

MAY 10 1991

Note to: Bill Russell

Thru: Larry Chandler *llc*

From: *JAG* Jack Goldberg

SUBJECT: REFERENCE TO TEMPORARY WAIVERS OF COMPLIANCE IN GUIDANCE DOCUMENTS ON OPERABILITY AND DEGRADED OR NONCONFORMING CONDITIONS

In my April 12, 1991 note to Richard Emch of NRR on an earlier draft of the subject documents, I indicated that OGC had fundamental concerns with the draft guidance regarding the staff's use of Temporary Waivers of Compliance. OGC has reviewed the latest draft guidance and, subject to resolving the specific concerns identified in the attachment to this note and in the attached mark-up, OGC has no legal objection to the proposed guidance; the document states that such waivers may be granted as described in the Memorandum from Thomas E. Murley to the Regional Administrators dated February 22, 1990. However, given questions that have arisen in the past and the staff's intent to formalize the use of Temporary Waivers of Compliance by issuing a generic letter and incorporating their use into the Inspection Manual, our position is subject to the proviso that the staff prepare an appropriate paper to inform the Commission about the use of this type of discretion as part of the licensing/enforcement process and obtain Commission approval of the practice. In these circumstances it is appropriate to provide the Commissioners with a discussion of how temporary waivers augment the discretion that already exists in the Enforcement Policy and to propose a revision to the Enforcement Policy to formally incorporate their use.

For purposes of the transmittal of the package to CRGR, and assuming that the concerns identified in the attachment are resolved, the staff should note the following: "OGC has no legal objection to the guidance provided that (1) the staff prepares a paper for the Commission which (a) describes the circumstances under which Temporary Waivers of Compliance are used, (b) states the standards which govern the staff's granting of such waivers, (c) explains how these waivers augment the licensing/enforcement process, and (d) proposes a revision to the Enforcement Policy which formally adds the use of Temporary Waivers of Compliance to the types of enforcement discretion which the staff is authorized to exercise under the Enforcement Policy, and (2) the Commission approves the use of Temporary Waivers of Compliance."

Attachments: As stated

cc w/Attachments: J. Scinto
D. Hoefling
J. Cutchin
J. Lieberman

9406070288 910812
PDR REVGP NRQCRGR
MEETING208 PDR

Plan for dealing with

??

→

OGC'S COMMENTS ON GUIDANCE ON OPERABILITY AND DEGRADED/NONCONFORMING CONDITIONS

The following OGC comments must be addressed before OGC could indicate that it had no legal objection to the CRGR package discussing operability and degraded/nonconforming conditions provided to OGC on May 6, 1991.

✓ 1. The package apparently contains both "guidance" and "staff positions". Guidance is not mandatory and so licensees need not adhere to it. Adherence to staff positions, as that term is used in the Backfit Rule, is mandatory. The package does not, in many cases, adequately express when guidance is being given or when a staff position is being given. For example, the package repeatedly refers to operability determinations and corrective actions for SSCs. But the package is not clear as to when such operability determinations or corrective actions are required or merely recommended. Examples of this problem have been labelled with the letter "A" throughout the text.¹

✓ 2. Application of the Backfit Rule to the package is inadequate. The package refers to guidance, existing staff positions and new staff positions. The backfit rule would apply to new staff positions. References to new staff positions are vague and non-specific. The compliance backfit exception is applied but there is no documented evaluation. Examples of this problem have been labelled with the letter "B" throughout the text. This problem is most clearly depicted in the Generic Letter and the CRGR Package. Additional OGC concerns regarding compliance with the Backfit Rule may be provided to you by Geary Mizuno.

✓ 3. The scope of the proposed guidance needs further refinement to assure that it is adequate. See the markup on Page 1 of Enclosure 1 on Degraded Conditions. Much of the problem discussed in Paragraph 1 above stems from the fact that, for a number of the scope categories, e.g. (i.), (ii.), (iii.), and (vi.), there are no specific operability or corrective action requirements which a licensee must meet.

4. The definition of a nonconforming condition on Page 2 of Enclosure 1 on Degraded Conditions must be expanded to include licensee commitments. Several of the examples are either incorrect or vague.

5. Section 4.7 of Enclosure 1 on Degraded Conditions does not accurately state the staff position that voluntary entry into LCC 3.0.3 is prohibited. The reference provides no additional

¹ The examples provided throughout these comments should be considered illustrative and not exhaustive.

Guidance to staff may result in BF.

~~Guidance to staff may result in BF.~~

guidance on this subject as the language presently represents. A simple reference would be appropriate.

6. The discussion of Page 3 of Enclosure 1 on Operability regarding operability at an instantaneous point in time is unclear. Also, we have not been able to identify an example in the referenced Section 6.11 to clarify this point.

7. The reference on Page 14 of Enclosure 1 on Operability is vague and unnecessary. Unspecified guidance is referred to on subjects other than operability. To the extent that GL 87-09 has additional guidance on operability, we again recommend that such guidance be incorporated into this document and the reference deleted.

8. The discussion at Pages 17 and 18 of Enclosure 1 on Operability contrasting Tech Specs and the ASME Code is unclear. To the extent that the discussion suggests that Tech Spec action statements must be entered if Code criteria are not met, it is not necessarily correct. Until this is clarified, we cannot give an opinion as to whether the guidance is legally correct.

* 9. The use of the phrase "unless justified otherwise" on Page 18 of Enclosure 1 on Operability is unclear. It suggests that relief is available when a system required to be operable is determined to be inoperable.

10. The references identified in Paragraph 6.13 of Enclosure 1 on Operability have been previously identified as containing incorrect and unclear statements. Most of these references are over ten years old. We again recommend that, to the extent these references contain useful guidance, the guidance should be incorporated into this new guidance document and the references deleted.

11. The CRGR Package on Page 1 incorrectly represents that Enclosure 1 on Operability applies only to SSCs covered by Tech Specs or NRC requirements.

✓12. The CRGR Package on Page 3 incorrectly represents that evaluation criteria from many different documents have been drawn together in one location. The new guidance still makes substantial use of references. This representation is repeated on Page 4.

✓13. The statement on Page 6 of the CRGR Package that Enclosure 1 provides more complete guidance is not consistent with repeated statements in the CRGR Package that Enclosure 1 provides no new guidance.

OGC also offers the following comments which, although not a bar to concurrence, should be considered by NRR to enhance the package.

1. As Enclosure 1 is primarily for the aid of inspectors, consideration should be given to explaining the difference between guidance and staff positions. This should aid inspectors in applying these documents and developing sound violations.

2. The definition of degraded condition on Page 2 of Enclosure 1 on Degraded Conditions is very broad. Some limitation on the breadth should be considered.

3. The chart in the package appears to have a footnote which does not attach to anything.

4. The language on Page 9 of Enclosure 1 on Operability should conform to the language used on Page 7 of Enclosure 1 on Degraded Conditions as the purpose appears to be the same. Also, language discussing Temporary Waivers of Compliance should be neutral in tone.

5. It remains unclear why certain elements listed on Page 10 of Enclosure 1 on Operability should be included in an operability determination. As it is clear that these elements are not mandatory, we have no legal objection to listing them. But given the regulatory significance of an operability determination, the elements of such a determination should have a sound basis.

6. The language at Page 13 of Enclosure 1 on Operability should be neutral in tone. Suggested language is provided.

7. It is unclear on Page 16 of Enclosure 1 on Operability why an element of a JCO for environmental qualification for equipment where there is reasonable assurance that it will function need include an evaluation of the consequences of its failure.

8. At a number of places in Paragraphs 6.13, 6.14 and 6.15 of Enclosure 1 on Operability, references are made to required actions to be taken by a licensee or that an NRC approval is to be sought. The NRC regulations requiring these actions should be specified.



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

MEMORANDUM FOR: Edward L. Jordan, Chairman
Committee to Review Generic Requirements
Office of Analysis and Evaluation of Operational Data

FROM: Frank J. Miraglia, Jr., Deputy Director
Office of Nuclear Reactor Regulation

SUBJECT: ISSUANCE OF TWO NEW NRC INSPECTION MANUAL SECTIONS AND A
GENERIC LETTER - GUIDANCE ON LICENSEE ACTIONS FOR RESOLUTION
OF DEGRADED AND NONCONFORMING CONDITIONS AND GUIDANCE ON
OPERABLE/OPERABILITY: ENSURING THE FUNCTIONAL CAPABILITY OF
A SYSTEM OR COMPONENT

The staff requests that CRGR approve issuance of the enclosed additions (See Enclosure 1) to Part 9900, Technical Guidance, of the NRC Inspection Manual. The staff also requests that the CRGR approve issuance of a Generic Letter (See Enclosure 2) with the guidance (i.e., Enclosure 1) as an attachment to licenses for their information. Enclosure 3 is the CRGR review package for this request.

Enclosure 1 contains the two proposed additions to the NRC Inspection Manual. The first is entitled, "LICENSEE ACTIONS FOR RESOLUTION OF DEGRADED AND NONCONFORMING CONDITIONS." This document is a summary of the process the NRC expects a licensee to follow upon identification of a degraded or nonconforming condition, including prompt follow-up action, operability determination, reporting requirements, decision categories, interim operation, deficiency resolution, and long-term follow-up. Since this document covers so many areas, it can be thought of as an umbrella document that outlines a complex process, and then directs the reader, as necessary, to more detailed information on any individual component of the process.

The umbrella document refers its reader for operability guidance to the second document of Enclosure 1 entitled, "OPERABILITY/OPERABLE: ENSURING THE FUNCTIONAL CAPABILITY OF A SYSTEM OR COMPONENT." This document is intended as a compilation of existing NRC guidance and staff positions on operability. It is based upon Generic Letters, Bulletins, Information Notices, and internal NRC correspondence issued between 1979 and the present.

*old positions
or new
positions.
Back for Rule
B*

CONTACT: Chris L. Hoxie, OTSB, NRR
49-23138

this speaks only to guidance.

and staff positions

(B)

ask staff

Because of the complexity involved in operability determinations and because of the complexity of the process described in LICENSEE ACTIONS FOR RESOLUTION OF DEGRADED AND NONCONFORMING CONDITIONS, it is possible that there have been differences in application of ~~the~~ guidance from licensee to licensee and differences in interpretation by NRC staff during inspection activities. Thus, the purpose of publishing ~~this~~ guidance is to provide some clarifying explanatory material for licensees and to ensure consistency in application of ~~this~~ guidance by NRC inspectors. NRR will conduct training on these topics to ensure uniform staff understanding and will oversee its implementation.

the and staff positions

Although ~~new~~ staff positions were not intended, particular licensees may find that ~~implementation of the guidance represents new staff positions.~~ We recognize that 10 CFR 50.109 may apply in such cases. Whether existing or new, the staff positions incorporated in the guidance ensures compliance with existing regulations and ~~Technical Specifications~~ Technical Specifications. Hence, the exception under 10 CFR 50.109(a)(4)(i) applies.

WHY

Enclosure 2 is the proposed Generic Letter. It is to be used to inform licensees of this addition to ~~the NRC Inspection Manual~~ Part 9900 of the NRC Inspection Manual. A copy of the guidance documents (i.e., Enclosure 1) will be attached to the Generic Letter for information. Licensees are not required to take any specific action by the Generic Letter.

Enclosure 3 is the CRGR review package that discusses the guidance (i.e., Enclosure 1) and the proposed Generic Letter (i.e., Enclosure 2). The guidance and the Generic Letter are sponsored by Charles E. Rossi, Director of Operational Events Assessment, NRR.

CRGR document suggests otherwise.

Frank J. Miraglia, Jr., Deputy Director
Office of Nuclear Reactor Regulation

Enclosures:
As stated

Need to identify "new" positions and perform a backfit analysis.

