integrates into a single RG guidance previously addressed in RG 1.9, Rev. 2, RG 1.108 and Generic Letter 84-15.
3. Defines reliability program and supplements guidance provided in RG 1.155.
4. Better defines testing reqmts, eliminates cold fast starts and minimizes accelerated testing.
5. Defines alert levels, remedial actions and reporting reqmts.
6. Incorporates proven industry practices and is consistent with NUMARC's revised NUMARC 8700, Appendix D.
7. Utilizes INPO's Industry-wide Performance Indicator Program (PPIP) surveillance definitions for consistency.

# **RG 1.9, REV. 3**

## **REGULATORY POSITIONS**

- C.1 Design Considerations
- C.2 Diesel Generator Testing
- C.3 EDG Reliability Goals & Calcs (SBO)
- C.4 Record Keeping Guidance
- C.5 Reporting Criteria
- C.6 EDG Reliability Program (SBO)

TABLE 1

CROSS-REFERENCE BETWEEN REGULATORY GUIDE 1.9, REV. 3  
AND NUMARC-8700, APPENDIX D

RG 1.9, REV 3 SECTION	NUMARC-8700 APPENDIX D
Section A, Introduction	(Use RG 1.9, Rev.3)
Section B, Discussion	(Use RG 1.9, Rev.3)
Section C, Regulatory Positions	
C.1, Design Considerations	(Use RG 1.9, Rev.3)
C.2, Diesel Generator Testing	
C.2.1, Definitions	D.1
C.2.2, Test Descriptions	(Use RG 1.9, Rev.3)
C.2.3, Preoperational and Surveillance Testing	(Use RG 1.9, Rev.3)
C.3., EDG Reliability Goals and Calculations	
C.3.1, Reliability Goals for SBO	D.2
C.3.2, Design Basis Accident Assesment	(Use RG 1.9, Rev.3)
C.3.3, Diesel Generator Reliability Calculations	D.2.2
C.3.4, EDG Reliability Program Monitoring	D.2.3, D.2.4
C.3.5, Recovery From A Strong Alert	D.2.4.4
C.4, Record Keeping Guidance	D.2.1
C.5, Reporting Criteria	D.2.5
C.6, EDG Reliability Program	D.3
C.6.1, Diesel Generator Reliability Target	D.2.3
C.6.2, Diesel Generator Surveillance Plan	D.3.1
C.6.3, EDG Performance Monitoring	D.3.2
C.6.4, EDG Maintenance Program	D.3.4
C.6.5, EDG Failure Analysis and Root Cause Investigation	D.3.5
C.6.6, Problem Close-out	D.3.6
C.6.7, Data Capture & Utilization	D.3.3
C.6.8, Assigned Responsibilities and Management Oversight	(Use RG 1.9, Rev.3)

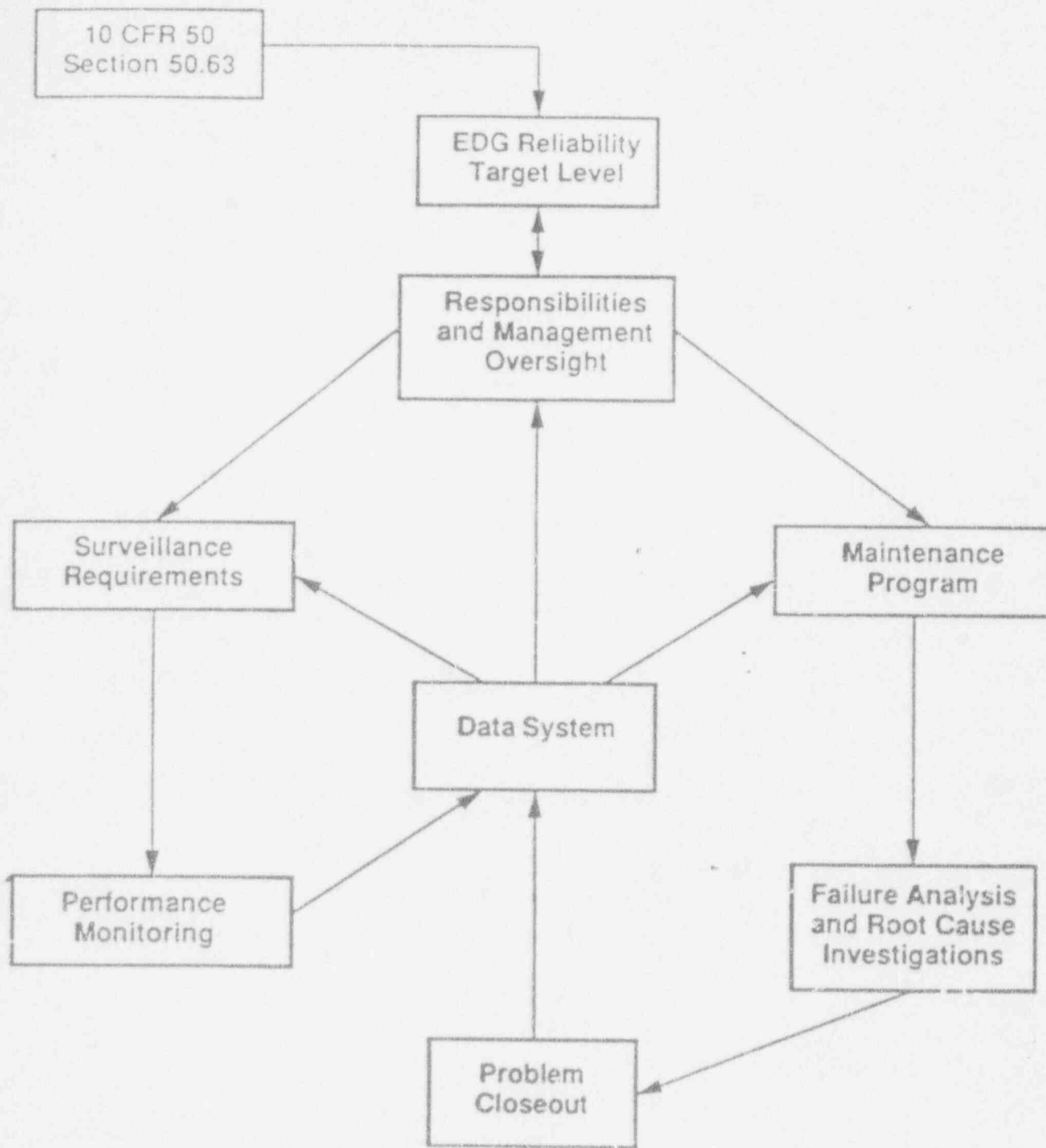
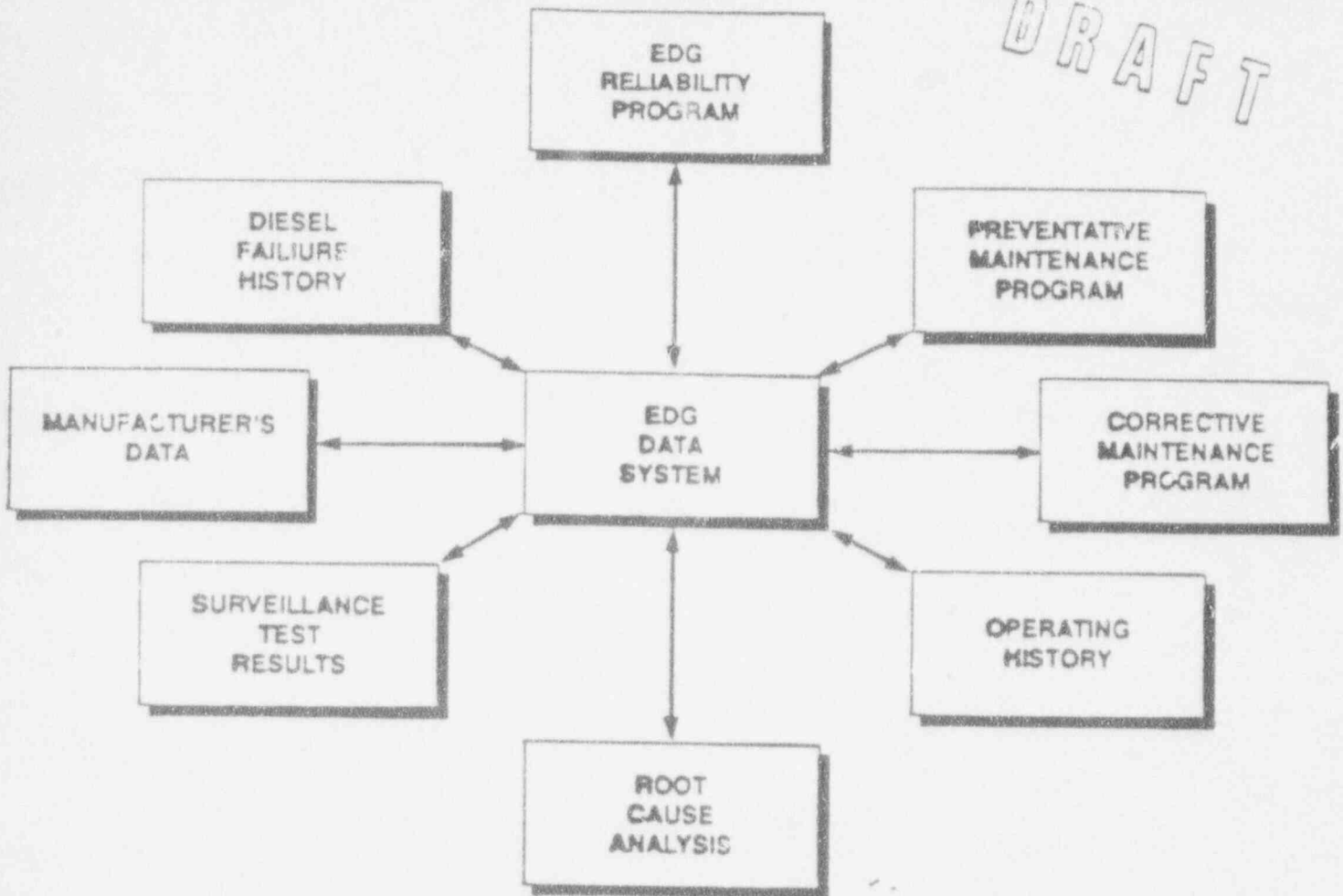


