

NOV 22 1989

ORGANIZATION: NUMARC (Nuclear Management and Resource Council)

SUBJECT: MEETING SUMMARY - STATION BLACKOUT ISSUES
(TAC NO. 40577)

Reference: Meeting Notice, P. S. Tam to J. F. Stolz, November 2, 1989

The meeting was held on November 8, 1989, as specified in the referenced meeting notice. It was a sequel to the meeting dated October 30, 1989 (see summary by P. S. Tam, dated November 6, 1989). Enclosure 1 is a list of the meeting attendees.

Before the meeting, NUMARC transmitted a draft response to the staff's draft generic letter. Copies of the draft NUMARC response were available to meeting attendees and is included in this summary as Enclosure 2. The staff provided a revised item 7 (Enclosure 3) of the draft generic letter. A second staff handout, Enclosure 4, provides sketches of acceptable and unacceptable alternate AC configurations for multi-unit sites, and excerpts from guidance documents on emergency diesel reliability programs.

NUMARC personnel stated that they plan to formally submit the responses (Enclosure 2) in about 10 days. They also stated that NRC's concerns, as expressed in its draft generic letter, have received executive level attention at member utilities, and therefore proposed that NRC not issue a generic letter on station blackout. They proposed that (1) a NUMARC letter, (2) a revised NUMARC-870C report and (3) additional Q&A's be issued, instead, to communicate the station's concerns.

The staff (A. Thadani, chief spokesman) commended NUMARC's efforts in resolving the concerns, and re-emphasized the importance of elevating the concerns to utility executive levels. The staff heard NUMARC's proposal not to issue a generic letter, but the staff made no decisions in this regard.

/s/
Peter S. Tam, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II

Enclosures:
As stated

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DATE	:11/2/89	:11/2/89	:11/2/89	:	:	:	:



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

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A handwritten signature in black ink, appearing to read "Peter S. Tam".

Peter S. Tam, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II

Enclosures:
As stated

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STATION BLACKOUT

Meeting with NUMARC, November 8, 1939

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DRAFT

Draft NUMARC Comments on Proposed SBO Generic Letter

The following are NUMARC comments on the draft Generic Letter (GL) regarding NRC findings from review of several utility SBO responses. In general, these comments parallel those delivered verbally to the NRC staff on Monday, October 30. Both general and specific comments are provided below.

As we discussed October 30, certain of the Staff's findings identified in the proposed GL suggest weaknesses in utility implementation of NUMARC 87-00 guidance. We believe such findings were foreseeable given the complexity of the SBO issue and the plant specific nature of SBO rule implementation. NUMARC has sought and appreciates this opportunity to address concerns of the Staff relative to consistent implementation of NUMARC 87-00 guidance. As a result of these discussions, NUMARC will provide to industry, as necessary, clarification of existing SBO guidance to ensure that NUMARC 87-00 is implemented consistently and that SBO coping analyses are properly supported. The envisioned NUMARC communication would address the concerns raised by the GL and would, we believe, obviate the need for issuance of a SBO GL at this time.

We look forward to meeting with the NRC staff on November 8th to discuss the issues raised. Draft NUMARC comments on the proposed GL are as follows:

General Comments

We find that certain of the plant specific concerns raised in the GL may have generic implications, and that NUMARC clarification of NUMARC 87-00 guidance is appropriate to advise industry of problem areas encountered. Potentially generic concerns raised can be characterized as follows:

1. instances where utilities may not have verified and documented that NUMARC 87-00 assumptions and bases are applicable to their plant(s),
2. instances where utilities have misapplied aspects of NUMARC 87-00 guidance,
3. instances where departures from selected aspects of the pre-approved methodology of NUMARC 87-00 were not identified and supported.

To address these concerns, NUMARC will provide a list of primary assumptions which should be verified by utilities in order to utilize the various portions of the NUMARC 87-00 methodology. In addition, common areas of utility departure from NUMARC 87-00 methodology will be identified, and utilities will be advised that such departures require separate supporting documentation be provided for NRC review. Further, where existing guidance has been misinterpreted by utilities, NUMARC will provide the necessary clarification to ensure consistent interpretation.

