SUMMARY REPORT

OPERABILITY/DEGRADED EQUIPMENT CONFERENCE

COSPONSORED BY NRC REGION III AND

MIDWEST ENGINEERING MANAGERS FORUM

RAMADA O'HARE HOTEL, ROSEMONT, ILLINOIS

JANUARY 21-22, 1993

OPERABILITY/DEGRADED EQUIPMENT CONFERENCE

1.0 OBJECTIVES

The objectives of the Operability/Degraded Equipment Conference were: to provide a forum for industry personnel to discuss and have a better understanding of Generic Letter 91-18; to provide each participant the opportunity to ask questions and give their perspective on the process and impact of making operability determinations; and to identify where clarification is needed or important issues are not addressed to improve degraded equipment and operability determinations to improve safe operation of nuclear facilities.

2.0 GENERAL OVERVIEW

An Operability/Degraded Equipment Conference was conducted on January 21-22, 1993 in Rosemont, Illinois. Attachment 1 is the conference agenda, and Attachment 2 is a list of persons who attended the conference.

The conference began with a Call to Order by Mr. Hubert Miller, Region III Deputy Regional Administrator, and Mr. Sushil Jain, Chairman of the Midwest Nuclear Engineering Managers Forum. They provided background and stated the objectives of the conference, see Attachment 3.

Mr. A. Bert Davis, Region 1II Regional Administrator, and Mr. Murray Edelman, Executive Vice President, Centerior Energy, addressed the conference participants. They expressed gratitude to the participants for their strong turnout and support, and discussed meeting common NRC and utility goals, particularly in the area of operability determinations, see Attachment 4.

Mr. John Hannon, Project Director NRR, gave an overview of Generic Letter 91-18. He discussed NRC's current approach to issues about operability determinations, see Attachment 5.

A seven member panel was formed with members from the industry and NRC. The panel members included Messrs. Miller and Jain, Mr. Warren Hall of NUMARC, Mr. T. K Schuster of Commonwealth Edison Company, and Messrs. Edward Greenman, Brian Grimes, and Jack Roe of NRC. They discussed matters framing the principle issues about implementation of Generic Letter 91-18, see Attachment 6. The keynote speakers and panel members provided an excellent starting point for promoting open discussion during the conference.

The participants were separated into three breakout sessions that were each subdivided into seven groups of approximately ten persons. All sessions discussed making operability determinations with emphasis on scope, timeliness, timing, documentation, and corrective actions. Each session was lead by four facilitators, two each from the industry and NRC.

The conference continued throughout the morning of January 22, 1993. The breakout sessions completed their discussions and summarized the most significant issues and recommendations. In the afternoon, the facilitators consolidated all the issues and presented their findings, conclusions, and recommendations to the panel for extensive discussion, see Attachment 7.

A final wrap-up and closing remarks were made by Messrs. Miller and Jain. The conference adjourned at 4:15 p.m.

3.0 SUMMARY OF BREAKOUT GROUP PRESENTATIONS

This is a cryptic summary of the points that were made to the panel members by the three breakout groups. The NRC will consider these points when reviewing GL 91-18 for possible modifications.

Breakout Session 1

A. Clarify GL 91-18 in the following areas:

- 24 hour guidance on making operability call.
- Conflict between GL 89-04, ASME XI, and GL 91-18.
- Expectation on documentation of an operability call.
- Limit that SSC's GL 91-18 applies to.
- Guidance on application of engineering judgement (NUREG 1022).
- Improve definitions of reasonable assurance and current licensing basis.
- Include concept of back-up operability call.

B. Develop an operability standard for motor operated valves, and inform industry of applicability of interim operability criteria for piping.

C. Include an "operability impact" section in each new generic letter.

D. State under what condition would NRC consider LCO abeyance.

Breakout Session 2

A. Clarification of GL 91-18 is needed for:

- Design basis discrepancies related to operability.
- Use of new analysis techniques vs. original design basis.
- Clear definition of current licensing basis and design basis.
- Whether new analysis techniques can be used for operability calls without prior NRC approval.

- Concept of initial judgement, near term supporting documentation, and longer term detailed resolution.
- Consolidation of GL 91-18 sections 5.4/5.5, 6.1 for consistency.
- Use of 50.59.

B. Eliminate 24 hour guideline and base timeliness on significance.

C. GL 91-18 should recognize staged approach (different phases - initial/back up) to operability call and utilize a process time line or graph similar to Mr. Miller's presentation.

D. Reevaluate cascading technical specification concept particularly for specific situations such as emergency diesel generator inoperable but normal power available.

E. Clarify Surveillance/Maintenance section for specific situations such as entire system capable except for manual/auto switch on a valve (stroke testing).

Breakout Session 3

A. Clarification of GL 91-18 is needed for:

- Cascading LCOs and the basis for support systems.
- Systems requiring mode change to adequately test after maintenance.
- Need for devoting resources to retroactive operability issues.
- Very low probability, hypothetical events that may impact plant design basis.
- Decision making (and resultant NRC notification) on timeliness.
- Better definition of support systems that cause cascading.
- Situations where PRA application may be best approach.
- Potential operability issue timeliness.
- Use of design/licensing basis in operability calls.

B. NRC wants prompt, accurate, complete information on developing operability issues. There needs to be a realization that some issues, particularly those involving qualification or design basis, may take considerable time to develop accurate and complete information to support final operability determinations. Withstanding this, interim operability determinations must be made promptly upon discovery of degraded and nonconforming conditions with the best information available.

C. Role expectations for both utility and NRC should be addressed.

4.0 SUMMARY

The most prevalent issue was the overall subject of timeliness. All of the breakout session groups identified one or more aspects of timeliness during their discussions. Additional areas of common concern were the extent of documentation needed to support an operability call, and the effect of cascading technical specifications.

5.0 CONCLUSION

The conference achieved the stated objectives. The conference promoted and stimulated open discussion between the NRC and industry, which was evident by the good participation from all participants who identified several areas that need improvement in making operability calls. The results from this conference, when considered with those from past and future conferences, will provide valuable insight to potential revisions to GL 91-18.

ATTACHMENT 1

OPERABILITY/DEGRADED EQUIPMENT CONFERENCE

AGENDA

Thursday - January 21, 1993

12:00 - 1:00 Registration

1:00 - 1:10 Call to Order . . . . . H. J. Miller/S. C. Jain
-- Conference Purpose — Grand Ballroom - West B & C

1:10 - 1:25 Introductory Remarks . . . . . A. Bert Davis
Administrator - Region III - NRC

1:25 - 1:40 Introductory Remarks . . . . . M. R. Edelman
Executive V.P., Centerior Energy

1:40 - 2:20 NRR Presentation on . . . . . John Hannon
Generic Letter 91-18 — Project Director - NRR - NRC

2:20 - 2:40 Break

2:40 - 4:15 Panel Discussion

Panel Members

H. J. Miller - NRC
E. G. Greenman - NRC
W. J. Hall - NUMARC
B. K. Grimes - NRC
J. W. Roe - NRC
S. C. Jain - TE
T. K. Schuster - CECO

This session is to frame the principle issues regarding Generic Letter 91-18 implementation. The discussion will include examples illustrating recent experience with Generic Letter 91-18.

4:15 - Explain Breakout Sessions . . . . K. R. Cotton - NRR

4:30 - Adjournment . . . . . S. C. Jain/H. J. Miller

Friday - January 22, 1993

7:45 - 9:30 Breakout Sessions - Session #1 - Grand Ballroom East A
Session #2 - Conference Room D-11
Session #3 - Conference Room D-12

9:30 - 9:45 Break

9:45 - 11:15 Breakout Sessions Continue

11:15 - 1:00 Lunch (Working lunch for facilitators to coordinate main points from breakout sessions.)

1:00 - 2:30 Panel Discussion on Breakout Session Points
(Facilitators will present major points from breakouts. Panel will respond to issues and questions as they are presented.)

2:30 - 2:45 Break

2:45 - 3:30 Panel Discussion Continues

3:30 - 4:00 Closing Remarks . . . . . S. C. Jain/H. J. Miller

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ATTACHMENT 3

CALL TO ORDER

H. J. MILLER

Good afternoon. I am Hub Miller, Deputy Regional Administrator in Region III. On behalf of the Region and the Midwest Nuclear Engineering Managers Forum, which is cosponsoring this conference, I would like to welcome you. This is an open conference focusing on the important process of making operability determinations when degraded or non-conforming conditions are identified at operating nuclear power plants.

Sushil Jain, Director of Engineering at Davis Besse and current Energineering Managers Forum Chairman, will cochair this conference with me. In a moment, he will review the agenda, specific approaches we plan to take in the conference and introduce our first speakers.

At this point, I would thank the Forum, Sushil, his staff at Toledo Edison for their efforts. Beyond this conference, I have observed the Manager's Forum to be doing many fine things to foster and improve effectiveness of engineering organizations in supporting plant operations. A proactive group, I commend them for all their efforts.

Effective communications between the regulator and licensees are always important to assure our mutual safety obligations are met. There is no set of issues that I can think of that demands effective communications more than those relating to operability of equipment in degraded or potentially degraded condition.

The stakes are high. Valid operability issues are by definition potentially significant from a safety perspective. The importance of dealing promptly with potential degraded conditions at an operating plant is obvious. Questions are frequently posed regarding continued plant operation. We are concerned about avoiding transients and safety challenges that are involved in manuevering a large unit through shutdown operations where this is not necessary. The issues involved are often highly complex. Problems can and often do present themselves in the off hours. Finally, we are often dealing with issues under the time pressures imposed by technical specifications. With these stakes, and under these conditions, having a very good understanding of what's expected is vital.