ENCLOSURE 1

TWO PROPOSED ADDITIONS TO PART 9900 OF THE NRC INSPECTION MANUAL

LICENSEE ACTIONS FOR RESOLUTION OF
DEGRADED AND NONCONFORMING CONDITIONS

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LICENSEE ACTIONS FOR RESOLUTION OF
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LICENSEE ACTIONS FOR RESOLUTION OF
DEGRADED AND NONCONFORMING CONDITIONS

1.0 PURPOSE AND SCOPE:

To provide guidance to NRC inspectors for the review of licensee actions for resolution of degraded and nonconforming conditions affecting the following systems, structures, or components (SSCs):

- (i) Safety-related SSCs relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, and the capability to prevent or mitigate the consequences of accidents that could result in potential offsite consequences comparable to the 10 CFR Part 100 guidelines. Design basis events are defined the same as in 10 CFR 50.49(b)(1).
- (ii) All SSCs used in a safety analysis or plant evaluation for the current licensing basis.
- ~~(iii) Any SSCs, including non-safety related SSCs whose failure could prevent satisfactory accomplishment of required safety functions.~~ *Vogel*
- (iv) Post-accident monitoring equipment subject to 10 CFR 50.49. *what does this add?*
- (v) Any SSCs subject to 10 CFR Part 50, Appendix B.
- ~~(vi) Any SSCs subject to 10 CFR Part 50, Appendix A, Criterion 1.~~ *Vogel*
- (vii) Any SSCs explicitly subject to facility Technical Specifications (TS).
- (viii) Any SSCs implicitly subject to facility TS through the definition of operability (i.e., support SSCs outside TS).
- (ix) Any SSCs subject to 10 CFR Part 50.59.

This guidance is directed toward NRC inspectors that are reviewing actions of licensees that hold an operating license.

2.0 DEFINITIONS:

2.1 Current Licensing Basis

Current licensing basis (CLB) consists of a licensee's written commitments for assuring compliance with and operation within applicable NRC requirements and license conditions including the plant-specific design basis (including all modifications and additions to such commitments over the life of the license) that are docketed and in effect. The CLB includes licensee commitments concerning systems, structures, and components identified in the Final Safety Analysis Report (FSAR), the Technical Specifications (TS), and the evaluations submitted to show compliance with the Commission's regulations such as ATWS, Station Blackout, Pressurized Thermal Shock, Fire Protection, and Environmental Qualification. It also includes the plant-specific design bases information defined in 10 CFR 50.2 as documented in the most recent FSAR as required by 10 CFR 50.71 and the licensee's commitments remaining in effect that were made in docketed licensing correspondence such as licensee responses to NRC Bulletins, Generic Letters, and enforcement actions, as well as licensee commitments documented in NRC safety evaluations.

2.2 Design Basis

Design basis is that body of plant-specific design bases information defined by 10 CFR 50.2, as documented in the most recent FSAR.

2.3 Degraded Condition

A condition of an SSC in which there has been ~~any~~ loss of quality or functional capability.

2.4 Nonconforming Condition

A condition of an SSC in which there is failure to meet ^{NRC} requirements. Some examples of nonconforming conditions include the following:

1. There is failure to conform to one or more applicable codes or standards specified in the FSAR.
2. As-built equipment, or as-modified equipment, does not meet FSAR design ^{requirements} ~~requirements~~. *commitments*
3. Operating experience or engineering reviews demonstrate a design ~~inadequacy~~ ^{to meet FSAR commitments}. *the failure of*
4. Documentation required by NRC requirements such as 10 CFR 50.49 is not available or deficient.

is

2.5 Operable or Operability

The Standard Technical Specifications (STS) define operable or operability as follows:

"A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified functions, and when all necessary attendant instrumentation, controls, electrical power, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its function(s) are also capable of performing their related support function(s)."

This definition is applicable to all SSC listed in Section 1.

3.0 BACKGROUND:

Many nuclear power plant's SSCs are designed to meet MRC requirements, satisfy the current licensing basis, and conform to specified codes and standards. For degraded or nonconforming conditions of these SSCs, the licensee may be required to take actions required by the Technical Specifications (TS). The provisions of Title 10 of the Code of Federal Regulations (10 CFR), Part 50, Appendix B, Criteria XVI, may apply requiring the licensee to identify promptly and correct conditions adverse to safety or quality. Reporting may be required in accordance with Sections 50.72, 50.73, and 50.9(b) of 10 CFR Part 50, 10 CFR Part 21, and the Technical Specifications (TS). Collectively, these requirements may be viewed as a process for licensees to develop a basis to continue operation or to place the plant in a safe condition, and to take prompt corrective action. Changes to the facility in accordance with 10 CFR 50.59 may be made as part of the corrective action required by Appendix B. (A)

The process displayed by means of the chart in the enclosure recognizes these and other provisions that a licensee may follow to restore or establish acceptable conditions. These provisions are success paths that enable licensees to continue safe operation of their facilities. (A)

Corrective actions taken, including

4.0 DISCUSSION OF NOTABLE PROVISIONS

4.1 Public Health and Safety

All success paths, whether specifically stated or not, are first directed to ensuring public health and safety and second, to restoring the current licensing basis of the plant as an acceptable level of safety. Identification of a degraded or nonconforming condition that may pose an immediate threat to the public health and safety, ~~requires~~ ^{should} the plant to be placed in a safe condition. *Upon* A

Technical Specifications (TS) address the safety systems and provide Limiting Conditions for Operation (LCOs) and Allowed Outage Times (AOTs) required to ensure public health and safety.

4.2 Operability Determinations

For guidance on operability see the Inspection Manual, Part 9900, "OPERABLE/OPERABILITY: ENSURING THE FUNCTIONAL CAPABILITY OF A SYSTEM OR COMPONENT," and see the Inspection Manual, Part 9900, "STANDARD TECHNICAL SPECIFICATIONS STS SECTION 1, OPERABILITY."

It is the licensee's responsibility to adhere to its TS and to make the operability determinations. It is the NRC's responsibility to audit selectively the determinations and challenge those with questionable basis or promptness.

4.3 10 CFR 50.59 "Changes, Tests, and Experiments" and 10 CFR 50, Appendix B

4.3.1 10 CFR 50, Appendix B

Each licensee ~~must~~ ^{should} ensure that the design and operation of each of its plants continues to be as described in the current licensing basis. Whenever degraded or nonconforming conditions of SSCs covered by Appendix B are identified, Appendix B requires prompt corrective action to correct or resolve the condition, with a timeliness that is commensurate with the safety significance of the issue. A licensee may delay Appendix B correct actions if it has completed an evaluation supporting the conclusion that a delay will not degrade safety below an acceptable level. Licensees ~~should~~ ^{are} expect that such evaluations to delay prompt corrective action will be reviewed by NRC staff on a selective basis to determine the acceptability of the decision and duration of the delay. A ✓

4.3.2 10 CFR 50.59

If the degraded or nonconforming condition involves an SSC covered by 50.59, the licensee must perform an evaluation in accordance with 10 CFR 50.59 to determine if operation with the degraded or nonconforming condition involves an unreviewed safety question (USQ). If a USQ is involved, such operation would be allowed only after a license amendment in accordance with 10 CFR 50.90 is obtained authorizing such operation. (See Section 4.6 for guidance where the licensee wishes to operate the plant while such a license amendment is being processed.)

the requirements of Part

4.3.3 Using 10 CFR 50.59 to Satisfy an Appendix B Corrective Action

A licensee may change the design of its plant as described in the FSAR in accordance with 10 CFR 50.59 at any time. Whenever such changes are sufficient to resolve a degraded or nonconforming condition involving an SSC that is covered both by Appendix B and 50.59, they may be used to satisfy the corrective action requirements of Appendix B, in lieu of restoring the affected equipment to its original design. However, whenever such a change involves a USQ or change in a Technical Specification (TS), the licensee must obtain a license amendment in accordance with 10 CFR 50.90 prior to operating the plant with the degraded or nonconforming condition. In order to resolve the degraded or nonconforming condition without restoring the affected equipment to its original design, a licensee may, in addition to performing a 50.59 safety evaluation, need to obtain an exemption from 10 CFR 50 in accordance with 10 CFR 50.12, or relief from a design code in accordance with 10 CFR 50.55a. The use of 10 CFR 50.59, 50.12 or 50.55a in fulfillment of Appendix B corrective action requirements does not relieve the licensee of the responsibility to determine the root cause, to examine other affected systems, or to report the original condition, as appropriate.

Further guidance on 10 CFR 50.59 is provided in the NRC Inspection Manual, Part 9900, "50.59 Changes, Testing, and Experiments."

4.4 Discovery of an Existing But Previously Unanalyzed Condition or Accident

In the course of its activities, the licensee may discover a previously unanalyzed condition or accident. Upon discovery of an existing but previously unanalyzed condition that does create the possibility of an accident or malfunction of a different type and is adverse to safety or quality, the licensee should report that condition in accordance with the appropriate regulations.

If the accident should have been evaluated as part of the design basis but was overlooked, this previously unanalyzed condition should be corrected. The licensee's 10 CFR Part 50, Appendix B program for prompt corrective action is applicable, assuming SSCs subject to Appendix B are involved.

For a previously unanalyzed condition or accident that is considered a significant safety concern, but is not part of the design basis, the licensee may subsequently be required to take additional action after consideration of backfit issues (see Section 50.109).

4.5 Justification for Continued Operation (JCO)

*Lower case
request to be
operable by TS*

4.5.1 Background

The license authorizes the licensee to operate the plant in accordance with the regulations and the conditions specified in the TS. If an SSC is degraded or nonconforming but operable, the license provides authorization to operate and the licensee does not need further justification. The licensee must, however, promptly identify and correct the condition adverse to safety or quality in accordance with 10 CFR Part 50, Appendix B, Criterion XVI.

A
*for SSC's
subject
to Appendix*

Under certain defined and limited circumstances, the licensee may find that strict compliance with the TS would cause an unnecessary plant action not in the best interest of public health and safety. Where ~~the licensee, however, is not~~ an immediate action ~~allowed by~~ 10 CFR 50.54(X), NRC review and response is required prior to the licensee taking actions that are contrary to compliance with the TS. A JCO, as defined herein for general NRC purposes, is the licensee's technical basis for requesting NRC responses to such action.

*pursuant
to*

is not appropriate

4.5.2 JCO Definition

A Justification for Continued Operation (JCO) is the licensee's technical basis for requesting authorization to operate in a manner that is prohibited (e.g., outside TS or license) absent such authorization. The preparation of JCOs does not constitute authorization to continue operation. They are normally submitted* to the NRC when seeking a Temporary Waiver of Compliance.

4.5.3 Items for Consideration in a JCO for a Temporary Waiver of Compliance

Some items which are appropriate for consideration in a licensee's development of a JCO for a Temporary Waiver of Compliance include:

- o Availability of redundant or backup equipment
- o Compensatory measures including limited administrative controls
- o Safety function and events protected against
- o Conservatism and margins, and
- o Probability of needing the safety function.

Licensees may also use existing PRAs or Individual Plant Evaluation (IPE) risk assessments to consider how operating the facility in the manner proposed in the JCO will impact the core damage frequency. A very small or negligible change in core damage frequency is a positive point in favor of a proposed JCO for a Temporary Waiver of Compliance.

*Regulations, generic letters, and bulletins may provide direction on specific issue JCOs, which do not require that they be submitted. They may also use the JCO for situations other than for operating in a prohibited manner. The JCO term has been used in Generic Letters 88-07 on Environmental Qualifications of Electrical Equipment and 87-02 on Seismic Adequacy. Licensees should continue to follow earlier guidance regarding the preparation of JCOs on specific issues.

to the NRC

4.5.4 Discussion of Industry-Type JCOs

Currently, some licensees refer to two other documents or processes as JCOs that are not equivalent to and do not perform the same function as the NRC-recognized JCO (as defined in 4.5.2) in support of a Temporary Waiver of Compliance. This is an acceptable industry practice and to the extent the industry JCO fulfills other NRC requirements, the JCOs will be selectively reviewed and audited accordingly. ✓

In the first industry-type JCO, the licensee may consider the entire process depicted in the attached chart as a single JCO that includes such things as the basis for operability, PRA, corrective action elements, and alternative operations.

