SEP 14

MEMORANDUM FOR: James M. Taylor
Executive Director for Operations

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

SUBJECT: MINUTES OF CRGR MEETING NUMBER 190

The Committee to Review Generic Requirements (CRGR) met on Wednesday, July 25, 1990 from 1:00-5:00 p.m. A list of attendees at the meeting is enclosed (Enclosure 1). The following items were discussed at the meeting:

1. C. Thomas, A. Gody, E. McKenna, and J. Spraul of NRR presented for CRGR review a proposed new Standard Review Plan Section 17.3 on Quality Assurance. The Committee recommended in favor of issuing the proposed section, subject to clarification of the applicability. This matter is discussed in Enclosure 2.

2. W. Minners and A. Serkiz of RES presented for CRGR review a revised package on diesel generator reliability including a proposed resolution for Generic Safety Issue B-56 and a proposed revision to Regulatory Guide 1.9. (This matter was previously discussed at Meetings 171 and 176.) The CRGR recommended in favor of issuing the proposed regulatory guide subject to a number of revisions. This matter is discussed in Enclosure 3.

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 Dennis Allison (492-4148).

Original Signed by:
E. L. Jordan

Edward L. Jordan, Chairman
Committee to Review Generic
Requirements

Enclosures:
As stated

cc: Commission (5)
SECY
J. Lieberman
P. Norry
D. Williams
Regional Administrators
CRGR Members

Distribution: See next page

[MIN190.DPA]slm:8/28/90

CRGR:AEOD	CRGR:AEOD	DD:AEOD	C:CRGR:AEOD
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9/13/90	9/13/90	/90	9/14/90

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ASerkiz	TMurley
JSniezek	CThomas
AGody	EMcKenna
JSpraul	DAllison
JConran	DRoss
EJordan	

ENCLOSURE 1

Attendance List for CRGR Meeting No. 190

July 25, 1990

CRGR Members

E. Jordan
F. Miraglia
L. Reyes
R. Burnett (for G. Arlotto)
B. Sheron
J. Moore

CRGR Staff

D. Ross
J. Conran
D. Allison

NRC Staff

W. Minners
A. Serkiz
C. Thomas
A. Gody
E. McKenna
J. Spraul
O. Chopra
H. Alderman
C. Nichols
J. Raval
E. Tomlinson
L. Plisco
D. Holody
G. Mizumo
F. Rosa
A. Thadani

Enclosure 2 to the Minutes of CRGR Meeting No. 190
Proposed Standard Review Plan (SRP) Section 17.3
on Quality Assurance

July 25, 1990

TOPIC

C. Thomas, A. Gody, E. McKenna and Spraul of NRR presented a proposed new SRP Section 17.3 for CRGR review. The new section would reduce the emphasis on QA program structure and increase the emphasis on performance. This would better reflect current practice in reviewing QA program descriptions. However, the staff indicated that it would not introduce any new positions. The new section would apply to future applications for CP's, OL's or design approvals. Licensees with existing approved QA program descriptions could volunteer to adopt the new Section 17.3 or they could continue using the existing Section 17.1 or 17.2, even when proposing changes for staff review.

A copy of the slides used by the staff in the presentation is provided as an attachment to this enclosure.

BACKGROUND

The package provided for CRGR review was transmitted by a memorandum dated June 4, 1990 from F. Miraglia to E. Jordan. The package included:

1. Proposed SRP Section 17.3
2. SRP Comparison
3. SRP Sections 17.1 and 17.2 (Current)
4. Comment resolution

CONCLUSIONS/RECOMMENDATIONS

The CRGR supported issuance of the proposed SRP section, subject to clarification of the intended applicability. (That is, an applicant for a CP/OL that references a standard design developed under a Section 17.1 QA program would not be required to adopt Section 17.3 for the Standard designer's QA program.)

This action was not considered to be a backfit.

Enclosure 3 to the Minutes of CRGR Meeting No. 190

July 25, 1990

Proposed Resolution for GSI B-56, Diesel Generator Reliability

TOPIC

W. Minners (RES) and A. Serkiz (RES) presented for CRGR review a revised proposal for final resolution of GSI B-56, "Diesel Generator Reliability". The proposed resolution included proposed Revision 3 to Reg. Guide 1.9 and an implementing generic letter. The B-56 issue was reviewed earlier by CRGR at Meetings Nos. 171 and 176; and the current review package included revisions reflect CRGR comments and recommendations from those earlier meetings. The proposed resolution involves backfitting; specifically, the imposition of new NRC staff positions/guidance relating to EDG reliability monitoring and EDG reliability programs. The proposed backfits were presented as cost-justified safety enhancements by the sponsoring staff.

Copies of the briefing slides used by the staff in their presentations to the Committee are enclosed (Attachment 1).

BACKGROUND

1. The documents submitted initially to CRGR for review in this matter were transmitted by memorandum dated June 19, 1990, E.S. Beckjord to E.L. Jordan; the initial review package included the following documents:

   a. Letter dated May 3, 1990 from W.H. Rasin (NUMARC) to E.S. Beckjord providing NUMARC Initiative 5A.

   b. Enclosure A - Responses to CRGR Comments (from CRGR Meeting No. 176) dated May 29, 1990

   c. Enclosure B - Working Draft, dated June 14, 1990, of Revision 3 to Reg. Guide 1.9

   d. Enclosure C - Draft Generic Letter, dated June 15, 1990, "Request for Action Pursuant to 10 CFR 50.54(f) Related to the Resolution of Generic Safety Issue (GSI) B-56, Diesel Generator Reliability"

   e. Enclosure D - Draft Backfit Analysis, dated May 30, 1990, "GI B-56, Diesel Generator Reliability"

   f. Enclosure E - Draft Federal Register Notice, dated May 29, 1990

   g. Enclosure F - Appendix D, Dated May 2, 1990, to NUMARC 87-00, "Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at Light Water Reactors"

h. Enclosure G - Draft memorandum, dated ay 8, 1990, "Resolution of Generic Safety Issue B-56 EDG Reliability", and enclosed model Safety Eva tion Report

2. A revision to the initial B-56 review packa was transmitted by memorandum dated July 9, 1990 (Attachment 2

3. NUMARC provided comments on the proposed re lution for GSI B-56 directly to CRGR via letter, dated July 10, 1990, to L. Jordan (Attachment 4).

CONCLUSIONS/RECOMMENDATIONS

As a result of their review of the B-56 issue, in uding the discussions with the staff at this meeting, the Committee recommer ed in favor issuance of proposed Revision 3 to Reg. Guide 1.9 and its imple enting generic letter, subject to several conditions stated below:

1. The staff should revise the format of prop ed Revision 3 along the lines discussed with the staff at this meeting (see Attachment 3), so that Regulatory Position C.6 identifies the principal elements of an EDG reliability program acceptable to NRC, but the detailed content currently included under C.6.2, C.6.3, C.6.4, C.6.5, C.6.6 and C.6.7 is moved to a new Appendix. The new Appendix should note explicitly that the detailed information provided therein is intended as illustrative examples and considerations that could be used, by licensees who choose to do so, in developing EDG reliability programs based on the principal elements contained in Regulatory Position C.6. (or the equivalent guidance in the NUMARC Appendix D dated 5/2/90). Also, the Reg. Guide should state explicitly that the principal elements of the EDG reliability program identified in Regulatory Position C.6 are intended as guidelines, which need not be used by a licensee to replace or supplement an existing successful program.

