

Reporting Requirements for Nonemergency Events at Nuclear Power Plants

RIN Number: 3150-AK71

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Regulatory Basis



November 2022

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EXECUTIVE SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) is considering updating its regulations for nonemergency event notifications in Section 50.72, “Immediate notification requirements for operating nuclear power reactors,” under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, “Domestic Licensing of Production and Utilization Facilities.” The NRC staff has prepared this regulatory basis to identify the regulatory issue, the alternatives available to address the regulatory issue, and the actions recommended to address the regulatory issue.

The NRC staff concludes that there is sufficient basis to proceed with rulemaking, including revising existing guidance, to justify updates to nonemergency event notification requirements for nuclear power plants in 10 CFR 50.72(b), “Non-emergency events.” A rulemaking would improve regulatory efficiency and reliability, continue to ensure the safety of the public, maintain appropriate NRC awareness of nonemergency events at operating commercial nuclear power plants, and support the NRC’s Principles of Good Regulation.

The NRC staff’s recommended changes, which include rulemaking to remove six reporting requirements, updating guidance for two reporting requirements, and adding an alternative reporting method are displayed in Table ES-1. The recommended changes would result in net averted costs to the industry, external stakeholders, and the NRC of approximately \$4.77 million using a 7 percent discount rate and \$7.71 million using a 3 percent discount rate, respectively, making the overall potential rulemaking cost beneficial.

Table ES-1 Recommended Action

10 CFR 50.72 Paragraph	Condition Requiring Notification	Recommendation
(b)(1)	Deviation from technical specifications under 10 CFR 50.54(x)	Retain the requirement
(b)(2)(i)	Plant shutdown required by technical specifications	Retain the requirement
(b)(2)(iv)(A)	System actuation (emergency core cooling system discharge)	Eliminate the requirement
(b)(2)(iv)(B)	System actuation (reactor protection system actuation)	Retain the requirement

10 CFR 50.72 Paragraph	Condition Requiring Notification	Recommendation
(b)(2)(xi)	News release or notifications of other government agency	Eliminate the requirement
(b)(3)(ii)(A)	Degraded condition	Update guidance
(b)(3)(ii)(B)	Unanalyzed condition	Update guidance
(b)(3)(iv)	System actuation (valid or invalid actuation)	Eliminate the requirement
(b)(3)(v)	Event or condition that could have prevented fulfillment of a safety function	Eliminate the requirement
(b)(3)(xii)	Transport of a contaminated person offsite	Eliminate the requirement
(b)(3)(xiii)	Loss of emergency preparedness capabilities	Eliminate the requirement
(a)(1)	General requirements (for notifying the NRC of a nonemergency event)	Provide an alternative reporting means

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ACRONYMS AND INITIALISMS

ADAMS	Agencywide Documents Access and Management System
BWR	boiling water reactor
CFR	<i>Code of Federal Regulations</i>
EAL	emergency action level
ECCS	emergency core cooling system
EN, ENs	event notification, plural
EP	emergency preparedness
ENS	Emergency Notification System
FR	<i>Federal Register</i>
FTE	full-time equivalent (employee)
FY	fiscal year
HOC	headquarters operations center
HOO	headquarters operations officer
IE	Office of Inspection and Enforcement
LER	licensee event report
MD	management directive
NEI	Nuclear Energy Institute
NPV	net present value
NRC	U.S. Nuclear Regulatory Commission
OpE	operating experience
ORO	offsite response organization
PERT	program evaluation and review technique
POC	point of contact
PRM	petition for rulemaking

PWR	pressurized water reactor
RCS	reactor coolant system
RPS	reactor protection system
RROAR	Retrospective Review of Administrative Requirements
SECY	the written issue paper and primary decision-making tool submitted by the NRC staff to the Commission describing policy, security, rulemaking, and adjudicatory matters, and general information.
SRM	staff requirements memorandum
TS	technical specifications
U.S.C.	United States Code

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1.0 INTRODUCTION

The U.S. Nuclear Regulatory Commission (NRC) is considering updating its regulations and guidance for the nonemergency notification requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.72, “Immediate notification requirements for operating nuclear power reactors.” The NRC staff developed this regulatory basis in response to a petition for rulemaking (PRM), “Petition for Rulemaking to Amend 10 CFR 50.72, ‘Immediate Notification Requirements for Operating Nuclear Power Reactors,’” dated August 2, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18247A204).

1.1 Background

Mr. Bill Pitesa, on behalf of the Nuclear Energy Institute (NEI) (the petitioner), submitted the PRM under 10 CFR 2.802, “Petition for rulemaking—requirements for filing,” requesting that the NRC amend 10 CFR 50.72 to remove all nonemergency notification requirements. In accordance with 10 CFR 2.803, “Petition for rulemaking—NRC action,” the NRC docketed the petition as PRM-50-116 and reviewed the petition under 10 CFR 2.803(h)(1). The NRC staff sent a rulemaking plan to the Commission under SECY-20-0109, “Petition for Rulemaking and Rulemaking Plan on Immediate Notification Requirements for Nonemergency Events (PRM-50-116; NRC-2018-0201),” dated November 30, 2020 (ML20073G004). In that rulemaking plan, the staff recommended evaluating within the NRC’s rulemaking process the nonemergency reporting requirements of 10 CFR 50.72(b), “Non-emergency events.”

In the staff requirements memorandum (SRM) SRM-SECY-20-0109, “Petition for Rulemaking and Rulemaking Plan on Immediate Notification Requirements for Nonemergency Events,” dated July 28, 2021 (ML21209A947), the Commission directed the NRC staff to proceed with a rulemaking on the immediate notification requirements for nonemergency events in 10 CFR 50.72(b) and the closure of the docket for PRM-50-116.

The Commission provided the following additional direction to the staff in SRM-SECY-20-0109:

Changes that shift the responsibility for gathering, verifying, and communicating information on nonemergency events from licensees to resident inspectors should not be pursued. The staff should discontinue this effort if it determines at any point that the costs are not justified by the benefits or that the rulemaking would unacceptably degrade the NRC’s situational awareness.

The staff should incorporate any applicable lessons learned from the Retrospective Review of Administrative Requirements and Rulemaking Process Innovation efforts to appropriately balance the regulatory improvements of this rulemaking effort and the anticipated staff expenditures.

Since the 2000 update to the nonemergency reporting requirements of 10 CFR 50.72(b) (“Reporting Requirements for Nuclear Power Reactors and Independent Spent Fuel Storage Installations at Power Reactor Sites; Final Rule,” October 25, 2000; Volume 65 of the *Federal Register* (FR), page 63769 (65 FR 63769) (2000 Final Rule)), the NRC has gained significant experience with the reporting criteria for nonemergency events. The NRC staff used that

experience in this regulatory basis to determine whether specific reporting requirements could be eliminated or modified while continuing to maintain appropriate agency awareness of nonemergency events at operating commercial nuclear power plants and support the NRC's Principles of Good Regulation, including openness, efficiency, and reliability.

Based on this experience, the NRC staff developed criteria including questions and other considerations to apply to each of the nonemergency reporting requirements (ML22061A242). These questions focused on the potential impact to the NRC's oversight, event response, data tracking and trending, and other regulatory functions that could occur from not receiving these reports. The NRC staff also considered the frequency of these reports; whether the NRC could receive the information in the reports by other means; and the potential impacts on Federal, State, Tribal, or local emergency and radiological responders from changes to or the elimination of these reports. The NRC staff used these questions as a guideline to develop specific recommendations for each reporting criterion in 10 CFR 50.72(b) as described in Appendix A.

1.2 Purpose and Scope of This Regulatory Basis

Consistent with the Commission's direction and the NRC's rulemaking process, the NRC staff prepared this regulatory basis to support its recommendation on whether it should pursue rulemaking to amend the nonemergency event reporting requirements of 10 CFR 50.72(b). This regulatory basis does the following:

- identifies the regulatory issues;
- explains whether the existing regulations or policies need to be revised to address identified regulatory issues;
- explains whether a change in the regulations can resolve the issues;
- explains whether alternatives to rulemaking can resolve the issues;
- provides the scientific, policy, legal, or technical information that supports the recommendation;
- discusses backfitting and issue finality considerations;
- discusses stakeholder interactions in developing the technical portion of the regulatory basis and stakeholder views, to the extent known;
- explains how the recommended rulemaking would support the NRC's Strategic Plan (ML22067A170) goals; and
- explains any limitations on the scope and quality of the regulatory basis, such as known uncertainties in the data or methods of analysis.

The regulatory basis also discusses how the NRC staff considered whether to issue guidance to support rulemaking or as an alternative to rulemaking and lists documents that have been cited

or otherwise factored into the development of the regulatory basis. Consistent with NRC policy and procedures, this regulatory basis does not include proposed regulatory text or a section-by-section analysis of current versus proposed regulations because this stage of the rulemaking process presents multiple potential solutions for each issue, whereas the next stage of the process, the proposed rule stage, presents one solution for each issue (i.e., proposed regulatory text).

1.3 Conforming Changes to Other NRC Requirements

In the development of this regulatory basis, the NRC staff did not perform a comprehensive review to determine whether other relevant reporting or technical requirements in the NRC's regulations would require conforming changes based on the changes to 10 CFR 50.72 described in this document. If the NRC decides to pursue rulemaking and develop a proposed rule, then the NRC staff would review other relevant regulations for any conforming changes that may be needed.

1.4 Document Contents and Organization

The subsequent sections of this document are organized as follows. Section 2 describes the background related to the evolution of the current regulatory framework for the nonemergency event reporting requirements of 10 CFR 50.72(b) and summarizes current regulatory guidance for these requirements. Section 3 describes regulatory issues related to the recommended rulemaking effort. Section 4 describes the estimated costs and savings to affected entities of proposed alternatives for reactor licensees and the NRC. Section 5 addresses other impacts and regulatory considerations related to using rulemaking to amend the nonemergency event reporting requirements of 10 CFR 50.72(b). Section 6 describes stakeholder involvement in the development of this regulatory basis. Section 7 describes the relevance of safety goal evaluations to this rulemaking effort. Section 8 describes how the recommended rulemaking would support the NRC Strategic Plan. Section 9 presents the NRC staff's conclusions. Section 10 presents a timeline for developing the rulemaking. Section 11 gives the references for sources cited. Appendix A to this regulatory basis describes the staff's detailed evaluation of each nonemergency event reporting requirement in 10 CFR 50.72(b) and an alternative means of reporting nonemergency events under 10 CFR 50.72(a)(2).

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2.0 BACKGROUND

The regulations for immediate notification of nonemergency events have evolved since their initial promulgation more than 40 years ago. This evolution demonstrates that the NRC has learned from and adjusted to decades of operating experience.

2.1 Petition PRM-50-116

On August 2, 2018, Bill Pitesa, on behalf of the NEI, submitted a PRM requesting that the NRC amend its regulations to eliminate immediate notification requirements for nonemergency events for operating nuclear power reactors. On November 20, 2018 (83 FR 58509), the NRC published a notice of docketing the petition as PRM-50-116 and a request for comment. The NRC received 16 comment submissions in response to the request. Most of the comment submissions supported the petition, while a few comment submissions opposed it. On August 12, 2021, the NRC published a notice (86 FR 44290) stating that the petitioner raised a valid regulatory issue about the immediate notification requirements for operating nuclear power reactors and that the agency would consider the issue in the rulemaking process.

2.2 Existing Regulatory Framework for Immediate Notification Requirements for Operating Nuclear Power Reactor

2.2.1 1980 Final Rule – Initial Promulgation of 10 CFR 50.72

Prior to the accident at Three Mile Island Nuclear Generating Station (Three Mile Island), Unit 2, on March 28, 1979, the NRC did not have dedicated phone lines connecting power reactors to the NRC. In addition, the NRC had not promulgated reporting requirements that clearly defined which events at operating nuclear reactors should be reported to the NRC. The accident at Three Mile Island, Unit 2 demonstrated a need for both the establishment of direct lines of communication between the NRC and licensees for significant events, and the need for the NRC to establish a consistent and clear set of reporting requirements for significant events at operating nuclear power reactors. After the event, the NRC installed dedicated telephone lines from all operating power plants to the NRC Headquarters Operations Center (HOC) and the regional offices to ensure the timely and accurate flow of information. When these telephones were picked up to report significant events, they would automatically ring at the NRC HOC and the lines could be held open as long as needed.

In April 1979, the NRC issued Office of Inspection and Enforcement bulletins to licensees (IE Bulletin Nos. 79-05, 79-05A, 79-05B, 79-06, 79-06A, and 79-06B) (ML080310330, ML031210600, ML080310483, ML080310337, ML080310335, and ML080310340, respectively), asking them to review their prompt reporting requirements. The bulletins were intended to make certain that each licensee would notify the NRC within 1 hour of the time the reactor was not in a controlled or expected condition of operation. However, the bulletins did not provide sufficient detail about the events that should be reported to the NRC. In addition, these bulletins did not impose requirements on licensees, and the Commission found that in several instances licensees were not immediately reporting these significant events to the NRC. The NRC determined that, to enable the NRC to take action necessary to protect public health and safety, licensees needed to report significant events to the NRC immediately. The NRC established the

relevant reporting requirements in 10 CFR 50.72 in the “Immediate Reporting of Significant Events at Operating Nuclear Power Plants” final rule dated February 29, 1980 (45 FR 13434) (1980 Final Rule). In the 1980 Final Rule, the Commission explained the purposes of the reporting requirements:

The capability of the NRC to make timely decisions and to provide adequate assurances regarding actual or potential threats to public health and safety, depends heavily on the rapidity with which significant events are communicated by nuclear power reactor licensees to [the] NRC. The majority of events occurring throughout the nuclear industry pose little or no serious or immediate threats to the public health and safety; however, certain events do pose such threats or generate fear or unusual concern.

[The] NRC has an important obligation to collect facts quickly and accurately about significant events, assess the facts, take necessary action, and inform the public about the extent of the threat, if any, to public health and safety. Not only must [the] NRC act promptly to prevent or minimize possible injury to the public, it must also take appropriate action to alleviate fear or concern created as a result of such events.

The NRC required licensees to report 12 types of significant events to the NRC within 1 hour. These included serious events that could result in an impact on public health and safety, such as the nuclear power plant being in an uncontrolled condition, the exceedance of a safety limit, or an uncontrolled release of radioactivity.

2.2.2 1983 Final Rule – Amendments to and Intent of 10 CFR 50.72

Experience with the reporting requirements in 10 CFR 50.72 led to the issuance of proposed amendments on December 21, 1981 (46 FR 61894). Public comments on the proposed rule indicated that the regulations should be revised to clarify reporting criteria and to require early reports only on those matters of value to the exercise of the Commission’s responsibilities. The Commission amended the reporting requirements of 10 CFR 50.72 in a final rule published August 29, 1983 (48 FR 39039). The amendments clarified the list of reportable events with the goal of providing the Commission with more useful reports about the safety of operating nuclear power plants.

The 1983 final rule eliminated several categories of reports in 10 CFR 50.72 on the basis that they were not useful to the NRC, including reports on worker injury, small radioactive releases, and minor security problems. For example, the 1983 final rule eliminated reports that were previously required in events where a worker at a nuclear power plant experiences chest pains or another illness not related to radiation and is sent to the hospital for evaluation; the vent stack monitor moves upward a few percent, yet radiation levels remain 100,000 times below the technical specification limits; or the security computer malfunctions for a few minutes. Emergency and nonemergency events were separated into different paragraphs within 10 CFR 50.72. Emergency events required 1-hour notifications and nonemergency events required either a 1-hour or a 4-hour notification.

2.2.3 1992 Final Rule – Amendments Regarding Invalid Actuations

The Commission amended the reporting requirements in 10 CFR 50.72 in a final rule published on September 10, 1992 (57 FR 41378). The Commission determined that some of the event reports were not necessary for the NRC to perform its safety mission and that continued reporting of these events would not contribute useful information to the operating reactor events database. The operating reactor events database is an electronic database of reactor events reported by licensees to the HOC, of which the reports made under 10 CFR 50.72 are a significant portion. The database contains information such as the name of the licensee reporting the event, reactor type, date of event, regulatory reporting codes, and a text summary of the report. Event notification reports submitted to the HOC are posted on the NRC's public website <https://www.nrc.gov/reading-rm/doc-collections/event-status/index.html>; these event reports provide examples of the data contained in the reactor events database. The Commission also considered that unnecessary reports would continue to consume licensee and NRC resources that could be applied elsewhere. As a result, the NRC removed events primarily involving invalid engineered safety feature actuations that were of little or no safety significance.

2.2.4 2000 Final Rule – Amendments to 10 CFR 50.72

In the 2000 Final Rule, the Commission significantly modified the reporting requirements of 10 CFR 50.72. These amendments divided the nonemergency event reporting requirements into 1-hour, 4-hour, and 8-hour notifications instead of only 1-hour and 4-hour reporting requirements. The rule also specified certain actuations as reportable.

The 2000 Final Rule established the current reporting requirements of 10 CFR 50.72(b), summarized in Table 1:

Table 1 - 10 CFR 50.72(b) Requirements

10 CFR 50.72 Paragraph	Time (hrs.)	Licensee Required to Notify the NRC of:
(b)(1)	1	Any deviation from the plant's technical specification (TS) authorized pursuant to 10 CFR 50.54(x)
(b)(2)(i)	4	Any shutdown required by TS
(b)(2)(iv)(A)	4	Any event that results or should have resulted in emergency core cooling system (ECCS) discharge into the reactor coolant system as a result of a valid signal except when actuation results from and is part of a pre-planned sequence during testing or reactor operation

10 CFR 50.72 Paragraph	Time (hrs.)	Licensee Required to Notify the NRC of:
(b)(2)(iv)(B)	4	Any event or condition that results in actuation of the reactor protection system (RPS) when the reactor is critical, except when the actuation results from and is part of a pre-planned sequence during testing or reactor operation
(b)(2)(xi)	4	Any event or situation, related to the health and safety of the public or onsite personnel, or protection of the environment, for which a news release is planned or notification to other government agencies has been or will be made, which may include an onsite fatality or inadvertent release of radioactively contaminated materials
(b)(3)(ii)	8	Any event or condition that results in the condition of the nuclear power plant, including its principal safety barriers, being seriously degraded, or the nuclear power plant being in an unanalyzed condition that significantly degrades plant safety
(b)(3)(iv)	8	Any event or condition that results in valid actuation of the RPS, containment isolation signals, ECCS systems, boiling water reactor (BWR) reactor core isolation cooling/ isolation condenser system/feedwater coolant injection system, pressurized water reactor (PWR) auxiliary or emergency feedwater systems, containment heat removal systems, or emergency alternating current electrical power systems
(b)(3)(v)	8	Any event or condition that, at the time of discovery, could have prevented the fulfillment of a safety function of structures or systems that are needed to shut down the reactor and maintain it in a safe shutdown condition, remove residual heat, control the release of radioactive material, or mitigate the consequences of an accident

10 CFR 50.72 Paragraph	Time (hrs.)	Licensee Required to Notify the NRC of:
(b)(3)(xii)	8	Any event requiring the transport of a radioactively contaminated person to an offsite medical facility for treatment
(b)(3)(xiii)	8	Any event that results in a major loss of emergency assessment capability, offsite response capability, or offsite communications capability

The 2000 Final Rule also provided the Commission’s justification for the timing for 1-hour, 4-hour, and 8-hour reports. The 1-hour reports were intended to “capture those events where there may be a need for immediate action by the NRC to protect public health and safety.” For 4-hour reports, the information was determined to be necessary in a prompt manner because the NRC may need to respond to heightened public concern or take a reasonably prompt action, such as partial activation of the agency’s response plan. The 8-hour reports were intended to capture those events for which the NRC may need to take action within about a day, such as initiation of a special inspection.

2.3 NUREG-1022, Revision 3, and 10 CFR 50.73

NUREG-1022, “Event Reporting Guidelines: 10 CFR 50.72 and 50.73,” contains guidelines that the NRC considers acceptable to meet the requirements of 10 CFR 50.72 and 50.73, “Licensee event report system.” The NRC issued NUREG-1022, Revision 3 in January 2013 (ML13032A220), superseding Revision 2, which had been issued with the 2000 Final Rule. The NRC issued Revision 3 to address several concerns with Revision 2 (e.g., increased burden, potential over-reporting, and potential interpretation concerns) raised by external stakeholders. In developing Revision 3 to NUREG-1022, the NRC held numerous public meetings to solicit stakeholder input on changes to the guidance. Because the interactions with external stakeholders during this process were substantial, the NRC also published a detailed discussion of all the public meetings and a summary of the changes incorporated into NUREG-1022, Revision 3 (ML12216A185). Appendices A through G of NUREG-1022, Revision 3, contain more detailed discussions about areas of significant stakeholder interest and form the basis for some of the changes found in that document.

The NRC published Supplement 1 to NUREG-1022, Revision 3, in September 2014 (ML14267A447), which contains additional guidance for reporting a major loss of the capability to provide emergency assessment, offsite response, or offsite communications under 10 CFR 50.72(b)(3)(xiii). The supplement endorses NEI 13-01, “Reportable Action Levels for Loss of Emergency Preparedness Capabilities,” dated July 2014 (ML14197A206). NEI 13-01 gives a uniform approach that promotes consistent application of the event reporting guidance associated with a loss of emergency preparedness capabilities. In its endorsement, the NRC

determined that NEI 13-01 provides an acceptable alternative to guidance in Section 3.2.13 of NUREG-1022, Revision 3.

Table 2 below shows references to the associated guidance and corresponding requirements in 10 CFR 50.73 for each 10 CFR 50.72(b) reporting criterion. The regulations in 10 CFR 50.73 require that licensees submit detailed reports for certain events at commercial nuclear power plants. The requirements for nonemergency notifications in 10 CFR 50.72 are intended to inform near-term actions that the agency may take (for example, a reactive inspection to an event) and generally contain very little technical information about the event. The requirements in 10 CFR 50.73 are intended to provide more detailed information on the event and inform longer term actions that the NRC performs, such as inspection reviews of each event as documented in inspection reports after these events occur. The NRC staff notes that 10 CFR 50.73 does not contain a reporting requirement that corresponds to 10 CFR 50.72(b)(2)(xi) concerning news releases or notification of other government agencies, 50.72(b)(3)(xii) concerning transport of a contaminated person offsite, or 50.72(b)(3)(xiii) concerning the loss of emergency preparedness capabilities. Therefore, 10 CFR 50.72(b) contains the only reporting requirements for these events.

Table 2 - Guidance Associated with the 10 CFR 50.72(b) and 50.73 Requirements

10 CFR 50.72 Requirement	10 CFR 50.73 Requirement	Associated Guidance
(b)(1)	(a)(2)(i)(C)	NUREG-1022, Rev. 3, page 24
(b)(2)(i)	(a)(2)(i)(A)	NUREG-1022, Rev. 3, page 15
(b)(2)(iv)(A)	(a)(2)(iv)	NUREG-1022, Rev. 3, page 31
(b)(2)(iv)(B)	(a)(2)(iv)	NUREG-1022, Rev. 3, page 31
(b)(2)(xi)	None	NUREG-1022, Rev. 3, page 53
(b)(3)(ii)	(a)(2)(ii)	NUREG-1022, Rev. 3, page 25
(b)(3)(iv)	(a)(2)(iv)	NUREG-1022, Rev. 3, page 31
(b)(3)(v)	(a)(2)(v)	NUREG-1022, Rev. 3, page 38

(b)(3)(xii)	None	NUREG-1022, Rev. 3, page 52
(b)(3)(xiii)	None	NUREG-1022, Rev. 3, page 57. NUREG-1022, Rev. 3, Supplement 1 endorsed NEI 13-01, issued July 2014, which contains more guidance on 10 CFR 50.72(b)(3)(xiii).

2.4 Summary of Recent Experience with Immediate Notification Requirements

This section discusses the current communication process and recent trends associated with the nonemergency event notification reports submitted to the NRC under 10 CFR 50.72(b). Appendix A contains trend data, where relevant, for specific reporting criteria.

2.4.1 Current Communication and Evaluation Process for 10 CFR 50.72(b) Event Notifications

The current regulatory framework in 10 CFR 50.72 requires that licensees report nonemergency events to the NRC. When a licensee identifies an event that may be reportable, the licensee evaluates the event against the reporting requirements using the guidance in NUREG-1022. In some cases, licensee actions are needed immediately, such as under 10 CFR 50.54(x), and require the approval of, at minimum, a licensed senior operator. No further reportability evaluation is needed in these situations. In other cases, licensees may need additional time, within the confines of the reportability time limits, to evaluate whether the event meets the reporting criteria. Once the licensee determines that the event is reportable, the licensee contacts the HOC to submit an event notification report.

Licensees are required under 10 CFR 50.72(a)(1) to report these nonemergency events using the Emergency Notification System (ENS). This means that, for all nonemergency event notifications, licensees call the HOC on a dedicated telephone line and verbally provide the report to a Headquarters Operations Officer (HOO). The HOC is the primary center of communication and coordination among the NRC, its licensees, and Federal, State, and Tribal agencies for operating events involving nuclear reactors or materials. Located in Rockville, Maryland, the HOC is staffed 24 hours a day by employees trained to receive and evaluate event reports and coordinate incident response activities.

Figure 1 shows the current communication pathway for event notifications at the NRC. After a licensee submits an event notification report, the HOC coordinates communication of the event notification report to NRC management and staff, NRC regional points of contact, internal databases, and the public. Typically, the agency handles these communications through entry of the event notification report into an internal database, emails to internal stakeholders, and posting of the event notification report to the public website each morning on the next business day after the NRC receives the event notification report. These actions provide situational awareness for broader agency and external stakeholder consideration. In some cases, licensees later determine that a reported event should be withdrawn because new information or further

evaluation shows that the reporting criteria were not met. The NRC maintains records of the original report and the withdrawal.

Resident inspectors and NRC regional points of contact typically coordinate any near-term actions, such as reactive inspections to an event, using the process outlined in NRC Management Directive (MD) 8.3, “NRC Incident Investigation Program,” revised March 27, 2001 (ML031250592) and Inspection Manual Chapter (IMC)-0309, “Reactive Inspection Decision Basis for Reactors,” issued October 2011 (ML111801157). The NRC staff notes that most licensees also voluntarily contact NRC resident inspectors when they submit event notification reports.

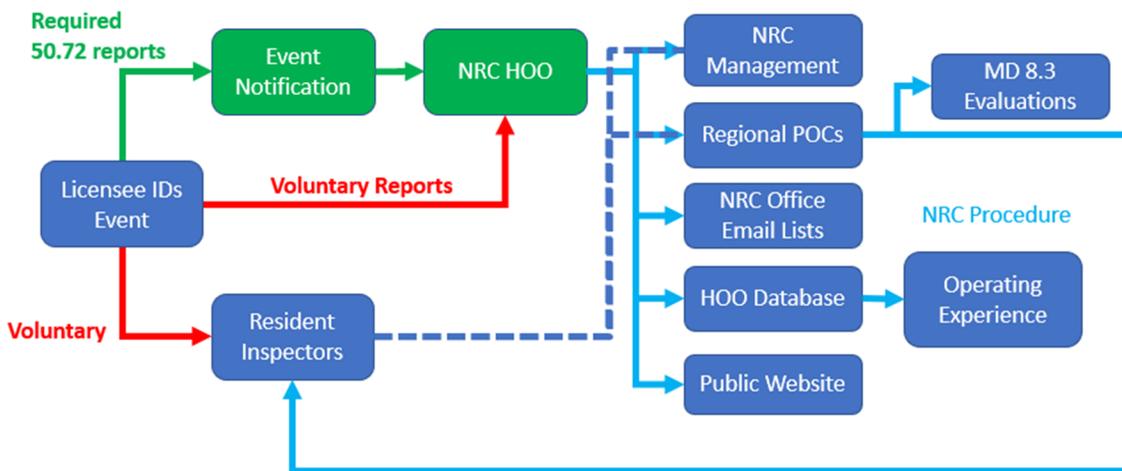


Figure 1 Current 10 CFR 50.72 event notification reporting and communication process

In addition, the NRC Headquarters technical staff reviews each event notification report that is submitted using the process outlined in LIC-401, Revision 4, “NRR Operating Experience Program,” dated October 16, 2019 (ML19155A036). The primary review and communication to technical staff within the NRC is coordinated by the Operating Experience Clearinghouse, which is the NRC’s centralized multi-office team that performs the key functions and activities of the reactor operating experience program. The Operating Experience Clearinghouse collects, stores, screens, prioritizes, and distributes operating experience information from multiple sources, including each event notification report submitted under 10 CFR 50.72, to interested individuals within the NRC for further evaluation. Other sources of operating experience that are regularly screened by the Operating Experience Clearinghouse include licensee events reports, NRC regional phone calls, and reports submitted under 10 CFR Part 21, “Reporting of Defects and Noncompliance.” The overlap between 10 CFR 50.72 reporting requirements and those in 10 CFR 50.73 is discussed above in Section 3.3.

2.4.2 Impact of Elimination of a 10 CFR 50.72(b) Reporting Requirement on Internal and External Communications

If the NRC removes the nonemergency event reporting requirements of 10 CFR 50.72(b), then the only communication of these events would be licensees’ voluntary notification to the NRC (e.g., HOO, NRC Headquarters, regional offices, resident inspectors). Relying on voluntary

licensee procedures or practices that could be changed without NRC approval could result in the NRC not receiving reports related to the nonemergency events. In this case, the communication process for the affected events would be significantly modified, which could impact situational awareness and broader agency and external stakeholder consideration of the event.

In SRM-SECY-20-0109, the Commission directed the staff to not pursue changes that shift the responsibility for gathering, verifying, and communicating information on nonemergency events from licensees to resident inspectors and to discontinue efforts that would unacceptably degrade the NRC's situational awareness. Therefore, this rulemaking effort would not require the resident inspectors to gather, verify, or communicate any information beyond that already identified in existing processes. This means that the HOC processes for any eliminated nonemergency reporting requirements would not be used unless other internal NRC Headquarters communications channels are augmented in some way. As part of its evaluation of the reporting requirements, the NRC staff evaluated whether eliminating a requirement would place additional burden on resident inspectors or unacceptably degrading the NRC's situational awareness.

In summary, removal of a reporting requirement would impact communication for these events in that 1) the events would not be communicated internally to NRC Headquarters technical points of contact and management unless identified through other routine operating experience channels, and 2) the event would not appear in the NRC HOO database, the NRC's internal operating experience tracking system, or the public website.

If a nonemergency report is not generated, due to its requirement being eliminated, and increased interest from external stakeholders aware of an issue exists, then the NRC staff would consider communication of event information to stakeholders where appropriate. For issues of public interest, responses could be developed and coordinated through the Office of Public Affairs. Increased internal interest could be handled using existing processes and regular operating experience briefs. Appendix A of this document discusses each reporting requirement and whether an associated LER under 10 CFR 50.73 would be sufficient without the licensee's reporting under 10 CFR 50.72(b).

Eliminating nonemergency event reports would not impact the NRC's risk evaluation programs that leverage operating experience, such as the NRC's Accident Sequence Precursor (ASP) (ML20049G020) and Standardized Plant Analysis Risk (SPAR) (ML092440319) programs. The NRC's ASP program systematically evaluates U.S. nuclear power plant operating experience to identify, document, and rank operational events by calculating a conditional core damage probability (CCDP) or an increase in core damage probability (Δ CDP). To identify events that are potential accident precursors, the staff reviews operational events from all LERs submitted to the NRC in accordance with 10 CFR 50.73. Each LER is evaluated (on a plant unit basis) against qualitative screening criteria for the purpose of identifying events that warrant further analysis as potential precursors. Since the ASP program relies on the information received in licensee event reports and not the information received in event notifications, the elimination of event notifications would not impact these evaluations. The NRC also does not rely on event notifications for development and modification of the SPAR models. The objective of the SPAR Model Program is to develop standardized risk analysis models and tools that staff analysts use in many regulatory activities. The SPAR models consist of a standardized, plant-specific set of risk models that use event-tree and fault-tree linking methodology. Updates to the SPAR models consider modifications made to

facilities, licensee event reports, and information shared with the Electric Power Research Institute under a memorandum of understanding with the NRC (ML18341A320).

2.4.3 Overall Trend in 10 CFR 50.72(b) Event Notifications

Figure 2 summarizes the overall reporting trend for event notifications made under 10 CFR 50.72(b) from 2011 through 2021. After accounting for the reduction in the number of annual scrams and operating reactors, coupled with revisions to reporting guidance contained in NUREG 1022 in 2014, there is a clear decline in power reactor event notifications after 2017 that was not evident in earlier years.

There is a demonstrated correlation on a plant-by-plant level between performance and the number of event notifications made to the NRC; however, this correlation holds for comparison between plants in a given year rather than as a mark of general industry performance across several years. Many reports are generated by events beyond the immediate control of the licensees involved, and multi-year trends in reporting depend significantly on factors that are not all directly related to performance.

This trend could be attributed to various factors including industry scram reduction efforts, a significant update in 2014 to the reporting guidance contained in Revision 3 of NUREG-1022, updated NEI guidance to its members for streamlining NRC event reporting in 2018, and the impacts of NRC event notification reports on both NRC and industry performance indicators. Appendix A includes overall reporting trends for specific reporting criteria, where appropriate.

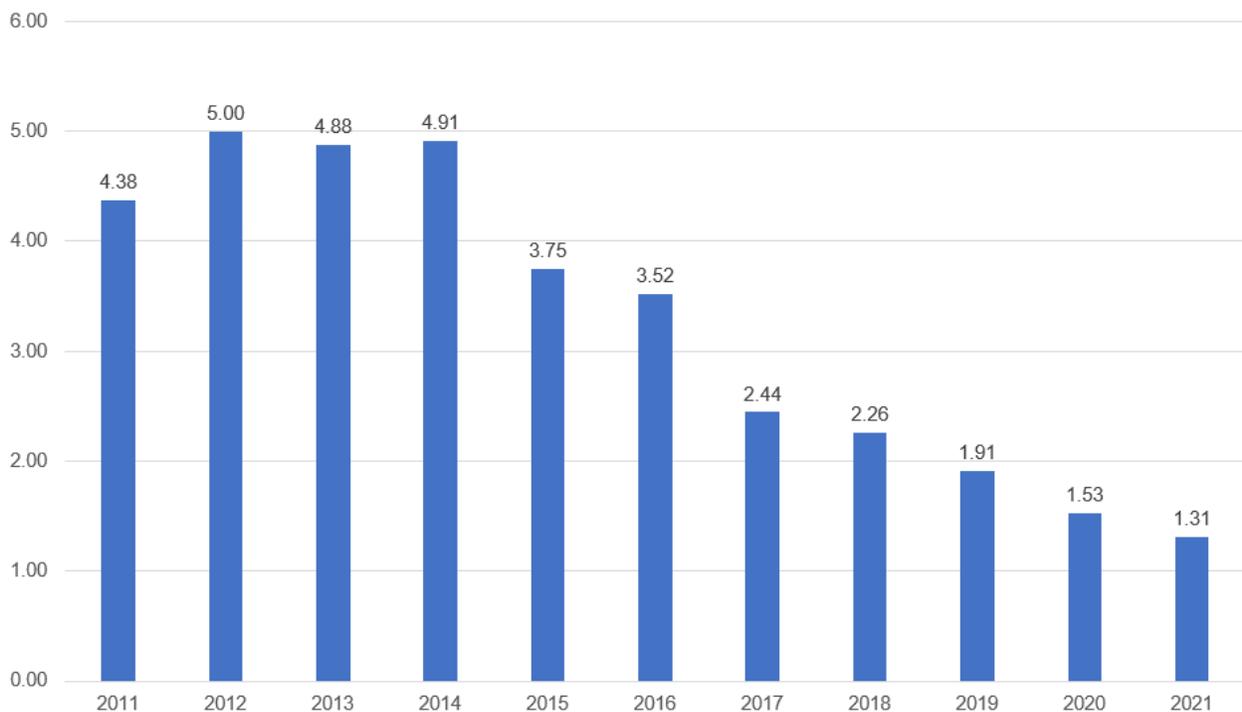


Figure 2 10 CFR 50.72(b) Average Event Notifications per Unit by Year Since 2011

2.4.4 Distribution of Event Notifications in 2021

Figure 3 shows the distribution of event notification reports received under 10 CFR 50.72(b) in calendar year 2021. These totals represent the number of times licensees submitted an event notification related to each reporting criterion. The number of times that a reporting criterion is reported in Figure 3 is greater than the total number of event notification reports in Figure 2 because a single report may contain multiple reporting criteria.

