Summary of Public Comments Received on Proposed Revisions to 10 CFR Parts 50 and 52 Enhancements to Emergency Preparedness Regulations

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U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Office of Nuclear Security and Incident Response

[Insert Date]

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List of Acronyms

ACE	Alliance for Clean Energy
ANS	Alert and notification system
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
CFR	Code of Federal Regulations
COL	Combined license
DBA	Design basis accident
DBT	Design basis threat
DHS	Department of Homeland Security
DPR	Division of Preparedness and Response
EAL	Emergency action level
EAS	Emergency alert system
ECL	Emergency classification level
ENS	Emergency notification system
EOC	Emergency operations center
EOF	Emergency operations facility
EP	Emergency preparedness
EPZ	Emergency planning zone
ERF	Emergency response facility
ERPA	Emergency response planning area
ERO	Emergency response organization
ESP	Early site permit
ETE	Evacuation time estimate
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FENOC	FirstEnergy Nuclear Operating Company
FOF	Force on force
FRN	Federal Register Notice
FSAR	Final safety analysis report
GE	General Emergency
HAB	Hostile action-based
HCM	Highway Capacity Manual
HP	Health Physics
HSEEP	Homeland Security Exercise Evaluation Program
HSPD	Homeland Security Presidential Directive
ICS	Incident Command System
INPO	Institute of Nuclear Power Operations
IPAWS	Integrated Public Alert and Warning System
ISG	Interim staff guidance
I&C	Instrumentation and control
JIC	Joint information center
JTA	Job/task analysis
KI	Potassium iodide
LERF	Large early release frequency
LLEA	Local law enforcement agency
LOA	Letter of agreement

List of Acronyms (continued)

LOS	Level of service
MACCS2	MELCOR Accident Consequence Code System, version 2
MOU	Memorandum of understanding
NEI	Nuclear Energy Institute
NIMS	National Incident Management System
NOUE	Notification of Unusual Event
NPP	Nuclear power plant
NRC	Nuclear Regulatory Commission
NSHC	No significant hazard consideration
NSIR	Nuclear Security and Incident Response
OMB	Office of Management and Budget
ORO	Offsite response organization
OSC	Operations support center
PAG	Protective action guide
PAR	Protective action recommendation
PI	Performance indicator
REP	Radiological emergency preparedness
RG	Regulatory guide
ROP	Reactor Oversight Process
RPV	Reactor pressure vessel
RTR	Research and test reactor
SAE	Site Area Emergency
SNL	Sandia National Laboratories
SOARCA	State-of-the-Art Reactor Consequence Analyses
SOC	Statement of considerations
STARS	Strategic Teaming and Resource Sharing
TSC	Technical support center

Introduction

On May 18, 2009, the Nuclear Regulatory Commission (NRC) published a request for comments on "Enhancements to Emergency Preparedness Regulations; Proposed Rule" in the *Federal Register* (74 FR 23254). On the same day, the NRC published a request for comments on several draft guidance documents on the proposed rule's docket (Docket No. NRC-2008-0122) at www.regulations.gov, including:

- NSIR/DPR-ISG-01, "Interim Staff Guidance Emergency Planning for Nuclear Power Plants;"
- DG-1237, "Guidance on Making Changes to Emergency Plans for Nuclear Power Reactors;" and
- NUREG/CR-7002, "Criteria for Development of Evacuation Time Estimates."

Similarly, on May 18, 2009, the Federal Emergency Management Agency (FEMA) published in the *Federal Register* a request for comments on FEMA's proposed Radiological Emergency Preparedness Program (REPP) Manual and proposed NUREG–0654/FEMA–REP–1, Rev. 1, Supplement 4.

Following the publication of these documents, the NRC and FEMA jointly conducted 11 public meetings in six different cities between June 2 and June 23, 2009. One additional public meeting was held by the NRC in Rockville, MD on September 17, 2009. At these meetings, the NRC introduced the proposed emergency preparedness (EP) requirements and associated onsite EP guidance documents, and answered questions from the meeting attendees. The NRC did not request or accept oral public comments at these meetings.

The NRC received 94 comment submissions[1] in response to its May 18, 2009 *Federal Register* notices. Some comments received by FEMA in response to the request for comments on FEMA's proposed REPP Manual and proposed NUREG–0654/FEMA–REP–1, Rev. 1, Supplement 4, concerned NRC-jurisdictional EP issues. The NRC and FEMA determined that these comments should be addressed by the NRC. As a result, these comments were transferred to the NRC for resolution. Similarly, some comments received by the NRC concerned FEMA-jurisdictional issues and were transferred to FEMA for resolution and appear in FEMA's comment resolution document associated with the REPP Manual and NUREG-0654/FEMA-REP-1, Rev. 1, Supplement 4.

This comment summary document addresses NRC-jurisdictional comments submitted to the NRC in writing by October 29, 2009, as well as NRC-jurisdictional comments submitted in writing to FEMA.

Exhibit 1 shows the name, comment letter number, and organization of each individual that submitted a comment letter on the proposed regulations and draft guidance documents. This summary document references comments letters by comment letter ID number. For example,

[1] This document distinguishes between comment letters and comments. A comment letter is a single submission that contains one or more comments (also referred to as comment excerpts).

[0064] refers to comment ID number 0064 submitted by Kevin Leuer of Minnesota Homeland Security and Emergency Management. The comment letter ID number corresponds to the last four digits of the document ID as posted on www.regulations.gov. Because the comment summary document addresses a few comment excerpts received by FEMA, Exhibit 1 also shows the name, comment letter ID number, and organization of the individuals who submitted comment letters addressing NRC-jurisdictional issues to FEMA.

Exhibit 1: List of Comment Letters on Docket No. NRC-2008-0122

Comment Letter ID	Commenter Name	Commenter Organization
0025	Martin Vyenielo	Pennsylvania Department of Environmental Protection Bureau of Radiation Protection
0026	Alan Nelson	Nuclear Energy Institute (NEI)
0027	Richard Mothena	FPL
0028	Kevin Leuer	Minnesota Homeland Security and Emergency Management
0029	Jonathan Schwarz	Nebraska Emergency Management Agency
0030	John W. Pitesa	Duke Energy
0031	Robert Jelacic	West Virginia Radiological Emergency Preparedness
0032	Fred C. Mashburn	Tennessee Valley Authority
0035	Stephen Payne	North Carolina Division of Emergency Management
0036	Michael M. Cline	Virginia Department of Emergency Management
0037	Paul D. Parmenter	Missouri Emergency Management Agency
0038	Ernest Moore	South Carolina Military Department
0039	Thomas A. Conley	Kansas Department of Health and Environment
0040	Robert Cole	Nemaha County Emergency Management Agency
0042	John S. Fuoto	AMEC Earth and Environmental, Inc.
0043	James Foster	None given
0044	Dr. John Dwyer	Stone Crab Alliance
0045	James Foster	NEI Task Force
0046	James Foster	NEI Task Force
0047	Lewis Lacy	Nye County, Nevada Nuclear Waste Repository Project Office
0048	Herschel Specter	RBR Consultants, Inc.
0049	Eric Schrader	USNRC
0050	Steve Reese	Oregon State University Radiation Center
0051	Ralph A. Butler	University of Missouri
0052	Matthew Straeb	Global Security Systems, LLC
0053	Lewis Cuthbert	The Alliance for a Clean Environment (ACE)
0056	Kathy Hougen	None given
0057	Kathy Hougen	None given
0059	Kevin Leuer	Minnesota Homeland Security and Emergency Management
0060	George R. Sabo	Ashtabula County, Ohio Emergency Management Agency
0061	Anonymous	None given
0062	J. Frank Price	Alabama Emergency Management Agency
0063	Douglas R. Fleck	None given