NRC has issued guidance to its inspectors on this topic in the form of Generic Letter 91-18. Given the complexity of a commercial nuclear power plant operations, however, there is simply no way to detail in written guidance how each operability case should be handled, or to anticipate the innumerable different situations that can arise. Therefore, the guidance is largely in the form of general principles that should be applied on a case by case basis. Hopefully, these principles and their

bases will be explained in the presentations made by NRC in this conference.

Having been involved in numerous cases over the past several years, I can speak from experience about the difficulties that arise when these principles are not understood, or, as is sometimes the case, there are semantics problems. The general nature of the principles which have been established unavoidably leads to, or presents, ambiguities that become clear only with discussion of specific cases. Even within the NRC, in our training sessions, we consistently find that effective communication of what is expected comes only through detailed and vigorous discussion of specifics and examples.

So this conference importantly provides not just a forum for NRC to make presentations and talk about concerns we have. We are here to thoroughly discuss the operability topic. The purpose is to have NRC hear and respond to questions and perspectives licensees and others may have. Our hope is that, by ventilating this issue, all partipants will have a better understanding and grasp of the principles NRC considers to be vital to safety when making important operability decisions.

Important too is that NRC understand the ramifications of the guidance we issue and the manner in which it is being implemented. As I mentioned earlier, we are involved in many an operability call; but we recognize that more often than not we are not involved. The daily routine at operating facilities is dispositioning numerous hardware and other problems, big and small, that potentially challenge equipment operability. My collegues and I are eager to hear from those of you who are involved in this daily process: operators, engineers, licensing specialists, and licensee managers. What does NRC operability guidance mean to you? What effect does it have on plant safety and operations? Is any aspect of it, or our implementation of it, counterproductive to safety? Is it clear? Is greater detail needed or appropriate?....and so on.

This conference is one in a series of such conferences being held in each of the Regions. Upon completion, NRR will be reviewing results of all of the meetings to determine what modifications and clarifications may be appropriate. So in addition to the immediate benefit of improved understanding that we will take away from this day and a half, this meeting can have significant impact on documented agency positions.

Finally, let me observe that frequently, we find ourselves discussing operability issues with licensees in far more difficult and contentious settings than this one, that is, for example, in enforcement conferences where circumstances are far more formal and the process far more rigid than it will be in this conference. We have the opportunity here for free and open exchange. I am pleased that we have such a strong turnout by licensees, other industry related groups, states, and members of

the public. We have done our best to support this conference with attendence by NRC staff holding a variety of positions in the Region and NRR. So I believe the mix is good. If we approach our discussions with a spirit of openness and candor, I am certain we will have a highly profitable meeting.

In the long run, our communications under pressure and trying circumstances will benefit from our discussions here.

Attachment 3
S. C. Jain
Nuclear Engineering
Managers Forum

Call to Order

- Do not expect radical or quick solutions to operability issues during this conference.

- Intent is to provide frank, open, and candid feedback on application of GL 91-18 guidance so as to help the NRC modify the guidance to us, the utility industry, i.e., to help us make better operability evaluations.

- I sincerely request that you provide such open feedback to the NRC to help them in their pursuit for improving this guidance.

- GL 91-18 was a good effort by the NRC to provide some guidance; now that we have had some experience using it, we can stand to improve upon it.

- I am sure the NRC is looking for this experience and feedback to improve this guidance.

ATTACHMENT 4

Highlights From Mr. Edelman's Introductory Remarks

1. Welcome and Thanks for NRC and Utilities working together to put this workshop together

2. Common goal of the Utility and the NRC - Achieve Safe and reliable plant operation

   - NRC mandate - Protection of public health and safety

   - Utility goal

      - Provide economical and reliable source of power while

         - Protecting public health and safety
         - Protecting environment
         - protecting shareholders investment and providing a reasonable rate of return

3. Utility and NRC goals can be best achieved with a good operating plant.

   - Best plants have high availability and capacity factors, few violations and low O&M costs.

   - What NRC expects of Utility

      o Effective management team

      o Well trained and experienced staff with thorough understanding of plant design, design basis, design constraints, applicable codes and standards, equipment capabilities, etc.

      o Well maintained plant

         - Good maintenance program (including preventive and predictive)
         - Equipment trending and status program
         - Effective root cause evaluations
         - Effective training program

      o Effective and open communication among utility staff (especially between operations and engineering staff) and with the NRC

- What utilities expect of NRC

  - o Open communications
  - o Willingness to listen to utility point of view
  - o Well trained and experienced NRC staff
  - o Consistent application of NRC guidance
  - o Maintain a global perspective
  - o Continue study of incorporating risk based regulations and evaluation of regulations marginal to safety
  - o Keep regulatory requirements current with industry experience and developments

4. Generic Letter 91-18 is a good start

- Compiles many operability issues in a single guidance document
- Effort to unify NRC and industry approach
- Accepts reasonable assurance and engineering judgement
- Separates qualification concerns and operability concerns

5. Additional clarifications may be needed on several issues that this workshop will address.

- Timeliness of operability evaluations
- Timeliness of initiating communications to NRC and at what level
- Scope of Operability determinations

  - Support system operability
  - MOV operability

6. Closing remarks wishing a successful workshop leading to mutually agreeable positions on critical issues

ATTACHMENT 5

OPERABILITY/DEGRADED EQUIPMENT

CONFERENCE

NRR PRESENTATION ON GENERIC LETTER 91-18

JANUARY 21, 1993

BY

JOHN HANNON, PROJECT DIRECTOR

NRR-NRC

NINE PRINCIPLES FOR DEALING WITH OPERABILITY QUESTIONS:

1. FOCUS ON SAFETY

2. DEAL WITH OPERABILITY AND RESTORATION OF QUALIFICATION SEPARATELY

3. OPERABILITY - THE CAPABILITY TO PERFORM SPECIFIED FUNCTION(S)

4. QUALIFICATION - CONFORMING TO ALL ASPECTS OF CURRENT LICENSING BASIS

5. DETERMINING OPERABILITY AND PLANT SAFETY IS A CONTINUOUS DECISION-MAKING PROCESS

6. TIMELINESS OF OPERABILITY DETERMINATIONS SHOULD BE COMMENSURATE WITH THE SAFETY SIGNIFICANCE OF THE ISSUE.

OTSB/OPER/7

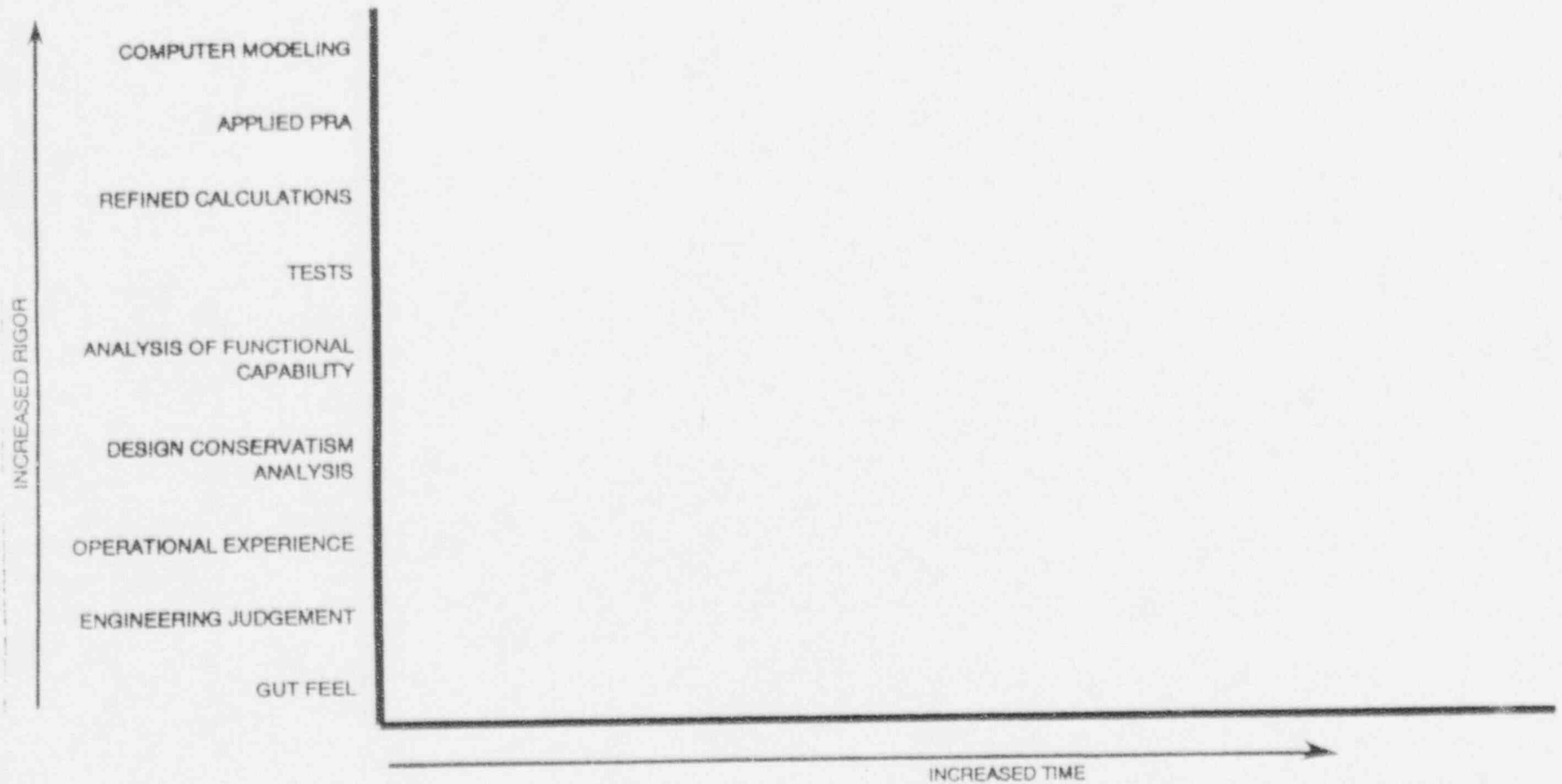
NINE PRINCIPLES FOR DEALING WITH OPERABILITY QUESTIONS (CONT'D) :

