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Docket: NRC-2018-0201

Elimination of Immediate Notification Requirements for Non-Emergency Events

Comment On: NRC-2018-0201-0002

Elimination of Immediate Notification Requirements for Non-Emergency Events

Document: NRC-2018-0201-DRAFT-0010

Comment on FR Doc # 2018-25273

Submitter Information

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General Comment

I oppose the Nuclear Energy Institutes petition for rulemaking that would eliminate 10 CFR 50.72 immediate notification requirements for non-emergency events. Furthermore, I recommend 10 CFR 50.72 be amended to change non-emergency events to significant events.

Attachments

Magnuson Public Comment Regarding Petition to Eliminate 10 CFR 50.72 Non-Emergency Notification Requirements

February 3, 2019

Docket ID NRC-2018-0201

RE: Nuclear Energy Institute's Petition for the Elimination of 10 CFR 50.72 Immediate Notification Requirements for Non-Emergency Events

Dear NRC Staff and Fellow Members of the Public:

I oppose the Nuclear Energy Institute's petition for rulemaking that would eliminate 10 CFR 50.72 immediate notification requirements for non-emergency events. Furthermore, I recommend 10 CFR 50.72 be amended to change "non-emergency events" to "significant events."

In consideration of this proposed rulemaking, I believe it is important to understand the nature of non-emergency events that require immediate notifications under 10 CFR 50.72; the differences between emergency and non-emergency events and; the basis and background of these immediate notification requirements. The Nuclear Energy Institute (NEI), the Nuclear Regulatory Commission (NRC), and nuclear power plant owners and operators all have this understanding. For those that might not, or need to be reminded, Revision 1 of NUREG-1022 "Event Report Guidelines 10 CFR 50.72 and 50.73" best explains the purpose, use and importance of immediate notification requirements for non-emergency events.

Even though parts of NUREG-1022, Revision 1 are outdated, it remains relevant to this proposed rulemaking. It provides answers to the five specific questions proposed by the NRC staff regarding public comments on this matter. Furthermore, when reviewed together, I believe it rebuts NEI's petition -- better than I could and with more authority and credibility. As such, I request this review be completed prior to any rulemaking. I have copied excerpts from it below, with the intent it be considered part of my public comments.

Notwithstanding, please consider these additional observations and insights:

In their petition, NEI asserts "10 CFR 50.72 non-emergency notifications distract key plant staff when they are addressing events."

This assertion appears fundamentally flawed. If 4-hour or 8-hour notifications truly distract key staff when they are addressing non-emergency events, what assurance is there that licensees can make 1-hour notifications required by 10 CFR 50.72 without distracting key plant staff when they are addressing emergency events with minimum staffing? What assurance is there that licensees can comply with 10 CFR 50.47 "Emergency Plans" without distracting key staff when they are addressing emergency events. And, are Licensees in compliance with 10 CFR 50.47 and Appendix E to Part 50 "Emergency Planning and Preparedness for Production and Utilization Facilities"?

In June 2011, NEI published "Assessment of On-Shift Emergency Response Organization Staffing and Capabilities" (NEI 10-05, Rev. 0) which describes methods that may be used to comply with 10 CFR 50.47, Appendix E to Part 50 and other requirements that relate to 10 CFR 50.72. As

such, NEI may be the foremost industry authority on this subject. Given this, and their stature in the nuclear power industry, NEI's assertion that *"10 CFR 50.72 non-emergency notifications distract key plant staff when they are addressing events"* is problematic.

If accurate, this assertion by NEI has significant implications outside the scope of these public comments that should require prompt evaluation by the NRC to determine if licensees are capable of making emergency notifications without distracting key plant staff when they are addressing emergency events as required by rule and regulations.

If it is not accurate, it should be retracted immediately and evaluated accordingly.