2. The staff should revise the proposed implementing generic letter to make clearer that NRC is, in accordance with the provisions of 10 CFR 50.54(f), requiring licensee response as to whether they will provide a regulatory commitment (a) to implement NUMARC Initiative 5A, and (b) to implement voluntarily the guidance for monitoring and maintaining EDG reliability in Regulatory Positions C.3, C.4, C.5 and C.6 of Revision 3 to Reg. Guide 1.9 (or equivalent guidance in NUMARC's Appendix D), as the means of complying with 10 CFR 50.63; and, if not, describe their alternative method for compliance with the rule. Specifically, the wording in the last paragraph on page 1 of the proposed generic letter (e.g., the reference to "complying with" the Regulatory Positiions in Reg. Guide 1.9) should be revised or deleted, to make clear that this letter is a generic information request only, and to avoid any suggestion that the letter is intended to impose new regulatory requirements. The wording in the first paragraph on pages 1 and 2 is generally more suitable in that regard, and should be used as the model.

Also the discussion under "Purpose and Background" in the proposed generic letter should be expanded to discuss the linkage between GSI B-56 and 10 CFR 50.63 (Station Blackout rule), specifically with respect to identification of the need for detailed guidance for monitoring EDG reliability and for EDG programs.

3. The staff should reexamine the wording of the Backfit Analysis provided with the review package for the B-56 issue, and the "Backfit Discussion" in the proposed implementing generic letter, and revise as appropriate to make clear that the staff is reaffirming at this time (in the light of the most current information available) the applicability of the bounding type cost estimates made for anticipated EDG reliability activities in the USI A-44 resolution approved earlier in connection with the Station Blackout rule. The comments received from NUMARC seem to lack recognition of this relationship, and a more explicit (perhaps expanded) discussion of this point in the B-56 package may be helpful.

4. The CRGR considered explicitly in discussions with the staff at this meeting comments submitted formally by NUMARC in their July 18, 1990 letter (Attachment 4), and reviewed the proposed responses to those comments provided at the meeting by the staff (Attachment 5). The Committee agreed with the overall thrust and tone of the proposed responses, and offered specific suggestions for several minor changes to improve their clarity and internal consistency. In finalizing the responses, the staff will consider expanding the discussion in areas that address policy type issues raised by NUMARC (e.g., whether there is any current need for detailed regulatory guidance on EDG reliability programs, and the effects of the recent Appendix D revisions by NUMARC).

5. The CRGR noted their disappointment and consternation at the recent NUMARC action in removing abruptly from their Appendix D guidance document much of detailed guidance on EDG programs previously included there. This action by NUMARC followed several years of extensive coordinative effort by the NRC staff to develop, in cooperation with NUMARC, complementary detailed EDG guidance (specifically, Revision 3 to Reg. Guide 1.9 and the NUMARC Appendix D document). As a result of those coordinated efforts, the NUMARC Appendix D guidance reviewed by CRGR at Meeting No. 176 was judged to be a fully acceptable equivalent to the detailed guidance in the staff's proposed Revision 3 to Reg. Guide 1.9. At that point, the Committee recommended, and the staff agreed in principle, that Appendix D should be adopted (essentially without exception) as an industry standard, suitable for referencing by the licensees as acceptable means for monitoring and maintaining EDG reliability.

   The staff informed NUMARC of the planned endorsement of, and reliance on, the Appendix D guidance by NRC. Notwithstanding, NUMARC chose to abruptly remove from Appendix D in a recent revision much of the detailed EDG program guidance that made it suitable for referencing as a standard. That action by NUMARC at this late stage has rendered largely a waste the expenditure of significant staff resources and CRGR review time over the last year-or-more, pursuing development of complementary detailed NRC and NUMARC guidance on EDG programs. Beyond the waste of staff resources involved, the time spent by the staff in pursuing that objective in good faith represents a year-or-more of unnecessary delay in coming to regulatory closure on the B-56 issue as now proposed by the staff.

   There was a CRGR consensus that the Chairman should send to the EDO a separate letter more fully discussing the circumstances involved, and expressing the Committee's concern regarding the broader policy implications of the NUMARC action.

STANDARD REVIEW PLAN

SECTION 17.3

"QUALITY ASSURANCE"

Attachment to
Enclosure 2

1984 NRC STUDY INDICATED

QA SHOULD FOCUS MORE ON

PERFORMANCE

THE ACCEPTANCE CRITERIA OF SRP SECTIONS 17.1 & 17.2 ARE PROGRAMMATICALLY ORIENTED - IN ACCORDANCE WITH THE 18 CRITERIA OF APPENDIX B

THE ACCEPTANCE CRITERIA OF SRP SECTION 17.3 ARE PERFORMANCE ORIENTED:

A. MANAGEMENT

B. PERFORMANCE/VERIFICATION

C. SELF-ASSESSMENT

SRP SECTION 17.3:

1. REQUIRES NO NEW STAFF POSITIONS

2. IS NOT A BACKFIT

3. ELIMINATES FRAGMENTATION AND OVERLAP

4. SIMPLIFIES, CLARIFIES, AND CONSOLIDATES TEXT

5. USES UP-TO-DATE INDUSTRY CONSENSUS STANDARDS

6. EMPHASIZES A GRADED APPROACH TO QA

7. IS LESS PRESCRIPTIVE

17.3 IMPLEMENTATION:

1. NOTICE IN FED. REGISTER
2. ISSUE
3. DEVELOP REVIEWER TRAINING
4. TRAIN REVIEWERS
5. DISCUSS AT SOCIETY MEETINGS
6. REVISE STANDARD FORMAT (R.G. 1.70)

RESOLUTION OF GSI B-56

PRESENTATION TO THE COMMITTEE

TO REVIEW GENERIC REQUIREMENTS

CRGR Meeting 190
July 25,1990

W. Minners
MS NL/S 360 EXT. 23900

Attachment 1
to Enclosure 3

OVERVIEW
RG 1.9, REV. 3

1. Consolidates into a single RG guidance previously provided in RG 1.9, Rev. 2, RG 1.108 and GL 84-15, thereby minimizing regulatory confusion.

2. Better defines testing requirements, eliminates cold fast starts and limits accelerated testing to the "problem" EDG.

3. Provides common guidance for monitoring EDG reliability levels and actions to be taken.

4. Defines the elements of an EDG reliability program and provides illustrative examples of proven considerations and practices; supplements guidance provided in RG 1.155, "Station Blackout".

5. Incorporates proven industry practices and is consistant with NUMARC's Appendix D (5-2-90) and related Topical Report.