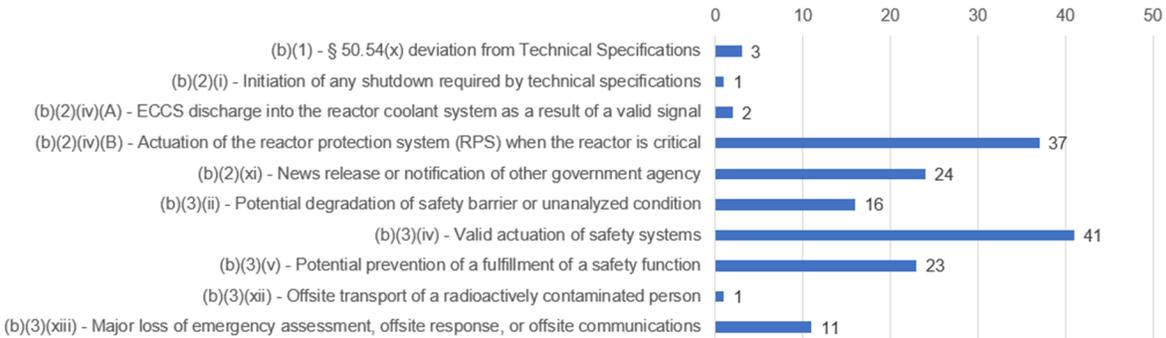


Figure 3 Distribution of Nonemergency Event Notifications in Calendar Year 2021

2.5 Summary of Management Directive 8.3 Evaluations Associated with Nonemergency Event Notifications

NRC inspectors and regional staff complete MD 8.3 evaluations in response to events involving reactor and materials facilities licensed by the NRC to determine whether the NRC should take additional actions, such as sending a special inspection team to investigate in greater detail the circumstances associated with an event or performing additional routine inspections. The staff compiled and reviewed MD 8.3 evaluations from 2011 through 2021 and cross-referenced these reports to event notification reports submitted under the reporting requirements of 10 CFR 50.72. The staff notes that this approach has some limitations, as it only captures those events that could be clearly linked to the compiled MD 8.3 evaluations.

This analysis showed that, from 2011 to 2021, the NRC completed at least 435 MD 8.3 evaluations. Of those, 116 were tied to nonemergency event notification reports submitted in accordance with 10 CFR 50.72(b). Of these 116 evaluations, 35 resulted in additional focused baseline inspections, during which NRC staff members performed additional routine inspections. For 16 of the 116 evaluations, the NRC dispatched a reactive inspection team to specifically investigate the reported event in more detail. In comparison, 81 of the evaluations not tied to a nonemergency event notification resulted in focused baseline inspections and 75 resulted in dispatching reactive inspection teams.

3.0 REGULATORY ISSUES

The regulatory issues under consideration in this rulemaking are whether to retain, eliminate, or modify the nonemergency event reporting requirements of 10 CFR 50.72(b). Appendix A of this document contains the NRC's detailed assessment of these issues for each of the reporting requirements in 10 CFR 50.72(b). The assessments include the alternatives considered by the NRC to address the issues and the recommended alternative for each notification requirement. Appendix A also addresses the NRC's consideration of an alternative method for submitting the nonemergency event reports to the NRC. For each reporting criterion, the NRC staff specifically considered actions the agency and other stakeholders took in response to historical nonemergency event notification reports submitted under 10 CFR 50.72(b).

In evaluating the reporting criteria of 10 CFR 50.72(b), the NRC staff considered the Principles of Good Regulation: independence, openness, efficiency, clarity, and reliability. As a responsible regulator with an important safety and security mission, the NRC applies these principles in the way it carries out its regulatory activities. These principles focus on ensuring safety and security while appropriately balancing the interests of the NRC's stakeholders, including the public and licensees. Details on the Principles of Good Regulation can be found on the agency public website at www.nrc.gov/about-nrc/values.html.

The NRC staff also used the NRC's Be riskSMART framework in its evaluation of the reporting criteria of 10 CFR 50.72(b). The Be riskSMART initiative is a holistic, high-level framework that gives the NRC staff the confidence to consistently apply and communicate risk information for all NRC decisions without compromising its mission. The framework is a common language tool to internally align the NRC staff with the various sources of risk information used across its corporate, technical, and legal programs. The framework ensures the NRC staff's basic understanding of how risk information is applied across different program areas and allows the NRC to effectively communicate how it uses risk information to make sound regulatory decisions. The NRC has published more information on the Be riskSMART framework in NUREG/KM-0016, "Be riskSMART: Guidance for Integrating Risk Insights into NRC Decisions," issued March 2021 (ML21071A238).

The NRC staff developed a set of evaluation criteria to apply to each reporting requirement in 10 CFR 50.72(b). The evaluation criteria were separated into two phases. In its evaluation of each reporting requirement in Appendix A to this document, the NRC staff answered the Phase 1 questions and used the Phase 2 considerations in the development of alternatives.

The Phase 1 screening questions consisted of the following:

- Without this nonemergency reporting, would the NRC still be able to successfully execute its oversight, event response, or other NRC regulatory functions?
- Would not receiving this nonemergency reporting significantly degrade the NRC's ability to successfully execute its oversight, event response, or other NRC regulatory functions?
- Would eliminating this nonemergency reporting significantly degrade the NRC's ability to track or trend data associated with this criterion?

- Is this nonemergency reporting duplicated by another regulation or 10 CFR 50.72 criterion?
- Is this type of event reportable under 10 CFR 50.73, and would that report meet the NRC's needs?

The Phase 2 considerations consisted of the following:

- Are alternative means available to provide awareness to the NRC without incurring significant burden or that are less burdensome?
- Based on historical data, how frequently has this type of nonemergency reporting been subsequently withdrawn due to a determination later that it did not meet the reporting criteria and how has that impacted the NRC and the licensee?
- What would be the risk of delaying or no longer receiving this nonemergency reporting?
- Without this nonemergency reporting, would the Federal, State, Tribal, or local emergency and radiological responders still be able to successfully execute their oversight, event response, or other functions?
- Would delays in receiving this nonemergency reporting significantly degrade Federal, State, Tribal, or local emergency and radiological responders' ability to use the information to act?
- Are alternative means available to provide awareness to external stakeholders without incurring significant burden or that are less burdensome (e.g., memorandum of understanding, negotiated agreements)?

The NRC staff notes that a nonemergency event reporting requirement itself does not have a direct impact on the public health and safety or common defense and security. However, as explained in section 5.5 of this regulatory basis document, such reporting can be necessary for the NRC to successfully execute its regulatory functions, such as oversight and incident response.

3.1 Regulatory Scope of a Rulemaking on Reporting Requirements for Nonemergency Events at Nuclear Power Plants

3.1.1 Scope Development

As described in Section 1.1 of this regulatory basis, the Commission provided the NRC staff with an initial scope for the rulemaking in SRM-SECY-20-0109. The scope of this regulatory basis and the NRC staff's recommendations are focused on regulatory issues related to the retention, elimination, or modification of the nonemergency event reporting requirements of 10 CFR 50.72(b).

On November 4, 2021, the NRC staff held a public meeting (ML21341B449) to gain feedback from external stakeholders on the development of the regulatory basis for this rulemaking. On

December 9, 2021, the NRC staff held another public meeting (ML21350A033) to describe and gain feedback on the draft evaluation criteria the staff was considering for use in this regulatory basis. Section 6.1 of this document summarizes the feedback received at these public meetings.

In this rulemaking, the NRC is only considering changes to the nonemergency event reporting requirements in 10 CFR 50.72(b) and the means of reporting nonemergency events under 10 CFR 50.72(a). The NRC is not considering changes to the emergency reporting requirements, the reporting requirements of 10 CFR 50.73, or other event reporting requirements, such as those contained in 10 CFR Parts 30, 40, and 70, in this rulemaking.

3.1.2 Rulemaking Scope

Based on the evaluations in Appendix A to this document, including consideration of public comments, the NRC staff concludes that there is a sufficient regulatory basis to proceed with rulemaking for certain reporting requirements for nonemergency events at nuclear power plants. The NRC staff is considering revisions to the regulatory requirements in the following paragraphs:

10 CFR 50.72(a)(1), General requirements (for notifying the NRC of a nonemergency event)

10 CFR 50.72(b)(1), Deviation from TS under 10 CFR 50.54(x)

10 CFR 50.72(b)(2)(i), Plant shutdown required by TS

10 CFR 50.72(b)(2)(iv)(A), System actuation (ECCS discharge)

10 CFR 50.72(b)(2)(iv)(B), System actuation (RPS actuation)

10 CFR 50.72(b)(2)(xi), News release or notifications of other government agency

10 CFR 50.72(b)(3)(ii), Degraded or unanalyzed condition

10 CFR 50.72(b)(3)(iv), System actuation (valid or invalid actuation)

10 CFR 50.72(b)(3)(v), Event or condition that could have prevented fulfillment of a safety function

10 CFR 50.72(b)(3)(xii), Transport of a contaminated person offsite

10 CFR 50.72(b)(3)(xiii), Loss of EP capabilities

3.1.3 Regulatory Objectives

This regulatory basis documents whether the NRC should amend the reporting requirements for nonemergency events at nuclear power plants. The staff's recommendations are based on recent experience with the nonemergency reporting requirements of 10 CFR 50.72(b), updates to methods of reporting these events, the potential safety impact of amending the regulations, the burden of the reporting requirements on licensees, and the needs of the NRC and external stakeholders.

If the NRC amends the regulations in 10 CFR 50.72(a) and (b) as the staff recommends, then the resultant regulations would continue to ensure the safety of the public, maintain appropriate NRC awareness of nonemergency events at operating commercial nuclear power plants, and support the Principles of Good Regulation.

3.2 NRC Guidance, Policy, and Implementation Issues

This section describes the guidance requiring NRC revision and the relevant policy and implementation issues associated with the staff's recommended rulemaking.

3.2.1 NRC Guidance

The NRC staff's recommended rulemaking would require the revision of existing guidance documents. Appendix A to this document provides detailed information about the need to revise or create regulatory guidance for each reporting requirement and the alternative means of reporting nonemergency events.

The NRC plans to include draft guidance for comment with the proposed rule and final guidance with the final rule. As a result of this rulemaking effort, the NRC staff would need to update the guidance contained in NUREG-1022, Revision 3, to reflect any amendments to the nonemergency reporting requirements contained in 10 CFR 50.72(b) and the reporting method for nonemergency events. In addition, the NRC staff would need to revise NRC Form 361, "Reactor Plant Event Notification Worksheet," because this form provides a standard template for a licensee making any report under 10 CFR 50.72.

There are no policy issues that require resolution outside the rulemaking process for the NRC to proceed with this rulemaking.

3.2.2 Implementation Issues

There are no implementation issues that require resolution outside the rulemaking process for the NRC to proceed with this rulemaking. The NRC staff will consider implementation issues in more detail during the development of the final rule.

4.0 ESTIMATES OF COSTS AND SAVINGS

In this rulemaking, the NRC considers the potential savings and costs for power reactor licensees, other external stakeholders, and the NRC resulting from alternative methods to address the identified issues. The regulatory basis stage of the rulemaking process provides an initial evaluation of these proposed impacts. The NRC will provide a more detailed evaluation of the benefits and costs with the proposed rule.

This section presents the process for, and results of, evaluating the costs and benefits expected to result from each alternative relative to the regulatory baseline (Alternative 1), which reflects anticipated behavior if the NRC does not undertake regulatory action. Additional details of each alternative are provided in Appendix A. All costs and benefits are monetized, when possible. The total costs and benefits are then summed to determine whether the difference between the costs and benefits results in a positive benefit. In some cases, costs and benefits are not monetized because meaningful quantification is not possible.

The sign conventions used in this analysis are that all favorable consequences for the alternative are positive and all adverse consequences for the alternative are negative. Negative values are shown using parentheses (e.g., negative \$500 is displayed as (\$500)). The NRC used an analysis horizon beginning with the proposed rule in 2023 through the final rule in 2024 and operations from the rule implementation date through 2081, which covers the remaining license term for currently operating nuclear power plants.

This regulatory basis describes the incremental impacts of each alternative relative to the regulatory baseline. The analysis assumes full compliance with existing NRC requirements, including current regulations and relevant orders consistent with the guidance in NUREG/BR-0058, draft Revision 5, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission," issued January 2020.

In determining the cost estimates, the NRC staff used the best available information, such as the number of operating nuclear power plants, the number of nonemergency event notification reports by year and criterion, remaining nuclear power plant licensed operating periods, the time to prepare and report nonemergency event information, and the time to receive, process, and evaluate the reported information. The analysis assumes that Vogtle Electric Generating Plant Units 3 and 4 begin operations in the first and last quarter of 2023, respectively, and for current nuclear power reactor plants to transition to decommissioning at the end of their renewed 60-year license term unless the plant has notified the NRC of earlier cessation of operations. The NRC staff did not include nonemergency event notification impacts for any planned small modular reactors or advanced power reactors in this estimate. The NRC will make appropriate changes to this cost-benefit analysis and its assumptions based on stakeholder comments and additional information on new reactor licensing schedules during the formulation of the proposed rule.

The NRC's information collection supporting statement, publicly available on [reginfo.gov](https://www.reginfo.gov), for NRC Form 361 states the burden hours for each notification requirement, including burden to the licensee and burden to the NRC, to be 0.5 hours per report and does not vary between requirements. The NRC staff acknowledges that the actual burden could be more and could

vary significantly between the reporting requirements and is seeking input from external stakeholders on how it could better estimate the licensee's burden to make these notifications, keeping in mind that "burden" is defined under 5 CFR 1320.3, the definitions section of the regulations implementing the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. Ch. 35) concerning collections of information. For the purposes of this preliminary regulatory analysis, the NRC staff assumed higher estimated burden hour values that varied for each requirement in the regulatory analysis.

Industry labor rates were taken from the 2021 Bureau of Labor Statistics data for March 2022 and inflated using the consumer price index to 2022 dollars. The NRC staff used the 2022 NRC labor rate of \$143 per hour throughout this analysis. The year 2022 was used as the base year for this analysis.

4.1 Evaluated Alternatives

For the reporting method in 10 CFR 50.72(a), the only alternatives considered were no action and rulemaking to include a voluntary electronic reporting method in lieu of notification through ENS.

To address the regulatory issues related to the retention, elimination, or modification of the nonemergency event reporting requirements of 10 CFR 50.72(b), the staff considered the alternatives described below.

4.1.1 Alternative 1: No Action

This alternative would maintain the current regulatory framework. Licensees would continue to be required to report nonemergency events under the current 10 CFR 50.72(b) framework.

4.1.2 Alternative 2: Extend Reporting Period

Under this alternative, the NRC would pursue rulemaking to extend the timeframe for reporting actions consistent with other nonemergency reporting requirements where there may not be a need for the NRC to take immediate action. The NRC would also update existing guidance to reflect the revised regulation.

4.1.3 Alternative 3: Eliminate Reporting Requirement

Under this alternative, the NRC would pursue rulemaking to remove the requirement to report the nonemergency events.

4.1.4 Alternative 4: Revise Regulatory Guidance

Under this alternative, which was considered only for reporting criteria 10 CFR 50.72(b)(3)(ii), the NRC would maintain the current nonemergency reporting requirement for degraded or unanalyzed conditions and clarify the guidance in NUREG-1022.

4.1.5 Alternative 5: Remove the Event Notification Requirement and Add a License Event Report Requirement

Under this alternative, which was considered only for reporting criterion 10 CFR 50.72(b)(3)(xii), the NRC would pursue rulemaking to remove the 8-hour reporting requirement and add a new requirement for a 60-day LER for events requiring the transport of a survey-confirmed radioactively contaminated person to an offsite medical facility for treatment.

4.2 Cost Impact on Power Reactor Licensees

The NRC staff performed a cost-benefit analysis to determine the impacts of each alternative for nuclear power reactor licensees. This section contains the NRC’s initial evaluation of the costs and benefits for these licensees associated with each regulatory alternative considered in the regulatory basis.

Appendix A to this document summarizes the cost and benefit impacts for each alternative that would change the nonemergency reporting requirements and the method for reporting those events. Based on the impacts identified for each reporting criterion, the staff selected the most beneficial of the evaluated alternatives and included those as recommended staff changes.

The NRC staff’s recommended changes, as shown in Table 9, result in net averted costs (benefits) to industry of approximately \$1.98 million using a 7 percent discount rate and \$3.22 million using a 3 percent discount rate, as shown in Table 3. Therefore, this regulatory basis indicates the potential rulemaking would be cost beneficial to industry.

Table 3 Industry Costs and Benefits for Recommended Alternatives

Description	Net Benefits (Costs) ^a (2022 dollars)		
	Undiscounted	7% NPV	3% NPV
Industry Implementation (includes procedure revision to eliminate certain 10 CFR 50.72 reporting requirements, guidance revision to reduce EN withdrawals, and new procedure for registering and using a reporting alternative)	(\$279,000)	(\$228,000)	(\$256,000)
Industry Operation (includes reporting criteria changes)	\$4,975,000	\$2,164,000	\$3,424,000
Industry Alternative Event Notification Reporting	\$13,000	\$45,000	\$51,000
Industry Net Benefits (Costs)	\$4,709,000	\$1,981,000	\$3,219,000

^a Values are rounded to the nearest thousand dollars. There may be small differences between tables due to rounding.

Changing the current regulatory framework to revise the reporting requirements for nonemergency events at nuclear power plants and the means of reporting those events could result in resource savings to the industry without adversely impacting public health and safety. The NRC staff recommendation to amend its regulations to remove certain nonemergency reporting requirements would save approximately \$1.98 million using a 7 percent discount rate and \$3.22 million using a 3 percent discount rate. These anticipated savings would result from reducing the total number of future nonemergency event reports that licensees would generate and provide to the NRC from the effective date of the final rule until the end of each licensee's operating license term. Further, if licensees chose to use the alternative reporting method (e.g., an online portal instead of an Emergency Notification System (ENS) phone call), they would save a nominal amount by eliminating the final step of the reporting process (i.e., making the ENS phone call).

4.3 Cost Impact on the NRC

The NRC staff's recommended change would result in a significant one-time cost to the NRC followed by ongoing savings. Initially, the NRC would incur incremental costs to undertake the rulemaking process. These costs include the preparation of the proposed and final rules, accompanying guidance, and supporting analyses.

By changing the current regulatory framework to revise the reporting requirements for nonemergency events at nuclear power plants and the means of reporting those events, the NRC would save future resources without adversely impacting public health and safety. Implementing the NRC staff's recommendation would reduce the total number of licensee reports, therefore saving NRC resources required to collect, store, screen, prioritize, distribute, or act upon reports. This savings would be recognized from the effective date of a final rule until the end of each licensee's operating license. The alternative event notification reporting system (e.g., an online portal) would add some nominal costs to support user registration and application maintenance and support. However, a system that allows licensees to automate licensee event reporting instead of an ENS phone call would save the NRC resources because operating experience review, analysis, and communication of information in the reports could be more automated and eliminate currently manual tasks.

The NRC staff's recommended changes would result in benefits to the NRC of approximately \$2.79 million using a 7 percent discount factor and \$4.49 million using a 3 percent discount factor, as shown in

Table 4.

Table 4 NRC Costs and Benefits for Recommended Alternatives

Description	Net Benefits (Costs) (2022 dollars)		
	Undiscounted	7% NPV	3% NPV
NRC Implementation (includes proposed and final rule, guidance revision, and revised NRC Form 361)	(\$736,000)	(\$714,000)	(\$726,000)
NRC Operation (includes reporting criteria changes)	\$7,680,000	\$3,558,000	\$5,312,000
NRC Alternative Event Notification Reporting System Implementation and Operation	(\$190,000)	(\$55,000)	(\$98,000)
NRC Net Benefits (Costs)	\$6,754,000	\$2,789,000	\$4,488,000

^a Values are rounded to the nearest thousand dollars. There may be small differences between tables due to rounding.

The NRC staff recommendation to amend its regulations to remove certain nonemergency reporting requirements, add a voluntary alternative event notification reporting system, and update guidance would save approximately \$2.79 million using a 7 percent discount rate and \$4.49 million using a 3 percent discount rate from the effective date of the final rule until the end of each licensee’s operating license.

4.4 Cost Justification

The NRC staff’s recommended changes would result in total net averted costs of approximately \$4.77 million using a 7 percent discount factor and \$7.71 million using a 3 percent discount factor), making the NRC staff recommendation cost beneficial.

4.5 Uncertainty Analysis

Because this preliminary regulatory analysis is based on estimates of values that are sensitive to plant-specific cost drivers and plant dissimilarities, the NRC staff provides the following analysis of the variables that have the greatest amount of uncertainty. To perform this analysis, the NRC staff conducted a Monte Carlo simulation analysis using the @Risk software program.¹

Monte Carlo simulations involve introducing uncertainty into the analysis by replacing the parameters modeled by a single value with probability distributions. By defining input variables

¹ Information about the @Risk software is available at www.palisade.com.

as probability distributions instead of point estimates, the influence of uncertainty on the results of the analysis (i.e., the net benefits) can be modeled effectively.

The probability distributions chosen to represent the different variables in the analysis were bounded by the range-referenced input and the NRC staff's professional judgment. When defining the probability distributions for use in a Monte Carlo simulation, summary statistics are needed to characterize the distributions. These summary statistics include (1) the minimum, most likely, and maximum values of a program evaluation and review technique (PERT) distribution;² (2) the minimum and maximum values of a uniform distribution; and (3) the specified integer values of a discrete population. The NRC staff used the PERT distribution to reflect the relative spread and skewness of the distribution defined by the three estimates for the number of hours needed by the licensees to prepare the reports and by the NRC to review the report. The NRC staff used the data from the NRC automated event tracking system to obtain the annual number of reports and then used the @Risk software program to generate a best fit distribution to model this data.

The NRC staff performed the Monte Carlo simulation by repeatedly recalculating the results 10,000 times. For each iteration, the cost model chose the values in the cost model randomly from the probability distributions that define the input variables. The model recorded the values of the output variables for each iteration and used these resulting output variable values to define the resultant probability distribution, in terms of costs and benefits.

A discussion of the uncertainty analysis and the results are provided in Appendix B. As discussed in Appendix B, Figure 6, the NRC staff's recommended alternatives would result in benefits of approximately \$3.9 million in averted costs using a 7 percent discount factor. The uncertainty analysis indicates that there is a greater than 99 percent chance that the NRC staff's recommendations would be cost beneficial. The key variables affecting uncertainty are the number of future event notifications that are avoided resulting from the proposed changes in reporting requirements. The 90% confidence interval for the alternative 2 net benefit is between \$1.76 million and \$6.27 million with a mean estimate of \$3.88 million using a 7 percent discount factor.

4.6 Nonquantified Costs and Benefits

In addition to the quantified costs discussed in the preliminary regulatory analysis, the attributes of regulatory efficiency, regulatory reliability, and impacts on State, local, and Tribal governments would produce nonquantified costs and benefits to the industry, governments, and the NRC as summarized in Section 6 of this regulatory basis.

² A PERT distribution is a special form of the beta distribution with specified minimum and maximum values. The shape parameter is calculated from the defined "most likely" value. The PERT distribution is similar to a triangular distribution in that it has the same set of three parameters. Technically, it is a special case of a scaled beta (or beta general) distribution. The PERT distribution is generally considered superior to the triangular distribution when the parameters result in a skewed distribution because the smooth shape of the curve places less emphasis in the direction of skew. Similar to the triangular distribution, the PERT distribution is bounded on both sides and, therefore, may not be adequate for some modeling purposes if the capture of tail or extreme events is desired.

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5.0 OTHER IMPACTS AND REGULATORY CONSIDERATIONS

Other impacts and issues related to using rulemaking to revise the reporting requirements and means of submitting the reports for nonemergency events at nuclear power plants include improving regulatory efficiency, achieving regulatory reliability, complying with the National Environmental Policy Act of 1969 (42 U.S.C. § 4321 *et seq.*) and the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*), addressing backfitting and issue finality provisions, conducting peer review of the regulatory basis, and determining the impacts on public health and safety as well as on State, local, and Federally recognized Indian Tribal governments, as described in the following sections.

5.1 Regulatory Efficiency

The NRC is pursuing rulemaking to update the nonemergency event reporting requirements for operating reactors. The following paragraphs describe the expected outcomes of the staff's recommended amendments.

This rulemaking would better align the reporting requirements of 10 CFR 50.72(b) with the current needs of the NRC to take short-term action in response to nonemergency events at operating nuclear power plants and modify or eliminate those reports that do not require immediate action or can be tracked using other existing agency processes. The recommended changes also would ensure that the agency's resources are devoted to the most risk significant events while maintaining appropriate NRC and stakeholder awareness of events at commercial nuclear power plants. These changes would result in a reporting process that has enhanced regulatory stability, predictability, and clarity.

The recommended changes would modify or eliminate certain reports that are not needed within the timeframes specified in the current 1-hour, 4-hour, and 8-hour reporting requirements of 10 CFR 50.72(b), thereby reducing unnecessary regulatory burden on licensees. The recommended change to the reporting method could also reduce the burden on licensees stemming from having to call the HOC to report nonemergency events.

This rulemaking would also provide a voluntary alternative means for reporting nonemergency events to the NRC. A licensee choosing to use this voluntary alternative could provide the notification in a single step, without the currently required telephone call to the HOC, thereby making the notification process more efficient. Also, because this option would use electronic reporting, it would also help the NRC improve the efficiency of its internal operating experience information collection, analysis, and distribution through automation.

In addition, the NRC staff considered whether it could incorporate any applicable lessons learned from the Retrospective Review of Administrative Requirements (RROAR) and rulemaking process innovation efforts to appropriately balance the regulatory improvements of this rulemaking effort and the anticipated staff expenditures, as directed by the Commission in its SRM to SECY-20-0109. The NEI originally recommended the scope of this nonemergency events rulemaking to be considered as a candidate for the RROAR rulemaking, but subsequently removed this recommendation and separately petitioned for this rulemaking through PRM-50-116. The NRC staff reviewed the RROAR rulemaking plans in SECY-21-0110, "Rulemaking

Plans to Implement the Results of the Retrospective Review of Administrative Requirements Evaluation,” dated December 20, 2021 (ML21124A116), and considered lessons learned described in the rulemaking plans. The application of NRC staff-developed criteria to each of the nonemergency reporting requirements was a direct outcome of incorporating RROAR lessons learned.

5.2 Regulatory Reliability

In addition to enhancing regulatory efficiency, using rulemaking to revise the reporting requirements for nonemergency events at nuclear power plants and the means of reporting nonemergency events would increase regulatory reliability by updating the NRC’s regulations. The rulemaking would demonstrate the agency’s ability to adapt to regulatory needs identified by stakeholders, provide opportunities for stakeholders to submit input to any changes to the reporting requirements, and maintain the NRC’s role as an effective regulator. As described in Section 2.2 of this document, since the promulgation of the original reporting requirements in 10 CFR 50.72(b), the Commission has periodically updated the reporting requirements to respond to external stakeholder concerns and modify the reporting requirements to meet current agency needs. In addition, the rulemaking process includes the greatest opportunity for Commission and public engagement on the issues related to the reporting requirements for nonemergency events at nuclear power plants. Public notice and comment during rulemaking would provide the widest range of viewpoints for Commission consideration during the rule’s development.

5.3 Compliance with the National Environmental Policy Act

As described in the 2000 Final Rule, the NRC determined that a rulemaking to amend reporting requirements was the type of action described in categorical exclusion 10 CFR 51.22(c)(3)(iii). Therefore, the NRC did not prepare an environmental impact statement or an environmental assessment for this regulatory basis. The NRC will make any document prepared to comply with the National Environmental Policy Act available for public comment with the proposed rule.

5.4 Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*), enacted in September 1980, requires agencies to consider the impact of their regulatory proposals on small entities, analyze alternatives that minimize small entity impacts, and make their analyses available for public comment.

None of the operating reactor licensees fall within the definition of “small entities” set forth by the NRC in 10 CFR 2.810, “NRC size standards.” Therefore, the NRC staff’s recommended rulemaking would not have a significant economic impact on a substantial number of small entities.

5.5 Backfitting and Issue Finality

The NRC staff recommends eliminating certain reporting requirements in 10 CFR 50.72(b) for nonemergency events at nuclear power plants. Eliminating a reporting requirement for nonemergency events would not constitute backfitting because such an action would not meet

the definition of “backfitting” in 10 CFR 50.109(a)(1). Backfitting is defined as the modification of or addition to systems, structures, components, or design of a facility; or the design approval or manufacturing license for a facility; or the procedures or organization required to design, construct or operate a facility; any of which may result from a new or amended provision in the Commission's regulations or the imposition of a regulatory staff position interpreting the Commission's regulations that is either new or different from a previously applicable staff position. As described below, eliminating one or more of these reporting requirements would not meet the definition of “backfitting” and, accordingly, would not constitute backfitting under 10 CFR 50.109, “Backfitting.”

Eliminating one or more of the reporting requirements in 10 CFR 50.72(b) would not meet the definition of “backfitting” because these reports are not required to operate a nuclear power reactor. These event reports provide information to the NRC that helps the agency perform its regulatory functions regarding the operations of a nuclear power reactor, such as oversight and incident response. However, the act of reporting to the NRC that a nonemergency event has occurred does not, by itself, affect the operations of a nuclear power reactor.

Furthermore, eliminating requirements does not meet the definition of “backfitting.” Eliminating a requirement does not create a new requirement nor does it amend an existing requirement because amending a requirement means the requirement still exists in some form. Without creating or amending a regulation, eliminating that regulation would not meet the definition of “backfitting.” Thus, eliminating reporting requirements in 10 CFR 50.72(b) would not constitute backfitting.

The recommended elimination of nonemergency event reporting requirements would not affect the issue finality of a combined license under 10 CFR Part 52, “Licenses, Certifications, and Approvals for Nuclear Power Plants.” The issue finality provision for combined licenses located in 10 CFR 52.98, “Finality of combined licenses; information requests,” provides, in relevant part, that the Commission may not modify, add, or delete any term or condition of a combined license except in accordance with the provisions of 10 CFR 50.109, “Backfitting.” As explained above, eliminating one or more of the nonemergency reporting requirements would not meet the definition of “backfitting” in 10 CFR 50.109. For this reason, the recommended eliminations also would not affect the issue finality of a combined license under 10 CFR Part 52.

For other reporting requirements in 10 CFR 50.72(b) for nonemergency events at nuclear power plants, the NRC staff recommends not changing the requirements but instead revising associated guidance documents. These recommendations would not meet the definition of “backfitting” because they would not result in a change to existing regulations, other requirements, or NRC staff positions that would be imposed on licensees. Therefore, the recommendations would not constitute backfitting or affect the issue finality of a combined license.

The NRC staff also recommends providing nuclear power reactor licensees with a voluntary, technology-inclusive alternative to the ENS for making a nonemergency event notification to the HOC. Because the alternative would be a voluntary regulatory alternative, such that licensees would not be required to use the alternative method, this recommendation would not meet the definition of “backfitting” in 10 CFR 50.109 or affect the issue finality of a combined license.

5.6 Peer Review of Regulatory Basis

The Office of Management and Budget's (OMB) *Final Information Quality Bulletin for Peer Review* requires each Federal agency to subject "influential scientific information" to peer review before dissemination. The OMB defines "influential scientific information" as "scientific information the agency reasonably can determine will have or does have a clear and substantial impact on important public policies or private sector decisions." The regulatory basis does not contain "influential scientific information." Therefore, a peer review of the regulatory basis is not needed.

5.7 Impact on Public Health and Safety

The NRC staff's recommended rulemaking on reporting requirements for nonemergency events at nuclear power plants is not needed based on safety or security concerns. Regulatory changes in these areas would be aimed at reducing the reporting burden and making the nonemergency notification reports under 10 CFR 50.72 more streamlined and efficient while still ensuring an appropriate level of awareness for NRC and its stakeholders. Thus, this rulemaking would have no impacts on public health and safety or the common defense and security.

5.8 Impact on State, Local, and Federally Recognized Indian Tribal Governments

The NRC staff's recommended rulemaking would remove the requirements for reporting certain nonemergency events and provide alternative means for submitting event reports to the NRC. This rulemaking would be applicable to power reactor licensees under 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," and 10 CFR Part 52. This rulemaking may affect State, local, or Tribal governments by eliminating a source of publicly available information about these events. During the November 4, 2021, public meeting on this topic (see Section 6.1 of this document), stakeholders informed the NRC that should such events take place without an NRC reporting requirement, it may be more difficult for these governments to obtain information on the situation and decide whether they need to take actions. State and local government officials may use these reports to ensure awareness and to support their own oversight or response efforts.

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6.0 STAKEHOLDER INVOLVEMENT

To obtain feedback from external stakeholders about the development of the regulatory basis for this rulemaking, the NRC held public meetings on November 4, and December 9, 2021. Attendees at these meetings included U.S. Congressional staff members, State representatives, nongovernmental organizations, licensees, nuclear power industry representatives, and other members of the public. The NRC invited stakeholders to make formal presentations during these meetings or offer informal feedback. The NRC used stakeholder feedback to inform the development of this regulatory basis and the preliminary regulatory analysis. The NRC detailed the results of these public meetings in meeting summaries, which can be found under ML21341B452 and ML21350A033, respectively.

6.1 NRC Observations on Stakeholder Feedback

At the November 4, 2021, public meeting, the NRC staff sought to obtain feedback on its plans to develop a regulatory basis for the rulemaking. Generally speaking, members of the nuclear power industry supported PRM-50-116 and its request to remove the nonemergency event notifications, whereas State representatives and nongovernmental organization representatives opposed the PRM.

At the December 9, 2021, public meeting, the NRC staff sought to obtain feedback on its draft evaluation criteria that the NRC planned to use in the development of this regulatory basis. During the meeting, attendees asked the NRC staff questions or gave feedback on the draft evaluation criteria.

The NRC also received three documents from members of the public addressing this draft regulatory basis. The State of North Carolina submitted an email (November 3, 2021; ML21342A186) responding to questions the NRC staff posed in its November 4, 2021, public meeting presentation. The Connecticut State Liaison Officer submitted a document (December 14, 2021; ML21350A293) describing how that State has responded to several of the nonemergency event reports. The NEI also submitted a letter (January 21, 2022; ML22021B638) providing additional details and data supporting PRM-50-116.

Appendix A to this document includes observations on stakeholder feedback specific to each reporting requirement and the recommended alternative means of reporting nonemergency events.

6.2 States, Nongovernmental Organizations, and Other Non-industry Members of the Public

States, nongovernmental organizations, and other non-industry members of the public generally spoke in opposition to the PRM. The following list summarizes the stakeholder concerns:

- States share a vested interest with the NRC in ensuring public health and safety and the protection of the environment. These notification reports are important and of great interest to States because they provide notification of potentially risk-significant events that can inform offsite officials.

- States need to be informed about issues that may affect public health and safety or the environment or that may inform decision-making, should a subsequent emergency event occur. Without such notification reports, States would be burdened with obtaining credible information on the event before taking offsite actions or meaningfully engaging with the NRC.
- Timeliness of these notification reports is important. Waiting 60 days for an LER is unacceptable and denies the States of the opportunity to take any immediate actions they deem prudent.
- Because these are rare events, reporting does not represent a cumulative burden, but rather is a nuclear safety obligation. Such notifications can result in increased public confidence.
- The NRC staff should consider including additional notification report requirements for events such as physical security and cybersecurity and other new threats that were not considered previously.
- Some stakeholders use the event notification reports on a daily basis, sharing them on social media with significant public interest in the information. Anything of relevance to public health and safety should be reported in a timely way, so that members of the public can then make their own decisions about how significant these events are and respond accordingly.
- The assertion that these nonemergency notification reports distract key plant staff appears misleading at best. If such a 4- or 8-hour notification report for a nonemergency event is distracting, what assurances are there that the licensee can make a 1-hour notification report for an emergency event? The proposal is contrary to the Principles of Good Regulation and to the stated purpose of the regulation.
- The draft evaluation criteria do not appear to address the NRC principle of openness. These requirements need to maintain transparency to public stakeholders. State and local officials still have a need for situational awareness, especially for matters that affect the public.

The NRC will continue to interface with stakeholders throughout the rulemaking process.

6.3 Licensees and Industry Representatives

Licensees and industry representatives, which generally spoke in support of the PRM and its request to remove the nonemergency event notifications, gave the following feedback on the NRC's intent to develop a regulatory basis for this rulemaking:

- The NRC promulgated the existing rule to provide timely notification of items that were of potential safety significance at that time, but based on 40 years of experience, prompt notification of the nonemergency events seems insignificant from a safety point of view. It appears to be relatively uncommon for any prompt NRC follow-up to nonemergency

event notification reports, which reinforces the perspective that these events do not rise to the level of safety-significance assumed in the initial development of the rule.

- Licensees commonly reach out to State and local representatives regardless of the NRC process.
- The PRM is not proposing to shift the burden to resident inspectors. Rather, it is common practice for plant staff to apprise resident inspectors of any significant evolution or change in plant status in parallel with the process of formal NRC notification, if required. In some cases, the licensee will communicate with the resident inspectors, as well as NRC regional office staff, whether or not a 10 CFR 50.72 reporting requirement is involved. Resident inspectors are expected to maintain awareness of plant conditions and adjust the scope of their inspection activities accordingly. The resident inspectors would not take on any added responsibility of formal NRC notification, such as notifying the HOC for monitoring, event response, or additional oversight outside of what the resident inspector would already do to respond to plant conditions.
- More detail is needed on how the NRC uses this information. The LER associated with some of these events may make the immediate report unnecessary, depending on timeliness needs.
- The NRC should fully describe actions taken as a result of the reporting requirement in its regulatory basis.

The next opportunity for the public to provide feedback on this rulemaking would be when the NRC publishes this regulatory basis.

6.4 Planned Interactions with the Advisory Committee on Reactor Safeguards

The NRC staff will provide the regulatory basis to the Advisory Committee on Reactor Safeguards at the time of publication. The NRC staff will brief the Committee on the regulatory basis, if requested, and will follow normal rulemaking processes for NRC engagement with it.