In the second industry-type JCO, the licensee may consider the documentation that is developed to support facility operation after the operability decision has been made as a JCO. This documentation can cover any or all of the items listed under "Interim Operation" on the attached chart.

Although the "JCO" is used differently by some licensees, the NRC concern is that the operability decision is correct, documentation of licensee's actions are appropriate, and submittals to the NRC (for a Temporary Waiver of Compliance) are complete. The licensee's documentation of the JCO's is normally proceduralized through the existing plant record system, which is auditable.

4.6 Technical Specification LCO Relief and Temporary Waiver of Compliance

In limited circumstances,
A To obtain relief from a Limiting Condition for Operation (LCO) in the TS, a licensee may request an emergency TS change. When the request cannot be processed within the Allowed Outage Time (AOT) that is allowed by the TS, the licensee may submit a JCO and request a Temporary Waiver of Compliance.

Further guidance is provided in the February 22, 1990 memorandum from Thomas E. Murley to Regional Administrators, "Temporary Waivers of Compliance."

use this at p 9 of second document re operability.

4.7 Voluntary Entry into LCO 3.0.3

Must not

The licensee ~~should~~ not voluntarily enter into LCO 3.0.3 for operational convenience, unless the licensee has obtained a Temporary Waiver of Compliance to operate in this otherwise prohibited manner. See previous section.

see also
Further guidance is provided in NRC Inspection Manual, Part 9900, "STS Section 3.0.3 Limiting Conditions for Operation."

4.8 Reasonable Assurance of Safety

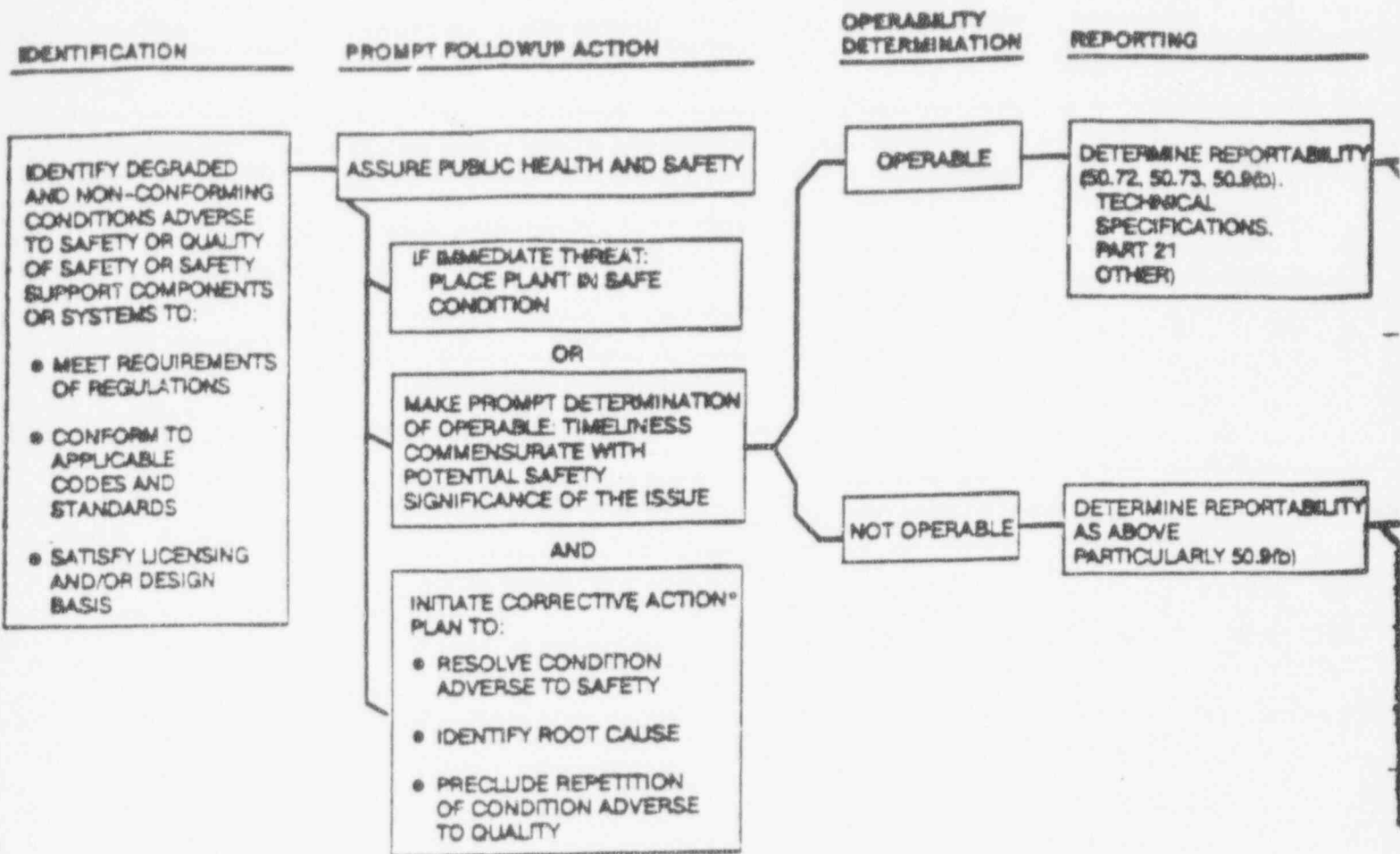
this has no further guidance, please

For SSCs that are not expressly subject to TS and that are determined to be inoperable, the licensee should assess the reasonable assurance of safety. If the assessment is successful, then the facility may continue to operate while prompt corrective action is taken. Items to be considered for such an assessment include the following:

- o Availability of redundant or backup equipment
- o Compensatory measures including limited administrative controls
- o Safety function and events protected against
- o Conservatism and margins, and
- o Probability of needing the safety function.

Licenses may also use existing PRAs or Individual Plant Evaluation (IPE) risk assessments to consider how operating the facility with the inoperable SSC in question will impact the core damage frequency. A very small, or negligible change in core damage frequency is a good measure of reasonable assurance of safety.

LICENSEE ACTIONS FOR RESOLUTION OF DEGRAD



NOTE:
BULLETINS AND GENERIC LETTERS, AMONG OTHERS, MAY PROVIDE GUIDANCE SPECIFIC TO AN ISSUE BUT COUNTER TO THE GENERALLY ACCEPTED APPROACH HEREIN. EXAMPLES OF DEVIATIONS FROM THE ABOVE APPROACH INCLUDE GENERIC LETTER 88-07 ON ENVIRONMENTAL QUALIFICATION OF ELECTRICAL EQUIPMENT AND GENERIC LETTER 87-02 ON SEISMIC ADEQUACY (SEE USE OF JCO).

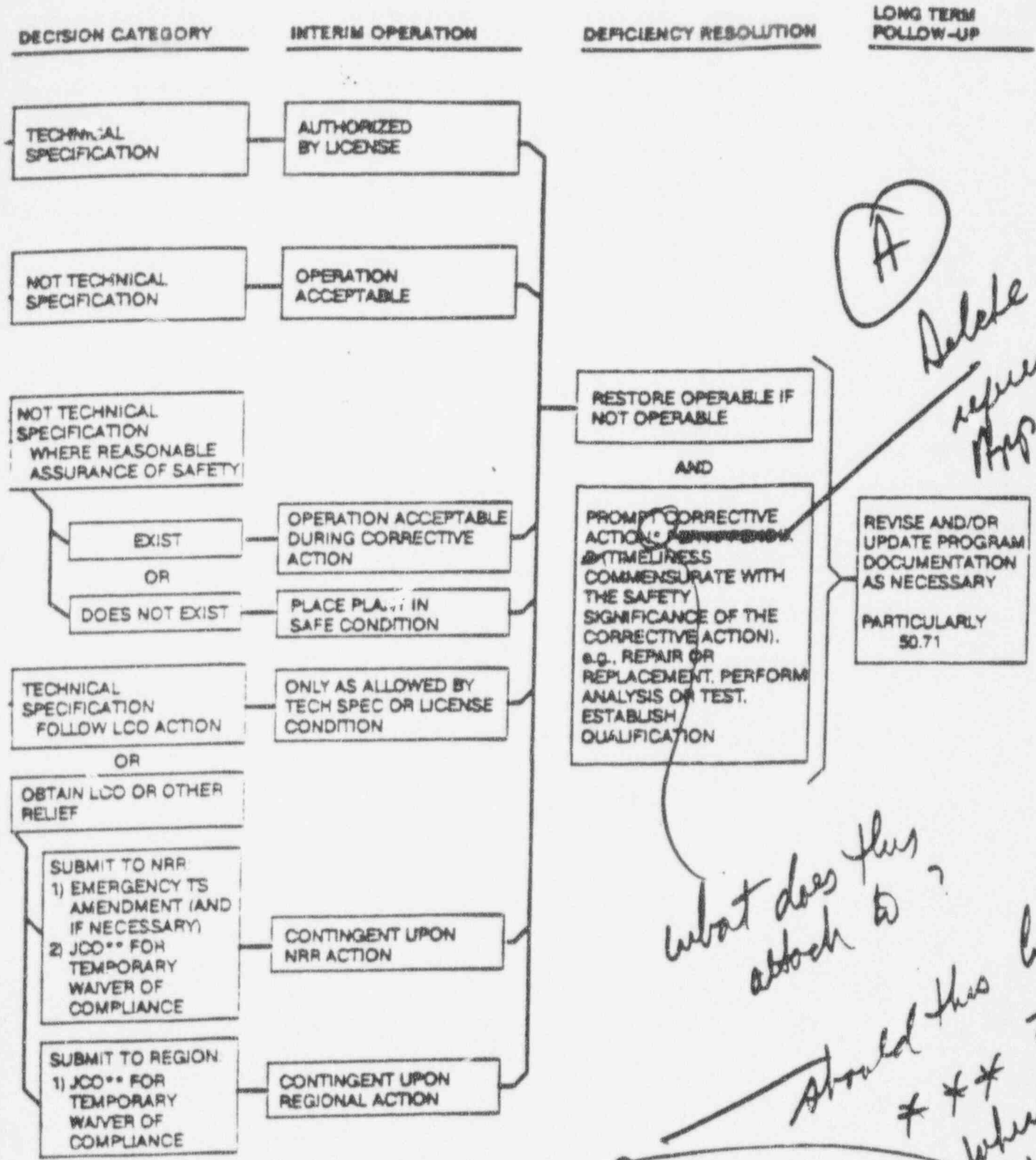
*50.59 MAY BE USED TO MAKE A CHANGE IN FACILITY AS DESCRIBED IN SAR WHICH WOULD RESOLVE THE CONDITION ADVERSE TO SAFETY OR QUALITY SO THAT THE DEGRADED AND NON-CONFORMING CONDITION NO LONGER EXISTS. DELAY OR PARTIAL CORRECTION OF CONDITION ADVERSE TO SAFETY OR QUALITY IS CONSIDERED A CHANGE IN FACILITY OR PROCEDURES AND SUBJECT TO 50.59 REVIEW.

** JUST FROM UNITE

3 AND NON-CONFORMING CONDITIONS



U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
B&D



A
Delete reference to App B

what does this attach to?
Should this be *** where does this?

ATION FOR CONTINUED OPERATION (JCO) TO COVER PERIOD IDENTIFICATION OF ADVERSE CONDITION UNTIL CORRECTED OR TECHNICAL SPECIFICATION APPROVAL BY NRR.

50.38(c) AMENDMENT IS IN ACCORDANCE WITH 50.80; HOWEVER, CODE RELIEF MAY BE OBTAINED PURSUANT TO 50.55a AND AN EXEMPTION PROVIDED PURSUANT TO 50.12 WHERE APPLICABLE.