REQUEST FOR APPROVAL

1. Issue RG 1.9, Rev. 3 (Enclosure B)
2. Issue 50.54(f) Letter (Enclosure C)
3. Close out GSI B-56 based on Items 1 & 2
4. Issue FRN which contains Backfit Analysis

B-56 CHRONOLOGY

SBO RULE ISSUED	6/88
CRGR MTGS NO. 144 & 146	8 & 9/88
RG 1.9, REV. 3 ISSUED FOR COMMENT	11/88
COMMENT PERIOD CLOSED	3/89
MTGS WITH NUMARC (7 MTGS)	5-6/89
CRGR MTG NO. 164	6/89
MTGS WITH NUMARC (4 MTGS)	7-10/89
CRGR MTG NO. 171	10/89
CRGR MTG NO. 176	12/89
ACRS MEETING	2/90
DISCUSSIONS WITH NUMARC	1-3/90
NUMARC SUBMITTAL OF INITIATIVE 5A & NUMARC-8700, APPENDIX D	5/90
CRGR MEETING 190	7/90
ACRS MEETINGS SCHEDULED	8/90

OVERVIEW

. Staff has followed up on CRGR recommendations.
(CRGR Meeting No. 176, 12/20/89)

. NUMARC was given the opportunity to submit Appendix D

. The Staff had discussions with NUMARC (Jan-Mar 1990).

. NUMARC submitted Initiative 5A and a revised Appendix D (reduced in scope) on 5-3-90.

. Staff has revised RG 1.9, Rev. 3 to reference NUMARC's Appendix D (5-2-90) as appropriate and included guidance for an EDG reliability program (C.6) in the RG.

. A 50.54(f) letter has been prepared to determine the course of action licensees and applicants plan to pursue and suggests submittal of Tech Spec changes to take advantage of relaxations afforded..

. Issuance of RG 1.9, Rev. 3, and the generic letter constitute resolution of GSI B-56. The FRN will include the backfit analysis for the proposed course of action.

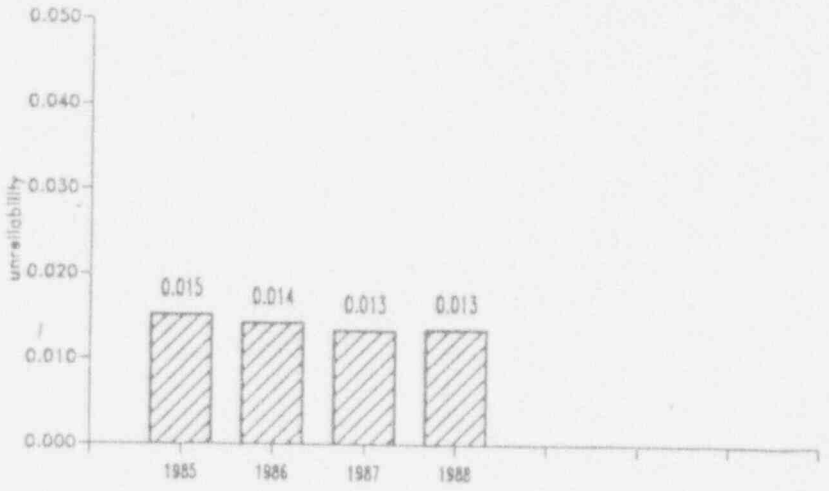
EDG RELIABILITY

1. EDG reliability situation has improved

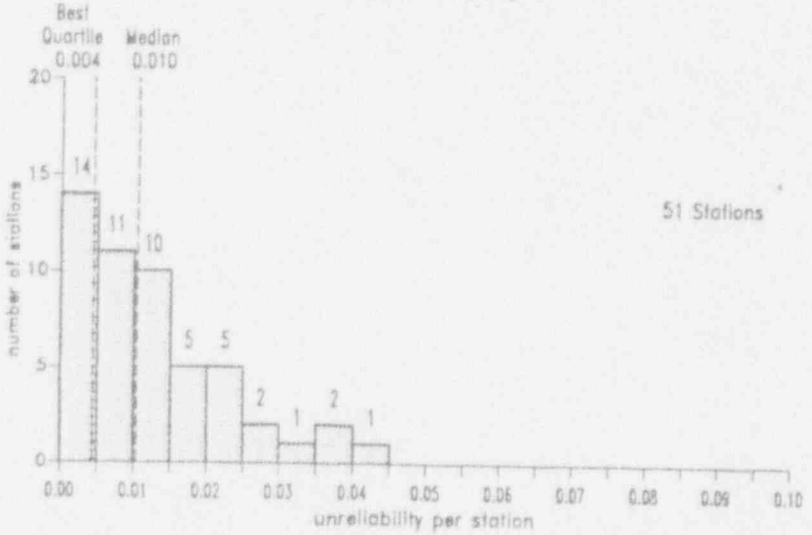
2. Industry "Averaged" level is 97 - 98%

3. Annual performance data shows a small number of plant sliding below 95%.

Diesel Generator Total Unreliability (by station)
Industry Average

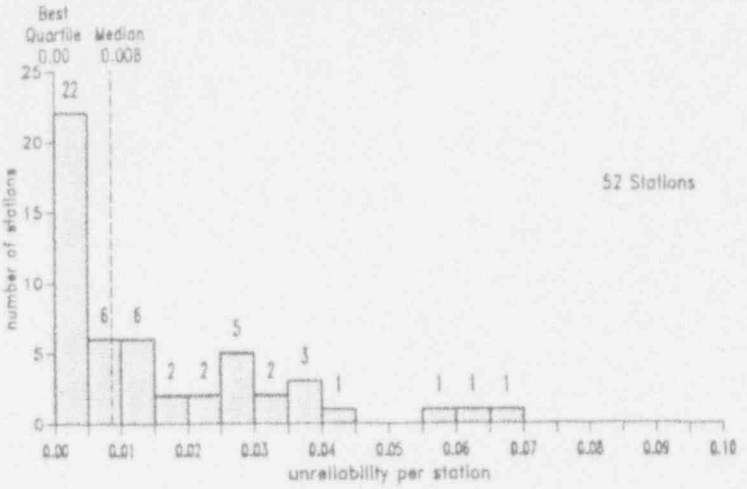


Diesel Generator Total Unreliability (by station)
Three Year Distribution
(1/86 - 12/88)

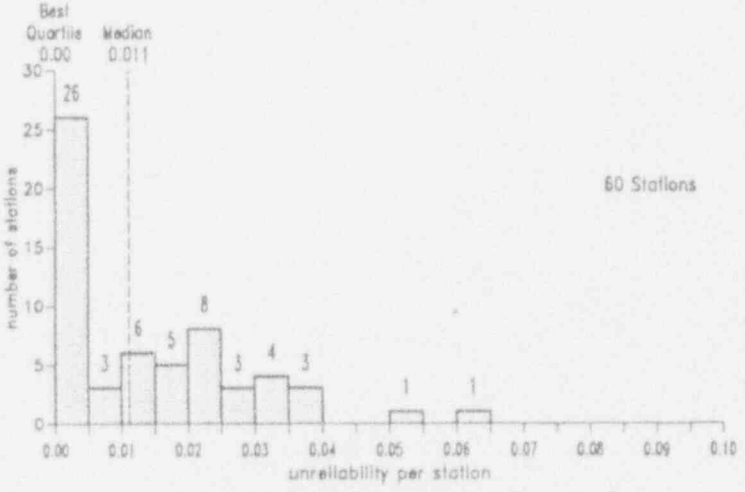


Ref. 5/2-3/90 meeting with NUMARC B-56 Working Group

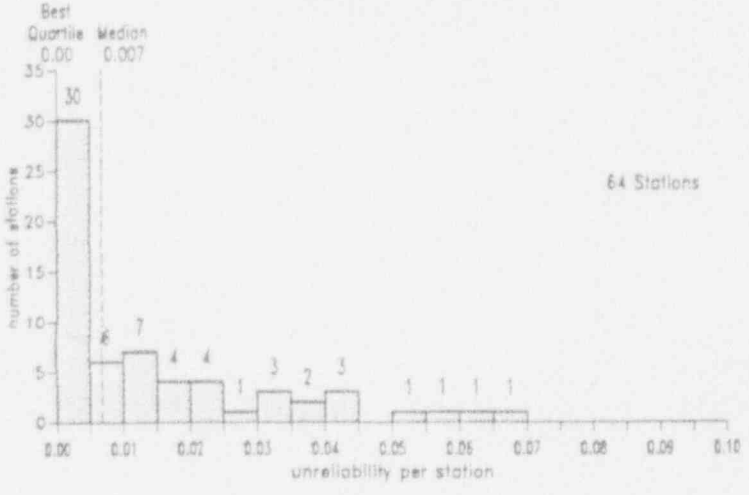
Diesel Generator Total Unreliability (by station)
One Year Distribution
(1/86 - 12/86)



