NON-ESCALATED NRC ENFORCEMENT POLICY ASSESSMENT PROCESS

Region IV Utility Group

Committee on NRC Enforcement Policy

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A Special Report by the Region IV Utility Group Committee on the NRC Enforcement Policy (NUREG 1600)

EXECUTIVE SUMMARY

This report provides the results of the Region IV Utility Group (RUG IV) special committee on non-escalated NRC enforcement policy assessment process. The committee was chartered to provide input to the NRC on aspects of the NRC's Enforcement Policy (NUREG-1600) associated with non-escalated enforcement (Severity Level IV, Non-Cited Violations [NCVs], and Minor Violations). RUG IV notes that currently 95% of all NRC enforcement actions fall into the category of non-escalated enforcement.

This report contains three sections. Section 1.0 discusses the existing non-escalated enforcement policy assessment process. Section 2.0 utilizes existing NRC guidance and clarification, primarily from NUREG-1022, "Licensee Event Report System," Supplement 1, to clarify enforcement policy assessment process definitions. Section 3.0 provides illustrative examples drawn from actual experience of enforcement actions, similar to that provided in NUREG-1022, Appendix C, "Sample Potentially Reportable Events."

The key conclusions and recommendations of this report are:

- The current criteria in the NRC Enforcement Manual (NUREG/BR-0195, Revision 1), for a violation to be classified as a Minor violation has led to inconsistent application of the enforcement policy. A simplified definition is proposed.

- The current definitions in the Enforcement Manual for "safety significance" and "potential safety significance" lack specificity and are not consistent with similar existing NRC definitions provided in NUREG-1022. This has led to inconsistent application of the enforcement policy. Adoption of applicable definitions and terminology from NUREG-1022 is proposed.

- The current definition in the Enforcement Policy for "regulatory concern" is inconsistent with the definition in the Enforcement Manual. Emphasis on existing sections of the Enforcement Policy is proposed.
- The enforcement examples in 10 CFR 2, Appendix C, Supplements I through VIII,

were incorporated into NUREG-1600, Section 8.0. However, these examples are not sufficiently developed to ensure consistent, uniform application of the enforcement policy. Suggested alternate examples, in the NUREG-1022, Appendix C format are provided.

The RUG IV committee supports the NRC Region IV initiatives in this area, appreciates the tough self-critical introspective review that Region IV has made of the historical application of the enforcement policy, and endorses the NRC Region IV recommendations to develop concise, uniform guidance on implementation of the non-escalated enforcement program. While RUG IV appreciates that discretion and judgement are appropriate, RUG IV concurs with the NRC:IG report (OIG/95A-04) which concluded that predictable consistent application of the enforcement policy must be achieved.

Questions or comments on this report can be directed to the RUG IV coordinator, Mr. Dan Howard, Certrec Corporation, (817) 649-7700.

INTRODUCTION

The new NRC Enforcement Policy, NUREG-1600, became effective on June 30, 1995. The Enforcement Policy was subsequently incorporated into the NRC Enforcement Manual (NUREG/BR-0195, Revision 1, dated November 1995). RUG IV supports the NRC's changes to the Enforcement Policy and strongly endorses the NRC's stated purpose for the Enforcement Policy (FR 95-15952):

> *"This [Introduction and Purpose] section has been modified to emphasize that the purpose and objectives of the enforcement program are focused on using enforcement actions:*
>
> *(1) As a deterrent to emphasize the importance of compliance with requirements; and*
>
> *(2) To encourage prompt identification and prompt, comprehensive correction of violations."*

On January 29-30, 1996, the American Nuclear Society (ANS) sponsored a "Utility-NRC Interface Workshop - Region IV." One of the three themes of the workshop was "Enforcement Issues," and included breakout sessions to discuss that topic in detail. One major finding of the workshop session was that although the NRC has successfully established a clear framework and detailed guidance for escalated enforcement actions, the framework and guidance for non-escalated enforcement had not been sufficiently developed.

This finding was supported by similar conclusions from other studies:

> " . . . *the [NRC] believes the [enforcement] process can be simplified to improve the predictability of decision making and obtain better consistency between regions.*" - Section III.C, "Conclusions," NUREG-1525, Assessment of the NRC Enforcement Program.
>
> " . . . *the [NRC:IG] noted the enforcement policy does not appear to have been uniformly applied between regions... " and ". . . [NRC organizational structure] contributes to inconsistent program implementation, particularly in the use of violations.*" - Report, Office of the Inspector General, Factors Contributing to Inconsistency in the Operating Reactor Inspection Program, (OIG/95A-04).

In response to the ANS workshop, the RUG IV met on March 19, 1996, to review the workshop findings and develop an ad hoc report. The ad hoc report was provided at an open public meeting with the NRC at the Region IV offices on March 20, 1996. The report noted that there were three specific open issues with the implementation of the Enforcement Policy:

- There is limited guidance on the non-escalated portion of the enforcement policy program,

- There are limited, definitions and term usage in the enforcement policy program, which in some cases conflict with existing NRC documents.

- There are limited examples of the proper application of the enforcement policy, unlike the detailed examples provided on the NRC's reportability guidance in NUREG-1022, Appendix C.

At the March 20 meeting, one enforcement issue example was presented. Compounding factors were sequentially added to increase the significance of the issue. The subsequent examples were robustly discussed. It was apparent that a healthy discussion, utilizing specific examples, is beneficial to clarifying the enforcement policy and its implementation.

RUG IV's goal, and reason for participation in the NRC public meeting and in development of this report, is to ensure a uniform, consistent application of the enforcement policy between Regions and among licensees. Therefore, RUG IV formed a special committee to review the non-escalated enforcement policy assessment process. The committee's goal was to provide unsolicited input to the NRC on aspects of the NRC's Enforcement Policy associated with non-escalated enforcement (Severity Level IV, Non-Cited Violations [NCVs], and Minor Violations).

RUG IV notes that currently 95% of all NRC enforcement actions fall into the category of non-escalated enforcement. Within that context, it is estimated that over 80% of a licensee's annual "management attention to enforcement issues" is directed to non-escalated enforcement issues. It is therefore important that non-escalated enforcement be properly focused, clear, and concise.

The RUG IV special subcommittee members met on April 18 and 19, 1996, to further discuss the enforcement process and review examples of various severity levels. This report constitutes the completion of the special RUG IV subcommittee efforts.

This report contains three sections. Section 1.0 discusses the existing non-escalated enforcement policy assessment process. Section 2.0 utilizes existing NRC guidance and clarification, primarily from NUREG-1022, Supplement 1, to define enforcement policy assessment process definitions. Section 3.0 provides illustrative examples drawn from actual experience of enforcement actions, similar to that provided in NUREG-1022, Appendix C.

1.0 Non-Escalated Enforcement Assessment Process

The Enforcement Policy, Section VI.B.2, provides a helpful flow chart, which is a graphic representation of the civil penalty process. However, the Enforcement Policy does not contain an overall flow chart of the Enforcement Assessment Process. RUG IV took the Enforcement Policy and developed a graphical flow chart of the non-escalated portion of the Enforcement Assessment Process. The overall flowchart is provided in the following figure (FIGURE 1). The flow chart also contains elements which are discussed in Section 2.0 below.

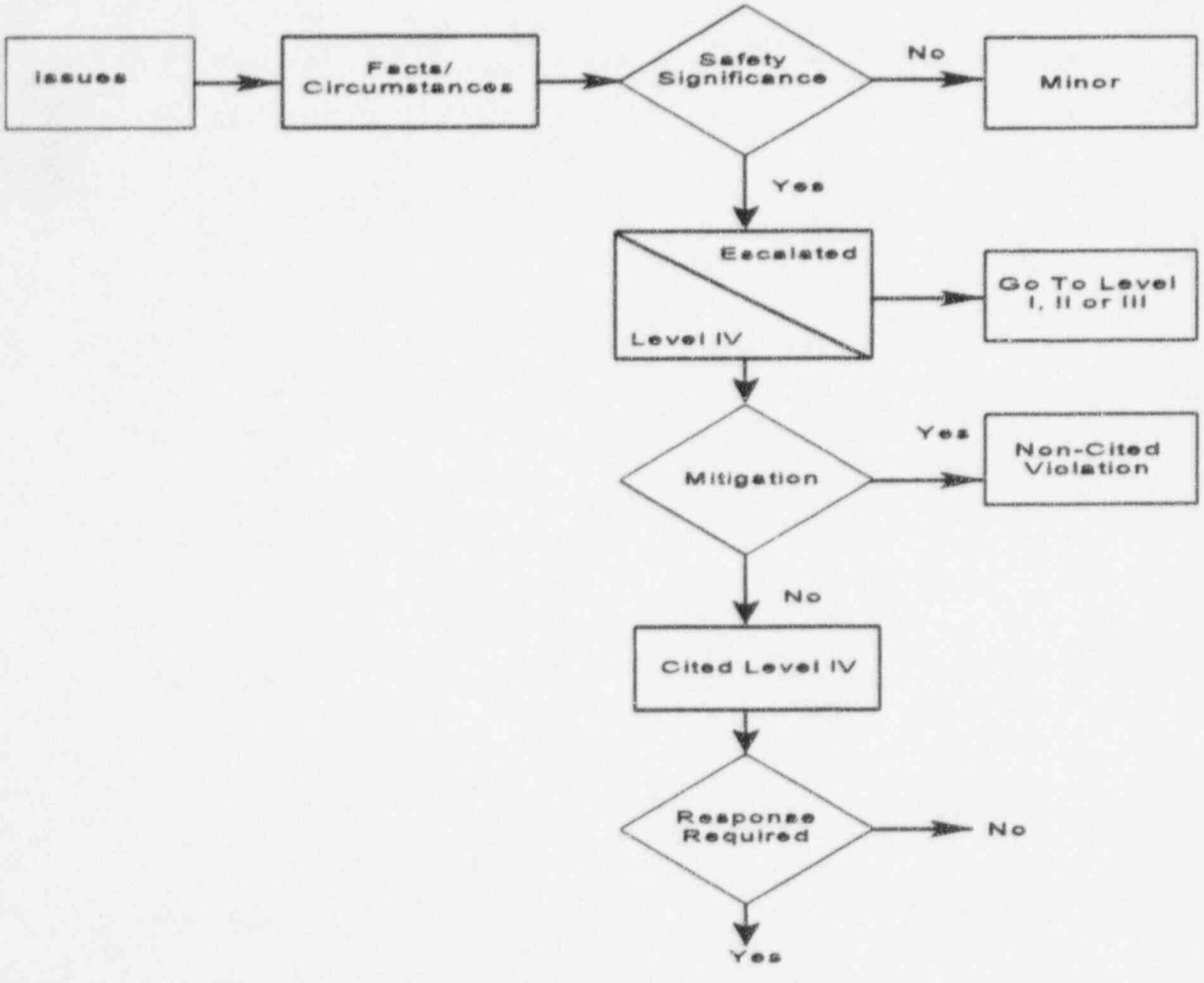


FIGURE 1

2.0 Enforcement Policy Assessment Process Definitions

There are four definitions critical to the implementation of the Enforcement Policy. RUG IV believes that misunderstanding these terms has been the single largest contributor to variance in application of the enforcement policy. These definitions are:

- Minor Violation (Section 2.1)
- Actual Safety Significance (Section 2.2)
- Potential Safety Significance (Section 2.3)
- Regulatory Concern (Section 2.4)

RUG IV evaluated numerous examples where essentially identical violations, issued to separate licensees, received different Severity Level categorizations. RUG IV concluded that:

- The current criteria in the Enforcement Manual for a violation to be classified as a Minor Violation has led to inconsistent application of the enforcement policy. A simplified definition is proposed based on the actual definition in the Enforcement Policy.

- The current definitions in the Enforcement Manual for "actual safety significance/consequence" and "potential safety significance/consequence" lack specificity and have distinctions different than similar existing NRC definitions provided in other NRC regulatory guidance such as NUREG-1022. This has led to inconsistent application of the enforcement policy. Adoption of consistent, applicable definitions and terminology from NUREG-1022 is proposed.

- The current definition in the Enforcement Policy and Enforcement Manual for "regulatory concern" is inconsistent with feedback from NRC personnel. Increased emphasis on existing sections of the Enforcement Policy and Enforcement Manual is proposed.

Each of these definitions/concepts is discussed below:

2.1 **Minor Violation**

The Enforcement Policy first defines a Minor Violation only after having discussed Severity I, II, III and IV violations in Section IV, "Severity of Violations." The Enforcement Policy, Section IV, states in part:

"The Commission recognizes that there are other violations of minor safety or environmental significance which are below the level of significance of Severity Level IV violations. These minor violations are not the subject of formal enforcement action and are not usually described in inspection reports."

RUG IV concluded that the Enforcement Policy intended to ascertain first whether a violation was a Severity Level I, II, III or IV, and if a violation did not meet that criteria, then it was a Minor Violation.