Figure 2 - Interaction of EDG Reliability Program Elements

FIGURE D.3-3

DRAFT



A systematic method of capturing data and retrieving data is effective in having data important to EDG reliability available to appropriate plant personnel. The data system need not be a special purpose system dedicated to EDG reliability and need not be centrally located. The system should, however, capture the important features of data available and be readily retrievable.

### D.3.3.2 Data Capture

The types of data that should be considered in the formation of a data system include but are not limited to the following:

1. Surveillance Test Results
2. EDG Failure History
3. Root Cause Analysis
4. Manufacturer's Data
5. Input from Preventative Maintenance Program
6. Input from Corrective Maintenance Program
7. Industry Operating Experience

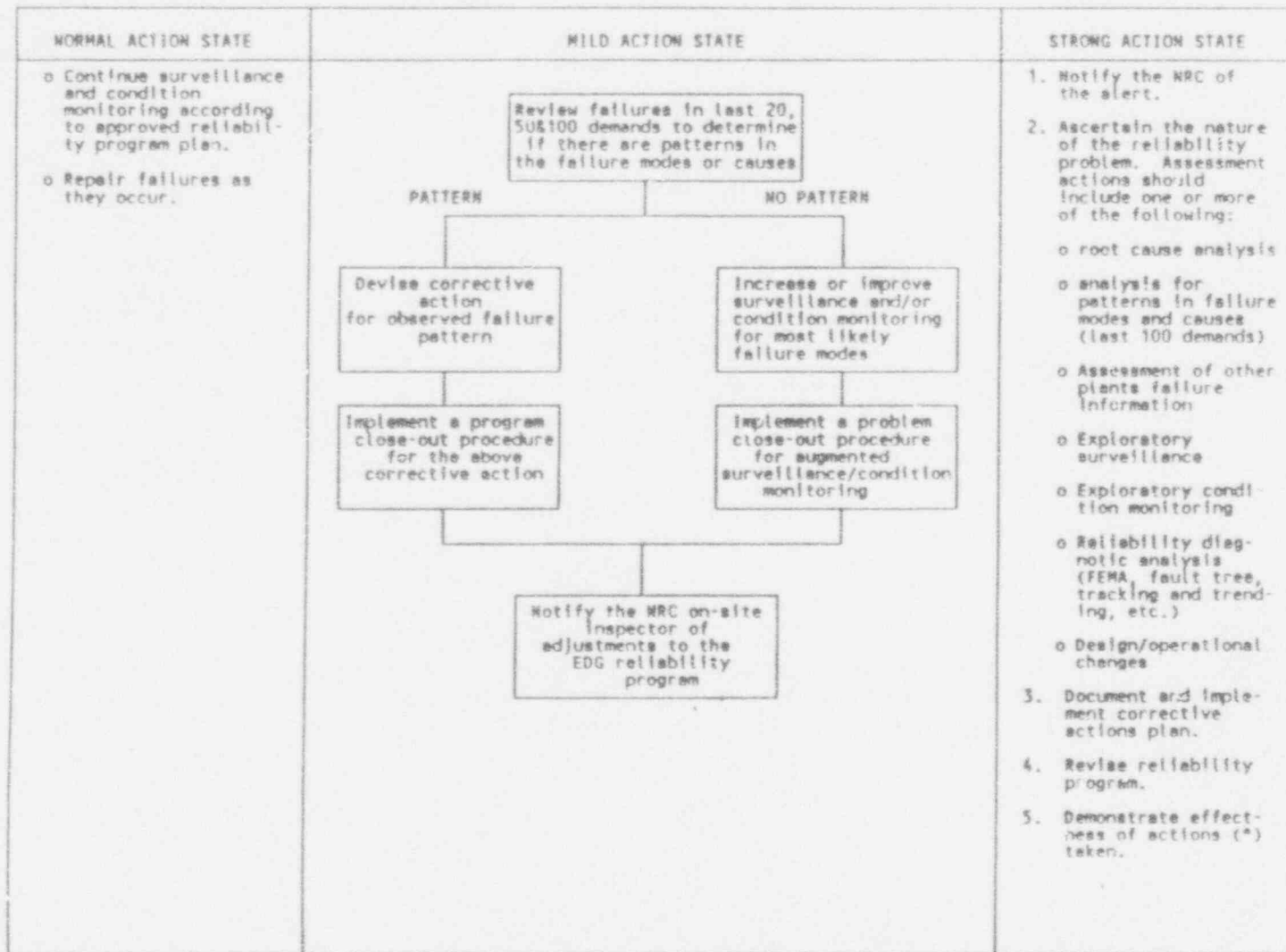
Each of these elements is discussed in greater detail in the following sections.