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NUMARC will advise utilities to reevaluate their previous submittals to NRC and consider supplementing their generic SBO responses, if necessary, to reflect departures from NUMARC 87-00 methodology or to correct a misapplication of the guidance.

Certain plant specific concerns raised by the Staff, including improper credit for hurricane procedures and inadequate modifications (both discussed later), are considered to have no significant generic implications and will not be addressed in the envisioned NUMARC communication to industry.

Two areas identified for further discussion at our scheduled November 8th meeting, (1) operability assessments for certain SBO equipment in less than 120F environments and (2) application of a single failure relative to Alternate AC (AAC) power systems, have considerable generic implications. As discussed later, we are hopeful that based on further discussion of these areas, previously established understandings will be reaffirmed, and that no change to existing SBO guidance will be required.

Specific Comments

Item 1

Some utilities may have inappropriately determined their I group. Lack of clarity of NUMARC 87-00 guidance in this area has likely caused improper determinations. NUMARC will provide a communication to industry to clarify existing SBO guidance contained in NUMARC 87-00, Section 3.1.D.

Item 2

Approved SBO guidance (and therefore the rule response format) is silent on the use of auxiliary shutdown capability for recovery from SBO. We believe this issue is limited to very few plants and is therefore not a generic concern. NUMARC will recommend to utilities utilizing remote shutdown panels to identify this aspect of their SBO coping strategy to the Staff.

We note that in the first example cited by the Staff, evacuation of the main control room was only one option being considered for a temporary coping strategy -- pending the installation of new station batteries. This option was not pursued. In the other example, we do not believe that similar evacuation of the main control room is contemplated by the utility.

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Item 3

The Staff has identified instances where utilities have either misapplied/misinterpreted NUMARC 87-00 methodology or did not identify and support use of alternative methodology. We believe it is important to note that NUMARC 87-00 consists of guidance acceptable to the Staff for demonstrating compliance with the SEC rule. Acceptable alternative methodologies certainly exist, however these generally require the utility to identify and support departures from the pre-approved guidance of NUMARC 87-00. NUMARC will identify common problem areas encountered and recommend that such departures from NUMARC 87-00 be identified to the Staff. Further, NUMARC will remind utilities that they may need to consider providing NRC with additional supporting information to that previously furnished in the generic rule response.

Item 4

The concern noted is believed to be limited to the utility in the example, and it is understood that the plant specific matter is being resolved between the utility and the NRC. As already noted, NUMARC will reemphasize to utilities the need to identify and support departures from methodologies contained in NUMARC 87-00.

Item 5

We believe the Staff position that AAC power systems must be designed to withstand an arbitrary single failure is inappropriate and inconsistent with understandings achieved between industry and NRC and reflected in approved SBO guidance.

Concerns relative to the susceptibility of a given AAC configuration to disablement by a single event are adequately addressed by Criterion B.B.e of NUMARC 87-00 which requires that "no single point vulnerability shall exist whereby a likely weather related event or single active failure could disable any portion of the on-site EAC or the preferred power sources and simultaneously fail the AAC power source(s)."

Detailed discussion of this matter was deferred to our meeting scheduled for November 8th. We consider the previously established understanding on this matter to be extremely important, and we will be prepared to discuss the issue fully on November 8th.

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Item 6

As previously stated, NUMARC intends to remind utilities that departures from pre-approved methodology established in NUMARC 87-00 need to be identified and supported. Further, utilities will be reminded to ensure that assumptions, calculations and analyses contributing to SBO coping assessments are appropriate and properly supported. RCS inventory and suppression pool heat-up calculations are examples where proper documentation is necessary.

The example cited of the undefined atmospheric dump valve modification underscores the need for utilities to clearly identify and understand proposed SBO modifications.

Item 7

In general, and as previously stated, utilities using NUMARC 87-00 are expected to verify the applicability of baseline assumptions to their plant.