Comment Letter ID	Commenter Name	Commenter Organization
0064	Kevin Leuer	Minnesota Homeland Security and Emergency Management
0065	Neil Batista	Miami-Dade Department of Emergency Management
0066	Randolph Sullivan	None given
0067	Mike Rose	San Onofre Nuclear Generating Station Interjurisdictional Planning Committee
0068	David Allard	Pennsylvania Department of Environmental Protection Bureau of Radiation Protection
0069	Andrew Velasquez	Illinois Emergency Management Agency
0070	Scott D. Portzline	Three Mile Island Alert
0071	Judge Nate McDonald	Matagorda County, Texas
0072	Mary Lampert	Pilgrim Watch, et al
0073	Bruce House	Tennessee Department of Environment and Conservation
0074	Thomas Myers	National Institute of Standards and Technology
0075	Thomas Joyce	PSEG Nuclear LLC
0076	T.A. Henderson	First Energy Nuclear Operating Company (FENOC)
0077	George R. Sabo	Ashtabula County, Ohio Emergency Management Agency
0078	Kevin Leuer	Minnesota Homeland Security and Emergency Management
0079	Kevin Leuer	Minnesota Homeland Security and Emergency Management
0082	John H. Campbell	State of Missouri
0083	Janice A. Dean	Environmental Protection Bureau, Office of the New York State Attorney General
0084	Jay Maisler	ENERCON
0085	Bill Potter	California Emergency Management Agency
0087	Jeffrey B. Archie	South Carolina Electric & Gas Company
0088	Richard Webster	Hudson River Sloop Clearwater, Inc.
0089	D. Hooper	Strategic Teaming and Resource Sharing (STARS)
0090	John F. McCann	Entergy Nuclear Operations
0091	McHenry Cornell	Florida Power & Light Company
0092	Christopher E. Boone	Southern Nuclear Operating Company
0093	Charles R. Pierce	Southern Nuclear Operating Company
0094	Gabor Salamon	Xcel Energy
0095	Richard B. Ennis	None given
0096	David Halstead	Florida Division of Emergency Management
0097	Mario H. Fontana, PhD, PE	University of Tennessee

Comment Letter ID	Commenter Name	Commenter Organization
0098	Atri Sen	IEM, Inc.
0099	Jeffrey A. Reinhart	Omaha Public Power District
0100	Jonathan Schwarz	Nebraska Emergency Management Agency
0101	John W. Pitesa	Duke Energy
0102	Alex Marion	Nuclear Energy Institute
0103	Timothy Rausch	PPL Susquehanna, TLC
0104	D.P. Helker	Exelon Nuclear
0105	Brian McCabe	Progress Energy
0106	Edward S. Gray	None given
0107	Elaine Wathen	North Carolina Division of Emergency Management
0108	Rochelle Becker	Alliance for Nuclear Responsibility
0109	Deborah Brancato	Riverkeeper, Inc.
0110	Brian McCabe	Progress Energy
0111	McHenry Cornell	Florida Power & Light Company
0112	Kevin Weinisch	KLD Associates, Inc.
0113	D. Hooper	Strategic Teaming and Resource Sharing (STARS)
0114	Brian McCabe	Progress Energy
0115	John F. McCann	Entergy Nuclear Operations
0118	D. Hooper	Strategic Teaming and Resource Sharing (STARS)
0119	Deborah Brancato	Riverkeeper, Inc.
0120	McHenry Cornell	Florida Power & Light Company
0121	Kevin Weinisch	KLD Associates, Inc.
0122	Kevin Weinisch	KLD Associates, Inc.
0123	Kevin Weinisch	KLD Associates, Inc.
0124	Kevin Weinisch	KLD Associates, Inc.
0125	Kevin Weinisch	KLD Associates, Inc.
0126	Kevin Weinisch	KLD Associates, Inc.
0127	Kevin Weinisch	KLD Associates, Inc.
0128	Kevin Weinisch	KLD Associates, Inc.
0129	Atri Sen	IEM, Inc.
0130	Atri Sen	IEM, Inc.
0131	D. Hooper	Strategic Teaming and Resource Sharing (STARS)
0132	McHenry Cornell	Florida Power & Light Company
0133	Deborah Brancato	Riverkeeper, Inc.
0134	John F. McCann	Entergy Nuclear Operations

Comment Letter ID	Commenter Name	Commenter Organization
0135	Paul Blasioli	Dominion Resources Services
FEMA-2008-0022-0044	Lewis Cuthbert	Alliance For A Clean Environment
FEMA-2008-0022-0048	Kevin Leuer	Minnesota Homeland Security and Emergency Management
FEMA-2008-0022-0050	Kevin Leuer	Minnesota Homeland Security and Emergency Management
FEMA-2008-0022-0059	Kevin Leuer	Minnesota Homeland Security and Emergency Management
FEMA-2008-0022-0078	Kevin Leuer	Minnesota Homeland Security and Emergency Management
FEMA-2008-0022-0079	James Turner	Delaware Emergency Management Agency
FEMA-2008-0022-0086	Mary Louise Meisenzahl	Monroe County, New York Office of Emergency Management
FEMA-2008-0022-0101	Michael Younger	Florida Division of Emergency Management
FEMA-2008-0022-0108	Cheryl Chubb	Louisiana Department of Environmental Quality
FEMA-2008-0022-0110	J. Frank Price	Alabama Emergency Management Agency
FEMA-2008-0022-0122	James Porcello	Emergency Management and Homeland Security Division
FEMA-2008-0022-0125	Eric Hoerner	Cumberland County Department of Public Safety

Some of the comment letters listed above contain only comment excerpts that are identical to comment excerpts from the same commenter in another submission. A few of the comment letters listed above are completely identical to other comment letters submitted by the same commenter, and other comment letters listed above are non-identical letters with the same substantive arguments as other comment letters from the same commenter. In each of the instances, the summaries in this document cite only one comment letter ID number per commenter. For example, comment letters [0064] and [0079] contain identical comment excerpts. The summary of a comment excerpt made in both submissions is cited only to the referenced submission. Exhibit 2 lists the submissions that are duplicative comment letters, comment letters with identical comment excerpts, and non-identical letters with the same substantive arguments as the referenced comment letters, and identifies the referenced comment letter ID number used in this document for citation to each letter. If the commenter submitted two or more identical comment letters, the referenced comment letter ID number is the lowest sequential comment letter number among the identical comment letters. However, where one comment letter contains only an excerpt that is identical to, or contains the same substantive argument as, another letter from the same commenter, the comment letter ID number of the more comprehensive comment letter serves as the referenced comment letter ID number.

Exhibit 2: List of Comment Letters With Identical Comment Excerpts

Referenced Comment Letter ID	Identical Comment Letter ID(s)*	Commenter Name	Commenter Organization
0043	0045 0046	James Foster	NEI Task Force
0053	FEMA-2008-0022-0044	Lewis Cuthbert	The Alliance for a Clean Environment (ACE)
0060	0077	George R. Sabo	Ashtabula County, Ohio Emergency Management Agency
0064	0059 0078 0079 FEMA-2008-0022-0048 FEMA-2008-0022-0050 FEMA-2008-0022-0059 FEMA-2008-0022-0078	Kevin Leuer	Minnesota Homeland Security and Emergency Management
0089	0113 0118 0131	D. Hooper	Strategic Teaming and Resource Sharing (STARS)
0091	0111 0120 0132	McHenry Cornell	Florida Power & Light Company
0109	0119 0133	Deborah Brancato	Riverkeeper, Inc.
0090	0115 0134	John F. McCann	Entergy Nuclear Operations
0130	0129	Atri Sen	IEM, Inc.

* The comment excerpts in each identical comment letter appear in the referenced comment letter. However, the identical comment letters may represent only a portion of the referenced comment letter. The identical comment letters contain substantively identical arguments to the referenced comment letter, but may have slight wording differences.

One commenter provided non-identical submissions that contained some substantively identical comment excerpts. For comment excerpts contained in multiple non-identical submissions, this document references only the first submission in which the comment excerpt appears. Specifically, in comment letter [0062], some comment excerpts are the same as those in comment letter [FEMA-2008-0022-0110]. For each of these comment excerpts, this document cites only comment letter [0062]. However, comment excerpts in comment letter [FEMA-2008-0022-0110] that do not appear in comment letter [0062] are cited to comment letter [FEMA-2008-0022-0110]. Exhibit 3 lists the comment letters that are non-identical but contain some of the same comment excerpts and identifies the referenced comment letter ID number.

Exhibit 3: List of Non-Identical Comment Letters

Referenced Comment Letter ID	Non-Identical Comment Letter ID	Commenter Name	Commenter Organization
0062	FEMA-2008-0022-0110	J. Frank Price	Alabama Emergency Management Agency

1. General Issues

1.1 Support

General Support

Comments: Two commenters stated that the proposed rule changes and guidance will be an improvement over the current situation. [0069, 0088]

NRC Response: No response is necessary.