DRAFT



Figure 1 Graded Response to Degrading EDG Reliability

(10-5-89 Draft)



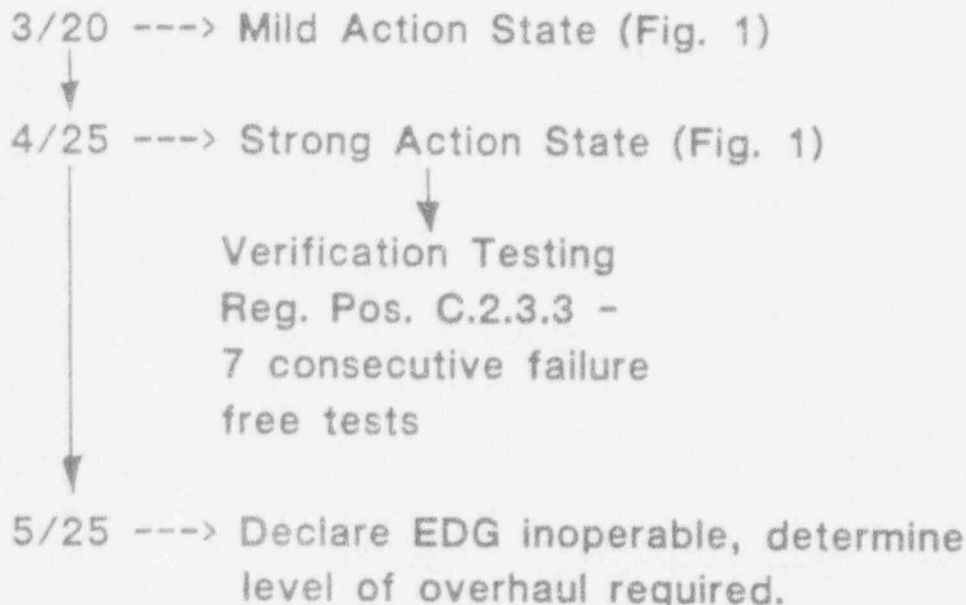
\* These recovery actions are discussed in Regulatory Positions C.3.5 and C.2.3.3.

# EDG RELIABILITY MONITORING & ACTIONS

- Based on monthly surveillance testing.
- Nuclear unit monitoring for SBO
- Utilizes reliability program and establishes action states vs. targets.

Target	Action State	Failure Combinations ( All EDGs)
.95	Mild	3/20 or 5/50 or 8/100
.95	Strong	4/50 and 8/100
.975	Mild	3/20 or 4/50 or 5/100
.975	Strong	4/50 and 5/100

- "Problem" EDG:



# STAFF - NUMARC DISCUSSIONS

1. Meetings held 9/29/89 & 10/6/89
2. 10-5-89 RG WKG DRAFT & 10/6/89 markups illustrate progress
3. Some differences of position will remain.

# OUTSTANDING DIFFERENCES

## RG 1.9, Rev. 3

- Endorsement language associated with use of IEEE Std. 387-1984
- Minor language differences in definitions (C.2.1) - exact wording is key issue.
- 6 month quick load tests, see Reg. Position C2.3.2.2.
- DBA Assessment (see C.3.2)
- SELB's 3/20 count to initiate accel. testing.
- 5/25 count to declare problem EDG inoperable (Pg 18).
- Major overhaul of problem diesel engine and 14 failure free tests to declare EDG operable (Pg. 18)

# **RG 1.9, Rev. 3**

## **Implementation**

1. Apply to all plants for purposes of monitoring EDG reliability levels and reviewing EDG reliability programs with respect to meeting the SBO rule.
2. Activities related to Design Considerations and Preoperational Testing will not have to be repeated by licensees or applicants where such activities have already been completed.
3. Applies to CPs and OLs docketed 6 months after issuance of RG.
4. Applies to ORs 9 months after issuance of RG.

# B-56 RESOLUTION

- RES will issue RG 1.9, Rev. 3.
- NRR will integrate findings into Tech Spec upgrades.
- NRR will develop inspection module for evaluating EDG reliability programs.
- NRR has revised pertinent SRP sections and reviewed with CRGR (CRGR Mtg 164,6/89).

# ENCLOSURE A

10-6-89 MARKUPS

RG 1.9, REV. 3

RECENT DISCUSSIONS  
WITH NUMARC

8700, Appendix D, "EDG Reliability Program," to provide guidance on a reliability program to ensure that EDG reliability target levels selected for station blackout are maintained, and on actions to be taken if EDG reliability targets are not being met. The NRC staff has reviewed this revised guidance and concludes that NUMARC 8700, Appendix D, provides guidance for an EDG reliability program in large part identical to those portions of this guide which deal with an EDG reliability program and the monitoring of EDG reliability. Table 1 of this regulatory guide provides a section-by-section comparison between Regulatory Guide 1.9, Revision 3 and NUMARC - 8700, Appendix D (Revised).

### C. REGULATORY POSITION

[10-6-84]\*

Conformance with the guidelines in IEEE Std 387-1984 "IEEE Standard Criteria for Diesel-Generator Units Applied as Standby Power Supplies for Nuclear Power Generating Stations," provides a method acceptable to the NRC staff for satisfying the Commission's regulations with respect to design, qualification, and periodic testing of diesel generator units used as onsite electric power systems for nuclear power plants subject to the following:

#### 1. DESIGN CONSIDERATIONS

The guidelines of IEEE Std 387-1984 should be supplemented as follows:

1.1 Section 1.2, "Inclusions," of IEEE Std 387-1984 should be supplemented to include diesel generator auto controls, manual controls, and diesel generator output breaker.

1.2. When the characteristics of the required diesel generator loads are not accurately known, such as during the construction permit stage of design, each diesel generator unit of an onsite power supply system should be selected to have a continuous load rating (as defined in Section 3.7.1 of IEEE Std 387-1984) equal to or greater than the sum of the conservatively estimated loads (nameplate) needed to be powered by that unit at any one time. In the absence of fully substantiated performance characteristics for mechanical equipment such as pumps, the electric motor drive ratings should be calculated using conservative estimates of these characteristics, e.g., pump runout conditions and motor efficiencies of 90 percent or less and power factors of 85 percent or ~~higher~~ lower.

1.3. At the operating license stage of review, the predicted loads should not exceed the short-time rating (as defined in Section 3.7.2 of IEEE Std 387-1984) of the diesel generator unit.

\* NUMARC staff requested insertion of introductory language similar to that used in the RG 1.155 regulatory position introduction.



would be predicated on plant-specific factors relating to the reliability of ac power systems such as those discussed in Reference 2.