However, the Enforcement Manual, Section 3.5.c provides a complex "test" as follows:

"A test of whether a violation should be categorized as a minor violation is whether, if it recurred several times, it would still be of minor concern. Such violations normally are characterized by (1) having no actual impact and little or no potential for impact on safety, (2) being isolated, not evidencing programmatic weaknesses, and (3) relating to licensee administrative limits rather than to NRC regulatory limits. When an inspector identifies a violation, the determination of whether the violation is minor should consider the following questions:

- *Does the violation have any actual impact (or realistic potential for impact) on safety?*
- *Does the violation suggest a programmatic problem that could have a realistic potential safety or regulatory impact?*
- *Could the violation be viewed as the possible precursor to a significant event?*
- *If the violation recurred, would its recurrence be a more significant concern?*
- *If inadvertently left uncorrected, would this violation become a more significant safety and regulatory concern?*
- *Are there associated circumstances that add regulatory concern to this violation (e.g., apparent willfulness, licensee refusal to comply, management involvement, etc.)?*

"If the answer to all of these questions is "no," the violation should be considered a minor violation. If, on the other hand, the answer to any one of these questions is "yes," the violation should not be considered a minor violation."

RUG IV notes that many elements in the test above involve concepts that are overly subjective and are not clearly defined, such as:

- *impact on safety*
- *programmatic weaknesses*
- *regulatory impact*
- *possible precursor*
- *a more significant concern*
- *a more significant safety and regulatory concern*

RUG IV believes that a "reasonable individual" could utilize/interpret the Enforcement Manual guidance above, and conclude that any violation fails the test (i.e., and is more than a Minor Violation). RUG IV recommends that the Enforcement Manual adopt the specific definition in the Enforcement Policy, as follows:

> Minor Violation **A Minor Violation is any violation of regulatory requirements which is not a Severity Level I, II, III, or IV.**

2.2 Safety Significance and Actual Safety Consequence

The Enforcement Manual, Section 3.5.a, "Safety Significance," states in part:

> *"**Safety significance**, as used in the enforcement program, involves consideration of three factors: (1) the actual safety consequences (e.g., overexposure, offsite release, loss of safety system), (2) the regulatory significance, and (3) the potential safety consequences of a violation. In other words, consideration is given to the matter as a whole in light of the circumstances surrounding the violation. There may be cases where the actual safety consequence of a violation represents a minor concern but the regulatory significance or the potential safety consequences represents a significant concern."*

It is noted that the terms "significance" and "consequence" are used interchangeably.

The following definition from the Enforcement Policy is proposed:

> Actual Safety Significance
>
> **The event must cause an actual overexposure in excess of NRC regulatory limits (10CFR20), offsite release of radioactivity in excess of NRC regulatory limits (10CFR20), or result in the actual loss of the safety function of a safety system (inability of the safety system to perform its safety function as described in the UFSAR, as credited in the Chapter 15 Accident Analysis).**

2.3 Potential Safety Significance

RUG IV supports the position that a violation's potential safety significance and consequence should be evaluated using a consistent, documented methodology. In 1986, NUREG-1022 was issued, and enhanced in 1989 with Supplement 1, to provide an established, consistent, regulatory framework to evaluate potentially safety significant events for reportability. Both licensees and the NRC have over 10 years experience with reportability using this criteria. These established terms and definitions in NUREG-1022 should be used as a framework for evaluating and assessing enforcement issues.

The following sections of 10 CFR 50-73 appear relevant as "universal definitions" of what constitutes potential safety significance:

10 CFR 50.73(a)(2)(i)B	*Any operation or condition prohibited by the plant's Technical Specifications*
10CFR50.73(a)(2)(ii)	*Any event or condition that resulted in the condition of the nuclear plant, including its principal safety barriers, being seriously degraded, or that resulted in the nuclear power plant being: (A) In an unanalyzed condition that significantly compromised plant safety; (B) In a condition that was outside the design basis of the plant; or (C) In a condition not covered by the plant's operating and emergency procedures.*
10CFR50.73(a)(2)(v)	*Any event or condition alone that could have prevented the fulfillment of the safety function of structures or systems that are needed to: (A) Shut down the reactor and maintain it in a safe shutdown condition; (B) Remove residual heat; (C) Control the release of radioactive material; or (D) Mitigate the consequences of an accident.*

The Enforcement Policy guidance when combined with NUREG-1022 provide additional clarification on these particular concepts which correspond to the escalation of Severity Levels, such as:

Inoperability - Severity Levels

Level I/II: A system was called upon to prevent or mitigate a serious safety event and was unable to perform its intended safety function.

Level III: A system designed to prevent or mitigate a serious safety event was not called upon to prevent or mitigate a serious safety event, but:

a) Would not have been able to perform its intended function under certain conditions (e.g., safety system not operable unless offsite power is available; materials or components not environmentally qualified), or

b) Was degraded to the extent that a detailed evaluation would be required to determine its operability (e.g., component parameters outside approved limits such a pump flow rates, heat exchanger transfer characteristics, safety valve lift setpoints, or valve stroke times).

Level IV: A system/train designed to prevent or mitigate a serious safety event was not called upon to prevent or mitigate a serious safety event, and:

a) There where other systems/trains that could perform the same functions. [NUREG-1022, Supplement 1, Q&A 7.7], or

b) It involved an independent component failure that alone could have caused a system to fail to fulfill its safety function, or is indicative of a generic problem that could have resulted in the failure of more than one switch, and thereby cause one or more systems to fail to fulfill their safety function. [NUREG-1022, Supplement 1, Q&A 7.22]

Minor: A system/train designed to prevent or mitigate a serious safety event was not called upon to prevent or mitigate a serious safety event, and the condition involved a single, independent component failure where a redundant component in the same system/train would have fulfilled the safety function. [NUREG-1022, Supplement 1, Q&A 7.20, 7.22]

Alternate Conditions:

An assessment of the event under alternative conditions must be included if the incident would have been more severe (e.g., the plant would have been in a condition not analyzed in the Safety Analysis Report) under reasonable and credible alternative conditions, such as power level or operating mode. [NUREG-1022, Section V, Page 19]

In evaluating the significance of any violation, it is not appropriate to assume any additional component, equipment, system, structure, or personnel action which did not actually exist or occur. It is not appropriate to "what if," beyond those reasonable and credible circumstances routine operating parameters such as power level, in determining if an event "could have prevented" fulfillment of a safety function (i.e., unrelated and independent failures that did not actually occur should not be considered. [NUREG-1022, Supplement 1, Q&A 7.8 & 7.22])

Procedural Compliance:

If an approved procedure has a major defect (e.g., it contains a step that would cause a safety system to become inoperable), but the procedure was never used, the inadequate procedure should be considered a NCV. If the procedure error was discovered before the procedure was approved, the error is not a violation. If the procedure was used, and the equipment became inoperable and a loss of system safety function resulted, the event should be considered a Severity Level IV. [NUREG-1022, Supplement 1, Q&A 7.23]

Before a failure to follow procedural steps can be categorized as a Severity Level IV, it

must be demonstrated that failure to follow the step(s) resulted (or would have resulted, if the inspector had not notified the licensee in time for correction of the step) in the actual inoperability of the equipment and affected the operability of the safety system.[NUREG-1022, Supplement 1, Q&A 7.24]

If it is determined that an individual made an error (mislubricating one pump of a two train safety system) which resulted in the inoperability of an individual component in a multi-train system, and if the individual could reasonably have been expected to make the same error without the condition being identified and corrected by the licensee, then there was sufficient potential and reasonable expectation that the personal error could have resulted in the loss of safety function (i.e., making both pumps inoperable, and losing the system safety function). [NUREG-1022, Supplement 1, Q&A 7.12]

Engineering Judgement:

Determinations of a condition's validity, scope, and resulting impact will all involve varying degrees of engineering judgement and these determinations can affect whether the condition has safety significance. Engineering judgement may include either a documented engineering analysis or judgement by a technically qualified individual, depending on the complexity, seriousness, and nature of the event or condition. A documented engineering analysis is not a requirement as an engineering judgement, but it would be appropriate for particularly complex events. [NUREG-1022, Supplement 1, Q&A 11.1]

Safety Function:

A safety system must operate long enough to complete its intended function as defined in the FSAR. Reasonable operator actions to correct minor problems may be considered; but heroic actions and unreasonably insightful diagnoses, particularly during stressful situations, should not be assumed. Control room and outside control room operator actions are permitted as specified in each licensee's accident analyses. [NUREG-1022, Supplement 1, Q&A 7.6]

Accidents that need to be considered are only those analyzed for in the FSAR. Usually the credited systems are Category I systems and structures and are usually addressed in the FSAR and Technical Specifications. However, non-Category I systems and structures, if credited in the FSAR accident analyses, fall under this definition. [NUREG-1022, Supplement 1, Q&A 7.13 & 7.14]

2.4 Regulatory Concern

The NRC Enforcement Policy, Section IV, "Severity of Violations," states in part,

> *"Therefore, the relative importance of each violation, including both the technical and regulatory significance is evaluated. . . In some cases, special circumstances may warrant an adjustment to the severity level categorization. . . A. Aggregation of Violations. . . B. Repetitive Violations. . . C. Willful Violations. . . D. Violations of Reporting Requirements. . . ."*

The NRC Enforcement Manual, Section 3.5.c, states in part,

> *". . .regulatory concern to this violation (e.g., apparent willfulness, licensee refusal to comply, management involvement, etc.)."*

RUG IV endorses the Enforcement Policy and Enforcement Manual definitions of Regulatory Concern, which would avoid non-specific qualitative, subjective opinion. While there is clearly a place for discretion by Senior NRC Management in application of escalated enforcement, RUG IV believes non-escalated enforcement assessment should be specific and avoid subjective analyses.

Therefore, the following definition from the Enforcement Policy is proposed:

> **Regulatory Concern**
>
> **The event involves the special circumstances of any of the following: aggregation, repetition, willfulness, or reporting.**

3.0 Illustrative Examples

RUG IV notes that the NRC provided in NUREG-1022, Appendix C, 51 examples of various situations and evaluated each situation for reportability under 10 CFR 50.73. Licensees have found these and subsequent NUREG-1022 examples to be extremely helpful in understanding NRC reporting requirements.

Appendix B, "Enforcement Policy Assessment Process Examples," provides examples taken from actual enforcement cases.

CONCLUSION

RUG IV ha[illegible]ncluded that a lack of specificity in terms and definitions utilized in implementin[illegible]ie Enforcement Policy is the likely root cause for the inconsistent application of the Enforcement Policy observed by OIG and NRR in non-escalated enforcement actions. If not the root cause, different interpretations of terms and definitions can certainly significantly contribute to inconsistent applications. Communication is very important to ensure clear, concise guidance to all parties.

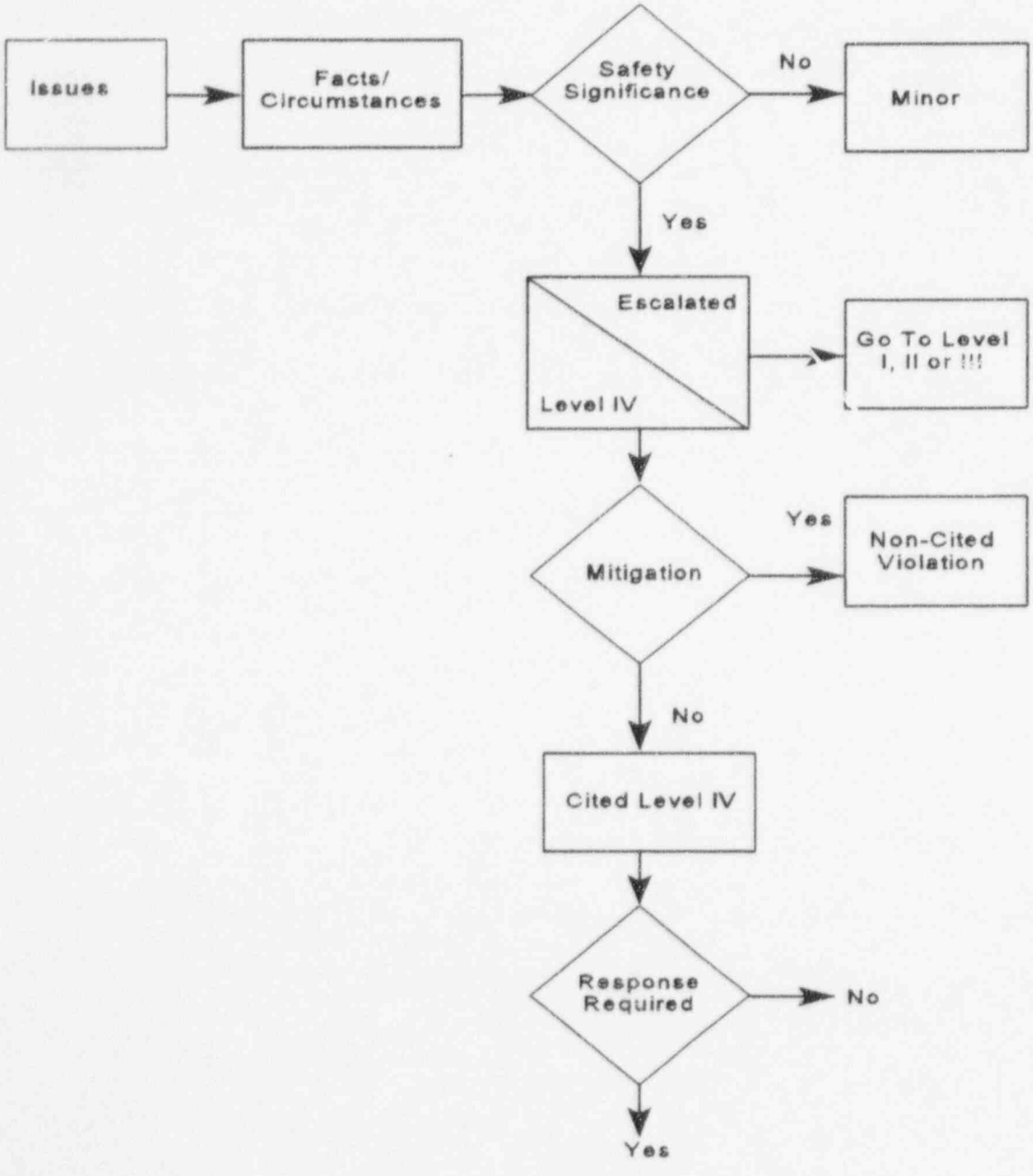
RUG IV believes that the existing guidance in NUREG-1022, which has been developed through the full public comment process of the Agency, provides valuable, established definitions and examples which can significantly improve the clarity and precision of the Enforcement Policy.