6.5 Cumulative Effects of Regulation

The NRC has implemented a program to address the possible cumulative effects of regulation in the development of regulatory bases for rulemakings. The concept of cumulative effects of regulation is an organizational effectiveness challenge that results from a licensee or other affected entity implementing several complex positions, programs, or requirements within a prescribed implementation period and with limited available resources, including the ability to access technical expertise to address a specific issue. The NRC requests feedback from the public at this regulatory basis stage on the cumulative effects that may result from the recommended rulemaking. The NRC will consider the comments received as it develops the proposed rule. The NRC will continue to engage with and request feedback from the public at the proposed rule stage on the cumulative effects that may result from revising the reporting requirements for nonemergency events at nuclear power plants.

6.6 Questions for Public Comment

The NRC welcomes comments on any aspect of this regulatory basis. The NRC has not prepared any specific questions for public comment in this regulatory basis.

7.0 SAFETY GOAL EVALUATION

Safety goal evaluations are applicable to regulatory initiatives considered to be generic safety enhancement backfits subject to the substantial additional protection standard in 10 CFR 50.109(a)(3). This regulatory basis supports a rulemaking that would eliminate, or revise guidance for, certain nonemergency event reporting requirements and create an alternative method for providing nonemergency event notification reports. The recommended rulemaking would not comprise generic safety enhancement backfits subject to the substantial additional protection standard in 10 CFR 50.109(a)(3). As discussed in section 5.5 of this regulatory basis document, the recommended rulemaking would not constitute backfitting and, therefore, would not be subject to the substantial additional protection standard in 10 CFR 50.109(a)(3).

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8.0 NRC STRATEGIC PLAN

The recommended rulemaking would support the NRC's Strategic Plan for FY 2022–2026 in relation to the strategic goal of ensuring the safe and secure use of radioactive materials and the strategic goal of inspiring stakeholder confidence in the NRC. The actions recommended in this regulatory basis support these goals. The NRC staff undertook a systematic review of the nonemergency event notification requirements to determine which of them must remain in place, which could be removed, and which could benefit from updated guidance. This systematic review included the review of historical data and actions the NRC has taken previously to inform the recommendations. Further, the strategic goal of inspiring stakeholder confidence is supported by the NRC staff holding two public meetings on this topic to seek input from stakeholders and the NRC staff's commitment to considering public comments on this regulatory basis.

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9.0 CONCLUSION

The NRC staff finds that there is sufficient regulatory basis to proceed with rulemaking. Specifically, the 10 CFR 50.72 rulemaking would eliminate the reporting burden associated with certain nonemergency notifications and provide an alternative method for notifying the NRC of nonemergency events.

In summary, this rulemaking would better align the reporting requirements with the current needs of the agency and external stakeholders. The recommended changes would better align the reporting requirements of 10 CFR 50.72(b) with the needs of the agency to take short term action in response to risk-significant events at operating nuclear power plants and eliminate those reports that do not require immediate action or can be tracked using other existing agency processes. These recommended changes would help ensure that the agency devotes its resources to the most risk-significant events while maintaining appropriate NRC and stakeholder awareness of these events at commercial nuclear power plants. These changes would result in a reporting process that maintains openness, has enhanced regulatory stability, predictability, and clarity, and addresses advances in technology. In addition, the recommended changes would eliminate reports that are not needed within the timeframes specified in the current 1-hour, 4-hour, and 8-hour reporting requirements of 10 CFR 50.72(b), thereby reducing burden on the NRC and licensees. The NRC staff notes that, with the exception of three reporting requirements, a licensee event report is publicly available within 60 days. The NRC staff considered these factors when making the recommendations below. Table 5 summarizes the recommended action for each requirement.

Table 5 Recommended Actions for Nonemergency Event Notifications

10 CFR 50.72 Paragraph	Condition Requiring Notification	Recommendation
(b)(1)	Deviation from TS under 10 CFR 50.54(x)	Alternative 1 – Retain the requirement
(b)(2)(i)	Plant shutdown required by TS	Alternative 1 – Retain the requirement
(b)(2)(iv)(A)	System actuation (ECCS discharge)	Alternative 3 – Eliminate the requirement
(b)(2)(iv)(B)	System actuation (RPS actuation)	Alternative 1 – Retain the requirement

10 CFR 50.72 Paragraph	Condition Requiring Notification	Recommendation
(b)(2)(xi)	News release or notifications of other government agency	Alternative 3 – Eliminate the requirement
(b)(3)(ii)(A)	Degraded condition	Alternative 4 – Update guidance
(b)(3)(ii)(B)	Unanalyzed condition	Alternative 4 – Update guidance
(b)(3)(iv)	System actuation (valid or invalid actuation)	Alternative 3 – Eliminate the requirement
(b)(3)(v)	Event or condition that could have prevented fulfillment of a safety function	Alternative 3 – Eliminate the requirement
(b)(3)(xii)	Transport of a contaminated person offsite	Alternative 3 – Eliminate the requirement
(b)(3)(xiii)	Loss of EP capabilities	Alternative 3 – Eliminate the requirement
(a)(1)	General requirements (for notifying the NRC of a nonemergency event)	Alternative 2 – Provide an alternative reporting means

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10.0 RULEMAKING DEVELOPMENT TIMELINE

The NRC is making this regulatory basis available for public comment by stakeholders, including the commercial nuclear power industry (e.g., vendors and utilities), governmental and nongovernmental organizations, and individual members of the public.

This activity is considered a medium priority rulemaking. The NRC has posted key milestones and target completion dates for the rulemaking deliverables on the NRC's Rules and Petitions web page under Planned Rulemaking Activities, <https://www.nrc.gov/reading-rm/doc-collections/rulemaking-ruleforum/active/ruledetails.html?id=1128>.

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APPENDIX A: EVALUATION OF THE NONEMERGENCY EVENT NOTIFICATIONS IN 10 CFR 50.72

This appendix provides a detailed evaluation of each of the nonemergency event notification (EN) requirements under Title 10 of the *Code of Federal Regulations* (10 CFR) 50.72(b) and an alternative EN reporting method.

12.0 SECTION 50.72(B)(1) – DEVIATION FROM TECHNICAL SPECIFICATIONS UNDER 10 CFR 50.54(X)

12.1 Existing Regulatory Framework

In 10 CFR 50.54(x), the U.S. Nuclear Regulatory Commission (NRC) permits licensees to take emergency actions that depart from plant technical specifications (TSs) if the action is immediately needed to protect public health and safety, including plant personnel, and no action consistent with the TSs that can provide adequate or equivalent protection is immediately apparent.

The NRC requires, in 10 CFR 50.72(b)(1), that licensees notify the NRC within 1 hour of any deviation from the plant's TSs, if not already reported as part of a declared emergency.

12.2 Regulatory Issue

In the preamble to the 2000 final rule (Volume 65 of the *Federal Register* (FR), page 63769 (65 FR 63769)) that established the current requirements in 10 CFR 50.72, "Immediate notification requirements for operating nuclear power reactors" (2000 Final Rule), the Commission explained that it was retaining the requirement to report deviations from TSs authorized pursuant to 10 CFR 50.54(x) because the NRC may need to take immediate action to protect public health and safety. The Commission further discussed that, in determining whether to retain, modify, or eliminate this reporting requirement, the NRC must balance its need for prompt information with the cost placed on licensees.

The NRC expects that all reports under 10 CFR 50.72(b)(1) are made because of ongoing conditions and actions are taken to address immediate safety or security concerns. A 1-hour reporting requirement may distract licensee personnel or divert resources more appropriately focused on immediately addressing the plant conditions. However, NRC decision makers and emergency response personnel need to be aware of such conditions to ensure an appropriate agency response.

Since 2011, the NRC received only two ENs under this criterion. One event involved a licensee suspending certain security measures due to an ongoing fire. The other involved a licensee removing personnel from a required area due to a tsunami warning. Although both events were also associated with licensee emergency plan declarations, actions taken pursuant to 10 CFR 50.54(x) are not explicitly tied to licensee emergency plan declarations. Therefore, emergency declarations cannot be relied on to capture all actions taken under 10 CFR 50.54(x).

The NRC is evaluating this reporting requirement to determine if the burden on licensees can still be justified. The NRC staff notes that a nonemergency event reporting requirement itself does not have a direct impact on the public health and safety or common defense and security. However, as explained in section 5.5 of this regulatory basis document, such reporting can be necessary for the NRC to successfully execute its regulatory functions, such as oversight and incident response.

The NRC staff used the following questions to consider potential changes to the reporting criterion.

Without this nonemergency reporting, would the NRC still be able to successfully execute its oversight, event response, or other NRC regulatory functions?

No, the NRC would not be able to successfully execute its oversight, event response, or other NRC regulatory functions without the 10 CFR 50.72(b)(1) notification. Deviations under 10 CFR 50.54(x) are reported for conditions under which licensees deviate from their approved TSs because the action is immediately needed to protect public health and safety and no action consistent with TSs that can provide adequate protection is immediately apparent. The nature of 10 CFR 50.54(x) deviations is such that immediate actions or follow-up by the NRC may be warranted, and without this notification the conditions may not be known within a time commensurate with the safety significance of the issue.

Would delays in receiving this nonemergency reporting significantly degrade the NRC's ability to successfully execute our oversight, event response, or other NRC regulatory functions?

Yes, delaying receipt of the 10 CFR 50.72(b)(1) reporting would significantly degrade the NRC's ability to successfully execute its oversight, event response, or other regulatory functions. Given the potential significance of events that may result in licensees taking actions pursuant to 10 CFR 50.54(x), delaying reports under this criterion would significantly degrade the NRC's ability to successfully execute its mission.

Would delaying or eliminating this nonemergency reporting significantly degrade the NRC's ability to track or trend data associated with this criterion?

No, delaying or eliminating the 10 CFR 50.72(b)(1) reporting would not significantly degrade the NRC's ability to track or trend data associated with this criterion. Information about these events would still be made available via licensee event reports (LERs) required by 10 CFR 50.73(a)(2)(i)(C). The NRC might incur short-term difficulties in tracking or trending while any processes that currently rely on ENs are modified to use LERs.

Is this nonemergency reporting duplicated by another regulation or 10 CFR 50.72 criterion?

No, the 10 CFR 50.72(b)(1) reporting criterion is not duplicated by another regulation or 10 CFR 50.72 criterion. Although frequently reported in connection with the emergency declarations made under 10 CFR 50.72(a)(1)(i), actions taken pursuant to 10 CFR 50.54(x) are not inherently tied to licensee emergency plan classifications. Conditions that necessitate taking actions

pursuant to 10 CFR 50.54(x) may not have been considered in licensee emergency plan classifications.

Is this type of event reportable under 10 CFR 50.73 and would that report meet the NRC's needs?

Yes, this type of event is reportable as an LER under 10 CFR 50.73(a)(2)(i)(C). However, the 60-day reporting requirement for LERs does not meet the NRC's need to consider immediate actions to protect public health and safety.

12.3 Discussion of Alternatives

12.3.1 Alternative 1: No Action

Description of Alternative 1

This alternative would maintain the current regulatory framework. Licensees would continue to be required to report actions taken pursuant to 10 CFR 50.54(x) within 1 hour.

Assessment of Alternative 1

This alternative retains the original basis for the regulation, which supports the NRC's ability to make timely decisions concerning public health and safety. The NRC's decisions depend heavily on the speed with which licensees communicate these events.

12.3.2 Alternative 2: Extend Reporting Period

Description of Alternative 2

Under this alternative, the NRC would pursue rulemaking to extend the timeframe for reporting actions taken pursuant to 10 CFR 50.54(x), consistent with other nonemergency reporting requirements where there may be a need for the NRC to take immediate action. The NRC would also update existing guidance to reflect the revised regulation.

Assessment of Alternative 2

Alternative 2 could alleviate time pressure on licensees to report actions taken pursuant to 10 CFR 50.54(x) within 1 hour. Extending the time for reporting would allow licensees to focus resources on immediate assessment of and response to the conditions that resulted in a need to take actions not pursuant to licensee TSs.

This alternative would not significantly reduce burdens on licensees. Any actions taken pursuant to 10 CFR 50.54(x) are deliberate actions taken by the licensees that require the approval of at least a licensed senior operator. As such, these actions should not result in any burdens to consider reportability beyond those necessary to support taking actions pursuant to 10 CFR 50.54(x).

This alternative would significantly reduce the NRC's ability to consider immediate actions in response to such events.

12.3.3 Alternative 3: Eliminate Reporting Requirement

Description of Alternative 3

Under this alternative, the NRC would pursue rulemaking to remove the requirement to report actions taken pursuant to 10 CFR 50.54(x) and update its guidance to reflect the elimination of this requirement.

Assessment of Alternative 3

The removal of the requirement to report actions taken pursuant to 10 CFR 50.54(x) would alleviate the burden on licensees to provide such notifications. The NRC would continue to require, under 10 CFR 50.73(a)(2)(i)(C), that licensees submit LERs for such actions within 60 days of occurrence.

Under Alternative 3, the NRC would have no regulatory requirement to ensure that prompt notifications are made to the Headquarters Operations Center (HOC). Many licensees' procedures require notifications to resident inspectors on a similar timeframe as licensee response personnel when these conditions occur, but such notifications are at the licensees' discretion because immediate notifications of inspectors are not required by NRC regulation. This could potentially delay inspector awareness of these events, as well as the NRC's overall awareness. This would seriously degrade the NRC's ability to promptly respond to issues requiring licensees to take emergency actions that depart from plant TSs when immediately needed to protect the public health and safety. Actions may not be taken until the NRC staff becomes aware by other means, such as through resident inspectors' plant status review or when the licensee submits an associated LER within 60 days of the event.

12.4 Regulatory Scope

Under Alternative 1, the NRC would not pursue any changes to the regulations in 10 CFR 50.72(b)(1) concerning the nonemergency notifications for nuclear power plants. Under Alternative 2, the NRC would pursue rulemaking to extend the timeframe required in 10 CFR 50.72(b)(1) for licensees to report actions taken pursuant to 10 CFR 50.54(x) and would revise any applicable guidance. Under Alternative 3, the NRC would pursue rulemaking to remove this reporting criterion in 10 CFR 50.72(b)(1) and would revise any applicable guidance.

12.5 NRC Guidance, Policy, and Implementation Issues

12.5.1 NRC Guidance

The NRC would revise NUREG-1022, Revision 3, "Event Reporting Guidelines: 10 CFR 50.72 and 50.73," issued January 2013, and NRC Form 361, "Reactor Plant Event Notification Worksheet," to address any changes made to 10 CFR 50.72(b)(1).

12.5.2 Policy Issues

No change in Commission policy would be required.

12.6 Impacts on Public Health, Safety, and Security

12.6.1 Alternative 1: No Action

Impacts on Public Health, Safety, and Security

Because this alternative would not change the current requirements, there would be no increase or reduction in public health, safety, or security.

Impacts on Applicants and Licensees

Because this alternative would not change the current requirements, this alternative would have no incremental impacts on applicants and licensees.

Impacts on the NRC

Because this alternative would not change the current requirements, this alternative would have no incremental impacts on the NRC.

Impacts to Other Stakeholders

Because this alternative would not change the current requirements, this alternative would have no incremental impact on State, local, or Tribal governments.

Additional Considerations

This alternative would not alleviate any concerns about operational costs that have been raised by licensees. However, among the alternatives, it would have the least impact on the NRC's ability to immediately respond to potentially significant events. Additionally, it would not impact State, local, and Tribal governments that may rely on the EN that the NRC publishes to its public website to maintain awareness. It would also maintain the current level of openness.

Licensee actions taken pursuant to 10 CFR 50.54(x) are intentional and require the approval of, at minimum, a licensed senior operator. The need to report once the actions are taken should be immediately apparent to licensees with no further evaluation needed.

Summary of Benefits and Costs

Alternative 1 would not result in any changes to the current regulatory framework; therefore, there would be no associated incremental costs or benefits.

12.6.2 Alternative 2: Extend Reporting Period

Impacts on Public Health, Safety, and Security

Because this alternative would delay reports to the NRC of potentially significant ongoing conditions, there may be a net reduction in public health, safety, or security as the NRC would not be able to consider taking appropriate actions immediately.

Impacts on Applicants and Licensees

Extending the reporting period would have no significant change in costs, as it would only delay licensee actions currently taken but still require them. The NRC estimates that licensees would incur incremental costs associated with revising plant procedures and conducting training for this requirement of approximately (\$12,000). Licensees may see operational benefits because some relief would be given for considering reporting while responding to events. However, given the nature of actions taken pursuant to 10 CFR 50.54(x) and the small number of ENs submitted under this criterion, that relief is estimated to be minor.

Impacts on the NRC

Under this alternative, the NRC's evaluation and response to plant events that result in actions taken pursuant to 10 CFR 50.54(x) would be delayed relative to the current reporting requirement. Further, the NRC would amend its regulations, guidance in NUREG-1022, and NRC Form 361 for this requirement at a cost of approximately (\$79,000). Because extending the required time for reporting would have no significant change in costs to the NRC to receive, review, process, or react to the notification, the NRC did not estimate these small incremental costs or benefits.

Impacts to Other Stakeholders

This alternative may have impacts on State, local, or Tribal governments. Any entity that relies on ENs reported to the NRC that are made public may have to alter its processes to account for the extended reporting period.

Summary of Benefits and Costs

This alternative would give more time for licensees to make the required report. It would also alleviate burden on operators while responding to potentially risk-significant conditions as reporting would not need to be considered or reports made until well after such conditions arise. However, extending the allowed time for reporting would require rulemaking, guidance revisions, training, and a revision to NRC Form 361 for this requirement at an estimated cost of approximately (\$91,000) without achieving substantial benefits.

12.6.3 Alternative 3: Eliminate Reporting Requirement

Impacts on Public Health, Safety, and Security

Because this alternative would eliminate reports of potentially significant safety or security concerns, and therefore delay the NRC's potential actions in response to those concerns, there may be a reduction in public health, safety, or security as the NRC would not be able to consider taking appropriate actions immediately.

Impacts on Applicants and Licensees

This alternative would eliminate licensee costs associated with this reporting requirement. The NRC estimates that licensees would incur one-time costs associated with revising plant procedures and conducting training for this requirement of approximately (\$6,000) to inform the affected personnel of the elimination of these nonemergency event reporting requirements. The elimination of future nonemergency event notifications for this requirement during the remaining license periods of current operating plants is estimated to result in approximately \$5,000 in avoided reporting costs using a 7 percent discount rate.

Impacts on the NRC

This alternative would seriously degrade the NRC's ability to promptly respond to issues requiring licensees to take emergency actions that depart from plant TSs when immediately needed to protect public health and safety. Many licensees' procedures require notifications to resident inspectors on a similar timeframe as licensee response personnel when these conditions occur, but such notifications are at the licensee's discretion. Immediate notifications would not be required by NRC regulation. This could potentially delay inspector awareness of these events, as well as the NRC's overall awareness. Actions may not be taken until the staff becomes aware by other means, such as through resident inspectors' plant status review or when the licensee submits an associated LER within 60 days of the event. Further, the NRC would need to amend its regulations, guidance in NUREG-1022, and NRC Form 361 for this requirement at an estimated cost of approximately (\$79,000). The elimination of future nonemergency event notifications for this requirement during the remaining license periods of current operating plants is estimated to result in approximately \$14,000 in avoided receipt, review, processing, and response costs using a 7 percent discount rate.

Impacts to Other Stakeholders

This alternative may impact State, local, and Tribal governments' ability to respond to events in a timely manner. Any organization that relies on ENs reported to the NRC for this requirement may have to alter its processes to gather plant information instead of relying on the corresponding LERs that are submitted up to 60 days after the event.

Summary of Benefits and Costs

This alternative would eliminate the cost of reporting actions taken pursuant to 10 CFR 50.54(x). However, this alternative would significantly undermine the NRC's ability to consider immediate actions in response to such conditions.

12.7 Backfitting and Issue Finality

None of the alternatives would constitute backfitting as defined in 10 CFR 50.109, "Backfitting," or affect the issue finality of a combined license issued under 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants." Alternative 1 would result in no change to existing regulations, other requirements, or NRC staff positions. Alternative 2 would give more time for the licensee to make the required notification. Thus, Alternative 2 would relax the

10 CFR 50.72(b)(1) reporting requirement. However, a licensee could continue to comply with the current timing requirement and still satisfy Alternative 2. This would make the relaxation nonmandatory and, as explained in Management Directive (MD) 8.4, "Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests," nonmandatory relaxations of regulations generally do not meet the definition of "backfitting." Alternative 2 would provide the voluntary relaxation of a current requirement and, thus, not constitute backfitting or affect the issue finality of a combined license. Under Alternative 3, the existing 10 CFR 50.72(b)(1) reporting requirement would be eliminated. Alternative 3 would not meet the definition of "backfitting" and would not affect the issue finality of a combined license because it would not result in a modification of or addition to systems, structures, or components (SSCs), or the design of a facility or the procedures or organization required to design, construct, or operate a facility.

12.8 Stakeholder Feedback

The NRC held public meetings on November 4, 2021, and December 9, 2021, to discuss updating the 10 CFR 50.72 nonemergency reporting criteria. The NRC did not receive input specific to this reporting criterion. Section 6.1 of this regulatory basis document summarizes the comments received.

12.9 Staff Recommendation

The NRC staff recommends adoption of Alternative 1, that no action be taken. The current reporting requirement provides the NRC with immediate notification of deviations from the plant's TSs pursuant to 10 CFR 50.54(x) so that the agency may consider taking immediate actions. Delaying or eliminating the report as considered in Alternatives 2 and 3, respectively, would unacceptably degrade the NRC's ability to perform oversight and event response. The associated LER reporting requirement would not fulfil the agency's need to consider immediate actions.

13.0 SECTION 50.72(B)(2)(I) – PLANT SHUTDOWN REQUIRED BY TECHNICAL SPECIFICATIONS

13.1 Existing Regulatory Framework

In 10 CFR 50.72(b)(2)(i), the NRC requires that licensees notify the NRC of the initiation of a plant shutdown required by the plant's TSs (e.g., reactor coolant system pressure boundary leakage). This report is required to be made within 4 hours of occurrence of such an event.

13.2 Regulatory Issue

In determining whether to maintain this reporting requirement, the NRC must balance its need for prompt information with the cost placed on licensees. The NRC uses these reports to support its inspection program. However, the 4-hour reporting requirement may impose a burden to licensees by requiring unnecessary or redundant reports to the NRC. In many cases, the resident inspectors will have sufficient notice for these types of events to accomplish the agency's oversight activities and maintain public health and safety. The NRC is evaluating this reporting requirement to determine if the burden on licensees can still be justified. The NRC staff notes that a nonemergency event reporting requirement itself does not affect public health and safety.

The NRC staff used the following questions to consider potential changes to the reporting criterion.

Without this nonemergency reporting, would the NRC still be able to successfully execute its oversight, event response, or other NRC regulatory functions?

Without the 10 CFR 50.72(b)(2)(i) notification, the NRC could still perform its oversight and event response functions. There is no regulatory requirement or prompt required action that the NRC must take in response to a plant shutdown required by TSs. The NRC found only one instance where a report made under 10 CFR 50.72(b)(2)(i) resulted in a reactive inspection. In that instance, the report was also submitted under two other 10 CFR 50.72(b) reporting criteria. Additionally, the NRC identified five other instances when the agency performed a review under MD 8.3, "NRC Incident Investigation Program," in response to a 10 CFR 50.72(b)(2)(i) report. While none of those reviews resulted in reactive inspections, appropriate NRC review of the issues was conducted under the baseline inspection program. Absent this reporting criterion, the Headquarters Operations Officer's (HOO's) nightly plant status call would identify any power changes at a nuclear power plant that resulted from the initiation of a shutdown required by TSs. Additionally, the resident inspectors' routine plant status review and baseline inspection would identify any shutdowns that were commenced due to TSs, as well as opportunities to learn about these shutdowns via licensees' voluntary information sharing. However, if the NRC were to rely solely on inspectors' plant status reviews, baseline inspections, and voluntary licensee communications, multiple days could pass before the NRC was made aware of the initiation of a shutdown required by plant TSs.

Without the 10 CFR 50.72(b)(2)(i) notification, there is the potential that an NRC regulatory function could be impacted. If the NRC eliminated this reporting criterion, there is the chance for a missed required baseline inspection sample. For example, the baseline inspection program

requires inspectors to inspect the containment if it is opened and substantive maintenance activities are performed during a plant shutdown. This requirement is part of Inspection Procedure 71111.20, "Refueling and Other Outage Activities" (ML21362A685). If inspectors were not made aware of a plant entering cold shutdown due to TSs (there is currently no regulatory requirement to notify the inspectors), and the licensee opened the containment for a short period, then the inspectors may not satisfy this requirement from Inspection Procedure 71111.20. If inspectors were to miss this inspection requirement, that could potentially lead to the NRC failing to complete the baseline inspection program. Further evaluation per Inspection Manual Chapter 0307, Appendix A, "Reactor Oversight Process Self-Assessment Metrics and Data Trending" (ML19274C401) would require additional effort on the part of the NRC and result in additional costs to the licensee. However, based on a detailed review of actual experience related to this reporting requirement, the staff concludes that, between the nightly HOO plant status calls to record daily power levels which are available to inspectors, the resident inspectors' daily plant status reviews, and other regular communications between resident inspectors and licensee staff, the chances of missing this regulatory requirement are low.

Would delays in receiving this nonemergency reporting significantly degrade the NRC's ability to successfully execute our oversight, event response, or other NRC regulatory functions?

The NRC received 134 ENs under the 10 CFR 50.72(b)(2)(i) criterion from 2011 through 2021. Of these, 75 were not associated with any other non-emergency event reporting criteria. Of the 134 ENs, 11 reports were subsequently withdrawn.

Similar to the discussion above regarding the elimination of this reporting requirement, delaying receipt of event reports under this criterion could result in the baseline inspection program not being completed. If the NRC were not timely made aware of a shutdown required by TSs and the shutdown resulted in the containment being opened and closed and substantive maintenance activities being performed inside containment while the residents were offsite, such as could occur on a weekend, there is some chance that the resident office would not be made aware in time to perform the required containment inspection.

The inspection procedure does allow inspectors to review photos and videos in lieu of an actual walkdown, but this would take coordination with the licensee before the outage to ensure the licensee takes videos and photos, which is not always possible. Although a delay in receiving the 10 CFR 50.72(b)(2)(i) report would not affect the event response capabilities of the NRC, a delay could be considered a significant degradation of an NRC function because of the potential that the NRC would not be able to complete the baseline inspection at the site. If inspectors were to miss this inspection requirement, that could potentially lead to the NRC failing to complete the baseline inspection program and would require further evaluation per Inspection Manual Chapter 0307, Appendix A.

Would delaying or eliminating this nonemergency reporting significantly degrade the NRC's ability to track or trend data associated with this criterion?

Delaying or eliminating the 10 CFR 50.72(b)(2)(i) reporting criterion may affect the NRC's ability to track and trend data associated with the reporting criterion. A 10 CFR 50.72(b)(2)(i) EN informs the NRC of the initiation of a shutdown required by TSs. TS-required shutdowns are also

subject to the requirement in 10 CFR 50.73 for licensees to submit an LER within 60 days of the completion of a shutdown required by TSs. The LER would allow the NRC to continue trending and tracking shutdowns that were completed due to the requirements in the plant's TSs. However, it would not allow the NRC to track and trend data associated with the initiation of a shutdown required by TSs if the plant did not complete the shutdown.

Is this nonemergency reporting duplicated by another regulation or 10 CFR 50.72 criterion?

No other 10 CFR 50.72(b) reporting criterion or other regulation duplicates the 10 CFR 50.72(b)(2)(i) reporting criterion.

Is this type of event reportable under 10 CFR 50.73 and would that report meet the agency's needs?

In 10 CFR 50.73, the NRC requires licensees to submit an LER within 60 days of the completion of a shutdown required by TSs. This 10 CFR 50.73 LER requirement is not identical to the 10 CFR 50.72(b)(2)(i) reporting criterion. In 10 CFR 50.72(b), the NRC requires a 4-hour nonemergency report for the initiation of a shutdown required by TSs, and the 10 CFR 50.73 LER requirement is for the completion of any nuclear plant shutdown required by the plant's TSs. Therefore, if the NRC were relying solely on the LER requirement to track and trend data, the NRC would miss instances when the plant initiated, but did not complete, a plant shutdown required by TSs.

13.3 Discussion of Alternatives

13.3.1 Alternative 1: No Action

Description of Alternative 1

This alternative would maintain the current regulatory framework, retaining the current reporting requirements of 10 CFR 50.72(b)(2)(i).

Assessment of Alternative 1

This alternative would continue to require licensees to notify the HOC within 4 hours of initiating a plant shutdown required by TSs.

This alternative would not alleviate the licensee's requirement to report the initiation of a plant shutdown required by the plant's TSs to the NRC within 4 hours. However, based on the total number of reports per year, and the small percentage of those that are withdrawn, this reporting criterion does not result in a significant annual burden to licensees.

This alternative retains the original basis for the regulation, which supports the NRC's ability to respond to heightened public concern or take a reasonably prompt action. The NRC would continue to be made aware of any initiation of a plant shutdown required by TSs and could use this data to assess the need for a reactive inspection. The NRC would not run the risk of not performing the Inspection Procedure 71111.20 baseline inspection of the containment.

Public stakeholders would also continue to be made aware of the initiation of a shutdown required by TSs. Although public stakeholders have not demonstrated any significant actions they take because of this reporting criterion, plant shutdowns required by TSs are usually of high interest to both the NRC and public stakeholders.

13.3.2 Alternative 2: Extend Reporting Period

Description of Alternative 2

Under this alternative, the NRC would pursue rulemaking to extend the timeframe for reporting the initiation of a shutdown required by TSs, consistent with other nonemergency reporting requirements that may result in a need for the NRC to take reasonably prompt action. The NRC would also update existing guidance to reflect the revised regulation.

Assessment of Alternative 2

Alternative 2 could alleviate time pressure on licensees to report the initiation of a shutdown required by TSs. This would not seriously degrade the NRC's ability to monitor and oversee operations at nuclear power facilities.

This alternative would not significantly reduce burden to licensees. Any actions taken to shut down the plant in accordance with the TSs should be readily apparent to licensees as they are deliberate actions. As such, these actions should not result in any burden to evaluate reportability beyond those already performed to support the need to shut down the plant. This conclusion is supported by the small number of withdrawals per year.

13.3.3 Alternative 3: Eliminate Reporting Requirement

Description of Alternative 3

Under this alternative, the NRC would revise 10 CFR 50.72(b)(2)(i) to remove the requirement to report the initiation of a plant shutdown required by the plant's TSs and update its guidance.

Assessment of Alternative 3

This alternative would remove this reporting criterion. Licensee resources would no longer be expended on reporting to the HOC a plant shutdown required by the plant's TSs. This could potentially degrade the NRC's capability to make timely decisions regarding actual or potential threats to public health and safety. The NRC would have to rely on either the nightly HOO plant status calls or the resident inspectors' plant status reviews to identify any shutdowns initiated because of requirements in the plant's TSs. This alternative could delay the HOO's awareness by approximately 24 hours and up to 5 calendar days for inspectors.

The NRC would still be able to maintain adequate emergency response capabilities if this reporting criterion is removed. The NRC does not need to take any immediate actions in response to reports made under this criterion. Although the NRC may be delayed in initiating a reactive inspection if the circumstances warranted, the agency is aware of only one instance from 2011 through 2021 when a report made under 10 CFR 50.72(b)(2)(i) resulted in a reactive

inspection. In that instance, two other 10 CFR 50.72(b) reporting criteria were also met. That event also triggered multiple reporting criteria under other NRC regulations. Although there are no significant impacts to the ability of the NRC or external stakeholders to respond immediately if this criterion were to be removed, a plant shutdown, especially one required by TSs, is an occurrence of high NRC and external stakeholder interest. Because of this heightened interest, situational awareness and the original basis for the regulation may still validate the justifications to maintain this requirement.

If this reporting criterion were eliminated, the NRC could miss performing a required baseline inspection sample or having inspectors respond promptly to the site for conditions of interest and to observe the licensee's response.

If this reporting criterion were eliminated, licensees would still be required by 10 CFR 50.73 to submit an LER within 60 days for the completion of any nuclear plant shutdown required by the plant's TSs.

13.3.4 Alternative 4: Revise Regulatory Guidance

Description of Alternative 4

Under this alternative, the NRC would maintain the requirement to report and would clarify the guidance in NUREG-1022.

Assessment of Alternative 4

This alternative retains the original basis for the regulation, which supports the NRC's ability to respond to heightened public concern or take a reasonably prompt action.

This alternative is unlikely to alleviate the concerns raised by the petitioner or provide any reduction in burden associated with this reporting requirement. The NRC staff is not aware of issues relating to insufficient or unclear guidance for these events.

13.4 Regulatory Scope

Under Alternative 1, the NRC would make no changes to the current regulatory framework, retaining the reporting requirements of 10 CFR 50.72(b)(2)(i) and its associated guidance. Under Alternative 2, the NRC would pursue rulemaking to extend the timeframe required in 10 CFR 50.72(b)(2)(i) for licensees to submit a report and would revise any applicable guidance. Under Alternative 3, the NRC would amend its regulations in 10 CFR 50.72(b)(2)(i) and the associated guidance to remove this reporting requirement. Under Alternative 4, the NRC would retain the reporting requirements of 10 CFR 50.72(b)(2)(i) while updating the regulatory guidance.

13.5 NRC Guidance, Policy, and Implementation Issues

13.5.1 NRC Guidance

The NRC would revise NUREG-1022 and NRC Form 361 to address any changes made to 10 CFR 50.72(b)(2)(i).

13.5.2 Policy Issues

No change in Commission policy would be required.

13.6 Impacts on Public Health, Safety, and Security

13.6.1 Alternative 1: No Action

Impacts on Public Health, Safety, and Security

Because this alternative would not propose any changes to the current regulatory framework, there would be no impacts on public health, safety, and security.

Impacts on Applicants and Licensees

Because this alternative would not propose any changes to the current regulatory framework, there would be no incremental impacts on applicants and licensees.

Impacts on the NRC

Because this alternative would not propose any changes to the current regulatory framework, there would be no incremental impacts on the NRC.

Impacts to Other Stakeholders

Because this alternative would not propose any changes to the current regulatory framework, there would be no incremental impacts on State, local, or Tribal governments.

Summary of Benefits and Costs

Alternative 1 would not result in any changes to the current regulatory framework. Therefore, there would be no incremental associated costs or benefits.

13.6.2 Alternative 2: Extend Reporting Period

Impacts on Public Health, Safety, and Security

Because this alternative would delay reports of potentially significant ongoing conditions for which the NRC may need to take reasonably prompt action, there may be a net reduction in public health, safety, or security as the NRC may not be able to timely consider taking those actions.

Impacts on Applicants and Licensees

Extending the required time for reporting would have no significant change in costs to licensees, as it would only delay reporting of the event to the NRC. The NRC estimates that licensees may incur incremental costs associated with revising plant procedures and conducting training for this requirement of approximately (\$12,000). Licensees may realize operational benefits due to the extended timeframe for reporting while responding to events. Licensees may also see longer

term cost savings if fewer reports are made that are subsequently withdrawn due to the extended time allowed to consider if reporting is required.

Impacts on the NRC

Under this alternative, the NRC's evaluation of plant events that result in the initiation of a shutdown required by TSs could be delayed relative to the current reporting requirement. In addition, the NRC would need to amend its regulations, guidance, and NRC Form 361 for this requirement at an estimated cost of approximately (\$79,000). Because extending the required time for reporting would have no significant change in costs to the NRC to receive, review, process or react to the notification, the NRC did not estimate these small incremental costs or benefits.

Impacts to Other Stakeholders

This alternative may have an incremental impact on State, local, or Tribal governments. Any entity that relies on ENs reported to the NRC that are made public may have to alter its processes to account for the extended reporting period.

Summary of Benefits and Costs

This alternative would give licensees more time to submit the required report to the NRC. It would also alleviate the cost to operators while responding to potentially risk-significant conditions as licensees would not need to consider reporting until well after such conditions arise. Licensees would incur costs to revise procedures and training, and the NRC would incur costs to amend its regulations, guidance, and NRC Form 361 of approximately (\$91,000) without an offsetting increase in benefits for the NRC, licensees, and other stakeholders.

13.6.3 Alternative 3: Remove Existing Reporting Requirements

Impacts on Public Health, Safety, and Security

Under this alternative, the NRC would pursue rulemaking to remove the reporting requirement in 10 CFR 50.72(b)(2)(i). This alternative would potentially deny the NRC the information needed for situational awareness of a significant issue developing at a site. This could delay the NRC's ability to consider a prompt response if necessary to ensure public health and safety.

Impacts on Applicants and Licensees

This alternative would eliminate the cost to licensees associated with this reporting criterion. The NRC estimates that the licensee may incur incremental costs associated with revising its plant procedures and conducting training for this requirement of approximately (\$12,000). The elimination of future event notifications for this requirement during the remaining license periods of current operating plants is estimated to result in approximately \$50,000 in avoided reporting costs using a 7 percent discount rate.