In their petition, NEI asserts "10 CFR 50.72 non-emergency notifications are contrary to the principles of good regulation, contrary to the best interests of the public, and contrary to the stated purpose of the regulation"

NRC Inspection Manual Part 9900: Operation – Safety and Compliance:

"Safety is the fundamental regulatory objective, and compliance with NRC requirements plays a fundamental role in giving the NRC confidence that safety is being maintained. NRC requirements, including technical specifications, other license conditions, orders, and regulations, have been designed to ensure adequate protection--which corresponds to "no undue risk to public health and safety"--through acceptable design, construction, operation, maintenance, modification, and quality assurance measures."

"Adequate protection is presumptively assured by compliance with NRC requirements."

Immediate notification of non-emergency events described in NUREG-1022, Revision 3 (current) specifically apply to the design, construction, operation, maintenance, modification, or quality assurance measures of nuclear power plants --that are unacceptable and non-compliant with NRC requirements. Because these events explicitly affect the health and safety of the public, the requirements for their immediate notification would, obviously, be in the best interest of the public. NEI's assertions to the contrary are challenged.

NEI states, *"Hundreds of 10 CFR 50.72 notifications are submitted to the NRC every year by NEI members who are nuclear power reactor licensees."* As can be concluded, this means hundreds of events occur every year at nuclear power plants that pose *"undue [unacceptable] risk to public health and safety."*

NUREG-0578, TMI-2 Lessons Learned TASK Force Status Report and Short-Term Recommendations:

"The accident at TMI-2 emphasized a previously recognized need to significantly increase operations reliability. The undetected existence of closed isolation valves in the auxiliary feedwater system is exemplary of a kind of human error in reactor operations that must be prevented. Among the many human or operational errors annually reported by the 70 plants now in operation, there are only a few comparable in significance to the defeat of

an entire safety function, that is, loss of auxiliary feedwater. However, the fact that operations errors of this magnitude continue to occur at other plants emphasizes the need for improvement. The Task Force recommends prompt action to significantly change the trend of reactor operating experience in this area. [emphasis added]

“We believe there are two basic approaches for the improvement of reliability of operations: (a) find new ways to effectively require it of the licensees (the requirements have existed, but the implementation has been unsatisfactory), or (b) find new ways to assure it by more effective review and inspection by the NRC staff.”

“The Task Force recommends the first approach of finding a new way to assure that licensees effectively meet their primary responsibility for reliability of safe operations. To this end we recommend the following immediate rulemaking action, having considered several threshold levels for its actuation and, several alternatives for effecting the NRC decisions it would require.

“Recommendation: Require that the Technical Specifications for each reactor provide that the reactor be placed in a hot shutdown condition within 8 hours and in a cold shutdown condition by the licensee within 24 hours of any time that it is found to be or have been in operation with a complete loss of safety function (e.g., loss-of emergency feedwater, high-pressure ECCS, low-pressure ECCS, containment, emergency power or other prescribed safety function). Require that an assessment of the cause of the loss of safety function be made (e.g.; maintenance, operations error) and that an evaluation of alternative corrective actions be made and documented by the licensee. Require that the senior corporate officer responsible for operation of the facility present the licensee's recommendation for corrective action and evaluation of the alternatives at a public meeting with senior NRC officials. Require that the senior NRC officials issue their decision at that public meeting, or a subsequent public meeting if time is required for staff evaluation, concerning the adequacy of the changes to improve operational reliability proposed by the utility. Allow the facility to return to power only after NRC approval of the changes proposed by the licensee.”

This adamant recommendation from the TMI-2 Lessons Learned Task Force, “an interdisciplinary team of engineers and scientists from various offices of the U.S. Nuclear Regulatory Commission,” was never implemented; nevertheless, it captures the risks and significance of a complete loss of safety function -a non-emergency event. This non-emergency event classification requires immediate (8-hour) notification under 10 CFR 50.72(b)(3):

(v) Any event or condition that at the time of discovery 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.