Diesel Generator Total Unreliability (by station)
One Year Distribution
(1/87 - 12/87)



Diesel Generator Total Unreliability (by station)
One Year Distribution
(1/88 - 12/88)



Ref. 5/2-3/90 meeting with NUMARC B-56 Working Group

SLIDE 8

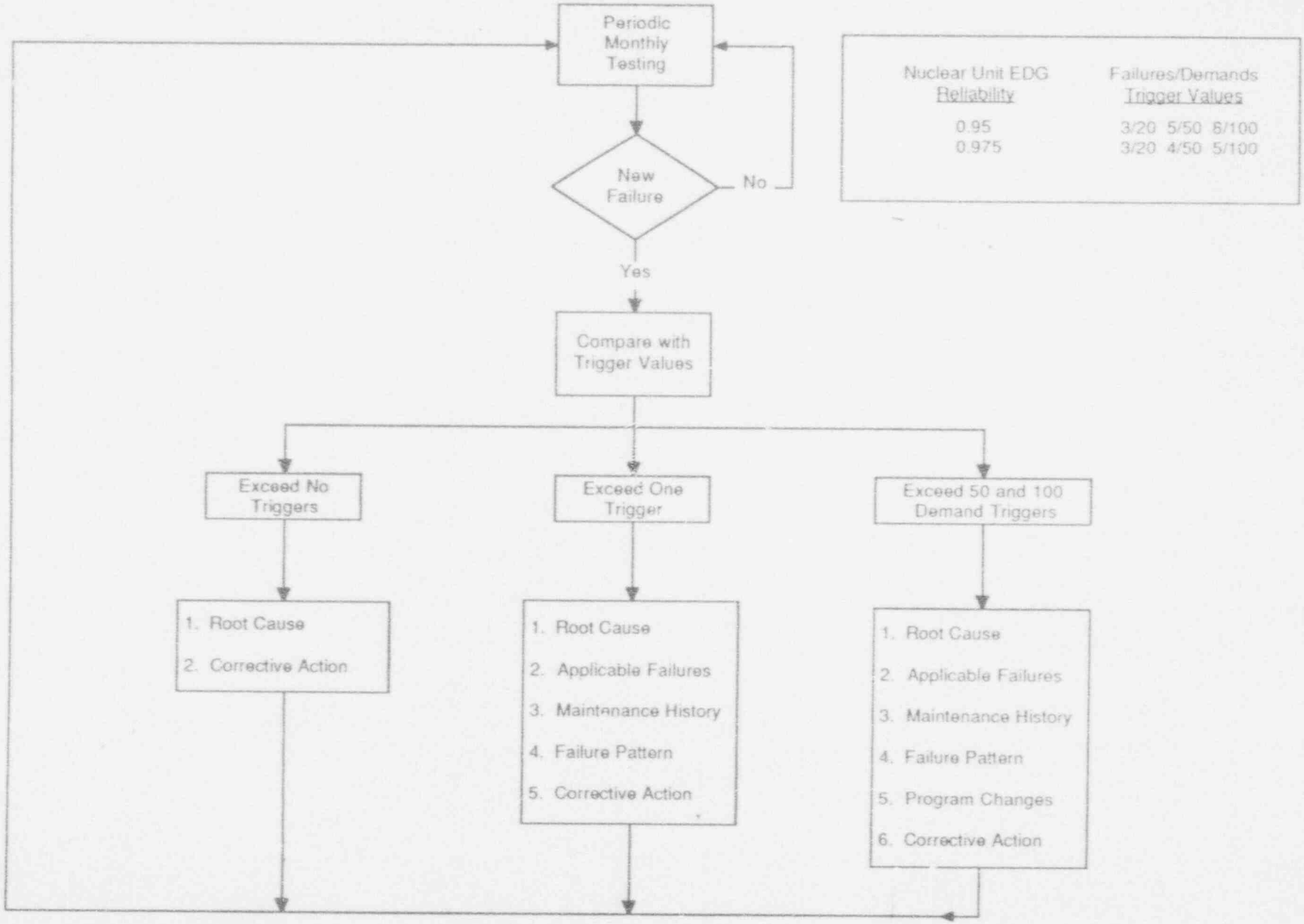
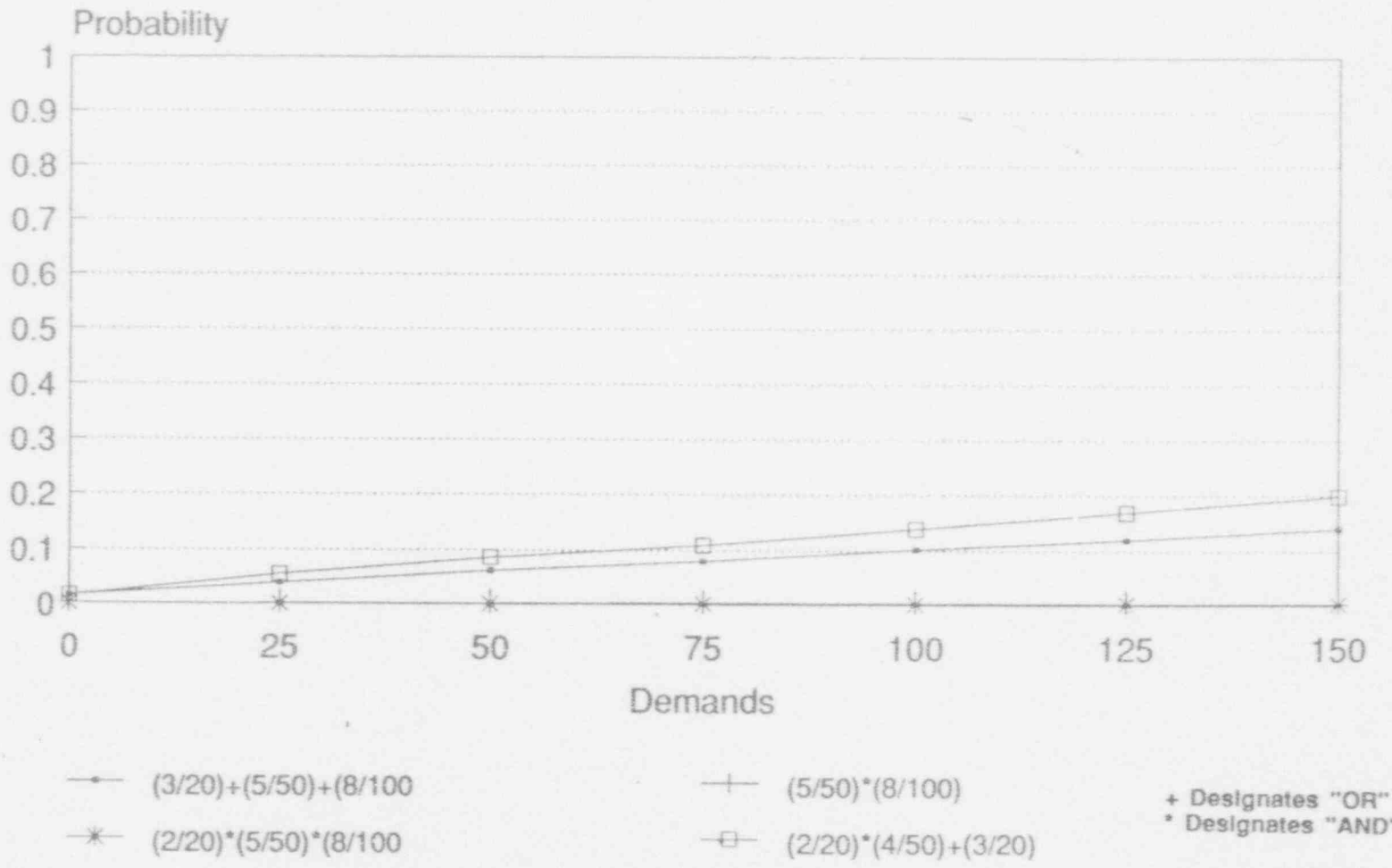