Impacts on the NRC

Removal of this reporting requirement would delay the situational awareness of NRC regional and Headquarters management about developing issues at nuclear power plants. The NRC would see some reduction in cost because the HOO, Regional Duty Officers, the Office of Public Affairs, and other NRC staff would no longer spend time on the receipt and response to reports from this requirement. The NRC would no longer be assured of timely awareness of shutdowns required by TSs. In addition, the NRC would need to amend its regulations, guidance, and NRC Form 361 for this requirement at an estimated cost of (\$79,000). The elimination of future event notifications for this requirement during the remaining license periods of current operating plants is estimated to result in approximately \$131,000 in avoided reporting costs using a 7 percent discount rate.

Impacts to Other Stakeholders

This alternative may have impacts on State, local, or Tribal governments. Any entity that relies on ENs reported to the NRC that are made public may have to alter its processes to account for the extended reporting period.

Summary of Benefits and Costs

This alternative eliminates the cost of making reports for plant shutdowns required by technical specifications. This alternative would result in averted costs to the NRC, licensees, and other stakeholders of approximately \$90,000 in avoided reporting costs using a 7 percent discount rate.

13.6.4 Alternative 4: Revise Regulatory Guidance

Impacts on Public Health, Safety, and Security

Because this alternative would only update guidance, it would not change the current requirement to notify the NRC of the initiation of a plant shutdown required by the plant's TSs, and there would be no increase or reduction in public health, safety, or security.

Impacts on Applicants and Licensees

This alternative would only involve the NRC updating its guidance in NUREG-1022 to clarify how to comply with the associated requirements. Licensees may need to update their plant procedures and training. Because revising the guidance would have no significant change in costs to licensees, the NRC staff did not estimate these small incremental costs or benefits.

Impacts on the NRC

Under this alternative, the NRC would incur the costs of updates to the guidance in NUREG-1022. Because revising the guidance would have no significant change in costs to the NRC, the NRC staff did not estimate these small incremental costs or benefits.

Impacts to Other Stakeholders

This alternative would have minimal impacts on State, local, or Tribal governments, primarily in their review of revised guidance documents.

Summary of Benefits and Costs

This alternative would involve costs to the NRC to revise the regulatory guidance. Licensees would incur associated costs to update their procedures and training. Because revising the guidance would have no significant change to the NRC, licensees, and other stakeholders and would not result in any changes to the regulations, the NRC staff did not estimate these small incremental costs or benefits.

13.7 Backfitting and Issue Finality

None of the alternatives would constitute backfitting as defined in 10 CFR 50.109 or affect the issue finality of a combined license issued under 10 CFR Part 52. Alternative 1 would result in no change to existing regulations, other requirements, or NRC staff positions. Alternative 2 would give more time for the licensee to make the required notification. Thus, Alternative 2 would relax the 10 CFR 50.72(b)(2)(i) reporting requirement. However, a licensee could continue to comply with the current timing requirement and still satisfy Alternative 2. This would make the relaxation nonmandatory and, as explained in MD 8.4, nonmandatory relaxations of regulations generally do not meet the definition of “backfitting.” Alternative 2 would provide the voluntary relaxation of a current requirement and, thus, not constitute backfitting or affect the issue finality of a combined license. Under Alternative 3, the 10 CFR 50.72(b)(2)(i) reporting requirement would be eliminated. Alternative 3 would not meet the definition of “backfitting” and would not affect the issue finality of a combined license because it would not result in a modification of or addition to SSCs, or the design of a facility or the procedures or organization required to design, construct, or operate a facility. Alternative 4 would revise the NRC’s guidance documents but would not impose any new requirements on licensees. Therefore, issuance of the guidance documents would not constitute backfitting or forward fitting, as that term is defined and described in MD 8.4 or affect the issue finality of a combined license.

13.8 Stakeholder Feedback

The NRC held public meetings on November 4, 2021, and December 9, 2021, to discuss updating the 10 CFR 50.72 nonemergency reporting criteria. The NRC did not receive input specific to this reporting criterion. Section 6.1 of this regulatory basis document summarizes the comments received.

13.9 Staff Recommendation

The NRC staff recommends adoption of Alternative 1, that no action be taken. The current reporting requirement provides the NRC with timely notifications of TS-required shutdowns so that the agency may consider taking reasonably prompt actions such as activating its response plan to monitor the event or immediately dispatching additional inspectors to support the resident staff. Also, the requirements of the Reactor Oversight Process (such as Inspection Procedure 71111.20) could be missed if inspectors were not made aware of a plant shutdown in a timely manner. It is immediately obvious to licensees that they have initiated a plant shutdown pursuant

to TSs and should require no additional evaluation or consideration, so the burden to licensees from this reporting requirement is minimal.

Delaying or eliminating the report as considered in Alternatives 2 and 3, respectively, would unacceptably degrade the NRC's ability to perform oversight and event response. Additionally, if the plant corrects the condition and does not complete the shutdown, then the NRC would not be notified of the shutdown through an LER, and any tracking and trending of data would rely on inspectors. The NRC staff is not aware of issues relating to insufficient or unclear guidance for these events, so the NRC staff does not recommend Alternative 4.

14.0 SECTION 50.72(B)(2)(IV)(A) – SYSTEM ACTUATION (EMERGENCY CORE COOLING SYSTEM DISCHARGE)

14.1 Existing Regulatory Framework

In 10 CFR 50.72(b)(2)(iv)(A), the NRC requires that each nuclear power reactor licensee notify the NRC of an event that results or should have resulted in a discharge of the emergency core cooling system (ECCS) into the reactor coolant system (RCS) resulting from a valid signal unless the actuation resulted from and was part of a pre-planned sequence during testing or reactor operation. The 10 CFR 50.72(b)(2)(iv)(A) report is required to be made within 4 hours of occurrence of such an event.

14.2 Regulatory Issue

In determining whether to maintain this reporting requirement, the NRC must balance its need for prompt information with the cost placed on licensees. These reports assist the NRC staff in monitoring ongoing events, confirming licensing bases, studying potentially generic safety problems, assessing trends, disseminating operating experience, and monitoring performance. Following a valid ECCS actuation that results in discharge into the RCS, the licensee staff may be responding to the event. A 4-hour reporting requirement may distract licensee personnel or divert resources more appropriately focused on immediately addressing the plant conditions.

As stated in the 2000 Final Rule, the NRC originally established a 4-hour reporting requirement for these conditions because the agency might need to take reasonably prompt action such as activating its response plan. The NRC is evaluating this reporting requirement to determine if the burden on licensees can still be justified. The NRC staff notes that a nonemergency event reporting requirement itself does not affect public health and safety.

The NRC staff used the following questions to consider potential changes to the reporting criterion.

Without this nonemergency reporting, would the NRC still be able to successfully execute its oversight, event response, or other NRC regulatory functions?

Yes, the NRC's ability to successfully execute its oversight, event response, or other NRC regulatory functions would not be significantly degraded if the 10 CFR 50.72(b)(2)(iv)(A) report were not received. The NRC received 37 ENs under this criterion from 2011 through 2021. Of

these notifications, 30 were reported under 10 CFR 50.72(b)(2)(iv)(B) as reactor protection system (RPS) actuations while the reactor was critical, 31 were also reported under 10 CFR 50.72(b)(3)(iv) as specified system actuations, 11 were also reported under other nonemergency criteria, one was reported in connection with an Unusual Event emergency notification, and one was not reported under other 10 CFR 50.72(b) nonemergency reporting criteria but was not safety significant.

Additionally, the NRC staff's review of the agency's reactive inspection determinations made in accordance with MD 8.3 found that, since 2011, the NRC has entered the MD 8.3 process 13 times in relation to notifications made under 10 CFR 50.72(b)(2)(iv)(A). Of those, only two resulted in recommendations for reactive inspections, both of which resulted in findings of very low safety significance. Both reactive inspections launched approximately 5 days after the underlying event occurred. For the remaining instances, the NRC conducted appropriate review of the issues under the baseline inspection program.

Given that the NRC has typically not immediately responded to these reports beyond routine inspector follow-up, eliminating or delaying reports under this criterion would not significantly degrade the NRC's ability to successfully execute its mission.

Would delays in receiving this nonemergency reporting significantly degrade the NRC's ability to successfully execute our oversight, event response, or other NRC regulatory functions?

No, delaying receipt of the 10 CFR 50.72(b)(2)(iv)(A) reporting would not significantly degrade the NRC's ability to successfully execute its oversight, event response, or other NRC regulatory functions, for the reasons as described in the previous response.

Would delaying or eliminating this nonemergency reporting significantly degrade the NRC's ability to track or trend data associated with this criterion?

No, delaying or eliminating the 10 CFR 50.72(b)(2)(iv)(A) reporting would not significantly degrade the NRC's ability to track or trend data associated with this criterion. Information about these events would still be made available through LERs required by 10 CFR 50.73(a)(2)(iv).

Is this nonemergency reporting duplicated by another regulation or 10 CFR 50.72 criterion?

Yes, the 10 CFR 50.72(b)(2)(iv)(A) reporting criterion is duplicated in part by 10 CFR 50.72(b)(3)(iv). Under 10 CFR 50.72(b)(2)(iv)(A), any event that results or should have resulted in ECCS discharge into the RCS as a result of a valid actuation signal unless part of a pre-planned sequence during testing or operation is reportable to the NRC as a 4-hour report. Under 10 CFR 50.72(b)(3)(iv), licensees must report any event or condition that results in valid ECCS actuations unless they are part of a pre-planned sequence during testing or operation as an 8-hour report. When originally establishing the 10 CFR 50.72(b)(2)(iv)(A) reporting criterion, the NRC assumed that ECCS actuations resulting in actual discharge into the RCS were inherently more significant than just valid ECCS system actuations, which justified a shorter reporting period. After reviewing recent experience with the reporting criteria, the NRC staff determined that whether there was an injection has not generally informed the level of the NRC's response to

these events. In addition, these events are generally captured by other criteria, such as valid RPS actuations while critical.

Is this type of event reportable under 10 CFR 50.73 and would that report meet the NRC's needs?

Yes, a valid ECCS actuation signal, regardless of whether it results in actual ECCS discharge into the RCS, is reportable under 10 CFR 50.73(a)(2)(iv) unless it is part of a pre-planned sequence during testing or operation, and that report would meet the NRC's needs to track and trend events of this type, inform adequate agency response, and ensure openness.

14.3 Discussion Of Alternatives

14.3.1 Alternative 1: No Action

Description of Alternative 1

This alternative would maintain the current regulatory framework. Licensees would continue to be required to report ECCS injection into the RCS resulting from a valid actuation signal within 4-hours unless the actuation resulted from and was part of a pre-planned sequence.

Assessment of Alternative 1

This alternative retains the original basis for the regulation, which supports the NRC's ability to respond to heightened public concern or take a reasonably prompt action such as partial activation of the agency's response plan. The NRC's decisions depend heavily on the speed with which licensees communicate these events.

14.3.2 Alternative 2: Extend Reporting Period

Description of Alternative 2

Under this alternative, the NRC would pursue rulemaking to extend the timeframe for reporting any nonemergency event that resulted or should have resulted in ECCS discharge into the RCS. The NRC would also update existing guidance in NUREG-1022 and NRC Form 361 to reflect the revised regulation.

Assessment of Alternative 2

Alternative 2 could alleviate time pressure on licensees to report within 4 hours an event that resulted or should have resulted in ECCS discharge into the RCS. Extending the time for reporting would allow licensees to focus resources on immediate assessment of and response to the conditions that resulted in ECCS discharge into the RCS but would delay the NRC's awareness of the condition. It would also give the licensee additional time to determine whether the actuation was valid or invalid.

14.3.3 Alternative 3: Eliminate Reporting Requirement

Description of Alternative 3

Under this alternative, the NRC would pursue rulemaking to remove the requirement to report the occurrence of events that result or should have resulted in ECCS discharges into the RCS. The NRC would update the existing guidance to reflect the eliminated regulation.

Assessment of Alternative 3

ECCS actuations are also subject to an 8-hour reporting requirement in 10 CFR 50.72(b)(3)(iv). Changes to that reporting requirement are considered in a separate section of this document. The removal of the requirement to report events that result or should have resulted in ECCS discharge into the RCS under this criterion, in combination with the changes to other reporting requirements considered in this appendix, would reduce the burden for licensees to evaluate ECCS injection as part of their immediate reporting while ensuring underlying events that are of interest to the NRC are still reported.

Under Alternative 3, the NRC would have no regulatory requirement to ensure that prompt, 4-hour notifications are made to the HOC. Many licensees' procedures require notifications to resident inspectors on a similar timeframe as licensee response personnel when these conditions occur, but such notifications are at the licensee's discretion because prompt notifications to inspectors are not required by NRC regulation. This could potentially delay inspector awareness of these events, as well as the NRC's overall awareness. Actions may not be taken until the staff becomes aware by other means, such as through resident inspectors' plant status review or when the licensee submits an associated LER within 60 days of the event. Relying on these other methods in lieu of an EN may limit the NRC's ability to take prompt actions if warranted when ECCS actuations occur but do not coincide with another reportable event requiring more timely notifications, such as emergency declarations under licensee emergency plans.

14.3.4 Alternative 4: Revise Regulatory Guidance

Description of Alternative 4

Under this alternative, the NRC would maintain the requirement to report and clarify the guidance in NUREG-1022.

Assessment of Alternative 4

This alternative retains the original basis for the regulation, which supports the NRC's ability to respond to heightened public concern or take a reasonably prompt action such as partial activation of the agency's response plan.

This alternative is unlikely to alleviate the concerns raised by the petitioner or provide any reduction in burden associated with this reporting requirement. The NRC staff is not aware of issues relating to insufficient or unclear guidance for these events.

14.4 Regulatory Scope

Under Alternative 1, the NRC would not pursue any changes to the regulations in 10 CFR 50.72(b)(2)(iv)(A). Under Alternative 2, the NRC would pursue rulemaking to extend the timeframe required in 10 CFR 50.72(b)(2)(iv)(A) for licensees to report an event that results or should have resulted in a discharge of ECCS into the RCS resulting from a valid signal unless the actuation resulted from and was part of a pre-planned sequence and would revise any applicable guidance. Under Alternative 3, the NRC would remove this reporting criterion. Under Alternative 4, the NRC would retain the current regulations but clarify the reporting criteria in associated guidance.

14.5 NRC Guidance, Policy, and Implementation Issues

14.5.1 NRC Guidance

The NRC would revise NUREG-1022 and NRC Form 361 to address any changes made to 10 CFR 50.72(b)(2)(iv)(A).

14.5.2 Policy Issues

No change in Commission policy would be required.

14.6 Impacts on Public Health, Safety, and Security

14.6.1 Alternative 1: No Action

Impacts on Public Health, Safety, and Security

Because this alternative would not change the current requirements, there would be no increase or reduction in public health, safety, or security.

Impacts on Applicants and Licensees

Because this alternative would not change the current requirements, this alternative would have no incremental impacts on applicants and licensees.

Impacts on the NRC

Because this alternative would not change the current requirements, this alternative would have no incremental impacts on the NRC.

Impacts to Other Stakeholders

Because this alternative would not change the current requirements, this alternative would have no incremental impact on State, local, or Tribal governments.

Summary of Benefits and Costs

Alternative 1 would not result in any changes to the current regulatory framework; therefore, there would be no associated incremental costs or benefits.

14.6.2 Alternative 2: Extend Reporting Period

Impacts on Public Health, Safety, and Security

Because this alternative would delay reports of potentially significant ongoing conditions for which the NRC may need to take reasonably prompt action, there may be a net reduction in public health, safety, or security as the NRC would be delayed in considering whether to take those actions. However, in a review of ENs received under this criterion received from 2011 through 2021, the NRC staff did not identify any ENs that resulted in the need to take prompt action. Conditions that did result in the NRC taking actions such as dispatching reactive inspection teams were also reported under notifications required by the licensee's emergency plan or under 10 CFR 50.72(b)(2)(iv)(B) for RPS actuations.

Impacts on Applicants and Licensees

Extending the reporting period would have no significant change in costs because it would only delay licensee actions currently taken but still require them. The NRC estimates that licensees may incur incremental costs associated with revising plant procedures and conducting training for this requirement of approximately (\$12,000). Licensees may realize operational benefits because some relief would be given for considering reporting while responding to events. Licensees may also experience longer term costs savings if fewer reports are made due to the extended time allowed to consider whether reporting is required. Because extending the required time for reporting would have no significant change in operating costs to licensees, the NRC did not estimate these small incremental costs or benefits.

Impacts on the NRC

Under this alternative, the NRC's evaluation of plant events that result in ECCS actuation and discharge into the RCS could be delayed relative to the current reporting requirement. In addition, the NRC would need to amend its regulations, guidance, and NRC Form 361 for this requirement at an estimated cost of (\$79,000). Because extending the required time for reporting would have no significant change in recurring costs to the NRC to receive, review, process, or act on the notifications, the NRC did not estimate these small incremental costs or benefits.

Impacts to Other Stakeholders

This alternative may have an incremental impact on State, local, or Tribal governments. Any entity that relies on ENs reported to the NRC that are made public may have to alter its processes to account for the extended reporting period.

Summary of Benefits and Costs

This alternative would give licensees more time to evaluate conditions to determine whether reporting is required. It would also alleviate an additional cost to operators while responding to potentially risk-significant conditions, as reporting would not need to be considered or reports

made until well after such conditions arise. The NRC estimates that extending the required time for reporting would result in licensees needing to revise procedures and training, and the costs to the NRC to amend its regulations, guidance, and NRC Form 391 would be approximately (\$91,000) without a substantial increase in benefits for the NRC, licensees, and other stakeholders.

14.6.3 Alternative 3: Eliminate Reporting Requirement

Impacts on Public Health, Safety, and Security

Because this alternative would eliminate reports of potentially significant ongoing conditions for which the NRC may need to take reasonably prompt action, there may be a net reduction in public health, safety, or security as the NRC would not be able to consider taking those actions. However, a review of ENs received under this criterion received from 2011 through 2021 did not identify any ENs that resulted in the need to take prompt action. Conditions that did result in the NRC taking actions such as dispatching reactive inspection teams were also reported under emergency plan notifications or under 10 CFR 50.72(b)(2)(iv)(B) for RPS actuations.

Additionally, although a nonemergency report would not be required, licensees would still be required to report such conditions through an LER under 10 CFR 50.73(a)(2)(iv). ECCS actuations that occur as part of conditions resulting in licensee emergency declarations would still be reportable in 1 hour under 10 CFR 50.72(a)(3).

Impacts on Applicants and Licensees

This alternative eliminates costs associated with this reporting criterion. The NRC estimates that licensees would incur one-time costs associated with revising their internal reporting procedures and training of the operators for this requirement of approximately (\$6,000). The elimination of future nonemergency event notifications for this requirement during the remaining license periods of current operating plants is estimated to result in approximately \$15,000 in avoided reporting costs using a 7 percent discount rate. The staff notes that this potential cost avoidance is limited by the fact that many of these plant events would still be reportable under other reporting requirements that would remain in place.

Impacts on the NRC

Alternative 3 would potentially reduce the NRC's ability to promptly respond to issues resulting in ECCS discharge into the RCS. Many licensees' procedures require notifications to resident inspectors on a similar timeframe as licensee response personnel when these conditions occur, but such notifications are at the licensee's discretion. Prompt notifications for ECCS injection into the RCS alone would not be required by NRC regulation. However, in combination with the other event reporting criteria, any underlying safety significant events impacting more than ECCS discharge would still be captured and reported to the NRC promptly.

In addition, the NRC would need to amend its regulations, guidance, and NRC Form 361 for this requirement at an estimated cost of approximately (\$79,000). The estimated averted costs to the NRC resulting from not receiving, reviewing, and processing 10 CFR 50.72(b)(2)(iv)(A) ENs

requirement during the remaining license periods of current operating plants are \$49,000 using a 7 percent discount rate.

Impacts to Other Stakeholders

This alternative may impact State, local, and Tribal governments' ability to respond to events in a timely manner. Any organization that relies on ENs reported to the NRC may have to alter its processes to instead rely on the corresponding LERs.

Additional Considerations

ECCS actuation and injection that would warrant timely NRC attention would be reported under other existing reporting criteria. From 2011 through 2021, the NRC has received only one EN under this criterion that was not also reported under other criteria, and that EN was not significant.

Summary of Benefits and Costs

This alternative eliminates the cost of making reports for valid ECCS actuation and injection into the RCS. This alternative would result in costs of (\$21,000) to the NRC, licensees, and other stakeholders to amend its regulations, guidance, and NRC Form 361 and eliminate future event notifications for this requirement during the remaining license periods of current operating plants using a 7 percent discount rate.

14.6.4 Alternative 4: Revise Regulatory Guidance

Impacts on Public Health, Safety, and Security

Because this alternative would not change the current requirements, there would be no increase or reduction in public health, safety, or security.

Impacts on Applicants and Licensees

This alternative would require that licensees review and integrate updated guidance into their procedures at an estimated cost of (\$205,000). The NRC estimates that revising the guidance would have no significant change in future costs to licensees, therefore, the NRC staff did not estimate these small incremental costs or benefits.

Impacts on the NRC

The NRC would incur the costs of revising NUREG-1022 under this alternative at an estimated cost of (\$103,000). Because revising the guidance would have no significant change in future costs to the NRC, the NRC staff did not estimate these small incremental costs or benefits.

Impacts to Other Stakeholders

This alternative would have minimal impacts on State, local, or Tribal governments.

Summary of Benefits and Costs

Alternative 4 would involve changes to the regulatory guidance associated with the current reporting requirement of approximately (\$308,000). Because revising the guidance would have no significant change in future costs to licensees or the NRC, the NRC staff did not estimate these small incremental costs or benefits.

14.7 Backfitting and Issue Finality

None of the alternatives would constitute backfitting as defined in 10 CFR 50.109 or affect the issue finality of a combined license issued under 10 CFR Part 52. Alternative 1 would result in no change to existing regulations, other requirements, or NRC staff positions. Alternative 2 would give more time for the licensee to make the required notification. Thus, Alternative 2 would relax the 10 CFR 50.72(b)(2)(iv)(A) reporting requirement. However, a licensee could continue to comply with the current timing requirement and still satisfy Alternative 2. This would make the relaxation nonmandatory and, as explained in MD 8.4, nonmandatory relaxations of regulations generally do not meet the definition of “backfitting.” Alternative 2 would provide the voluntary relaxation of a current requirement and, thus, not constitute backfitting or affect the issue finality of a combined license. Under Alternative 3, the 10 CFR 50.72(b)(2)(iv)(A) reporting requirement would be eliminated. Alternative 3 would not meet the definition of “backfitting” and would not affect the issue finality of a combined license because it would not result in a modification of or addition to SSCs, or the design of a facility or the procedures or organization required to design, construct, or operate a facility. Alternative 4 would revise the NRC’s guidance documents but would not impose any new requirements on licensees. Therefore, issuance of the guidance documents would not constitute backfitting or forward fitting, as that term is defined and described in MD 8.4 or affect the issue finality of a combined license.

14.8 Stakeholder Feedback

The NRC held public meetings on November 4, 2021, and December 9, 2021, to discuss updating the 10 CFR 50.72 nonemergency reporting criteria. The NRC did not receive input specific to this reporting criterion. Section 6.1 of this regulatory basis document summarizes the comments received.

14.9 Staff Recommendation

The NRC staff recommends pursuing rulemaking to consider Alternative 3 to eliminate this reporting requirement. The reports received under this criterion are infrequent and significant plant events involving ECCS actuation and injection are captured under other reporting criteria. Additionally, the associated LER reporting requirements would ensure openness. At this time, the staff does not anticipate that elimination of this reporting requirement would require significant changes to internal communications or place additional burden on resident inspectors.

15.0 SECTION 50.72(B)(2)(IV)(B) – SYSTEM ACTUATION (REACTOR PROTECTION SYSTEM ACTUATION)

15.1 Existing Regulatory Framework

The regulations in 10 CFR 50.72(b)(2)(iv)(B) require that licensees notify the NRC of an event or condition that results in actuation of the RPS when the reactor is critical, except when the actuation results from and is part of a pre-planned sequence during testing or reactor operation. This report is required to be made within 4 hours of occurrence of such an event.

15.2 Regulatory Issue

In determining whether to maintain this reporting requirement, the NRC must balance its need for prompt information with the cost placed on licensees. These reports assist the NRC staff in monitoring ongoing events, confirming licensing bases, studying potentially generic safety problems, assessing trends, disseminating operating experience, and monitoring performance. Following an actuation of the RPS when the reactor is critical, licensee staff may be focusing their attention on responding to risk significant plant conditions such as loss of reactor core cooling, feedwater, containment heat removal, or electrical power. A 4-hour reporting requirement may distract licensee personnel or divert resources more appropriately focused on immediately addressing the plant conditions. However, NRC decision makers and emergency response personnel need to be aware of such conditions to ensure an appropriate agency response.

The 2000 Final Rule established a 4-hour reporting requirement for unplanned transients because the NRC may need to take a reasonably prompt action, such as partially activating its response plan to monitor the course of the event. The NRC is evaluating this reporting requirement to determine if the burden on licensees can still be justified. The NRC staff notes that a nonemergency event reporting requirement itself does not affect public health and safety.

The NRC staff used the following questions to consider potential changes to the reporting criterion.

Without this nonemergency reporting, would the NRC still be able to successfully execute its oversight, event response, or other NRC regulatory functions?

No, the NRC would not be able to successfully execute its oversight, event response, or other NRC regulatory functions without the 10 CFR 50.72(b)(2)(iv)(B) notification. An actuation of the RPS while the reactor is critical is considered an initiating event. Initiating events are those events and operations that upset plant stability and challenge critical safety functions during shutdown and power operations. Following initiating events such as an actuation of RPS, the NRC performs Inspection Procedure 71153, "Follow Up of Events and Notices of Enforcement." Inspectors use this procedure to gather details about plant status and the performance of equipment and personnel to inform NRC management, event review staff, and NRC regional and Headquarters risk analysts. The details are used to determine the level of NRC response, investigatory response if any (e.g., Incident Investigation Team, Augmented Inspection Team, or Special Inspection), and any special resources and expertise needed for event follow-up.

Inspection Procedure 71153 states that licensee notifications in accordance with 10 CFR 50.72 are one means of activating Inspection Procedure 71153. Without the requirement of 10 CFR 50.72(b)(2)(iv)(B), the NRC's ability to perform this procedure and, more importantly, provide the information needed to determine the level of agency response, would be degraded. Absent this reporting criterion, the HOO's nightly plant status call would identify any power changes that resulted from an actuation of the RPS. However, although available, that information is not currently provided directly to inspection staff. Additionally, the resident inspectors' plant status review and baseline inspection could identify any actuations of the RPS while critical. However, if the NRC were to rely solely on the resident inspectors' plant status review and baseline inspection, multiple days could pass before the NRC was made aware of an actuation of the RPS.

If this reporting criterion were eliminated, the NRC could miss performing a required baseline inspection sample or having inspectors respond promptly to the site for conditions of interest and to observe the licensee's response.

If inspectors were to miss this inspection requirement, that could potentially lead to the NRC failing to complete the baseline inspection program. Further evaluation per Inspection Manual Chapter 0307, Appendix A, "Reactor Oversight Process Self-Assessment Metrics and Data Trending" would be performed by the NRC and would result in additional cost to the licensee.

Would delays in receiving this nonemergency reporting significantly degrade the NRC's ability to successfully execute our oversight, event response, or other NRC regulatory functions?

Yes, delaying receipt of the 10 CFR 50.72(b)(2)(iv)(B) reporting would significantly degrade the NRC's ability to successfully execute its oversight, event response, or other NRC regulatory functions, for the reasons described in the previous response.

Would delaying or eliminating this nonemergency reporting significantly degrade the NRC's ability to track or trend data associated with this criterion?

No, delaying or eliminating the 10 CFR 50.72(b)(2)(iv)(B) reporting would not significantly degrade the NRC's ability to track or trend data associated with this criterion. Information about these events would still be made available through LERs required by 10 CFR 50.73(a)(2)(iv). The NRC might incur short-term difficulties in tracking or trending while any processes that currently rely on ENs are modified to use LERs. Additionally, there may be some degradation because LERs are reported on a much longer timeframe (60 days) than the 4-hour ENs.

Is this nonemergency reporting duplicated by another NRC regulation or 10 CFR 50.72 criterion?

No, the 10 CFR 50.72(b)(2)(iv)(B) reporting is not duplicated by another 10 CFR 50.72 criterion or NRC regulation, although it is similar to 10 CFR 50.72(b)(3)(iv). Under 10 CFR 50.72(b)(2)(iv)(B), any event or condition that results in actuation of RPS when the reactor is critical except when the actuation results from and is part of a pre-planned sequence during testing or reactor operation is reportable to the NRC as a 4-hour report. Under 10 CFR 50.72(b)(3)(iv), a valid RPS actuation when part of a pre-planned sequence during testing or operation is reportable to the NRC as an 8-hour report. The primary difference between the two

reporting criteria is that RPS actuations that occur when the reactor is critical are subject to the 4-hour reporting, whereas valid RPS actuation signals that occur when the reactor is not critical are subject to 8-hour reporting.

Is this type of event reportable under 10 CFR 50.73 and would that report meet the NRC's needs?

The 60-day LER required by 10 CFR 50.73 would not meet the agency's need to take a reasonably prompt action in response to a 10 CFR 50.72(b)(2)(iv)(B) report, such as partially activating its response plan to monitor the course of the event.

15.3 Discussion of Alternatives

15.3.1 Alternative 1: No Action

Description of Alternative 1

This alternative would maintain the current regulatory framework. Licensees would continue to notify the NRC of an event that results in valid actuation of any of the systems listed in 10 CFR 50.72(b)(2)(iv)(B) within 4 hours unless the actuation results from and is part of a pre-planned sequence during testing or reactor operation.

Assessment of Alternative 1

This alternative retains the original basis for the regulation, which supports the NRC's ability to respond to heightened public concern or take a reasonably prompt action such as partial activation of the agency's response plan. The NRC's decisions depend heavily on the speed with which licensees communicate these events.

15.3.2 Alternative 2: Rulemaking – Extend Reporting Period

Description of Alternative 2

Under this alternative, the NRC would pursue rulemaking to extend the timeframe for reporting any nonemergency events that result in actuation of the RPS while critical. The NRC would also update existing guidance to reflect the revised regulation.

Assessment of Alternative 2

Alternative 2 could alleviate time pressure on licensees to report within 4 hours an event that resulted in an unplanned actuation of the RPS when the reactor is critical while still providing information to the NRC in a timely fashion for action, if needed. Extending the time for reporting would allow licensees to focus resources on immediate assessment of and response to the conditions that resulted in actuation of the RPS but would delay the NRC's awareness of the condition.

15.3.3 Alternative 3: Rulemaking – Eliminate Reporting Requirement

Description of Alternative 3

Under this alternative, the NRC would pursue rulemaking to eliminate the requirement to report actuation of the RPS when the reactor is critical, except when the actuation results from and is part of a pre-planned sequence during testing or reactor operation.

Assessment of Alternative 3

The removal of the requirement to report actuation of RPS when the reactor is critical would alleviate the burdens on licensees to provide such notifications. The NRC would continue to require, under 10 CFR 50.73(a)(2)(iv), that licensees submit LERs for such actions within 60 days of event occurrence.

Under Alternative 3, there would be no regulatory requirement to ensure that prompt notifications are made to the Headquarters Operation Center (HOC).

15.4 Regulatory Scope

Under Alternative 1, the NRC would not pursue any changes to the regulations in 10 CFR 50.72(b)(2)(iv)(B) concerning the need to report actuation of the RPS when the reactor is critical, except when the actuation results from and is part of a pre-planned sequence during testing or reactor operation. Under Alternative 2, the NRC would pursue rulemaking to extend the timeframe in which licensees must report an event that resulted in an unplanned actuation of the RPS when the reactor is critical and would revise any applicable guidance. Under Alternative 3, the NRC would remove this reporting requirement.

15.5 NRC Guidance, Policy, and Implementation Issues

15.5.1 NRC Guidance

The NRC would revise NUREG-1022 and NRC Form 361 to address any changes made to 10 CFR 50.72(b)(2)(iv)(B).

15.5.2 Policy Issues

No change in Commission policy would be required.

15.6 Impacts on Public Health, Safety, and Security

15.6.1 Alternative 1: No Action

Impacts on Public Health, Safety, and Security

Because this alternative would not change the current regulations, there would be no increase or reduction in public health, safety, and security.

Impacts on Applicants and Licensees

Because this alternative would not change the current regulations, this alternative would have no incremental impacts on applicants and licensees.

Impacts on the NRC

Because this alternative would not change the current regulations, this alternative would have no incremental impacts on the NRC.

Impacts to Other Stakeholders

Because this alternative would not change the current regulations, this alternative would have no incremental impact on State, local, or Tribal governments.

Additional Considerations

This alternative would not reduce any duplicative reporting or alleviate any operational costs identified by licensees. However, among the alternatives, it would have the least impact on State, local, and Tribal governments that may rely on the ENs that the NRC publishes to its public website to maintain awareness. It would also maintain the current level of openness.

Summary of Benefits and Costs

Alternative 1 would not result in any changes to the current regulatory framework; therefore, there would be no associated incremental costs or benefits.

15.6.2 Alternative 2: Extend Reporting Period

Impacts on Public Health, Safety, and Security

Because this alternative would delay reports of potentially significant ongoing conditions for which the NRC may need to take reasonably prompt action, there may be a net reduction in public health, safety, or security as the NRC would not be able to consider taking those actions.

Impacts on Applicants and Licensees

Extending the reporting period would only delay licensee actions currently taken but still require them. The NRC estimates that licensees may incur incremental costs associated with revising plant procedures and conducting training of approximately (\$12,000). Licensees may realize operational benefits because additional time would be available for considering reporting while responding to events. Because extending the required time for reporting would have no significant change in recurring costs to licensees in complying with this reporting requirement, the NRC did not estimate these small incremental costs or benefits.

Impacts on the NRC

Under this alternative, the NRC's evaluation of plant events that result in actuation of RPS when the plant is critical could be delayed relative to the current reporting requirement. In addition, the NRC would need to amend its regulations, guidance, and NRC Form 361 at an estimated cost of

approximately (\$79,000). Because extending the required time for reporting would have no significant change in recurring costs to the NRC to receive, review, process, or act on the notifications, the NRC did not estimate these small incremental costs or benefits.

Impacts to Other Stakeholders

This alternative may have an incremental impact on State, local, or Tribal governments. Any entity that relies on ENs reported to the NRC that are made public may have to alter its processes to account for the extended reporting period.

Summary of Benefits and Costs

This alternative would give licensees more time to evaluate conditions to determine whether reporting is required. It would also alleviate an additional cost to operators while responding to potentially risk-significant conditions as reporting would not need to be considered or reports made until well after such conditions arise. However, implementing this change requires rulemaking, guidance revisions, procedure revisions, training, and other activities for this requirement at an estimated cost of (\$91,000) without achieving substantial benefits. Because extending the required time for reporting would have no significant change in recurring costs to the NRC, licensees, and other stakeholders for reporting or processing these notifications, the NRC did not estimate these small, incremental costs or benefits.

15.6.3 Alternative 3: Eliminate Reporting Requirement

Impacts on Public Health, Safety, and Security

Under this alternative, the NRC would pursue rulemaking to eliminate the requirement to report actuation of the RPS under 10 CFR 50.72(b)(2)(iv)(B). Although a prompt report would not be required, licensees would report such conditions through an LER under 10 CFR 50.73(a)(2)(iv).

Although this alternative would not change what is ultimately reported to the NRC, as discussed below, elimination of this reporting requirement would unacceptably degrade the NRC's ability to perform oversight and event response such that there could be a reduction in public health, safety, or security. Additionally, public awareness of such events could be delayed for up to 60 days.

Impacts on Applicants and Licensees

This alternative eliminates costs associated with this reporting requirement. The NRC estimates that licensees would face one-time costs associated with changing their internal reporting procedures and training of the operators for this requirement of approximately (\$6,000) to inform the affected personnel of the elimination of these nonemergency event reporting requirements. The elimination of future nonemergency event notifications for this requirement during the remaining license periods of current operating plants is estimated to result in approximately \$155,000 in avoided reporting costs using a 7 percent discount rate.

Impacts on the NRC

This alternative would potentially deny the NRC information needed for situational awareness of a significant issue developing at a plant, which could degrade the NRC's ability to promptly respond. The NRC and the public could be denied developing information on these events for up to 60 days until the licensee submits the LER under 10 CFR 50.73, or until the NRC is made aware of the event through other means. In addition, the NRC would need to amend its regulations, guidance, and NRC Form 361 for this requirement at an estimated cost of (\$79,000). The elimination of future nonemergency event notifications for this requirement during the remaining license periods of current operating plants is estimated to result in approximately \$500,000 using a 7 percent discount rate in avoided costs to the NRC to receive, review, process, or act on the eliminated notifications.

Impacts to Other Stakeholders

This alternative may impact State, local, and Tribal governments' ability to respond to events in a timely manner. Any organization that relies on ENs reported to the NRC may have to alter its processes to instead rely on the corresponding LERs.

Summary of Benefits and Costs

This alternative would eliminate the cost of making reports for actuation of the RPS while critical. Licensees would face one-time costs associated with changing their internal reporting procedures and training of the operators, and the NRC would need to amend its regulations, guidance, and NRC Form 361.