1.2 Oppose

The Proposed Rule is Unnecessary

Comments: Three commenters stated that the proposed regulations are unnecessary because current regulations adequately protect public health and safety. [0063, 0076, 0106] One commenter claimed that the goal of the proposed rulemaking is to institute regulatory requirements, rather than to address specific deficiencies in the current emergency planning process. [0084] One commenter contended that FEMA provides sufficient oversight for offsite response organizations (OROs) and that those organizations do not need another federal agency "looking over their shoulder." [0106] Another commenter argued that nuclear power plants (NPPs) pose minimal health risks and that emergency planning requirements have very little risk reduction potential. [0048]

NRC Response: The NRC disagrees in part with the commenters. The NRC agrees that the implementation of its EP regulations existing when the proposed rule was issued adequately protects public health and safety, but the rule changes are necessary to ensure new security-related EP requirements are consistently implemented by current and future licensees, to address participant preconditioning in drills and exercises, and to address other issues identified during EP program reviews, EP program implementation, and new reactor application reviews. No change was made to the final rule in response to these comments. The comment regarding FEMA's oversight role for OROs and no need for another Federal agency to perform this role is addressed in Section 3.4, "Licensee Coordination with OROs During Hostile Action Events," of the comment summary.

The Proposed Rule is Too Broad or Burdensome

Comments: One commenter argued that the proposed rulemaking exceeds the purpose of NRC Order EA-02-026. [0084] Another commenter argued that the NRC should simplify emergency planning requirements due to their limited potential benefits. [0048] Three commenters claimed that the proposed regulations and guidance impose a significant burden that the rule's potential benefits do not justify. [0071, 0076, 0084]

NRC Response: The NRC disagrees with the commenters. The purpose of Order EA-02-026 was to require licensees to implement interim compensatory measures deemed necessary for addressing situations at NPPs that could involve hostile action following the events of September 11, 2001. These measures included several EP-related actions, such as identifying alternative facilities capable of supporting emergency response, conducting a review of staffing

to ensure that collateral duties were not assigned to responders that would prevent effective emergency response, and implementing site-specific hostile action emergency action levels (EALs). The rule changes regarding security-related EP issues are consistent with the intent of the NRC order (and subsequent generic communications such as NRC Bulletin 2005-02, "Emergency Preparedness and Response Actions for Security-Based Events"). Comments on the potential burden and benefits that would be created by the rule are addressed in Section 5.3, "Regulatory Analysis," of the comment summary. No change was made to the final rule in response to these comments.

The Proposed Rule Does Not Sufficiently Address Health and Safety Concerns

Comments: Four commenters claimed that the proposed regulations do not adequately address public health and safety concerns [0053, 0072, 0088, 0109]; two of them argued that the proposed regulations allow industry cost concerns to supersede these public concerns. [0053, 0072] One commenter suggested that the NRC focused excessively on hostile action and certain non-security issues, and did not pay enough attention to underlying assumptions in current emergency planning. [0072]

NRC Response: The NRC disagrees with the commenters. As stated in the proposed rule, the NRC concluded that the implementation of its EP regulations existing when the proposed rule was issued ensures the adequate protection of public health and safety. The rule changes provide for enhancements to EP regulations to address specific topics and issues. These topics were identified as the top priority issues for EP rulemaking by the Commission. Because the NRC has determined that the amendments would not be necessary to ensure adequate protection of public health and safety or common defense and security, the NRC has considered costs in evaluating the amendments. Comments on the potential burden and benefits that would be created by the rule are addressed in Section 5.3, "Regulatory Analysis," of the comment summary. No change was made to the final rule in response to these comments.

1.3 Legal Basis

No comments generically addressed the legal basis of the proposed rule.

1.4 Technical Basis

Additional Quantitative Data Is Needed to Justify the Rulemaking

Comments: Two commenters argued that the NRC did not present or consider enough quantitative data to support the rulemaking. [0048, 0084] One of the commenters cited a statement by NRC Chairman Jaczko recommending greater use of quantitative data. [0048] The same commenter argued that the NRC should conduct quantitative analyses for a variety of potential hostile actions and develop specific emergency responses to each type of situation. [0048] The other commenter stated that the few examples that the NRC does present to support its decisions represent a limited sample of mostly outdated data and information. [0084]

NRC Response: The NRC disagrees with the commenters. Quantitative data was considered when available for a specific rulemaking topic. Use of data developed through new quantitative analyses may be considered in any future rulemaking. Examples used for other rulemaking topics, such as challenging drills and exercises, are based on several years of results, findings,

and lessons learned documented in NRC inspection reports, exercise reports, Department of Homeland Security (DHS) comprehensive reviews, and NRC generic communications. In many cases, only a few selected examples were discussed in the Statement of Considerations (SOC) for the proposed rule. No change was made to the final rule in response to these comments.

Comments: One commenter stated that the NRC needs to consider the "best science" available to inform its emergency preparedness rulemaking. [0048] In that vein, several commenters suggested specific data sources that the NRC should consider. Four commenters recommended that the NRC consider the results of research conducted at Sandia National Laboratories (SNL) as part of the State-of-the-Art Reactor Consequence Analyses (SOARCA) program. [0048, 0069, 0090, 0097] One of these commenters pointed out two specific conclusions of the SOARCA program that were made public on March 11, 2009: Large Early Release Frequency (LERF) should not be included in unmitigated sensitivity cases, and actual releases are much smaller and more delayed than the results of the 1982 Siting Study indicated. [0069] Another commenter agreed that SOARCA data had revealed smaller releases over longer release times than previous studies had estimated. [0097] One commenter suggested that the NRC support its use of SOARCA data with an explanation of the SOARCA program, comparing its methods and conclusions with previous accident consequence studies. [0090]

NRC Response: The NRC agrees in part with the commenters. Greater use of quantitative data may be considered to support future EP rulemaking activities. However, the SOARCA study is currently under review and the results were not used as the basis for changes to EP regulations in this rulemaking. No change was made to the final rule in response to these comments.

Comment: Commenters also suggested that the NRC consider data and information from: an RBR Consultants, Inc. traffic analysis [0048]; the MELCOR Accident Consequence Code System (MACCS2) consequence analyses [0048]; industry experience dealing with Hurricanes Katrina and Rita [0084]; NRC inspection data [0084]; and industry performance data from drills, exercises, and real events, especially any data with regards to hostile action. [0084]

NRC Response: The NRC disagrees in part with the commenters. The RBR analysis is being considered in studies the NRC staff is conducting to determine if a risk informed and performance based regulatory structure is feasible for oversight of EP. This work is just beginning and was not considered in this rulemaking. The MELCOR code is a probabilistic risk tool for estimating health consequences from hypothetical accidents. It was not used in this rulemaking but is being used in other studies conducted by the staff. The NRC studied the responses to Hurricanes Katrina and Rita and compared those responses to the current EP regulatory structure. That work can be found in NUREG/CR-6981, "Assessment of Emergency Response Planning and Implementation for Large Scale Evacuations." The staff found that the state of EP at NPPs compared favorably to that in place at the time of the evacuations studied. As stated in the proposed rule SOC, regulatory experience gained through inspection and performance indicators led to and/or supported some of the rule changes. No change was made to the final rule in response to these comments.

2. Specific Request for Comments

2.1 Whether the NRC should issue regulations requiring that licensees train responders and implement the National Incident Management System (NIMS)/Incident Command System (ICS) to improve the interface with OROs

Support for a Requirement That Licensees Implement NIMS and ICS

Comments: Eight commenters favored a requirement that licensees implement NIMS and ICS. [0047, 0062, 0064, 0068, 0084, FEMA-2008-0022-0086, FEMA-2008-0022-0108, FEMA-2008-0022-0122] One commenter stated that NRC's requirements should be consistent with those stipulated by the radiological emergency preparedness (REP) program, Homeland Security Presidential Directive 5 (HSPD-5), and the Occupational Safety and Health Administration (OSHA)—each of which requires, or will require, NIMS and ICS. [FEMA-2008-0022-0110] One commenter stated that the requirements should apply to both reactor and non-reactor licensees. [0047] One commenter interpreted the purpose of the rule to be to implement NIMS, ICS, and the Homeland Security Exercise Evaluation Program (HSEEP), and pointed out that the rule changes do not achieve that goal. [0062] Six of the commenters agreed that the NIMS and ICS requirements would improve communication between onsite and OROs. [0047, 0064, 0068, 0084, FEMA-2008-0022-0108, FEMA-2008-0022-0122] One of those commenters stated that without the imposition of NIMS requirements, licensees would have too much discretion as to which emergency plan changes to communicate with offsite agencies. [0047] One commenter stated that if the NRC does not require licensees to implement NIMS and ICS, it should at least require licensee emergency response organizations (EROs) to have a basic awareness of the NIMS/ICS concepts and interfaces. [FEMA-2008-0022-0086] Another commenter suggested that the NRC add references to NIMS and ICS in Section II of NUREG-0654, and that licensees consider NIMS and ICS in their ERO structure. [0135]

NRC Response: The NRC disagrees with the commenters and is not requiring its licensees to implement NIMS/ICS or any specific incident management system. The NRC's position regarding NIMS/ICS is consistent with HSPD-5 directives to DHS that the use of NIMS/ICS is voluntary for the private sector. NIMS/ICS is designed to aid private sector stakeholders involved in domestic incident management activities to the degree that they are willing to embrace the potential benefits of the systems.