APPENDIX A

NON-ESCALATED ENFORCEMENT POLICY ASSESSMENT PROCESS

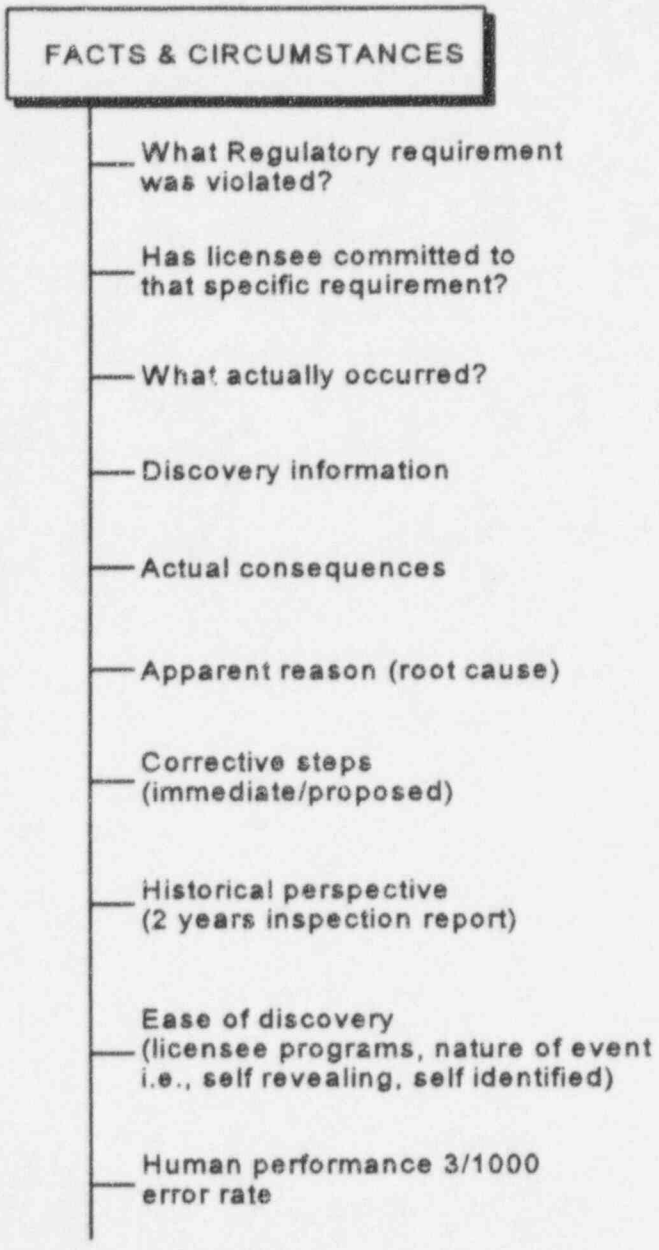
NON-ESCALATED ENFORCEMENT POLICY ASSESSMENT PROCESS

The NRC Enforcement Policy, Section VI.B.2, "Civil Penalty Assessment," contains a flow chart which is a graphical representation of the civil penalty assessment process. Similarly, the following flow chart is a graphical representation of the entire enforcement policy assessment process:



Individual elements of the process are expanded further as follows:

A. FACTS and CIRCUMSTANCES



Facts and Circumstances (continued)

Several factors should be considered and evaluated while at the point of initial problem identification and determination.

1. What specific regulatory requirements were violated? If none, then the process is ended.

2. If a requirement was violated, then confirm the licensee is committed to the specific requirement (the regulatory requirement is part of the licensee's current licensing basis).

3. What were the facts and circumstances which actually occurred?

   - Scenario
   - Sequence of events
   - Licensee immediate actions for recovery
   - Any associated circumstances that add regulatory concern (i.e., aggregation, repetition, willfulness, or reporting)

4. Discovery information

   - Licensee identified
   - NRC identified
   - Self-revealing, e.g., identified through an event
   - Mixed identification
   - Missed opportunity to identify
   - Ease of discovery - what extent/methods were needed to find issue?

5. Actual/potential (if any) consequences of the event

   - Is there any actual impact on the plant?
   - A probable precursor to a more significant event?

6. Apparent or (preferably) formal root cause reason, if available. Are there significant programmatic problems?

7. Immediate/long term corrective actions proposed by licensee

   - Speed of response
   - Scope of response
   - Accuracy of approach to problem (i.e., has license captured the problem?)

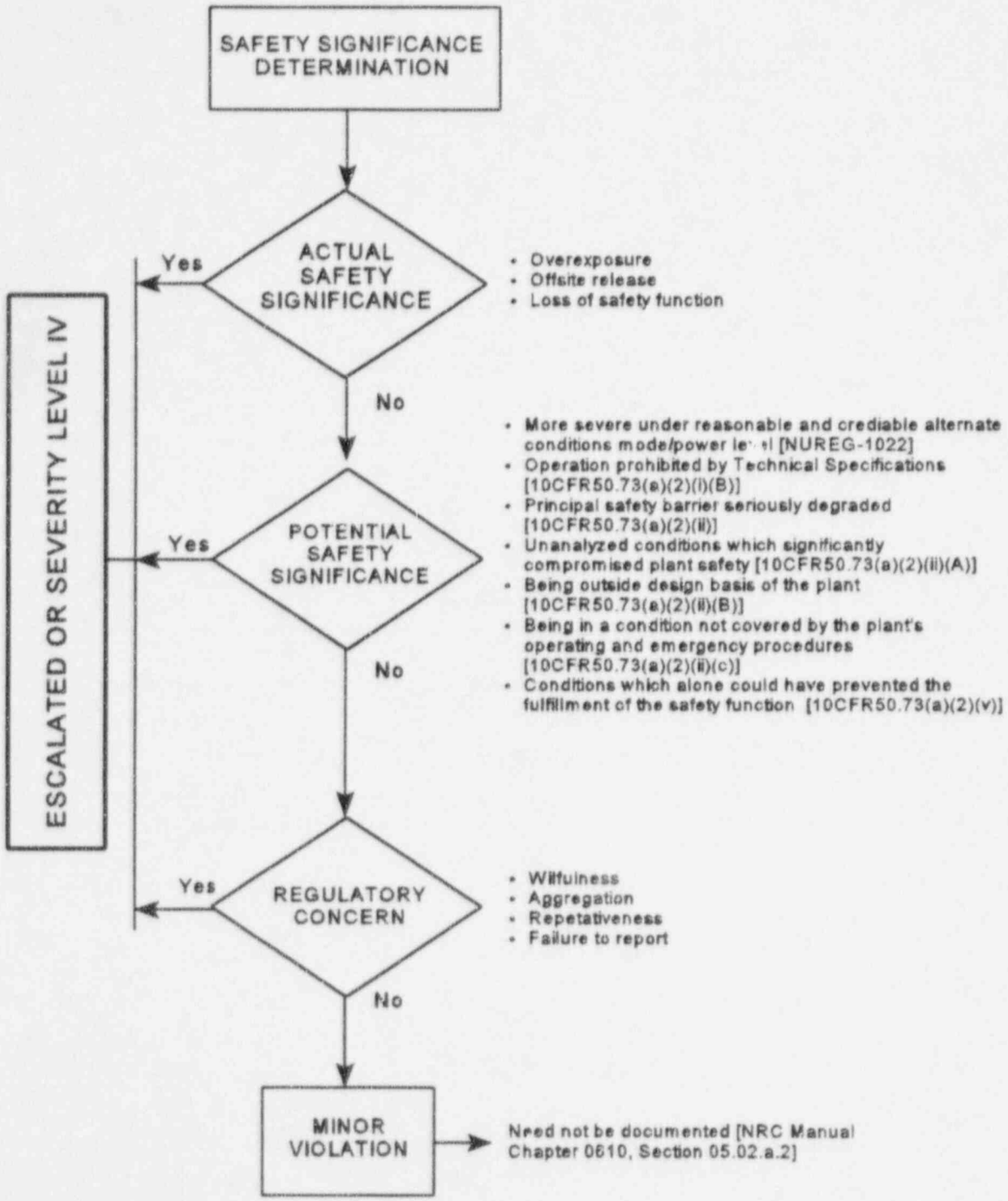
8. View the issue from a historical (2 year) perspective?

   - Is it recurring?
   - Were previous corrective actions for an event with the same root cause ineffective?

9. Human performance

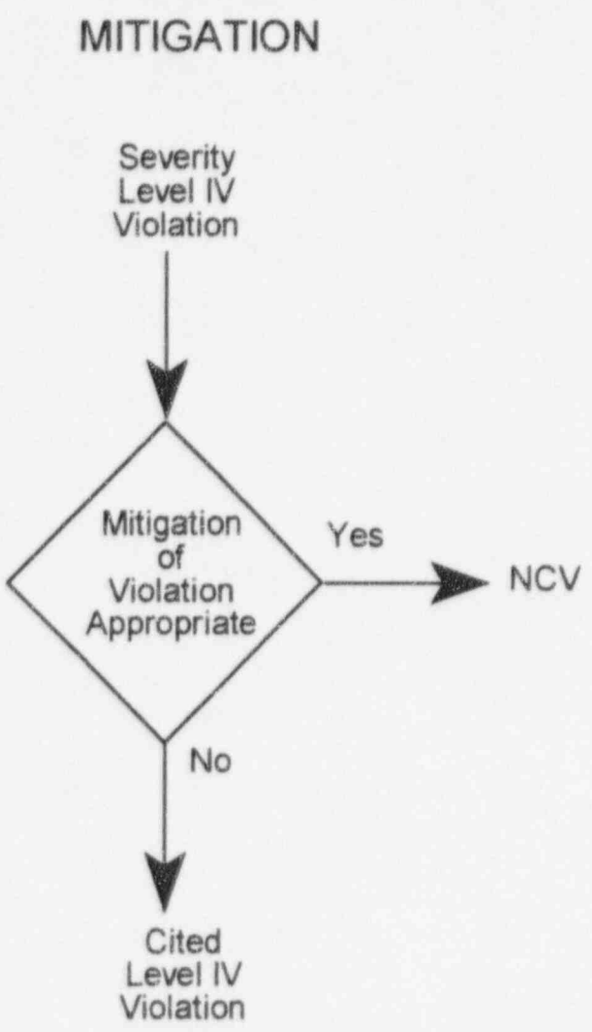
   - Was error due to personnel error or other causes (e.g., weak procedure?)
   - Since human error occurs (3/1000 failure rate) and is unavoidable, was the error particularly egregious or the result of lack of qualification? [Ref. NUREG/CR-1278, "Handbook of Human Reliability Analysis with Emphasis on Nuclear Power Plant Applications," August 1983]

B. SAFETY SIGNIFICANCE



C. MITIGATION

Once the violation is confirmed to have safety significance, the violation is then evaluated against the escalated enforcement policy for Severity Level I, II, or III. If the violation does not meet a Level I, II, or III, it is by definition a Severity Level IV. Then the Severity Level IV is evaluated for possible mitigation, as follows:



For mitigation of a Severity Level IV Violation to a Non-Cited Violation, the following criteria must be met:

(A) It was identified by the licensee, including identification through an event.

(i) **Licensee-Identified**. When a problem requiring corrective action is licensee-identified (i.e., identified before the problem has resulted in an event), the NRC normally gives licensees credit for actions related to identification, regardless of whether prior opportunities existed to identify the problem. In

addition, for NRC-identified issues, licensees may still be given credit for self-identification if they would likely have identified the issue in the same time period if the NRC had not been involved.

(ii) **Identified Through an Event**. When a problem requiring corrective action is identified through an event, the decision on whether to give the licensee credit for actions related to identification normally considers the ease of discovery, whether the event occurred as the result of a licensee self-monitoring effort (i.e., whether the licensee was "looking for the problem"), the degree of licensee initiative in identifying the problem or problems requiring corrective action, and whether prior opportunities existed to identify the problem.