7. TIMELINESS OF CORRECTIVE ACTION (I.E., 10 CFR PART 50, APPENDIX B, CRITERION XVI REQUIREMENT FOR "PROMPT" CORRECTIVE ACTION) SHOULD BE COMMENSURATE WITH THE SAFETY SIGNIFICANCE OF THE CORRECTIVE ACTION

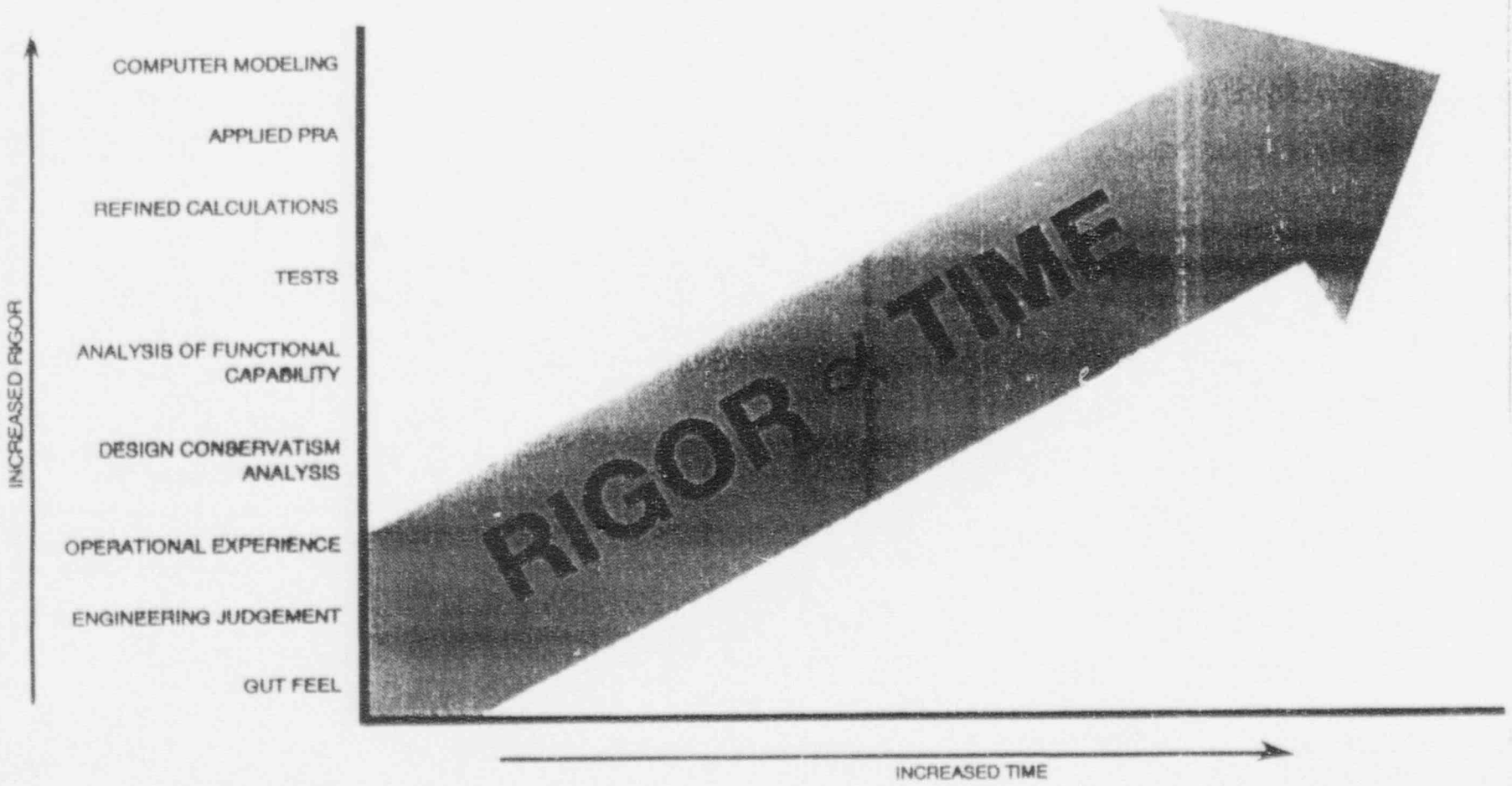
8. JCOS ARE THE LICENSEE'S TECHNICAL BASIS FOR OPERATING IN AN OTHERWISE PROHIBITED MANNER

9. LICENSE AMENDMENTS ARE NRC'S AFFIRMATIVE RESPONSE TO LICENSEE'S REQUEST TO OPERATE IN PROHIBITED MANNER

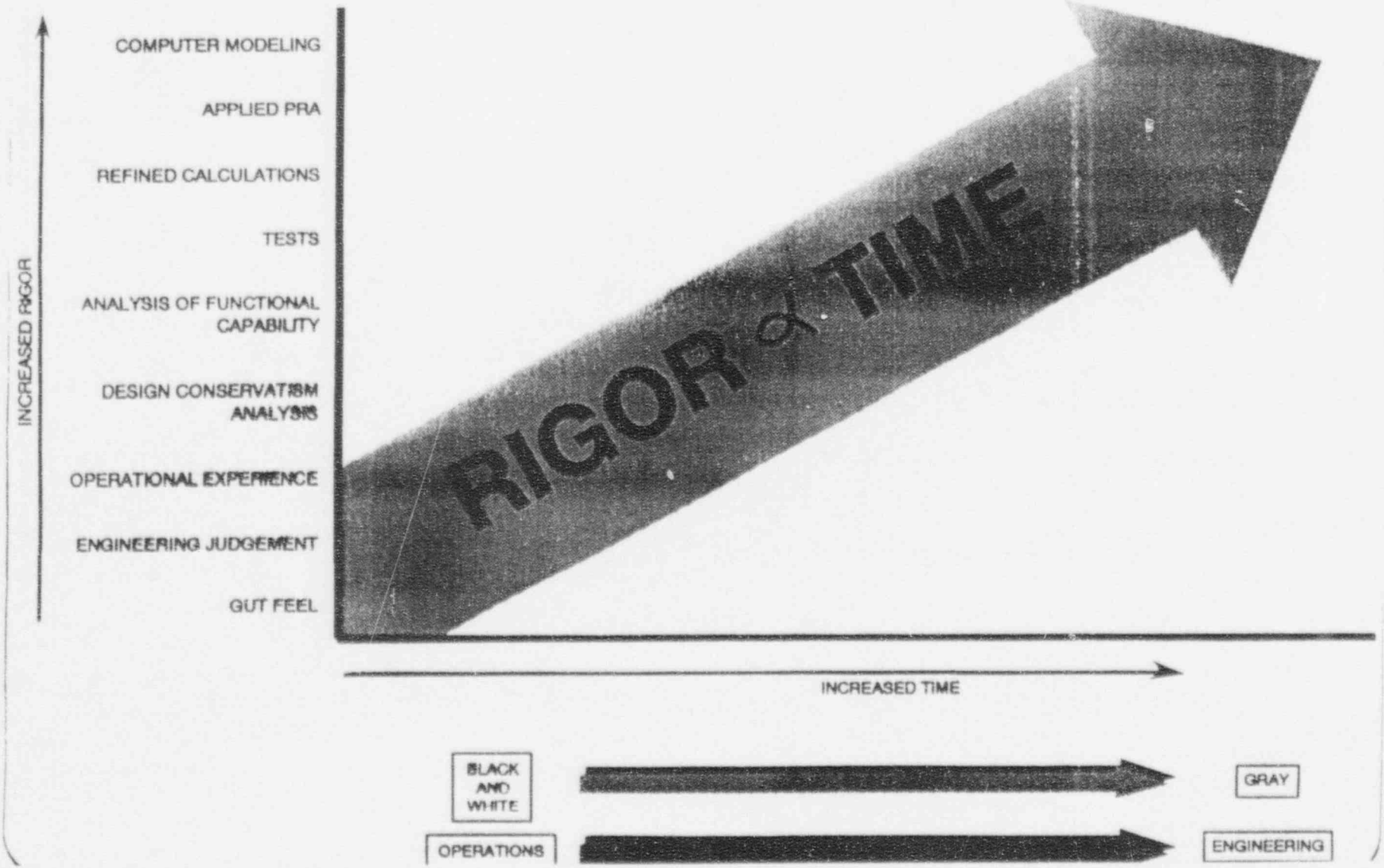
OPERABILITY DETERMINATIONS



OPERABILITY DETERMINATIONS



OPERABILITY DETERMINATIONS



PRINCIPLES UNDERLYING GENERIC LETTER 91-18

- Focus on Safety
- Timeliness
- Rigor
- Operations/Engineering Interface
- Continuous Process