The NRC recognizes the benefits that its licensees may gain by incorporating elements of NIMS/ICS into their programs to enhance incident response management. However, the NRC is not requiring implementation of them because specifically making NIMS/ICS a requirement is not necessary to achieve this goal. The NRC's regulations in 10 CFR 50.47(b) and 10 CFR Part 50, Appendix E, as amended by the final rule, address coordination between onsite EROs and OROs. Section 50.47(b)(1) states in part that "Primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones have been assigned, [and] the emergency responsibilities of the various supporting organizations have been specifically established." Section 50.47(b)(3) states in part that "Arrangements for requesting and effectively using assistance resources have been made." Section 50.47(b)(6) requires licensees to have the ability to communicate with OROs. Section IV.A.7 in Appendix E, as amended by the final rule, requires licensees to include in their

emergency plans the "[i]dentification of, and a description of the assistance expected from, appropriate State, local, and Federal agencies with responsibilities for coping with emergencies, including hostile action at the site." Section IV.F.2.i in Appendix E, as amended by the final rule, requires that "Exercise and drill scenarios as appropriate must emphasize coordination among onsite and offsite response organizations." As a result, integration of onsite ERO activities with OROs becomes a reality, regardless of the incident management system in use.

Although the NRC disagrees with making NIMS/ICS a required framework for licensees to work with OROs to manage incidents at NPP sites, it agrees that licensees and OROs should have a common framework for incident response management. In addition, utilities should be familiar with NIMS/ICS terminology, concepts, and interfaces, especially when the OROs responding to incidents at their respective sites have adopted such systems. A licensee's use of a command structure that is compatible with the applicable OROs' command structure not only would enhance communication and coordination between OROs and licensees but would also facilitate the licensee's compliance with the regulations cited in the preceding paragraph.

The NRC disagrees that references to NIMS and ICS be included in Section II of NUREG-0654. As stated previously, the NRC is not requiring its licensees to implement NIMS/ICS, which is consistent with HSPD-5. The Interim Staff Guidance (ISG) NSIR/DPR-ISG-01, "Emergency Planning for Nuclear Power Plants," contains new evaluation criterion C.6 which addresses provisions that each organization, including licensees, should make to enable onsite response support from OROs in a hostile action incident as needed. However, the criterion does not specifically refer to NIMS/ICS.

The NRC disagrees that too much discretion is given to licensees as to which emergency plan changes to communicate with offsite agencies because the plan largely deals with onsite organization and response. However, where the plan impacts OROs, then coordination is required, such as the development of notification procedures and EALs. The NRC requires that each licensee's drill and exercise program include critiques of the licensee's performance. The NRC requires that when weaknesses, including those that involve a lack of coordination with OROs, due perhaps to unfamiliarity with NIMS or a failure to communicate plan/procedure changes, are identified, they will be corrected. Should corrective actions fail or the critique fail to identify weaknesses, the NRC may cite the licensee for a failure to comply with regulations. No changes were made to the final rule in response to these comments.

Support for a Requirement that Licensees Implement ICS or a Similar System, But Not Other Aspects of NIMS

Comments: One commenter argued that the NRC should require the adoption of ICS because it would facilitate communication between licensees and OROs, but that other elements of NIMS should be voluntary for licensees. [0065] Another commenter opposed adding the requirement for NIMS and ICS, but agreed that integrating ICS or a similar system into licensee emergency response would be beneficial. The commenter approved of the evaluation criterion that the NRC added to NUREG-0654, Section II.C.6, requiring each organization to "make provisions to enable onsite response support from OROs in a hostile action-based incident as needed." [0102]

NRC Response: The NRC agrees in part with the commenters. The NRC agrees that the adoption of ICS by licensees would facilitate their communication with OROs as well as provide other benefits. But the NRC does not agree that the NRC should require licensees to adopt a

specific type of incident command structure such as the one stipulated by HSPD–5. If the NRC mandated that its licensees use an incident command structure such as the one required by HSPD–5, any future changes to HSPD–5 or NIMS/ICS could require corresponding rule changes by the NRC. Similarly, if the NRC were to compel its nuclear power reactor licensees to use a specific incident management program, that program still could be different than incident management systems adopted by OROs that comply with laws promulgated by other governmental organizations.

The NRC agrees that this issue is more appropriately addressed in guidance, such as the evaluation criterion in NUREG-0654 for each organization to "make provisions to enable onsite response support from OROs in a hostile action event as needed." However, the requirements exist in 10 CFR 50.47 and 10 CFR Part 50, Appendix E for cooperation and communication between licensees and OROs. The voluntary use of ICS can be tied to site-specific licensee agreements, procedures, or plans developed in coordination with OROs. No changes were made to the final rule in response to these comments.

Opposition to a Requirement that Licensees Implement NIMS or ICS

Comments: Six commenters expressed opposition to a potential requirement for licensees to implement NIMS or ICS. [0073, 0089, 0090, 0096, 0102, FEMA-2008-0022-0101] Three commenters argued that required use of NIMS should only apply to government entities, and that non-governmental entities, such as nuclear facilities, should not face such a requirement. [0089, 0096, 0102] One of these commenters stated that requiring licensees to implement NIMS or ICS would exceed the scope of HSPD-5. [0096] A commenter from a State government agency complained that such a requirement would add an unnecessary "administrative layer" that would impede the State's internal communication during nuclear facility exercises. [0073] Another commenter argued that the current industry approach to emergency response incorporates concepts similar to those in NIMS and ICS, and replacing existing practices with NIMS and ICS would be costly and yield little improvement in emergency response capabilities. [0102] Another industry representative stated that it is "desirable but not essential" for licensee EROs to use NIMS and ICS. [0090] Another commenter felt that it would be impractical for a licensee to adopt several aspects of NIMS, and that licensees should be encouraged, but not required, to adopt ICS only. [FEMA-2008-0022-0101]

NRC Response: The NRC agrees with the commenters that NIMS/ICS should not be a requirement for nuclear power reactor licensees. However, the NRC expects that licensees will meet the requirement in 10 CFR 50.47(b)(6) for adequate communications with OROs. Any weaknesses in response concerning communications with OROs during drills and exercises that result from a licensee's lack of familiarity with NIMS or ICS should be identified in critiques and corrected. Failure to identify or correct such weaknesses may be in noncompliance with NRC regulations. No changes were made to the final rule or the guidance documents in response to these comments.

2.2 Whether the NRC should enhance its current regulations to be more explicit in the number of ERO staff necessary for nuclear power plant emergencies

Comments: Six industry representatives opposed the ERO staff requirements that the NRC suggested in the *Federal Register* Notice (FRN). [0084, 0089, 0090, 0102, 0105, 0135] One

commenter argued that the NRC should not add the draft staffing table included in the FRN to the rulemaking because codifying the guidance would make it difficult for the NRC to update ERO staffing requirements based on experience or improvements in technology. Instead, the commenter suggested that the NRC include the table in the ISG, NSIR/DPR-ISG-01. [0102] Another commenter recommended that the NRC include the table as an alternative to the requirement in 10 CFR Part 50, Appendix E, Section IV.A that licensees provide analyses showing that personnel with assigned emergency plan implementation functions do not have responsibilities that would interfere with their emergency planning functions. [0090] Two of the commenters requested an opportunity to review and comment on a staffing table before the NRC finalizes it. [0089, 0102] Three commenters agreed that the NRC needed to provide a stronger technical basis for the requirements or guidance included in such a staffing table. [0089, 0102, 0105] Two of the commenters did acknowledge that the draft staffing table would be an improvement over its counterpart in NUREG-0654, Table B-1. [0084, 0102]

NRC Response: The NRC agrees with the commenters that the staffing table should not be included in the NRC's regulations. The table would be too prescriptive and would not accommodate differences in staffing levels at each site that would be appropriate because of site-specific considerations.