15.7 Backfitting and Issue Finality

None of the alternatives would constitute backfitting as defined in 10 CFR 50.109 or affect the issue finality of a combined license issued under 10 CFR Part 52. Alternative 1 would result in no change to existing regulations, other requirements, or NRC staff positions. Alternative 2 would give more time for the licensee to make the required notification. Thus, Alternative 2 would relax the 10 CFR 50.72(b)(2)(iv)(B) reporting requirement. However, a licensee could continue to comply with the current timing requirement and still satisfy Alternative 2. This would make the relaxation nonmandatory and, as explained in MD 8.4, nonmandatory relaxations of regulations generally do not meet the definition of "backfitting." Alternative 2 would provide the voluntary relaxation of a current requirement and, thus, not constitute backfitting or affect the issue finality of a combined license. Under Alternative 3, the 10 CFR 50.72(b)(2)(iv)(B) reporting requirement would be eliminated. Alternative 3 would not meet the definition of "backfitting" and would not affect the issue finality of a combined license because it would not result in a modification of or addition to SSCs, or the design of a facility or the procedures or organization required to design, construct, or operate a facility.

15.8 Stakeholder Feedback

The NRC held public meetings on November 4, 2021, and December 9, 2021, to discuss updating the 10 CFR 50.72 nonemergency reporting criteria. The NRC did not receive input specific to this reporting criterion. Section 6.1 of this regulatory basis document summarizes the comments received.

15.9 Staff Recommendation

The staff recommends pursuing Alternative 1, that no action be taken on the 10 CFR 50.72(b)(2)(iv)(B) reporting requirement. The current reporting requirement provides the NRC with timely notifications of the RPS actuations when the reactor is critical so that the agency may consider taking reasonably prompt actions such as activating its response plan to monitor the event or immediately dispatching additional inspectors to support the resident staff. Delaying or eliminating the report as considered in Alternatives 2 and 3, respectively, would unacceptably degrade the NRC's ability to perform oversight and event response.

Additionally, the existing reporting requirement should be a minimal burden to licensees, as RPS actuations when the reactor is critical are readily apparent. Licensees do not need to perform any additional evaluation or analysis to determine if the condition is reportable. Delaying or eliminating the report would be of minimal benefit to licensees while seriously degrading the NRC's ability to perform its mission.

16.0 SECTION 50.72(B)(2)(XI) – NEWS RELEASE OR NOTIFICATION OF OTHER GOVERNMENT AGENCY

16.1 Existing Regulatory Framework

The regulations in 10 CFR 50.72(b)(2)(xi) require that licensees notify the NRC of any event or situation, related to the health and safety of the public or onsite personnel, or protection of the environment, for which a news release is planned or notification to other government agencies has been or will be made. Such an event may include an onsite fatality or inadvertent release of radioactively contaminated materials. The report is required to be made within 4 hours of occurrence of such event.

16.2 Regulatory Issue

In determining whether to maintain this reporting requirement, the NRC must balance its need for prompt information with the cost placed on licensees. These reports provide the NRC with timely and accurate information so that the agency can be prepared to respond to potential heightened public concern or communicate with other government entities as appropriate. This information can also assist the NRC staff in monitoring ongoing events, confirming licensing bases, studying potentially generic safety problems, assessing trends, disseminating operating experience, and monitoring performance. In addition, the reports are made publicly available. However, meeting a 4-hour reporting requirement may distract licensees or divert resources more appropriately focused on plant operations.

As stated in the 2000 Final Rule, the NRC originally established a 4-hour reporting requirement for these conditions because the agency might need to take reasonably prompt actions, such as activating its response plan or initiating a reactive inspection or investigation. The NRC is evaluating this reporting requirement to determine if the burden on licensees can still be justified. The NRC staff notes that a nonemergency event reporting requirement itself does not affect public health and safety.

The NRC staff used the following questions to consider potential changes to the reporting criterion.

Without this nonemergency reporting, would the NRC still be able to successfully execute its oversight, event response, or other NRC regulatory functions?

Yes, the NRC would still be able to successfully execute its oversight, event response, or other NRC regulatory functions without this nonemergency notification. Events covered by 10 CFR 50.72(b)(2)(xi) are generally not related to plant safety and, therefore, do not pose a threat to public health and safety. Agency records indicate that the NRC has never initiated a reactive inspection or investigation in response to these events. The NRC also considered its obligations with the U.S. Fish and Wildlife Service and the U.S. National Marine Fisheries Service when a licensee would need to make a report to those agencies and determined that removing this requirement would not affect the NRC's regulatory responsibilities and agreements with these agencies.

Would delays in receiving this nonemergency reporting significantly degrade the NRC's ability to successfully execute our oversight, event response, or other NRC regulatory functions?

No, 10 CFR 50.72(b)(2)(xi) events are generally not related to plant safety and, therefore, do not pose a threat to public health and safety. Agency records indicates that the NRC has never initiated a reactive inspection or investigation in response to these events.

Would delaying or eliminating this nonemergency reporting significantly degrade the NRC's ability to track or trend data associated with this criterion?

The NRC received 628 ENs under this criterion from 2011 through 2021. Of these, 544 were not associated with any other non-emergency event reporting criteria. Eighteen of the 544 reports were subsequently withdrawn.

Delaying or eliminating this reporting criterion would not affect the NRC's ability to track and trend risk significant data associated with offsite notifications. Specifically, situations that are normally reported under this criterion are of very low significance because they are generally not related to plant safety and, thus, do not pose a risk to public health and safety. Therefore, any public awareness or concern would be addressed under the normal regional baseline inspections and subsequent inspection reports that already address situations resulting in offsite notifications. As an example, resident inspectors routinely review condition reports generated on a daily basis under the corrective action program that would normally capture situations that would be reported to offsite organizations, thereby ensuring the NRC would remain informed and able to communicate to the public via quarterly baseline inspection reports.

Is this nonemergency reporting duplicated by another regulation or 10 CFR 50.72 criterion?

No other 10 CFR 50.72(b) reporting criterion or other regulation is a direct duplicate of this reporting criterion.

Is this type of event reportable under 10 CFR 50.73 and would that report meet the NRC's needs?

There is no corresponding reporting requirement in 10 CFR 50.73.

16.3 Discussion Of Alternatives

16.3.1 Alternative 1: No Action

Description of Alternative 1

This alternative would maintain the current regulatory framework. Licensees would continue to report any news release or notification of another government agency within 4 hours.

Assessment of Alternative 1

This alternative retains the original basis for the regulation, which supports the NRC's ability to respond to heightened public concern or take a reasonably prompt action such as partial activation of the agency's response plan.

16.3.2 Alternative 2: Extend the Reporting Period

Description of Alternative 2

Under this alternative, the NRC would pursue rulemaking to extend the timeframe for reporting any news release or notification of another government agency. The NRC would also update existing guidance to reflect the revised regulation.

Assessment of Alternative 2

Alternative 2 could alleviate time pressure on the licensee to report while still providing the same information in timely fashion. Extending the time for reporting would allow the licensee to focus on immediate assessment of and response to the conditions that resulted in a need to issue any news release or notify another government agency.

16.3.3 Alternative 3: Eliminate the Reporting Requirement

Description of Alternative 3

Under this alternative, the NRC would pursue rulemaking to remove the requirement to report any news release or notification to another government agency. The NRC would also update existing guidance to reflect the eliminated regulation.

Assessment of Alternative 3

Under Alternative 3, there would be no regulatory requirement to ensure prompt notification to the NRC of such an event. Many licensees' procedures require notifications to resident inspectors on a similar timeframe as licensee response personnel when these conditions occur, but such notifications are at the licensee's discretion because prompt notifications are not required by NRC regulation. This could potentially delay inspector awareness of these events, as well as the NRC's overall awareness. Actions may not be taken until the staff becomes aware by other means, such as through resident inspectors' plant status review.

Because an LER is not required for these events, Alternative 3 would limit the NRC's ability to respond to any public concerns if the event is not reported.

16.4 Regulatory Scope

Under Alternative 1, the NRC would not pursue any changes to the regulations in 10 CFR 50.72(b)(2)(xi) concerning any event or situation, related to the health and safety of the public or onsite personnel, or protection of the environment, for which a news release is planned or notification to other government agencies has been or will be made. Under Alternative 2, the NRC would pursue rulemaking to extend the timeframe required in 10 CFR 50.72(b)(2)(xi) for licensees to report any news release or notification to other government agencies and would revise any applicable guidance. Under Alternative 3, the NRC would remove this reporting criterion and revise its guidance.

16.5 NRC Guidance, Policy, and Implementation Issues

16.5.1 NRC Guidance

The NRC staff would revise NUREG-1022 and NRC Form 361 to address any changes made to 10 CFR 50.72(b)(2)(xi).

16.5.2 Policy Issues

No change in Commission policy would be required.

16.6 Impacts on Public Health, Safety, and Security

16.6.1 Alternative 1: No Action

Impacts on Public Health, Safety, and Security

Because this alternative would not change the current reporting requirement, there would be no increase or reduction in public health, safety, and security.

Impacts on Applicants and Licensees

Because this alternative would not change the current reporting requirement, there would be no incremental impact on applicants and licensees.

Impacts on the NRC

Because this alternative would not change the current reporting requirement, there would be no incremental impact on the NRC.

Impacts to Other Stakeholders

Because this alternative would not change the current reporting requirements, there would be no incremental impact on State, local, or Tribal governments.

Summary of Benefits and Costs

Alternative 1 would not result in any changes to the current regulatory framework; therefore, there would be no associated incremental costs or benefits.

16.6.2 Alternative 2: Extend the Reporting Period

Impacts on Public Health, Safety, and Security

Under Alternative 2, the NRC's extension of the reporting timeline would not impose any new requirements applicable to a licensee. Because this alternative would delay reports to the NRC of potentially significant ongoing conditions, there may be a net reduction in public health, safety, or security as the NRC would not be able to consider reasonably prompt actions. However, a review of past reports showed that notifications received under this criterion are infrequent and events are generally not significant or related to plant safety, and therefore are not a threat to public health and safety.

Impacts on Applicants and Licensees

Extending the reporting period would only delay licensee actions currently taken but would still require them. The NRC estimates that licensees may incur incremental costs associated with revising plant procedures and conducting training for this requirement of approximately (\$12,000). Licensees may realize operational benefits because additional time would be available for considering reporting while responding to events. Because extending the required time for reporting would have no significant change in recurring costs to licensees in complying with this reporting requirement, the NRC did not estimate these small incremental costs or benefits.

Impacts on the NRC

Under this alternative, the NRC's evaluation of events that led to a news release or notification to another government agencies may be minimally delayed relative to the current reporting requirement. In addition, the NRC would need to amend its regulations, guidance, and NRC Form 361 for this requirement at an estimated cost of (\$79,000). Because extending the required time for reporting would have no significant change in recurring costs to the NRC to receive, review, process, or act on the notifications, the NRC did not estimate these small incremental costs or benefits other than rulemaking costs.

Impacts to Other Stakeholders

This alternative may have an incremental impact on State, local, or Tribal governments. Any entity that relies on ENs reported to the NRC that are made public may have to alter its processes to account for the extended reporting period.

Summary of Benefits and Costs

This alternative would give licensees more time to complete the required reporting. However, there would be costs to the licensees to revise procedures and training, and costs to the NRC to

amend its regulations, guidance, and NRC Form 361 of approximately (\$91,000) without a substantial increase in benefits for the NRC, licensees, and other stakeholders.

16.6.3 Alternative 3: Eliminate the Reporting Requirement

Impacts on Public Health, Safety, and Security

Because an LER under 10 CFR 50.73(a)(2)(iv) is not required for this event, the NRC may not become aware an event has occurred unless the licensee voluntarily notifies inspectors or the event is reported. Because this alternative would eliminate reports to the NRC of potentially significant ongoing conditions, there may be a net reduction in public health, safety, or security as the NRC would not be able to consider reasonably prompt actions.

Impacts on Applicants and Licensees

This alternative eliminates costs associated with this reporting requirement. The NRC estimates that licensees would incur one-time costs associated with changing their internal reporting procedures and training of the operators for this requirement of approximately (\$6,000). The elimination of future nonemergency event notifications for this requirement during the remaining license periods of current operating plants is estimated to result in approximately \$230,000 in avoided reporting costs using a 7 percent discount rate.

Impacts on the NRC

Alternative 3 would potentially reduce the NRC's ability to promptly respond to issues resulting from an event for which a news release is planned or notification to other government agencies has been or will be made. Many licensees' procedures require notifications to resident inspectors on a similar timeframe as licensee response personnel when these conditions occur, but such notifications are at the licensee's discretion. Prompt notifications would not be required by NRC regulation. This could potentially delay inspector awareness of these events, as well as the NRC's overall awareness. Actions may not be taken until the staff becomes aware by other means, such as through resident inspectors' plant status review. To implement this change, the NRC would need to amend its regulations, guidance, and NRC Form 361 for this requirement at an estimated cost of (\$79,000). The estimated avoided costs to the NRC resulting from not receiving, reviewing, and processing future licensee news release event notifications during the remaining license periods of current operating plants are \$425,000 using a 7 percent discount rate.

Impacts to Other Stakeholders

This alternative may impact State, local, and Tribal governments' ability to respond to events in a timely manner. Any organization that relies on ENs or LERs reported to the NRC may have to alter its processes.

Summary of Benefits and Costs

This alternative eliminates the cost of generating reports for events for which a news release is planned or notification to other government agencies has been or will be made. This alternative

would result in implementation costs of approximately (\$85,000) and avoided costs to the NRC, licensees, and other stakeholders resulting from the elimination of future nonemergency event notifications for this requirement during the remaining license periods of current operating plants of approximately \$655,000 for a total net benefit of \$570,000 using a 7 percent discount rate.

16.7 Backfitting and Issue Finality

None of the alternatives would constitute backfitting as defined in 10 CFR 50.109 or affect the issue finality of a combined license issued under 10 CFR Part 52. Alternative 1 would result in no change to existing regulations, other requirements, or NRC staff positions. Alternative 2 would give more time for the licensee to make the required notification. Thus, Alternative 2 would relax the 10 CFR 50.72(b)(2)(xi) reporting requirement. However, a licensee could continue to comply with the current timing requirement and still satisfy Alternative 2. This would make the relaxation nonmandatory and, as explained in MD 8.4, nonmandatory relaxations of regulations generally do not meet the definition of “backfitting.” Alternative 2 would provide the voluntary relaxation of a current requirement and, thus, not constitute backfitting or affect the issue finality of a combined license. Under Alternative 3, the 10 CFR 50.72(b)(2)(xi) reporting requirement would be eliminated. Alternative 3 would not meet the definition of “backfitting” and would not affect the issue finality of a combined license because it would not result in a modification of or addition to SSCs, or the design of a facility or the procedures or organization required to design, construct, or operate a facility.

16.8 Stakeholder Feedback

The NRC held public meetings on November 4, 2021, and December 9, 2021, to discuss updating the 10 CFR 50.72 nonemergency reporting criteria. The NRC did not receive input specific to this reporting criterion. Section 6.1 of this regulatory basis document summarizes the comments received.

16.9 Staff Recommendation

The NRC staff recommends pursuing rulemaking to consider Alternative 3 to eliminate this reporting requirement. Historically, the NRC has not activated its response plan or performed reactive inspections because of reports received under this criterion. Public awareness or concern would be addressed under the normal regional baseline inspections and subsequent inspection reports that already address situations resulting in offsite notifications. The reports received under this criterion are infrequent and are generally not significant or related to plant safety. Consequently, eliminating reports under this criterion would not significantly degrade the NRC’s ability to successfully execute its mission. At this time, the staff does not anticipate that elimination of this rulemaking requirement would require significant changes to internal communications or place additional burden on resident inspectors.

17.0 SECTION 50.72(B)(3)(II)(A) – DEGRADED CONDITION

17.1 Existing Regulatory Framework

The regulations in 10 CFR 50.72(b)(3)(ii)(A) require licensees to submit a report to the NRC within 8 hours of any event or condition that results in the condition of the nuclear power plant, including its principal safety barriers, being seriously degraded (e.g., minor flaws in reactor vessel head penetrations or through wall piping leaks on shutdown cooling test lines).

17.2 Regulatory Issue

In determining whether to maintain this reporting requirement, the NRC must balance its need for prompt information with the cost placed on licensees and the significance of the conditions. The significance of a degraded condition may not be well understood initially by the licensee or the NRC, and as such the NRC's responsibility may be to become aware, provide oversight, or respond to the event. As stated in the 2000 Final Rule, the NRC originally established an 8-hour reporting requirement for these conditions because the NRC might need to take an action within about a day, such as initiating a special inspection or investigation. The NRC is evaluating this reporting requirement to determine if the burden on licensees can still be justified. The NRC staff notes that a nonemergency event reporting requirement itself does not affect public health and safety.

The NRC staff used the following questions to consider potential changes to the reporting criterion.

Without this nonemergency reporting, would the NRC still be able to successfully execute its oversight, event response, or other NRC regulatory functions?

No, the NRC would not be able to successfully execute its oversight, event response, or other NRC regulatory functions without the notification under 10 CFR 50.72(b)(3)(ii)(A). Although degraded conditions may not require immediate event response, awareness and increased monitoring may be appropriate based on the extent or significance of degradation. Additionally, if this reporting requirement were eliminated, it may lead to an increased burden on resident inspectors to ensure such conditions are promptly relayed to NRC regional and headquarters staff to ensure adequate agency response. This would be in addition to their normal oversight responsibilities and response to emergent plant conditions, which is counter to the Commission direction.

Would delays in receiving this nonemergency reporting significantly degrade the NRC's ability to successfully execute our oversight, event response, or other NRC regulatory functions?

Yes, delaying receipt of this nonemergency reporting would significantly degrade the NRC's ability to successfully execute its oversight, event response, or other NRC regulatory functions. However, not all currently reported degraded conditions are significant conditions. From 2011 to 2021, the NRC received 159 ENs under this criterion. Of those, 14 were reviewed under the MD 8.3 process and one resulted in a reactive inspection. Twenty-four of the 159 reports were subsequently withdrawn.

While only a small fraction of reports resulted in consideration of reactive inspections or other response or oversight actions, rapid notification aligns NRC resources in the most appropriate fashion for the NRC's awareness and allows all levels of NRC management to consider what actions are warranted in a reasonably prompt timeframe. The NRC's situational awareness may be provided through the numerous channels that licensees use to communicate with the NRC and other stakeholders on these events, but the ENs are the only communication method required by regulation and are the most efficient method for notification of multiple organizations throughout the NRC.

Would delaying or eliminating this nonemergency reporting significantly degrade the NRC's ability to track or trend data associated with this criterion?

No, delaying or eliminating the criterion would not have an adverse effect on tracking and trending because LERs for degraded condition events would still be required under 10 CFR 50.73(a)(2)(ii)(A).

Is this nonemergency reporting duplicated by another regulation or 10 CFR 50.72 criterion?

This reporting criterion is broad in scope, and certain events reported under it may be required to be reported under other criteria in 10 CFR 50.72. However, 93 percent of the ENs submitted under this criterion from 2011 through 2021 were for events reported only under 10 CFR 50.72(b)(3)(ii)(A), while 7 percent were for events additionally reported under other criteria.

Is this type of event reportable under 10 CFR 50.73 and would that report meet the NRC's needs?

The corresponding LER, under 10 CFR 50.73(a)(2)(ii)(A), submitted 60 days after identifying the degraded condition, would not meet the NRC's needs. Relying on the LER would not enable the NRC to execute timely oversight or have sufficient awareness to make decisions if timely agency action were warranted.

17.3 Discussion of Alternatives

17.3.1 Alternative 1: No Action

Description of Alternative 1

This alternative would continue to require that licensees report serious degraded conditions to the NRC within 8 hours of the event or condition resulting in the degradation with no changes to the current requirements.

Assessment of Alternative 1

This alternative retains the original basis for the regulation, which supports the NRC's ability to take action within about a day, such as initiation of a special inspection.

17.3.2 Alternative 2: Extend Reporting Period

Description of Alternative 2

Under this alternative, the NRC would pursue rulemaking to extend the timeframe for reporting any event or condition that results in the condition of the nuclear power plant, including its principal safety barriers, being seriously degraded. The NRC would also update existing guidance to reflect the revised regulations.

Assessment of Alternative 2

This alternative may alleviate time pressure on licensees to report the event to the NRC in a timely fashion. Extending the time for reporting would allow licensee resources to focus on immediate assessment of and response to the event or conditions that resulted in the condition of the nuclear power plant, including its principal safety barriers, being seriously degraded. Extending the time for reporting also would delay the NRC's awareness and NRC management's consideration of potential actions.

17.3.3 Alternative 3: Eliminate Reporting Requirement

Description of Alternative 3

Under this alternative, the NRC would pursue rulemaking to remove the requirement to report the occurrence of degraded conditions. The NRC would also update existing guidance to reflect the revised regulations.

Assessment of Alternative 3

This alternative would eliminate the reporting requirement. Elimination of this requirement would mean that the NRC's awareness, oversight, or event response would rely on the 60-day LER reporting requirement in 10 CFR 50.73(a)(2)(ii)(A).

The removal of the requirement to report degraded conditions would alleviate the burden on licensees to provide such notifications, allowing the licensee to focus on the immediate assessment of and response to the event or conditions that resulted in the condition of the nuclear power plant, including its principal safety barriers, being seriously degraded.

Under Alternative 3, there would be no regulatory requirement to ensure that timely notifications are made to the HOC. Many licensees' procedures require notifications to resident inspectors on a similar timeframe as licensee response personnel when these conditions occur, but such notifications are at the licensees' discretion. Timely notifications would not be required by NRC regulation. This could potentially delay inspector awareness of these events, as well as the NRC's overall awareness.

17.3.4 Alternative 4: Revise Regulatory Guidance

Description of Alternative 4

Under this alternative, the NRC would maintain the requirement to report any event or condition that results in the condition of the nuclear power plant, including its principal safety barriers, being seriously degraded and would clarify the guidance in NUREG-1022.

Assessment of Alternative 4

This alternative retains the original basis for the regulation, which supports the NRC's ability to take action within about a day, such as initiation of a special inspection.

This alternative is likely to alleviate the concerns raised by the petitioner and reduce the burden associated with this reporting requirement. Clarifying the guidance could reduce licensee burdens in developing the report and decrease the potential for future notice withdrawals.

17.4 Regulatory Scope

Under Alternative 1, the NRC would not pursue any changes to the regulations in 10 CFR 50.72(b)(3)(ii)(A) concerning any event or condition that results in the condition of the nuclear power plant, including its principal safety barriers, being seriously degraded. Under Alternative 2, the NRC would pursue rulemaking to extend the timeframe required in 10 CFR 50.72(b)(3)(ii)(A) for licensees to report any event or condition that results in the condition of the nuclear power plant, including its principal safety barriers, being seriously degraded and would revise any applicable guidance. Under Alternative 3, the NRC would remove this reporting criterion and revise its guidance. Under Alternative 4, the NRC would update NUREG-1022 to clarify the guidance.

17.5 NRC Guidance, Policy, and Implementation Issues

17.5.1 NRC Guidance

The NRC staff would revise NUREG-1022 and NRC Form 361 to address any changes made to 10 CFR 50.72(b)(3)(ii)(A).

17.5.2 Policy Issues

No change in Commission policy would be required.

17.6 Impacts on Public Health, Safety, and Security

17.6.1 Alternative 1: No Action

Impacts on Public Health, Safety, and Security

Because this alternative would not change the current reporting requirements, there would be no increase or reduction in public health, safety, or security.

Impacts on Applicants and Licensees

Because this alternative would not change the current reporting requirements, this alternative would have no incremental impacts on applicants and licensees.

Impacts on the NRC

Because this alternative would not change the current reporting requirements, this alternative would have no incremental impacts on the NRC.

Impacts to Other Stakeholders

Because this alternative would not change the current reporting requirements, this alternative would have no incremental impact on State, local, or Tribal governments.

Summary of Benefits and Costs

Alternative 1 would not result in any changes to the current regulatory framework; therefore, there would be no associated incremental costs or benefits.

17.6.2 Alternative 2: Extend Reporting Period

Impacts on Public Health, Safety, and Security

Under Alternative 2, the NRC's extension of the reporting timeline would not impose any new requirements applicable to a licensee. Because this alternative would delay reports to the NRC of potentially significant ongoing conditions, there may be a net reduction in public health, safety, or security as it would delay the NRC's ability to consider taking appropriate, timely actions.

Impacts on Applicants and Licensees

Extending the reporting period would only delay licensee actions currently taken, but it would still require them. The NRC estimates that licensees would incur incremental costs associated with revising plant procedures and conducting training for this requirement of approximately (\$12,000). Licensees may realize operational benefits because additional time would be available for considering reporting while responding to events. Because extending the required time for reporting would have no significant change in recurring costs to licensees in complying with this reporting requirement, the NRC did not estimate these small incremental costs or benefits.

Impacts on the NRC

Under this alternative, the NRC's evaluation of plant events that result from degraded conditions would be delayed. Given that any report made under this criterion may require additional background information from on-shift licensee staff, extending the required time for reporting under this criterion would degrade the NRC's ability to successfully execute its mission, which may include time-sensitive actions.

Impacts to Other Stakeholders

This alternative may have an incremental impact on State, local, or Tribal governments. Any entity that relies on ENs reported to the NRC that are made public may have to alter its processes to account for the extended reporting period.

Summary of Benefits and Costs

This alternative would give licensees more time to evaluate conditions to determine whether reporting is required. It would also alleviate an additional cost to operators while responding to potentially risk-significant conditions because reporting would not need to be considered or reports made until well after such conditions arise. However, licensee efforts spent generating, reviewing, and assuring the accuracy of each EN would remain the same. In addition, the NRC would incur rulemaking costs to revise the existing reporting criterion in 10 CFR 50.72(b)(3)(ii)(A) and associated guidance, and licensees would incur costs to revise associated procedures and perform training for this requirement at a total estimated cost of (\$51,000) without a substantial increase in benefits for the NRC, licensees, and other stakeholders.

17.6.3 Alternative 3: Eliminate Reporting Requirement

Impacts on Public Health, Safety, and Security

Under this alternative, the NRC would pursue rulemaking to remove the requirement to report the occurrence of degraded conditions. Although an EN would not be required, licensees would continue to report such conditions through an LER under 10 CFR 50.73(a)(2)(ii)(A). Because this alternative would delay reports to the NRC of potentially significant ongoing conditions, there may be a net reduction in public health, safety, or security as the NRC would not be able to consider taking appropriate, timely actions for safety significant degraded conditions.

Impacts on Applicants and Licensees

Under this alternative, the licensee would not be required to promptly report events resulting in seriously degraded plant conditions. The NRC estimates that licensees would incur one-time costs associated with changing their internal reporting procedures and training of the operators for this requirement of approximately (\$6,000) to inform the affected personnel of the elimination of these nonemergency event reporting requirements. The elimination of future nonemergency event notifications for this requirement during the remaining license periods of current operating plants is estimated to result in approximately \$230,000 in avoided reporting costs using a 7 percent discount rate.

Impacts on the NRC

Under this alternative, the NRC would not be notified of any event that results in the condition of the nuclear power plant, including its principal safety barriers, being seriously degraded, until the licensee submits an LER under 10 CFR 50.73(a)(2)(ii)(A). This delay in notification would prevent the NRC from taking any prompt actions necessary to protect public health, safety, and security, thereby degrading its ability to successfully execute its mission. In addition, the NRC would need to amend its regulations, guidance, and NRC Form 361 for this requirement at an estimated cost of (\$79,000). The elimination of future nonemergency event notifications for this requirement during the remaining license periods of current operating plants is estimated to result in approximately \$226,000 using a 7 percent discount rate in avoided costs to the NRC to receive, review, process, or act on the eliminated notifications.

Impacts to Other Stakeholders

This alternative may impact State, local, and Tribal governments' ability to respond to events in a timely manner. Any organization that relies on ENs reported to the NRC may have to alter its processes to instead rely on the corresponding LERs.

Summary of Benefits and Costs

This alternative would eliminate the cost of reporting occurrences of degraded conditions. Licensees would face one-time costs associated with changing their internal reporting procedures and training of the operators, and the NRC would need to amend its regulations, guidance, and NRC Form 361.

17.6.4 Alternative 4: Revise Regulatory Guidance

Impacts on Public Health, Safety, and Security

Because this alternative would not change the current reporting requirements, there would be no increase or reduction in public health, safety, or security.

Impacts on Applicants and Licensees

This alternative would result in licensees reviewing and incorporating updated guidance into their processes and procedures. The NRC estimates that revising industry procedure to incorporate revisions to NUREG-1022 and training for this requirement would cost approximately (\$145,000). The NRC staff assumes that these procedure revisions would add clarity that results in reducing the licensee's cost of developing these reports by 5 to 15 percent and eliminate the number of notifications that are subsequently withdrawn. Historically, licensees withdraw approximately 15 percent of these reports. The estimated avoided costs to licensees resulting from these improvements are \$70,000 using a 7 percent discount factor.

Impacts on the NRC

Under this alternative the NRC estimates the costs to revise NUREG-1022 for this requirement is approximately (\$51,000). The estimated NRC avoided costs to not receive, review, or process degraded condition ENs are \$55,000 using a 7 percent discount factor.

Impacts to Other Stakeholders

This alternative would have minimal impacts, primarily related to the review of new guidance documents, on State, local, or Tribal governments.

Additional Considerations

This alternative would not reduce any duplicative reporting or alleviate any operational costs identified by licensees. It would also maintain the current level of openness.

Summary of Benefits and Costs

Alternative 4 would involve clarifying the regulatory guidance associated with degraded conditions. Clarifying the guidance could reduce licensee burdens in developing the report and decrease the potential for future notice withdrawals. Licensees would incur associated costs of updating, reviewing, and implementing their processes and procedures. The NRC would realize associated costs of revising the guidance. This alternative would result in costs to the NRC, licensees, and other stakeholders of approximately (\$71,000) using a 7 percent discount factor.

17.7 Backfitting and Issue Finality

None of the alternatives would constitute backfitting as defined in 10 CFR 50.109 or affect the issue finality of a combined license issued under 10 CFR Part 52. Alternative 1 would result in no change to existing regulations, other requirements, or NRC staff positions. Alternative 2 would give more time for the licensee to make the required notification. Thus, Alternative 2 would relax the 10 CFR 50.72(b)(3)(ii)(A) reporting requirement. However, a licensee could continue to comply with the current timing requirement and still satisfy Alternative 2. This would make the relaxation nonmandatory and, as explained in MD 8.4, nonmandatory relaxations of regulations generally do not meet the definition of “backfitting.” Alternative 2 would provide the voluntary relaxation of a current requirement and, thus, not constitute backfitting or affect the issue finality of a combined license. Under Alternative 3, the 10 CFR 50.72(b)(3)(ii)(A) reporting requirement would be eliminated. Alternative 3 would not meet the definition of “backfitting” and would not affect the issue finality of a combined license because it would not result in a modification of or addition to SSCs, or the design of a facility or the procedures or organization required to design, construct, or operate a facility. Alternative 4 would revise the NRC’s guidance documents but would not impose any new requirements on licensees. Therefore, issuance of the guidance documents would not constitute backfitting or forward fitting, as that term is defined and described in MD 8.4 or affect the issue finality of any approval issued under 10 CFR Part 52.

17.8 Stakeholder Feedback

Public comments on PRM-50-116 stated that the term “seriously” in 10 CFR 50.72(b)(3)(ii)(A) is subjective and this fosters strenuous debates within the licensee organization or between the licensee and the NRC on the reportability of events. The NRC held public meetings on November 4, 2021, and December 9, 2021, to discuss updating the 10 CFR 50.72 nonemergency reporting criteria. During these meetings, external stakeholders remarked that it is important that these notifications continue because the seriousness of some conditions may not be readily apparent.

17.9 Staff Recommendation

The NRC staff recommends adoption of Alternative 4 to not pursue rulemaking but instead clarify the guidance in NUREG-1022. The current reporting requirement, Alternative 1, provides the NRC with an 8-hour notification of degraded conditions pursuant to 10 CFR 50.72(b)(3)(ii)(A) so that the agency may consider taking actions. Delaying or eliminating the report as considered in Alternatives 2 and 3, respectively, would unacceptably degrade the NRC’s ability to perform oversight and event response. However, the NRC, licensees, and other stakeholders would benefit by clarifying the guidance, which could result in preventing unnecessary reports and withdrawals. The associated LER reporting requirement would not fulfil the agency’s need to consider actions.

18.0 SECTION 50.72(B)(3)(II)(B) – UNANALYZED CONDITION

18.1 Existing Regulatory Framework

The regulations in 10 CFR 50.72(b)(3)(ii)(B) require licensees to submit a report to the NRC within 8 hours of any event or condition that results in their nuclear power plant being in an unanalyzed condition that significantly degrades plant safety (e.g., the effects of tornado missiles; refueling a water storage tank outside of design conditions).

18.2 Regulatory Issue

In determining whether to maintain this reporting requirement, the NRC must balance its need for prompt information with the cost placed on licensees and the significance of the conditions. With 10 CFR 50.72(b)(3)(ii)(B), the significance of an unanalyzed condition may not be well understood initially by the licensee or the NRC, and as such the NRC needs to know whether to be aware of, provide oversight of, or respond to an event. Other regulatory functions such as rulemaking or trending can occur using information from the associated 10 CFR 50.73(a)(2)(ii)(B) report.

The NRC decision makers and emergency response personnel need to be aware of such conditions to ensure an appropriate agency response. The cost of engineering judgment used when making the report should be commensurate with the significance of the report. The NRC is evaluating this reporting requirement to determine if the burden to licensees can still be justified. The NRC staff notes that a nonemergency event reporting requirement itself does not affect public health and safety.

The NRC staff used the following questions to consider potential changes to the reporting criterion.

Without this nonemergency reporting, would the NRC still be able to successfully execute its oversight, event response, or other NRC regulatory functions?

No, the NRC would not be able to successfully execute its oversight, event response, or other NRC regulatory functions without the notification under 10 CFR 50.72(b)(3)(ii)(B). Although unanalyzed conditions may not require immediate event response, awareness and increased monitoring may be appropriate based on the extent or significance of degradation. Additionally, if this reporting requirement were eliminated, it may lead to an increased burden on resident inspectors to ensure such conditions are promptly relayed to NRC regional and headquarters staff to ensure adequate agency response. This would be in addition to their normal oversight responsibilities and response to emergent plant conditions, which is counter to the Commission direction.

Would delays in receiving this nonemergency reporting significantly degrade the NRC's ability to successfully execute our oversight, event response, or other NRC regulatory functions?

Yes, delaying receipt of this nonemergency reporting would significantly degrade the NRC's ability to successfully execute its oversight, event response, or other NRC regulatory functions. While the majority of these reports are not time critical, on several occasions the NRC has had the need to perform timely inspections to verify significance. However, not all currently reported unanalyzed conditions are significant conditions. From 2011 to 2021, the NRC received 368 ENs under this criterion. Of those, 13 were reviewed under the MD 8.3 process and three resulted in a reactive inspection. Ninety-eight of the reports were subsequently withdrawn.

While only a small fraction of reports resulted in consideration of reactive inspections or other response or oversight actions, rapid notification aligns NRC resources in the most appropriate fashion for the agency's awareness and allows all levels of NRC management to consider what actions are warranted in a reasonably prompt timeframe. The NRC's situational awareness may be provided through the numerous channels that licensees use to communicate with the NRC and other stakeholders on these events, but the ENs are the only communication method required by regulation and are the most efficient method for notification of multiple organizations throughout the NRC.

Would delaying or eliminating this nonemergency reporting significantly degrade the NRC's ability to track or trend data associated with this criterion?

No, delaying or eliminating the criterion would not have an adverse effect on tracking and trending because LERs for unanalyzed conditions would still be required under 10 CFR 50.73(b)(2)(ii)(B).

Is this nonemergency reporting duplicated by another regulation or 10 CFR 50.72 criterion?

This reporting criterion is broad in scope, and certain events reported under it may be required to be reported under other reporting criteria in 10 CFR 50.72. However, 96 percent of the ENs submitted under this criterion from 2011 through 2021 were for events reported only under 10 CFR 50.72(b)(3)(ii)(B), while 4 percent were for events additionally reported under other criteria.

Is this type of event reportable under 10 CFR 50.73 and would that report meet the NRC's needs?

The corresponding LER, under 10 CFR 50.73(a)(2)(ii)(B), submitted 60 days after identifying the unanalyzed condition, would not meet the NRC's needs. Relying on the LER would not enable the NRC to execute timely oversight or have sufficient awareness to make decisions if timely agency action is warranted.

18.3 Discussion of Alternatives

18.3.1 Alternative 1: No Action

Description of Alternative 1

This alternative would maintain the current regulatory framework. Licensees would continue to report to the NRC unanalyzed conditions that significantly degrade plant safety within 8 hours of

the event or condition resulting in the plant being in an unanalyzed condition, with no changes to the current requirements.

Assessment of Alternative 1

This alternative retains the original basis for the regulation, which supports the NRC's ability to take action within about a day, such as initiation of a special inspection.

18.3.2 Alternative 2: Extend Reporting Period

Description of Alternative 2

Under this alternative, the NRC would pursue rulemaking to extend the timeframe for reporting any event or condition that results in the nuclear power plant being in an unanalyzed condition that significantly degrades plant safety. The NRC would also update existing guidance to reflect the revised regulation.