The information submitted to comply with § 50.63 is also required to be incorporated in an update to the FSAR in accordance with paragraph 50.71(e)(4). It is expected that the applicant or licensee will have available for review, as required, the analyses and related information supporting the submittal.

Concurrent with the development of this regulatory guide, and consistent with discussions with the NRC staff, the Nuclear Management and Resource Council (NUMARC) has developed guidelines and procedures for assessing station blackout coping capability and duration for light water reactors (NUMARC-8700, Ref. 10). The NRC staff has reviewed these guidelines and analysis methods and concludes that NUMARC-8700 provides guidance for conformance to § 50.63 that is in large part identical to the guidance provided in this regulatory guide. Table 1 of this regulatory guide provides a section-by-section comparison between Regulatory Guide 1.155 and NUMARC-8700. The use of NUMARC-8700 is further discussed in Section C, Regulatory Position, of this guide.

### C. REGULATORY POSITION

This regulatory guide describes a means acceptable to the NRC staff for meeting the requirements of § 50.63 of 10 CFR Part 50. NUMARC-8700 (Ref. 10) also provides guidance acceptable to the staff for meeting these requirements. Table 1 provides a cross-reference to NUMARC-8700 and notes where the regulatory guide takes precedence.

#### 1. ONSITE EMERGENCY AC POWER SOURCES (EMERGENCY DIESEL GENERATORS)

##### 1.1 Emergency Diesel Generator Target Reliability Levels

The minimum emergency diesel generator (EDG) reliability should be targeted at 0.95 per demand for each EDG for plants in emergency ac (EAC) Groups A, B, and C and at 0.975 per demand for each EDG for plants in EAC Group D (see Table 2). These reliability levels will be considered minimum target reliabilities and each plant should have an EDG reliability program containing the principal elements, or their equivalent, outlined in Regulatory Position 1.2. Plants that select a target EDG reliability of 0.975 will use the higher level as the target in their EDG reliability programs.

The EDG reliability for determining the coping duration for a station blackout will be determined as follows:

1. Calculate the most recent EDG reliability for each EDG based on the last 20, 50, and 100 demands using definitions and methodology in Section 2 of NSAC-108, "Reliability of Emergency

Diesel Generators at U.S. Nuclear Power Plants" (Ref. 11), or equivalent.<sup>1</sup>

2. Calculate the nuclear unit "average" EDG reliability for the last 20, 50, and 100 demands by averaging the results from step 1 above.
3. Compare the calculated "average" nuclear unit EDG reliability from step 2 above against the following criteria:

Last 20 demands > 0.90 reliability  
Last 50 demands > 0.94 reliability  
Last 100 demands > 0.95 reliability

4. If the EAC group is A, B, or C AND any of the three evaluation criteria in step 3 are met, the nuclear unit may select an EDG reliability target of either 0.95 or 0.975 for determining the applicable coping duration from Table 2.

If the EAC group is D and any of the three evaluation criteria in step 3 are met, the allowed EDG reliability target is 0.975.

5. If the EAC group is A, B, or C and NONE of the selection criteria in step 3 are met, an EDG reliability level of 0.95 must be used for determining the applicable coping duration from Table 2. Additionally, if the "averaged" nuclear unit EDG reliability is less than 0.90 based on the last 20 demands, the acceptability of a coping duration based on an EDG reliability of 0.95 from Table 2 must be further justified.

If the EAC group is D and NONE of the three evaluation criteria in step 3 are met, the required coping duration (derived by using Table 2) should be increased to the next highest coping level (i.e., 4 hours to 8 hours, 8 hours to 16 hours).

##### 1.2 Reliability Program

The reliable operation of onsite emergency ac power sources should be ensured by a reliability program designed to maintain and monitor the reliability level of each power source over time for assurance that the selected reliability levels are being achieved. An EDG reliability program would typically be composed of the following elements or activities (or their equivalent):

1. Individual EDG reliability target levels consistent with the plant category and coping duration selected from Table 2.
2. Surveillance testing and reliability monitoring programs designed to track EDG performance and to support maintenance activities.

<sup>1</sup>This EDG reliability is not suitable for probabilistic risk analyses for design basis accidents because of the differing EDG start-reliability requirement that would be applicable for such probabilistic risk analyses.

- o A load-run of any duration that results from a real (e.g. not a test) automatic or manual signal.
- o A load-run test to satisfy the plant's load and duration test specifications.
- o Other operations (e.g., special tests) of the emergency diesel generator in which the emergency diesel generator is planned to run for at least one hour with at least 50 percent of design load.

**Load-run Failures:** A load-run failure should be counted when the emergency diesel generator starts but does not pick up load and run successfully. Any failure during a valid load-run demand should be counted. See "Exceptions" below. For monthly surveillance tests, the diesel generator can be loaded at a rate that is recommended by the manufacturer to minimize stress and wear.

Any condition identified in the course of maintenance inspections (with the EDG in the standby mode) that would have resulted in a load-run failure if a demand had occurred should be counted as a valid load-run demand and failure.

**Exceptions:** Unsuccessful attempts to start or to load-run should not be counted as valid demands or failures when they can be definitely attributed to any of the following:

- o Spurious operation of a trip that would be bypassed in the emergency operation mode (e.g. high cooling water temperature trip)
- o Malfunction of equipment that is not required to operate during the emergency operating mode (e.g., synchronizing circuitry).
- o Component malfunctions or operating errors that did not prevent the emergency diesel from being restarted and brought to load within a few minutes (i.e., without corrective maintenance or significant problem diagnosis)
- o Intentional termination of the test because of alarmed or observed abnormal conditions (e.g., small water or oil leaks) that would not have ultimately resulted in significant emergency generator damage or failure.

- o A failure to start following an actual (manual or automatic) or inadvertent start demand (if actuated only on a loss of offsite power), if restarted manually within five minutes from the first start attempt.

Agreement reached 10-6-89 to drop this exception. See also Pg 15.

- (1)
- o If the EDG fails to reach rated speed and voltage in the precise time required by Technical Specifications, the start attempt and load-run attempt should not be considered a failure if the test demonstrated that the EDG would have started in an emergency and should therefore be retained in the EDG availability data base.

Each emergency diesel generator failure that results in the emergency diesel generator being declared inoperable should be counted as one demand and one failure. Exploratory tests during corrective maintenance and the successful test that is run following repair to verify operability ~~(prior to declaring operability)~~ should not be counted as demands or failures *when the EDG has not been declared operable again.*

## 2.2 Test Descriptions

(2)

The following test descriptions are applicable to Regulatory Positions 3 and 4. Table 2 describes the sequence of qualification and surveillance testing. Detailed procedures should be provided for each test defined in Regulatory Position 2. The procedures should identify special arrangements or changes in normal system configuration that must be made to put the EDG under test. Jumpers and other non-standard configurations or arrangements should not be used subsequent to initial equipment startup testing.

2.2.1 Start-Test: Demonstrate proper startup from ambient conditions and verify that the required design voltage and frequency is attained. For these tests, the diesel generator can be slow-started, be prelubricated, have prewarmed oil and water circulating, and should reach rated speed on a prespecified schedule that is selected to minimize stress and wear.