(vi) Events covered in paragraph (b)(3)(v) of this section may include one or more procedural errors, equipment failures, and/or discovery of design, analysis, fabrication, construction, and/or procedural inadequacies.

Given, "Hundreds of 10 CFR 50.72 notifications are submitted to the NRC every year by NEI members who are nuclear power reactor licensees," there are, undoubtedly, still too many events that cause a complete loss of safety function. This concern, identified by the TMI-2 Lessons Learned Task Force in 1979, remains today; moreover, NEI's petition intends to obscure it.

Excerpts from NUREG-1022, Revision 1 are copied below.

For questions, please contact me at magnuson28@msn.com.

Sincerely,

Brian Magnuson

Lead Emergency Management Specialist, Licensed Senior Reactor Operator (inactive), and former Operations Shift Manager at Exelon Corporation --acting expressly as a member of the public.

NUREG-1022 Event Report Guidelines 10 CFR 50.72 and 50.73 (Rev. 1)

Two of the many elements contributing to the safety of nuclear power are emergency response and the feedback of operating experience into plant operations. These are achieved partly by the licensee event reporting requirements of Title 10 of the Code of Federal Regulations, Part 50, Sections 50.72 and 50.73 (10 CFR 50.72 and 50.73), which became effective on January 1, 1984.

The information reported under 10 CFR 50.72 and 50.73 is used by the NRC staff in responding to emergencies, monitoring ongoing events, confirming licensing bases, studying potentially generic safety problems, assessing trends and patterns of operational experience, monitoring performance, identifying precursors of more significant events, and providing operational experience to the industry.

I INTRODUCTION

This document provides guidance on the reporting requirements of Title 10 of the Code of Federal Regulations, Part 50, Sections 50.72 and 50.73 (10 CFR 50.72 and 10 CFR 50.73). While these reporting requirements range from immediate, 1-hour, and 4-hour verbal notifications to 30-day written reports, covering a broad spectrum of events from emergencies to generic component level deficiencies, the NRC wishes to emphasize that reporting requirements should

not interfere with ensuring the safe operation of a nuclear power plant. Licensees' immediate attention must always be given to operational safety concerns. [emphasis added]

1.1 Background

The origins of 10 CFR 50.72 and 50.73 are described in Appendix A to this report. In 1983, partially in response to lessons from the Three Mile Island accident, the U.S. Nuclear Regulatory Commission (NRC) revised its immediate notification requirements via the emergency notification system (ENS) in 10 CFR 50.72 and modified and codified its written licensee event report (LER) system requirements in 10 CFR 50.73. The revision of 10 CFR 50.72 and the new 10 CFR 50.73 became effective on January 1, 1984. Together, they specify the types of events and conditions reportable to the NRC for emergency response and identifying plant-specific and generic safety issues.

The two rules have identical reporting thresholds and similar language whenever possible. They are complementary and of equal importance, with necessary dissimilarities in reporting requirements to meet their different purposes, as illustrated in this report, Section 1, Table 1, and Section 3 text.

Section 50.72 is structured to provide telephone notification of reportable events to the NRC Operations Center within a time frame established by the relative importance of the events. Events are categorized as either emergencies (immediate notifications, but no later than 1 hour) or non emergencies. The latter is further categorized into 1-hour and 4-hour notifications; nonemergency events requiring 4-hour notifications generally have slightly less urgency and safety significance than those requiring 1-hour notifications. Immediate telephone notification to the NRC Operations Center of declared emergencies is necessary so the Commission may immediately respond. Reporting of non-emergency events and conditions is necessary to permit timely NRC followup via event monitoring, special inspections, generic communications, or resolution of public or media concerns. [emphasis added]

Section 50.73 requires written LERs to be submitted on reportable events within 30 days of their occurrence, after a thorough analysis of the event, its root causes, safety assessments, and corrective actions are available, to permit NRC engineering analyses and studies.