Any of these considerations may be overriding if particularly noteworthy or particularly egregious. For example, if the event occurred as the result of conducting a surveillance or similar self-monitoring effort (i.e., the licensee was looking for the problem), the licensee should normally be given credit for identification. As a second instance, even if the problem was easily discovered (e.g., revealed by a large spill of liquid), the NRC may choose to give credit because noteworthy licensee effort was exerted in ferreting out the root cause and associated violations, or simply because no prior opportunities (e.g., procedural cautions, post-maintenance testing, quality control failures, readily observable parameter trends, or repeated or locked-in annunciator warnings) existed to identify the problem.

An additional example may include an inadvertent switch manipulation that caused an event where the effects were immediate and no procedural cautions, indications, or annunciators existed that could have reasonably prevented the mis-manipulation.

(B) It was not a violation that could reasonable be expected to have been prevented by the licensee's corrective action for a previous violation, or a previous licensee finding that occurred within the past two years, or the period within the last two inspections, whichever is longer.

(C) It was or will be corrected within a reasonable time by specific corrective action committed to by the licensee by the end of the inspection, including immediate corrective action and comprehensive corrective action to prevent recurrence.

(D) It was not a willful violation or if it is/was a willful violation:

(i) The information concerning the violation, if not required to be reported, was promptly provided to appropriate NRC personnel, such as a resident inspector, Regional section chief or branch chief;

(ii) The violation involved the acts of a low-level individual (and not a licensee official);

(iii) The violation appears to be the isolated action of the employee without management involvement, and the violation was not caused by lack of management oversight - as evidenced by either a history of isolated, willful violations or a lack of adequate audits or inadequate supervision of employees; and

(iv) Significant remedial action commensurate with the circumstances was taken by the licensee such that it demonstrated the seriousness of the violation to other employees and contractors, thereby creating a deterrent effect within the licensee's organization. Although removal of the employee from licensed activities is not necessarily required, substantial disciplinary action is expected.

APPENDIX B

ENFORCEMENT POLICY ASSESSMENT PROCESS EXAMPLES

OPERATIONS EXAMPLE 1:

TITLE: CHILLER REFRIGERANT LEVEL ABOVE MAXIMUM OPERABILITY

The licensee initiated a Corrective Action document in response to the Train B chiller trip that occurred on November 27, 1995. Prior to completing a root cause evaluation for the trip, the licensee suspected that low refrigerant level in the cooler may have been a contributing factor. The licensee identified that the Train B chiller refrigerant level was low in its band.

In 1990, HVAC engineering had established that refrigerant levels in the cooler should be maintained between 3 and 7 inches in accordance with an engineering evaluation. The high and low levels had been defined as the maximum and minimum operability limits. The inspector noted that, following the Train B chiller trip, HVAC technicians increased the shutdown refrigerant levels in all three units as necessary to slightly greater than 6 inches to prevent a trip on "low refrigerant temperature."

On December 20, 1995, during a system walkdown to verify the licensee's corrective actions, the inspector identified that the refrigerant level in another chiller was above 7 inches.

On January 4, 1996, the inspector determined that a Corrective Action document had not been initiated to document and resolve the refrigerant level discrepancy. The inspector noted in the weekly chiller preventive maintenance tasks for November and December, the refrigerant level was recorded as 4 3/4 inches. The week following December 20, the refrigerant level was recorded at 3 3/8 inches.

The inspector concluded that the high refrigerant level and the abnormal trend represented a condition adverse to quality which, according to the licensee's corrective action program, required that a Corrective Action document be initiated. The inspector concluded that the failure of the maintenance technicians to initiate a Corrective Action document demonstrated that they were not fully cognizant of refrigerant level issues, despite the recent trip of the Train B chiller. The inspector further concluded that maintenance engineering, which had responsibility for the chiller preventive maintenance program and had been involved in the review of the chiller trip, had not ensured that the maintenance technicians were sufficiently aware of previous refrigerant level discrepancies. The failure to identify a condition adverse to quality is a violation of 10 CFR Part 50, Appendix B, Criterion XVI.

ENFORCEMENT DISCUSSION:

Safety Significance - MINOR VIOLATION

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	None - not more severe under reasonable and credible alternate conditions such as mode or power level, not a Technical Specification (TS) Limiting Condition for Operation (LCO) violation, safety barrier not affected, not in an unanalyzed condition, not outside the design basis of the plant, condition was covered by the plant's operating procedures, and not a condition that alone could have prevented fulfillment of the safety function.
Regulatory Concern:	None - not willful, no aggregation, not repetitive, and no failure to report.

ALTERNATE ANALYSIS:

1. Had the Corrective action document determined the essential chiller was not capable of performing its intended safety function for greater than the TS allowed outage time, a Severity Level IV would be appropriate.

2. Had the failure to issue a Corrective action document been repetitive (indicative of a programmatic breakdown), as evidenced by e.g., four minor violations identified by the NRC within the past two years, a Severity Level IV would be appropriate.

OPERATIONS EXAMPLE 2:

TITLE: DIESEL GENERATOR COMBUSTION AIR INTAKE VALVE LEFT IN INOPERABLE CONFIGURATION

On May 12, 1994, while the team was observing diesel generator surveillance testing, the licensee noted that the over speed butterfly valve for the combustion air intake line to the diesel generator did not fully close as required. Upon review, it was determined that this valve had been disconnected on April 24, 1994 [three weeks earlier], in conjunction with a periodic diesel disassembly and inspection performed pursuant to work order. Although this work order contained work instruction steps which provided for retest of the butterfly valve, the applicable step was in the body of the work document, and was not included or referenced in the retest section. The work instructions also stated that tasks in the body of the work instructions could be performed out of sequence. As a result, although the retests was apparently performed, other work instruction steps performed after the retest made the valve inoperable. The licensee indicated they would change the applicable procedure writer's guides to ensure that all retests are either listed or referenced in the retest section of the procedure and not performed until all related work is complete. The failure to conduct proper testing to ensure valve operability following maintenance activities was a violation.

ENFORCEMENT DISCUSSION

1. Safety Significance - LEVEL IV VIOLATION

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	Yes - a significant failure to comply with the Action Statement for a TS LCO where the appropriate action was not taken within the required time. Emergency diesel generator was not called on to prevent or mitigate an accident during the inoperability period. Safety function could have been performed by redundant emergency diesel generator.
Regulatory Concern:	None - not willful, no aggregation, not repetitive, and no failure to report.

2. Mitigation - Yes, re-categorize as a NON-CITED VIOLATION

Licensee-identified:	Yes.

Reasonably preventable: No - could not have reasonably been expected to have been prevented by the licensee's corrective action for a previous violation or a previous licensee finding that occurred within the past two years.

Corrected: Yes.

Willful: No.

ALTERNATE ANALYSIS:

1. Had the affected diesel generator been able to perform its intended safety function, the event would be a Minor Violation.

2. Had the diesel generator been unable to perform its intended safety function, and the redundant diesel generator was removed from service and also was unable to perform its intended safety function, consideration for a Severity Level III Violation would be appropriate.

3. Had the diesel generator been unable to perform its intended safety function, and the redundant diesel generator was removed from service and also was unable to perform its intended safety function during a valid loss of voltage event which occurred in response to a grid or plant transient, consideration for a Severity Level I or II Violation would be appropriate. Depending on how egregious the violation was, it may be mitigated for the case e.g., where the plant successfully recovered from the event through a fast transfer to an alternate power supply.

OPERATIONS EXAMPLE 3:

TITLE: INAPPROPRIATE CONTROL ROOM MATERIALS

On February 27, 1995, the inspector observed an onshift control room operator showing another licensee employee 45-rpm phonograph records in the control room. The inspector noted that operations management expectations, described by procedure, were that nonoperating material should not be reviewed in the control room by operators responsible for monitoring the plant. Specifically, the procedure stated, in part, that "Potentially distracting activities shall be prohibited, such as radios, televisions, games, horseplay, hobbies, and reading that is not company approved." The inspector concluded that because activities in the control room at the time were minimal, and because the operator did not appear to be neglecting any emergent condition, that the safety significance was low. However, the inspector concluded that the operator violated the procedure by engaging in the distracting activity of showing another licensee employee 45 rpm phonograph records while he was on duty as a control operator.

ENFORCEMENT DISCUSSION:

Safety Significance - MINOR VIOLATION

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	None - not more severe under reasonable and credible alternate conditions, not a TS LCO violation, safety barrier not affected, not in an unanalyzed condition, not outside the design basis of the plant, condition was covered by the plant's operating procedures, and not a condition that alone could have prevented fulfillment of the safety function.
Regulatory Concern:	None - not willful, no aggregation, not repetitive, and no failure to report.

Note: This event was a minor violation because activities in the control room at the time were minimal, the operators did not appear to be neglecting any emergent condition and were fully ready to respond to any annunciator(s), verbal communications, or other situations that may have occurred. The total time the record was viewed was less than 15 seconds.

ALTERNATE ANALYSIS:

1. Had the Operators been engaged in a card game, e.g., rather than the few second distraction, a more significant (regulatory concern) violation may be assessed if it was an indication of a willful violation and/or a failure of management or supervision to exert due diligence. Under those conditions, a Severity Level IV Violation would be appropriate.

2. As a result of a distracting activity, had the Operator failed to properly respond to emergent plant conditions and not followed procedures, consideration for a Severity Level III Violation against the licensed operator as well as the utility (if condoned by the utility) would be appropriate.

OPERATIONS EXAMPLE 4:

TITLE: DRAIN DOWN OF THE PRESSURIZER AND A PARTIAL DEPRESSURIZATION OF THE RCS

On September 16, 1994, the plant was shut down for a refueling outage. On September 17, with the plant in Mode 4 and still cooling down (reactor coolant temperature at about 300 degrees F and pressure at about 350 psig), a violation of procedural requirements resulted in draining approximately 9,200 gallons of water from the reactor coolant system to the refueling water storage tank (RWST), draining most of the water from the pressurizer and causing a decrease in RCS pressure to about 25 psig. The event occurred when operators opened a valve that was required by system operating procedures to be closed when bringing a residual heat removal system (RHR) train on line, creating a drainage path for reactor coolant to be pumped to the RWST. This event can be blamed on a failure of the operating crew to maintain adequate control of two activities that were occurring at the same time but which were essentially incompatible testing a motor-operated valve in the RHR system, when that same valve was required to be closed while bringing RHR into service.

The operating staff quickly diagnosed the event and took prompt action to terminate the drain-down in approximately 66 seconds and restore RCS inventory. Due to this prompt action, the event did not result in a loss of core cooling and the 9,200 gallons of reactor coolant was confined to plant systems, primarily the RWST.

The NRC considers the violation that caused the event a significant regulatory concern because: 1) the event itself was significant given the relatively short time that the plant had been shut down and the amount of decay heat available; 2) the event had the potential, had it continued, to result in a loss of emergency core cooling system equipment and complicate a recovery; and 3) the event resulted in an unnecessary challenge to plant operators, necessitating prompt diagnosis and action. In addition, the NRC has issued Information Notices to the industry regarding events of this type and is concerned that, with the industry trend toward shorter outages, outage planning include tight controls over plant activities in the early stages of an outage when the plant is still cooling down and plant is in transition from a routine operating mode.

ENFORCEMENT DISCUSSION:

1. Safety Significance - LEVEL III VIOLATION

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	Yes - could have been more severe under reasonable and credible alternate conditions due to the relatively short time that the plant had been shut down and the amount of decay heat available. As is,

the event resulted in RCS diversion causing a decrease in RCS pressure to about 25 psig. If left uncorrected, the violation would have become a more significant concern; it could have resulted in a loss of emergency core cooling system equipment and complicated recovery.

Regulatory Concern: None - not willful, no aggregation, not repetitive, and no failure to report.

Escalation: Yes - inattentiveness to duty on the part of licensed personnel; failure of operating crew to maintain adequate control of two incompatible activities. In addition, the event resulted in reactor parameters that caused unanticipated reductions in margins of safety.

2. Mitigation - No, retain as a CITED LEVEL III VIOLATION

Licensee-identified: No - identified through an event. The event resulted in an unnecessary challenge to plant operators, necessitating prompt diagnosis and action. In addition, NRC Information Notices have been issued regarding events of this type.

Reasonably preventable: No - could not have reasonably been expected to have been prevented by the licensee's corrective action for a previous violation or a previous licensee finding that occurred within the past two years.

Corrected: Yes.

Willful: No - a failure of the operating crew to maintain adequate control of two activities occurring at the same time, but which were essentially incompatible.

ALTERNATE ANALYSIS:

1. Had the operator inadvertently operated any other valve, not resulting in a drain-down event, then a Minor Violation would be appropriate.

2. Had the event not been caused by licensed personnel, consideration for mitigation to a Level IV Violation would be appropriate.

3. Had the event resulted in a loss of coolant accident, consideration for a Level II Violation would be appropriate (emergency core cooling system not being able to perform its intended safety function).