2.2.2 Load-Run Test: Demonstrate full-plant emergency load carrying capability, or 90 to 95 percent of the continuous rating of the EDG, for an interval of not less than 1 hour and until temperature equilibrium has been attained. This test may be accomplished by synchronizing the generator with offsite power. The loading and unloading of a diesel generator during this test should be gradual and based on a prescribed schedule that is selected to minimize stress and wear on the diesel generator.

2.2.3 Fast-Start Test: Demonstrate that each diesel generator unit starts from ambient conditions (if a plant has normally operating prelube and prewarm systems, this would constitute its ambient conditions) and verify that the diesel generator reaches stable required voltage and frequency within acceptable limits and time, as defined in the plant technical specifications.

10-6-89 Htg

SLIDE 4A

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- (1) Paragraph will be re-reviewed to determine if INPO language can be used, with a footnote to clarify NERS staff concern regarding Tech Spec exemption.
- (2) Wording revised to conform exactly with INPO wording.

When the EDG is declared operational in accordance with plant technical specifications, the following periodic test program should be implemented.

2.3.2.1 Monthly Testing: After completion of the diesel generator unit reliability demonstration during preoperational testing, periodic testing of diesel generator units during normal plant operation should be performed. Each diesel generator should be started and loaded as defined in Regulatory Positions 2.2.1 and 2.2.2 at least once in 31 days (with maximum allowable extension not to exceed 25 percent of the surveillance interval) on a staggered basis.

2.3.2.2 Six-Month (or 184 days) Testing: The design basis for nuclear power plants requires a capability for the diesel generators to make fast starts (as defined in the plant Technical Specifications) from standby conditions to provide the necessary power to mitigate the large-break loss-of-coolant accident coincident with loss of offsite power. It has been determined (based on a probabilistic risk analysis performed to examine the change in core melt frequency associated with lengthening the fast-start test interval) that relaxation of fast-start test frequency from once per month to once per 6 months would not appreciably increase risk. Therefore, once every 6 months each diesel generator should be started from standby conditions (if a plant has normally operating prelube and prewarm systems this should constitute its standby conditions) to verify that the diesel generator reaches stable rated voltage and frequency within acceptable limits and time and operates for 5 minutes.

NUMAC disagrees with a need for this test at 6 month intervals (10-6-89 mty)

need to follow-up on (10-6-89 mty)

2.3.2.3. Refueling Outage Testing: Overall diesel generator unit design capability should be demonstrated at every refueling outage by performing the tests identified in Table 2.

2.3.2.4. Ten-Year Testing: Demonstrate that the trains of standby electric power are independent once per 10 years (during a plant shutdown) or after any modifications that could affect diesel generator independence, whichever is the shorter, by starting all redundant units simultaneously to help identify certain common failure modes undetected in single diesel generator unit tests.

2.3.3 Corrective Action Testing: Following the occurrence of a degrading situation as defined in Regulatory Position 3.5 for a problem EDG, the surveillance testing interval for that EDG should be reduced to no more than 7 days, but no less than 24 hours. This test frequency should be maintained until seven consecutive failure-free start and load-run tests have been performed to demonstrate the effectiveness of corrective actions taken and recovery of reliability levels. At that time, monthly

surveillance testing can be resumed. However, if subsequent to the seven failure-free tests, one or more additional failures occur such that there are again four or more failures in the last 25 tests, the testing interval should again be reduced as noted above and maintained until seven consecutive failure-free tests have been performed. The EDG undergoing corrective action testing should be considered "operable" unless other license requirements necessitate declaring the EDG inoperable.

3. EDG RELIABILITY GOALS AND CALCULATIONS

Reliability goals for emergency diesel generators (EDGs) and related calculational methodology are as follows:

3.1 Reliability Goals for Station Blackout

In order to comply with 10 CFR 50.63, "Loss of All Alternating Current Power," and the guidance in Regulatory Guide 1.155, "Station Blackout," the minimum EDG reliability should be targeted at 0.95 or 0.975 per demand for each EDG for plants in emergency ac (EAC) Groups A, B, and C and at 0.975 per demand for each EDG for plants in EAC Group D (see Table 2 of Regulatory Guide 1.155).

3.2 Design Basis Accidents Assessment

A quantitative EDG reliability target for design basis accidents has not been established. If an EDG reliability estimate is needed for plant-specific PRAs, it should be calculated using only the successful "immediate" starts, where immediate is defined as the time required for the EDG to be available for design basis loss-of-coolant accidents and other limiting plant transient emergency electrical loads. Therefore, delayed starts (i.e., starts that are restarted manually within 5 minutes from the first start attempt) deemed successful for station blackout assessments ~~per exceptions noted in Regulatory Position 2.1~~ should not be considered for design basis accident assessment.

agreement reached at 10-6-89 meeting to delete.

3.3 Diesel Generator Reliability Calculations

Calculation of EDG reliabilities should be based on the definitions consistent with the reporting rules for the Industry-wide Plant Performance Indicator Program or equivalent and the definitions in Regulatory Position 2.1.

The evaluation of a nuclear unit's EDG reliability should take into account the demand and failure experience of all EDGs that provide emergency AC power for the unit. Calculation of EDG reliability levels should be based on the last 50 and 100 demands in the following manner:

sample that falls below 96 percent, is an indication that the true underlying reliability may have fallen below 97.5 percent. Actions to be taken are discussed below.

3.4 EDG Reliability Program Monitoring

Data from surveillance tests and unplanned starts can be used to estimate achievement of a nuclear unit's EDG reliability targets and also to detect a deteriorating situation for both the reliability program and individual EDGs. Failures encountered in the last 20, 50, and 100 demands can be related to nuclear unit target reliabilities as in Table 4

Table 4 Action Levels and Remedial Actions

<u>Target Reliability</u>	<u>Action Level</u>	<u>Demand Failure Combinations (All EDGs)</u>	<u>Remedial Actions</u>
.95	Mild	3/20 <u>or</u> 5/50 <u>or</u> 8/100	(1)
	Strong	5/50 <u>and</u> 8/100	(2)
.975	Mild	3/20 <u>or</u> 4/50 <u>or</u> 5/100	(1)
	Strong	4/50 <u>and</u> 5/100	(2)

- (1) Take action per Figure 1 for a Mild Action Level.
- (2) Take action per Figure 1 for a Strong Action Level.

3.5 Problem EDG

A problem diesel is defined as an individual EDG experiencing 3 or more failures in the last 20 demands. Should this case arise, a Mild Action Level would be declared and the actions defined in Figure 1 would be undertaken. If the problem EDG experiences an additional failure, such that there have been 4 failures in the last 25 demands, then a Strong Action Level would be declared.

Following completion of corrective programmatic actions as defined in Steps 1 - 4 of column 3 (Strong Action Level) of Figure 1, restored performance of the problem EDG should be demonstrated by conducting seven consecutive failure free starts and load-run tests as defined in Regulatory Position 2.3.3. The monthly surveillance schedule should not be resumed until 7 consecutive failure free start and run-load demand tests have been completed. All starts and load-runs performed during the corrective action testing shall be included in the nuclear unit EDG reliability data set so long as the EDG is declared operable.