Assessment of Alternative 2

This alternative may alleviate time pressure on licensees to report the event to the NRC in a timely fashion. Extending the time for reporting would allow licensee resources to focus on immediate assessment of and response to the conditions that resulted in an unanalyzed condition that significantly degrades plant safety. However, based on the NRC's use of this information, this alternative would not meet the NRC's needs. Extending the time for reporting would delay the NRC's awareness and NRC management's consideration of potential actions.

18.3.3 Alternative 3: Eliminate Reporting Requirement

Description of Alternative 3

Under this alternative, the NRC would pursue rulemaking to remove the requirement to report the occurrence of an unanalyzed condition. The NRC would also update existing guidance to reflect the revised regulations.

Assessment of Alternative 3

This alternative would eliminate the reporting requirement. Elimination of this requirement would mean that the NRC's awareness, oversight, or event response would rely on the 60-day reporting requirement in 10 CFR 50.73(a)(2)(ii)(A).

The removal of the requirement to report unanalyzed conditions would alleviate the burden on licensees to provide such notifications, allowing the licensee to focus on the immediate assessment of and response to the event or conditions that resulted in the unanalyzed condition.

Under Alternative 3, there would be no regulatory requirement to ensure that timely notifications are made to the HOC. Many licensees' procedures require notifications to resident inspectors on a similar timeframe as licensee response personnel when these conditions occur, but such notifications are at the licensees' discretion. Timely notifications would not be required by NRC

regulation. This could potentially delay inspector awareness of these events, as well as the NRC's overall awareness

18.3.4 Alternative 4: Revise Regulatory Guidance

Description of Alternative 4

Under this alternative, the NRC would maintain the requirement to report the occurrence of unanalyzed conditions but clarify the guidance in NUREG-1022.

Assessment of Alternative 4

This alternative retains the original basis for the regulation, which supports the NRC's ability to take action within about a day, such as initiation of a special inspection.

This alternative is likely to alleviate the concerns raised by the petitioner and reduce the burden associated with this reporting requirement. Clarifying the guidance could reduce licensee burdens in developing the report and reduce the potential for future notice withdrawals.

18.4 Regulatory Scope

Under Alternative 1, the NRC would not pursue any changes to the regulations in 10 CFR 50.72(b)(3)(ii)(B) concerning any event or condition that results in the nuclear power plant being in an unanalyzed condition that significantly degrades plant safety. Under Alternative 2, the NRC would pursue rulemaking to extend the timeframe required in 10 CFR 50.72(b)(3)(ii)(B) for licensees to report an unanalyzed condition that significantly degrades plant safety and would revise any applicable guidance. Under Alternative 3, the NRC would remove this reporting criterion and revise its guidance. Under Alternative 4, the NRC would update NUREG-1022 to clarify the guidance.

18.5 NRC Guidance, Policy, and Implementation Issues

18.5.1 NRC Guidance

The NRC staff would revise NUREG-1022 and NRC Form 361 to address any changes made to 10 CFR 50.72(b)(3)(ii)(B).

18.5.2 Policy Issues

No change in Commission policy would be required.

18.6 Impacts on Public Health, Safety, and Security

18.6.1 Alternative 1: No Action

Impacts on Public Health, Safety, and Security

Because this alternative would not change the current reporting requirements, there would be no increase or reduction in public health, safety, or security.

Impacts on Applicants and Licensees

Because this alternative would not change the current reporting requirements, this alternative would have no incremental impacts on applicants and licensees.

Impacts on the NRC

Because this alternative would not change the current reporting requirements, this alternative would have no incremental impacts on the NRC.

Impacts to Other Stakeholders

Because this alternative would not change the current reporting requirements, this alternative would have no incremental impact on State, local, or Tribal governments.

Summary of Benefits and Costs

Alternative 1 would not result in any changes to the current regulatory framework; therefore, there would be no associated incremental costs or benefits.

18.6.2 Alternative 2: Extend Reporting Period

Impacts on Public Health, Safety, and Security

Under Alternative 2, the NRC's extension of the reporting timeline would not impose any new requirements applicable to a licensee. Because this alternative would delay reports to the NRC of potentially significant ongoing conditions, there may be a net reduction in public health, safety, or security as it would delay the NRC's ability to consider taking appropriate actions.

Impacts on Applicants and Licensees

Extending the reporting period would only delay licensee actions currently taken but still require them. The NRC estimates that licensees would incur incremental costs associated with revising plant procedures and conducting training for this requirement of approximately (\$12,000). Licensees may realize operational benefits because some relief would be given for considering reporting while responding to events. Because extending the allowed time for reporting would have no significant change in recurring costs to licensees in complying with this reporting requirement, the NRC did not estimate these small incremental costs or benefits.

Impacts on the NRC

Under this alternative, the NRC's evaluation of plant events that result from unanalyzed conditions would be delayed. Given that any report made under this criterion may require additional background information from on-shift licensee staff, extending the required time for reporting under this criterion would unacceptably degrade the NRC's ability to perform oversight and event response to successfully execute its mission, which may include time-sensitive actions. To implement this alternative, the NRC would need to amend its regulations, guidance, and NRC Form 361 at an estimated cost of approximately (\$79,000). Because extending the

required time for reporting would have no significant change in recurring costs to the NRC to receive, review, process, or act on the notifications, the NRC did not estimate these small incremental costs or benefits.

Impacts to Other Stakeholders

This alternative may have an incremental impact on State, local, or Tribal governments. Any entity that relies on ENs reported to the NRC that are made public may have to alter its processes to account for the extended reporting period.

Summary of Benefits and Costs

This alternative would give licensees more time to evaluate conditions to determine whether reporting is required. It would also alleviate the burden to operators while responding to potentially risk-significant conditions, as reporting would not need to be considered or reports made until well after such conditions arise. The NRC estimates that extending the required time for reporting would result in licensees needing to revise procedures and training at a cost of approximately (\$12,000) in addition to rulemaking costs of approximately (\$79,000) without achieving substantial benefits. However, extending the reporting period would unacceptably degrade the NRC's ability to perform oversight and event response and would impact other stakeholders by delaying the notification, resulting in an inability to take appropriate, timely measures as necessary.

18.6.3 Alternative 3: Eliminate Reporting Requirement

Impacts on Public Health, Safety, and Security

Under this alternative, the NRC would pursue rulemaking to remove the requirement to report the occurrence of an unanalyzed condition. Although an EN would not be required, licensees would report such conditions through an LER under 10 CFR 50.73(a)(2)(ii)(B).

Because this alternative would delay reports to the NRC of potentially significant ongoing conditions, there may be a net reduction in public health, safety, or security as the NRC would not be able to consider taking appropriate, timely actions for safety significant unanalyzed conditions.

Impacts on Applicants and Licensees

This alternative eliminates costs associated with this reporting criterion. Licensees would face one-time costs of approximately (\$6,000) associated with changing their internal reporting procedures and training of the operators.

Impacts on the NRC

Alternative 3 would potentially reduce the NRC's ability to promptly respond to an unanalyzed condition. Many licensees' procedures require notifications to resident inspectors on a similar timeframe as licensee response personnel when these conditions occur, but such notifications are at the licensee's discretion. Timely notifications would not be required by NRC regulation.

This could potentially delay inspector awareness of these events, as well as the NRC's overall awareness. Actions may not be taken until the staff becomes aware by other means, such as through resident inspectors' plant status review or when the licensee submits an associated LER within 60 days of the event. To implement this alternative, the NRC would need to amend its regulations, guidance, and NRC Form 361 at an estimated cost of approximately (\$79,000).

Impacts to Other Stakeholders

This alternative may impact State, local, and Tribal governments' ability to respond to events in a timely manner. Any organization that relies on ENs reported to the NRC may have to alter its processes to instead rely on the corresponding LERs.

Summary of Benefits and Costs

This alternative would eliminate the cost of reporting occurrences of unanalyzed conditions. Licensees would face one-time costs associated with changing their internal reporting procedures and training of the operators, and the NRC would need to amend its regulations, guidance, and NRC Form 361 for an estimated cost of (\$85,000) without achieving substantial benefits.

18.6.4 Alternative 4: Revise Regulatory Guidance

Impacts on Public Health, Safety, and Security

Because this alternative would not change the current reporting requirements, there would be no increase or reduction in public health, safety, or security.

Impacts on Applicants and Licensees

This alternative would result in licensees reviewing and incorporating updated guidance into their processes and procedures. The NRC estimates that revising industry procedure to incorporate revisions to NUREG-1022 and training would cost approximately (\$145,000). The NRC staff assumes that these procedure revisions would add clarity that results in reducing the licensee's cost of developing these reports by 5 to 15 percent and eliminate the number of notifications that are subsequently withdrawn. Historically, approximately 25 percent of these notifications are withdrawn. The estimated avoided costs to licensees resulting from these improvements are \$164,000 using a 7 percent discount factor.

Impacts on the NRC

Under this alternative, the NRC estimates the costs to revise NUREG-1022 for this requirement is approximately (\$51,000). The estimated NRC avoided costs to not receive, review, or process degraded condition ENs for this requirement are \$142,000 using a 7 percent discount factor.

Impacts to Other Stakeholders

This alternative would have minimal impacts, primarily related to the review of new guidance documents, on State, local, or Tribal governments. The NRC did not estimate these small incremental costs or benefits.

Additional Considerations

This alternative would not reduce any duplicative reporting or alleviate any operational costs identified by licensees. It would also maintain the current level of openness.

Summary of Benefits and Costs

Alternative 4 would clarify the regulatory guidance associated with unanalyzed conditions. Clarifying the guidance could reduce licensee burdens in developing the report and decrease the potential for future notice withdrawals. Licensees would incur associated costs of updating, reviewing, and implementing their processes and procedures. The NRC would realize associated costs of revising the guidance. This alternative would result in avoided costs to the NRC, licensees, and other stakeholders resulting from the eliminated unanalyzed condition ENs for this requirement of approximately \$110,000 using a 7 percent discount rate.

18.7 Backfitting and Issue Finality

None of the alternatives would constitute backfitting as defined in 10 CFR 50.109 or affect the issue finality of a combined license issued under 10 CFR Part 52. Alternative 1 would result in no change to existing regulations, other requirements, or NRC staff positions. Alternative 2 would give more time for the licensee to make the required notification. Thus, Alternative 2 would relax the 10 CFR 50.72(b)(3)(ii)(B) reporting requirement. However, a licensee could continue to comply with the current timing requirement and still satisfy Alternative 2. This would make the relaxation nonmandatory and, as explained in MD 8.4, nonmandatory relaxations of regulations generally do not meet the definition of “backfitting.” Alternative 2 would provide the voluntary relaxation of a current requirement and, thus, not constitute backfitting or affect the issue finality of a combined license. Under Alternative 3, the 10 CFR 50.72(b)(3)(ii)(B) reporting requirement would be eliminated. Alternative 3 would not meet the definition of “backfitting” and would not affect the issue finality of a combined license because it would not result in a modification of or addition to SSCs, or the design of a facility or the procedures or organization required to design, construct, or operate a facility. Alternative 4 would revise the NRC’s guidance documents but would not impose any new requirements on licensees. Therefore, issuance of the guidance documents would not constitute backfitting or forward fitting, as that term is defined and described in MD 8.4 or affect the issue finality of a combined license.

18.8 Stakeholder Feedback

Public comments on PRM-50-116 stated that the term “significantly” in 10 CFR 50.72(b)(3)(ii)(B) is subjective and this fosters strenuous debates within the licensee organization or between the licensee and the NRC on the reportability of events. Should the NRC pursue Alternative 4, it could clarify this term and reduce the subjectivity. The NRC held public meetings on November 4, 2021, and December 9, 2021, to discuss updating the 10 CFR 50.72 nonemergency reporting

criteria. During these meetings, external stakeholders remarked that it is important that these notifications continue because the seriousness of some conditions may not be readily apparent.

18.9 Staff Recommendation

The NRC staff recommends adoption of Alternative 4 to not pursue rulemaking but instead clarify the guidance in NUREG-1022. The current reporting requirement, Alternative 1, provides the NRC with an 8-hour notification of unanalyzed conditions pursuant to 10 CFR 50.72(b)(3)(ii)(B) so that the agency may consider taking actions. Delaying or eliminating the report as considered in Alternatives 2 and 3, respectively, would unacceptably degrade the NRC's ability to perform oversight and event response. However, the NRC, licensees, and other stakeholders would benefit by clarifying the guidance, which could result in preventing unnecessary reports and withdrawals. The associated LER reporting requirement would not fulfil the agency's need to timely consider actions.

19.0 SECTION 50.72(B)(3)(IV)(A) – SYSTEM ACTUATION

19.1 Existing Regulatory Framework

The regulations in 10 CFR 50.72(b)(3)(iv)(A) require that nuclear power reactor licensees notify the NRC of an event that results in valid actuation of any of the systems listed in 10 CFR 50.72(b)(3)(iv)(B) except when the actuation results from and is part of a pre-planned sequence during testing or reactor operation. The report must be made within 8 hours of the occurrence of such an event.

19.2 Regulatory Issue

In determining whether to maintain this reporting requirement, the NRC must balance its need for prompt information with the cost placed on licensees. The reports assist the NRC staff in monitoring ongoing events, confirming licensing bases, studying potentially generic safety problems, assessing trends, disseminating operating experience, and monitoring performance. In addition, the NRC makes the reports available on its public website to ensure transparency. Following a valid actuation of any of the systems listed in 10 CFR 50.72 (b)(3)(iv)(B) except when the actuation results from and is part of a pre-planned sequence during testing or reactor operation, licensee personnel may be responding to risk significant plant conditions such as loss of reactor core cooling, feedwater, containment heat removal, or electrical power. An 8-hour reporting requirement may distract licensee personnel or divert resources more appropriately focused on immediately addressing the changing plant conditions.

As stated in the 2000 Final Rule, the NRC originally established an 8-hour reporting requirement for these conditions because the agency might need to take action within about a day, such as to activate its response plan or initiate a reactive inspection or investigation. The NRC is evaluating this reporting requirement to determine if the burden on licensees can still be justified. The NRC staff notes that a nonemergency event reporting requirement itself does not affect public health and safety.

The NRC staff used the following questions to consider potential changes to the reporting criterion.

Without this nonemergency reporting, would the NRC still be able to successfully execute its oversight, event response, or other NRC regulatory functions?

Yes, the NRC would still be able to successfully execute its oversight, event response, and other NRC regulatory functions without the 10 CFR 50.72 (b)(3)(iv)(A) notification. Routine inspector follow-up is sufficient to ensure that the NRC takes appropriate near-term actions in response to these events. For longer-term actions, the NRC would still have many ways to become aware of conditions to which this criterion is applicable, including formal notification through LERs under 10 CFR 50.73(a)(2)(iv).

Would delays in receiving this nonemergency reporting significantly degrade the NRC's ability to successfully execute our oversight, event response, or other NRC regulatory functions?

No, delaying receipt of the 10 CFR 50.72 (b)(3)(iv)(A) reporting would not significantly degrade the NRC's ability to successfully execute its oversight, event response, or other regulatory functions. From 2011 to 2022, the NRC received 625 ENs under this criterion. Of these notifications, 182 were not associated with another reportable nonemergency criterion. For these 182 standalone ENs, the NRC did not activate its response plan. Additionally, the NRC staff's review of the agency's reactive inspection determinations made in accordance with MD 8.3 found that the NRC did not enter the MD 8.3 process for any of the 625 ENs. Because the NRC does not immediately respond to reports under this criterion beyond routine inspector follow-up, delaying these reports would not significantly degrade the NRC's ability to successfully execute its mission.

Would delaying or eliminating this nonemergency reporting significantly degrade the NRC's ability to track or trend data associated with this criterion?

No, delaying or eliminating this nonemergency reporting would not significantly degrade the NRC's ability to track or trend data associated with this criterion. Information about these events would still be made available through LERs required by 10 CFR 50.73(a)(2)(iv). The NRC may incur short-term difficulties in tracking or trending while any processes that currently rely on ENs are modified to use LERs.

Some degradation may occur because LERs are submitted on a much longer timeframe (60 days) than the 8-hour ENs. However, this degradation is insignificant, given that, historically, the NRC has not needed to take immediate short-term actions for ENs reported under this criterion outside of routine event response.

Is this nonemergency reporting duplicated by another regulation or 10 CFR 50.72 criterion?

No, this nonemergency reporting is not duplicated by another regulation or 10 CFR 50.72 criterion.

Is this type of event reportable under 10 CFR 50.73 and would that report meet the NRC's needs?

Yes, this type of event is reportable under 10 CFR 50.73(a)(2)(iv) and that report would meet the NRC's needs to track and trend events of this type, inform adequate agency response, and ensure public transparency.

19.3 Discussion of Alternatives

19.3.1 Alternative 1: No Action

Description of Alternative 1

This alternative would maintain the current regulatory framework. Licensees would continue to be required to notify the NRC within 8 hours of an event that results in valid actuation of any of the systems listed in 10 CFR 50.72(b)(3)(iv)(B) unless the actuation results from and is part of a pre-planned sequence during testing or reactor operation.

Assessment of Alternative 1

This alternative retains the original basis for the regulation, which supports the NRC's ability to take action within about a day, such as initiation of a special inspection.

19.3.2 Alternative 2: Extend Reporting Period

Description of Alternative 2

Under this alternative, the NRC would pursue rulemaking to extend the timeframe for reporting any nonemergency event that results in valid actuation of any of the systems listed in 10 CFR 50.72(b)(3)(iv)(B). The NRC would also update existing guidance to reflect the revised regulation.

Assessment of Alternative 2

Alternative 2 could alleviate time pressure on licensees to report an event resulting in valid actuation of any of the systems listed in 10 CFR 50.72(b)(3)(iv)(B), while still providing for timely notification to enable the NRC to act promptly, if needed. Extending the time for reporting would allow licensees to focus resources on immediate assessment of and response to plant conditions, and it would only minimally delay the NRC's awareness. It would also give licensees more time to determine whether the actuation was valid or invalid.

19.3.3 Alternative 3: Eliminate Reporting Requirement

Description of Alternative 3

Under this alternative, the NRC would pursue rulemaking to remove the requirement to report an event resulting in valid actuation of any of the systems listed in 10 CFR 50.72(b)(3)(iv)(B). The NRC would also revise associated guidance.

Assessment of Alternative 3

The removal of the requirement to report events resulting in valid actuation of any of the systems listed in 10 CFR 50.72(b)(3)(iv)(B) would alleviate time pressure on licensees to notify the NRC of such events.

Under Alternative 3, there would be no regulatory requirement to ensure that prompt notifications are made to the NRC. Many licensees' procedures require notifications to resident inspectors on a similar timeframe as licensee response personnel when these conditions occur, but such notifications are at the licensee's discretion. Timely notifications would not be required by NRC regulation. This could potentially delay inspector awareness of these events, as well as the NRC's overall awareness. Actions may not be taken until the staff becomes aware by other means, such as through resident inspectors' plant status review or when the licensee submits an associated LER within 60 days of the event. However, in reviewing the reporting period from 2011 to the present, the NRC has never activated its response plan or performed reactive inspections in accordance with MD 8.3 as a result of valid actuations of the systems listed in 10 CFR 50.72(b)(3)(iv)(B). Rather, the NRC conducted appropriate review of the issues under the baseline inspection program. Consequently, eliminating reports under this criterion would not significantly degrade the agency's ability to successfully execute its mission.

Under Alternative 3, the NRC would continue to require, under 10 CFR 50.73(a)(2)(iv), that licensees submit LERs within 60 days of the event. Because of the timing of LERs, this alternative may limit the NRC's ability to take prompt actions if warranted when a valid system actuation occurs but does not coincide with another reportable event requiring earlier notification, such as an emergency declaration under licensee emergency plans.

19.3.4 Alternative 4: Revise Regulatory Guidance

Description of Alternative 4

Under this alternative, the NRC would maintain the requirement to report and clarify the guidance in NUREG-1022.

Assessment of Alternative 4

This alternative retains the original basis for the regulation, which supports the NRC's ability to take action within about a day, such as initiation of a special inspection.

This alternative is unlikely to alleviate the concerns raised by the petitioner or provide any reduction in cost associated with this reporting requirement.

19.4 Regulatory Scope

Under Alternative 1, the NRC would not pursue any changes to the regulations in 10 CFR 50.72(b)(3)(iv)(A). Under Alternative 2, the NRC would pursue rulemaking to extend the timeframe required in 10 CFR 50.72(b)(3)(iv)(A) for licensees to report valid actuation of any of the systems listed in the regulation and would revise any applicable guidance. Under Alternative 3, the NRC would remove this reporting criterion and revise its guidance. Under Alternative 4, the NRC would update NUREG-1022 to clarify guidance.

19.5 NRC Guidance, Policy, and Implementation Issues

19.5.1 NRC Guidance

The NRC staff would revise the regulatory guidance in NUREG-1022 and NRC Form 361 to address any changes made to 10 CFR 50.72(b)(3)(iv)(A).

19.5.2 Policy Issues

No change in Commission policy would be required.

19.6 Impacts on Public Health, Safety, and Security

19.6.1 Alternative 1: No Action

Impacts on Public Health, Safety, and Security

Because this alternative would not change the current reporting requirements, there would be no increase or reduction in public health, safety, or security.

Impacts on Applicants and Licensees

Because this alternative would not change the current reporting requirements, this alternative would have no incremental impacts on applicants and licensees.

Impacts on the NRC

Because this alternative would not change the current reporting requirements, this alternative would have no incremental impacts on the NRC.

Impacts to Other Stakeholders

Because this alternative would not change the current reporting requirements, this alternative would have no incremental impact on State, local, or Tribal governments.

Summary of Benefits and Costs

Alternative 1 would not result in any changes to the current regulatory framework; therefore, there would be no associated incremental costs or benefits.

19.6.2 Alternative 2: Extend Reporting Period

Impacts on Public Health, Safety, and Security

Because this alternative would delay reports to the NRC of potentially significant ongoing conditions, there may be a net reduction in public health, safety, or security as it would delay the NRC's ability to consider taking appropriate actions.

Impacts on Applicants and Licensees

Extending the required time for reporting would only delay licensee actions currently taken but still require them. The NRC estimates that licensees would incur incremental costs associated with revising plant procedures and conducting training for this requirement of approximately (\$12,000). Licensees may realize operational benefits because additional time would be available for considering reporting while responding to events. However, overall resource efforts would remain the same to ensure a timely and accurate EN has been reported. Because extending the required time for reporting would have no significant change in recurring costs to licensees in complying with this reporting requirement, the NRC did not estimate these small incremental costs or benefits.

Impacts on the NRC

Under this alternative, the NRC's evaluation of plant events that result in valid actuation of any of the systems listed in 10 CFR 50.72(b)(3)(iv)(B) could be delayed relative to the current reporting requirement. However, this delay would not significantly degrade the NRC's ability to successfully execute its mission, given that, historically, the NRC has not immediately responded to reports of such events, beyond routine inspector follow-up. In addition, under Alternative 2, the NRC would need to amend its regulations, guidance, and NRC Form 361 for this requirement at an estimated cost of (\$79,000). Because extending the required time for reporting would have no significant change in recurring costs to the NRC to receive, review, process, or act on the notifications, the NRC did not estimate these small incremental costs or benefits other than rulemaking costs.

Impacts to Other Stakeholders

This alternative may have an incremental impact on State, local, or Tribal governments. Any entity that relies on ENs reported to the NRC that are made public may have to alter its processes to account for the extended reporting period. Because extending the required time for reporting would have no significant change in costs to other stakeholders, the NRC did not estimate these small incremental costs or benefits.

Summary of Benefits and Costs

This alternative would give licensees more time to evaluate conditions to determine if reporting is required. It would also alleviate an additional cost to operators while responding to potentially risk-significant conditions as reporting would not need to be considered or reports made until well after mitigating actions have been established. However, licensee efforts to generate, review, and ensure the accuracy of each EN would remain the same. The NRC estimates that extending the required time for reporting would result in licensee costs to revise procedures and training, and costs to the NRC to amend its regulations, guidance, and NRC Form 391 for this requirement of approximately (\$91,000) without a substantial increase in benefits for the NRC, licensees, and other stakeholders.

19.6.3 Alternative 3: Eliminate Reporting Requirement

Impacts on Public Health, Safety, and Security

Because this alternative would eliminate reports of potentially significant ongoing conditions for which the NRC may need to take reasonably prompt action, there may be a net reduction in public health, safety, or security as the NRC would not be able to consider taking those actions. However, a review of ENs received under this criterion received from 2011 through 2021 did not identify any that resulted in the need to take prompt action. Conditions that did result in the NRC taking actions such as dispatching reactive inspection teams were also reported under emergency notifications or under 10 CFR 50.72(b)(2)(iv)(B) for RPS actuations.

Although a nonemergency report would not be required, licensees would still be required to report such conditions through an LER under 10 CFR 50.73(a)(2)(iv).

Impacts on Applicants and Licensees

This alternative would eliminate costs associated with this reporting criterion. The NRC estimates that licensees would incur one-time costs associated with changing their internal reporting procedures and training operators for this requirement of approximately (\$6,000). The estimated averted costs to licensees resulting from the elimination of valid and invalid system actuation ENs during the remaining license periods of current operating plants are approximately \$160,000 using a 7 percent discount factor.

Impacts on the NRC

Alternative 3 would potentially reduce the NRC's ability to promptly respond to issues resulting in valid actuation of any of the systems listed in 10 CFR 50.72(b)(3)(iv)(B). Many licensees' procedures require notifications to resident inspectors on a similar timeframe as licensee response personnel when these conditions occur, but such notifications are at the licensee's discretion. Timely notifications would not be required by NRC regulation. NRC Headquarters staff members, including emergency operations personnel, may remain unaware of these conditions until they are made aware by other means, such as through inspectors or submittal of the associated LER. In addition, the NRC would need to amend its regulations, guidance, and NRC Form 361 for this requirement at an estimated cost of (\$79,000). The estimated averted costs to the NRC resulting from the elimination of the receipt, review, and processing of valid and invalid system actuation ENs during the remaining license periods of current operating plants is estimated to result in approximately \$393,000 using a 7 percent discount factor.

Impacts to Other Stakeholders

This alternative may impact State, local, and Tribal governments' ability to respond to events in a timely manner. Any organization that relies on ENs reported to the NRC may have to alter its processes to instead rely on the corresponding LERs. The NRC did not estimate these small incremental costs or benefits.

Additional Considerations

Valid system actuations to mitigate events such as loss of reactor core cooling, feedwater, containment heat removal, or electrical power that would warrant immediate NRC attention would be reported under other existing reporting criteria. Since 2011, the NRC did not activate its

response plan or perform reactive inspections for any of the 182 EN reports that were submitted for standalone events for valid actuations of the systems listed in 10 CFR 50.72(b)(3)(iv)(B). In these cases, appropriate NRC review of the issues was conducted under the baseline inspection program.

Summary of Benefits and Costs

This alternative eliminates the cost of making reports for valid actuations of the systems listed in 10 CFR 50.72(b)(3)(iv)(B). This would result in future avoided costs to the NRC, licensees, and other stakeholders of approximately \$468,000 using a 7 percent discount rate.

19.6.4 Alternative 4: Revise Regulatory Guidance

Impacts on Public Health, Safety, and Security

Because this alternative would not change the current reporting requirements, there would be no increase or reduction in public health, safety, or security.

Impacts on Applicants and Licensees

This alternative would result in licensees reviewing and incorporating updated guidance into their processes and procedures. The NRC estimates that revising industry procedure to incorporate revisions to NUREG-1022 and training for this requirement would cost approximately (\$145,000) without achieving any identified offsetting benefits.

Impacts on the NRC

Under this alternative the NRC would incur the costs of approximately (\$51,000) to revise NUREG-1022 guidance for this requirement without achieving any identified offsetting benefits.

Impacts to Other Stakeholders

This alternative would have minimal impacts, primarily related to the review of new guidance documents, on State, local, or Tribal governments.

Summary of Benefits and Costs

Alternative 4 would involve changes to the regulatory guidance; therefore, there would be associated costs to the NRC, licensees, and other stakeholders for updating, reviewing, and implementing these guidance changes at an estimated cost of (\$196,000) without achieving any identified offsetting benefits.

19.7 Backfitting and Issue Finality

None of the alternatives would constitute backfitting as defined in 10 CFR 50.109 or affect the issue finality of a combined license issued under 10 CFR Part 52. Alternative 1 would result in no change to existing regulations, other requirements, or NRC staff positions. Alternative 2 would give more time for the licensee to make the required notification. Thus, Alternative 2 would relax

the 10 CFR 50.72(b)(3)(iv)(A) reporting requirement. However, a licensee could continue to comply with the current timing requirement and still satisfy Alternative 2. This would make the relaxation nonmandatory and, as explained in MD 8.4, nonmandatory relaxations of regulations generally do not meet the definition of “backfitting.” Alternative 2 would provide the voluntary relaxation of a current requirement and, thus, not constitute backfitting or affect the issue finality of a combined license. Under Alternative 3, the 10 CFR 50.72(b)(3)(iv)(A) reporting requirement would be eliminated. Alternative 3 would not meet the definition of “backfitting” and would not affect the issue finality of a combined license because it would not result in a modification of or addition to SSCs, or the design of a facility or the procedures or organization required to design, construct, or operate a facility. Alternative 4 would revise the NRC’s guidance documents but would not impose any new requirements on licensees. Therefore, issuance of the guidance documents would not constitute backfitting or forward fitting, as that term is defined and described in MD 8.4 or affect the issue finality of a combined license.

19.8 Stakeholder Feedback

The NRC held public meetings on November 4, 2021, and December 9, 2021, to discuss updating the 10 CFR 50.72 nonemergency reporting criteria. The NRC did not receive input specific to this reporting criterion. Section 6.1 of this regulatory basis document summarizes the comments received.

19.9 Staff Recommendation

The NRC staff recommends pursuing rulemaking to consider Alternative 3 to eliminate this reporting requirement. The reports received under this criterion have not resulted in the NRC activating its response plan or performing reactive inspections. Because plant events that may result in an increase of risk to the public or need for NRC awareness such as those involving RPS system actuation, which remain reportable under 10 CFR 50.72(b)(2)(iv)(B), no additional risk to the public would be actualized from elimination of this criterion. Additionally, the associated LER reporting requirements would ensure openness to the public and timely notification to the NRC commensurate with safety significance. At this time, the staff does not anticipate that elimination of this rulemaking requirement would require significant changes to internal communications or place additional burden on resident inspectors.

20.0 SECTION 50.72(B)(3)(V) – POTENTIAL PREVENTION OF FULFILLMENT OF SAFETY FUNCTION

20.1 Existing Regulatory Framework

In 10 CFR 50.72(b)(3)(v), the NRC requires that nuclear power reactor licensees notify the NRC of an event that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to shut down the reactor and maintain it in a safe shutdown condition, remove residual heat, control the release of radioactive material, or mitigate the consequences of an accident. The report must be made within 8 hours of the occurrence of such an event.

20.2 Regulatory Issue

In determining whether to maintain this reporting requirement, the NRC must balance its need for prompt information with the cost placed on licensees. These reports assist the NRC staff in monitoring ongoing events, confirming licensing bases, studying potentially generic safety problems, assessing trends, disseminating operating experience, and monitoring performance. The NRC makes the reports available on its public website to ensure transparency. Events covered in 10 CFR 50.72(b)(3)(v) may include procedural errors, equipment failures, or the discovery of design, analysis, fabrication, construction, or procedural inadequacies. However, individual component failures need not be reported pursuant to 10 CFR 50.72(b)(3)(v) if redundant equipment in the same system was operable and available to perform the required safety function.

As stated in the 2000 Final Rule, the NRC originally established an 8-hour reporting requirement for these conditions because the agency might need to take action within about a day, such as to initiate a reactive inspection or investigation. The NRC is evaluating this reporting requirement to determine if the burden on licensees can still be justified. The NRC staff notes that a nonemergency event reporting requirement itself does not affect public health and safety.

The NRC staff used the following questions to consider potential changes to the reporting criterion.

Without this nonemergency reporting, would the NRC still be able to successfully execute its oversight, event response, or other NRC regulatory functions?

Yes, the NRC would still be able to successfully execute its oversight, event response, or other NRC regulatory functions without the 10 CFR 50.72(b)(3)(v) notification. Routine inspector follow-up is sufficient to enable appropriate near-term actions in response to these events. For longer-term actions, the NRC would still have many ways to become aware of conditions to which this criterion applies, including formal notification through LERs under 10 CFR 50.73(a)(2)(v).

Would delays in receiving this nonemergency reporting significantly degrade the NRC's ability to successfully execute our oversight, event response, or other NRC regulatory functions?

No, delaying this nonemergency reporting would not significantly degrade the NRC's ability to successfully execute its oversight, event response, or other NRC regulatory functions. From 2011 through 2021, the NRC received 867 ENs under this criterion. Of these, 145 (16 percent) were for events that were also reported under other 10 CFR 50.72 reporting criteria, and the latter included 9 ENs (1 percent) made in connection with an Unusual Event emergency notification. In total, 722 ENs submitted from 2011 through 2021 were for events not additionally reported under other reporting criteria.

Additionally, the NRC staff's review of the agency's reactive inspection determinations made in accordance with MD 8.3 found that, since 2011, the NRC has entered the MD 8.3 process 12 times in relation to notifications made under this reporting criterion. Of those, three resulted in focused baseline inspections and two resulted in recommendations for reactive inspections. Each of these five events was reported under 10 CFR 50.72(b)(3)(v)(D), which is the criterion for

reporting 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 mitigate the consequences of an accident. Of these five, the two events that received additional inspections resulted in white findings that were issued months after the event occurred. Both of these events, a division 2 emergency diesel inoperability issue and a turbine driven auxiliary feedwater pump check valve failure, would likely have been detected by resident inspectors had there not been an event notification. The NRC would still receive an LER on all of these events within 60 days.

Based on the fact that the NRC has responded with focused baseline or special inspections for only five out of 867 event notifications from 2011 to 2021, there is a high likelihood that onsite inspectors would discover the issues that resulted in additional inspections without timely event notification and without the need for other agency actions. Further, because the NRC would receive a licensee event report within 60 days of all of these events, delaying or even eliminating reports under this criterion would not significantly degrade the NRC's ability to successfully execute its mission.

Would delaying or eliminating this nonemergency reporting significantly degrade the NRC's ability to track or trend data associated with this criterion?

No, delaying or eliminating this nonemergency reporting would not significantly degrade the NRC's ability to track or trend data associated with this criterion. Information about these events would still be made available through LERs required by 10 CFR 50.73(a)(2)(v). The NRC may incur short-term difficulties in tracking or trending while any processes that currently rely on ENs are modified to use LERs because LERs are submitted on a much longer timeframe (60 days) than the 8-hour ENs. The NRC typically analyzes trends on a quarterly or yearly basis, both of which are supported by collecting data at a frequency of 60 days.

Is this nonemergency reporting duplicated by another regulation or 10 CFR 50.72 criterion?

This reporting criterion is broad in scope, and certain events reported under it may be required to be reported under other criteria in 10 CFR 50.72. However, as discussed above, 84 percent of the ENs submitted under this criterion from 2011 through 2021 were for events reported only under 10 CFR 50.72(b)(3)(v), while 16 percent were for events additionally reported under other criteria.

Is this type of event reportable under 10 CFR 50.73 and would that report meet the NRC's needs?

Yes, this type of event is reportable under 10 CFR 50.73(a)(2)(v) and that report would meet the NRC's needs to track and trend events of this type, inform adequate agency response, and ensure public transparency.

20.3 Discussion of Alternatives

20.3.1 Alternative 1: No Action

Description of Alternative 1

This alternative would maintain the current regulatory framework. Licensees would continue to be required to report these events within 8 hours of discovery. These events are those that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to shut down the reactor and maintain it in a safe shutdown condition, remove residual heat, control the release of radioactive material, or mitigate the consequences of an accident.

Assessment of Alternative 1

This alternative retains the original basis for the regulation, which supports the NRC's ability to take action within about a day, such as initiation of a special inspection.

20.3.2 Alternative 2: Extend Reporting Period

Description of Alternative 2

Under this alternative, the NRC would pursue rulemaking to extend the timeframe for providing a report of any nonemergency event that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to shut down the reactor and maintain it in a safe shutdown condition, remove residual heat, control the release of radioactive material, or mitigate the consequences of an accident. The NRC would also update existing guidance to reflect the revised regulation.

Assessment of Alternative 2

Alternative 2 could alleviate time pressure on licensees to report within 8 hours an event that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to shut down the reactor and maintain it in a safe shutdown condition, remove residual heat, control the release of radioactive material, or mitigate the consequences of an accident while still providing information to the NRC in a timely fashion for action, if needed. Extending the time for reporting would allow licensees to focus resources on assessment and response to the conditions that resulted in these events and only minimally delay the NRC's awareness of the condition.

20.3.3 Alternative 3: Eliminate Reporting Requirement

Description of Alternative 3

Under this alternative, the NRC would pursue rulemaking to remove the requirement to report the occurrence of events that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to shut down the reactor and maintain it in a safe shutdown condition, remove residual heat, control the release of radioactive material, or mitigate the consequences of an accident.

Assessment of Alternative 3

Under Alternative 3, there would be no regulatory requirement to ensure that timely notifications of these events are made to the agency. Many licensees' procedures require notifications to

resident inspectors on a similar timeframe as licensee response personnel when these conditions occur, but such notifications are at the licensee's discretion. Timely notifications would not be required by NRC regulation. This could potentially delay inspector awareness of these events, and therefore the NRC's awareness, until inspectors become aware through other routine activities.