OPERATIONS EXAMPLE 5:

TITLE: TEMPERATURE RECORDER NOT ENGAGING THE RECORDER PAPER

The inspector walked down Control Room boards on June 1, 1994, and noted that the recording pen for a wide range reactor coolant cold leg temperature recorder was not in contact with the chart paper. The inspector made this observation at approximately 10:30 a.m. and noted that the recorder had not responded since approximately 4 a.m. that same morning. The inspector informed the control operator, who reengaged the pen to the strip chart. The inspector was concerned because this recorder was one of the indications operators would have used to trend RCS temperature in the event of entry into emergency procedures in order to control RCS heatup and cooldown. The inspector was also concerned because the inoperability of the recorder had gone unnoticed during the 6 a.m. shift turnover and because the condition had been unnoticed for so long.

ENFORCEMENT DISCUSSION:

Safety Significance - MINOR VIOLATION

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	None - not more severe under reasonable and credible alternate conditions, not a TS LCO violation, safety barrier not affected, not in an unanalyzed condition, not outside the design basis of the plant, condition was covered by the plant's operating procedures, and not a condition that alone could have prevented fulfillment of the safety function.
Regulatory Concern:	None - not willful, no aggregation, not repetitive, and no failure to report.

Note: The inspector incorrectly believed this recorder was used in Emergency Operating Procedures, when it in fact, it was not used in that application. This particular recorder is non-safety related, unalarmed, and is one of over 51 cold leg temperature indicators (monitoring various cold legs) available to control room operators. There was no safety significance associated with this finding.

ALTERNATE ANALYSIS:

1. Had the temperature recorder been a TS instrument and was inoperable greater than its allowed outage time, but identified and corrected by the licensee, an NCV would be appropriate.

2. Had the temperature recorder been a TS instrument and been inoperable greater than its allowed outage time, and identified by the NRC, as noted above, a Severity Level IV would be appropriate.

OPERATIONS EXAMPLE 6:

TITLE: FAILURE TO FOLLOW PROCEDURES

EXAMPLE 1:

On August 16, 1995, during a tour of the west switchgear, the inspector observed that maintenance personnel had erected and secured an 8-foot step ladder to an electrical conduit to support installation per an engineering change notice. The purpose of the change was to remove the security uninterruptable power supply located in the west switchgear room. The work was to be conducted in accordance with a construction work order.

Upon noticing the ladder was secured to the conduit, the inspector traced the conduit to a junction box. The junction box housed the breaker for instrument power for an Auxiliary Feedwater (AFW) panel. This panel provided indication and control of the AFW system to allow for a safe shutdown of the plant during an emergency that resulted in the forced evacuation of the control room.

The inspector noted that the conduit the ladder was secured to was less than 2 inches in diameter. The inspector questioned maintenance personnel as to whether the ladder should have been secured to the conduit since the conduit was less than two inches in diameter. Maintenance personnel acknowledged that the ladder should not have been tied to the conduit.

Standing Order "Storage of Transient Equipment and Material to Prevent Seismic Interactions" states, in part, that ladders shall only be secured to conduits greater than 2 inches in nominal diameter. Securing the ladder to an electrical conduit less than 2 inches in diameter is a violation.

EXAMPLE 2:

On August 24, 1995, a licensed operator was performing a procedure titled, "Diverse Scram System Actuation Relay Operability Test." During performance of the test, the operator inadvertently operated the Channel B Diverse Scram System (DSS) test or bypass switch rather than the DSS manual trip switch, as required by the procedure. When the test or bypass switch was incorrectly placed from the test position to the normal position, with the manual trip switch in the trip position, the reactor tripped as designed.

During review of this event, the inspectors concluded that the reactor trip was a result of personnel error in that the operator failed to properly follow the procedure and adequately self-check to ensure the right switch was manipulated. Based on reviews performed by the inspectors, the failure to properly follow the surveillance test procedure for the diverse scram system is a violation.

ENFORCEMENT DISCUSSION:

Safety Significance - MINOR VIOLATION

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	None - not more severe under reasonable and credible alternate conditions, not a TS LCO violation, safety barrier not affected, not in an unanalyzed condition, not outside the design basis of the plant, condition was covered by the plant's operating procedures, and not a condition that alone could have prevented fulfillment of the safety function.
Regulatory Concern:	None - not willful, no aggregation, not repetitive, and no failure to report.

Note: Engineering judgement showed seismic event would not have caused the step ladder to damage conduit making AFW inoperable. In addition, the two examples, taken by themselves, are each considered as minor. Taken together, they were not considered an aggregation because they were not separate Level IV Violations having the same underlying cause or programmatic deficiencies, or did not contribute to or were not unavoidable consequences of the underlying problem.

ALTERNATE ANALYSIS:

1. Had the step ladder damaged conduit making AFW inoperable greater than the TS allowed outage time, a Level IV Violation would be appropriate.

2. Had the reactor trip not occurred, as designed, e.g., partial reactor trip, a Level IV Violation would be appropriate (loss of safety function).

3. Had both examples been separate Level IV Violations having the same underlying cause or programmatic deficiencies, or contributed to or were unavoidable consequences of the underlying problem, consideration for a Level III Violation would be appropriate.

ENGINEERING/TECHNICAL SUPPORT EXAMPLE 1:

TITLE: INADEQUATE DRAWINGS

This violation involved the failure to maintain piping and instrumentation diagrams in accordance with an established procedure. Although the NRC staff recognizes the relative minor safety significance in this instance associated with the identification of locked valves on piping and instrumentation diagrams; the violation is of concern because the drawing discrepancies did not receive adequate management attention until addressed by the NRC staff.

Through interviews, the team determined on February 22, 1994, that engineering had attempted to correctly indicate on the drawings (P&IDs) all valves specified in the locked valve list. However, there were other valves indicated as locked on the drawings which were not in the locked valve list. The team determined that engineering had not established measures to correct the drawings (P&IDs). The status of valves identified during the audit had not been corrected on plant drawings. The team determined that the drawings had not been updated to correctly indicate the locked valve status in certain instances. The team identified the failure to revise the P&IDs as a violation of Criterion V, "Instructions, Procedures, and Drawings," of Appendix B to 10 CFR Part 50 and the licensee's procedure.

ENFORCEMENT DISCUSSION:

Safety Significance - MINOR VIOLATION

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	None - not more severe under reasonable and credible alternate conditions, not a TS LCO violation, safety barrier not affected, not in an unanalyzed condition, not outside the design basis of the plant, condition was covered by the plant's operating procedures, and not a condition that alone could have prevented fulfillment of the safety function.
Regulatory Concern:	None - not willful, no aggregation, not repetitive, and no failure to report.

ALTERNATE ANALYSIS:

1. Had the deficient P&IDs been used to control TS required locked valve positions resulting in a TS LCO violation, and the condition was licensee identified and corrected, a NCV would be appropriate.

2. Had the deficient P&IDs been used to control TS required locked valve positions resulting in a TS LCO violation, and discovered by the NRC, as noted above, a Level IV Violation would be appropriate.

ENGINEERING/TECHNICAL SUPPORT EXAMPLE 2:

TITLE: FAILURE TO GENERATE 50.59 SAFETY EVALUATION

A weakness was identified in the implementation of a plant procedure titled , "Field Change Notice (FCN) and Field Interim Design Change Notice (FIDCN)," used by the licensee for field change notices. Field change notices are stand-alone documents used by the licensee to implement small scope changes. The licensee defined small scope changes as those that would not result in major changes to plant function or any changes to design bases described in primary design drawings, or any regulatory design commitment documents. If the proposed change exceeds these criteria, the change must be processed as a design change package. The procedure included a field change notice decision tree that served several purposes. The procedure provided guidance on how to classify a change as a field change notice or a design change package. The procedure also provided the criteria for assisting the evaluator in determining the need for a detailed 10 CFR 50.59 safety evaluation.

The inspector's limited review of several hundred field change notices found that very few facility change notices had a detailed 10 CFR 50.59 safety evaluation performed. Instead, the licensee used a safety evaluation screening process (i.e., a yes or no checkoff) to indicate whether a 10 CFR 50.59 evaluation was required. However, the individual performing the 10 CFR 50.59 screening was not required to provide a basis for the answers to the screening questions. Thus, a second party reviewer would not know the basis for the preparer answers to the screening questions. The inspectors identified this concern to the licensee as a weakness in their procedure.

The inspectors reviewed several field change notices and found one example where the procedural guidance had not been properly followed. A FCN was processed to modify the reactor coolant gas venting system by replacing an existing flow-limiting orifice with a gate valve that acts like an orifice when closed. The gate valve had a hole drilled in the disc, which would act as a flow-limiting device only when fully closed. The Updated Final Safety Analysis Report (UFSAR) indicated the design function of the flow-limiting orifice was to limit flow for postulated breaks downstream of the orifice so the mass flow rate of reactor coolant would be less than the makeup capacity of a single charging pump. An UFSAR figure depicted the layout of the reactor coolant gas venting system, and included the flow-limiting orifice. This modification also required a revision to procedures to assure the valve was locked during Modes 1 through 4. The licensee processed this FCN without performing a detailed 10 CFR 50.59 safety evaluation.

The plant procedure stated in the introduction that a change processed as a field design change shall not result in any change to the design bases described in the UFSAR. If it does, the procedure required that the change be processed as a design change package.

The replacement of a fixed orifice with an orifice gate valve introduced the possibility of this valve being left in a less-than-fully closed position. Since the function of the orifice was to limit mass reactor coolant system flow during accident conditions, the orifice gate valve would not perform this function if in an open position. Thus, the licensee relied on administrative controls to assure that this flow-limiting orifice satisfied its design function.

The inspectors determined that the description in the UFSAR was of sufficient detail to conclude that the replacement of a flow-limiting orifice with an orifice gate valve constituted a change in the design bases. This would have required that the modification be processed as a design change package, with an accompanying 10 CFR 50.59 safety evaluation. This was the first example of the failure to follow procedures. The inspectors also concluded that, even though the licensee did not determine the modification to be a change to the design bases, a detailed 10 CFR 50.59 safety evaluation was required by procedure. This was required if the change involved a minor change to function that did not affect the design bases. In addition, the licensee had not instituted a change to the UFSAR as required. This was the second example of the failure to follow procedures. The above two examples constitute a violation of NRC requirements.

ENFORCEMENT DISCUSSION:

Safety Significance - MINOR VIOLATION

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	None - not more severe under reasonable and credible alternate conditions, not a TS LCO violation, safety barrier not affected, not in an unanalyzed condition, not outside the design basis of the plant, condition was covered by the plant's operating procedures, and not a condition that alone could have prevented fulfillment of the safety function.
Regulatory Concern:	None - not willful, no aggregation, not repetitive, and no failure to report.

ALTERNATE ANALYSIS:

1. Had this failure to provide a safety evaluation been an indication of ineffective corrective actions from previous violations within the past two years (repetitive), a Severity Level IV Violation would be appropriate.

2. Had the failure to provide a safety evaluation and installation of the orificed gate valve resulted in loss of the vent system's safety function, consideration for a Severity Level III Violation would be appropriate.

ENGINEERING/TECHNICAL SUPPORT EXAMPLE 3:

TITLE: FAILURE TO FOLLOW PROCEDURE FOR WELDING WORK

The inspector was informed that ASME Code Section XI replacement work (i.e., the removal and replacement of main feedwater piping and elbows) had been scheduled for this outage. Construction work orders authorized and provided the controls for removing and replacing piping subassemblies for two steam generators.

Discussion with licensee representatives resulted in the determination that the piping subassemblies had already been removed, the new piping subassemblies had been fabricated (i.e., weld BG in one subassembly and weld BK in the other subassembly), and radiography of the welds had been performed. The welding was performed during February 11-13, 1995, by a contractor, and the radiography was performed on February 19, 1995, by licensee nondestructive examination personnel. The inspector requested the radiographic examination procedure, technique sheet, film interpretation data report (reader sheet), and the radiographic film associated with welds BG and BK.

Plant procedure titled, "Radiographic Examination," had been reviewed and approved by the appropriate licensee personnel, and by the authorized nuclear inservice inspector. The procedure provided detailed information and guidance to allow qualified nondestructive examination personnel to perform the specified radiographic examination. Acceptance criteria were clearly identified, either directly or by reference to the appropriate ASME Code appendix and section.

The radiographic examination technique sheet provided detailed information regarding the exposure arrangement and technique. The recorded information complied with the requirements of plant procedures. The inspector reviewed the film interpretation data report, and compared the recorded results to the radiographic film packages. The results documented on the data report coincided with what could be observed on the radiographic film. The inspector also verified film and penetrameter density, and geometric unsharpness.

The inspector also reviewed the contractor welding procedure specification, procedure qualification records, and the field welding checklist which was used to document the actual welding conditions and parameters. The contractor welding procedure was a multi-process welding procedure (i.e., manual gas tungsten arc and shielded metal arc welding processes) for carbon steel materials with stipulated notch toughness properties. Since the system design specification required the pipe and elbows to be manufactured from material that had been Charpy-V impact tested, and with a lowest service temperature of +40°F as defined by Section III of the ASME Code, this welding procedure specification was applicable. The welding procedure specification had been qualified for several different applications by procedure qualification records. The inspector noted that the welding procedure specification permitted a maximum interpass temperature of 225°F for the gas tungsten arc welding process and 600°F for the shielded metal arc welding process, while the procedure qualification record showed a recorded maximum interpass temperature of 450°F for both welding processes.