Some reporting guidance for 10 CFR 50.72 and 50.73 was contained in the Statements of Considerations for the rules. More detailed guidelines and examples of reportable events were developed and issued in NUREG-1022 and its Supplements 1 and 2. The intent of these publications was to achieve complete reporting of specified events and conditions. Subsequently, additional interpretations and directions on certain subjects have been issued in NRC bulletins, information notices, and generic letters.

1.2 Reporting Guidelines and Industry Experience

Event reporting under these rules since 1984 has contributed significantly to focusing the attention of the NRC and the nuclear industry on the lessons learned from operating experience to improve reactor safety. In the mid-1980's, decreasing trends in the number of reactor

transients and in the number of significant events and improvements in reactor safety system performance were noticeable. Since 1989, these trends have leveled off as fewer plants were on a learning curve and industry completed improvements that have a high return in safety performance. While the more obvious lessons have been extracted from operating experience, more analyses need to be performed and new efforts need to be developed to extract further lessons from operational data.

The operational experience submitted in accordance with 10 CFR 50.72 and 50.73 is publicly available and has been used by other organizations in ways that are most often beneficial to nuclear safety. However, uses in areas that were unintended, such as in prudence hearings, in statistical presentations and comparisons of reporting rates without regard to or inclusion of a technical analysis of the safety significance of the events, can lead to unwarranted impressions of safety performance. In such uses, there has been a tendency to only count the number of reported events without assessing their individual safety significance. Such misuses could result in licensees adopting a more restrictive reporting threshold in order to reduce the number of reportable events, although the Commission's requirement for a low threshold has not changed. This can be counterproductive to the purpose of these rules.

Experience has shown that the threshold of reporting, as well as other areas of the reporting rules, has not been consistently implemented. Some problems have occurred in such areas as interpretation of the guidelines and definitions, timeliness of reporting, reporting of generic concerns, engineering judgment, and reporting of deficiencies found during design reviews. These problems, as well as a 1990 survey on the effect of NRC regulation on nuclear power plant activities and subsequent event reporting workshops, identified the need for further guidelines on the two reporting rules.

APPENDIX A

HISTORICAL PERSPECTIVE ON EVENT REPORTING

Origin of 10 CFR 50.72 and 50.73

In December 1980, the U.S. Nuclear Regulatory Commission (NRC) determined that requirements for reporting operational experience data needed major revision and approved the development of an integrated operational experience reporting (IOER) system. The IOER system was to combine, modify, and make mandatory the existing licensee event report (LER) system and the industry supported, voluntary nuclear plant reliability data system (NPRDS). The NPRDS contains both engineering and failure data submitted by nuclear power plant licensees on specified plant components and systems. An advance notice of proposed rulemaking concerning the IOER system was published on January 15, 1981 (46 FR 3541).

On June 8, 1981, the Institute of Nuclear Power Operations (INPO) stated it would assume responsibility for managing and funding the NPRDS and would audit member utilities to assess the adequacy of their participation in the NPRDS. The NRC believed the NPRDS would provide the necessary operating experience data and further development of the IOER system was discontinued.

On May 6, 1982, the NRC published a notice of proposed rulemaking in the Federal Register (47 FR 19543) that would modify and codify the existing LER system. On July 26, 1983, after consideration of public comments, the NRC published in the Federal Register (48 FR 33850) a final rule under 10 CFR 50.73, which modified and codified the LER system and became effective on January 1, 1984. In the rule, the Commission clearly indicated that the NPRDS is a vital adjunct to 10 CFR 50.73 for component data V) The purpose of the rule was to standardize the reporting requirements for all nuclear power plant licensees, to eliminate reporting events of low individual significance, and to require more thorough documentation and analyses of reported events. Licensees are to submit such reports within 30 days of discovery. The revised system also permits licensees to use the LER procedures for various other reports required under specific sections of 10 CFR Part 20 and Part 50.