OPERABLE/OPERABILITY:
ENSURING THE FUNCTIONAL CAPABILITY OF A SYSTEM OR COMPONENT

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OPERABLE/OPERABILITY:

see earliest document - p1

ENSURING THE FUNCTIONAL CAPABILITY OF A SYSTEM OR COMPONENT

1.0 PURPOSE AND SCOPE

To provide guidance to NRC inspectors for the review of licensee operability determinations affecting the following systems, structures, or components (SSCs):

- (i) Safety-related SSCs relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, and the capability to prevent or mitigate the consequences of accidents that could result in potential offsite consequences comparable to the 10 CFR Part 100 guidelines. Design basis events are defined the same as in 10 CFR 50.49(b)(1).
- (ii) All SSCs used in a safety analysis or plant evaluation for the current licensing basis.
- (iii) Any SSCs, including non-safety-related SSCs, whose failure could prevent satisfactory accomplishment of required safety functions.
- (iv) Post-accident monitoring equipment subject to 10 CFR 50.49.
- (v) Any SSCs subject to 10 CFR Part 50, Appendix B.
- (vi) Any SSCs subject to 10 CFR Part 50, Appendix A, Criterion 1.
- (vii) Any SSCs explicitly subject to facility Technical Specifications (TS).
- (viii) Any SSCs implicitly subject to facility TS through the definition of operability (i.e., support SSCs outside TS).
- (ix) Any SSCs subject to 10 CFR Part 50.59.

This guidance is directed toward NRC inspectors that are reviewing actions of licensees that hold an operating license.

2.0 DEFINITIONS:

See earlier document 5/2

2.1 Current Licensing Basis

Current licensing basis (CLB) consists of a licensee's written commitments for assuring compliance with and operation within applicable NRC requirements and license conditions including the plant-specific design basis (including all modifications and additions to such commitments over the life of the license) that are docketed and in effect. The CLB includes licensee commitments concerning systems, structures, and components identified in the Final Safety Analysis Report (FSAR), the Technical Specifications (TS), and the evaluations submitted to show compliance with the Commission's regulations such as ATWS, Station Blackout, Pressurized Thermal Shock, Fire Protection, and Environmental Qualification. It also includes the plant-specific design bases information defined in 10 CFR 50.2 as documented in the most recent FSAR as required by 10 CFR 50.71 and the licensee's commitments remaining in effect that were made in docketed licensing correspondence such as licensee responses to NRC Bulletins, Generic Letters, and enforcement actions, as well as licensee commitments documented in NRC safety evaluations.

2.2 Design Basis

Design basis is that body of plant-specific design bases information defined by 10 CFR 50.2, as documented in the most recent FSAR.

2.3 Degraded Condition

A condition of an SSC in which there has been ~~an~~ loss of quality or functional capability.

a meaningful?

2.4 Nonconforming Condition

A condition of an SSC in which there is failure to meet requirements. Some examples of nonconforming conditions include the following:

1. There is failure to conform to one or more applicable codes or standards specified in the FSAR.
2. As-built equipment, or as-modified equipment, does not meet FSAR design requirements.
3. Operating experience or engineering reviews demonstrate a design inadequacy.
4. Documentation required by NRC requirements such as 10 CFR 50.49 is not available or deficient.

3.0 STANDARD TECHNICAL SPECIFICATIONS OPERABILITY DEFINITION AND DISCUSSION

3.1 Operability Definition

The Standard Technical Specifications (STS) define operable or operability as follows:

"A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified functions, and when all necessary attendant instrumentation, controls, electrical power, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its function(s) are also capable of performing their related support function(s)."

3.2 Variations of Operability Definition in Plant Specific TS

There are several variations in existing plant-specific TS of the above basic definition. Therefore, some judgement is required in application of this guidance on operability. Word differences that exist are not viewed by the NRC to imply any significant overall difference in application of the plant-specific TS. Any problems that result from existing inconsistencies between a plant-specific definition of operability and this guidance should be discussed with regional management, who should discuss the issues with NRR if deemed necessary. In all cases, a licensee's plant-specific definition is governing.

3.3 Specified Function(s)

The definition of operability refers to capability to perform the "specified functions." The specified function(s) of the system, subsystem, train, component, or device (hereafter referred to as system) is that specified safety function(s) in the current licensing basis for the facility.

~~In addition to providing the specified safety function, a system is expected to perform as designed, tested and maintained. When system capability is degraded to a point where it cannot perform with any certainty or reliability, the system should be judged inoperable, even if at this instantaneous point in time the system could provide the specified safety function. See Section 6.11, which discusses ASME Section XI, for an example.~~

Under

3.4 Support System Operability - Understanding System Interrelationships

The definition of operability embodies a principle that a system can perform its specified safety function(s) only when all its necessary support systems are capable of performing their related support functions. Therefore, an NRC inspector should expect that each licensee understands which support systems are necessary to ensure the operability of main systems and components that perform specified safety functions. Such an understanding is mandatory. Otherwise the licensee will not be able to implement the definition of operability.

4.0 BACKGROUND

The purpose of the Technical Specifications is to ensure that the plant is operated within its design basis and to preserve the validity of the safety analyses, which are concerned with both the prevention and mitigation of accidents. Because both prevention of accidents and the ability to mitigate them must be continuously ensured, the process of ensuring OPERABILITY for safety or safety support systems is ongoing and continuous. The focus of operability is foremost on the capability to ensure safety.

Licensees should ^{by TS} maintain a documented basis for concluding that all SSCs required to be operable are, in fact, operable. NRC staff may selectively review and audit this basis.

The process of ensuring operability consists of the continuous verification of operability by surveillances and formal determinations of operability whenever a verification or other indication calls into question the system's or component's ability to perform its specified function.

Verification of operability is supplemented by continuous and ongoing processes such as:

- o Day-to-day operation of the facility
- o Implementation of programs such as inservice testing and inspection
- o Plant walkdowns or tours
- o Observations from the control room
- o Quality assurance activities such as audits and reviews
- o Engineering design reviews including design basis reconstitution.

Without any information to the contrary, once a component or system is established as operable, it is reasonable to assume that the component or system should continue to remain operable, and the previously stated verifications should provide that assurance. However, whenever the ability of a system or structure to perform its specified function is called into question, operability must be determined from a detailed examination of the deficiency.

The determination of operability for systems covered by TS is to be made promptly, with a timeliness that is commensurate with the potential safety significance of the issue. If the licensee chooses initially not to declare a system inoperable, the licensee must have a reasonable expectation that the system is operable and that the prompt determination process will support that expectation. Otherwise, the licensee should immediately declare the system or structure inoperable. Where there is reason to suspect that the determination process is not, or was not prompt, the Region may discuss with the licensee, with NRR consultation as appropriate, the reasoning for the perceived delay.

The TS establish operability requirements on systems required for safe operation and include surveillance requirements to demonstrate periodically that these systems are operable. Performance of the surveillance requirement is usually considered to be sufficient to demonstrate operability provided that there is reasonable assurance that the system continues to conform to all appropriate criteria in the current licensing basis (CLB). Whenever conformance to the appropriate criteria in the CLB is called into question, performance of the surveillance requirement alone is usually not sufficient to determine operability.

When operability verification or other processes indicate a potential deficiency or loss of quality, licensees should make a prompt determination of operability and act on the results of that determination. The licensee should also restore the quality of the system in accordance with 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action.

*If a system or component
required to be operable by TS,*

A

5.0 ADDITIONAL GUIDANCE FOR OPERABILITY DETERMINATIONS

this would include components and systems not specifically required to be operable by TS

In the course of review activities or through normal plant operation, a licensee may become aware of degraded or nonconforming conditions affecting the SSCs defined in Section 1. These activities include, but are not limited to, the following:

(A)

- o Review of operational events
- o Design modifications to facilities
- o Examinations of records
- o Additions to facilities
- o Vendor reviews or inspections
- o Plant system walkdowns.

These and other paths for identifying degraded or nonconforming conditions, including reports from industry and other utilities, should result in the prompt identification and correction of the deficiency by the licensee. Licensees should make an operability determination and take follow-on corrective action in the following circumstances:

- o Discovery of degraded conditions of equipment where performance is called into question
- o Discovery of nonconforming conditions where the qualification of equipment (such as conformance to codes and standards) is called into question
- o Discovery of an unanalyzed condition associated with the current licensing basis (CLB), that is, a condition that should have been analyzed, but was not. NOTE: If the unanalyzed condition is not part of the CLB, the licensee may still be required to make some improvement through the backfit process (See 10 CFR 50.109 (a)(5)).

The following guidance for dealing with issues that are closely associated with operability determinations has been derived from the NRC regulations and from previous guidance issued to licensees.

5.1 Focus on Safety

The immediate and primary attention must be directed to safety concerns. Reporting and procedural requirements should not interfere with ensuring the health and safety of the public. To continue operation while an operability determination is being made, the licensee must have a reasonable expectation that the system is operable and that the determination process will support that expectation.

If the licensee does not have a reasonable expectation that a system or component required by TS is operable, the appropriate Action Statement should be followed. For other SSC's, the licensee should perform an evaluation to assess the

(A)

safety significance of the operable SSC. In circumstances where an evaluation pursuant to

am 566

5.2 Deal with Operability and Restoration of Qualification Separately

Operability and qualification are closely related concepts. However, the fact that a system is not fully qualified does not, in all cases, render that system unable to perform its specified function if called upon. According to the definition of operability, ~~a safety or safety support system or structure must be capable of performing its specified function(s), of prevention or mitigation as described in the TS or FSAR.~~

✓

The prompt determination of operability will result in decisions or actions pertaining to continued plant operation, while qualification or requalification becomes a corrective action goal. Qualification concerns, whether it is a lack of required quality or loss of quality because of degradation, can and should be promptly considered to determine the effect of the concern on the operability of the system.

If operability is assured based on this prompt determination, plant operation can continue while an appropriate corrective action program is implemented to restore full qualification. ~~This is consistent with the plant TS being the controlling document for making decisions about plant operations, while 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, is the requirement document for dealing with restoring equipment qualification.~~

(A)
this discussion is broader than TS

The principle of treating the related concepts of operability and restoration of qualification separately is to ensure that the operability determination is focused on safety and is not delayed by decisions or actions necessary to plan or implement the corrective action, i.e., restoring full qualification.

5.3 Full Qualification

consists of

Full qualification ~~consists of~~ conforming to all aspects of the current licensing basis, including codes and standards, design criteria, and FSAR commitments.

✓

The SSCs defined in section 1 are designed and operated, as described in the current licensing basis (CLB), to include design margins and engineering margins of safety to ensure, among other things, that some loss of quality does not mean immediate failure. The CLB includes commitments to specific codes and standards, design criteria, and some regulations that also dictate margins. Many licensees add conservatism so that a partial loss of quality does not affect their commitments to the margins. The loss of conservatism not taken credit for in the safety analyses and not committed to by the licensee to satisfy licensing requirements does not require a system to be declared inoperable. All other losses of quality or margins ~~are subject to~~ an operability determination and corrective action.

should be considered in

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*MUST II
is an oversimplification*

should

5.4 Determining Operability and Plant Safety is a Continuous Decision-Making Process

Licensees are obligated to ensure the continued operability of SSCs as specified by TS, or to take the remedial actions addressed in the TS. For other SSCs which may be in a degraded or nonconforming condition, it ~~must~~ be determined whether a condition adverse to quality exists and whether corrective actions are needed. Operability is verified, as discussed above, by day-to-day operation, plant tours, observations from the control room, surveillances, test programs, and other similar activities. Deficiencies in the design basis or safety analysis or problems identified by the operability verification lead to the operability determination process by which the specific deficiency and overall capability of the component or system are examined. The process, in one form or another, is ongoing and continuous. As a practical matter, decision making requires good information and takes time. However, the process used by licensees should call for prompt and continuous attention to deficiencies and potential system inoperabilities. In addition, the licensee's process should call for immediately declaring equipment inoperable when reasonable expectation of operability does not exist or mounting evidence suggests that the final analysis will conclude that the equipment cannot perform its specified safety function(s).