Paragraph QW-200.1 of Article II in Section IX of the ASME Code requires welding procedure specifications to describe all of the essential, nonessential, and, when required, supplementary essential variables for each welding process used in the welding procedure specification. Supplementary essential variables are invoked whenever welding of materials having specified notch toughness properties occurs. QW-200 further stipulates that changes in essential or required supplementary essential variables require requalification of the welding procedure specification (i.e., new or additional procedure qualification records to support the change in essential of supplementary essential variables). The inspector's review of the welding variables tables for the shielded metal arc and gas tungsten metal arc welding processes showed that interpass temperature is a supplementary essential variable (QW-406.3). Paragraph QW-406.3 requires welding procedure specification requalification if there is an increase of more than 100°F above the maximum interpass temperature recorded on the supporting procedure qualification record, unless the welding procedure specification is qualified with a postweld heat treatment above the upper transformation temperature, or when an austenitic material is solution annealed after welding. Neither of these conditions were applicable.

The permitted use in the welding procedure specification of a maximum interpass temperature of 600°F for the shielded metal arc welding process exceeded the allowed 100°F increase over the qualified interpass temperature specified in the appropriate procedure qualification record, and is a violation of 10 CFR 50, Appendix B, Criterion IX.

The inspector also noted that the contractor field welding checklist, which was used to record the specified, pertinent information for this welding activity, stated "N/R" (i.e., not required) under the requirements for interpass temperature. This resulted in interpass temperature not being measured or recorded during welding of the replacement piping subassemblies. The actual interpass temperatures that occurred during welding are thus unknown. The failure to appropriately control interpass temperature is a violation of 10 CFR 50, Appendix B, Criterion IX, and is considered a second example of the Violation.

The inspector informed licensee management that a technical concern existed regarding the potential for degradation of material toughness properties if elevated interpass temperatures were used. The contractor's use of an inadequately qualified welding procedure specification, coupled with a failure to assure conformance to a maximum interpass temperature limit during welding of the feedwater piping subassemblies, were also considered an indicator of inadequate licensee review and oversight of contractor welding activities.

ENFORCEMENT DISCUSSION:

Safety Significance - MINOR VIOLATION

Actual: None - no overexposure, offsite release, or loss of safety function occurred.

Potential: None - not more severe under reasonable and credible alternate conditions, not a TS LCO violation, safety barrier not affected, not in an unanalyzed condition, not outside the design basis of the plant, condition was covered by the plant's operating procedures, and not a condition that alone could have prevented fulfillment of the safety function.

Regulatory Concern: None - not willful, no aggregation, not repetitive, and no failure to report.

Note: As corrective action, the affected feedwater piping welds were removed and rewelded using a revised welding procedure specification and weld record, and interpass temperature was correctly monitored and documented.. The weld procedure with the incorrect interpass temperature was determined to have been used only once before. Those welds were evaluated and determined to be acceptable.

ALTERNATE ANALYSIS:

1. Had the use of incorrect interpass temperature resulted in an unqualified weld which under the worst case accident analysis could have caused minor leakage in the steam generator greater than allowed by the TS, a Severity Level IV Violation would be appropriate.

2. Had this condition affected both steam generators to such a degraded extent that a detailed engineering evaluation would be required to determine secondary system operability, consideration for a Severity Level III Violation would be appropriate.

ENGINEERING/TECHNICAL SUPPORT EXAMPLE 4:

TITLE: FAILURE TO FOLLOW PROCEDURES - MISPLACED FUEL ASSEMBLY

The NRC identified a violation due to placing a spent fuel assembly into the wrong location in the spent fuel pool (SFP). This violation is of concern because the shift supervisor was not aware of the error until an NRC inspector informed him.

During defueling, a fully burned assembly was lowered into the wrong location in the SFP. Specifically, the assembly was lowered into location I1 instead of location KK21. The SFP handling machine bridge coordinates for location I1 and KK21 were 123.23 and 324.86, respectively. The trolley coordinates were approximately equivalent. The error was discovered by an assistant refueling supervisor monitoring the fuel assembly movements of the SFP machine operator (SFPMO) from the SFP room.

The inspector had been monitoring fuel movements from the refueling machine in containment, and he monitored the initial corrective actions for this incident. Immediately following this error, the control room engineer (CRE) directed the SFPMO to engage (regrapple) the fuel assembly with the SFP handling machine. The CRE obtained approval from the refueling engineer (RE) to move the assembly from location I1 to KK21, and the assembly was moved within a few minutes after the error. The refueling senior reactor operator had been monitoring all activities from the refueling machine (via headset) and also approved moving the assembly to the correct location. The CRE and SFPMO discussed the reasons for the error (communication deficiencies), resolved the communication deficiencies, and continued defueling operations. The inspector continued to monitor the defueling activities and concluded that refueling personnel appeared to have corrected the communications problems which had led to the misplaced assembly. In addition, subsequent to this incident the inspector reviewed defueling logs and periodically continued to monitor defueling activities until completion. The inspector concluded that corrective actions were effective in precluding additional errors.

Immediately after this incident, the inspector contacted the shift supervisor (SS) and determined that the refueling personnel had not informed the SS of the error. The inspector noted that management expectations were that refueling personnel should have informed the SS to allow the SS to maintain the command-and-control function. Several hours after this incident, when it was brought to the attention of senior licensee management, defueling activities were stopped, and the incident was reviewed in much more detail by senior licensee management. Extensive debriefs were held with refueling personnel as a result of this incident. Defueling activities were resumed several hours later.

Operations and refueling management subsequently informed the inspector that their expectations were that the fuel movement should have been suspended immediately following the incident.

Shortly after the incident, the inspector interviewed the CRE involved. The SFPMO was interviewed by the inspector at a later time. The inspector concluded, based on observations and interviews, that the error was due to poor communications and mental error by the SFPMO and poor control by the CRE. This conclusion was based on the following: the SFPMO was at location I1 but communicated he was at KK21; the SFPMO read the bridge and trolley coordinates very quickly to the CRE and the CRE did not note when the SFPMO read 123.25 instead of reading the expected value of 324.86; the SFPMO read the trolley coordinate first instead of the bridge, which the CRE was expecting; the CRE was focused on the last four digits of the bridge number, which was the normal practice and what was being documented as a check of the correct location; and, the CRE did not follow procedural guidance which could have precluded misplacement of the assembly because the bridge coordinates given by the SFPMO were not within required tolerances. The inspector was concerned about the error made in the understanding of the bridge coordinates because training had been given to all SFPMO personnel regarding operation of the equipment. As a result of this concern, the inspector reviewed the training records for the SFPMO. Based on the review, the inspector concluded that training included that the SFPMO demonstrate understanding of the bridge and trolley coordinate system.

The inspector reviewed plant procedure titled, "Nuclear Fuel Movement for Refueling Cycles," and noted it required that the fuel and assembly be placed in spent fuel storage rack locations within plus or minus 112 inch tolerance. However, the inspector noted that the SFPMO placed the fuel assembly in bridge location 123.25 inches, approximately 200 inches less than the required bridge location, which was 324.86 inches. Another failure to follow the procedure was the failure of the CRE to note that the coordinates given (assuming the CRE was focusing on the last four digits) were more than 112 inches different. Specifically, the difference between 23.25 and 24.86 inches is greater than 112 inches. In addition, the inspector noted the procedure required that modifications of the fuel movement sequence could only be approved by the RE. The inspector noted instead that the CRE discussed the error with the SFPMO and determined that the assembly should be moved to KK21 from I1, the CRE directed the SFPMO to regrapple the misplaced fuel assembly, and that the CRE initiated documentation correcting the misplaced assembly and then the CRE contacted the RE to inform him of what had occurred in order to get approval. The inspector concluded that the safety significance of these errors was low because the assembly had been used through two operating cycles and had been placed in an unrestricted location. However, the inspector also concluded that this incident was potentially safety significant in that misplaced fuel assemblies could potentially lead to criticality accidents. The inspector concluded that the failure of refueling personnel to follow procedures was a violation.

The inspector also noted that the procedure contained guidance on stopping fuel movement when refueling errors occurred. However, the licensee stated that this guidance applied to refueling errors for fuel movement activities in the reactor vessel. The inspector concluded that the inclusion of similar guidance for refueling errors in the SFP could have provided refueling personnel guidance with respect to which activities would require suspension of core alternations. The licensee stated that it would evaluate the inspector's comment for future enhancements to procedural controls.

In response to this incident, the licensee also conducted an investigation. The inspector reviewed the licensee's investigation report, and concluded that the report was thorough and that the licensee's corrective actions appeared adequate to prevent recurrence. The licensee noted the absence of formally defined communications standards which was corrected during special training sessions and was captured for future refueling activities in training documents. In addition, the guidance for the one-half inch tolerance was reinforced during special training, the verification of bridge and trolley coordinates was to include verification of all digits not just the last four, and the applicable procedure would be modified to address weaknesses identified. The inspector also observed refueling activities conducted after this incident and reviewed refueling logs and noted that no similar errors occurred or were noted.

ENFORCEMENT DISCUSSION:

Safety Significance - MINOR VIOLATION

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	None - not more severe under reasonable and credible alternate conditions, not a TS LCO violation, safety barrier not affected, not in an unanalyzed condition, not outside the design basis of the plant, condition was covered by the plant's operating procedures, and not a condition that alone could have prevented fulfillment of the safety function.
Regulatory Concern:	None - not willful, no aggregation, not repetitive, and no failure to report.

ALTERNATE ANALYSIS:

1. Had the fuel element been inserted into the wrong location in the reactor core, and there was significant potential for the situation being undetected by licensee verification and process controls, a Severity Level IV Violation would be appropriate.

2. Had the activity been performed by and/or caused by a technically unqualified person, consideration for a Level III Violation would be appropriate.

ENGINEERING/TECHNICAL SUPPORT EXAMPLE 5:

TITLE: FAILURE TO INITIATE NCR AND TAKE TIMELY CORRECTIVE ACTIONS (AGASTAT RELAYS)

The inspector reviewed selected nonconformance reports (NCR) and warehouse NCRs. All of the NCRs and WNCRs were dispositioned in accordance with the applicable licensee procedures. The disposition of each was determined to be in accordance with the requirements of 10 CFR Part 50, Appendix B, Criterion XV, "Nonconforming Material, Parts, or Components."

However, in one of the NCRs, the licensee's failure to qualify optional components (including auxiliary switches) for Agastat relays, was known by the licensee on July 13, 1993, but the NCR was not initiated until February 1, 1994. Members of the licensee's staff had identified that Agastat relays with the unqualified auxiliary switches were installed in safety-related circuits in the plant. Also, in seismic tests conducted October 26, 1993, one of the Agastat relays with auxiliary switches (one of six relays) chattered. This added additional uncertainty whether similar relays installed in safety circuits in the plant would perform their safety function. Ultimately, the safety concern was properly addressed on February 5, 1994, with the completion of the safety analysis included in the NCR. The NCR described a worst-case scenario in which relay chatter of the Agastat relays during a seismic event could potentially result in the associated emergency diesel generator (EDG) not providing power to the safety-related bus due to lock-out of the EDG output breaker. The NCR included an analysis that explained why the relays continued to perform the required safety function, but this analysis was not available between July 1993 and February 1994.

The inspector identified the licensee's failure to initiate an NCR and take timely corrective action for a condition that could affect the safe operation of the plant, as a violation of 10 CFR Part 50, Appendix B, Criterion XV, and plant procedures.

ENFORCEMENT DISCUSSION:

Safety Significance - MINOR VIOLATION

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	None - not more severe under reasonable and credible alternate conditions, not a TS LCO violation, safety barrier not affected, not in an unanalyzed condition, not outside the design basis of the plant, condition was covered by the plant's operating procedures, and not a condition that alone could have prevented fulfillment of the safety function.

Regulatory Concern: None - not willful, no aggregation, not repetitive, and no failure to report.

ALTERNATE ANALYSIS:

1. Had the condition resulted in any TS equipment inoperability beyond the TS allowed outage time, a Severity Level IV Violation would be appropriate.

2. Had the failure to promptly identify and correct a condition adverse to quality actually resulted in a system's inability to perform its intended safety function, consideration for a Severity Level III Violation would be appropriate.

PLANT SUPPORT EXAMPLE 1:

TITLE: FAILURE TO FOLLOW PROCEDURES

On March 15, 1994, a licensee employee entered the radiologically controlled area without an operating alarming dosimeter. The individual read and signed the applicable radiation work permit and picked up an alarming dosimeter and a self-reading dosimeter. However, he failed to stop at the entry point to be logged, via computer, onto the applicable radiation work permit and have the alarming dosimeter turned on. The individual entered the entry point through the swinging exit gate. The failure to turn on the dosimeter was not discovered until the individual exited the controlled area to have exposure logged onto the computer. The licensee's immediate actions were to suspend the individual's access to the controlled area, read his self-reading dosimeter, (zero exposure), and initiate an incident report to document and review the event. Plant procedure titled, "Radiation Protection Administration Procedure," required that all personnel log in and out of the access control system for each radiologically controlled access entry. In addition, the procedure required that personnel entering the controlled area wear approved personnel monitoring equipment. The radiation work permit required a thermoluminescent dosimeter and an alarming dosimeter. The failure to log into the access control system and have an approved (operable) alarming dosimeter is a violation of NRC requirement.