Also, effective January 1, 1984, the NRC amended its immediate notification requirements of significant events at operating nuclear power reactors (10 CFR 50.72) to clarify reporting criteria and to require early reports only on those matters of value to the exercise of the Commission's responsibilities. The amended rule was published in the Federal Register (48 FR 39039) on August 29, 1983, and corrections to the rule (48 FR 40882) were published on September 12, 1983. Among the changes made were the use of terminology, phrasing, and reporting thresholds similar to those of 10 CFR 50.73 whenever possible. Therefore, most events reported under 10 CFR 50.72 also will require an in-depth follow up report under 10 CFR 50.73.

NRC Workshops and Event Reporting Guidelines

In September 1983, the NRC staff published NUREG-1022, "Licensee Event Reporting System," to provide supporting information and guidelines to persons responsible for the preparation and review of LERs. NUREG-1022 includes (1) a brief description of how the NRC analyzes LERs, (2) a restatement of the guidance contained in the Statements of Consideration that accompanied the publication of the LER rule, (3) a set of examples of potentially reportable events with staff comments on the actual reportability of each event, (4) guidelines on how to prepare an LER and use the LER form, and (5) guidelines on submittal of LERs.

Between October 25 and November 16, 1983, the NRC held five regional workshops to discuss the new LER rule (10 CFR 50.73) and the revised emergency notification rule (10 CFR 50.72). Supplement I to NUREG-1022 was published in February 1984 to provide a summary of answers to questions asked during the workshops.

Supplement 2 to NUREG-1022, issued in September 1985, contained evaluations of the quality and completeness of an industry-wide sample of 415 LERs. The study was performed for the NRC Office for Analysis and Evaluation of Operational Data (AEOD) by EG&G, Inc., at Idaho National Engineering Laboratory. The report identifies deficiencies in LER content and recommends corrective actions.

NRC Regulatory Impact Study (Draft NUREG-1395)

In the fall of 1989, the NRC staff surveyed personnel from 13 nuclear power utilities to obtain their views on the potential effect that NRC regulatory activities were having on the safe operation of their nuclear plants. This survey was documented in NUREG-1395, "Industry

Perceptions of the Impact of the U.S. Nuclear Regulatory Commission on Nuclear Power Plant Activities," Draft, March 1990. Section 8, "Reporting Events," of NUREG-1395 included industry comments on reporting required by 10 CFR 50.72 and 50.73.

Specific industry concerns included the need for reporting

- * inadvertent actuations of engineered safety feature (ESF) equipment*
- * actuation of ESF equipment involving no safety significance*
- * plant shutdowns required by plant technical specifications even though the action statements of the technical specifications were being met*
- * grass fires not affecting plant safety*
- * radiation exposures in excess of regulatory limits*

Amendment of 10 CFR 50.72 and 50.73

On September 10, 1992 the NRC published a final rule in the Federal Register (57 FR 41373) to eliminate the requirement to report certain events which had been determined to be of little or no safety significance. These were events that resulted in invalid actuation of several specific engineered safety features.

Other amendments have been made from time to time in order to make these sections conform with changes in other sections. For example, the requirements for reporting releases of radioactive material have been amended to conform with changes to 10 CFR Part 20.

Revision of NUREG-1022

Partially in response to the industry's concerns regarding event reporting described in NUREG1395, the NRC sponsored four additional regional workshops on event reporting during September to November 1990.

The NRC staff determined that additional clarification was needed to further improve the usefulness, quality, and threshold of reporting by the licensees under 10 CFR 50.72 and 50.73. Therefore, a draft of Revision 1, to NUREG-1022, to encompass and supersede NUREG-1022 and Supplements I and 2, was published for comment in September 1991. In May 1992 and again in May 1993, public meetings were held to discuss the issues raised by public comments. After addressing these issues, a second draft was published for comment in February 1994.