If following completion of the seven consecutive failure-free tests (per Regulatory Position 2.3.3), the same EDG experiences another failure such that there have been 5 failures

Agreement on wording reached on 10-6-89 & separation of problem EDG into Reg. Position 3.5.

in the last 25 demands, consideration should be given to declaring that problem EDG inoperable in accordance with plant Technical Specifications and undertaking a overhaul of that EDG based on the subsystems affected (see Figure 3) and the nature of re-occurring failures.

If the overhaul necessitates the tear-down and overhaul of the diesel engine and/or the generator (see Figure 3), then prior to returning that EDG to service, 14 consecutive failure-free tests (per Regulatory Position 2.2.3) should be conducted. If the overhaul is of a lesser nature (i.e. subsystem or support system overhaul, see Figure 3), then the problem EDG should be considered in a Strong Action Level and 7 consecutive failure-free tests (per Regulatory Position 2.2.3) should be conducted before returning that EDG to service per plant Technical Specification requirements.

### 3.6 Recovery from a Strong Action Level (EDG Program)

Recovery from a Strong Action Level should be based on continued monitoring of the nuclear unit EDG reliability level and the demand-failure combinations shown in Table 4. The plant would not revert to a reduced action level until the number of demand-failures was adequately reduced, or two years from the last failure while in an exceedance, whichever occurs first. However, prior to reverting to a no exceedance state, all identified improvement actions must be completed within the two year period.

Should a plant continue in an exceedance state because of new failures, these failures should be evaluated against improvement actions previously identified for implementation. The purpose of this evaluation would be to assess whether prior conclusions and attendant recommendations should be revised due to continued failures.

## 4. RECORDKEEPING GUIDANCE

Guidance from Section 7.5.2, "Records and Analysis," of IEEE Std 387-1984 should be supplemented as follows:

All demands, as defined in Regulatory Position 2.1, should be logged and continually updated for each diesel generator based on surveillance testing and experienced failures. The log should be maintained in auditable form and should include sufficient detail to permit review and audit of reliability calculations in accordance with Regulatory Position 3.3. The log should also include a recalculated nuclear unit reliability estimate following occurrence of a load-run demand.

- ① NUREC does not agree with need to declare problem EDG inoperable at 18 a 5/20 count.
- ② NUREC does not see a need for language marked, and in particular strongly disagrees with the need for 14 consecutive test requirement. The point was made to deal with "requalification" separately.

A management oversight function (or procedures) should also be available to review the effectiveness of the reliability program and reliability levels being sustained, independent of the day-to-day EDG activities. Such a plant-wide function may already exist; however, a routine evaluation of EDG performance should be incorporated into the plant performance review process.

#### D. IMPLEMENTATION

The purpose of this section is to provide information to applicants regarding the NRC staff's plans for using this regulatory guide.

Except in those cases in which an applicant proposes an acceptable alternative method for complying with the specified portions of the Commission's regulations, the methods described in this guide will be used in the evaluation of selection, design, qualification, and testing of diesel generator units used as onsite electric power systems for the following nuclear power plants:

1. Plants for which the construction permit is issued after the issue date of the final guide,
2. Plants for which the operating license application is docketed 6 months or more after the issue date of the final guide,
3. Plants for which the licensee voluntarily commits to the provisions of this guide.

The NRC Staff also intends to apply this Regulatory Guide to monitor emergency diesel generator reliability levels and to review existing or proposed EDG reliability programs for meeting the station blackout rule, 10 CFR 50.63 in accordance with Regulatory Positions 3 and 6.

Activities associated with Regulatory Positions 1, Design Considerations and 2.3.1, Preoperational Testing will not have to be repeated by licensees or applicants which have completed such activities. Previous submittals by applicants, licensees, or other parties such as by the TDI Owners Group, can be used where appropriate.

This regulatory guide will become effective 270 days after issuance.

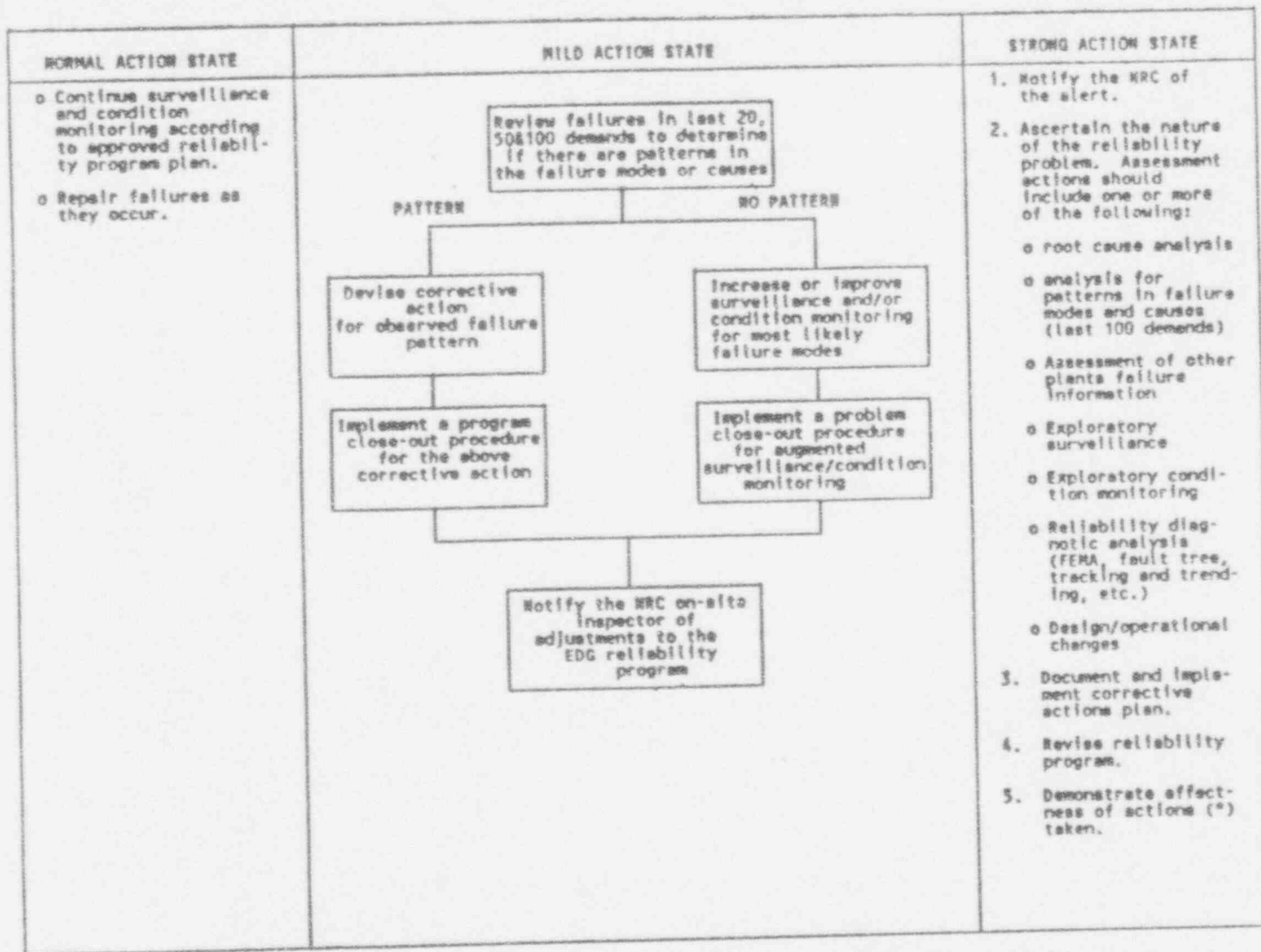
These regulatory positions <sup>25</sup> will apply to all operating plants. In addition, these regulatory positions will apply to existing operating license applications 270 days after issuance of the operating license.

wording agreed to at 10-6-89 meeting.