ATTACHMENT 6

OUTLINE OF PANEL PRESENTATION
H. J. MILLER

General theme:

- discuss Regional perspectives on engineering oriented operability issues
- highlight some commonly observed problems

Some general points:

- NRC recognizes that many items are dealt with daily in operating plant....most are straightforward and we are not involved
- we are most often involved with the difficult, complex, significant items
- by and large, licensees have done well
- improvement over the past several years. e.g.,
  - established specific procedures on operability
  - training

- identification of issues
  - need to be alert to issues that raise question about operability -- sometimes subtle
    - special design basis reviews -- few such reviews have <u>not</u> found potentially significant issues
    - performing modifications where consulting the design and licensing basis (included detailed review of calcs) is necessary
    - troubleshooting equipment problems
  - keep eyes open for errors in past work
  - prudence of rechecking areas outside but related to problems identified -- especially when margins have been reduced
  - balance needed -- must act expeditiously but recognize can't be on a "hair trigger"...taking precipitous action for small items

- addressing potential issues promptly and competently
  - need to involve right people
    - technical
    - management
  - concentrated focus on problems until ultimately resolved...
    - op. determination is <u>continuous process</u> -- continuously increasing information is obtained
    - while continuous, several <u>discrete</u> points in process are important
      - immediate determination -- if plant continues to operate, de-facto decision is being made
      - backup determination
      - long term analysis and corrective action

- NRC perspectives on enforcement
  - self-identified issues
  - corrective actions -- dealing with issues after found is key

Other points and common problems:

- lack of rigor and completeness in operability determinations
- overly simplistic evaluations -- general, "gut feeling" of an engineer vice competent engineering judgement
- one-sided evaluations -- identification of all the positive reasons to support operability determination and continued plant operation without considering potential negative factors/arguements
- lack of timeliness
  - in identification of degraded conditions/non-conformances that challenge operability
  - in making operability determinations once problem identified
  - in taking corrective action
- lack of documentation

Some root causes

- lack of training and sensitivity of entire engineering staff to operability issue
- failure to transmit expectations to contractors/consultants
- production pressures
- inadequate staffing
- inexperienced staff
- failure to involve management

Enforcement

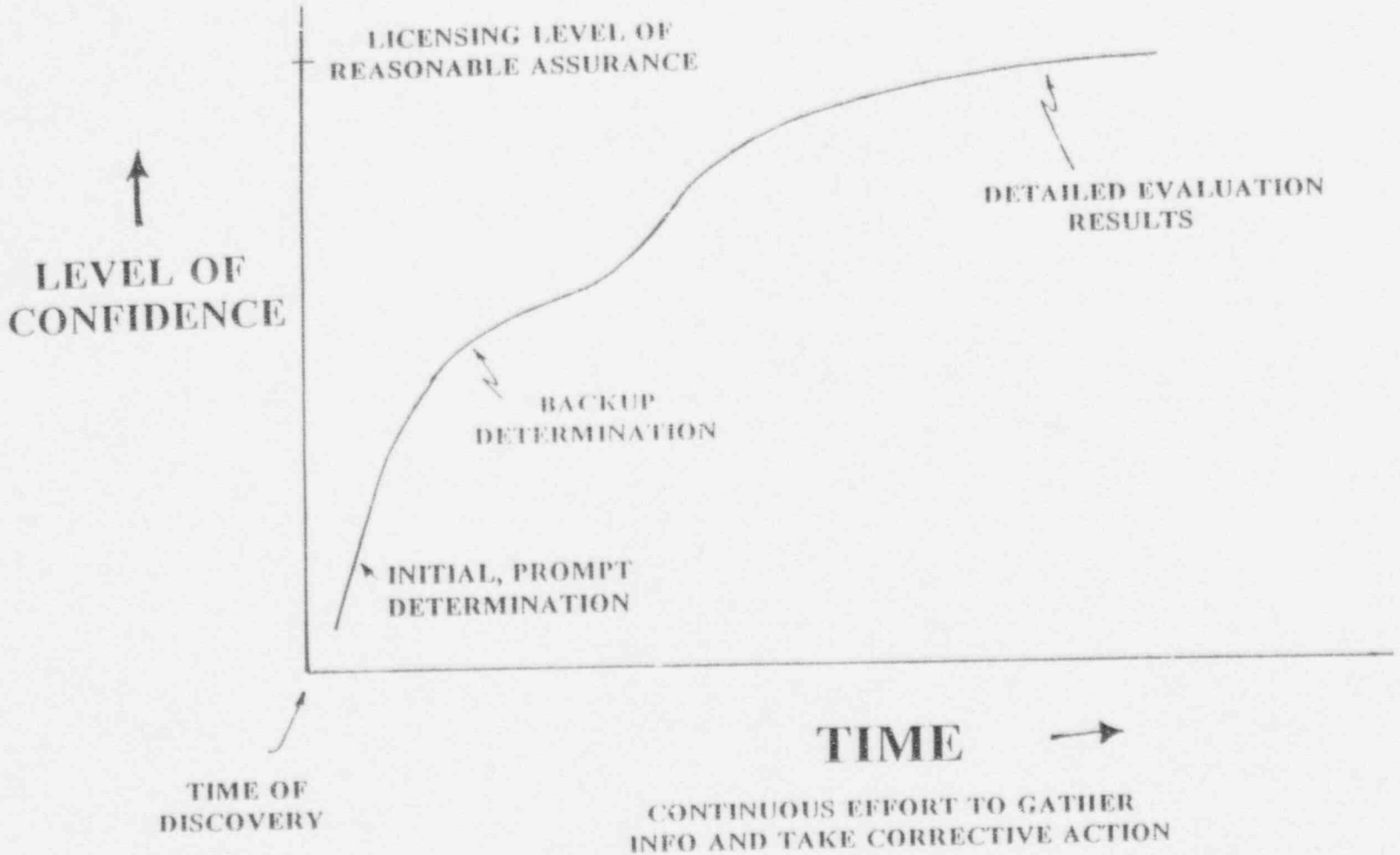
- broad perspective
  - licensee finding own problems, especially in detailed design oriented reviews is very positive
  - important to take timely corrective actions with findings -- only situation where we have taken escalated enf. action on findings coming from licensee reviews

ENGINEERING RELATED OPERABILITY DETERMINATIONS - REGIONAL PERSPECTIVE

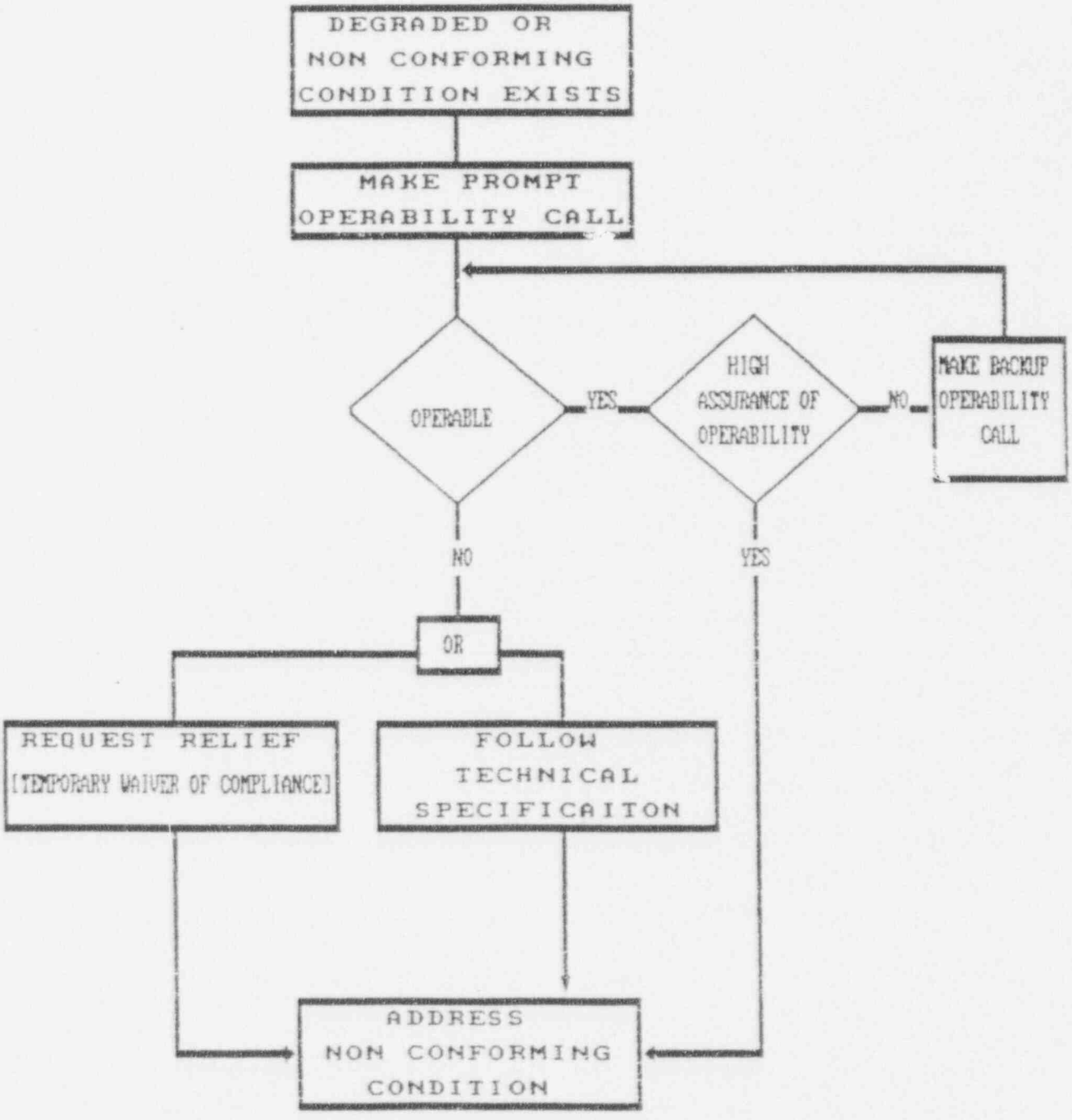
- OVERVIEW OF PERFORMANCE
  - IMPROVEMENT
  - SOME PROBLEMS PERSIST
- IDENTIFICATION OF ISSUES
- ADDRESSING OPERABILITY ISSUES PROMPTLY/COMPETENTLY
  - CONTINUOUS PROCESS
  - PROMPT AND BACKUP DETERMINATIONS