The Staff has indicated that such operability assessments are required for equipment rated for service below 104F expected to operate in SBO environments up to 120F. This is apparently a new position that is beyond the scope of SBO guidance pertaining to the establishment of reasonable assurance of equipment operability. NUMARC 87-00, p.2-12, notes that temperature rises of up to 120F are not expected to adversely affect operability of most SBO equipment. Also, NUMARC SBO seminar responses to questions 4, 6 and 82 form the basis for industry understanding that operability assessments for SBO equipment in environments up to 120F are not required.

Detailed discussion of Staff concerns in this area were deferred to our meeting scheduled for November 8th. We consider previously established understandings to be extremely important, and we will be prepared to discuss the issue fully on November 8th.

Item 8

As stated at our October 30 meeting, the Staff is well aware of the coordinated industry activity on the B-56 issue. The suggestion that utility SBO responses have been deficient due to a lack of a documented commitment is inappropriate.

Due to the on-going nature of B-56 activities on the part of the industry and NRC, we do not believe it appropriate for the Staff to seek specific utility commitments in this area at this time.

7. Lack of verification of baseline assumptions for assessing equipment operability:

During the site audit review, several licensees stated that the assessment of SBO equipment operability in the control room and other areas was not required based on the NUMARC 87-00 assumption that the equipment would be operable at a final temperature up to 120°F. However, section 1.3 of NUMARC 87-00 states: "Utilities are expected to ensure that the baseline assumptions are applicable to their plants." ~~Therefore, an assessment of operability for the SBO equipment not designed to operate at an ambient temperature calculated for the control room and other areas during an SBO event should have been made.~~ The staff expects the licensees to verify ^{that} the NUMARC 87-00 assumptions ~~for operability to their plants~~ that the control room and other area temperatures are below the 120°F assumed value by (a) performing a plant-specific heatup calculation for the control room and other areas to verify that the area final steady state ambient temperature, during the entire period of an SBO, will not exceed 120°F, and (b) committing to develop and implement plant-specific procedures for these areas to open doors (e.g. cabinet doors, area doors) promptly (within 30 minutes) following the onset of an SBO. The licensees should make a definitive supporting statement, as part of their submittal which confirms that the control room and other areas heatup calculations have been performed and plant-specific procedures have been incorporated as cited above.

NUMARC 87-00

First 2 pages address Item 5 of the draft generic letter and NUMARC response (Enclosure 2)