The inspector noted an earlier NRC Inspection Report contained a violation documenting four examples of individuals entering the radiologically controlled area without proper dosimetry. The corrective actions taken by the licensee in response to this violation have not been totally adequate to preclude recurrence.

ENFORCEMENT DISCUSSION:

1. Safety Significance - LEVEL IV VIOLATION

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	None - not more severe under reasonable and credible alternate conditions, not a TS LCO violation, safety barrier not affected, not in an unanalyzed condition, not outside the design basis of the plant, condition was covered by the plant's operating procedures, and not a condition that alone could have prevented fulfillment of the safety function.
Regulatory Concern:	Yes - corrective actions from the previous event were not effective; a previous inspection report had documented four other occurrences.

2. Mitigation - No, retain as a CITED LEVEL IV VIOLATION

Licensee-identified:	Yes.
Reasonably preventable:	Yes - corrective actions from the previous event were not effective; a previous inspection report had documented four other occurrences.
Corrected:	Yes - the licensee's immediate actions were to suspend the individual's access to the controlled area, read his self-reading dosimeter, (zero exposure), and initiate an incident report to document and review the event.
Willful:	No.

ALTERNATE ANALYSIS:

1. Had this been an isolated occurrence (i.e., no previous violations), a Minor Violation would be appropriate.

2. Had the previous corrective actions occurred greater than two years ago and as such would not have reasonably been expected to have prevented this occurrence, a Minor Violation would be appropriate.

3. Had this resulted in a worker exposure above regulatory limits, consideration for a Level III Violation would be appropriate.

PLANT SUPPORT EXAMPLE 2:

TITLE: INADEQUATE CONTROLS OF ACCESS TO ROOF OF THE RAD WASTE BUILDING

In the radwaste building, the inspectors identified that unrestricted access was available to the roof of the building. Because some high level radioactive waste was stored in the building, one of the inspectors and a radiation protection technician performed radiation measurements in accessible areas on the roof. Radiation levels measured by the licensee and confirmed by the inspector were 6 millirems per hour. Because the radiation levels exceeded 5 millirems per hour, the area on the roof was a radiation area, as defined by 10 CFR 20.1003. The licensee did not include the uncontrolled area in its routine survey schedule. The inspectors identified the failure to survey the radiation area as a violation of 10 CFR 20.1501(a), which requires that the licensee make or cause to be made, surveys that may be necessary to comply with the regulations in Part 20, and are reasonable under the circumstances to evaluate the extent of radiation levels and potential radiological hazards that could be present. To comply with 10 CFR 20.1902(a), which requires that radiation areas be conspicuously posted, it would have been necessary for the licensee to have identified the radiation area on the roof of the radwaste building by means of a radiation survey.

Licensee representatives stated that the routine survey schedule would be revised to include the roof of the radwaste building and initiated a corrective action document to document and correct the situation. This failure constitutes a violation of minor significance.

ENFORCEMENT DISCUSSION:

Safety Significance - Minor Violation

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	None - not more severe under reasonable and credible alternate conditions, not a TS LCO violation, safety barrier not affected, not in an unanalyzed condition, not outside the design basis of the plant, condition was covered by the plant's operating procedures, and not a condition that alone could have prevented fulfillment of the safety function.
Regulatory Concern:	None - not willful, no aggregation, not repetitive, and no failure to report.

ALTERNATE ANALYSIS:

1. Had this been a repetitive violation where previous corrective action had not been effective, a Level IV Violation would be appropriate.

2. Had this resulted in exposure greater than the licensee's administrative limits, a Level IV Violation would be appropriate.

3. Had this resulted in a worker exposure above regulatory limits, consideration for a Level III Violation would be appropriate.

PLANT SUPPORT EXAMPLE 3:

TITLE: INADEQUATE CONTROLS OF POSTED RADIOGRAPHY BOUNDARY

This item involved the discovery of technicians inside a radiography boundary, but outside the high radiation boundary during radiography operations. Health Physics personnel controlled the activity using a radiation work permit, which required the radiographer to comply with plant procedure titled, "Radiography Guidelines." The procedure required the radiographer to ensure that the area was unoccupied after radiological postings had been established and prior to exposing the radiography source. During discussions, the inspector learned that the radiographer and radiographer's assistants checked accessible areas and shook locked doors as part of their verification that the posted area was unoccupied. Since the technicians in the electro-hydraulic room did not respond when the radiography personnel shook the door, they assumed that the room was unoccupied. The licensee initiated a corrective action document, stopped radiography, developed and implemented immediate corrective actions, and has subsequently completed additional radiography in the turbine building successfully.

The inspector concluded that the failure of the radiographer to ensure that the radiography area was unoccupied prior to exposing the source is a violation of Technical Specifications.

ENFORCEMENT DISCUSSION:

1. Safety Significance - LEVEL IV VIOLATION

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	Yes - could have been more severe under reasonable and credible alternate conditions; failing to ensure the posted radiography areas was unoccupied could have resulted in significant exposure to the technicians working within the radiography boundary had the source been located closer to the workers.
Regulatory Concern:	None - not willful, no aggregation, not repetitive, and no failure to report.

2. Mitigation - Yes, re-categorize as a NON-CITED VIOLATION

Licensee-identified:	Yes.
Reasonably preventable:	No - could not have reasonably been expected to have been prevented by the licensee's corrective action for a previous violation or a previous licensee finding that occurred within the past two years.
Corrected:	Yes - the licensee initiated a corrective action document, stopped radiography, developed and implemented immediate corrective actions.
Willful:	No.

ALTERNATE ANALYSIS:

1. Had it been determined that no overexposure was possible, even though the workers were inside the radiography boundary, a Minor Violation would be appropriate.

2. Had the licensee not implemented timely and thorough corrective actions, a cited Severity Level IV Violation would be appropriate.

3. Had this resulted in a worker exposure above regulatory limits, consideration for a Level III Violation would be appropriate.

PLANT SUPPORT EXAMPLE 4:

TITLE: FAILURE TO FOLLOW EMERGENCY PLAN

Through a review of records, fire protection audits, and interviews with key individuals, it was determined that some fire drills had not been conducted during 1994. A further reviewer of 1994 fire protection audit results indicated that a similar problem had existed in 1993. Follow-up interviews indicated that during 1993 a problem with maintaining documentation of fire drill participation had occurred. Whereas, in 1994 not only did there appear to be a problem with maintenance of fire drill participation records but also in ensuring that all members of the fire brigades participated in at least two of the quarterly fire drills.

The inspectors verified that the licensee had conducted fire drills during the first and second quarters of 1995. However, because the intended corrective actions implemented in response to the 1994 audit findings were not effective, fire drills were missed in 1994. The inspectors considered the issue to be a weakness in the licensee's corrective action program. The failure to conduct required fired drills is a violation of regulatory requirements.

ENFORCEMENT DISCUSSION:

Safety Significance - MINOR VIOLATION

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	None - not more severe under reasonable and credible alternate conditions, not a TS LCO violation, safety barrier not affected, not in an unanalyzed condition, not outside the design basis of the plant, condition was covered by the plant's operating procedures, and not a condition that alone could have prevented fulfillment of the safety function.
Regulatory Concern:	None - not willful, no aggregation, not repetitive, and no failure to report.

ALTERNATE ANALYSIS:

1. Had this resulted from ineffective corrective actions from a previous violation, which was not the case above (licensee audit findings/corrective actions), this would appropriately be considered of regulatory concern (repetitive), and a Severity Level IV Violation would be appropriate.

2. Had this resulted from ineffective corrective actions from a previous violation, and was licensee identified and properly corrected, a NCV Violation would be appropriate.

PLANT SUPPORT EXAMPLE 5:

TITLE: INADEQUATE COMMUNICATIONS

On November 27, 1995, operators declared the Train A chiller inoperable after an auxiliary operator noted there was no observable oil level in its oil reservoir. Operators subsequently declared the chiller operable after adding 5 gallons of oil and performing the chiller surveillance test. The inspector reviewed the licensee's basis for operability and concluded that the procedure for operability determinations had not been implemented and found that the basis for operability had not been well established.

The site shift manager, shift supervisor, and the HVAC maintenance team leader discussed the operability of the Train A chiller. The licensee added 5 additional gallons of oil to the chiller and performed a chiller surveillance test. Maintenance logs identified that this addition brought the total oil in the chiller to approximately 32 gallons, 7 gallons above the limit established by engineering. Both the Train A chiller and auxiliary feedwater pump were declared operable at 6:55 a.m. The chiller was subsequently shutdown, placed in standby, and remained operable. On November 28, the HVAC maintenance engineer initiated a corrective action document and developed an action plan to determine why the chiller was losing oil from the reservoir.

On December 4, operations removed the Train A chiller from service and HVAC technicians replaced the rear motor seal o-ring as part of their corrective maintenance. The HVAC technicians determined that the o-ring had been damaged during the previous maintenance outage. The oil recovered from the chiller was approximately 37 gallons, 5 gallons more than had been recorded in maintenance logs. Following the maintenance activity, operations personnel tested the chiller for 4 hours. After the test showed no apparent oil leaks, operations personnel declared the chiller operable.

Assessment of Interim Actions

On January 18, 1996, the inspector met with the HVAC maintenance team, including the HVAC maintenance engineer, to discuss their basis for considering the chiller operable on November 27, 1995. The HVAC maintenance engineer had recognized that 32 gallons exceeded the established criteria and that the majority of the oil was in the refrigerant. The maintenance engineer stated that the primary concern was that, if the chiller operated in a full load condition, the oil return system would flood the oil reservoir. He noted that, without manual action to remove the recovered oil, there would be an increased risk of a chiller trip on compressor high bearing oil temperature.

The HVAC maintenance team stated that they had provided 21 hours of onsite coverage from November 27 through December 1, to be available if the Train A EC system was called upon, to prevent the chiller from tripping and maintain chiller operability. For the remainder of the time from December 2 through 4, the technicians were available by telephone and a team leader was also available on backshift.

The inspector subsequently reviewed the unit and shift technical advisor logs and observed that the log entries did not clearly establish that continued operability of the chiller depended on manual action by a HVAC maintenance technician. In addition, the inspector determined that the operations personnel had not recognized the fact that manual action was required by the HVAC technician to maintain operability.

Licensee procedures provided guidelines and instructions for evaluating the operability of a system when a degraded or nonconforming condition has been identified. The procedure provided several actions which must be met before taking credit for manual action. These actions were consistent with the guidance in NRC Generic Letter 91-18, concerning operability and included a 10 CFR 50.59 evaluation, written instructions that prescribe the manual actions, and ensuring that necessary communications are established. Operations did not implement the operability determination procedure, nor were any of the actions called out in the procedure documented prior to declaring the Train A chiller operable. The failure to follow the prescribed operability evaluation procedure is a violation.

Finally, the inspector questioned whether the licensee had developed a reasonable basis for considering the chiller operable on November 27. The licensee concurred that the operability determination process had not been implemented and the arguments to support operability had not been well developed. On February 2, 1996, the licensee presented a well developed basis for considering the chiller operable from November 27 through December 4, 1995. The inspector critically reviewed the licensee's determination and found the basis acceptable.

ENFORCEMENT DISCUSSION:

Safety Significance - MINOR VIOLATION

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	None - not more severe under reasonable and credible alternate conditions, not a TS LCO violation, safety barrier not affected, not in an unanalyzed condition, not outside the design basis of the plant, condition was covered by the plant's operating procedures, and not a condition that alone could have prevented fulfillment of the safety function.
Regulatory Concern:	None - not willful, no aggregation, not repetitive, and no failure to report.

ALTERNATE ANALYSIS:

1. Had it been determined that the chiller had actually been inoperable greater than the TS allowed outage time, a Severity Level IV Violation would be appropriate.

2. Had both chillers actually been inoperable due to an over-fill condition, such that the emergency chiller system would not have been able to perform its intended safety function to prevent or mitigate as serious safety event, consideration for a Severity Level III Violation would be appropriate.

MAINTENANCE EXAMPLE 1:

TITLE: FAILURE TO FOLLOW PROCEDURES

The violation is of concern because maintenance personnel commenced work on an incorrect valve after being cautioned to that effect by the NRC inspector. Furthermore, the maintenance Supervision failed to initiate a corrective action document to document the work on the wrong component so that the need for corrective action could be evaluated.

On August 16, 1995, the inspectors observed the replacement of an air start solenoid operated valve (SOV), which was designed to admit 250 psi starting air from the forward air receivers to the common starting air manifold on the diesel generator (DG). This repair activity was in response to a failure of the DG to start during a surveillance test.