REGIONAL PERSPECTIVE

- SOME COMMON PROBLEMS
  - SUPERFICIAL EVALUATIONS/LACK OF RIGOR -- "GUT FEELING" DOES NOT PASS FOR ENGINEERING JUDGEMENT
  - UNTIMELY ACTION
  - LACK OF DOCUMENTATION
- ROOT CAUSES
  - LACK OF TRAINING/SENSITIVITY OF ENGINEERING STAFF AND CONTRACTORS
  - EXCESSIVE PRODUCTION PRESSURES
  - INADEQUATE STAFFING
  - INEXPERIENCED STAFF
  - FAILURE TO INVOLVE MANAGEMENT
- ENFORCEMENT



OPERABILITY DECISIONS


DEGRADED OR NON CONFORMING CONDITION EXISTS
MAKE PROMPT OPERABILITY CALL
OPERABLE
YES
HIGH ASSURANCE OF OPERABILITY
NO
MAKE BACKUP OPERABILITY CALL
NO
YES
OR
REQUEST RELIEF [TEMPORARY WAIVER OF COMPLIANCE]
FOLLOW TECHNICAL SPECIFICAITON
ADDRESS NON CONFORMING CONDITION

DF-SKETCH

OUTLINE OF PANEL PRESENTATION

E. G. GREENMAN

General Theme:

- o discuss Region III perspective on operations oriented operability issues, safety significance timeliness scope (some issues may require ongoing review)
- o highlight some commonly observed problems:
  - o use of JCOs
  - o "indeterminate" state of operability
  - o T. S. "Operability" vs ASME Code XI "Operative"
  - o Support System Operability

General Points

- o Timely call by licensee
- o Get to the SRI and Region quickly
- o Utilization of PRA
- o How enforcement relates

Root Causes for Problems

- o Lack of training
- o Lack of understanding
- o Untimely
- o Incomplete evaluations

Other Points

- **Concerns Raised at Utilities on Operability Issues Have Increased Significantly Over the Last Few Years Mainly Resulting From**

  - **Increased Knowledge and Scrutiny on Part of Plant's Staff (e.g., Assigned System Engineers)**

  - **Design Basis Reconstitution Programs**

  - **Self - Initiated Safety System Functional Reviews**

  - **Procurement/Commercial Dedication Issues**

OUTLINE OF PANEL PRESENTATION
S. C. Jain
Page 1

- **To Ensure a Thorough Response To Operability Issues, Utility Must Have Good Understanding Of the Design Basis, Licensing Basis and NRC Expectations**

- **First and Foremost is Preservation of Safety**

- **NRC Guidance Provided in GL 91-18 is Generally Adequate, But May Need Clarification**

- General Issues of Interest to Utilities Relating to Operability

  - Timeliness
  - Use of PRA
  - Qualification vs Operability
  - Support System Operability
  - Design Basis Vs Current Licensing Basis
  - ASME Requirements vs Operability
  - Operability Of Equipment Not Covered By Plant Technical Specifications
  - Operability vs Reportability. When Does 30 Day Clock Start for the LER
  - Content Of JCO
  - Interaction with NRC

- **Midwest Nuclear Engineering Managers Forum**
  - **Objectives**
  - **Subcommittees**
  - **NUMARC Interface**
- **Operability Subcommittee**
  - **Formed in May 1992**
  - **Representation from 10 Region III Utilities**

- **Position Papers Under Development**
  - **Design Basis vs Current Licensing Basis**
  - **Operability vs ASME code Section XI Operative Criteria**
  - **Support System Operability**
  - **Qualification vs Operability**

- Concerns
  - MOV Operability Issues
  - Consistency in NRC Application of Guidance
  - Communications with NRC

- MOV Operability Issues

  - Previous Calculations and Settings Were Based on IE Bulletin 85-03 Guidance

  - GL 89-10 and its Supplements Imposed New Requirements

  - Use of Conservative Assumptions in New Calculations May Suggest that the MOV May Not Function

  - Widely Varying Utility Positions on Valve Operability in Light of IEB 85-03 vice GL 89-10 Requirements are Apparent

  - Additional Clarification is Necessary

- **Consistency in NRC Application of Guidance is an Important Industry Concern**
  - **TSI Thermo - Lag Fire Barrier Concerns**
    - **Non - Conforming Condition**
    - **Qualification vs Operability Principle Applies**
    - **Based on Actual Fire Loadings Fire watches are Not Required**
    - **NRC Position Appears to be Inconsistent with GL 91-18 Guidance**

- Communications with NRC
  - Timeliness of Communications
    - Issue Identification
    - Issue Evaluation
    - Reasonable vs Absolute Assurance of Functionality
    - Issuance of Non - Conformance Condition Report
  - Concerns Associated with Early Communication Late Communications

PANEL PRESENTATION OUTLINE

Industry view of GL 91-18 Inspection Guidance

1. **Positive Aspects**

   - General agreement with basic philosophical discussion
   - Good starting point to establish written guidance to inspectors
   - Provides emphasis on licensee responsibility for operability determination
   - Provides a basis for separation of operability from qualification
   - Provides a tacit acknowledgement that operability may be assumed in certain cases

2. **Concerns**

   - Cascading Tech Specs
   - Additional clarification and explanation for certain areas of the guidance
   - Timeliness
   - Current Licensing Basis and Design Basis
   - Timing of operability determination
   - Clarification of the use of some words and definitions

NRC TEMPORARY WAIVERS OF COMPLIANCE

CURRENT POLICY

* FEBRUARY 22, 1990 MEMO FROM TOM MURLEY TO REGIONAL ADMINISTRATORS

* TWOC IS NRC'S STATED INTENT NOT TO ENFORCE COMPLIANCE IN CERTAIN LIMITED CIRCUMSTANCES

PROCESS

* TWO TYPES - REGIONAL OR NRR TWOC, BOTH CONCUR

  - REGIONAL: NON-RECURRING, AMENDMENT NOT NEEDED, LESS THAN 7 DAYS

  - NRR: AMENDMENT NEEDED, TWOC GRANTED UNTIL EMERGENCY OR EXIGENT CHANGE CAN BE PROCESSED

* LICENSEE'S REQUEST

  - CAN BE VERBAL, FOLLOWED PROMPTLY BY DOCUMENTATION

  - MUST BE APPROVED BY PORC

  - MUST ADDRESS:

    1) REQUIREMENTS FROM WHICH RELIEF IS SOUGHT
    2) CIRCUMSTANCES, WHY SITUATION COULDN'T BE AVOIDED
    3) COMPENSATORY ACTIONS
    4) SAFETY SIGNIFICANCE AND POTENTIAL CONSEQUENCES
    5) JUSTIFICATION FOR DURATION
    6) BASIS FOR NO SIG HAZARDS DETERMINATION (NRR TWOC)
    7) NO IRREVERSIBLE ENVIRONMENTAL CONSEQUENCES (NRR TWOC)

OTHER CONSIDERATIONS

* EXPIRATION OF LCO ACTION TIME

  - DURING DISCUSSION WITH NRC - ADDRESS UP FRONT

  - REQUEST DENIED, OR GRANTED TWOC TERMINATED - CLOCK IS DETERMINED FROM ORIGINAL ENTRY INTO LCO

* ENFORCEMENT ACTION CONSIDERED, AS APPROPRIATE

* EXISTING POLICY BEING REVISED PER SECY-92-346

OPERABILITY: AN NRC PERSPECTIVE

* PURPOSE

  - History
  - Need
  - Importance

* GL 91-18...OUR VIEW

  - Use As A Tool
    - communication
    - level playing field
    - win-win
  - Functioning Now

* GL 91-18...FUTURE USE (IMPROVED STS)

* WORKSHOP EXPECTATIONS
  - Gather Information On Problem Areas
  - Suggestions For Improvement
  - Gather Feedback
  - Aid In Improving 91-18
  - Set The Stage For A Better NRC/Industry Interface

REGION III OPERABILITY CONFERENCE
January 21 - 22, 1993

Panel Opening Remarks by Brian Grimes

Introduction

Each NRC panel member comes from a different perspective - engineering, operations, licensing

Audience also represents these perspectives which should lead to a good interchange of views during the conference

History and Importance

Various generic communications on operability have been issued going back at least to 1980.