A

5.5 Timeliness of Operability Determinations

Timeliness of operability determinations should be commensurate with the safety significance of the issue. Once the deficiency has been identified and the specific component or system has been identified, the determination can be made regarding the capability to perform the specified function(s). There is no explicit requirement in the regulations for the timing of the decision. As discussed further in Section 6.0, timeliness is important and is determined by the safety significance of the issue. The Allowed Outage Times (AOTs) contained in TS generally provide reasonable guidelines for safety significance.

5.6 Timeliness of Corrective Action

Timeliness of corrective action ^(e.g.,) ~~(time)~~, the requirements in 10 CFR Part 50, Appendix B, Criterion XVI, for "prompt" corrective action ^{for SSC's within the scope of Appendix B} should be commensurate with the safety significance of the corrective action.

The determination of operability establishes a basis for plant operation while the corrective action establishes or re-establishes the design basis/qualification of the safety or safety support system. ~~As in Section 5.4 above,~~ There is no explicit requirement in the regulations for timeliness of ~~these~~ corrective actions, except that 10 CFR Part 50, Appendix B, Criterion XVI requires it to be "prompt". Again, timeliness is determined by the safety significance of the issue.

5.5
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among
relevant
Annex

5.7 Justification for Continued Operation

See the NRC Inspection Manual, Part 9900, Technical Guidance, "Licensee Actions for Resolution of Degraded and Nonconforming Conditions," for guidance on JCOs and NRC responses to them.

Technical Specifications LCO Relief

use of 1st document

5.8 License Amendments and Temporary Waivers of Compliance

License amendments and Temporary Waivers of Compliance are possible NRC responses to a licensee's request to operate in a ~~previously prohibited manner~~ *which would be otherwise prohibited*

Where time is available, the license amendment process is the appropriate process for approving operation that would otherwise be prohibited. Temporary Waivers of Compliance are to promote safety by not imposing unnecessary actions on an operating plant and to permit a reactor startup if the proposed course of action involves minimal or no reduction of safety.

6.0 DETAILED DISCUSSION OF SPECIFIC OPERABILITY ISSUES

6.1 Scope and Timing of Operability Determinations

Determining system, structure, or component (SSC) operability is a continuous process that cannot be avoided. Action is required any time an SSC that is required by TS or NRC requirement to be operable is found to be inoperable. If an immediate threat to public health and safety is identified, action to place the plant in a safe condition should begin as soon as this circumstance is known and should be completed expeditiously.

Once a degraded or nonconforming condition of specific SSCs is identified, an operability determination should be made as soon as possible consistent with the safety importance of the SSC affected. In most cases, it is expected that the decision can be made immediately (e.g., loss of motive power, etc.). In other cases, it is expected the decision can be made within approximately 24 hours of discovery even though complete information may not be available. Some few exceptional cases may take longer. For SSCs in TS, the Allowed Out Times (AOTs) contained in TS generally provide reasonable guidelines for safety significance. For SSCs outside TS, engineering judgement must be used to determine safety significance. The decision should be based on the best information available and must be predicated on the licensee's reasonable expectation that the SSC is operable and that the prompt determination process will support that expectation. When reasonable expectation does not exist, the SSC should be declared inoperable and the safe course of action should be taken.

The licensee should examine the full scope of the current licensing basis, including the TS and FSAR commitments, to establish the conditions and performance requirements to be met for determining operability. The operability decision may be based on analysis, a test or partial test, experience with operating events, engineering judgment, or a combination of these factors taking into consideration equipment functional requirements. An initial determination regarding operability should be revised, as appropriate, as new or additional information becomes available.

The scope of an operability determination needs to be sufficient to address the capability of the equipment to perform its safety function(s). Operability determinations should therefore include the following actions:

- o Determine what equipment is degraded or ~~potentially~~ nonconforming. ✓
- o Determine the safety function(s) performed by the equipment.
- ~~o Determine the circumstances of the potential nonconformance, including the possible failure mechanism.~~
- o Determine the requirement or commitment established for the equipment, and why the requirement or commitment may not be met.
- ~~o Determine by what means and when the potentially nonconforming equipment was first discovered.~~
- o Determine safest plant configuration including the effect of transitional action.
- o Determine the basis for declaring the affected system operable, through:
 - a. analysis
 - b. test or partial test,
 - c. operating experience, and
 - d. engineering judgement.

If an NRC-approved action (such as provided in an LCO action statement) is immediately taken to compensate for failed equipment (e.g., placing one channel of reactor protection in the tripped condition upon failure of the channel such that the specified safety function can be maintained), the system is still operable and continued operation of the facility is permitted.

However, continued operation with an inoperable channel in the tripped condition is not advisable because a subsequent failure will result in a plant trip that will challenge plant safety systems. It is also not advisable from the standpoint of plant availability.

unrelated to operability determination

6.2 Treatment of Single Failures in Operability Determinations

6.2.1 Definition of Single Failure

10 CFR Part 50, Appendix A, "General Design Criteria for Nuclear Power Plants," defines a single failure as:

"A single failure means an occurrence which results in the loss of capability of a component to perform its intended safety functions. Multiple failures resulting from a single occurrence are considered to be a single failure."

6.2.2 Capability to Withstand a Single Failure is a Design Consideration

Appendix A contains general design criteria (GDC) for SSCs that perform major safety functions. Many of the GDC contain a statement similar to the following:

"Suitable redundancy in components and features and suitable interconnections, leak detection, isolation and containment capabilities shall be provided to assure that for onsite electrical power system operation (assuming offsite power is not available) and for offsite electrical power system operation (assuming onsite power is not available) the system safety function can be accomplished assuming a single failure."

See, for example, GDC 17, 34, 35, 38, 41, 44. Therefore, capability to withstand a single failure in fluid or electrical systems is a plant-specific design consideration, which ensures that a single failure does not result in a loss of the capability of the system to perform its safety functions.

6.2.3 Discovery of a Design Deficiency in Which Capability to Withstand a Single Failure is Lost

A design deficiency in which capability to withstand a single failure is lost should be evaluated and treated as a loss-of-quality issue and a nonconformance. As with any loss-of-quality issue or nonconformance, a prompt determination of operability ~~is required~~. *should be made*

For any design deficiency in which the capability to withstand a single failure is lost, the licensee ~~must~~ *should* address the quality aspects and if the design deficiency affects the ~~design basis~~ *should* for the particular plant, promptly correct the deficiency in accordance with ~~10 CFR Part 50, Appendix B~~, Appendix B, Criterion XVI, Corrective Action.

A

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SSC's within the scope of 10 CFR Part 50, Appendix B,

6.3 Treatment of Consequential Failures in Operability Determinations

6.3.1 Definition of Consequential Failure

A consequential failure is a failure of an SSC caused by a postulated accident within the design basis. For example, if during a loss of coolant accident (LOCA) (a design basis event), the broken pipe could whip and incapacitate a nearby pump, then the pump would not be able to function. Such a pump failure is called a consequential failure because the pump failed as a result of the design basis event itself. In general, facility design takes any such consequential failures that are deemed credible into consideration. In this case, that would mean that the broken pump was not one that the safety analysis would take credit for to mitigate the LOCA.

6.3.2 Consequential Failures and Operability Determinations

Operability determinations should be performed for those ~~potential~~ consequential failures (i.e., an SSC failure that would be a direct consequence of a design basis event) for which the SSC in question needs to function. Where consequential failures would cause a loss of function needed for limiting or mitigating the effects of the event, the affected SSC is inoperable because it cannot perform all of its specified functions. Such situations are most likely discovered during design basis reconstitution studies, or when new credible failure modes are identified.

6.3.3 Consequential Failures and Appendix B

With any consequential failure, the licensee ~~should~~ address the quality aspects and, if the failure affects the ~~design basis requirements for the particular plant,~~ promptly correct the deficiency in accordance with ~~10 CFR Part 50, Appendix B,~~ Criterion XVI, Corrective Action.

6.4 Operability During TS Surveillances and Preventive Maintenance

During preventive maintenance (PM), equipment may be removed from service and rendered incapable of performing the function(s) specified for safety. This equipment is clearly inoperable. For equipment covered by the Technical Specifications (TS), the PM activity and any other action that may be required by the Limiting Conditions for Operation (LCOs), is expected to be completed within the Allowed Outage Time (AOT). For ~~safety equipment~~ not covered by the TS either explicitly by direct inclusion in the TS or implicitly through the definition of operability, the licensee's PM activities should be consistent with the importance of the equipment to safety and the function(s) of the equipment and a reasonable time goal should be set to complete the PM.

Murley to Regional Administrators

In such cases in accordance with the guidance in the February 27, 1990 memorandum from Thomas E.

In all cases, care should be exercised in removing equipment from service for PM to avoid accumulating long out-of-service times of safety trains. The licensee should reestablish operability before the equipment is returned to service. The licensee also may need to reestablish operability for systems or components, in whole or in part, that are actively dependent upon the equipment undergoing the PM activity. The need for testing to reestablish operability should be based on a reasonable judgement about how the inoperable equipment may have been affected. If retesting to reestablish operability is not possible or practicable because of safety concerns, analysis or other means should be used to demonstrate operability.

If TS surveillances require that safety equipment ^{is} to be removed from service and rendered incapable of performing its safety function, the equipment is inoperable. The LCO action statement shall be entered unless the TS explicitly direct otherwise. Upon completion of the surveillance, the licensee should verify restoration to operable status of at least those portions of the equipment or system features that were altered to accomplish the surveillance.

NOTE: With regard to surveillances or other similar activities (such as inservice testing) that create an ~~unwarranted~~ operability problem by requiring that systems be removed from service for extended periods (i.e., those that may exceed the Allowed Outage Time (AOT)), licensees must have prior MRC approval by license amendment for the surveillance requirement or redefine the tests. ~~It is not the intent of surveillances or other similar program requirements to cause unwarranted plant shutdowns or to unnecessarily challenge other safety systems. A Temporary Waiver of Compliance may be sought for the first such occurrence. A Waiver for the same situation would not be appropriate thereafter.~~

See "Guidance on Voluntary Entry into Technical Specifications Limiting Conditions for Operation Action Statements to Perform Preventive Maintenance (On-Line PM)," memorandum from Thomas E. Murley to Regional Administrators, dated April 30, 1991 for further guidance on on-line PM.

6.5 Surveillance and Operability Testing in Safety Configuration

Many systems are designed to perform both normal operational and safety functions. It is preferable that both the Technical Specification (TS) surveillance requirement testing and any other operability testing be performed in the configuration as would be required to perform the safety function, i.e., safety mode. However, testing in the normal configuration or mode of operation may be required for systems if testing in the safety mode will result in unwarranted safety concerns or transients. The mode of operation for the TS surveillance requirements test is usually prescribed and the acceptance criteria are established on that basis.

If a system should fail while it is being tested in the safety mode of operation, the system is to be declared inoperable. For ongoing periodic testing that must be performed during normal mode operation, the licensee ~~should~~ establish normal mode operational acceptance criteria that are based on a direct relationship to the safety mode requirements. Operability verification is then provided by acceptable normal mode operational test results.

must (A) 9900 STS
this is required
more info

subject - new priority

(B)

(A)

should be corrected

Test failures should be examined to determine the root cause and ~~correct~~ the problem before resumption of testing. Repetitive testing to achieve acceptable test results without identifying the root cause or correction of any problem in a previous test is not acceptable as a means to establish or verify operability. ✓

6.6 Missed Technical Specification Surveillance

The Standard Technical Specifications (STS) contain Surveillance Requirement 4.0.3 which states:

"Failure to perform a Surveillance Requirement within the specified time interval shall constitute a failure to meet the OPERABILITY requirements for a Limiting Condition for Operation. Exceptions to these requirements are stated in the individual specifications. Surveillance Requirements do not have to be performed on inoperable equipment."