Figure 1 - EDG Reliability Monitoring & Maintenance Activities

SLIDE 9

FALSE ALARM RATE

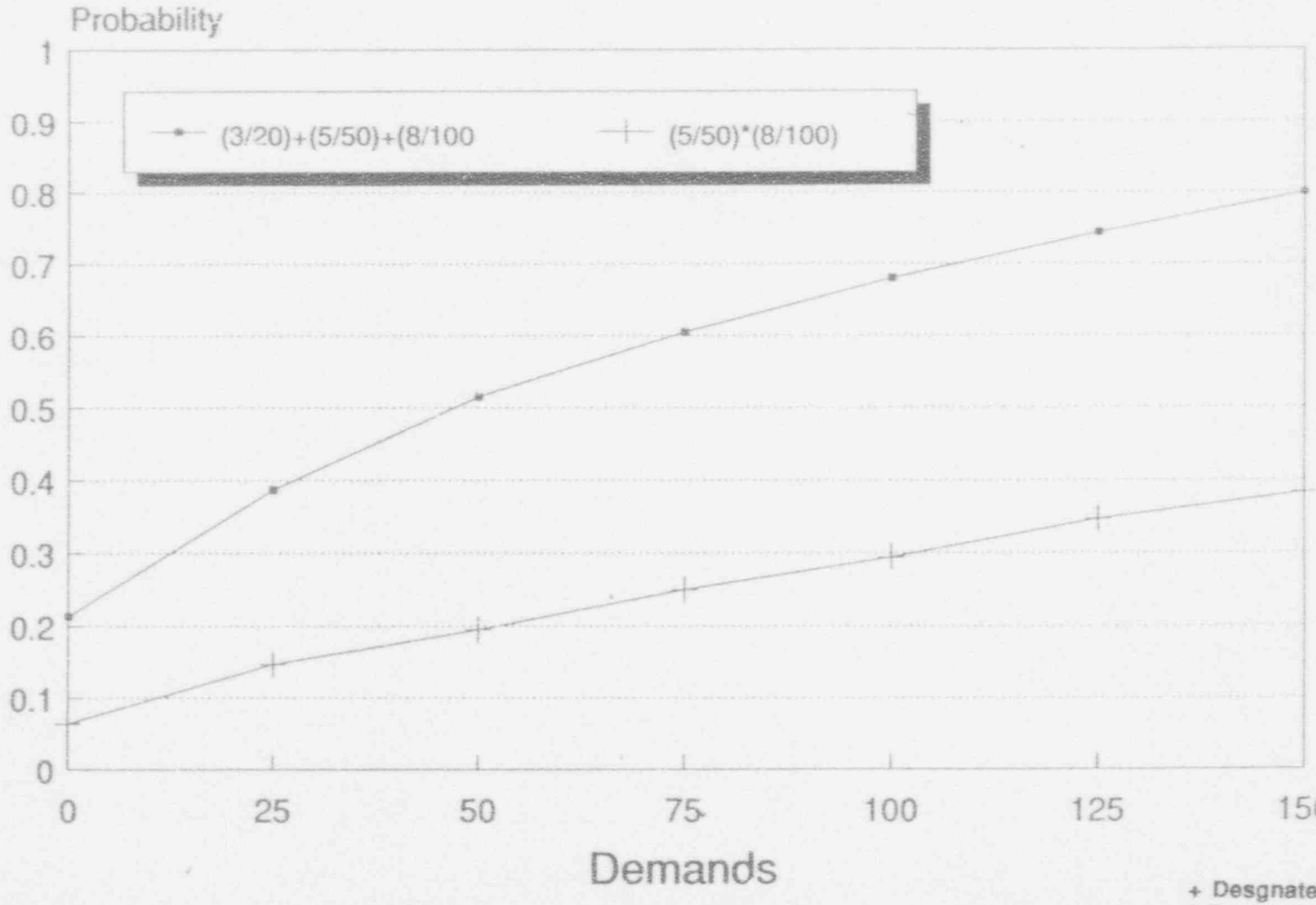
(Steady-State Reliability is 98%)



High EDG reliability will not result in significant false alarms

FALSE ALARM RATE

(Steady-State Reliability is 95%)