Questions continued to be raised by Regions and industry - in particular Illinois Power questions on "cascading."

Also concerns about consistency of NRC interpretations.

Guidance was therefore developed for NRC inspectors and shared with the industry (GL 91-18).

The subject of operability is fundamental to how we assure that redundant components are normally available to cope with accidents and transients and to how we assure that operation without any protection against accidents or transients does not continue.

Remarks on GL 91-18

NRC views the inspection guidance in GL 91-18 as a tool for use in the operability process, not as a recipe for particular operability decision.

Properly used, GL 91-18 can enhance communication of NRC expectations to industry, contribute to consistency (providing a level playing field).

Mutual understanding of GL 91-18 should be of benefit both to industry and NRC.

Our view of the operability process is that it is functioning fairly well now.

Three tough areas:

- determination of operability
- timeliness
- supported system operability (cascading)

Application of Operability in Improved T.S.

A different approach to supported system operability has been developed.

Requires development of a safety function determination process.

Needs to be worked through on a lead plant being converted to the improved T.S.

When experience gained, can consider whether this approach is useful for operating plants.

Conference Expectations

- Better understanding of each others problems and solutions
- NRC wants to gather information on the problem areas with suggestions for improvement
- We plan to revise the inspection guidance and GL 91-18 after the workshops
- Aside from GL 91-18 changes, this type of conference helps set the stage for a better NRC/industry interface

RIII 1/21/93

OPERABILITY CONFERENCE

OUTLINE OF PANEL PRESENTATION

T.K. Schuster

- General Brief discussion of general CECo/utility impression of GL91-18
- Specific Identification and discussion of concerns regarding GL91-18 implementation
  - CLB vs. DB
    - What is the difference?
    - Use of UFSAR as a checklist
    - Apples and oranges scenarios
      - Combining of Design Bases for different components/systems
      - Use of original Design Requirements vs. today's Design Requirements
  - Use of the word "Inoperable"
  - What constitutes a "Timely response"
    - Engineering judgment
    - 24 hour criteria

General Impression of GL 91-18

CECo has reviewed the two Inspection Manual Sections in great detail and I would like to begin by offering a general impression. I must applaud the final product being as the most comprehensive and complete compilation of DNCC and operability issues to date. I am personally appreciative that NRC guidance previously provided in various internal memoranda on various issues regarding operability have been brought together into one common document, and the fact the document was made readily available to each licensee.

The DNCC and Operability processes give the licensee "The Operating Room" needed to continue plant operation in the presence of DNCC, without the NRC being a necessary part of the decision making process. The licensee can assess the impact of small changes in the design of a plant, relative to the recorded Current Licensing Basis, provided the change doesn't constitute an URSQ or require a Technical Specification Amendment.

Current Licensing Basis vs Body of Information to which one assesses Operability

Implementation of the Generic Letter Guidance and the related interactions between CECo and the NRC has caused us to re-review the guidance to understand why we have not come to quick agreement or experienced differences of opinion regarding some past operability assessments.

- The first issue is that of the difficulty of reaching agreement on "What deviations from the Current Licensing Basis are allowable for an operability assessment and whether the deviation or analysis changes made to accomodate the deviation are considered an unreviewed safety question.

I believe the problem relates to the following, regarding the guidance provided in the generic letter inspection manual sections. First, though definitions are provided for CLB and Design Basis by reference or example, no true distinction is made between general CLB information and Design Bases information. Second, no attempt is made to define what information within the Design Basis information for a system is that which would be considered unchangeable without prior NRC approval. This would be equivalent to defining the threshold for what is and what is not 50.59-able licensing information, while providing a definition of what licensing information is that, to which operability is assessed. For purposes of this discussion, allow me to define what these types of Design Basis information are. This information is of 3 types - a qualitative description of the systems' specified safety function such as "deliver adequate SI flow to keep the core covered" for a Safety Injection pump; qualitative restraints or conditions under which the safety function is to be performed, (ex. LOOP, LOCA, single failure); and finally, numerical "Acceptance Limits" set for critical parameters. Any or all of these types of non-50.59-able Design Basis information may apply to a specific operability concern. To determine which apply to a given concern a disciplined approach must be taken.

As a matter of process, to make the distinction between allowable changes and non allowable changes, we can rely to a large extent on guidance provided in NSAC-125, "Guidelines for 10 CFR 50.59 Safety Evaluations", since past concerns have predominantly been centered around an issue posed by the 3rd question of a 50.59 Safety Evaluation: "Is the margin of safety as defined in the basis for any Technical Specification reduced?"

The guidance provided in NSAC-125 attempts to explain the difference between design margin and "Margin of Safety", where design margin would be excess margin available for the licensee to perform an operability assessment, and where the "Margin of Safety" is that margin unavailable to the licensee, and if used without prior NRC approval would constitute an URSQ. Similarly, the document attempts to make a distinction between the inputs and assumptions of a calculation and the results of a calculation. The inputs and assumptions are generally not used as the basis for acceptability of a specific design. The fact that the calculation results are less than specific numerical "Acceptance Limits" indicates acceptability of the change. As an example of this rather esoteric preceding discussion, consider containment pressure, a parameter which would have an "Acceptance Limit" equivalent to the Design pressure of 50 psig and a failure point of 120 psig. Let us go on further to say that the original peak calculated pressure was 40 psig. Assume some DNCC was discovered which caused us to consider changing some physical assumption made in the original analysis. Could changes be made to ESF system flowrates, heat exchanger heat transfer rates or the temperature of cooling water systems which are not specified in Tech Specs, though noted in the UFSAR, if degradation in any of these calculation assumptions results in slightly higher calculated containment pressure than previously calculated? For this example, a result of 45 psig. Per NSAC-125, the answer would be yes, the change is acceptable since the new calculated pressure remains below the 50 psig design pressure known as the "Acceptance Limit". Though the design margin has decreased, the "Margin of Safety" between the design pressure of containment and the point of failure of containment has not.

For operability assessments of a complex nature, to identify the three types of information within the design bases which clearly define the specified safety function, along with providing information which would identify the other non-50.59-able issues the following approach must be taken. The Licensee must begin by working backwards in time through the CLB information. All of it, including the UFSAR, applicable SERs & SRP sections, and most recent Tech Spec amendment SERs relating to the equipment in question must be reviewed, unless some other recent effort on the subject is available. Integration of these sources allows the licensee to determine, to the best extent possible, the basis for NRC acceptance of the specific system's design.

The UFSAR should not be used alone as a checklist for what is and is not an URSQ. It contains both descriptive entries and numerical values representing inputs and assumptions beyond those which the NRC could have reasonably used as the basis for accepting the design feature which satisfies a safety function. Unfortunately, a mechanism which clearly ear marks the basis for acceptability of a design feature did not in the past, nor in the present, exist.

Apples and Oranges scenarios

We, meaning both the NRC and the industry, have to be careful performing operability assessments to avoid creating hybrid scenarios for equipment not within the original design basis of a system. There are two ways in which this can happen. One way is to simply cross two current design basis assumption scenarios of different systems and create a single new compound design basis scenario for one of the systems. The system will likely fail to function under this new scenario, the credibility of which is suspect. The second method of creating new hybrid scenarios is by adopting design requirements of today's regulatory standards versus using the design requirements appropriate to the last NRC Requirement/Licensee Commitment for the respective SSC. Though it is certainly acceptable, it needs to be thoroughly reviewed prior to committing to such a change.

Use of the word "Inoperable"

The word "Inoperable" was meant to be used in the context of describing the incapability of a component to carry out its specified safety function, provided the system, structure or component is one named or described within a Technical Specification. It was not meant to describe the condition of a single support piece of equipment not within Technical Specifications. Use of a similar but different word such as non-functional would be more appropriate. My concern here is that misuse of the word for cases where a non-Tech Spec piece of equipment was incapable of performing its design function, and some personnel were describing it as inoperable prior to an operability evaluation being completed, can cause real-time communication errors and post-event review misperceptions about what was known and when, and ultimately possible inappropriate enforcement action. The word appeared to be improperly used several times in the Generic Letter. In light of the cascading guidance given in one section of the Generic Letter which implies immediate cascading of an inoperable support system to a supported system within Tech Specs, it would appear inconsistent to tolerate such use.

What constitutes a "Timely" response?

Relative to threshold and timeliness issues frequently raised, I would like to offer two brief comments. I believe that CECo fully concurs with the concept that once an issue has been raised to the level of an Operability Concern, engineering judgment should be used within hours to assess operability of an SSC. However, we should all recognize that literally hundreds of DNCC are identified, evaluated, and dispositioned each year for each Station. Therefore, to be able to plan and prioritize routine work properly and maintain the proper safety focus for our activities and resources, both a process for dispositioning and the training of personnel involved must be relied upon to recognize a true potential operability concern vs. routine DNCCs discovered every day.

The GL gives a 24 hour timeframe as an appropriate timeframe to determine the operability of a SSC, but also states that the timeframe should be commensurate with the safety significance of the issue. A timeframe of twenty-four hours may be appropriate if the nature of the degradation is within the normal capabilities of the site staff to disposition.

More complex situations may require detailed analyses to resolve the condition. These situations can, and often do, require days, weeks or even months of effort to complete. In the interim, engineering judgment or an interim operability assessment can provide adequate protection assuming it is performed properly with the best available information.