Plant-specific Technical Specification (TS) variations of this statement may exist, in which case the plant-specific TS govern.

The Allowed Outage Time (AOT) in the action requirements specifies a time interval that permits corrective action to be taken to satisfy the LCO. If such a time interval is specified in the action requirements or if the licensee has adopted by license amendment the 24-hour provision of amended Surveillance Requirement 4.0.3 as discussed in Generic Letter (GL) 87-09, the completion of a missed surveillance within these time intervals meets the requirements. As with systems discovered to be inoperable, the time interval begins upon discovery of the missed surveillance. Failure to perform a TS requirement within the specified time interval is considered a condition prohibited by the TS and is reportable at least under 10 CFR Part 50.73; it also may be subject to enforcement action. ✓

Generic letter 87-09 and other documents provide extensive guidance on surveillance extension, applicability, and success criteria. The above discussion involves only the operability issues. ✓

Confusing

Not clear whether additional guidance is being endorsed. Also unnecessary

6.7 Use of Manual Action in Place of Automatic Action

Automatic action is frequently provided as a design feature specific to each safety system to ensure that the specified functions of the system will be accomplished. Limiting safety system settings for nuclear reactors are defined in 10 CFR Part 50.36, "Technical Specifications," as settings for automatic protective devices related to those variables having significant safety functions. Where a limiting safety system setting is specified for a variable on which a safety limit has been placed, the setting must be so chosen that automatic protective action will correct the abnormal situation before a safety limit is exceeded. Accordingly, it is not appropriate to take credit for manual action in place of automatic action for protection of safety limits to consider equipment operable. This does not preclude operator action to put the plant in a safe condition, but operator action cannot be a substitute for automatic safety limit protection.

not be acceptable
If automatic action is lost or degraded, and if manual action alone for the system would ~~have been~~ acceptable, then loss of the automatic function clearly results in the system being inoperable. *for systems required to be operable by TS* (A) ✓

(A) For ~~any~~ other situation, ^{such} substitution of manual action for automatic action may be acceptable. The licensee's determination of operability with regard to the use of manual action must focus on the physical differences between automatic and manual action and the ability of the manual action to accomplish the specified function. The physical differences to be considered include, but are not limited to, the ability to recognize input signals for action, ready access to or recognition of setpoints, design nuances that may complicate subsequent manual operation such as auto-reset, repositioning on temperature or pressure, timing required for automatic action, etc., minimum manning requirements, and emergency operation procedures written for the automatic mode of operation. The licensee should have written procedures in place and training accomplished on those procedures before substitution of any manual action for the loss of an automatic action. ✓

accordance with
The assignment of a dedicated operator for manual action ~~is not acceptable~~ without written procedures and a full consideration of all pertinent differences. The consideration of manual action in remote areas also must include the ability and timing in getting to the area, training of personnel to accomplish the task, and occupational hazards to be incurred such as radiation, temperature, chemical, sound, or visibility hazards. One reasonable test of the reliability and effectiveness of manual action may be the approval of manual action for the same function at a similar plant. Nevertheless, this is expected to be a temporary condition until the automatic action can be promptly corrected. *should be done in* (A) ✓

Facilities have been licensed
The licensing of specific plant designs includes consideration of automatic and manual action. While ~~approval has been granted~~ for either or both type actions, not every combination or consideration of the above differences has been reviewed from an operability standpoint. Although it is possible, it is not expected that many determinations of operability will be ~~successful~~ for manual action in place of automatic action. Credit for manual initiation to mitigate the consequences of design basis accidents should have been established as part of the licensing review of a plant. *(for SSC's within the scope of Agreement)* (A) ✓
adequate

6.8 "Indeterminate" State of Operability

An SSC is operable when it is capable of performing its specified function(s) and when all necessary support SSCs are also capable of performing their related support functions. See operability definition and discussion in Section 3.0. Otherwise, the SSC is inoperable. When a licensee has cause to question the operability of an SSC, the operability determination is to be prompt; the timeliness must be commensurate with the potential safety significance of the issue. The determination process during this time, however, must be predicated on the licensee's reasonable expectation that the SSC is operable and that the prompt determination process will support that expectation. ✓

Why is this necessary if the licensee has reasonable assurance that the equipment will work

required by TS to be operable

In the absence of reasonable expectation that the SSC is operable, the SSC is to be declared inoperable immediately. The licensee should then proceed with its operability determination process and reach a sound conclusion regarding SSC operability. The determination may conclude that an SSC declared inoperable is in fact operable. The licensee's actions subsequent to declaring an SSC inoperable are guided by the regulations, TS, plant procedures, and so forth. In addition, the licensee should determine when and under what circumstances the system became inoperable so that reporting requirements may be met and NRC followup actions may properly reflect the circumstances and the licensee's efforts to correct and prevent occurrences. In summary, an SSC is either operable or inoperable at all times. "Indeterminate" is not a recognized state of operability.

(X)

agree

✓

6.9 Use of Probabilistic Risk Assessment in Operability Decisions

Probabilistic risk assessment (PRA) is a valuable tool for the relative evaluation of accident scenarios while considering, among other things, the probabilities of occurrence of accidents or external events. The definition of operability states however, that the SSC must be capable of performing its specified function(s). The inherent assumption is that the occurrence conditions or event exists and that the safety function can be performed. The use of PRA or probabilities of the occurrence of accidents or external events is not acceptable for making operability decisions.

✓

However, PRA may provide valid and useful supportive information for a Temporary Waiver of Compliance or licensee amendment. PRA is also useful for determining the safety significance of SSCs. The safety significance, whether determined by PRA or other analyses, is a necessary factor in decisions on the appropriate "timeliness" of operability determinations. Specific guidance on the timeliness of determinations is presented in Section 5.5.

✓

6.10 Environmental Qualification

When the NRC or licensee identifies a potential deficiency in the environmental qualification of equipment (i.e., a licensee does not have an adequate basis to establish qualification), the licensee is expected to make a prompt determination of operability, to take immediate steps to establish a plan with a reasonable schedule to correct the deficiency, and to write a Justification for Continued Operation (JCO) (See Note below), which will be available for NRC review. The licensee may be able to make a finding of operability using analysis and partial test data to provide reasonable assurance that the equipment will perform its safety function(s) in its accident environment when called upon to do so. The licensee should also show that subsequent failure of the equipment will not result in significant degradation of any safety function or provide misleading information to the operator.

NOTE: The JCO referred to in questions of equipment qualification is specifically addressed by Generic Letter 88-07 dated April 7, 1988. This environmental qualification "JCO" includes an operability determination. It also states that the licensee should evaluate whether the findings are reportable under 10 CFR 50.72, 10 CFR 50.73, 10 CFR Part 21, the Technical Specifications, or any other pertinent reporting requirements, including 10 CFR 50.9.

The following actions should be taken if a licensee is unable to demonstrate equipment operability:

- o For inoperable equipment in a system covered by the TS, the licensee shall follow the appropriate action statements. This could require that the plant be shut down or remain shut down.
- o For inoperable equipment in a system not covered by the TS, the licensee may continue reactor operation if the safety function can be accomplished by other designated equipment that is qualified, or if limited administrative controls can be used to ensure the safety function is performed.

6.11 Technical Specification Operability vs. ASME Code, Section XI Operative Criteria

The Technical Specifications (TS) normally apply to overall system performance but sometimes contain limiting values for certain component performance, which are specified to ensure that the design basis and safety analysis is satisfied. The values (e.g., pump flow rate, valve closure time, valve leakage rate, safety/relief valve set point pressure) are operability verification criteria. If these values are not met at any time, the applicable LCO shall be entered as if the deficiency was discovered during the required surveillance.

The ASME Section XI inservice testing plans for pumps and valves may contain the same or different limits and additional component performance acceptance values which, if not met, will indicate that the pump or valve has seriously degraded so that corrective action would be required to ensure or restore the operability and operational readiness of the pump or valve. The ASME Section XI acceptance criteria include "required action ranges" or limiting values for certain component performance parameters. These required action ranges or limiting values as defined by the code as component performance parameters, may be less conservative than the TS values which are safety analysis limits. However, action must be taken when the TS requirements are not met.

Generic Letter 89-04 Attachment 1, Position B, defines the starting point for the Allowed Outage Time (AOT) in TS action statements for ASME Section XI pumps and valves. When performance data fall in the required action range, regardless of whether the limit is equal to or more conservative than the TS limit, the pump or valve must be declared inoperable immediately (the term "inoperative" is used in the text of ASME Section XI; the pump or valve is both "inoperative" and inoperable) and the TS action statement for the associated system must be entered.

In cases where the required action range limit is more conservative than its corresponding TS limit, the corrective action may not be limited to replacement or repair; it may be an analysis to demonstrate that the specific performance degradation does not impair operability and that the pump or valve will still fulfill its function, such as delivering the required flow. A new required action range may be established after such analysis which would then allow a new determination of operability.

Nuclear TS critical to operability and safety

The durations specified by the Code for analyzing test results have not been accepted by the NRC for postponing entering a TS action statement. As soon as data are recognized as being within the required action range for pumps or as exceeding the limiting value of full-stroke time for valves, the associated component must be declared inoperable and, if covered by the TS, the action specified in the action statement must be started at the time the component was declared inoperable. For inoperable pumps and valves considered by ASME Section XI but not covered by the TS, the action should be consistent with the safety significance of the issue and the functions served by the affected system(s).

Recalibrating test instruments and then repeating pump or valve tests is an acceptable alternative to the corrective action of repair or replacement, but is not an action that can be taken before declaring the pump or valve inoperable. However, if during a test it is obvious that a test instrument is malfunctioning, the test may be halted and the instruments promptly recalibrated or replaced. During a test, anomalous data with no clear indication of the cause must be attributed to the pump or valve under test. For this occurrence, a prompt determination of operability is appropriate with follow-on corrective action as necessary.

Note: In the above discussion, "required action range" and "inoperative" are ASME Section XI terms.

6.12 Support System Operability

The definition of operability embodies the principle that a system can perform its function(s) only if all necessary support systems are capable of performing their related support functions. It is incumbent upon each licensee to understand which support systems are necessary to ensure operability of systems and components that perform specified safety functions.

When a support system is determined to be inoperable, all systems for which that support system is required for systems operability should be declared inoperable and the LCOs for those systems entered, unless justified otherwise. Any appropriate remedial actions specified by a supported system LCO action statement (to compensate for the inoperable supported system) should be taken.

When a support system is determined to be inoperable, the licensee should employ the same operability determination process for the supported system as the licensee would for any other system. In particular, the scope and timing of such operability decisions should follow the guidance in Section 6.1.

There are cases where judgment on the part of a licensee is appropriate in determining whether a support system is or is not required. One example is the case of a ventilation system. A ventilation system may be required to ensure that other safety-related equipment can perform its safety function in the summer, but may not be required in the winter. Similarly, the electrical power supply for heat tracing may be required in the winter to ensure that a safety-related system can perform its safety function, but may not be required in the summer. The need for judgment in reviewing what individual licensees do in specific cases should be recognized. If a licensee determines that a Technical

I need a FF body case they use where the system is not subject to TS. A

required to be operable by TS

Nuclear, what does this mean?

✓

✓

(A)

what is basis of restoring this unneeded support system?

Specification (TS) system is capable of performing its specified function(s) with an inoperable support system ~~that is not in the TS~~, then no additional action ~~outside of the TS~~ is needed. Furthermore, the licensee may modify the support function like any other change to the facility by use of the 10 CFR 50.59 process and FSAR update.

For some support systems, there are specific Allowed Outage Times (AOTs) specified in the TS. The AOT contained in the TS for any support system should be equal to or less than the AOT for any system for which that support system is required for system operability. Problems where inconsistencies exist between an AOT for a support system and the AOT for a system for which that support system is required should be discussed with Regional management who should discuss the issue with MRR if deemed necessary. In some cases, an amendment to the TS may be necessary.