Figure 1 Graded Response to Degrading EDG Reliability

(10-5-89 Draft)



\* These recovery actions are discussed in Regulatory Positions C.3.5 and C.2.3.3.

*for problem EDG's*

SLIDE 10A  
 MAKE-UP

SELB'S POSITION ON  
RELIABILITY MONITORING R.G. 1.9 REV. 3 ACTIONS  
FOR AN INDIVIDUAL EDG

IF AN INDIVIDUAL EDG HAS THREE FAILURES IN THE LAST 20 TESTS:

- o INITIATE MILD ACTION LEVEL (CHANGE SECTION 3.5 AND FIG. 1)
- o REDUCE TEST FREQUENCY FROM MONTHLY TO WEEKLY UNTIL 7 CONSECUTIVE FAILURE FREE START AND LOAD RUN TESTS AS DEFINED IN REGULATORY POSITION C.2.3.3 ARE COMPLETED (CHANGE SECTION 2.3.3 AND 3.5)
- o IF DURING THE CORRECTIVE ACTION TESTING THE EDG EXPERIENCES ADDITIONAL FAILURES, SO THAT THE NUMBER OF FAILURES IN THE LAST 20 DEMANDS IS FIVE OR MORE, CONSIDERATION SHOULD BE GIVEN TO UNDERTAKING A MAJOR OVERHAUL IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS (CHANGE SECTION 3.5)
- o FOLLOWING MAJOR OVERHAUL AND PRIOR TO RETURNING THE EDG TO SERVICE, A SERIES OF 14 CONSECUTIVE FAILURE FREE START AND LOAD RUN TESTS SHOULD BE CONDUCTED (CHANGE SECTION 3.5)

10/6/89

BASES FOR SELB POSITIONS ON R.G. 1.9 REV. 3 TESTING

- o NUCLEAR UNIT EDG RELIABILITY ULTIMATELY DEPENDS ON INDIVIDUAL EDG RELIABILITY
- o INDUSTRY AVERAGE EDG RELIABILITY NOT RELEVANT
  - EDG(S) WEAR, EARLY DETECTION OF DEGRADATION IS CRITICAL
  - EDG MAINTENANCE EFFECTIVENESS VARIES PLANT TO PLANT AND IS NOT CONSTANT OVER TIME
  - EDG OVERLOADINGS REPORTED
  - MANY PLANTS PROPOSE TO MEET SBO BY COPING, OR BY DESIGNATING EDG AS AAC SOURCE
- o TIMELY DETECTION OF DEGRADATION: 7 WEEKS INSTEAD OF 7 MONTHS
  - 3/20 = 0.85 POINT ESTIMATE RELIABILITY
  - 4/25 COULD ACTUALLY BE 4/20 OR 0.80 POINT ESTIMATE
  - G.L. 84-15 CALLS FOR 2/20 WEEKLY TESTING
  - PRE HEAT, PRE LUBE, SLOW LOAD, EXCEPTIONS (SEC. 2.1) PRECLUDE COUNTING INVALID FAILURES
  - GIVEN 0.95 RELIABILITY, PROB OF  $\geq$  3/20 IS 0.08
- o FOLLOWING OVERHAUL: 14 CONSECUTIVE FAILURE FREE TESTS
  - 50% CONFIDENCE OF 0.95 RELIABILITY
  - SAME AS G.L. 84-15

10/6/89

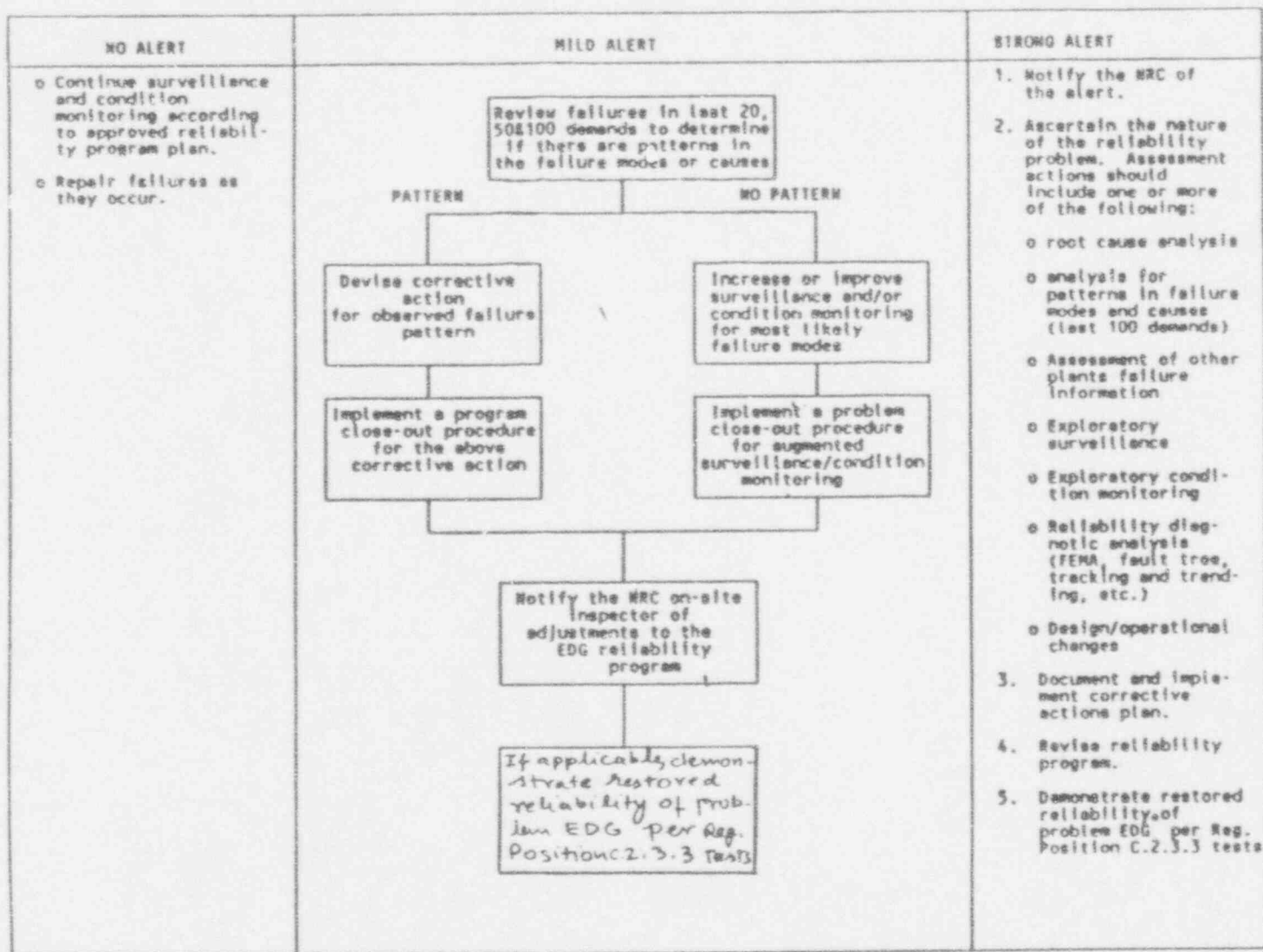
SELB'S PROPOSED WORDING FOR R.G. 1.9, REV. 3