The point here is that, regardless of the timeframe involved, issues must be promptly identified, initial judgments made, and a reasonable resolution schedule developed. Strict adherance to a 24 hour rule would be inappropriate.

Closing Statement

As I stated in the beginning, GL 91-18 provides the most comprehensive guidelines to date. There are aspects, however, where philosophical differences exist which will cause needed discussion when issues arise.

I personally expect to have a larger number of discussions with both Regional and NRR personnel regarding implementation of this letter for the mature CECo plants such as Zion, Quad Cities and Dresden Stations. This should not be interpreted as a performance issue but is rather a result of reconciling the guidance, written from a more contemporary viewpoint of both the design and specifications with which a plant operates, as compared to the design and specifications of these mature plants. The ongoing efforts to upgrade Technical Specifications currently under-way at the mature plants will eliminate some of the potential causes for discussion.

In addition, once discussions begin for issues at the mature plants, the task of comming to agreement on the design bases for a specific licensing issue will be longer and more arduous simply because of the larger body of CLB information present for a mature plant. DBR programs and development of licensing basis computer data bases will improve the speed with which we can retrieve the CLB information pertinent to a specific issue.

Thank You.

ATTACHMENT 7

OPERABILITY/DEGRADED EQUIPMENT CONFERENCE
BREAKOUT PRESENTATION TO PANEL
GROUP 1

BREAKOUT GROUP ONE FACILITATORS

Tom Martin - NRC, Tad Marsh, NRR-NRC, Richard Phares - Illinois Power, Dave Chrzanowski - Commonwealth Edison, K. C. Prasad - Toledo Edison.

A. Timeliness

1. Include more guidance - chart from Hub Miller's presentation and concept of backup call (see Attachment 6, Outline of Panel Presentation, H. J. Miller, page 5).

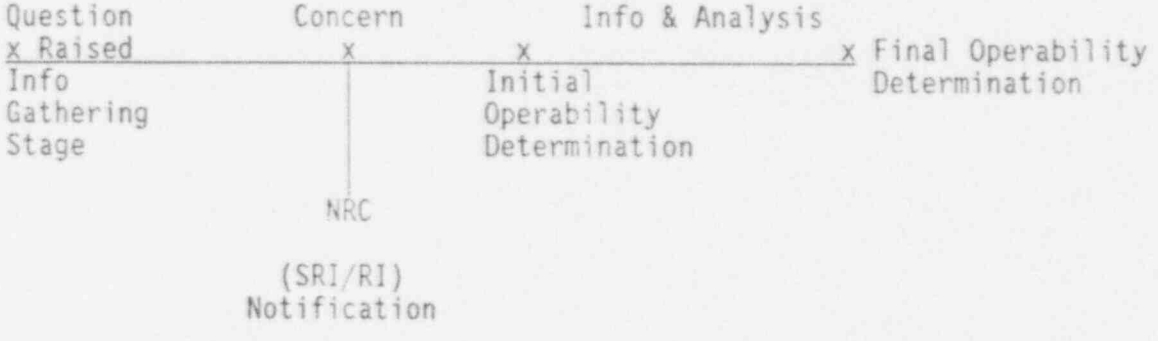
2. Clarification of 24 hour guidance - is it hard and fast? (Examples)

3. Conflicting guidance between GL 89-04, ASME Section XI, GL 91-18, T/S bases on time available.

4. Time for detailed/follow-up analyses should be a function of CONFIDENCE of initial call.

5. Recommendation:

Process Timeline



a. Multi-step process/maybe concurrent

b. Eliminate 24 hr/safety (PRA) to guide timeliness

c. Question phase - "Operable" unless information to contrary

d. Consolidate GL 91-18 5.4, 5.5, 6.1 - consistent

B. Documentation

1. Expectation on documentation of 24 hour call.

2. Is a note in SS log sufficient?

3. What's the THRESHOLD for documenting operability calls?

OPERABILITY/DEGRADED EQUIPMENT CONFERENCE
BREAKOUT PRESENTATION TO PANEL
GROUP 1

C. Communication

1. Keeping SRI informed - depends onpreference of SRI/RI.

2. Generally, communication doesn't need to be addressed in the generic letter.

3. Under what conditions will the NRC review the operability determinations? Who? (R3/NRR).

4. Some inconsistency between inspectors - need consistency.

D. Other Issues

1. SSC defined by GL 91-18 is very broad. Should be limited to SSC with actual safety functions.

2. More guidance is needed on engineering judgment for example, NUREG 1022, Rev. 1.

E. Operability Standards

1. Develop an operability standard for MOVs.

2. Make known that the NRC accepts interim operability criteria (I.O.C.) for piping on a case-by-case basis.

3. Include "Operability Impact" Section in each new generic letter.

4. Under what conditions would the NRC entertain LCO abeyance? Who? How? What's expected?

5. Issue

   a. What are the characteristics used to determine timeliness of operability judgment.

6. Comments

   a. PRA

   b. AOT

   c. Plant Mode

   d. Plant Configuration

   e. Design Margins

7. Recommendations

   a. Expand discussion in 91-18 to include guidance for consideration of these items.

F. Structural Integrity

1. Pipe support O/S T.S. System Boundary (same subsystem)

2. 72 hr. LCO vs 24 hr. NRC 91-18

3. Resident response of (reaction/acknowledge) - Table 4

G. Definition

1. Functional vs Operable

2. Available but not operable

3. Reasonable Assurance
   (i.e., GL 91-18 page 16)

   [Timeliness]

4. What is "Current Licensing basis?"

   [scope]

5. LCO Abeyance

H. Concern: Timeliness Guidance in Generic Letter

1. 24 hours okay for preliminary operability determination

2. Need more guidance for detailed analysis timeliness

3. Suggest graph with appropriate words added to generic letter

I. Additional Comments

1. More guidance may be needed on non-Tech Spec equipment which affects TS equipment - does TS LCO always need to be entered.

   (Group split on whether this is a problem)

2. Group feels a good operability procedure is needed for each plant.

3. GL 91-18 endorses "cascading" in making operability calls. This, however, conflicts with many (custom) T/S should the GL promote a "policy".

OPERABILITY/DEGRADED EQUIPMENT CONFERENCE
BREAKOUT PRESENTATION TO PANEL
GROUP 1

I. Additional Comments (Continued)

4. GL 91-18 should better define the types of operability calls and timeliness.

   a. Initial (hrs?)

   b. Backup (days)

   c. Detailed (weeks)

   There is inconsistency in GL 91-18 currently

5. How much confidence is needed to terminate an operability analysis?

6. GL should address when time clock STARTS - utility needs time to make appropriate review to determine that a problem exists.

7. Need for an operability standard in major areas e.g. MOVs, piping support, deficiencies.

8. What documentation is necessary for initial operability calls?

9. Not clear how to utilize GL 91-18 for situations where real question is if the licensing basis is adequate to guarantee operability for a SSC.

10. NRC needs to determine who (regional office/RI vs NRR) is responsible for making evaluation of the licensee's detailed operability call.

J. Current License Basis

1. Too broad in 91-18

2. Should really only tie operability to specific safety requirements of 10CFR50.2 Design Basis.

K. Cascading

1. Use on plants whose Tech Specs were not designed for it.

2. If the NRC has an issue with particular Tech Spec -- change it, don't block reinterpret history.

3. IPE/PRA analysis should identify inappropriate Tech Specs or T.S. AOT's.

4. The "24 hour" criteria if its only a general guideline, say so.

OPERABILITY/DEGRADED EQUIPMENT CONFERENCE
BREAKOUT PRESENTATION TO PANEL
GROUP 1

K. Cascading (Continued)

5. More guidance on engineering judgment reference NUREG 1022 (Rev 1) Draft Sect. 2.1.

6. SSC as defined by 91-18 should only be those in the FSAR with actual safety functions.

L. Discussion Items Not Related to Example but Bear on 91-18

1. 24 hour operability call guidance not seen as a "problem" until this conference by our group.

2. Use of normal plant systems currently cannot be used to support safety system functions to avoid changes to operating modes.

   Example: High Energy Line Break - HPCI Room

M. Nonconforming Condition

1. HPCI room heat up calculation did not account for a normal access door from the reactor building to the HPCI room. Since the reactor building is a "non-harsh EQ environment," the concern over safety related equipment adjacent to the HPCI Room surfaced.

N. Licensee Processing of This Issue

1. Open

   a. 24 hour operability call requirement

   b. 30 days to confirm operability call

2. Scope

   a. Initially, investigation focused on equipment needed to isolate the steam flow from the break.

   b. Scope was expanded to address safe shutdown of the plant.

O. Timeliness Issues

1. Initial scope was not broad enough, necessitating an expansion of the week.

2. Discussion of when to involve SRI in operability determinations is based on familiarity with the SRI background and reactions.

OPERABILITY/DEGRADED EQUIPMENT CONFERENCE
BREAKOUT PRESENTATION TO PANEL
GROUP 2

BREAKOUT GROUP TWO FACILITATORS

John Hannon - NRR-NRC, Mark Ring - NRC, Al Chaffee - NRR-NRC, Curt Angstadt - Cleveland Electric Illuminating, Joe Bauer - Commonwealth Edison.