In all cases, the following principles should be used:

- a. The most important safety concern is to ensure that the complete capability to perform a specified safety function is not lost as a result of more than one support or supported system being declared inoperable. When a support or supported system is declared inoperable in one train, the corresponding independent support or supported systems and all other associated support systems in the opposite train(s) should be ensured to be operable. i.e., the complete capability to perform the specified safety function has not been lost. The term "ensure" as used here allows for an administrative check by examining logs or other information to determine if required features are out-of-service for maintenance or other reasons. These actions are not to be used in lieu of required TS actions.
- b. Upon determining that a loss of functional capability condition exists, actions specified in the support and supported system LCOs should be taken to mitigate the loss of functional capability.

What does this mean?

6.13 Piping and Pipe Support Requirements

(A) should

Piping and pipe supports found to be degraded or nonconforming must be subjected to an operability determination and restored to the FSAR design criteria. To assist licensees in the determinations, operability guidance has been provided specific to various components. These components include the piping, supports, support plates, and anchor bolts. IE Bulletin No. 79-14 addressed the seismic analysis for as-built safety-related piping systems. Supplement 1 to IE Bulletin 79-14 dated August 15, 1979 and Supplement 2 to IE Bulletin 79-14 dated September 7, 1979 provide additional guidance. Concrete anchor bolts and pipe supports are addressed with specific operability criteria in Supplement 1 to Revision 1 of IE Bulletin 79-02. The criteria for evaluating operability of seismic design piping supports and anchor bolts relating to Bulletins 79-02 and 79-14 are detailed in the E. Jordan memo to the Regions dated July 1979, and the V. Noonan memo dated August 7, 1979. Upon discovery of nonconformances with piping and pipe supports, licensees may use the criteria in Appendix F of Section III of the ASME Code for operability determinations. These criteria and use of Appendix F are valid until the next refueling outage when the support(s) are to be restored to the FSAR criteria.

nonconformances degraded

These are identified under WRT these conditions demands

(A)

What requirement?

Nuclear

A

For systems determined to be otherwise operable but which do not meet the above operability criteria, licensees should treat the systems or components as if inoperable until NRC approval is obtained for any additional criteria or evaluation methods used to determine operability. Where a piping support is determined to be inoperable, a determination of operability should be performed on the associated piping system.

6.14 Flaw Evaluation

no requirement referenced calling for NRC approval

Regulation 10 CFR 50.55a(g) and Standard Technical Specification (STS) 3.4.10 (the section number may vary with plant specific TS) require that the structural integrity of ASME Code Class 1, 2, and 3 components be maintained according to Section XI of the ASME Code. In the conduct of inservice inspection, maintenance activities, or during plant operation, flaws in components will be discovered. The operability of ~~such~~ systems containing flaws may depend on the flaw characterization or evaluation performed by the licensee and the acceptability of continued service of the component. Since the characterization and/or evaluation is vital to the determination of operability, the licensee's efforts following flaw detection ~~must~~ be prompt.

A
may

Components containing flaws characterized or determined to be within the acceptance standards in IWB-3500 (IWC-3500 for Class 2 components) of Section XI are acceptable for continued service and, although no determination of operability is necessary, reporting must be in accordance with regulatory requirements.

are these reports?

A

MUST?

Upon discovery of a flaw exceeding the acceptance standards in IWB-3500 (IWC-3500 for Class 2 components), the licensee should promptly determine operability. The evaluation and acceptance criteria of IWB-3600 may be used in the determination. For Class 3 moderate energy piping, i.e., Class 3 piping with a maximum operating temperature below 200 #F and a maximum operating pressure below 275 psig, the evaluation and acceptance criteria in Generic Letter 90-05 may be used.

A
is only what they are

The licensee may treat the system containing the flaw(s), evaluated and found to meet the acceptance criteria in IWB-3600, as operable until NRC approval in accordance with IWB-3600 is obtained. For Class 3 moderate energy piping, the licensee may treat the system containing the flaw(s), evaluated and found to meet the acceptance criteria in Generic Letter 90-05, as operable until relief is obtained from the NRC. The licensee must promptly submit its evaluation for either case to the NRC for review and approval.

A

Nuclear
What are reports?

Alternative evaluation procedures and/or acceptance criteria may also be used for flaws exceeding IWB-3600 or Generic Letter 90-05. When alternative evaluation procedures and/or acceptance criteria are used as a basis for acceptable continued service, the licensee must treat the system containing the flaw(s) as inoperable until NRC approval of procedures and criteria is obtained. Prior to the approval, the plant must be placed in a safe condition or for systems in the TS, the plant must enter the corresponding Limiting Condition for Operation (LCO).

How is all of this linked to TR?

6.15 Operational Leakage

If leakage develops in the reactor coolant system, ~~there are additional requirements.~~ The Technical Specifications (TS) do not permit any pressure boundary leakage. The Operational Leakage Limiting Condition for Operation (LCO) must be entered upon discovery of pressure boundary leakage; therefore, an operability determination is not appropriate.

Article NB-2121 of Section III of the ASME Code excludes code requirements ~~from~~ materials not associated with the pressure retaining function of a component, such as packing and gaskets. However, leakage from the reactor coolant system is limited to specified values in the TS depending on whether the leakage is from identified, unidentified, or specific sources such as the steam generator tubes or reactor coolant system pressure isolation valves. If the leakage exceeds the TS limits, the LCO must be entered.

For reactor coolant system leakage within the limits of the TS, the licensee should determine operability for the degraded component and include in the determination the effects of the leakage onto other components and materials.

Furthermore, the regulations and TS require that the structural integrity of ASME Code Class 1, 2, and 3 components be maintained according to Section XI of the ASME Code. If a leak is discovered in a Class 1, 2, or 3 component in the conduct of inservice inspections, maintenance activities, or during plant operation, IWA-5250 of Section XI requires corrective measures be taken based on repair or replacement in accordance with Section XI. In addition, a through-wall flaw does not meet the acceptance criteria in IWB-3600.

Upon discovery of leakage from a Class 1, 2, or 3 component pressure boundary (i.e., pipe wall, valve body, pump casing, etc.) the licensee should declare the component inoperable. The only exception is for Class 3 moderate energy piping as discussed in ~~Generic Letter 90-09~~. For Class 3 moderate energy piping, the licensee may treat the system containing the through-wall f/w(s), evaluated and found to meet the acceptance criteria in ~~Generic Letter 90-09~~, as operable until relief is obtained from the NRC.

6.16 Structural Requirements

Category I structures and supports (referred to herein as structures) which are subject to periodic surveillance and inspection in accordance with the requirements of Technical Specifications (TS) shall be considered operable if the limits stipulated in the TS are met. If these limits are not met, the Limiting Condition for Operations (LCOs) are to be entered for the affected structure.

If the degradation affects the ability of the structure to provide the required design support for systems attached to the structure, an operability determination must be performed for these systems as well.

TS's are MCO's start

Refer to Section 6.14

by

from

(must?) all some of these components subject to TS

specify

what requirement is involved that defines relief:

required to be operable by TS and

(A)

(A)

(A)

(A)

(A)

(A)

Degradation affection Category I structures include, for example, concrete cracking and spalling, excessive deflection or deformation, water leakage, rebar corrosion, missing or bent anchor bolts, etc. If ~~these degradations are~~ identified in Category I structures ~~which are not subject to periodic surveillance and inspection~~, they should be assessed by the licensee to determine the capability of these structures to perform their specified function. As long as the identified degradation does not result in the exceedance of acceptance limits specified in applicable design codes and standards, referenced in the design basis document, the affected structures are operable. 1.5 ✓

Significant degradations resulting in the exceedance of the acceptance limits must be promptly reported in accordance with the requirements in 10 CFR 50.72 and evaluated by the licensee for determination of operability. These evaluations should include the criteria used for the operability determination and the rationale for continued plant operation in a degraded condition outside of the design basis. The licensee's evaluations should also include the plan for corrective action, as required by Criterion XVI of Appendix B to 10 CFR Part 50, to restore degraded structures to their original design requirements. As stated above, any system which depends upon the degraded structure for required support should also be examined for operability if the degradation or nonconformance calls into question the performance of the system. NRC inspectors, with possible support from headquarters, should review licensees' evaluations of structural degradations to determine their technical adequacy and conformance to licensing and regulatory requirements. ✓
✓

should be
A

A
when SSC's within the
scope of Appendix B
are evaluated

ENCLOSURE 2

PROPOSED GENERIC LETTER



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

TO: ALL NUCLEAR POWER REACTOR LICENSEES AND APPLICANTS

SUBJECT: INFORMATION TO LICENSEES REGARDING TWO NEW NRC INSPECTION MANUAL SECTIONS ON LICENSEE ACTIONS FOR RESOLUTION OF DEGRADED AND NONCONFORMING CONDITIONS AND ON OPERABILITY (GENERIC LETTER 91-)

The NRC staff has issued two new sections to be included in Part 9500, Technical Guidance, of the NRC Inspection Manual. The first is, "LICENSEE ACTIONS FOR RESOLUTION OF DEGRADED AND NONCONFORMING CONDITIONS." The second is, "OPERABLE/OPERABILITY: ENSURING THE FUNCTIONAL CAPABILITY OF A SYSTEM OR COMPONENT."

The proposed additions to the NRC Inspection Manual are generally based upon previously issued guidance. In a few cases, the proposed additions depend on common sense, and long-standing informal staff interpretations.

Copies of the proposed additions to the NRC Inspection Manual (enclosure) are provided for information only. No specific licensee actions are required. However, because the NRC guidance and staff positions that are compiled in the proposed additions were issued over a period of 12 years, it is possible that not all of them are adequately reflected in existing plant procedures. Therefore, licensees are encouraged to review the revised manual guidance in light of existing procedures with a view towards eliminating potential inconsistencies.

The purpose of the enclosed guidance is to document in a single location what the staff believes to be existing guidance or staff positions. Although new staff positions were not intended, particular licensees may find that implementation of the guidance represents new staff positions. Recognizing that 10 CFR 50.109 may apply in such cases, the staff has followed the procedures consistent with generic backfitting in issuing this Generic Letter. Whether existing or new, the staff positions incorporated in the enclosed guidance ensures compliance with existing regulations, including parts of 10 CFR 50, Appendices A and B, and the intent of existing Technical Specifications. Hence, the exception under 10 CFR 50.109(a)(4)(1) applies.

Please contact the appropriate NRC Project Manager if you have any questions regarding this matter.

James G. Partlow
Associate Director for Projects
Office of Nuclear Reactor Regulation

Enclosure: As stated

CONTACT: Chris L. Hoxie, NRR/OTSB
x23138

What is it? It is guidance, licensees need not follow it.

If it is a position, licensee must follow it and it is a backfit.

and positions?
(B) 2
?
(B) WHY
Backfit

(B)

ENCLOSURE 3

CRGR REVIEW PACKAGE

CRGR REVIEW PACKAGE

*not accurate.
Not all SSC's feel in
the category*

PROPOSED ACTION:

It is proposed to issue two new additions to Part 9900, Technical Guidance, of the NRC Inspection Manual on (1) licensee actions for resolution of degraded and nonconforming conditions and (2) operability determinations for systems, structures, or components (SSCs) covered by Technical Specifications or other NRC requirements. It is also proposed to issue simultaneously a Generic Letter with these updated Inspection Manual Sections as attachments to licensees for information.

CATEGORY: 2

RESPONSE TO REQUIREMENTS FOR CONTENT OF PACKAGE SUBMITTED FOR CRGR REVIEW:

(i) The proposed generic requirement or staff position as it is proposed to be sent out to licensees.