One commenter suggested that a design-specific analysis be allowed and others suggested that there be a technical analysis to support staffing. The detailed analysis required by the final rule will serve as the technical analysis for each licensee's staffing levels. No changes were made to the final rule or the guidance documents in response to these comments.

2.3 Whether it is necessary to add a requirement for non-power reactor licensees (i.e., research and test reactor licensees) to include in their emergency plans detailed analyses demonstrating that on-shift personnel can perform all assigned emergency plan implementation functions in a timely manner without having competing responsibilities that could prevent them from performing their emergency plan functions

Comments: Five commenters opposed a potential requirement that non-power reactor licensees conduct detailed staffing level analyses. [0050, 0051, 0068, 0074, 0102] Each of those commenters agreed that current practices sufficiently protect the public health and safety. [0050, 0051, 0068, 0074, 0102] One academic institution commenter stated that, at a non-power reactor, the operator conducts emergency response in the control room within the first few minutes of an event. Additionally, employees at such facilities are accustomed to balancing multiple duties. Therefore, an event at a non-power reactor would not lead to multitasking problems. [0050] Another commenter agreed that the emergency organization for a non-power reactor is much smaller and simpler than for a power reactor. [0068] Another academic institution commenter with a non-power reactor indicated that NRC inspectors already review its staffing levels for adequacy twice a year, and that it participates in emergency exercises with its outside emergency support organizations. [0051] Another commenter indicated that the NRC currently approves the emergency plans at non-power reactors. [0074] Two commenters argued that an incident at a non-power reactor would result in doses of radioactivity below the thresholds established in 10 CFR Part 20, [0050, 0051] and another commenter stated that

incidents at a non-power reactor would be on a smaller scale than an incident at a power reactor. [0068]

NRC Response: The NRC agrees with the commenters that adding a requirement for non-power reactor licensees to include in their emergency plans a detailed analysis demonstrating that on-shift personnel can perform all assigned emergency plan implementation functions in a timely manner is not needed. Staffing at non-power reactors is generally small, which is commensurate with the need to operate the facility in a manner that is protective of public health and safety. The staffing is reviewed as part of initial reactor licensing. The functions of emergency staff are outlined in emergency plans and are tested through drills and exercises in accordance with NUREG-0849. Results are reviewed by the NRC during routine inspections. Therefore, the NRC has not included this requirement in the final rule.

Comment: One commenter argued that such a regulation would violate Office of Management and Budget (OMB) Circular A-119 which requires the consideration of voluntary standards. The commenter indicated that the American Nuclear Society and American National Standards Institute (ANSI) have issued emergency planning standards for research reactors. The commenter argued that the content of these standards is "superior to the content of the new regulation." [0074]

NRC Response: The NRC agrees in part with the commenter. If the NRC had decided to maintain in the final rule the requirement for non-power reactor licensees to include in their emergency plans a detailed analysis demonstrating that on-shift personnel can perform all assigned emergency plan implementation functions in a timely manner, the NRC would have had to consider the standards of ANSI/ANS 15.16-1982 and ANSI/ANS 15.16-2008. However, the NRC is not adopting this requirement. No change was made to the final rule in response to this comment.

Comment: Two commenters reserved comment on a potential requirement, and requested that the NRC provide additional information and discussion on the need for such a requirement through a design basis analysis. [0085, 0096]

NRC Response: The NRC disagrees with the commenters. The proposed rule contained sufficient information to form an opinion. No change was made to the final rule in response to this comment.

2.4 Whether it is necessary to add the emergency declaration timeliness criteria for non-power reactor licensees. The NRC is seeking comments on whether to issue regulations requiring that non-power reactor licensees meet these criteria

Comments: Four commenters opposed emergency declaration timeliness criteria for non-power reactor licensees. [0050, 0051, 0074, 0102] Each of those commenters agreed that current practices sufficiently protect the public health and safety. [0050, 0051, 0074, 0102] Two academic institution commenters stated that their current reporting structures are consistent with ANSI/ANS guidance documents. [0050, 0051] One of those institutions indicated that its reporting also conforms to 10 CFR Part 50, Appendix E and RG 2.6. [0051] The other academic institution commenter stated that "most, if not all" non-power reactors have a 24-hour

reporting that is sufficient to protect the public health and safety. [0050] Another commenter indicated that the NRC currently approves the emergency plans at non-power reactors. [0074] One commenter argued that an incident at a non-power reactor would result in doses of radioactivity below the thresholds established in 10 CFR Part 20 [0051], and another commenter argued that the doses from such an incident would be too low to justify this requirement. [0050] One commenter did support adding emergency declaration criteria for non-power reactor licensees, citing tornado damage to the TRIGA reactor building in Kansas in 2008 as an example of the need for notification. The commenter suggested setting the reporting time criteria at 30 to 45 minutes because of the small source and limited offsite consequences of a release from such a reactor. [0068]

NRC Response: The NRC agrees with the commenters that requiring non-power reactor licensees to meet emergency declaration timeliness criteria is not warranted at this time. Non-power reactors do not have the same potential impact on public health and safety as do power reactors and non-power reactor licensees do not require complex offsite emergency response activities. The NRC has determined that further analysis and stakeholder interactions are needed prior to changing the requirements for non-power reactors. Therefore, the NRC has not included this requirement in the final rule.

Comment: One commenter argued that such a regulation would violate OMB Circular A-119 which requires the consideration of voluntary standards. The commenter indicated that the American Nuclear Society and ANSI have issued emergency planning standards for research reactors. The commenter argued that the content of these standards is "superior to the content of the new regulation." [0074]

NRC Response: The NRC agrees in part with the commenter. If the NRC had decided to maintain in the final rule the requirement for non-power reactor licensees to include in their emergency plans a detailed analysis demonstrating that on-shift personnel can perform all assigned emergency plan implementation functions in a timely manner, the NRC would have had to consider the standards of ANSI/ANS 15.16-1982 and ANSI/ANS 15.16-2008. However, the NRC is not adopting this requirement. No change was made to the final rule in response to this comment.

Comment: Two commenters reserved comment on a potential requirement, and requested that the NRC provide additional information and discussion on the need for such a requirement through a design basis analysis. [0085, 0096]

NRC Response: The NRC agrees with the commenters. The NRC has determined that further analysis and stakeholder interactions are needed prior to changing the requirements for non-power reactor licensees. Therefore, the NRC has not included in the final rule similar requirements for non-power reactor licensees to assess, classify, and declare an emergency condition within 15 minutes and promptly declare an emergency condition.

2.5 Whether the NRC should issue regulations requiring that non-power reactor licensees include hostile action EALs in their emergency plans

Comments: Five commenters opposed requiring non-power reactor licensees to include hostile action EALs in their emergency plans. [0050, 0051, 0068, 0074, 0102] Each of those

commenters agreed that current practices sufficiently protect the public health and safety. [0050, 0051, 0068, 0074, 0102] One commenter argued that the small physical size and limited complexity of a non-power reactor would prevent confounding interactions between a simultaneous security-related event and typical operational event as might occur at a power reactor. [0050] Another commenter argued that the consequences of a hostile action at a non-power reactor would be very similar to a non-security related event, eliminating the need for separate EALs. [0068] Another commenter indicated that the NRC currently approves the emergency plans at non-power reactors. [0074] An academic institution commenter with a non-power reactor indicated that it already incorporates security-related EALs for bomb threats and loss of physical control of the facility. The commenter suggested the NRC should only determine the need for additional EALs on a site-by-site basis, based on NRC review of emergency and security plans, rather than by regulation. [0051]

NRC Response: The NRC agrees in part with the commenters who stated that it was unnecessary to expand beyond current practices to include a requirement for hostile action event EALs. Appendix E to 10 CFR Part 50 cites RG 2.6 as the guidance for the acceptability of research and test reactor (RTR) emergency plans. RG 2.6 endorses ANSI/ANS 15.16-1982 as an acceptable approach to non-power reactor emergency plans. The newly updated ANSI/ANS 15.16-2008 includes some events that could be considered as hostile action EALs. However, the NRC has determined that further stakeholder interactions and analysis of requirements for hostile action EALs for non-power reactors are needed prior to changing the requirements for these licensees. This action is being added to the NRC's current effort to look at long term solutions for non-power reactor licensing and regulation. Because the NRC is addressing through guidance the issue of hostile action EALs for non-power reactors, the NRC has not included this requirement in the final rule.