The intent of this Revision 1 is to clarify reporting requirements of 10 CFR 50.72 and 50.73 without changing those reporting requirements. Accordingly, most of the guidance is not new or different from generic reporting guidance previously published in the statements of considerations for the rules, NUREG-1022, its Supplements I and 2, or generic correspondence such as generic letters and information notices. This final version of Revision 1 has been modified as appropriate to address public comments on the second draft that was published for comment

in February 1994. Further, at the staff's initiative the instructions for preparation of LERs were augmented to address consistency of information provided in LERs which is used to understand events, as discussed in Sections 2.8 and 5.

APPENDIX B

EMERGENCY NOTIFICATION SYSTEM PROCESS

NRC Prompt Response Personnel

Headquarters Operations Officer

The U.S. Nuclear Regulatory Commission (NRC) Operations Center is continuously staffed with an NRC headquarters operations officer (HOO), who holds a degree in engineering and works for the Office for Analysis and Evaluation of Operational Data (AEOD). HOOs are trained to receive licensee notifications via the emergency notification system (ENS) made under Title 10 of the Code of Federal Regulations (10 CFR) Section 50.72. In addition, they are trained to receive materials, security or transportation events, as well as inquiries from the public or media. A second HOO is usually on duty during normal working hours to help with the more frequent communications experienced during the work day.

Each HOO has previous nuclear experience and receives extensive classroom and simulator training on both boiling-water and pressurized-water reactor systems at the NRC Technical Training Center.

Although HOOs have a good general understanding of nuclear power plants, they do not have expert knowledge of each specific plant. The HOOs ask questions and rely on the licensees to explain plant-specific details, terms, and the limiting conditions for operation of related technical specifications, to ensure they understand the significance of the event and are able to answer pertinent questions. The HOOs will attempt to obtain all of the details of the event that bear on its safety significance, even if those details would not otherwise be reportable.

The HOO determines, by procedure, how quickly the ENS event information needs to be disseminated to various NRC officials and other Federal agencies and prepares a written report of the oral ENS notification (ENS Event Notification Report) for electronic distribution to the NRC Office of Nuclear Reactor Regulation (NRR), NRC regional offices and the Institute of Nuclear Power Operations, by 7:30 a.m. each weekday morning.

Emergency Officer

If an emergency is declared or if it appears that the event may have significant plant-specific or generic interest to the NRC, the HOO notifies the emergency officer (EO). The EO is assigned on a weekly rotation from NRC staff members of the Senior Executive Service, and is on call 24 hours per day. These are typically NRR division directors, assistant division directors, or branch chiefs, who are responsible for the NRC response to an event. The EO decides which other NRC managers should be informed to participate in responding to the event. The EO also participates in deciding whether the NRC Operations Center and/or the applicable NRC regional incident response center will be partially or fully staffed to continuously monitor the event.

Regional Duty Officer

The HOO promptly informs the regional duty officer (RDO) of any ENS notification affecting the RDO's NRC region. The RDO, who is a senior NRC employee (typically a branch chief or division director) in the applicable NRC region, is assigned a weekly rotation and is on call 24 hours per day. The RDO informs the responsible NRC section chief and other NRC staff, as needed. The NRC regional staff follow up on the plant-specific aspects of each event through the responsible section chief, resident inspectors, and other NRC managers or technical experts, as needed.

Resident Inspector

If the safety significance of an event warrants or if the HOO can not obtain a clear understanding of an event, the RDO may request a resident inspector to immediately investigate, monitor, and report back to the NRC region and headquarters on the situation.

Licensees are encouraged to work with a resident inspector if they have a question regarding the reportability of an issue. If the resident inspector cannot provide guidance, he or she can direct the licensee through the region to headquarters for a more definitive discussion. The resident inspector will not make the decision, but can advise what the regulations require. The resident inspector should be informed about an event whenever an ENS notification is made.

The NRC relies on the continuously staffed NRC Operations Center, not the resident inspector, to notify the appropriate NRC staff of a reportable event.