The inspectors identified problems with this maintenance activity that were not typical of the observations during the past few months. Specifically, the inspectors observed a mechanic surveying the job site prior to receiving the work package. When questioned, the mechanic pointed out the components he would be working on. After the mechanic left, the inspectors took a closer look and found that the mechanic had incorrectly pointed to the rear air components, when the failure had occurred on the forward air subsystem. Subsequently, in the shop, the inspectors alerted the mechanic about pointing to the wrong valve. In response, the mechanic assured the inspectors that the written instructions would be followed. As the job was commencing, the inspectors observed the mechanics erroneously loosening the pilot air supply tubing fitting on the rear starting air valve. By the time the inspectors had reached the platform to challenge this activity, the mechanics had moved to the correct, forward air start SOV. The inspectors were concerned that the error occurred after alerting the mechanics about the possibility of working on the incorrect valve even though both valves were clearly labeled and the maintenance work order (MWO) was correct. The failure to follow the MWO is a violation of Technical Specification (Example 1).

The inspectors also noted that the licensee had not written a corrective action document to document this problem until prompted by the inspectors on August 18. The inspectors expressed concern to licensee management about plant staff not promptly identifying and documenting an error such as the above. The inspectors indicated that the licensee needed to know when unexpected work was performed on a safety-related structure, system, or component in order to evaluate the impact on plant safety. Also, the work, restoration, and any required retest needed to be documented prior to declaring the affected safety system operable. The inspectors noted that plant procedure titled, "Initiation and Processing of Condition Reports," required a corrective action document to be written when performing activities on the wrong equipment because of personnel error. The failure to follow this procedure is a violation of Technical Specification (Example 2).

ENFORCEMENT DISCUSSION:

Safety Significance - MINOR VIOLATION

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	None - not more severe under reasonable and credible alternate conditions, not a TS LCO violation, safety barrier not affected, not in an unanalyzed condition, not outside the design basis of the plant, condition was covered by the plant's operating procedures, and not a condition that alone could have prevented fulfillment of the safety function.
Regulatory Concern:	None - not willful, no aggregation, not repetitive, and no failure to report.

Note: This is a minor violation for failure to follow the maintenance job plan requirements. The diesel was inoperable at the time the work was performed, and the error by the mechanic had no impact on diesel operability. There was immediate identification and action by the foreman. The event was isolated, had no safety impact, and was promptly identified and corrected. This could potentially have been a Level IV violation if the work had been performed on the incorrect (operable) diesel , if the error had not been promptly identified and corrected, or if there was any indication of a programmatic breakdown.

ALTERNATE ANALYSIS:

1. Had the worker's actions actually resulted in an inoperable emergency diesel generator for a period greater than the TS allowed outage time, a Severity Level IV Violation would be appropriate.

2. Had the workers error occurred on the opposite operable emergency diesel generator, resulting in the emergency power system not being able to prevent or mitigate a serious safety event, consideration for a Severity Level III Violation would be appropriate.

MAINTENANCE EXAMPLE 2:

TITLE: FAILURE TO FOLLOW PROCEDURES - PREVENTIVE MAINTENANCE DEFERRAL

As of February 28, 1996, there were six out of a total of 1845 (0.33 percent) safety-related preventive maintenance tasks that were late. The preventive maintenance tasks were:

- Inspect and clean Component Cooling Water Heat Exchanger B - late January 12, 1996;
- Check tripping sequence of feeder breaker to Component Cooling Water Pump A - late October 27, 1995;
- Calibrate time delay relay of Component Cooling Water Pump A - Late July 1, 1995;
- Calibrate time delay relay of Component Cooling Water Pump C - late July 1, 1995;
- Sample outboard bearing oil of Motor-Driven Auxiliary Feedwater Pump B - late November 28, 1995;
- Inspect coupling and pins on Charging Pump A main lubricating pump - late December 31, 1995.

Additionally, there were nine out of a total of 3756 (0.24 percent) nonsafety-related preventive maintenance tasks that were late.

Administrative procedures described the required action when an extension of a preventive maintenance activity late date was necessary. The action entailed documenting the basis for the extension on a "Preventive Maintenance Deferral Notice" form. The procedure also required that Preventive Maintenance Deferral Notices be processed as Quality Assurance Records. The licensee failed to write Preventive Maintenance Deferral Notices for each of the above safety-related preventive maintenance activities. The failure to initiate Preventive Maintenance Deferral Notices for the above activities was a violation of Technical Specification 6.8.1 and plant procedures.

Although the number of past due preventive maintenance tasks was low, the inspectors identified that the licensee's control of the late safety-related preventive maintenance activities did not meet the requirements of administrative procedures.

Although the licensee's technical basis for not performing preventive maintenance in accordance with established schedules was weak in some cases, the inspectors had no immediate operability concerns. There were no known noncompliances with the Technical Specifications for any of the equipment listed above, no known current problems were evident, and no history of past problems appeared evident.

ENFORCEMENT DISCUSSION:

Safety Significance - MINOR VIOLATION

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	None - not more severe under reasonable and credible alternate conditions, not a TS LCO violation, safety barrier not affected, not in an unanalyzed condition, not outside the design basis of the plant, condition was covered by the plant's operating procedures, and not a condition that alone could have prevented fulfillment of the safety function.
Regulatory Concern:	None - not willful, no aggregation, not repetitive, and no failure to report.

ALTERNATE ANALYSIS:

1. Had the failures to perform PM actually resulted in inoperability of TS equipment for periods greater than the TS allowed outage times, a Severity Level IV Violation would be appropriate.

2. Had there been a past history (within two years) of TS related equipment problems related to preventive maintenance (PM) programmatic problems, a Severity Level IV Violation would be appropriate.

3. Had such a PM programmatic problem resulted in the a system not being able to prevent or mitigate a serious safety event, consideration for a Severity Level III Violation would be appropriate.

MAINTENANCE EXAMPLE 3:

TITLE: FAILURE TO FOLLOW PROCEDURES

The violation is of concern because it involves the inadvertent securing of the in-service residual heat removal pump which resulted in loss of core cooling during reactor shutdown, a serious safety concern. The NRC is concerned that the cause of the violation involved two failures by two members of operations staff to follow the appropriate procedure and that a contributing cause of the violation was the failure to conduct an adequate pretest briefing. While the NRC recognized the plant's efforts to improve procedural compliance, they remained concerned that the plant's efforts may not be fully effective.

On the evening of October 18, 1994, diesel generator (DG) testing per surveillance test procedure titled, "Diesel Generator 24-Hour Load Test," was performed which involved the demonstration of autostart and load transfer functions. The autostart portion of the test involved running the DG at full load for 1 hour or until operating temperature stabilized, unloading and securing the DG, opening the auxiliary power feeder breaker supplying the 4 kv bus associated with the DG being tested, and verifying that the DG autostarted and loaded onto the bus within 10 seconds. The load transfer portion of the test verified that breakers for 4 kv auto-connected loads closed onto the bus after the DG breaker closed.

A licensed operator was assigned to operate and align equipment per procedure, as required, during the test. A system engineer was assigned to the testing team to provide technical guidance if required during testing. Control room equipment alignments, required during the test procedure performance, were accomplished by the licensed operator with the surveillance procedure in hand. Changes in equipment lineups were communicated to the control operator.

In preparation for the autostart auto load test portion, the procedure specified alignment of Vital Bus H equipment. Systems and components affected by the loss of 4 kv Bus H power were required to be realigned, prior to de-energizing the bus, to ensure the test did not adversely impact plant operation. Step 12.3.1.e.4, stated, in part, that "The following equipment will not autostart in this test and must be shut down: a) RHR Pump No. 2 b) Containment Spray Pump No. 2 c) SIS Pump No. 2." This step was initialed by the operator as complete in error, since the RHR pump was not secured. Immediately following Step 12.3.1.e.4, the procedure contained a note which explains that these 4 kv bus H loads are secured because the load shed signal, which is generated during the test, will trip the breakers supplying power to the pumps if they are in service. The note additionally cautioned that "if the autotransfer signal cannot be reset these pumps can not be manually restarted" and concludes with the statement that "these pumps should not be in service to support any critical plant operations."

At a subsequent point in the procedure, prior to securing the power to 4 kv Buss H, Step 12.3.2.g.1 required that a review be performed to verify that the equipment lost due to the transfer will not place the plant in a Technical Specification (TS) action statement. The step was

initialed as being completed by the operator; however, the operator did not identify that the operating RHR pump was powered from 4 kv Bus H and that securing power to 4 kv Bus H would result in the entry into a TS action statement. TS requires that one RHR train be operable and in operation when in Mode 5 with the reactor coolant loops filled.

Prior to securing the auxiliary power feed to the bus, the control operator discussed the sequence of events for de-energizing the bus to the autostarting of the loads with the operator. The shift foreman was informed when the portion of the test which de-energized the bus commenced. The control operator scanned the control board to determine which loads would be lost during the transfer. During the scan, the control operator did not identify that the running RHR pump would be stripped from the bus during testing. Caution tags were hanging on the control board which obscured the control operator's view of color coded labeling indicating equipment power sources; however, the tags did not obscure RHR Pump No. 2 running light indication. The control operator did not recognize that the running RHR pump would be affected by the surveillance.

The two instances where the operator failed to follow the instruction of the surveillance test procedure are examples of failure to follow procedural requirements and are a violation of TS 6.8.1. TS 6.8.1 requires that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, including procedures covering the performance of surveillance tests on emergency power systems.

ENFORCEMENT DISCUSSION:

1. Safety Significance - LEVEL IV VIOLATION

Actual:	Yes - loss of safety function occurred; inadvertent securing of the in-service residual heat removal pump resulted in temporary loss of core cooling during reactor shutdown.
Potential:	None - not more severe under reasonable and credible alternate conditions, not a TS LCO violation, safety barrier not affected, not in an unanalyzed condition, not outside the design basis of the plant, condition was covered by the plant's operating procedures, and not a condition that alone could have prevented fulfillment of the safety function.
Regulatory Concern:	None - not willful, no aggregation, not repetitive, and no failure to report.

2. Mitigation - No, retain as a CITED LEVEL IV VIOLATION

Licensee-identified:	No - identified through an event; involved two failures by two members of operations staff to follow the appropriate procedure, and a contributing cause of the violation was the failure to conduct an adequate pretest briefing.
Reasonably preventable:	No - could not have reasonably been expected to have been prevented by the licensee's corrective action for a previous violation or a previous licensee finding that occurred within the past two years.
Corrected:	Yes.
Willful:	No.

ALTERNATE ANALYSIS:

1. Had the second operator caught the first operator's error preventing the inadvertent loss of core cooling, a Minor Violation would be appropriate.

2. Had the violation been credited as licensee-identified, e.g., a single operator error caused the event and the licensee would not have reasonably caught the error, the violation could be mitigated to a NCV.

3. Had the two examples been determined to collectively represent a potentially significant lack of attention or carelessness toward licensed responsibilities, consideration for a Severity Level III Violation would be appropriate.

MAINTENANCE EXAMPLE 4:

TITLE: EMERGENCY GENERATOR INTAKE VENTS COVERED

This violation is of concern because painting and masking activities affecting the operability of a diesel generator were implemented without the knowledge of the operations shift superintendent.

On August 31, 1995, during a plant tour, the inspectors found the standby generator cooling air intakes and outlets had been completely covered with plastic sheeting and masking tape. The painters were preparing the DG for painting and had installed the plastic to protect the generator internals from paint over spray. The inspectors immediately contacted the control room and noted that the control room operators considered the DG to be operable but were not aware that the generator cooling air vents were totally covered. Immediate corrective action included removing all masking and terminating painting of operable safety-related components until the controls and precautions for painting could be reevaluated and corrected.

The inspectors concluded that the safety significance of the specific violation was low because the DG probably could have been restored to an operable status by the person assigned to remove the covering if the DG started. The principal concern discussed with the licensee was that plant staff working on and around safety systems and components and impacting operability failed to inform the operators so that appropriate decisions could be made consistent with policies, procedures and the operating license.

The failure to establish procedural guidance on taking manual actions to sustain operability of the DG was contrary to operations policy, and is a violation of Technical Specifications.

ENFORCEMENT DISCUSSION:

1. Safety Significance - LEVEL IV VIOLATION

Actual:	None - no overexposure, offsite release, or loss of safety function occurred.
Potential:	Yes - more severe under reasonable and credible alternate conditions; the painting foreman had stationed an individual by the generator to remove the cover in the event that the diesel started. However, this was not communicated to the Operations Department nor had it been evaluated for operability per the requirements of site procedures.
Regulatory Concern:	None - not willful, no aggregation, not repetitive, and no failure to report.

2. Mitigation - No, retain as a CITED LEVEL IV VIOLATION

Licensee-identified:	No.
Reasonably preventable:	No - could not have reasonably been expected to have been prevented by the licensee's corrective action for a previous violation or a previous licensee finding that occurred within the past two years.
Corrected:	Yes.
Willful:	No.

ALTERNATE ANALYSIS:

1. Had this violation been licensee-identified and corrected, it could be mitigated to a NCV.

2. Had the control room operators been fully aware of the compensatory actions required to ensure continued diesel generator operability, a Minor Violation would be appropriate.

3. Had this occurred on the emergency diesel generator while the other was inoperable (system degraded to the extent a detailed evaluation would be required to determine operability), consideration for a Level III Violation would be appropriate.