Comment: One commenter argued that such a regulation would violate OMB Circular A-119 which requires the consideration of voluntary standards. The commenter indicated that ANS and ANSI have issued emergency planning standards for research reactors. The commenter argued that the content of these standards is “superior to the content of the new regulation.” [0074]

NRC Response: The NRC agrees in part with the commenter. If the NRC had decided to maintain in the final rule the requirement for non-power reactor licensees to include in their emergency plans a detailed analysis demonstrating that on-shift personnel can perform all assigned emergency plan implementation functions in a timely manner, the NRC would have had to consider the standards of ANSI/ANS 15.16-1982 and ANSI/ANS 15.16-2008. However, the NRC is not adopting this requirement. No change was made to the final rule in response to this comment.

Comment: One commenter reserved comment on a potential requirement, and requested that the NRC provide additional information and discussion on the need for such a requirement. [0096]

NRC Response: The NRC agrees with this commenter. The NRC has determined that further analysis and stakeholder interactions are needed prior to changing the requirements for non-power reactor licensees. Therefore, the NRC has not included in the final rule a requirement for non-power reactor licensees to have hostile action EALs. No change was made to the final rule in response to this comment.

2.6 How COL and ESP applicants would implement this rule as proposed, including any impacts to the process and schedule for the applicant to submit and the NRC to review those revisions to COL or ESP applications

COL and ESP Applicants Should Be Allowed to Defer Implementation of the Proposed Rule Enhancements

Comments: Three commenters argued that the NRC should not require pending combined license (COL) and early site permit (ESP) applicants to implement the proposed rule changes before approving their applications. [0093, 0102, 0135] An industry representative argued that requiring applicants to implement the changes could delay COL issuance by as long as two years. Furthermore, the commenter argued that the emergency plans submitted with applications are sufficient as long as they comply with current requirements, because the proposed requirements are enhancements not necessary to ensure adequate protection of public health and safety. [0102] New nuclear plants will not begin operation until well after the COL is issued, and the plant could update its emergency plans to comply with the new requirements during that period. The commenter suggested that, for COL applications pending on the effective date of the rule, the requirements should become applicable following the issuance of the COL, and should be implemented prior to the initial emergency planning exercise for the unit. For ESP applications pending on the effective date of the rule, the applicant should address the new requirements either in the ESP application or in any COL application referencing the ESP after the rule's effective date. [0102] A commenter with a currently pending COL application argued that NRC may not impose new requirements on a pending ESP application according to 10 CFR 52.39(a). [0093]

NRC Response: The NRC disagrees, in part, with the commenters regarding implementation of this rule relative to COL and ESP applications. NRC regulations at 10 CFR 52.97(a)(1) require, in part, that "the Commission may issue a COL if the Commission finds that…the applicable standards and requirements of the Act and the Commission's regulations have been met." A similar regulation at 10 CFR 52.24(a) exists for issuance of an ESP. A permit/license application pending before the NRC for review, regardless of the potential for a near-term decision on that permit/license, must comply with all applicable, effective regulations as of the date of the license. Although this rulemaking is an enhancement to the existing EP requirements, and the changes being codified in the rulemaking are not required for adequate protection of public health and safety, the effect of the rulemaking on public health and safety has no bearing on the requirement to comply with the Commission's regulations and the Atomic Energy Act.

The comments refer to both deferred applicability and deferred implementation of the rule. All applicants for COLs and ESPs by definition defer implementation of EP requirements for some period of time due to the fact that the COL or ESP itself does not require immediate construction of an NPP. Rather, the COL is a license to build, and an ESP a permit to designate an area suitable for, a nuclear power plant that would be protected, in part, through EP; it is not in itself an actual NPP that would be protected, in part, through EP. The NRC agrees that a COL or ESP applicant could defer implementation of its EP program if the application is found to be in compliance with the Commission's applicable regulations in effect at the time of COL or ESP issuance. The NRC also agrees with the arguments the commenters make regarding the

necessity of implementing the emergency plan prior to the first scheduled EP exercise. However, the commenters suggest deferred applicability of the rule to COL or ESP applicants. Deferred applicability means that the rule should not apply to the applicant now, but should apply to the applicant at some later time. Because the existing EP regulations do apply to COL and ESP applicants now, and their applications are addressing those requirements, the NRC disagrees with the suggestions of deferred applicability of this rule to COL or ESP applications.

Rather, what the commenters seem to be proposing is deferred compliance with the amended EP regulations. By deferring the required compliance date for a COL or ESP applicant whose application is docketed before the effective date of the final rule, the applicant is being given a period of time to update its application in order to come into compliance with an amended regulation. This is no different from the manner in which the NRC imposes some new requirements on existing licensees. That is, the licensee is given a reasonable time period after the effective date of the rule to bring its license into compliance with the amended regulations. In the case of the docketed COL or ESP applicant, after obtaining a license or permit, the then-licensee is given a reasonable period of time to bring its license into compliance with the amended requirements, albeit outside of the initial license proceeding. However, the initial application would need to be found in compliance with the current EP regulations (that is, the applicable EP regulations in effect prior to this rulemaking) in order for the Commission to issue the initial license. Deferred compliance with this rule for these docketed COL or ESP applicants will provide the desired schedule flexibility and regulatory stability, as well as require compliance with the amended EP regulations prior to the time when the licensee's EP program would be required to be functional. The NRC included in the FRN for the final rule provisions to allow deferred compliance to this rule for docketed COL and ESP applications.

The NRC does, however, agree with the commenter regarding the Commission's finality provisions on an issued ESP and the COL application referencing that ESP. Section 52.39(a) does provide finality to the ESP and prevents the NRC from imposing new requirements on the ESP unless those new requirements meet one or more of the criteria under 10 CFR 52.39(a)(1). The NRC agrees that this rulemaking does not meet the criteria under 10 CFR 52.39(a)(1) and therefore cannot require compliance with the amended EP regulations in this rulemaking. Further, while 10 CFR 52.39(b) requires COL applicants to update their EP information provided in the ESP and discuss whether the updated information materially changes the bases for compliance with applicable NRC regulations, the COL applicant would not be required to update its application to comply with EP regulations that were amended after issuance of the ESP. However, in order to maintain consistency among NPPs using the same design, the NRC encourages COL applicants to voluntarily comply with the amended EP regulations in the COL application or as a license amendment after a COL has been issued. Changes were made to the final rule in response to these comments.

Opposition to the Thirty Day Implementation Schedule

Comment: One commenter generally opposed the 30-day implementation schedule, and argued that the implementation period should be at least 90 days. The 90-day period may need to vary if it took effect during or immediately preceding the fall or spring refueling outage seasons. An optional deferral period would allow licensees the necessary flexibility. The commenter indicated that it spoke only for operating reactors and does not have a position regarding COL or ESP applicants. [0089]

NRC Response: The NRC disagrees with the commenter. The 30-day period is the period at the end of which the final rule would become effective; implementation of the final rule at that time applies only to changes involving 10 CFR 50.54(q) and the introductory paragraphs to 10 CFR Part 50, Appendix E, Section IV. A 90-day period for implementation would have been more restrictive than the 180-day or longer implementation period for other provisions of the final rule. No change was made to the final rule in response to this comment.

2.7 Regarding the appropriateness of the proposed implementation schedule

Opposition to the Proposed Implementation Schedule

Comments: Two industry representatives opposed the proposed implementation schedule. [0089, 0102] One of the two commenters argued that there should be no "arbitrary" implementation deadline, and that no implementation period should be shorter than 90 days. [0089] Both commenters suggested that a preferred alternative to the proposed implementation schedule would be for each site to submit its own implementation schedule to the NRC to allow for site-specific flexibility. [0089, 0102] Such an approach would allow licensees to appropriately budget their resources [0089, 0102] and facilitate coordination with OROs. [0089] One of the commenters also made the following implementation schedule recommendations, in case the NRC does not adopt a site-by-site approach:

- With regard to on-shift staffing, the commenter recommended a 36-month implementation schedule based on a survey of licensees regarding the time and resources needed to conduct staffing analyses, budget approval, recruiting, hiring, and training of additional staff, and the potential shortage of qualified individuals.
- With regard to emergency classification timeliness, the commenter recommended a 12-month implementation schedule to allow licensees to review procedures, protocols, training and expectations, to ensure that their emergency strategies will meet the proposed requirements. A 12-month period would also allow normal training cycles to incorporate new material, if applicable, or reinforce current expectations.
- With regard to a backup means for alert and notification systems (ANS), the commenter recommended a 36-month implementation schedule to allow licensees to determine appropriate alert and notification backup methods; revise letters of agreement with and train OROs; develop, approve and implement new procedures; and submit the procedure to FEMA for inclusion into the ANS design.
- With regard to ERO augmentation and alternative facilities, the commenter recommended a 36-month implementation schedule to allow licensees to upgrade facilities, amend letters of agreement, and potentially purchase or construct a new facility. Some facilities do not currently meet the proposed requirements for the availability of computer links, and will have to make facility changes under the site modification process.
- With regard to updating evacuation time estimates (ETEs), the commenter recommended a 12-month implementation schedule because some licensees will need to incorporate subsets of the U.S. Census data into their ETEs that may not be available with the initial release of census data. Also, it may take longer than the proposed 180 days to incorporate information from State and local agencies regarding special and transient populations. There are only a few vendors that have the capabilities to prepare ETEs, and it would be difficult for those vendors to complete all the necessary ETEs within 180 days.