The removal of this requirement would alleviate the need to provide such notifications. The NRC would continue to require, under 10 CFR 50.73(a)(2)(v), that licensees submit LERs within 60 days of the event. Because LERs are required within 60 days, this alternative may limit the NRC's ability to take timely actions if warranted when these events occur but do not coincide with another reportable event requiring more timely notifications, such as emergency declarations under licensee emergency plans.

20.3.4 Alternative 4: Revise Regulatory Guidance

Description of Alternative 4

In this alternative, the NRC would maintain the requirement to report and would clarify the guidance in NUREG-1022.

Assessment of Alternative 4

This alternative retains the original basis for the regulation, which supports the NRC's ability to take action within about a day, such as initiation of a special inspection.

This alternative is unlikely to alleviate the concerns raised by the petitioner or provide any reduction in cost associated with this reporting requirement. The NRC staff is not aware of issues relating to insufficient or unclear guidance for these events.

20.4 Regulatory Scope

Under Alternative 1, the NRC would not pursue any changes to the regulations in 10 CFR 50.72(b)(3)(v) concerning the nonemergency notifications for nuclear power plants. Under Alternative 2, the NRC would pursue rulemaking to extend the timeframe required in 10 CFR 50.72(b)(3)(v) for licensees to report an event that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to shut down the reactor and maintain it in a safe-shutdown condition, remove residual heat, control the release of radioactive material, or mitigate the consequences of an accident; the NRC would also revise any applicable guidance. Under Alternative 3, the NRC would remove this reporting criterion. Under Alternative 4, the NRC would maintain the requirement to report and would clarify the guidance in NUREG-1022.

20.5 NRC Guidance, Policy, and Implementation Issues

20.5.1 NRC Guidance

The NRC staff would revise NUREG-1022 to address any changes made to 10 CFR 50.72(b)(3)(v).

20.5.2 Policy Issues

No change in Commission policy would be required.

20.6 Impacts on Public Health, Safety, and Security

20.6.1 Alternative 1: No Action

Impacts on Public Health, Safety, and Security

Because this alternative would not change the current process, there would be no increase or reduction in public health, safety, or security.

Impacts on Applicants and Licensees

Because this alternative would not change the current reporting requirements, this alternative would have no incremental impacts on applicants and licensees.

Impacts on the NRC

Because this alternative would not change the current reporting requirements, this alternative would have no incremental impacts on the NRC.

Impacts to Other Stakeholders

Because this alternative would not change the current reporting requirements, this alternative would have no incremental impact on State, local, or Tribal governments.

Summary of Benefits and Costs

Alternative 1 would not result in any changes to the current regulatory framework; therefore, there would be no associated incremental costs or benefits.

20.6.2 Alternative 2: Extend Reporting Period

Impacts on Public Health, Safety, and Security

Because this alternative would not change what is ultimately reported to the NRC, and because licensees would still be required by plant Technical Specifications (which are part of the plant license) to promptly address inoperability of systems, structures, and components that are required to perform critical safety functions, this alternative would not result in an increase or reduction in public health, safety, or security. However, public awareness of such events could be delayed by the difference in the current 8-hour reporting requirement and the amount of time designated in a modified reporting requirement.

Impacts on Applicants and Licensees

Extending the required time for reporting would only delay licensee actions currently taken but still require them. The NRC estimates that licensees would incur incremental costs associated

with revising plant procedures and conducting training for this requirement of approximately (\$48,000). Licensees may realize operational benefits because additional time would be available for considering reporting while responding to events. Licensees may also see longer term cost savings if fewer reports are made due to the extended time allowed to consider whether reporting is required. Because Alternative 2 would result in no significant change in recurring costs to licensees, the NRC did not estimate these small incremental costs or benefits.

Impacts on the NRC

Under this alternative, the NRC's evaluation of events that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to shut down the reactor and maintain it in a safe shutdown condition, remove residual heat, control the release of radioactive material, or mitigate the consequences of an accident may be delayed relative to the current reporting requirement. In addition, the NRC would need to amend its regulations, guidance, and NRC Form 361 for this requirement at an estimated cost of (\$316,000). Because Alternative 2 would result in no significant change in recurring costs to the NRC to receive, review, process, or act on the notifications, the NRC did not estimate these small incremental costs or benefits.

Impacts to Other Stakeholders

This alternative may have an incremental impact on State, local, or Tribal governments. Any entity that relies on ENs reported to the NRC that are made public may have to alter its processes to account for the extended reporting period. The NRC did not estimate these small incremental costs or benefits.

Summary of Benefits and Costs

This alternative would give licensees more time to evaluate conditions to determine whether reporting is required. It would also alleviate an additional cost to operators while responding to potentially risk-significant conditions, as reports would not be required until well after such conditions arise. The NRC estimates that extending the allowed time for reporting this requirement would result in licensees' costs to revise procedures and training, and costs to the NRC to amend its regulations, guidance, and NRC Form 391 of approximately (\$364,000) without a substantial increase in benefits for the NRC, licensees, and other stakeholders.

20.6.3 Alternative 3: Eliminate Reporting Requirement

Impacts on Public Health, Safety, and Security

Under this alternative, the NRC would pursue rulemaking to eliminate the requirement under 10 CFR 50.72(b)(3)(v) to report events that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to shut down the reactor and maintain it in a safe shutdown condition, remove residual heat, control the release of radioactive material, or mitigate the consequences of an accident. Although an EN would not be required, licensees would report such conditions through an LER under 10 CFR 50.73(a)(2)(v).

Because this alternative would not change what is ultimately reported to the NRC, and because licensees would still be required by plant Technical Specifications (which are part of the plant license) to promptly address inoperability of systems, structures, and components that are required to perform critical safety functions, there would be no increase or reduction in public health, safety, or security. However, public awareness of such events could be delayed for up to 60 days.

Impacts on Applicants and Licensees

This alternative eliminates costs associated with this reporting criterion. Licensees would face one-time costs associated with changing their internal reporting procedures and training of the operators for this requirement with an estimated cost of approximately (\$24,000). The estimated averted costs to licensees resulting from the elimination of reporting requirements for any event or condition that could prevent the fulfillment of the safety function of structures or systems that are needed to (1) shut down the reactor and maintain it in a safe shutdown condition, (2) remove residual heat, (3) control the release of radioactive material, or (4) mitigate the consequences of an accident are \$132,000, \$166,000, \$350,000, and \$595,000, respectively, for a total of \$1,240,000 using a 7 percent discount factor.

Impacts on the NRC

Alternative 3 would potentially reduce the NRC's ability to promptly respond to an event that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to shut down the reactor and maintain it in a safe shutdown condition, remove residual heat, control the release of radioactive material, or mitigate the consequences of an accident. Many licensees' procedures require notifications to resident inspectors on a similar timeframe as licensee response personnel when these conditions occur, but such notifications are at the licensee's discretion. Timely notifications would not be required by NRC regulation. NRC Headquarters staff members, including emergency operations personnel, may remain unaware of these conditions until they are made aware by other means, such as through inspectors or the receipt of the associated LER. In addition, the NRC would need to amend its regulations, guidance, and NRC Form 361 for this requirement at an estimated cost of (\$316,000). The estimated averted costs to the NRC resulting from the elimination of reporting requirements for any event or condition that could prevent the fulfillment of the safety function of structures or systems that are needed to (1) shut down the reactor and maintain it in a safe shutdown condition, (2) remove residual heat, (3) control the release of radioactive material, or (4) mitigate the consequences of an accident are \$130,000, \$164,000, \$344,000, and \$585,000, respectively, for a total of \$1,220,000 using a 7 percent discount factor.

Impacts to Other Stakeholders

This alternative may impact State, local, and Tribal governments' ability to respond to events in a timely manner. Any organization that relies on ENs reported to the NRC may have to alter its processes to instead rely on the corresponding LERs. The NRC did not estimate these small incremental costs or benefits.

Summary of Benefits and Costs

This alternative eliminates the cost of making reports for events that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to shut down the reactor and maintain it in a safe shutdown condition, remove residual heat, control the release of radioactive material, or mitigate the consequences of an accident. This alternative would result in avoided future costs to the NRC, licensees, and other stakeholders of approximately \$2,120,000 using a 7 percent discount factor.

20.6.4 Alternative 4: Revise Regulatory Guidance

Impacts on Public Health, Safety, and Security

Because this alternative would not change the current process, there would be no increase or reduction in public health, safety, or security.

Impacts on Applicants and Licensees

This alternative may require that applicants and licensees review and implement updated guidance into their processes and procedures to conform to changes in NRC guidance. However, the NRC staff is not aware of issues relating to insufficient or unclear guidance for these events, so changes to industry processes and procedures could be inconsequential. As a result, the NRC staff did not estimate these small incremental costs.

Impacts on the NRC

Under this alternative, the NRC would incur the costs to review and update guidance to resolve areas where insufficient or unclear guidance exists. The NRC staff is not aware of issues with this guidance, so revising this guidance is expected to have no significant change in costs to the NRC. As a result, the NRC staff did not estimate these small incremental costs. The NRC staff did not identify any substantive benefits resulting from this alternative.

Impacts to Other Stakeholders

This alternative would have minimal impacts, primarily related to the review of new guidance documents, on State, local, or Tribal governments.

Summary of Benefits and Costs

This alternative would involve costs to the NRC to review and revise regulatory guidance and for licensees to make conforming changes in their procedures and training. However, the NRC is unaware of any issues with its guidance for this reporting requirement and, as a result, this alternative is unlikely to alleviate concerns raised by the petitioner.

20.7 Backfitting and Issue Finality

None of the alternatives would constitute backfitting as defined in 10 CFR 50.109 or affect the issue finality of a combined license issued under 10 CFR Part 52. Alternative 1 would result in no

change to existing regulations, other requirements, or NRC staff positions. Alternative 2 would give more time for the licensee to make the required notification. Thus, Alternative 2 would relax the 10 CFR 50.72(b)(3)(v) reporting requirement. However, a licensee could continue to comply with the current timing requirement and still satisfy Alternative 2. This would make the relaxation nonmandatory and, as explained in MD 8.4, nonmandatory relaxations of regulations generally do not meet the definition of “backfitting.” Alternative 2 would provide the voluntary relaxation of a current requirement and, thus, not constitute backfitting or affect the issue finality of a combined license. Under Alternative 3, the 10 CFR 50.72(b)(3)(v) reporting requirement would be eliminated. Alternative 3 would not meet the definition of “backfitting” and would not affect the issue finality of a combined license because it would not result in a modification of or addition to SSCs, or the design of a facility or the procedures or organization required to design, construct, or operate a facility. Alternative 4 would revise the NRC’s guidance documents but would not impose any new requirements on licensees. Therefore, issuance of the guidance documents would not constitute backfitting or forward fitting, as that term is defined and described in MD 8.4 or affect the issue finality of a combined license.

20.8 Stakeholder Feedback

The NRC held public meetings on November 4, 2021, and December 9, 2021, to discuss updating the 10 CFR 50.72 nonemergency reporting criteria. The NRC did not receive input specific to this reporting criterion. Section 6.1 of this regulatory basis document summarizes the comments received.

20.9 Staff Recommendation

The NRC staff recommends pursuing rulemaking under Alternative 3. Because the NRC has responded with focused baseline or special inspections for only five out of 867 event notifications under 10 CFR 50.72(b)(3)(v) from 2011 to 2021, onsite inspectors would likely discover the issues that resulted in additional inspections without the event notification, and the NRC receives an LER within 60 days of the event, eliminating or delaying reports under this criterion would not significantly degrade the NRC’s ability to successfully execute its mission. The associated LER requirements would continue to provide openness and ensure that the NRC is informed of the relevant events for awareness, assessment, and trending. Additionally, licensees would still be required by plant Technical Specifications (which are part of the plant license) to promptly address inoperability of systems, structures, and components that are required to perform critical safety functions. Hence, the NRC staff concludes that elimination of this reporting requirement is not likely to result in conditions that could potentially prevent fulfillment of a safety function remaining uncorrected for significant periods of time.

21.0 SECTION 50.72(B)(3)(XII) – TRANSPORT OF A CONTAMINATED PERSON OFFSITE

21.1 Existing Regulatory Framework

The regulations in 10 CFR 50.72(b)(3)(xii) require that nuclear power reactor licensees notify the NRC of any event requiring the transport of a radioactively contaminated person to an offsite

medical facility for treatment. This report is required to be made within 8 hours of the occurrence of such an event.

21.2 Regulatory Issue

In determining whether to maintain this reporting requirement, the NRC must balance its need for prompt information with the burden placed on licensees. Events involving radioactively contaminated persons generally do not result from risk-significant plant conditions. For example, personnel could be exposed to radiation contamination resulting from a leak or a processing error in a radwaste facility, or during routine refueling outage activities. However, the need to meet an 8-hour reporting requirement may distract licensees or divert resources more appropriately focused on plant operations.

As stated in the 2000 Final Rule, the NRC established an 8-hour reporting requirement for 10 CFR 50.72(b)(3)(xii) events because the agency might need to take action within about a day, such as to initiate a reactive inspection or investigation. The NRC is evaluating this reporting requirement to determine if the burden on licensees can still be justified. The NRC staff notes that a nonemergency event reporting requirement itself does not affect public health and safety.

The NRC staff used the following questions to consider potential changes to the reporting criterion.

Without this nonemergency reporting, would the NRC still be able to successfully execute its oversight, event response, or other NRC regulatory function?

Yes, the NRC would still be able to successfully execute its oversight, event response, or other NRC regulatory functions without the 10 CFR 50.72(b)(3)(xii) notification. Events covered by 10 CFR 50.72(b)(3)(xii) are generally not related to plant safety. Therefore, the NRC does not need to respond to these events and can focus its resources on oversight and other functions. Agency records indicate that the NRC has never initiated a reactive inspection or investigation in response to these events.

Would delays in receiving this nonemergency reporting significantly degrade the NRC's ability to successfully execute our oversight, event response, or other NRC regulatory functions?

No, 10 CFR 50.72(b)(3)(xii) events are generally not related to plant safety, and therefore are not a threat to public health and safety. The agency's records indicate that the NRC has never initiated a reactive inspection or investigation in response to these events.

Would delaying or eliminating this nonemergency reporting significantly degrade the NRC's ability to track or trend data associated with this criterion?

Yes, delaying or eliminating this nonemergency reporting would degrade the NRC's ability to track or trend data associated with this criterion because there is no other regulatory requirement to notify the NRC of such events (e.g., 10 CFR 50.73 does not require LERs for these events).

From 2001 to 2021, licensees reported 72 of these events (an average of approximately 3.5 events/year). The NRC's staff's review of the reports indicates that less than 40% of the events

showed actual contamination of clothing or persons once radiation surveys were completed, suggesting the current guidance may pose undue cost on licensees.

Is this nonemergency reporting duplicated by another regulation or 10 CFR 50.72 criterion?

No, this nonemergency reporting criterion is not duplicated by another regulation or 10 CFR 50.72 criterion.

Is this type of event reportable under 10 CFR 50.73 and would that report meet the NRC's needs?

No, there is no corresponding LER requirement.

21.3 Discussion Of Alternatives

21.3.1 Alternative 1: No Action

Description of Alternative 1

This alternative would maintain the current regulatory framework. Licensees would continue to be required to report within 8 hours any event requiring the transport of a radioactively contaminated person to an offsite medical facility for treatment.

Assessment of Alternative 1

This alternative retains the original basis for the regulation, which supports the NRC's ability to take action within about a day, such as to initiate a reactive inspection or investigation.

21.3.2 Alternative 2: Extend Reporting Period

Description of Alternative 2

Under this alternative, the NRC would pursue rulemaking to extend the timeframe for reporting any nonemergency event requiring the transport of a radioactively contaminated person to an offsite medical facility for treatment. The NRC would also update existing guidance to reflect the revised regulation.

Assessment of Alternative 2

Alternative 2 could alleviate time pressure on licensees to report within 8 hours any events requiring the transport of a radioactively contaminated person to an offsite medical facility for treatment. Extending the time for reporting would allow licensees to focus resources on plant operations and would only minimally delay the NRC's awareness of the condition.

21.3.3 Alternative 3: Eliminate Reporting Requirement

Description of Alternative 3

Under this alternative, the NRC would pursue rulemaking to remove the requirement to report events requiring the transport of a radioactively contaminated person to an offsite medical facility for treatment. The NRC would also revise the associated guidance.

Assessment of Alternative 3

Under Alternative 3, there would be no regulatory requirement to ensure that prompt notifications are made to the agency. Many licensees' procedures require notifications to resident inspectors on a similar timeframe as licensee response personnel when these conditions occur, but such notifications are at the licensee's discretion. Timely notifications would not be required by NRC regulation. This could delay inspector awareness of these events, and therefore the NRC's awareness, until inspectors become aware through other routine activities.

Because LERs are not required under 10 CFR 50.73(a)(2)(iv) for these events, this alternative may limit the NRC's ability to take prompt action if warranted when an event involving radioactively contaminated persons occurs but does not coincide with another reportable event requiring timely notification, such as an emergency declaration under licensee emergency plans. Eliminating this nonemergency reporting would also remove the NRC's ability to track or trend data associated with this criterion.

21.3.4 Alternative 4: Revise Regulatory Guidance

Description of Alternative 4

Under this alternative, the NRC would maintain the requirement to report and would clarify the guidance in NUREG-1022. Currently, NUREG-1022 recommends that licensees make an ENS notification when a person transported to an offsite medical facility for treatment is potentially contaminated. Under Alternative 4, the NRC would revise the guidance to recommend that licensees make ENS notifications only when a subsequent radiation survey has confirmed that contamination is present.

Assessment of Alternative 4

This alternative would retain the original basis for the regulation, which supports the NRC's ability to take action within about a day, such as to initiate a reactive inspection or investigation.

This alternative is likely to alleviate the concerns raised by the petitioner and reduce the cost associated with this reporting requirement. Review of 10 CFR 50.72(b)(3)(xii) event reports indicates that less than 40 percent of the events showed actual contamination of clothing or persons once surveys were completed. The NRC could lessen licensee costs by revising guidance to recommend that licensees make ENS notifications only when required surveys confirm that contamination is present, which would reduce the number of events reported.

21.3.5 Alternative 5: Remove EN Requirement and Add LER Requirement

Description of Alternative 5

Currently, 10 CFR 50.72(b)(3)(xii) does not have an associated LER. In Alternative 5, the NRC would pursue rulemaking to remove the 10 CFR 50.72(b)(3)(xii) 8-hour reporting requirement and add a new requirement for a 60-day LER for events requiring the transport of a survey-confirmed radioactively contaminated person to an offsite medical facility for treatment.

Assessment of Alternative 5

This alternative would maintain the NRC's ability to track and trend data associated with these events, however, the burden to the licensees would likely increase as LERs typically require an identification of the event cause and any applicable corrective actions.

21.4 Regulatory Scope

Under Alternative 1, the NRC would not pursue any changes to the regulations in 10 CFR 50.72(b)(3)(xii), which require licensees to report events requiring the transport of a radioactively contaminated person to an offsite medical facility for treatment. Under Alternative 2, the NRC would pursue rulemaking to extend the timeframe required in 10 CFR 50.72(b)(3)(xii) for making the reports, and the NRC would also revise any applicable guidance. Under Alternative 3, the NRC would remove this reporting criterion and revise its guidance. Under Alternative 4, the NRC would pursue changes to guidance only (making no changes to regulations). Under Alternative 5, NRC would pursue rulemaking to eliminate the 8-hour nonemergency notification but would add an LER requirement to report transport of a survey-confirmed radioactively contaminated person to an offsite medical facility for treatment events.

21.5 NRC Guidance, Policy, and Implementation Issues

21.5.1 NRC Guidance

The NRC staff would revise NUREG-1022 to address any changes made to 10 CFR 50.72(b)(3)(xii).

21.5.2 Policy Issues

No change in Commission policy would be required.

21.6 Impacts on Public Health, Safety, and Security

21.6.1 Alternative 1: No Action

Impacts on Public Health, Safety, and Security

Because this alternative would not change the current reporting requirements, there would be no increase or reduction in public health, safety, or security.

Impacts on Applicants and Licensees

Because this alternative would not change the current reporting requirements, this alternative would have no incremental impacts on applicants and licensees.

Impacts on the NRC

Because this alternative would not change the current reporting requirements, this alternative would have no incremental impacts on the NRC.

Impacts to Other Stakeholders

Because this alternative would not change the current reporting requirements, this alternative would have no incremental impact on State, local, or Tribal governments.

Summary of Benefits and Costs

Alternative 1 would not result in any changes to the current regulatory framework; therefore, there would be no associated incremental costs or benefits.

21.6.2 Alternative 2: Extend Reporting Period

Impacts on Public Health, Safety, and Security

Because this alternative would delay reports to the NRC of potentially significant ongoing conditions, there may be a net reduction in public health, safety, or security as the NRC would not be able to consider taking appropriate actions immediately.

Impacts on Applicants and Licensees

Extending the reporting period would only delay licensee actions currently taken but still require them. The NRC estimates that licensees may incur incremental costs associated with revising plant procedures and conducting training for this requirement of approximately (\$12,000). Licensees may realize operational benefits because additional time would be available for considering reporting while responding to events. Because extending the required time for reporting would have no significant change in recurring costs to licensees in complying with this reporting requirement, the NRC did not estimate these small incremental costs or benefits.

Impacts on the NRC

Under this alternative, the NRC's evaluation of events related to transport of a radioactively contaminated person to an offsite medical facility for treatment may be minimally delayed relative to the current reporting requirement. In addition, the NRC would need to amend its regulations, guidance, and NRC Form 361 for this requirement at an estimated cost of (\$79,000). Because extending the required time for reporting would have no significant change in recurring costs to the NRC to receive, review, process, or act on the notifications, the NRC did not estimate these small incremental costs or benefits.

Impacts to Other Stakeholders

This alternative may have an incremental impact on State, local, or Tribal governments. Any entity that relies on ENs reported to the NRC that are made public may have to alter its

processes to account for the extended reporting period. The NRC did not estimate these small, incremental costs or benefits.

Summary of Benefits and Costs

This alternative would give more time to licensees to complete required reporting of this requirement at a cost of (\$91,000).

21.6.3 Alternative 3: Eliminate Reporting Requirement

Impacts on Public Health, Safety, and Security

Under this alternative, the NRC would pursue rulemaking to eliminate the requirement under 10 CFR 50.72(b)(3)(xii) to report any event requiring the transport of a radioactively contaminated person to an offsite medical facility for treatment.

Because an LER under 10 CFR 50.73(a)(2)(iv) is not required for these events, the NRC may not become aware that an event has occurred unless the licensee notifies inspectors. However, the elimination of this reporting requirement would neither increase nor reduce public health, safety, or security, because 10 CFR 50.47(b)(12) and Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," require licensees to have arrangements in place for transportation and medical services for radiologically contaminated individuals, which would include notifying the offsite medical facilities. Further, the NRC staff considered whether removing this requirement would affect the agency's memorandum of understanding with the U.S. Occupational Safety and Health Administration and found that there would be no impact.

Impacts on Applicants and Licensees

This alternative eliminates costs associated with this reporting criterion. Licensees would incur one-time costs associated with changing their internal reporting procedures and training operators for this requirement at a cost of approximately (\$6,000). The estimated averted costs to licensees resulting from the elimination of the requirement to report the transport of contaminated persons offsite is up to \$11,000 using a 7 percent discount rate assuming no other reporting requirements apply (e.g., 10 CFR 50.72(a)(1) or 50.47(b)(12)).

Impacts on the NRC

Alternative 3 would potentially reduce the NRC's ability to promptly respond to issues resulting from an event requiring the transport of a radioactively contaminated person to an offsite medical facility for treatment. Many licensees' procedures require notifications to resident inspectors on a similar timeframe as licensee response personnel when these conditions occur, but such notifications are at the licensee's discretion. Timely notifications would not be required by NRC regulation. NRC Headquarters staff members, including emergency operations personnel, may remain unaware of these conditions until they are made aware by other means, such as through inspectors or a separate, required notification related to radioactively contaminated persons. In addition, the NRC would need to amend its regulations, guidance, and NRC Form 361 for this requirement at a cost of approximately (\$79,000). The estimated avoided costs to the NRC from

the elimination of the requirement to report the transport of contaminated persons offsite during the remaining license periods of current operating plants is approximately \$20,000 using a 7 percent discount rate.

Impacts to Other Stakeholders

This alternative may impact State, local, and Tribal governments' ability to respond to events in a timely manner. If established control procedures fail, these events could result in the spread of contamination that State, local, or Tribal governments may be concerned about. However, the NRC would need to evaluate this further during development of a proposed rule. Any organization that relies on ENs or LERs submitted to the NRC may have to alter its processes. The NRC did not estimate these small incremental costs or benefits.

Summary of Benefits and Costs

This alternative eliminates the cost of making reports for events requiring the transport of a radioactively contaminated person to an offsite medical facility for treatment. This alternative would result in additional costs to the NRC, licensees, and stakeholders of approximately (\$54,000) using a 7 percent discount rate.

21.6.4 Alternative 4: Revise Regulatory Guidance

Impacts on Public Health, Safety, and Security

Because this alternative would change the current guidance to recommend reporting only for cases with confirmed contamination, there would be no increase or reduction in public health, safety, or security.

Impacts on Applicants and Licensees

This alternative may eliminate costs associated with this reporting criterion for cases in which surveys ultimately reveal that no contamination is present. The NRC estimates that licensees may incur one-time costs associated with changing their internal reporting procedures and training operators for this requirement of approximately (\$12,000). In addition, one less 10 CFR 50.72(b)(3)(xii) event report on average would be generated per year based on historical data for an estimated avoided cost of \$4,000.

Impacts on the NRC

This alternative would change the current process to reporting only for cases with confirmed contamination. The NRC estimates that the costs to amend its guidance and NRC Form 361 for this requirement is approximately (\$51,000). This guidance revision is expected to result in one less 10 CFR 50.72(b)(3)(xii) event report received annually, which results in an avoided cost of approximately \$6,000.

Impacts to Other Stakeholders

Because this alternative would change the current process to reporting only for cases with confirmed contamination, it would have a minimal incremental impact on State, local, and Tribal governments. Therefore, the NRC did not estimate these small incremental costs or benefits.

Summary of Benefits and Costs

This alternative eliminates the cost of making reports for events requiring the transport of a radioactively contaminated person to an offsite medical facility for treatment in cases for which surveys ultimately reveal that no contamination is present. This alternative would not change the current regulatory framework and would result in an additional cost on the NRC, industry, State, local, or Tribal governments of (\$53,000).

21.6.5 Alternative 5: Remove EN Requirement and Add LER Requirement

Impacts on Public Health, Safety, and Security

This alternative would remove the 10 CFR 50.72(b)(3)(xii) 8-hour reporting requirement and add a new requirement for a 60-day LER for events requiring the transport of a survey-confirmed radioactively contaminated person to an offsite medical facility for treatment. This change would improve the NRC's ability to track and trend data associated with radiological events that contaminate individuals and may improve the information reported to the NRC. However, the change may result in no or only minimal improvement in public health, safety, or security. Furthermore, under Alternative 5, public awareness of such events could be delayed for up to 60 days.

Impacts on Applicants and Licensees

This alternative eliminates costs associated with the 8-hour reporting requirement for cases in which surveys ultimately reveal that no contamination is present, but it adds costs for developing and submitting an LER within 60 days for cases of confirmed contamination. The NRC estimates that licensees would incur one-time costs associated with changing their internal reporting procedures and training their operators for this requirement from an 8-hour notification to a 60-day LER at a cost of approximately (\$53,000). The replacement of future 10 CFR 50.72(b)(3)(xii) nonemergency event notifications with 60-day LERs during the remaining license periods of current operating plants is estimated to result in an additional incremental industry cost of (\$201,000) using a 7 percent discount rate.

Impacts on the NRC

Alternative 5 would potentially reduce the NRC's ability to promptly respond to issues resulting from events requiring the transport of a radioactively contaminated person to an offsite medical facility for treatment. Many licensees' procedures require notifications to resident inspectors on a similar timeframe as licensee response personnel when these conditions occur, but such notifications are at the licensee's discretion. Timely notifications would not be required by NRC regulation. NRC Headquarters staff members, including emergency operations personnel, may remain unaware of these conditions until they are made aware via other means, such as through inspectors or the associated LER. To implement this alternative, the NRC would need to amend

its regulations, guidance, and NRC Form 361 at an estimated cost of (\$80,000). The replacement of future 10 CFR 50.72(b)(3)(xii) nonemergency event notifications with 60-day LERs during the remaining license periods of current operating plants is estimated to result in an additional incremental NRC cost of (\$13,000) using a 7 percent discount rate.

Impacts to Other Stakeholders

This alternative may impact State, local, and Tribal governments' ability to respond to events in a timely manner. Any organization that relies on ENs reported to the NRC may have to alter its processes to instead rely on the corresponding LERs. The NRC did not estimate these small incremental costs or benefits.

Summary of Benefits and Costs

This alternative eliminates the cost of making 8-hour reports for events requiring the transport of a radioactively contaminated person to an offsite medical facility for treatment, but it adds the cost of submitting LERs within 60 days, which results in an incremental additional cost of (\$347,000) to NRC, industry, and State, local, and Tribal Governments.

21.7 Backfitting and Issue Finality

None of the other alternatives would constitute backfitting as defined in 10 CFR 50.109 or affect the issue finality of a combined license issued under 10 CFR Part 52. Alternative 1 would result in no change to existing regulations, other requirements, or NRC staff positions. Alternative 2 would give more time for the licensee to make the required notification. Thus, Alternative 2 would relax the 10 CFR 50.72(b)(3)(xii) reporting requirement. However, a licensee could continue to comply with the current timing requirement and still satisfy Alternative 2. This would make the relaxation nonmandatory and, as explained in MD 8.4, nonmandatory relaxations of regulations generally do not meet the definition of "backfitting." Alternative 2 would provide the voluntary relaxation of a current requirement and, thus, not constitute backfitting or affect the issue finality of a combined license.

Under Alternative 3, the 10 CFR 50.72(b)(3)(xii) reporting requirement would be eliminated. Alternative 3 would not meet the definition of "backfitting" and would not affect the issue finality of a combined license because it would not result in a modification of or addition to SSCs, or the design of a facility or the procedures or organization required to design, construct, or operate a facility. Alternative 4 would revise the NRC's guidance documents but would not impose any new requirements on licensees. Therefore, issuance of the guidance documents would not constitute backfitting or forward fitting, as that term is defined and described in MD 8.4 or affect the issue finality of a combined license.

Alternative 5 would eliminate a reporting requirement in 10 CFR 50.72(b) and establish a new reporting requirement in 10 CFR 50.73. As discussed in section 5.5 of this regulatory basis document, the reporting requirements in 10 CFR 50.72(b) are not procedures required to operate a nuclear power reactor, so eliminating one of these reporting requirements would not meet the definition of backfitting. Establishing a new reporting requirement under 10 CFR 50.73 would not meet the definition of backfitting because the reporting requirement would not be a procedure

required to operate a nuclear power reactor. Thus, Alternative 5 would not constitute backfitting or affect the issue finality of a combined license.

21.8 Stakeholder Feedback

The NRC held public meetings on November 4, 2021, and December 9, 2021, to discuss updating the 10 CFR 50.72 nonemergency reporting criteria. The NRC did not receive input specific to this reporting criterion. Section 6.1 of this regulatory basis document summarizes the comments received.

21.9 Staff Recommendation

The NRC staff recommends pursuing rulemaking under Alternative 3. Without this nonemergency reporting, the NRC would still be able to successfully execute its oversight, event response, or other NRC regulatory functions. The events addressed in 10 CFR 50.72(b)(3)(xii) are generally not related to plant safety and, therefore, are not a threat to public health and safety. The agency's records indicate that the NRC has never initiated a reactive inspection or investigation in response to these events. The NRC staff does not anticipate that elimination of this rulemaking requirement would require significant changes to internal communications or place additional burden on resident inspectors.

22.0 SECTION 50.72(B)(3)(XIII) – MAJOR LOSS OF EMERGENCY ASSESSMENT, OFFSITE RESPONSE, OR OFFSITE COMMUNICATIONS CAPABILITY

22.1 Existing Regulatory Framework

The regulations in 10 CFR 50.72(b)(3)(xiii) require that nuclear power reactor licensees notify the NRC of any event that results in a major loss of emergency assessment capability, offsite response capability, or offsite communications capability (e.g., significant portion of control room indication, ENS, or offsite notification system). The report must be made within 8 hours of the occurrence of such an event.

22.2 Regulatory Issue

In determining whether to maintain this reporting requirement, the NRC must balance its need for prompt information with the cost placed on licensees. One such cost accompanying the 10 CFR 50.72(b)(3)(xiii) reporting criterion is that licensees are subject to additional requirements to report some of the same events that require 10 CFR 50.72(b)(3)(xiii) notifications. The following site-specific emergency plan actions make this notification redundant:

- Licensees declare an emergency action level (EAL) within 15 minutes of a major loss of communication capability. Licensees must have the capability to notify offsite response organizations (OROs) of EAL classifications within 15 minutes of declaring an emergency under 10 CFR Part 50, Appendix E, Section IV.D.3, and the NRC within 60 minutes of the declaration under 10 CFR 50.72(a)(3).

- Licensees maintain the effectiveness of their site-specific emergency plan at all times under 10 CFR 50.54(q)(2). This is an integral part of the approved emergency plan and subsequent inspection process. Licensees may implement temporary compensatory measures in order to maintain emergency plan effectiveness, however, this does not require NRC notification.

The Federal Emergency Management Agency (FEMA) assesses offsite radiological emergency response plans and preparedness for adequacy and informs the NRC when offsite response capabilities may be compromised as outlined in the Memorandum of Understanding between agencies (ML15344A371). In addition, technological enhancements have significantly enhanced the NRCs awareness of potential weather issues surrounding a nuclear power plant. Requiring licensees to inform the NRC of these potential situations is redundant and places an undue burden on licensees.

From 2001 to 2014, licensees reported 1,419 events under 10 CFR 50.72(b)(3)(xiii) (an average of 101 ENs per year). In September 2014, the NRC published Supplement 1, to NUREG-1022, "Event Report Guidelines: 10 CFR 50.72(b)(3)(xiii)," to provide specific guidance regarding the conditions or events that warrant reporting. Because of the revised guidance, the number of reports decreased significantly; from 2015 through 2021, licensees reported an average of 35 events per year.

As stated in the 2000 Final Rule, the NRC retained the 8-hour reporting requirement for these conditions because the agency may need to take action within about a day, such as to initiate a reactive inspection or investigation. However, the NRC did not initiate any reactive inspections or investigations as a result of the 8-hour reports submitted from 2011 through 2021. The NRC is evaluating this reporting requirement to determine if the burden on licensees can still be justified. The NRC staff notes that a nonemergency event reporting requirement itself does not affect public health and safety.

The NRC staff used the following questions to consider potential changes to the reporting criterion.

Without this nonemergency reporting, would the NRC still be able to successfully execute its oversight, event response, or other NRC regulatory functions?

Yes, the NRC would be able to successfully execute its oversight, event response, or other NRC regulatory functions without the 10 CFR 50.72(b)(3)(xiii) notification. The information reported under this criterion is reportable under an existing EAL, provided by FEMA if the issue is significant, or not needed to support NRC oversight, event response, or other regulatory functions.

Would delays in receiving this nonemergency reporting significantly degrade the NRC's ability to successfully execute our oversight, event response, or other NRC regulatory functions?

No, delaying receipt of the 10 CFR 50.72(b)(3)(xiii) reporting would not significantly degrade the NRC's ability to successfully execute its oversight, event response, or other NRC regulatory functions. The information reported under this criterion is reportable under an existing EAL,

provided by FEMA if the issue is significant, collected and reported under reactor oversight or inspection processes, provided by the technological platforms available to monitor weather, or not needed to support NRC oversight, event response, or other regulatory functions.

Would delaying or eliminating this nonemergency reporting significantly degrade the NRC's ability to track or trend data associated with this criterion?

Although the information contained in the 10 CFR 50.72(b)(3)(xiii) reporting is not necessary for the NRC to successfully execute its oversight, event response, or other regulatory functions, delays in reporting or elimination of this criterion would render the NRC unable to track or trend data associated with this criterion. Unlike other 10 CFR 50.72 reporting requirements, 10 CFR 50.72(b)(3)(xiii) does not have a corresponding LER requirement in 10 CFR 50.73. However, all declared EALs are tracked and inspected using existing inspection procedures. Inspection activities related to the review and evaluation of the effectiveness of a licensee's problem identification and resolution processes serve to evaluate the licensee's compensatory measures for maintaining emergency plan effectiveness.

Is this nonemergency reporting duplicated by another regulation or 10 CFR 50.72 criterion?

The reporting requirement in 10 CFR 50.72(b)(3)(xiii) is partially duplicated by 10 CFR 50.72(a) for events that warrant declaration of any emergency action level as specified in the licensee's emergency plan.

Is this type of event reportable under 10 CFR 50.73 and would that report meet the agency's needs?

No, this type of event is not reportable under 10 CFR 50.73.

22.3 Discussion of Alternatives

22.3.1 Alternative 1: No Action

Description of Alternative 1

This alternative would maintain the current regulatory framework. Licensees would continue to be required to report within 8 hours any event that results in a major loss of emergency assessment capability, offsite response capability, or offsite communications capability.