NRC Response to ENS Notifications

NRC Response Options

There is a wide range of typical NRC headquarters and region responses to an ENS notification, depending on the safety significance of the event, including:

- * The NRC Operations Center and the NRC regional incident response center may be fully activated and a site team sent to the plant.*
- * Specific NRC staff may monitor the progress of the event from the NRC Operations Center and/or regional incident response center and an NRC team may be sent to the plant.*
- * A resident inspector may be requested to immediately investigate, monitor, and report back to the NRC region and/or headquarters.*
- * Conference calls among NRC headquarters, region, and licensee management may be established.*
- " The EO, RDO, and HOO may follow the progress of the event and request specific information from the licensee on a periodic basis until the plant is in a safe condition.*
- * The RDO may receive the notification and contact the resident inspector for additional information.*

Additional NRC Operating Event Review

Each working day the NRR Events Assessment and Generic Communications Branch (PECB) and the AEOD Reactor Analysis Branch (RAB) obtain copies of notifications of events that were received in the NRC Operations Center since the beginning of the previous working day. Copies of the daily report from each regional office also are obtained. These reports present the results of the regional offices' review of events occurring within the region since the previous working day, regardless of whether licensees have submitted notifications under 10 CFR 50.72.

Each working day PECB and RAB personnel screen the notifications and regional daily reports to identify events that are potentially significant. A telephone conference follows at a preset time in the morning among representatives of PECB, RAB, the NRC Operations Center, and others. The conference call is made to discuss the significance of the events and identify specific events for further assessment. If an assessment is needed, engineers are assigned to determine what happened during the event, what caused the event, what the consequences might be, what corrective or preventive action is being taken, and whether that action is sufficient. If the event is still ongoing, then the engineer follows its development.

During assessment of the event, the assigned engineer determines whether the event is generic, significant, or both. The event is generic if other nuclear power plants have the potential for occurrence of a similar event. Searches of plant operational experience data bases may be performed by RAB personnel to identify similar occurrences and assess generic applicability. The event is significant if any of the following occurred:

**potential or actual degradation occurred in safety-related equipment or structures, fuel integrity, the primary coolant pressure boundary, or containment*

** release of radioactivity (in excess of 10 CFR Part 20 limits) occurred*

** the plant was operated outside technical specification limits*

**a scram with complications occurred*

**other conditions warranted attention by NRC*

If the event is classified as significant, senior NRC management are informed at the next weekly events briefing meeting. Briefing information, including event summaries and diagrams, are placed in the Public Document Room (PDR). The event also is entered into the PECB significant event tracking system. Each quarter the significant events are compiled and published in the NRC performance indicator report ("Performance Indicators for Operating Commercial Nuclear Power Reactors," issued by AEOD and available in the NRC PDR).

Additional event followup actions performed by NRR, the appropriate NRC regional office, and AEOD personnel may include consulting with the Executive Director for Operations in the selection of an incident investigation team (IIT), participating in the decision to dispatch an augmented inspection team (AIT) to the site and in the selection of the team members, or performing a human performance evaluation at the plant. The appropriate NRC regional office has the direct responsibility for routine followup and inspection related to reportable events.

Depending on the number or types of event notifications by licensees, NRR also may issue NRC generic letters, bulletins, and information notices.

APPENDIX C

LICENSEE EVENT REPORT REVIEW PROGRAMS

Title 10 of the Code of Federal Regulations (10 CFR) Section 50.73 specifies that licensee event reports (LERs) shall include a detailed narrative description of reportable operating experience, including safety significant and potentially safety significant events and conditions. By describing in detail the events or conditions required to be reported, LERs provide information for detailed studies of events or conditions that might affect the health and safety of the public.

Variations in LER counts from plant to plant can result from numerous factors, only one of which is an actual difference in safety performance. Thus, the number of LERs submitted by a plant should not be used as a measure of the plant's safety performance.