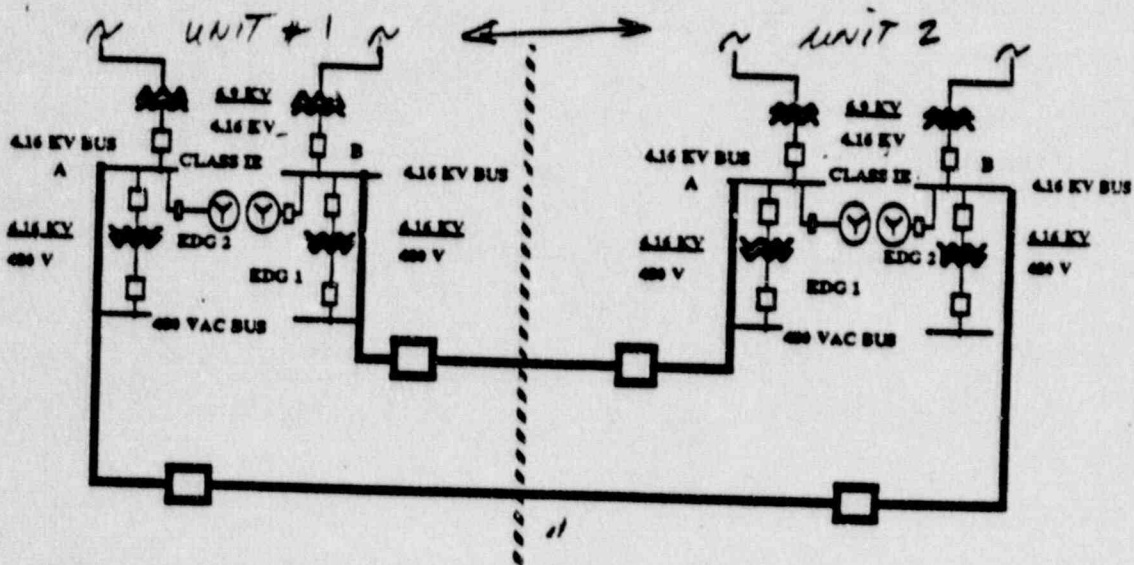
2.3 INITIATING EVENT

2.3.1 Assumptions

- (3) (b) For multi-unit sites, EAC sources available from a non-black-out unit, after assuming a single failure at the non-black-out unit, may be designated as Alternate AC, if they meet the AAC criteria provided in Appendix B and are capable of meeting the necessary shutdown loads of both units.