Assessment of Alternative 1

This alternative retains the original basis for the regulation, which supports the NRC's ability to take action within about a day, such as initiation of a special inspection.

However, the primary drivers of the current regulation no longer exist. This report was established to ensure that the NRC maintains situational awareness of adverse weather conditions and other situations that may detract from effective emergency response, including potential licensee issues related to communication methods. Advances in technology have significantly improved the NRC's ability to maintain situational awareness of potential weather-

related concerns, and enhancements to licensee EAL schemes include emergency action levels for issues that would potentially impact licensee emergency response, including communication methods. Therefore, these 8-hour reports are not as necessary as they once were.

22.3.2 Alternative 2: Extend Reporting Period

Description of Alternative 2

Under this alternative, the NRC would pursue rulemaking to extend the timeframe for reporting any event that results in a major loss of emergency assessment capability, offsite response capability, or offsite communications capability. The NRC would also update existing guidance to reflect the revised regulation.

Assessment of Alternative 2

Alternative 2 could alleviate time pressure on licensees to report within 8 hours an event that results in a major loss of emergency assessment capability, offsite response capability, or offsite communications capability. However, this alternative would not significantly reduce burden to licensees because the report would still be required.

22.3.3 Alternative 3: Eliminate Reporting Requirement

Description of Alternative 3

Under this alternative, the NRC would pursue rulemaking to remove the requirement to report events that result in a major loss of emergency assessment capability, offsite response capability, or offsite communications capability. The NRC would also update existing guidance to reflect the revised regulation.

Assessment of Alternative 3

The removal of the requirement to report events that result in a major loss of emergency assessment capability, offsite response capability, or offsite communications capability would eliminate the burden on licensees of providing such notifications without affecting the licensee's, offsite response organizations', the NRC's, or FEMA's capabilities to protect public health and safety from the consequences of a radiological event.

Under Alternative 3, for elements of the reporting criterion not addressed by 10 CFR 50.72(a) emergency notifications, there would be no regulatory requirement to ensure that timely notifications are made to the NRC under 10 CFR 50.72. However, the NRC requires and inspects compensatory measures to ensure that licensees maintain the effectiveness of their emergency plans. For events currently covered by 10 CFR 50.72(b)(3)(xiii) that fall under emergency reporting criteria, licensees would continue to submit ENs under 10 CFR 50.72(a); the existing oversight and inspection processes would continue to be addressed; and events affecting offsite response capabilities that are reported by Federal partners would continue to be reported.

22.4 Regulatory Scope

Under Alternative 1, the NRC would not pursue any changes to the regulations in 10 CFR 50.72(b)(3)(xiii) for licensees to report an event that results in a major loss of emergency assessment capability, offsite response capability, or offsite communications capability. Under Alternative 2, the NRC would pursue rulemaking to extend the timeframe required in 10 CFR 50.72(b)(3)(xiii) and revise any applicable guidance. Under Alternative 3, the NRC would remove this reporting criterion and revise any applicable guidance.

22.5 NRC Guidance, Policy, and Implementation Issues

22.5.1 NRC Guidance

The NRC would revise NUREG-1022 to address any changes made to 10 CFR 50.72(b)(3)(xiii).

22.5.2 Policy Issues

No change in Commission policy would be required.

22.6 Impacts on Public Health, Safety, and Security

22.6.1 Alternative 1: No Action

Impacts on Public Health, Safety, and Security

Because this alternative would not change the current regulatory framework, there would be no increase or reduction in public health, safety, or security.

Impacts on Applicants and Licensees

Because this alternative would not change the current regulatory framework, there would be no incremental impacts on applicants and licensees.

Impacts on the NRC

Because this alternative would not change the current regulatory framework, there would be no incremental impacts on the NRC.

Impacts to Other Stakeholders

Because this alternative would not change the current regulatory framework, there would be no incremental impact on State, local, or Tribal governments.

Summary of Benefits and Costs

Alternative 1 would not result in any changes to the current regulatory framework; therefore, there would be no associated incremental costs or benefits.

22.6.2 Alternative 2: Extend Reporting Period

Impacts on Public Health, Safety, and Security

This alternative would extend the time available for licensees to report events of potentially significant ongoing conditions. This delay would not cause a net reduction in public health, safety, or security because events under this criterion are reportable under an existing EAL, information about the offsite capabilities affected by these events would be provided by FEMA if significant, and event information is collected and reported under the NRC's reactor oversight or inspection processes provided by the technological platforms available to monitor weather.

Impacts on Applicants and Licensees

Extending the reporting period would have no significant change in costs because it would only delay licensee actions currently taken but still require them. The NRC estimates that licensees may incur incremental costs associated with revising plant procedures and conducting training for this requirement of (\$12,000). Licensees may realize operational benefits, as additional time would be available for considering reporting while responding to events. This alternative is expected to have negligible recurring operations costs; therefore, the NRC did not estimate these small incremental costs or benefits.

Impacts on the NRC

Under this alternative, the NRC's evaluation of and response to events that result in a major loss of emergency assessment capability, offsite response capability, or offsite communications capability (that are not reported under 10 CFR 50.72(a)) would be delayed relative to the current reporting requirements. This delay would have little to no impact as these events do not result in immediate NRC action, the NRC has other means of becoming aware of them, and such a loss of emergency preparedness capability is subject to routine NRC inspection. The NRC would need to amend its regulations, guidance, and NRC Form 361 for this requirement at an estimated cost of (\$79,000). Because extending the required time for reporting would have no significant change in recurring costs to the NRC to receive, review, process, or act on the notifications, the NRC did not estimate these small incremental costs or benefits.

Impacts to Other Stakeholders

This alternative may have impacts on State, local, or Tribal governments. Any entity that relies on ENs reported to the NRC that are made public may have to alter its processes to account for the extended reporting period. However, OROs would continue to be informed of 10 CFR 50.72(a) emergency notifications within 15 minutes of classification. Because Alternative 2 is expected to have negligible impact on State, local, or Tribal governments, the NRC did not estimate these small incremental costs or benefits.

Summary of Benefits and Costs

This alternative would give licensees more time to make the required report; however, it is not expected to change the resources required to collect the information, complete the form, and submit the report. The extended reporting period may alleviate a distraction to operators

responding to event conditions by allowing them to submit the reports after the event conditions are resolved. Alternative 2 is expected to add an incremental cost of (\$91,000) on the NRC, industry, and State, local, or Tribal governments.

22.6.3 Alternative 3: Eliminate Reporting Requirement

Impacts on Public Health, Safety, and Security

Under this alternative, the NRC would pursue rulemaking to eliminate the requirement under 10 CFR 50.72(b)(3)(xiii) to report events that result in a major loss of emergency assessment capability, offsite response capability, or offsite communications capability. NRC and ORO notification of emergency events would continue in accordance with 10 CFR 50.72(a). The NRC has other means of becoming aware of events under this criterion that do not also fall under 10 CFR 50.72(a). Eliminating this reporting requirement would not negatively impact public health, safety, or security.

Impacts on Applicants and Licensees

This alternative eliminates costs associated with this reporting criterion. The NRC estimates that licensees would incur one-time costs associated with changing their internal reporting procedures and training operators for this requirement at an incremental cost of (\$6,000). The costs to licensees resulting from the elimination of the requirement to report events that result in a major loss of emergency assessment capability, offsite response capability, or offsite communications capability under 10 CFR 50.72(b)(3)(xiii) during the remaining license periods of current operating plants is estimated to result in up to \$256,000 in avoided reporting costs using a 7 percent discount rate assuming no other parts of 10 CFR 50.72 or 50.47 would require reporting.

Impacts on the NRC

Alternative 3 would potentially reduce the NRC's ability to consider timely actions in response to major loss of emergency assessment capability, offsite response capability, or offsite communications capability. Many licensees' procedures require notifications to resident inspectors on a similar timeframe as licensee response personnel when these conditions occur, but such notifications are at the licensee's discretion. Timely notifications would not be required by NRC regulation. NRC Headquarters staff members, including emergency operations personnel, may remain unaware of these conditions until they are made aware by other means, such as through the plant resident inspector. In addition, the NRC would need to amend its regulations, guidance, and NRC Form 361 for this requirement at an estimated cost of (\$79,000). The estimated avoided costs to the NRC resulting from the elimination of the requirement to report future events that result in a major loss of emergency assessment capability, offsite response capability, or offsite communications capability under 10 CFR 50.72(b)(3)(xiii) during the remaining license periods of current operating plants are \$709,000 using a 7 percent discount rate.

Impacts to Other Stakeholders

This alternative may impact State, local, and Tribal governments' ability to respond to events in a timely manner. Any organization that relies on ENs reported to the NRC may not have access to the information under this criterion, as there is no notification or corresponding LER. However, OROs would continue to be notified of emergencies under 10 CFR 50.72(a).

Additional Considerations

Since the NRC issued updated guidance on making 10 CFR 50.72(b)(3)(xiii) reports in 2014, the number of reports has fallen significantly from an average of 99 ENs per year from 2001 through 2014 to an average of 33 ENs per year from 2015 through 2021. The updated guidance has reduced costs for licensees. The information provided by the petitioner in support of the petition did not identify this criterion as being particularly burdensome.

Summary of Benefits and Costs

This alternative eliminates the cost of making reports for events that result in a major loss of emergency assessment capability, offsite response capability, or offsite communications capability. This alternative would result in avoided costs to the NRC, licensees, and State, local, and Tribal Governments of approximately \$880,000 using a 7 percent discount rate.

22.7 Backfitting and Issue Finality

None of the alternatives would constitute backfitting as defined in 10 CFR 50.109 or affect the issue finality of a combined license issued under 10 CFR Part 52. Alternative 1 would result in no change to existing regulations, other requirements, or NRC staff positions. Alternative 2 would give more time for the licensee to make the required notification. Thus, Alternative 2 would relax the 10 CFR 50.72(b)(3)(xiii) reporting requirement. However, a licensee could continue to comply with the current timing requirement and still satisfy Alternative 2. This would make the relaxation nonmandatory and, as explained in MD 8.4, nonmandatory relaxations of regulations generally do not meet the definition of "backfitting." Alternative 2 would provide the voluntary relaxation of a current requirement and, thus, not constitute backfitting or affect the issue finality of a combined license. Under Alternative 3, the 10 CFR 50.72(b)(3)(xiii) reporting requirement would be eliminated. Alternative 3 would not meet the definition of "backfitting" and would not affect the issue finality of a combined license because it would not result in a modification of or addition to SSCs, or the design of a facility or the procedures or organization required to design, construct, or operate a facility.

22.8 Stakeholder Feedback

The NRC held public meetings on November 4, 2021, and December 9, 2021, to discuss updating the 10 CFR 50.72 nonemergency reporting criteria. The NRC did not receive input specific to this reporting criterion. Section 6.1 of this regulatory basis document summarizes the comments received.

22.9 Staff Recommendation

The NRC staff recommends pursuing rulemaking under Alternative 3. Historically, the NRC has not activated its response plan or performed reactive inspections as a result of reports received under this criterion. Consequently, eliminating reports under this criterion would not significantly degrade the NRC's ability to successfully execute its mission. In addition, although there is no corresponding LER, if an event occurred that was significant enough to warrant notification of State, local, and Tribal stakeholders, the associated EAL classification would require appropriate notifications in accordance with the licensee's emergency plan and 10 CFR 50.72(a)(1)(i). Elimination of this reporting requirement would not likely involve significant changes to internal communications or place additional burden on resident inspectors.

23.0 ALTERNATIVE TO USING THE EMERGENCY NOTIFICATION SYSTEM FOR NOTIFYING THE NRC OF A NONEMERGENCY EVENT

23.1 Existing Regulatory Framework

The regulations in 10 CFR 50.72(a)(1) require, in part, that each operating nuclear power reactor licensee notify the NRC HOC through the ENS of the declaration of any of the emergency classes specified in the licensee's approved emergency plan and nonemergency events specified in 10 CFR 50.72(b). ENS lines are direct access lines that bypass switching in the telephone service's local central office. These lines are installed in the licensee control rooms as well as the technical support center and emergency operations facility. If the ENS is inoperative, 10 CFR 50.72(a)(2) requires the licensee to make the required notifications through a commercial telephone service, another dedicated telephone system, or any other method enabling a report as soon as practical to the HOC at the telephone numbers specified in Appendix A to 10 CFR Part 73, "Physical Protection of Plants and Materials." NUREG-1022 contains guidance to licensees on using the ENS and how to communicate event information if the ENS is unavailable. The NRC Form 361 provides a standard structure for licensees to communicate to the HOC the information required by 10 CFR 50.72. Licensees often supplement the required ENS phone call by submitting a completed version of NRC Form 361 to the HOC by facsimile or email.

23.2 Regulatory Issue

In the early 1980s, when the NRC first required and implemented the ENS, telephones were the only means of communication available between the NRC and its licensees. Since then, several other means of communication have become widely available, including facsimile, email, text messaging, instant messaging, and online portals. Licensees have used facsimile or other electronic means to submit Form 361 to the NRC with specific event information as a supplement to their telephone reporting required by 10 FR 50.72(a)(1). Often, the completed version of NRC Form 361 would be sufficient to notify the NRC of the event. However, because 10 CFR 50.72(a)(1) refers specifically to the ENS, licensees must continue to use the ENS to call the HOC. In cases for which NRC Form 361 would be sufficient, the mandatory ENS phone call could be considered an unnecessary burden.

The NRC maintains an online portal called Mission Analytics Portal, External (MAP-X) to communicate with licensees. In 2022, the NRC added an EN module to MAP-X to allow licensees to provide, via a webform, the information in NRC Form 361. To use the EN module, licensees would need to subscribe to the MAP-X portal. Once a licensee submits EN information through the webform, MAP-X will send the EN submittal to the HOC for the HOO, allowing the HOO to follow up with the licensee if needed, and to the NRC's operating experience team (nuclear power plants only) for data retention, tracking, and trending. Further, the development of MAP-X is part of the NRC's overall modernization objective to streamline the flow of information, such as ENs, from licensees to the NRC and warehouse data for operational analytics. Because licensees can now use MAP-X to directly send EN information required by 10 CFR 50.72 to the NRC, the NRC is considering the use of this capability within MAP-X, or other technology-inclusive means, as an alternative to the ENS. However, licensees who use this module are currently still required to use ENS to comply with 10 CFR 50.72(a)(1).

23.3 Discussion of Alternatives

23.3.1 Alternative 1: No Action

Description of Alternative 1

The NRC would maintain the current event reporting procedural requirements and framework. The NRC would not pursue any changes to current reporting requirements under 10 CFR 50.72 or to guidance in NUREG-1022.

Assessment of Alternative 1

Under this alternative, the NRC would continue to require the use of the ENS as the sole means for licensees to comply with the 10 CFR 50.72 reporting requirement as described in the current regulations and guidance. Any use of non-ENS communication methods by licensees to transmit event information to the NRC would be considered supplemental, similar to licensees' current options for transmitting completed versions of NRC Form 361 to the NRC.

This alternative does not address the burden on licensees from being required to make the ENS notification via phone call to the HOC. The NRC already has the technological capability to receive EN information through an online portal, and licensees can submit the EN information through that online portal. Therefore, this alternative would not address the regulatory issue.

23.3.2 Alternative 2: Rulemaking – Alternative to the ENS for Nonemergency Event Notifications

Description of Alternative 2

Under this alternative, the NRC would pursue rulemaking to provide a technology-inclusive alternative to the ENS for submitting nonemergency event information required under 10 CFR 50.72(b). The NRC would update guidance to reflect the revised regulation.

Assessment of Alternative 2

This alternative would allow operating nuclear power plant licensees to use the EN module within MAP-X or other technology inclusive means to directly transmit 10 CFR 50.72(b) event information to the NRC instead of making a phone call to the HOC through the ENS. This alternative would eliminate the burden on licensees to call the HOC through the ENS. While the Alternative 2 rulemaking would not specify the technology for this alternative reporting method, the technology used would need to have certain functional characteristics, such as receiving the EN information and enabling the transmission and appropriate distribution of the information to various NRC organizations. The NRC would update the guidance in NUREG-1022 to reflect the revised regulations.

23.3.3 Alternative 3: Rulemaking – Standalone Rulemaking for an Alternative to the ENS for Nonemergency and Other Event Notifications

Description of Alternative 3

Under this alternative, the NRC would pursue a separate rulemaking to provide a technology-inclusive alternative to the ENS for submitting emergency and nonemergency event information required under 10 CFR 50.72 or other NRC regulations.

Assessment of Alternative 3

Although Alternative 3 would provide an alternative reporting mechanism for nonemergency events, it would be considered out of scope for the current rulemaking activity. The Commission limited the scope of this rulemaking to nonemergency events under 10 CFR 50.72. Because Alternative 3 would be considered out of scope, it will not be described or assessed further in this regulatory basis.

23.4 Regulatory Scope

Under Alternative 2, the NRC would amend the regulations in 10 CFR 50.72 on nonemergency notifications for nuclear power plants to provide a technology-inclusive alternative to ENS notifications.

23.5 NRC Guidance, Policy, and Implementation Issues

23.5.1 NRC Guidance

The NRC staff would revise NUREG-1022 to describe the new reporting alternative to an ENS phone call and include guidance for submitting NRC Form 361 information electronically through technology-inclusive means.

23.5.2 Policy Issues

No change in Commission policy would be required.

23.6 Impacts on Public Health, Safety, and Security

23.6.1 Alternative 1: No Action

Impacts on Public Health, Safety, and Security

Because this alternative would not change the current reporting requirements, there would be no impact on public health, safety, and security.

Impacts on Applicants and Licensees

Because this alternative would not change the current regulatory framework, there would be no incremental impact on applicants and licensees.

Impacts on the NRC

Because this alternative would not change the current regulatory framework, there would be no incremental impact on the NRC.

Impacts to Other Stakeholders

Because this alternative would not change the current regulatory framework, there would be no incremental impact on State, local, or Tribal governments.

Summary of Benefits and Costs

Alternative 1 would not result in any changes to the current regulatory framework; therefore, there would be no associated incremental costs or benefits.

23.6.2 Alternative 2: Rulemaking – Alternative to the ENS for Nonemergency Event Notifications

Impacts on Public Health, Safety, and Security

Alternative 2 would provide licensees with an alternative method for providing the required 10 CFR 50.72 nonemergency event notification information to the NRC. Therefore, there would be no impact on public health, safety, and security.

Impacts on Applicants and Licensees

This voluntary reporting alternative would not impose any new requirements on a licensee and would not change the requirement for nuclear power reactor licensees to notify the NRC of a nonemergency event under 10 CFR 50.72. Licensees interested in using this alternative reporting system to ENS would incur a one-time implementation cost to acquire and maintain the necessary accounts or fulfill other requirements with the NRC for access to the alternative system, test the system to ensure it accepts the licensee's ENs, and implement any training or procedure changes needed to use the system. The NRC estimates that these initial setup costs for the entire group of industry adopters are (\$21,000), assuming a large adoption rate. The NRC plans to add several more modules to MAP-X for other licensing and regulatory activities. The

NRC anticipates that MAP-X account access will be shared across all MAP-X modules, so that after licensees set up their initial accounts to access the EN module, they would be able to add other modules to their profiles when future modules become available.

The NRC staff estimates that the use of an alternative means to submit an EN in lieu of a phone call to the HOC would save approximately 0.5 hours per event. To estimate averted costs, the NRC staff used its EN data from 2016 through 2021 as the basis for the number of ENs received per year and assumed that licensees would voluntarily choose to register 270 users (based on an estimated 3-7 users per site).

Once a licensee has a MAP-X account or has met the access requirements, that licensee would no longer be burdened by calling the HOC via ENS for nonemergency events. There may be recurring costs to register new users or to resolve application issues during the remaining license periods of current operating plants, and the NRC estimates those costs to be (\$49,000) using a 7 percent discount rate. The estimated avoided costs to licensees in reporting and processing using an alternative means are \$114,000.

Impacts on the NRC

This alternative would impact the NRC in two ways. First, the NRC would need to pursue rulemaking to provide a technology-inclusive method as a regulatory alternative to making the ENS notification at an estimated cost of (\$79,000), which is an incremental cost because this amendment is considered to be performed with other changes to nonemergency events. Second, before the licensee could use an alternative system in place of the ENS phone call, the NRC would need to set up and test the system with the licensee to verify that it is working properly and provide annual support to the application until it is retired. The NRC estimates that these costs are (\$113,000) using a 7 percent discount rate. The estimated avoided costs to the NRC in receiving notifications using an alternative means are \$70,000.

Impacts to Other Stakeholders

This alternative would not have impacts on State, local, or Tribal governments.

Summary of Benefits and Costs

This alternative would reduce the regulatory cost of requiring ENS phone calls for nonemergency ENs to the NRC, while incurring a moderate rulemaking cost. Furthermore, the development of MAP-X is part of the NRC's overall modernization objective of streamlining the flow of information, such as ENs, from licensees to the NRC and warehousing data for operational analytics. This alternative would also improve the internal and external stakeholder experience. Alternative 2 would result in an additional incremental cost of (\$78,000) of which industry would incur an avoided cost of \$44,000 and the NRC would incur an additional incremental cost of (\$122,000).

23.7 Backfitting and Issue Finality

Neither of the alternatives would constitute backfitting as defined in 10 CFR 50.109 or affect the issue finality of a combined license issued under 10 CFR Part 52. Alternative 1 would result in no

change to existing regulations, other requirements, or NRC staff positions. Alternative 2 would provide nuclear power reactor licensees with a voluntary alternative to the ENS, through MAP-X or other technology-inclusive means, for making a nonemergency event notification to the HOC. Because the alternative would be a voluntary regulatory alternative, such that licensees would not be required to use the alternative method, this alternative would not meet the definition of backfitting in 10 CFR 50.109 or affect the issue finality of a combined license.

23.8 Stakeholder Feedback

The NRC held public meetings on November 4, 2021, and December 9, 2021, to discuss updating the 10 CFR 50.72 nonemergency reporting criteria. The NRC did mention the possibility of using MAP-X for reporting nonemergency events during the December 2021 public meeting, but the NRC did not receive input specific to this reporting criterion. Section 6.1 of this regulatory basis document summarizes the comments received.

23.9 Staff Recommendation

The NRC staff recommends adoption of Alternative 2 to provide an alternative reporting means. Alternative 2 provides the best balance between regulatory cost reduction, flexibility, resources, and schedule. Alternative 1 is not desirable because licensees would continue to incur costs with the ENS phone call.

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APPENDIX B: UNCERTAINTY ANALYSIS

Because this preliminary regulatory analysis is based on estimates of values that are sensitive to plant-specific cost drivers and plant dissimilarities, the NRC staff provides the following analysis of the variables that have the greatest amount of uncertainty. To perform this analysis, the NRC staff conducted a Monte Carlo simulation analysis using the @Risk software program.³

Monte Carlo simulations involve introducing uncertainty into the analysis by replacing parameters modeled by a single value with probability distributions. By defining input variables as probability distributions instead of point estimates, the influence of uncertainty on the results of the analysis (i.e., the net benefits) can be modeled effectively.

The probability distributions chosen to represent the different variables in the analysis were bounded by the range-referenced input and the NRC staff's professional judgment. When defining the probability distributions for use in a Monte Carlo simulation, summary statistics are needed to characterize the distributions. These summary statistics include (1) the minimum, most likely, and maximum values of a program evaluation and review technique (PERT) distribution;⁴ (2) the minimum and maximum values of a uniform distribution; and (3) the specified integer values of a discrete population. The NRC staff used the PERT distribution to reflect the relative spread and skewness of the distribution defined by the three estimates for the number of hours needed by the licensees to prepare the reports and by the NRC to review the report. The NRC staff used the data from the NRC automated event tracking system to obtain the annual number of reports and then used the @Risk software program to generate a best fit distribution to model this data.

The NRC staff performed the Monte Carlo simulation by repeatedly recalculating the results 10,000 times. For each iteration, the cost model chose the values in the cost model randomly from the probability distributions that define the input variables. The model recorded the values of the output variables for each iteration and used these resulting output variable values to define the resultant probability distribution, in terms of costs and benefits.

Figure 4 and Figure 5 display the graphs of the net incremental costs and benefits from the regulatory baseline (Alternative 1) of the NRC staff's recommended alternatives.

³ Information about the @Risk software is available at www.palisade.com.

⁴ A PERT distribution is a special form of the beta distribution with specified minimum and maximum values. The shape parameter is calculated from the defined "most likely" value. The PERT distribution is similar to a triangular distribution in that it has the same set of three parameters. Technically, it is a special case of a scaled beta (or beta general) distribution. The PERT distribution is generally considered superior to the triangular distribution when the parameters result in a skewed distribution because the smooth shape of the curve places less emphasis in the direction of skew. Similar to the triangular distribution, the PERT distribution is bounded on both sides and, therefore, may not be adequate for some modeling purposes if the capture of tail or extreme events is desired.

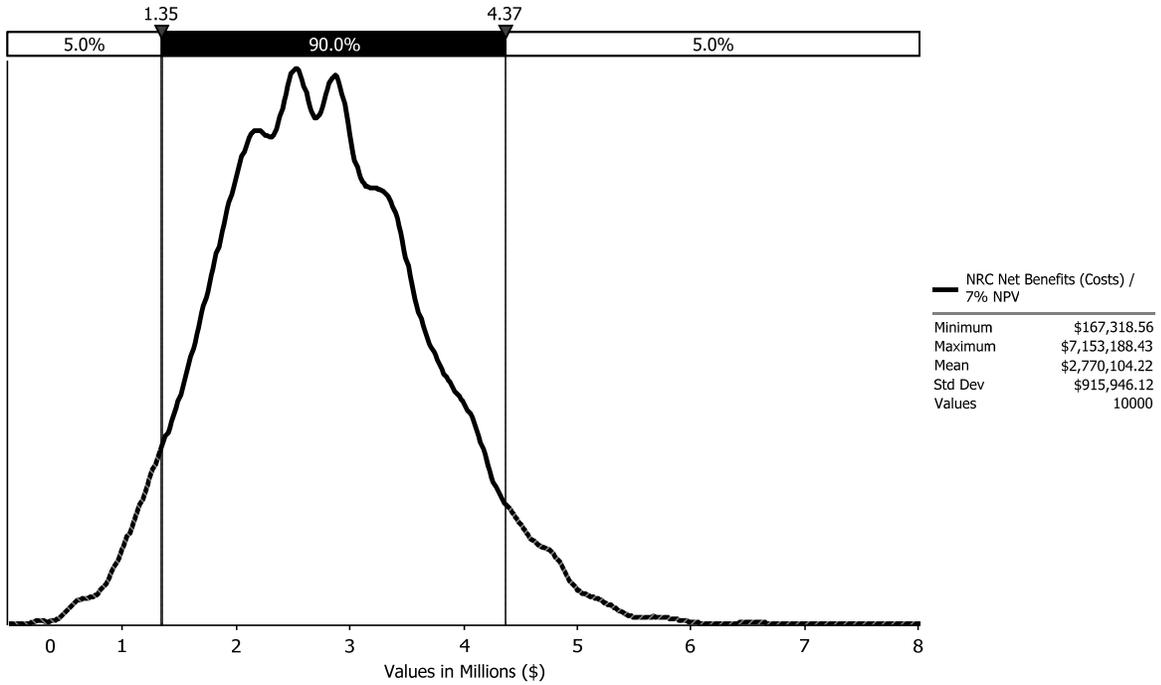


Figure 4 NRC net benefits (costs), 7 percent NPV

As shown in Figure 4, the NRC staff's recommended alternatives would result in averted costs to the NRC of approximately \$2.8 million, using a 7 percent NPV. The uncertainty analysis indicates that there is a greater than 99 percent chance that the NRC staff's recommended alternatives would be cost beneficial to the NRC.

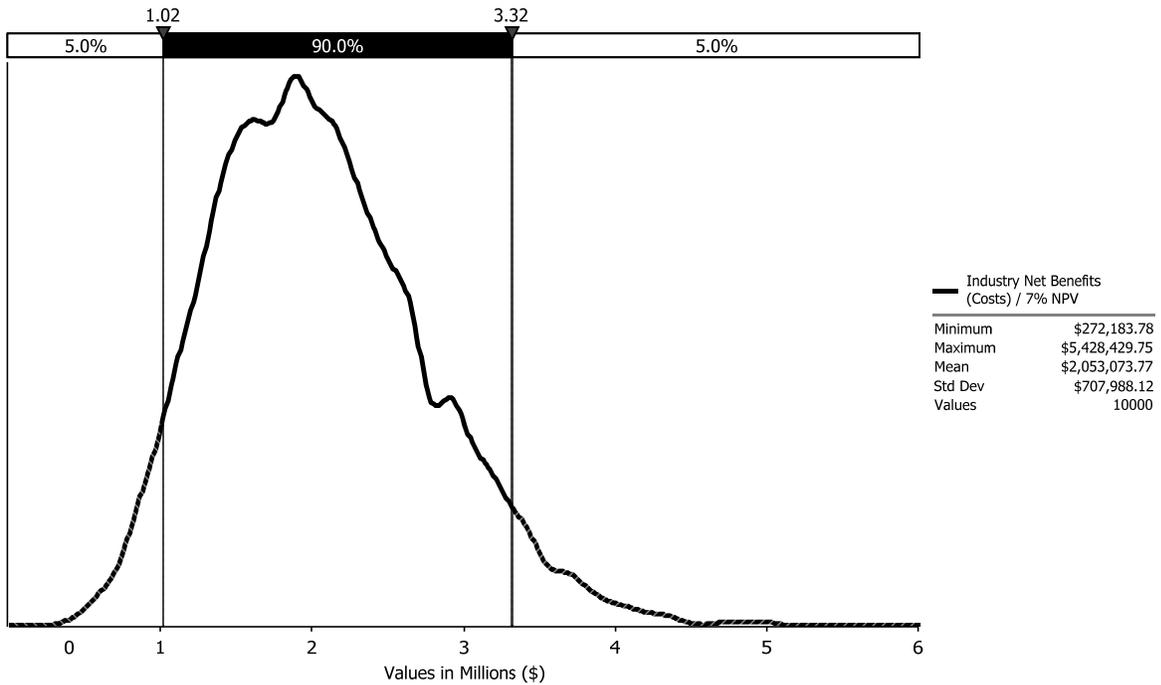


Figure 5 Industry net benefits (costs), 7 percent NPV

As shown in Figure 5, the NRC staff's recommended alternatives would result in averted costs to the industry of approximately \$2.1 million, using a 7 percent NPV. The uncertainty analysis indicates that there is a greater than 99 percent chance that these alternatives would be cost beneficial to the industry.

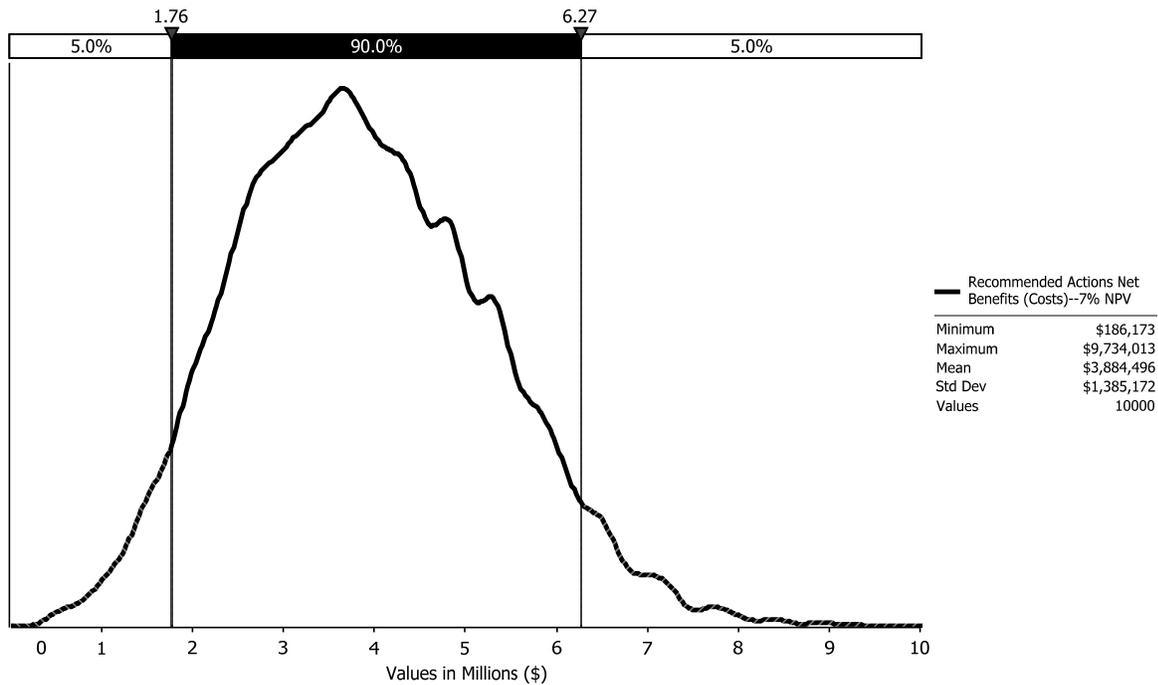


Figure 6 Total net benefit, 7 percent NPV

As shown in Figure 6, the NRC staff's recommended alternatives would result in benefits of approximately \$3.9 million in averted costs using a 7 percent discount factor. The uncertainty analysis indicates that there is a greater than 99 percent chance that the NRC staff's recommendations would be cost beneficial.

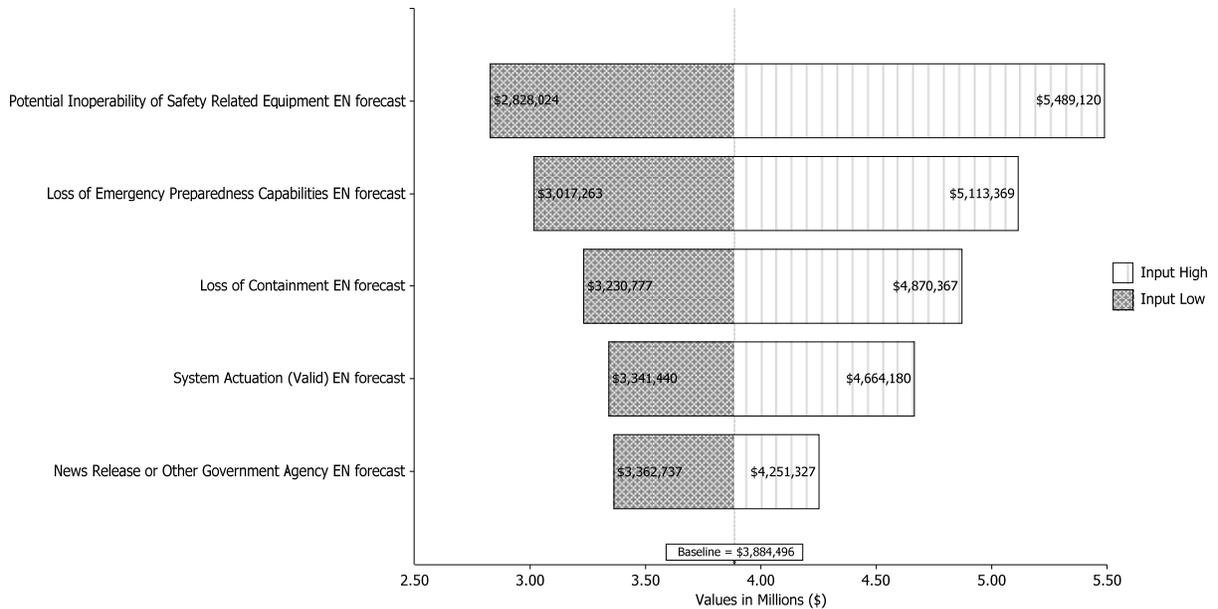


Figure 7 Combined Totals Tornado Diagram, 7 percent NPV

Figure 7 shows a tornado diagram that identifies the key variables whose uncertainty drives the largest impact on net benefits for the recommended alternatives. Figure 7 ranks the variables based on their contribution to cost uncertainty.

The figure shows that the forecast of the number of future event notifications has the greatest impact on the analysis. Specifically, the event notification forecasts for the potential inoperability of safety related equipment notifications result in the greatest uncertainties in this analysis. The uncertainty in forecasting the elimination of future event notifications reported under this criterion would result in a change to the mean of \$2.7 million, the difference in averted costs that ranges between \$2.8 million to \$5.5 million with a 90 percent confidence level.

The estimate that has the second greatest variation in the overall results is the forecast of the loss of emergency preparedness capabilities event notifications. The uncertainty in forecasting the elimination of future event notifications reported under this criterion would result in a change to the mean of \$2.1 million, the difference in averted costs that ranges between \$3.0 million to \$5.1 million with a 90 percent confidence level.

The estimate that has the third greatest variation in the overall results is the loss of containment event notification forecast. The uncertainty in forecasting the elimination of future event notifications reported under this criterion would result in a change to the mean of \$1.7 million, the difference in averted costs that ranges between \$3.2 million to \$4.9 million with a 90 percent confidence level.

The estimate that has the fourth greatest variation in the overall results is the system actuation (valid) event notification forecast. The uncertainty in forecasting the elimination of future event notifications reported under this criterion would result in a change to the mean of \$1.4 million, the difference in averted costs that ranges between \$3.3 million to \$4.7 million with a 90 percent confidence level.