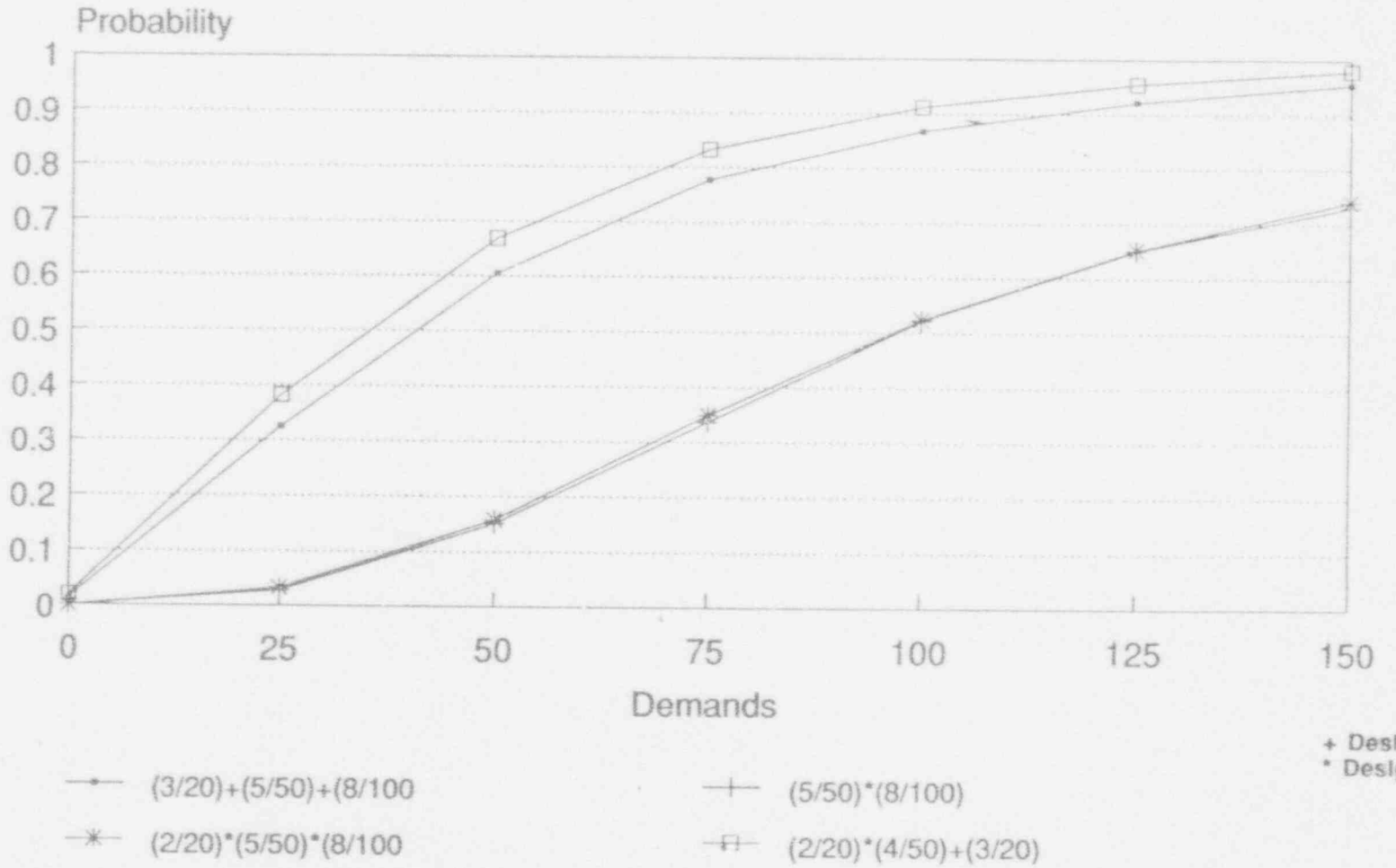


+ Desgnates "OR"
* Designates "AND"

High EDG reliability will not result in significant false alarms.

DETECTION RESPONSE

(Reliability Drops from 98% to 92%)



+ Designates "OR"
* Designates "AND"

1) Single trigger is an indicator of onset of degradation.

2) Detection response with "multiple" triggers is slow.

(7-23-90)

TABLE 1

CROSS-REFERENCE BETWEEN REGULATORY GUIDE 1.9, REV. 3
AND NUMARC-87-00, APPENDIX D (5-2-90)

RG 1.9,REV 3 SECTION	NUMARC-8700 APPENDIX D
Section A, Introduction	None (Use RG 1.9,Rev.3)
Section B, Discussion	None (Use RG 1.9,Rev.3)
Section C, Regulatory Position	
1 Design Considerations	None (Use RG 1.9,Rev.3)
2 Diesel Generator Testing	
2.1 Definitions	D.1
2.2 Test Descriptions	None (Use RG 1.9,Rev.3)
2.3 Preoperational and Surveillance Testing	None (Use RG 1.9,Rev.3)
3 EDG Reliability Goals and Monitoring	D.2
3.1 Reliability Goals for SBO	Introduction
3.2 EDG Reliability Monitoring	D.2.2, D.2.3
3.3 Maintaining EDG Reliability	D.2.1,D.2.3,D.2.4,D.2.5
3.4 Problem EDG	D.2.4.4
4 Record keeping Guidance	D.2.4.6
5 Reporting Criteria	Use RG 1.9, Rev. 3
6 EDG Reliability Program	Introduction
6.1 Monitoring EDG Reliability	D.2
6.2 EDG Surveillance Plan	None (Use RG 1.9,Rev.3)
6.3 EDG Performance Monitoring	None (Use RG 1.9,Rev.3)
6.4 EDG Maintenance Program	None (Use RG 1.9,Rev.3)
6.5 EDG Failure Analysis and Root Cause Investigation	None (Use RG 1.9,Rev.3)
6.6 EDG Problem Close-out	None (Use RG 1.9,Rev.3)
6.7 EDG Reliability Data System	None (Use RG 1.9,Rev.3)
Section D, Implementation	Introduction (Initiative 5A)

C.6 EDG RELIABILITY PROGRAM

Section C.6 identifies the following principal elements of an EDG reliablity program:

1. Monitoring nuclear unit EDG reliability levels against SBO targets.

2. Surveillance Plan

3. Performance monitoring of important parameters.

4. Maintenance Program

5. Failure Analysis

6. EDG Problem Closeout Process

7. EDG Reliability Data System

These elements are the same as NUMARC's.

The RG subsections which follow provide general guidelines (with illustrative examples) for these major program elements.

C.6.1 Monitoring EDG Reliability

Periodic surveillance testing per Reg Position C.3 & NUMARC-8700, Appendix D, 5-2-90.

C.6.2 EDG Surveillance Plan

. Examples of factors for consideration in developing a surveillance plan.

. EDG components, subsystems & boundary defined (Fig. 2 of RG 1.9, Rev. 3) and examples of surveillance activities are provided (Tables 3 & 4)

C.6.3 EDG Performance Monitoring

General guidance provided regarding obtaining data for trending and detection of onset of degradation to allow for corrective action prior to failure.

C.6.4 EDG Maintenance Program

General guidance on development of a maintenance program which identifies:

. Vendor recommendations

. Relating maintenance actions to repair time, severity, likelihood of reoccurence.

. Consideration of reliability characteristics of the subsystems and components when planning preventive maintenance.

. Interfacing maintenance activities with the overall EDG reliability program.

C.6.5 Failure Analysis & Root Cause Investigation

General guidance for failure analysis and root cause investigationsis provided (ie Fig. 3) of systematic approach to failure and root cause analysis.