- With regard to licensee coordination with OROs, the commenter recommended a 24-month implementation schedule based on a survey of licensees regarding the process of revising letters of agreement (LOAs) with OROs. Time is needed to make and review changes to the agreement and procedures, negotiate with the OROs, and for the OROs to develop and implement the processes to support the new requirements.
- With regard to protective actions for onsite personnel, the commenter recommended a 90-day implementation schedule based on a survey of licensees. The licensees indicated that specific areas would require additional review, including site evacuation by opening security gates and the arrangements for accounting for personnel after an attack.
- With regard to EALs for security events, the commenter recommended a 36-month implementation period because each licensee may need to submit its EAL changes to the NRC for approval. NRC approval of an EAL change typically takes 24 months. After approval, the licensee needs time for training and drills prior to implementation. The commenter also proposed that the NRC create a generic approval for sites to change their existing EALs to comply with the new criteria. If the NRC implements that proposal, a shorter implementation period would be acceptable.
- With regard to the amended emergency plan change process, the commenter recommended a 12-month implementation period to develop administrative procedures and processes to implement the license amendment process for emergency plans.
- With regard to challenging drills and exercises, the commenter recommended a 6-month implementation period to allow sites to revise their emergency plans and drill and exercise program guidance documents, and to negotiate the timing of new exercise cycles with Federal, State, and local governments. [0102]

Another commenter concurred with these recommendations on the proposed implementation schedule. [0135] During a public meeting held by the NRC and FEMA on November 15, 2010 in Rockville, MD, stakeholders provided additional feedback on the proposed implementation periods. Highlights of feedback from the participants, including representatives of the nuclear power industry and State/local emergency management agencies, on each of the rulemaking topics are summarized below. A full summary of the meeting, including the meeting transcript, is available on www.regulations.gov at Docket No. NRC-2008-0122.

- Comments by representatives of the nuclear power industry indicated that 36 months was still considered the appropriate time frame for implementing the new requirements of Appendix E, Section IV.A.9, regarding on-shift staffing. This time frame would allow licensees 12 months to perform the staffing analysis, and an additional 24 months to hire, train, and qualify personnel, or reassign tasks to existing personnel, if any staffing shortfalls were identified.
- Comments by representatives of the nuclear power industry indicated that 12 months was still considered the appropriate time frame for implementing the new requirements of Appendix E, Section IV.C.2, regarding emergency declaration timeliness. This time frame would be necessary to revise emergency plans, update procedures, and train emergency responders on the new declaration timeliness requirements.
- Comments by representatives of the nuclear power industry and State/local agencies indicated that 36 months was still considered the appropriate time frame for implementing the new requirements of Appendix E, Section IV.D.3, regarding ANS backup means. For sites with ANS backup means already in approved ANS design reports, but modifications to the ANS backup means are needed to ensure compliance with the new requirements, this time frame would allow time to update ANS design reports and obtain FEMA

approval. For sites without ANS backup means already in approved ANS design reports, it would allow time to identify and design the ANS backup means, revise ANS design reports, and obtain FEMA approval.

- Comments by representatives of the nuclear power industry indicated that 36 months was still considered the appropriate time frame for implementing the new requirements of Appendix E, Section IV.E.8.d, regarding ERO augmentation at an alternative facility (or facilities). A 36 month time period would allow licensees to locate or construct new facilities with full capabilities, including communications links and computer links.
- Comments by representatives of the nuclear power industry indicated that 12 months was still considered the appropriate time frame for implementing the new requirements of Appendix E, Section IV.3, to update ETE analyses. This would allow time to obtain census data from the U.S. Census Bureau and State/local agencies, and to perform ETE analyses by a limited number of vendors.
- Comments by representatives of State/local agencies indicated that 24 to 36 months was considered the appropriate time frame for implementing the new requirements of Appendix E, Section IV.A.7, regarding licensee coordination with OROs. This time frame would permit offsite agencies to identify additional offsite resources and obtain/update agreements for these resources. A longer time (36 months) might be needed if any legal issues involving these new agreements arise.
- Comments by representatives of the nuclear power industry indicated that 36 months was still considered the appropriate time frame for implementing the new requirements of Appendix E, Section IV.B.1, regarding hostile action EALs. This time frame would allow licensees to submit EAL scheme changes and obtain NRC approval.
- Comments by representatives of the nuclear power industry indicated that 90 days was considered the appropriate time frame for implementing the amended requirements of 10 CFR 50.54(q) regarding the emergency plan change process. This time frame would allow time for implementing licensee change management processes; it would also allow flexibility to accommodate outages and other EP staff work assignments.
- Comments by representatives of the nuclear power industry indicated that 180 days was considered the appropriate time frame for implementing the new requirements of Appendix E, Section IV.F.2, regarding challenging drills and exercises to allow time to modify drill/exercise programs to address the new scenario variation requirements. Comments by representatives of State/local agencies indicated that 36 months or longer was considered the appropriate time frame to allow time to develop plans and procedures to address hostile action, train responders, and conduct practice drills.

NRC Response: The NRC agrees in part and disagrees in part with the commenters. Adjustments were made to the implementation schedule and are addressed in the final rule. The NRC disagrees that each licensee should submit its own preferred implementation schedule. This would result in varying implementation periods among licensees, creating the need for multiple inspections to verify compliance with the new requirements and additional compliance tracking. This approach could create problems with coordinating emergency response program changes for FEMA, State agencies, and other offsite agencies, particularly for those agencies that are involved with multiple sites. Specific implementation schedule recommendations proposed by one of the commenters are discussed below:

- The NRC agrees that 180 days may not be sufficient time for licensees to perform a detailed staffing analysis, but disagrees that 36 months should be allowed to perform a staffing analysis and then address any on-shift staffing shortfalls. The staffing analyses

can be completed within 365 days to allow time for reviewing implementing procedures, developing task lists, and performing a job/task or similar analysis. Licensees will be expected to take interim compensatory measures to address any staffing shortfalls within 30 days of when the results of the staffing analysis are available to ensure that the emergency plan can be implemented as designed. Licensees shall then implement long-term corrective actions, such as hiring, training, and qualifying additional personnel, if necessary within 24 months of completing the staffing analysis.