In addition to prompt followup to ENS notifications described in Appendix B, longer-term followup of licensee events is conducted using the LER information. The appropriate U.S. Nuclear Regulatory Commission (NRC) regional office conducts plant-specific followup, the Office of Nuclear Reactor Regulation (NRR) conducts plant-specific and generic reviews, and the Office for Analysis and Evaluation of Operational Data (AEOD) and its contracted national laboratories, screen, classify, categorize, trend, assess, and store the data for each LER. Those events and conditions, both plant-specific and generic, that appear to be important to safety are further analyzed or evaluated. From this review process, the NRC determines further actions such as (1) a special study initiated to propose revisions to regulatory programs, (2) reporting as an abnormal occurrence to Congress, or (3) dissemination to the U. S. nuclear power industry through generic communications and to the international community through the Nuclear Energy Agency (NEA). The NEA is part of the Organization for Economic Cooperation and Development and gathers information from its member countries on the operating experience of commercial nuclear power plants worldwide.

Several fundamental objectives associated with the LER analysis process are

- * to identify and quantify events and conditions that are precursors to potential severe core damage*
- * to discover emerging trends or patterns of potential safety significance*
- * to identify events that are important to safety and their associated safety concerns and root causes and to determine the adequacy of corrective actions taken to address the safety concerns*
- * to assess the generic applicability of events*

A precursor to potential severe core damage is an event or condition that could have been serious if plant conditions, personnel action, or the extent of equipment failure or faulting had been slightly different than that which occurred.

An analysis of trends and patterns in operational experience identifies repetitive events and failures and searches past operating history for similar events and failures to determine if the frequency of such events or failures is significant enough to be a cause for concern. When appropriate, an NRC bulletin or information notice is issued or a generic study initiated to focus on the nature, cause, consequences, and possible corrective actions of such a situation. Trends and patterns analysis usually applies to events and conditions that individually are of low safety significance but that become a safety significant factor because of repetition or, more accurately, the frequency of occurrence.

AEOD studies of events that are important to safety are documented in the following reports:

** Case study reports document substantive, in-depth analyses of safety issues and the bases for AEOD recommendations for regulatory or industry actions.*

** Special study reports document accelerated assessments of significant operating events and contain recommendations for remedial actions, if appropriate.*

** Engineering evaluation reports document assessments of significant operating events and contain suggestions for remedial actions, if appropriate.*

** Technical review reports document studies of issues that were determined to have little safety significance.*

AEOD uses the sequence coding and search system (SCSS) data base for storage and retrieval of LER data. This system, developed in the early 1980's and maintained under contract at the Oak Ridge National Laboratory, Oak Ridge, Tennessee, contains an average of 150 items of information in its data base for each LER submitted since 1980.

AEOD uses LER data from the SCSS data base to support NRC activities such as plant diagnostic evaluations, NRC senior management meetings, and performance indicators. The SCSS data base also is a primary source of information for AEOD studies. In addition, NRC's Office of Nuclear Regulation, Office of Nuclear Regulatory Research, and regional offices use the SCSS as a source of information on operating experience.

AEOD also maintains LER information in the trends and patterns data base at Idaho National Engineering and Environmental Laboratory (INEEL). This data base supports such specific AEOD studies as those covering performance indicator data for reactor trips, safety system actuations, and safety system failures. The INEL data base also is used to calculate forced outage rates and equipment-forced outages per 1000 critical hours, as well as to support the preparation of Commission site visit briefing packages, special studies, and the evaluations of selected plants.

The information from LERs is widely used within the nuclear industry, both nationally and internationally. For example, the industry's Institute of Nuclear Power Operation (INPO) uses LERs as a basis for providing operational safety experience feedback data to individual utilities

through such documents as significant operating experience reports, significant event reports, significant event notifications, and operations and maintenance reminders. U.S. vendors and nuclear steam system suppliers, as well as other countries and international organizations, use LER data as a source of operational experience data.

End