C.6.6 Problem Closeout

Notes that attention should be given to procedures and controls for resolution and closeout of problems and supports plant specific procedures to to prevent recurrence of failures or problem. Identifies the following considerations:

. Criteria for closeout

. Closeout review

. Closeout monitoring

. Data system interface

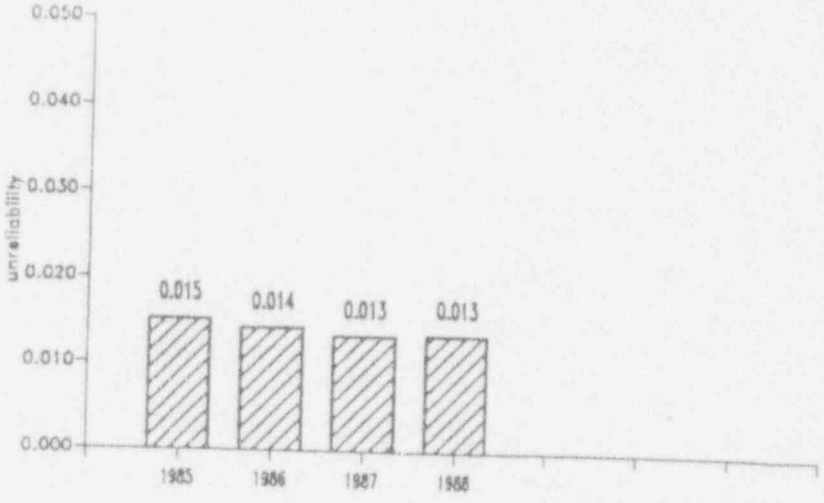
C.6.7 EDG Reliability Data System

Identifies need for a data collection, storage and retrieval system, that can be accessed by personnel assigned to monitoring and maintaining the EDGs. Identifies typical types of information:

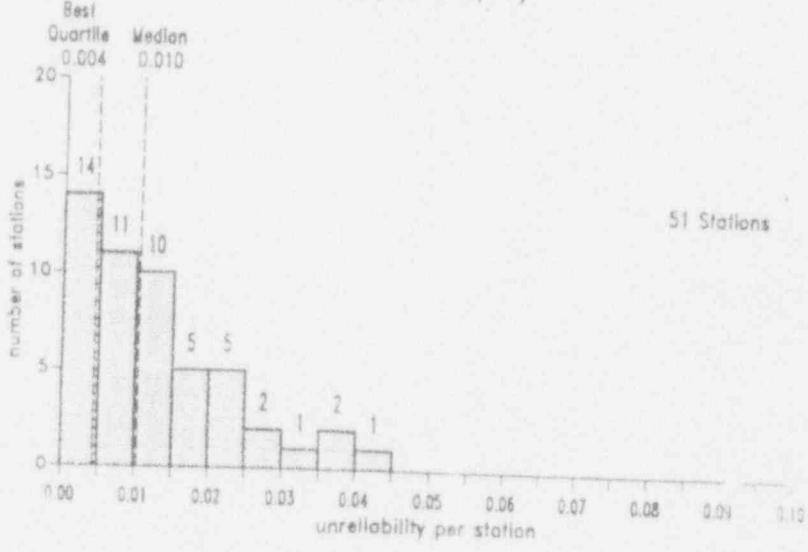
- Surveillance test results
- EDG failure history
- Failure and root cause analysis information
- Manufacturer's recommendations
- Input from the preventative maintenance program
- Input from the corrective maintenance program
- Industry operating experiance

CRGR Meeting No. 19c
July 25, 1990

Diesel Generator Total Unreliability (by station)
Industry Average



Diesel Generator Total Unreliability (by station)
Three Year Distribution
(1/86 - 12/88)

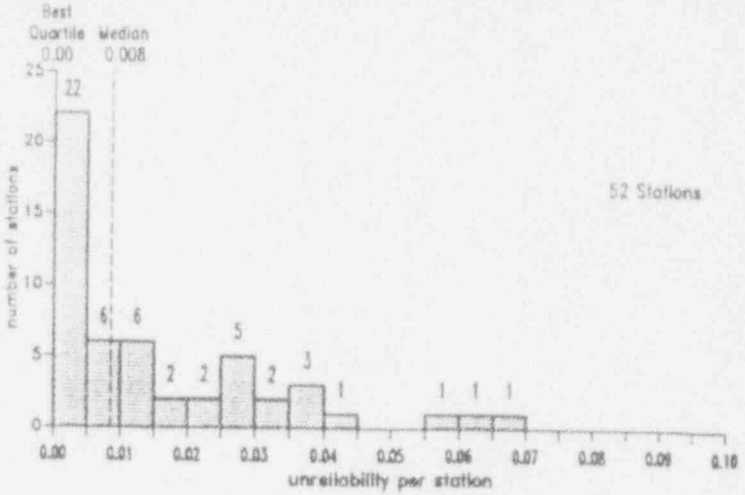


Ref. 5/2-3/89 meeting with NUMARC B-56 Working Group

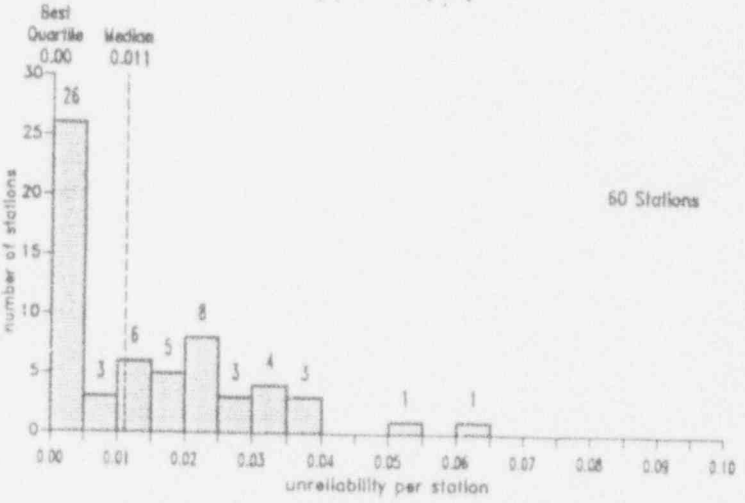
Supplemental Briefing Slide [redacted]

CRGR Meeting No. 1
July 25, 1990

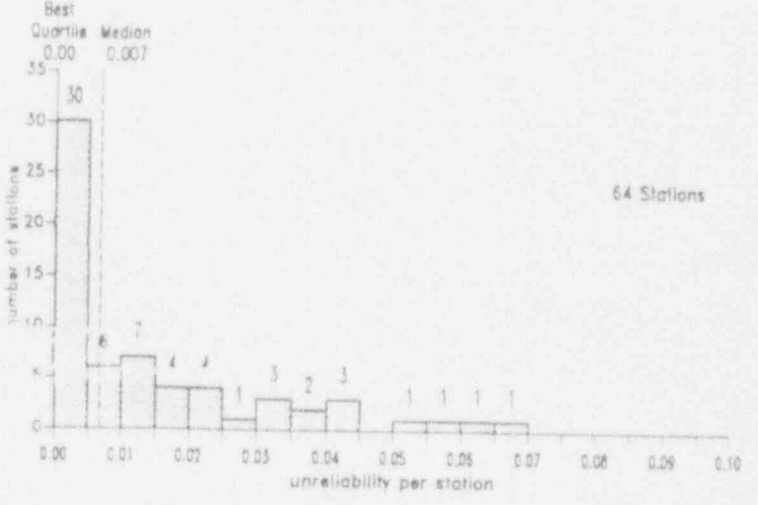
Diesel Generator Total Unreliability (by station)
One Year Distribution
(1/86 - 12/86)



Diesel Generator Total Unreliability (by station)
One Year Distribution
(1/87 - 12/87)



Diesel Generator Total Unreliability (by station)
One Year Distribution
(1/88 - 12/88)



Ref. 5/2-3/89 meeting with NUMARC B-56 Working Group

Supplemental Briefing Slide [redacted]

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUL 9 1990

MEMORANDUM FOR: E. L. Jordan, Chairman
Committee to Review Generic Requirements

FROM: E. S. Beckjord, Director
Office of Nuclear Regulatory Research

SUBJECT: REVISION TO B-56 CRGR PACKAGE

Enclosed is a revision to Section C.5, "Reporting Criteria" of Regulatory Guide 1.9, Revision 3 which incorporates the reporting requirements desired by NRR. This revision calls for a special report to be submitted when a "problem" EDG situation occurs (i.e. 4 failures in the last 25 valid demands). The need for such a report is justified in the enclosed A. Thadani (NRR) to W. Minners (RES) memo dated July 6, 1990. The revised portion of the regulatory analysis dealing with this reporting requirement is also enclosed. This backfitting is necessary to provide uniform reporting requirements for all plants.