A. Design Basis Discrepancies As They Relate to Operability

1. Discussion

a. Clear Definition of CLB vs DB

a.1 What margins can be reduced during operability evaluation and yet remain "operable?"

b. Use of new analysis techniques in design basis reconstitution.

b.1 Can operability be based on original design basis vs new technique results? Do new techniques have to be used?

c. Can state-of-art codes/methods be used for operability calls without prior NRC approval?

c.1 Review regulation for consistency.

d. Am I allowed to use an analysis methodology not licensed on my plant but licensed on other plants to make an operability determination.

2. Clarification is needed for:

a. Operability call for mature plant design basis reconciliation based on new technology or current licensing basis.

b. Recommendation:

b.1 Clearly state that Operability determinations are to be based on the current licensing basis, not current technology.

3. Clarification is required for:

a. Concept of initial judgment, near term documentation to support it, and longer term detailed resolution of operability concern. (Timeliness and documentation expected).

b. Recommendation:

b.1 Capture the philosophy of the graph presented (see Attachment 6, H. J. Miller Outline of Panel Presentation, page 5).

B. Problems/Concerns (Timeliness and Rigor of Evalution)

1. GL 91-18 doesn't recognize different phases of the process.

2. GL 91-18 24 hr. guideline may cause greater safety problem than the original concern. (Not enough time to do things safely and effectively.)

3. Not clear about relationship between prompt and backup operability calls.

4. "24 hrs" is not serving a useful purpose as long as timeliness reflects safety. It could be an artificial constrain on good engineering.

5. Timeliness 6.1 (5.4/5.5)

   a. Clarification of initial expectations.

      a.1 W/I 24 hrs.

      a.2 Bases

      a.3 Content

      a.4 Continuing issues

      *a.5 PRA use to assess safety significant/schedule extension (5.5)

6. Section 6.1 (Page 8) needs to be clarified/expanded

   a. It is unlikely that anything more than engineering judgment can be applied in the first 24 hours.

   b. The 24 hour requirement has resulted in more confusion and interpretation problems than it resolved. Timeliness should be based on significance.

7. Recommendations:

   a. *Provide further definition on difference between preliminary and backup operability determination, recognizing the level of rigor involved.

   b. *Remove the 24 hour - replace by timeliness proportional to safety significance depending on case-by-case.

   c. Rec → Consolidation of Sections 5.4/5.5, 6.1 to ensure consistency and address content issues above.

C. Evolution of Operability Call

1. When operability is "indeterminate," virtually 100% will say it is "operable."

2. GL does not recognize that there is a period of time and evaluation that occurs before an issue is elevated to being an operability question, or that a degraded condition is apparent.

   a. Inconsistency between LCOs on Support/Supported systems which could result in actions not in the best interest of safety (e.g., unwarranted shutdown).

   b. Do you have to Cascade to any other TS if normal power is available and a diesel is declared inoperable?

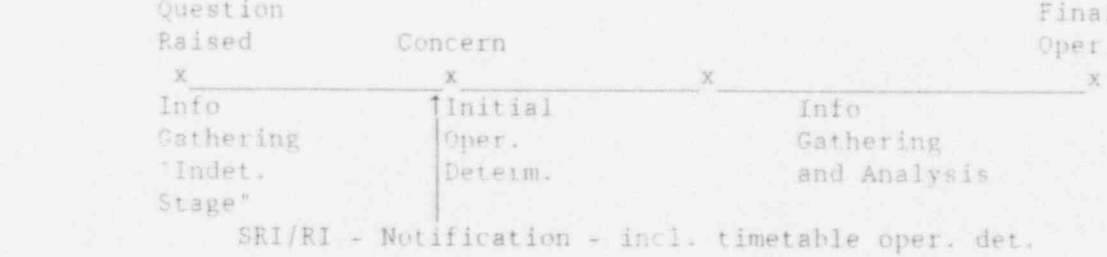
   c. Do you have to enter the LCO for equipment during surveillance testing if system is not clearly incapable of performing its function (Example: Stroke testing a valve).

      c.1 LCO entry on surveillance test when sys/component not clearly unable to perform.

      Example: Place switch in manual for test. Everything else totally operable.

3. *Adopt the cascading TS LCO of improved STS as line-item improvement for current TS.

Process Timeline



C. Evolution of Operability Call (Continued)

4. Recommended Changes

a. Recognize different phases.

b. Recognize two separate operability calls (sometimes maybe concurrent).

c. Eliminate 24 hr. guideline - leave A.O.T. from T.S. for initial call as guideline.

d. Recognize that during the initial concern definition phase that the S.S.C. is operable.

d.1 No information to the contrary

d.2 Industry exp. →usually operable.

D. Other Issues Discussed

1. 91-18 Guidance on use of 50.59

2. 91-18 guidance on Documentation Requirements

3. 91-18 guidance on EQ issues (Section 6.10)

Conclusion - Generally okay no specific recommendation (EQ section could probably be improved for clarity).

OPERABILITY/DEGRADED EQUIPMENT CONFERENCE
BREAKOUT PRESENTATION TO PANEL
GROUP 3

BREAKOUT GROUP THREE FACILITATORS

Bill Forney - NRC, Jim Dyer - NRC, Mark Ackerman - American Electric Power, John Schrage - Commonwealth Edison

A. Major Areas

1. Timeliness on potential operability issues identified by support organizations (engineering/design concerns).

2. Declaration of inoperability - time of event vs time of discovery

3. Placing the plant in a "safe" condition does not necessarily translate to plant shutdown.

4. LCOs for equipment not covered by the TSs. Operability requirements not specified. (Relates to using design/licensing basis in operability calls.)

5. Cascading TS issue not understood - support systems not always well defined.

B. Timeliness

NRC wants residents informed early but utilities are pressured to have all answers at that time. We need space.

1. Comment

   a. Some residents want all answers now.

2. Recommendation

   a. NRC/utility should have an understanding as to how much time the utility has to address issue. This is on an item by item basis.

3. Recommendation

   a. Communication between utility and NRC is vital to resolving "gray" issue.

   b. Reasonable assurance of operability gut check (from the right gut).

      "I'm fairly certain it's OK" = It's OK. Formalize in a timely manner or it's inoperable.

OPERABILITY/DEGRADED EQUIPMENT CONFERENCE
BREAKOUT PRESENTATION TO PANEL
GROUP 3

C. Cascading LCO's

1. Cascading or not: Basis for support, systems in definition of operability is unclear.

   a. Is it - Those not in their own T.S. or those not in T.S. and those in T.S.?

2. Resolution

   a. Make it clear which is correct.

3. Cascading technical specifications are not well understood and support systems are not well defined.

   a. Inconsistent application of cascading technical specifications is the result.

4. Recommendations

   a. Rethink issue and provide clear guidance to be used consistently.

   b. Possible option to apply support system LCO for systems in tech specs, and use LCO approach for support systems without tech spec LCOs.

   c. Consider diesel generator inoperability different from other support systems. (TS 3.0.5)

D. Post Maintenance Testing

1. Should the GL address how to handle operability declarations for systems which have had maintenance performed on them, that also require a higher temperature/pressure (Mode Change) in order to adequately test the system?

   a. Will regulatory guide on maintenance rule address?

2. Recommendations

   a. Address in either GL or in maintenance rule regulatory guide.

E. Retroactive Operability Issues

1. When should you devote resources to resolve these issues.

   a. There may be minimal benefit for resources/money spent.

2. Recommendation

   a. Bring the issue before the main committee for discussion.

   b. Report as required, but don't do any further analysis.

F. PRA Usage

1. Hypothetical very low probability events that impact the design basis - results in plant shutdown.

   a. Example - Calvert Cliffs shutdown

2. Recommendation

   a. Perform a relative risk analysis using PRA data. If shutdown risk > hypothetical event then plant should remain on line.

G. NRC Involvement

1. Comments

   a. NRC wants early notification on degraded system decisions, but utilities feel pressured to have all the answers.

      a.1 NRC should not be put in the position of directing the operability decisions.

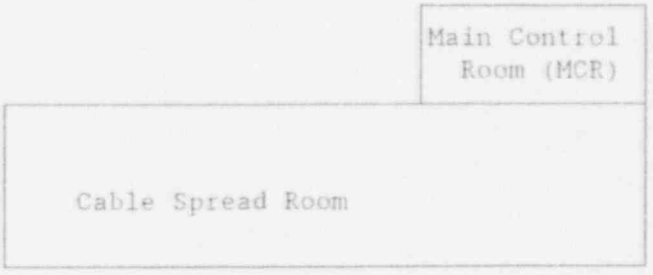
   b. Not acceptable for utility to consider an operability decision for a week and then notify NRC Friday night to ask for relief.

2. Recommendations

   a. Clarify the role expectations for both utility/NRC.

   b. Utilities must recognize there is no "indeterminate" operability classification.

H. Specific Example



0.1 psid positive (w/wo vent. Vent was not designed seismic)

1. Comments

   a. Testing of cordox in cable spreading room revealed leakage into MCR. Habitability issue.

   b. Vent - acided. 0.1 psid criteria (tech spec) met w/wo vent.

   c. Subsequent testing revealed 0.1 psid no longer achievable w/vent open (0.08).

      c.1 Did not enter LCO

      c.2 20 days to determine seismic is a problem

      c.3 3 days later - communicated

2. Lessons Learned

   a. Resolution

      a.1 Notify resident sooner

      a.2 Qualification issues can take time

      a.3 Take immediate action/enter LCO

   b. Question

      b.1 Page 1 - Why is (viii), "Any SSC's described in the FSAR" included? (Why wasn't i - vii sufficient to define scope of GL 91-18?)