Enclosure 1 contains the two proposed guidance documents. The first is titled, "LICENSEE ACTIONS FOR RESOLUTION OF DEGRADED AND NONCONFORMING CONDITIONS." The second is titled "OPERABLE/OPERABILITY: ENSURING THE FUNCTIONAL CAPABILITY OF A SYSTEM OR COMPONENT."

These two proposed guidance documents will ~~update~~ *set out* existing information contained in Part 9900, Technical Guidance, of the NRC Inspection Manual.

Enclosure 2 is the proposed Generic Letter that will transmit the updated Inspection Manual Sections (Enclosure 1) to the licensees for information.

(ii) Draft staff papers or underlying staff documents supporting the staff requirements or staff position.

The guidance proposed for inclusion in the NRC Inspection Manual and for distribution to licensees is a compilation of the information contained in the documents listed in "References" at the end of this CRGR package. In addition, selected Licensee Event Reports (LERs) and Event Notifications are attached in "Sample Licensee Event Reports and Event Notifications" to illustrate some of the concepts discussed in the Inspection Manual Guidance.

(iii) Each proposed requirement or staff position shall contain the sponsoring office's position as to whether the proposal would increase requirements or staff positions, implement existing requirements or staff positions, or would relax or reduce existing staff requirements or staff positions.

The purpose of the proposed guidance is to document in a single location what the NRC staff believes to be existing guidance or staff positions. The purpose of publishing this guidance is to provide some clarifying explanatory material and to ensure consistency in application of this guidance among NRC inspectors. The proposed guidance is primarily a compilation of existing guidance or staff positions on (1) licensee actions for resolution of degraded and nonconforming conditions and (2) operability determinations for systems, structures or components (SSCs) covered by Technical Specifications or other NRC requirements.

(3)

*back for analysis
and perform*

1. I. I. is it. If new positions, need to identify

Enclosure 1 contains the two proposed additions to the NRC Inspection manual. The first is entitled, "LICENSEE ACTIONS FOR RESOLUTION OF DEGRADED AND NON-CONFORMING CONDITIONS." This document is a summary of the process a licensee should follow upon identification of a degraded or non-conforming condition, including prompt follow-up actions, operability determinations, reporting requirements, decision categories, interim operation, deficiency resolution and long-term follow-up. This document is an umbrella document that outlines a complex process, and then directs the reader, as necessary, to more detailed information on any individual component of the process. The NRC staff believes that actions consistent with this process would ensure compliance with the regulations that address degraded or nonconforming conditions, e.g., 10 CFR 50, Appendix B.

One of the places the umbrella document refers its reader to for operability guidance is the other document of Enclosure 1 entitled, "OPERABLE/OPERABILITY: ENSURING THE FUNCTIONAL CAPABILITY OF A SYSTEM OR COMPONENT." This document is a compilation of existing NRC guidance and staff positions on operability. It is based upon Generic Letters, Bulletins, Information Notices, and internal NRC correspondence issued between 1979 and the present.

The proposed guidance was not developed as a new requirement or staff position. However, because of the complexity involved in operability determinations and because of the complexity of the process described in LICENSEE ACTIONS FOR RESOLUTION OF DEGRADED AND NON-CONFORMING CONDITIONS, it is possible that there have been differences in application of this guidance from licensee to licensee. The purpose of publishing this guidance is to provide some clarifying explanatory material and to ensure consistency in application of this guidance among NRC inspectors. Thus, although a new staff position was not intended, particular licensees may find its implementation to represent new staff positions because of previously existing inconsistencies and lack of documentation. Recognizing that 10 CFR 50.109 may apply in such cases, the NRC staff is following the procedures indicated for generic backfits. However, a detailed examination of licensee practices and plant procedures on a licensee-by-licensure basis was not attempted to estimate the burden that the proposed guidance may represent.

(iv) The proposed method of implementation along with the concurrence (and any comments) of the Office of General Counsel (OGC) on the method proposed.

The proposed guidance will be made available for use by NRC personnel by inclusion in Part 9900 of the NRC Inspection Manual, and to licensees for information through the provisions of the Generic Letter.

Licensees may choose to voluntarily review their plant procedures to see that they are consistent with the guidance. Since the proposed guidance is a compilation of existing guidance, it is not expected that such a review would be particularly time consuming or that many inconsistencies would be found. However, for any inconsistencies that are found, a revision of plant procedures would be in order, as well as a TS amendment in some cases.

OGC comments and concerns have been considered and have been incorporated into the proposed guidance and Generic Letter. OGC has no legal objection to the proposed action.

Inadequate backfit analysis

if there is a basis for this need to specify and perform backfit analyses.

WHY

*-2-
Need to specify. No changes for guidance
only changes where NRC has POSITION*

(B)

need a formal analysis for new staff positions

(v) Regulatory analysis generally conforming to the directives and guidance of NUREG/BR-0058 and NUREG/CR-3568.

A formal regulatory analysis has not been performed. To the extent that the proposed guidance does contain new guidance or staff positions, they are required to ensure compliance with existing regulations. The two documents provide a framework for organizing existing guidance on (1) licensee actions for resolution of degraded and non-conforming equipment and (2) operability determinations for systems, structures, or components (SSCs) covered by Technical Specifications or other NRC requirements.

(3)

(vi) Identification of the category of reactor plants to which the generic requirement or staff position is to apply.

The proposed guidance is intended for use by NRC personnel in evaluating licensee actions for resolution of degraded and non-conforming conditions and operability determinations at all nuclear power plants.

(vii) For each category of reactor plants, the evaluation should be prioritized and scheduled in light of other ongoing regulatory activities. The evaluation is to consider information available concerning any of the following factors as may be deemed appropriate and any other information relevant and material to the proposed action.

(a) Statement of the specific objectives that the proposed action is designed to achieve.

The specific objectives of the proposed action are to (a) update Part 9900 of the NRC Inspection Manual with respect to licensee actions for resolution of degraded and non-conforming conditions, (b) update the Manual with respect to operability guidance, and (c) to inform licensees of the updates of the NRC Inspection Manual by Generic Letter.

As a consequence of the proposed action, it is anticipated that evaluations of licensee actions for resolution of degraded and non-conforming conditions and evaluation of operability determinations by NRC personnel will be more consistent from one licensee to another, and from one time to another. This is because evaluation criteria, which are currently in many different documents, have been drawn together in one location.

(3)

(b) General description of the activity that would be required by licensees in order to complete the action.

The proposed guidance is being provided to licensees for information. No specific action by licensees is required.

(B)

not consistent with history of P2 or with the view that certain licensees may see this as a new position

not less with regard to ASME Code, flow calculations and piping

(c) Potential change in risk to the public from accidental offsite release of radioactive material.

As stated above, it is anticipated that the proposed guidance will result in a more consistent approach to evaluating licensee actions for resolution of degraded and non-conforming conditions and operability determinations. This is because most evaluation criteria will be available in the NRC Inspection Manual as opposed to being dispersed throughout numerous documents. Consequently, the potential for failing to consider an essential evaluation criterion will be reduced. Therefore, the likelihood should be increased that the licensees will take the correct action when (1) resolving a degraded or non-conforming condition, and (2) making operability determinations. This should have a beneficial effect on the risk to the public, although it is not possible to quantify the benefit.

not true
see comment
p 3

(d) Potential impact on radiological exposure of facility employees and other onsite workers.

At some plants, licensees may revise plant procedures based on the proposed guidance. Any revision of procedures might cause an incremental change in radiological exposure of facility employees; however, the increment is impossible to quantify in the general case. Overall, this guidance is not expected to have a large impact (either positive or negative) in facility employee exposures.

(e) Installation and continuing costs associated with the action, including the cost of facility downtime or construction delay.

The proposed guidance does not involve any physical changes to any nuclear plants. Therefore, there will be no installation or continuing costs. Also, no facility downtime costs are anticipated.

On the other hand, the proposed guidance involves complex processes such as licensee actions for degraded and non-conforming equipment and operability determinations. Such fundamental concepts are pervasive in their impact on facility operation. If the proposed guidance is interpreted by the licensee as requiring a major change in plant procedures, it is conceivable that the guidance would increase facility downtime for some facilities by resulting in changes to plant procedures that required more appropriate actions. However, this guidance should not cause unnecessary shutdowns.

now proposed

(f) The potential safety impact of changes in plant operational complexity, including the relationship to proposed and existing regulatory requirements and positions.

The proposed guidance documents are not intended to contain new guidance or staff positions. It is not expected that this guidance will result in a significant increase in operational complexity for most licensees.

However, for some licensees that may have previously been operating with a different interpretation of (1) actions to resolve degraded or nonconforming conditions and (2) operability determinations, following the proposed guidance may require changes in plant procedures and operations.

This needs to be determined

This language again reflects an internal inconsistency in this document

Is this guidance on an NRC position?
If a position, is it a new position?

As an example, surveillances that make a piece of equipment inoperable ~~should~~ not be conducted on one safety train of a system if the other train is also inoperable. The proposed guidance makes this clear; however, if a licensee currently had procedures that allowed such surveillance scheduling, the proposed guidance will be interpreted as allowing less operational flexibility and causing more operational complexity.

From the NRC perspective, the potential safety impact is positive because continued operation will not be allowed with a complete loss of system function caused by the performance of the surveillance.

g) The estimated resource burden on the NRC associated with the proposed action and the availability of such resources.

The resource burden on the NRC would be minimal.

h) The potential impact of differences in facility type, design, or age on the relevancy and practicality of the proposed action.

The proposed guidance is applicable to all power reactors, regardless of plant age, facility type, or design.

i) Whether the proposed action is interim or final, and if interim, the justification for imposing the proposed action on an interim basis.

Other than for the exception noted below, the proposed guidance is final.

The section on 10 CFR 50.59 is interim. We will discuss this issue during CRGR review of the new 50.59 procedures and NSAC-125. (NSAC-125, dated June 1989 is "Guidelines for 10 CFR 50.59 Safety Evaluations," prepared by Nuclear Management and Resources Council, Nuclear Safety Analysis Center.)

viii) For each evaluation conducted pursuant to 10 CFR 50.109, the proposing office director's determination, together with the rationale for the determination based on the considerations of paragraphs (i) through (vii) above that

a) there is a substantial increase in the overall protection of public health and safety or the common defense and security to be derived from the proposal; and

b) the direct and indirect costs of implementation for the facilities affected, are justified in view of this increased protection.

To the extent that the proposed guidance does impose new NRC staff positions, the backfit rule does apply. The new positions are justified on the basis that they provide assurance of compliance with existing regulations and staff positions. The proposed guidance is a compilation of existing guidance and staff positions into two documents. Use of the proposed guidance will add consistency to

(B)

MUST this
appear
to be
a
requirement
not
guidance
Licensee
MUST
do
this.

(B)

What are they? -5- Specify and perform a back fit analysis.

evaluations of licensee actions for resolution of degraded and nonconforming conditions and operability determinations, which, in turn, will have a positive impact on plant safety. For most licensees, there should be little or no additional costs as a consequence of issuing this proposed guidance. The exception under 10 CFR 50.109(a)(4)(i) applies.

For some licensees, this proposed guidance might be viewed as new to them. It is possible that, because of interpretation differences, application of existing guidance has not been consistent from licensee-to-licensee. It is not easily possible to quantify how many licensees fit this description, and to what extent each such licensee would be affected by the proposed guidance. Estimates of the costs of implementation for such licensees are not easily obtainable.

B

backfit analysis required.

This guidance should make enforcement problems easier to deal with by providing clearer and more complete guidance.

(x) For each evaluation conducted for proposed relaxations or decreases in current requirements or staff positions, the proposing office director's determination, together with the rationale for the determination based on the considerations of paragraphs (i) through (vii) above that

a) the public health and safety and the common defense and security would be adequately protected if the proposed reduction in requirements or positions were implemented, and

b) the cost savings attributed to the action would be substantial enough to justify taking the action.

The proposed guidance will not relax any existing requirements or positions.

not consistent with the position that these documents do not contain new guidance. Also, as guidance is not mandatory, unless new enforcement is added