2.3.3 Corrective Action Testing: Following the occurrence of a degrading situation as defined in Regulatory Position 3.5 for a problem EDG, the surveillance testing interval for that EDG should be reduced to no more than 7 days, but no less than 24 hours. This test frequency should be maintained until seven consecutive failure-free start and load-run tests have been performed to demonstrate the effectiveness of corrective actions taken and recovery of reliability levels. At that time, monthly surveillance testing can be resumed. However, if subsequent to the seven failure-free tests, one or more additional failures occur such that there are again three or more failures in the last 20 tests, the testing interval should again be reduced as noted above and maintained until seven consecutive failure-free tests have been performed or until the number of failures in the last 20 tests is less than three. The EDG undergoing corrective action testing should be considered "operable" unless other license requirements necessitate declaring the EDG inoperable.

### 3.5 Problem EDG

If any individual EDG experiences three or more failures in the last 20 demands, then a Mild Alert is declared and actions in Figure 1 are undertaken including the corrective action testing per Regulatory Position 2.3.3. If during the corrective action testing, the EDG experiences additional failures, so that the number of failures in the last 20 demands is five or more (including the previous three failures), consideration should be given to undertaking a major overhaul in accordance with the manufacturer's recommendations for such failures. If the overhaul necessitates the tear-down and overhaul of the diesel engine, then prior to returning the EDG to service, a series of 14 consecutive failure free start and load-run tests (per Regulatory Position 2.2.3) should be conducted. Regular EDG surveillance testing should then commence. Also, any failures which occurred prior to the 14 consecutive successful tests should not be counted for any subsequent determination of the 3/20 failures criterion of this position.

Figure 1 Graded Response to Degrading EDG Reliability



\* This remedial action is discussed in Reg. Positions C.3.4 and C.3.5.

TABLE 1 - RG 1.9 REV. 3 COMPARISON OF CHANGES

Requirements Now In:		Guidance Formerly In These Documents				Generic Letter 84-15	New Position	Remarks
RG 1.9, Rev. 3 (Endorses IEEE 387-1984)	IEEE-387 1984	R.G. 1.9 Rev. 2	IEEE-387 1977	R.G. 1.108* Rev. 1				
Position - Guidance	Section	Position	Section	Position				
C.1 D.G. controls and output breaker	No	No	No	(Discussion Sect.)	N/A	No		
C.2 Selection of continuous rating of diesel generators	No	C.1	No	No	N/A	No		
C.3 Short term rating of diesel generators	3.7.2	C.2	3.7.2	No	N/A	No		
C.4 Acceptability of other reference standards	4.0	C.12	4.0	No	N/A	No		
C.5 Reference to R.G. 1.32	No	C.3	5.1.1	No	N/A	No		
C.6 Mech. & Elect. capabilities of DGs	5.1.2	C.4	5.1.2	No	N/A	No		
C.7 Design & application consideration of DGs	5.4	No	5.5	C.1	N/A	No		
C.8 Diesel generator surveillance systems	3.5.3	C.8	5.6.3.1	C.1.B.4	N/A	No		
C.9 Bypassing of DG protective trips	5.5.4	C.7	5.6.2.2	No	N/A	No		
C.10 Site acceptance & periodic testing of DGs	6.4 & 6.5	No	6.5 & 6.6	C.2.a(9)	Enc. 1 & 3	Yes	The positions of R.G. 1.108 as superseded by Gl 84-15 drastically reduces cold fast-starts.	

Attachment 3 to Enclosure 1

TABLE 1 (CONTINUED)

Requirements Now In:		Guidance Formerly In These Documents				New Position	Remarks
RG 1.9, Rev. 3 (Endorses IEEE 387-1984)	IEEE-387 1984	R.G. 1.9 Rev. 2	IEEE-387 1977	R.G. 1.108* Rev. 1	Generic Letter 84-15		
C.11	Qualification testing of DGs	7.1	C.5	5.4	No	N/A	No
C.12	Start & Load Acceptance Qualification of DGs	7.2.2	C.13	6.3.2	No	N/A	No
C.13	Endurance testing (24 hour testing) of DGs	7.2.1	No	No	C.2.a.3	N/A	No
C.14	Definition of valid tests and failures	7.2.2(5)	No	No	C.2.e	Enc. 3 Sec. 8	No
C.15	Seismic Qualification of DGs	7.4	C.9	6.3	No	N/A	No
C.16	DG test records & reporting criteria	7.5.2	No	6.3.2	6.3	Enc. 3 Sec. 8	No
C.17	Reliability demon- stration of DGs including reliability program	No	No	No	C.2.a(9)& C.2.d	Enc. 1	No

\*RG 1.108 will be withdrawn  
after issuance of RG 1.9, Rev. 3

Criteria of NSAC-108  
is used, as in R.G.  
1.155. This is a  
refinement - not new.

Required to meet  
10 CFR 50.63 and  
the guidance of  
RG 1.155.



Enclosure 2 to the Minutes of CRGR Meeting No. 171  
Briefing on Guidance for Implementing IST Generic Letter  
October 11, 1989

TOPIC

Due to unanticipated time constraints that developed during this meeting, the Committee cancelled a planned briefing by the staff on a proposed package of guidance to facilitate implementation of the IST Generic Letter (GL 89-04). The Committee discussed this item briefly, however, at the end of this meeting and made a determination regarding the need for formal CRGR review. (See Conclusions/Recommendations below.)

BACKGROUND

Background information provided to CRGR in connection with the planned briefing on this item was transmitted by memorandum, dated September 6, 1989, J. H. Sniezek to E. L. Jordan; that background package included the following documents:

1. Proposed Generic Letter, "Minutes of the Public Meetings on Generic Letter 89-04," and attachments as follows:
  - a. Minutes of the Public Meetings to Discuss Generic Letter 89-04, "Guidance on Developing Acceptable Inservice Testing Programs,"
  - b. Lists of Attendees at Public Meetings on Generic Letter 89-04:
    - Region I, June 5, 1989
    - Region II, June 8, 1989
    - Region III, June 13, 1989
    - Regions IV & V, June 15, 1989

2. Briefing Slides for Planned Briefing at Meeting No. 171

(Copies of these background documents are enclosed - see Attachment 1)

CONCLUSIONS/RECOMMENDATIONS

After a brief discussion at this meeting, the Committee determined that this item does not require further formal consideration by CRGR. However, the generic letter which transmits the minutes of the public meetings on GL 89-04 to licensees should state clearly that no new requirements are intended by issuance of those meeting minutes.