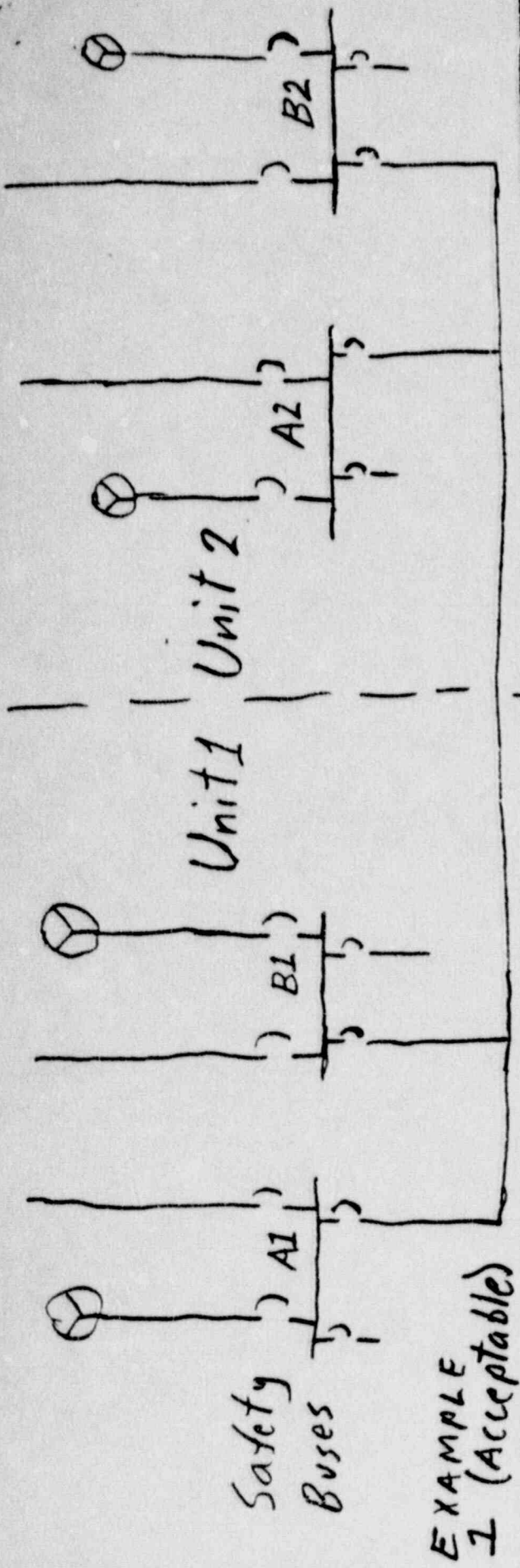
Appendix C: page C-4

AAC Configuration 2B: Dedicated Diesels with Cross-tie at Multiunit Site

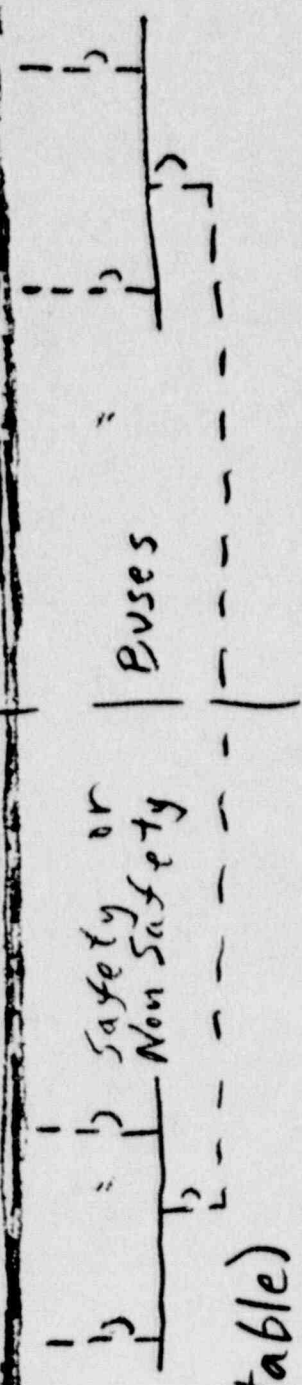


APPENDIX B. ALTERNATE AC POWER CRITERIA

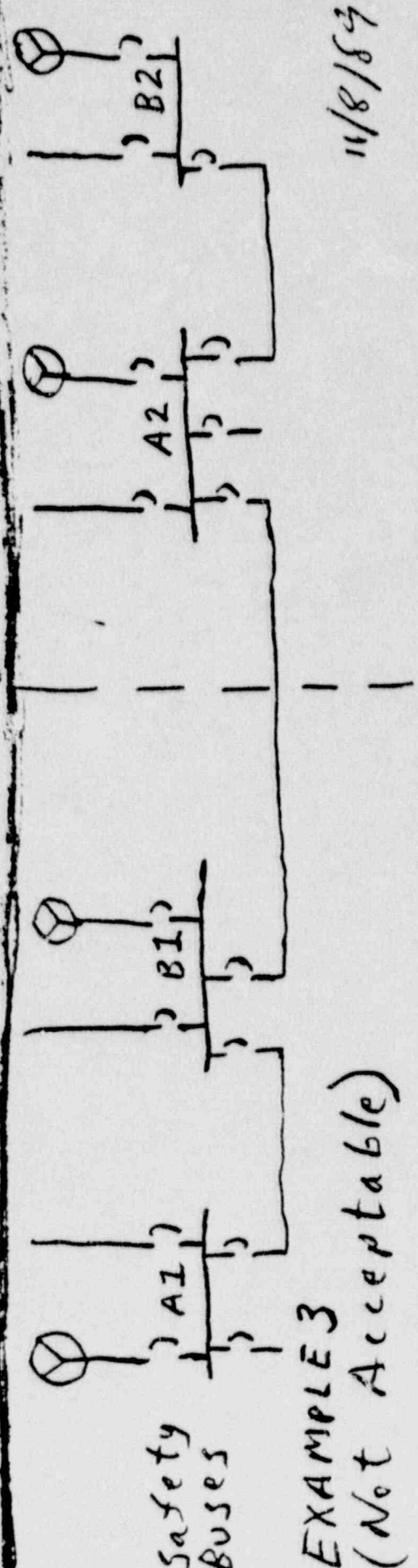
- (e) No single point vulnerability shall exist whereby a likely weather-related event or single active failure could disable any portion of the onsite emergency AC power sources or the preferred power sources, and simultaneously fail the AAC power source(s).



EXAMPLE 1 (Acceptable)



EXAMPLE 2 (Acceptable)



EXAMPLE 3 (Not Acceptable)

11/8/89

EDG Reliability Program

C. REGULATORY POSITION

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

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):

GUIDELINES AND TECHNICAL BASES FOR NUMARC INITIATIVES

NUMARC 87-00

3.2.4 Step Four: Determine Allowed EDG Target Reliability

The minimum EDG reliability should be targeted at 0.95 per demand per EDG for plants in EAC Groups A, B, C, and 0.975 per demand per EDG for plants in EAC Group D. These reliability levels should be considered minimum target reliabilities. Each plant should establish an EDG Reliability Program as outlined in Appendix D to this document. Plants which select a target EDG reliability of 0.975 should utilize this target level in their reliability program. If the diesel generator performance falls below the target reliability level specified, action should be taken through an EDG reliability program such as set forth in Appendix D to restore the target reliability level.