This report is a relaxation of the special EDG failure reporting requirements found in most Tech Specs which reference RG 1.108, which requires the reporting of all EDG failures, valid or non-valid. However, there are some older plants that do not have any Tech Spec EDG failure reporting requirements and therefore this requirement is a backfit.

A suggestion for submittal of revised Tech Specs associated with these relaxations is contained in page 2 of the 50.54 (f) letter (see Enclosure C of the B-56 package previously submitted to the CRGR).

E. S. Beckjord, Director
Office of Nuclear Regulatory Research

Enclosures: As stated

cc:
W. Russell, NRR
A. Thadani, NRR
F. Rosa, NRR
O. Chopra, NRR
J. Calvo, NRR
T. Dunning, NRR

9007130107

Attachment 2 to
Enclosure 3

7-9-90

REVISION TO SECTION C.5, RG 1.9, REV. 3

5. REPORTING CRITERIA

When reporting EDG failures, all plants should conform with the provisions of 10 CFR 50.4, 10 CFR 50.72, 10 CFR 50.73, 10 CFR 21, plant technical specifications, and other current NRC reporting regulations.

In addition, if an individual EDG experiences 4 or more valid failures in the last 25 demands, these failures and any non-valid failures experienced by that EDG in that time period should be reported in 30 days. This report should include the following information:

1. The nuclear unit EDG performance and reliability indicators as compared to the appropriate 20, 50, and 100 demand trigger values.

2. A description of the failures, underlying causes, and corrective actions taken.

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the total cost would be $150,000.

The development of guidelines by staff and industry representatives which resulted in Revision 3 of Regulatory Guide 1.9, and of NUMARC-8700, Rev. 1, Appendix D provides for uniform guidance and conformity of approaches, thereby reducing NRC review costs.

(8) The potential impact of differences in facility type, design, or age on the relevance and practicality of the proposed backfit.

Differences in facility type, design, or age will not have any significant effect on the relevance or practicality of complying with the EDG reliability monitoring program since the proposed changes reflect current industry practices.

In addition, Revision 3 of Regulatory Guide 1.9 and NUMARC-8700, Rev. 1, Appendix D have been subjected to extensive discussions with NUMARC's B-56 working group and also issued for external review to solicit a wide spectrum of review and ensure conformity with proven practice, thereby further reducing potential impacts.

However, reporting requirements associated with the problem EDG will impact older plants that currently are not subject to reporting any EDG failures through Tech Spec requirements. Current EDG performance indicates that such reports should be extremely minimal. The occurence of a problem EDG situation is indicative of an inability to correct failures through on-site EDG maintenance practices and also represents a significant deterioration of nuclear unit EDG reliability level.

On the other hand the revised EDG failure reporting requirements are a relaxation of reporting requirements for the majority of plants which currently report all EDG failures, valid or non-valid, per RG 1.108, Rev.2.

(9) Whether the proposed backfit is interim or final and, if interim, the justification for imposing the proposed backfit on an interim basis.

The proposed action is final.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

July 6, 1990

MEMORANDUM FOR: Warren Minners, Director
Division of Safety Issues Resolution
Office of Nuclear Reactor Research

FROM: Ashok C. Thadani, Director
Division of Systems Technology
Office of Nuclear Reactor Regulation

SUBJECT: REPORTING REQUIREMENTS FOR PROBLEM EDG FAILURES
(GENERIC SAFETY ISSUE B-56)

Per our discussions of June 28, 1990, regarding reporting requirements for failures of problem emergency diesel generators (EDGs), we request that Regulatory Position C.5 previously concurred in by NRR be reinstated in Regulatory Guide 1.9, Rev. 3, which is being transmitted to the CRGR. The preferred wording is provided in the Enclosure.

The basis for this reporting requirement is simply that EDG reliability is an important factor in the determination of the overall safety status of a nuclear power plant. The continued occurrence of failures which result in a problem EDG are of particular concern since this is an indication that nuclear unit EDG reliability is being seriously degraded (particularly in a two EDG plant), and also that the onsite EDG reliability program is not being effective. Thus, submittal of a report when a problem EDG situation comes about will assure appropriate licensee and NRR management focus on this concern. The existence of a problem EDG must be considered in the context of other electrical or other problems that may also exist. Timely notification of this condition will assure appropriate NRR management oversite of potential overall safety problems.

Ashok C. Thadani, Director
Division of Systems Technology
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc: W. Russell
A. Serkiz

Contact:
O. P. Chopra, SELB/DST
X20781

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C.5 When reporting EDG failures, all plants should conform with the provisions of 10 CFR 50.72, 10 CFR 50.73, 10 CFR 50.21, plant technical specifications, and other current NRC reporting regulations. In addition, if an individual EDG experiences 4 or more valid failures in the last 25 demands, these failures and any non-valid failures experienced by that EDG in that time period shall be reported within 30 days. This report should include the following information:

1. The nuclear unit EDG performance and reliability indicators as compared to the appropriate 20, 50, and 100 demand trigger values.

2. A description of the failures, underlying causes, and corrective actions taken.

Draft
7-25-90

Potential Revision to Section C.6

The principal elements of an EDG reliability program should be comprised of the following principal elements (or activities):

1. Monitoring nuclear unit EDG reliability levels against those selected for station blackout (see also Regulatory Position C.3).

2. A surveillance plan that identifies EDG support systems and subsystems, describes frequency and scope of testing, and incorporates manufacturer recommendations.

3. Performance monitoring of important parameters on an ongoing basis to obtain information on the condition of the EDG and key components so that precursor conditions can be identified prior to failure.

4. A maintenance program designed for both preventive and corrective actions based on operating history and past maintenance activities, vendor recommendations, spare parts considerations, and the results of surveillance monitoring.

5. Failure analyses and root cause investigation to assist in developing corrective actions to prevent recurrence of failures.

6. An EDG problem closeout process to ensure that the resolution of a failure or a problem is properly implemented and successful.

7. An EDG reliability data system to ensure the availability and retrievability of important data and information related to EDG reliability.

These elements are the same as those described in NUMARC-8700, Appendix D (5-2-90), "Introduction".

These principal elements of an EDG reliability program are provided as guidelines. Other reliability programs that include the same or similar activities may also be used, such as the TDI Owner's Group maintenance and surveillance activities. Such programs should be reviewed for consistency with Regulatory Guide 1.155 and this regulatory guide.

Attachment 3 to

Although this guidance is based on proven industry practices, it is recognized that there are existing programs that have proven effective at maintaining high EDG reliability levels. Therefore this guidance as well as the examples contained in Appendix A are not intended to replace or supplant programs proven effective.

Appendix A provides illustrative examples and considerations which could be used in developing an EDG reliability program based on the principal elements noted above.