- The NRC disagrees that 12 months should be allowed to address emergency declaration timeliness. This is standard practice for power reactor licensees and a component of one of the EP performance indicators. If procedural changes or training is needed, 180 days is sufficient time for implementation.
- The NRC agrees in part that more time may be needed for certain licensees and offsite officials to implement the backup ANS requirement. In the proposed rule, the NRC stated that the ANS backup means must be implemented by the first biennial exercise more than one year after the effective date of the final rule, which would have allowed up to three years for implementation across the industry. However, for some sites the implementation period could have been as short as one year to update an ANS design report (or other documentation describing the backup method), submit the documentation for and obtain FEMA approval, and install the backup means. The NRC is modifying the implementation period depending on whether a site already has a FEMA-approved ANS backup means in place. For a site that already has a FEMA-approved backup means in place for part or all of the ANS, 12 months should be sufficient time for implementation. Implementation for other sites will be based on two steps: 1) submittal of an updated ANS design report for FEMA approval, which must be submitted to FEMA within 18 months of the effective date of the final rule, and 2) completion of ANS backup means installation within 365 days of the date of FEMA approval. The time period for FEMA approval will vary, and thus the total implementation period will vary from site to site, but must not exceed a total time period of 3 years and 6 months from the effective date of the final rule.
- The NRC agrees in part that 36 months should be allowed for implementing an alternative facility or facilities to function as staging areas for ERO staff augmentation during hostile action. Licensees should have already identified alternative facilities in response to Bulletin 2005-02. The NRC is requiring that the staging area and communications capabilities of alternative facilities be in place within 180 days of the effective date of the final rule. The final rule does not require that any new facilities be built, although some existing facilities may need to be upgraded to meet the new requirements. The remaining capabilities must be in place within 36 months of the effective date.
- The NRC agrees that a 12-month (or 365-day) implementation schedule is warranted for performing ETE updates so that information from State and local agencies regarding special and transient populations can be incorporated, and in recognition that a limited number of vendors have the capability to prepare ETE updates.
- The NRC agrees that 180 days may not be sufficient time to obtain new or update existing LOAs involving offsite resources that support onsite response activities. A twelve–month implementation period was included in the proposed rule. Based on additional feedback from offsite agency officials provided at the November 15th public meeting, the NRC believes that 30 months is a more reasonable time frame in which to identify any additional resources that are needed and institute new or revise existing agreements.
- The NRC disagrees with the proposed 90-day implementation period for protective actions for onsite personnel during hostile action. The NRC had proposed that protective actions for onsite personnel be implemented within 180 days. Although licensees should have

already identified these protective actions in response to Bulletin 2005-02, the 180-day time frame allows time for additional procedure changes and training if needed.

- The NRC disagrees that 36 months should be allowed for incorporation of hostile action EALs. Licensees should have incorporated these EALs into their EAL schemes in response to Bulletin 2005-02. Prior NRC approval would not be needed if licensees need to make additional procedure changes to conform to the Bulletin, and 180 days is sufficient time for making these changes and conducting training if needed.
- The NRC disagrees that any time period should be allowed for implementing the amended emergency plan change process beyond the effective date of the final rule. The NRC intends that the amended process be used for any emergency plan changes under consideration after the final rule becomes effective. This allows ample time for licensees to develop or revise administrative procedures in anticipation of the need for making changes to their emergency plans.
- The NRC proposed that the new drill and exercise program requirements be implemented no later than the first biennial exercise more than one year after the effective date of the final rule. This would have resulted in a minimum of one year and up to three years for implementation across the industry. Although the nuclear power industry had proposed a six-month implementation period for revising licensee drill and exercise programs, offsite agency officials indicated that they would need three or more years to develop plans and procedures to address hostile action, train responders, and conduct practice drills. Therefore, the NRC has revised the implementation period such that the first hostile action biennial exercise must be conducted by December 31, 2015 for each site. States should fully participate in one hostile action exercise by the same date. This will allow additional time for offsite agencies to prepare for biennial exercises with hostile action scenarios. The initial 8-year exercise cycle will begin in the calendar year of the initial hostile action exercise for a site.

The NRC included in the FRN for the final rule provisions for each of these implementation periods.

Comments: A commenter also stated that the proposed 30-day implementation schedule of the new Section 50.54(q) requirements is inadequate. [0102]

NRC Response: The NRC disagrees with the commenter. Although the amended 10 CFR 50.54(q) becomes effective 30 days after the publication of the final rule in the *Federal Register*, its actual impact doesn't occur until the licensee processes the first emergency plan change following the effective date of the final rule. As such the implementation schedule is under the licensee's control. No change was made to the final rule in response to this comment.

3. Security-Related Issues

3.1 On-Shift Staffing Analysis

3.1.1 Part 50, Appendix E, Section IV.A.9: On-Shift Staffing Analysis

Guidance Inconsistencies

Comment: One commenter stated that different parts of the guidance under the proposed rule are inconsistent. The guidance under 10 CFR 50.54(q) states that changes to ERO staffing should be submitted to the NRC for prior approval, but the guidance for Section IV.A.9 of Appendix E states that this analysis should be retained for inspection, even though the analysis could result in a staffing change. The commenter suggested that all staffing changes should be submitted to the NRC for review and approval prior to implementation. [0066]

NRC Response: The NRC disagrees with the commenter. RG 1.219, "Guidance on Making Changes to Emergency Plans for Nuclear Power Reactors," states that changes to ERO staffing that eliminate a key position or reduce the licensee's capability to staff those positions on a 24/7 basis consistent with fitness-for-duty requirements, are examples of emergency plan changes that should be submitted to the NRC for prior review and approval. The detailed analysis required by Section IV.A.9 of Appendix E may result in a change to the number of on-shift staff, but the licensee would still be responsible for determining whether any staffing change is a reduction in effectiveness of the plan requiring NRC approval. Therefore, submission of all staffing changes for review and approval prior to implementation is not necessary. No change was made to the final rule in response to this comment.

Detailed Analysis of On-Shift Staffing

Comment: One commenter noted that the proposed rule does not allow the use of on-shift staff from one unit of a multi-unit site to support emergency response functions at another unit. The commenter recommended that the regulation state that it is permissible to use staff from other units if the accident or threat only affects one unit. [0076]

NRC Response: The NRC disagrees with the commenter. The proposed rule did not explicitly state that on-shift staff from one unit can support emergency response at another unit of a multi-unit site, but the proposed rule did not disallow that action either. The detailed analysis required by the final rule provides licensees maximum flexibility to demonstrate that on-shift staff is not assigned additional duties that would prevent the timely performance of assigned emergency plan functions. Therefore, the suggested rule language is not necessary. No change was made to the final rule in response to this comment.

Comment: One commenter stated that the proposed rule needs to provide a specific definition of each function and the competencies necessary to satisfy its performance. The commenter suggested that action on the proposed rule should be deferred until it is clear how compliance with the rule could be demonstrated. The commenter recommended that a well-defined set of standard circumstances for a response evaluation would provide for uniform and repeatable analysis of staffing needs and would be preferable to fixed staffing levels. [0135]

NRC Response: The NRC disagrees with the commenter. Licensees have approved emergency plans which specify the emergency functions that on-shift responders are responsible for performing. NRC regulations and NUREG-0654, Table B-1, address ERO staffing and functions in general terms to allow licensees flexibility in determining, on a site-specific basis, the on-shift staff necessary to perform those functions. Industry events and NRC inspections have revealed that licensees have sometimes assigned additional responsibilities to on-shift staff which could interfere with their primary emergency response duties.

The final rule requires licensees to perform a detailed analysis of their choosing to show that the on-shift staff specified in the emergency plan can reasonably perform their emergency functions without being overburdened. The NRC has purposely not provided a defined set of standard circumstances to allow for a site-specific analysis of a defined series of events, such as postulated design basis accidents (DBAs) and the design basis threat (DBT), to determine the on-shift staff necessary for response until the augmenting staff arrives. The guidance available to show compliance with the rule is clear and will ensure that regional NRC inspectors use a standardized approach to evaluating, for consistent implementation, the detailed analyses performed by licensees. No change was made to the final rule in response to this comment.

Comments: Three commenters questioned the need for this new regulation. [0084, 0090, 0102] One commenter stated that current regulations are adequate to address NRC's concerns, and that NRC's discussion supporting the need for enhanced regulations does not indicate a need for licensees to perform a detailed analysis of on-shift staffing. [0084] Two commenters suggested that the process for demonstrating compliance should be described in a Regulatory Guide (RG) instead of in the regulations. [0090, 0102] One of the commenters agreed that this rulemaking is not required because 10 CFR 50.47(b)(2) already requires adequate on-shift staffing. The commenter recommended that this section of the proposed rule be deleted or changed to the following wording:

> "Nuclear power plant licensees under this part and Part 52 must ensure that on-shift personnel assigned emergency plan implementation functions are not assigned any responsibilities that would prevent the timely performance of their assigned functions as specified in the emergency plan." [0102]

NRC Response: The NRC disagrees with the commenters. The existing regulation, 10 CFR 50.47(b)(2), requires adequate on-shift staffing, but does not provide a clear definition of "adequate." Guidance concerning on-shift emergency response staffing is general in nature to allow licensees flexibility in the number of on-shift staff. This regulatory structure has resulted in inconsistent licensee implementation that sometimes has led to inadequate emergency response. This new regulation requires licensees to demonstrate adequate staffing by a measureable analysis that shows that the duties assigned to on-shift staff are reasonable for one person to perform and not burdensome.

This staffing issue previously lacked clarity in the regulations and was specifically addressed in the interim compensatory measures issued in February 2002. The NRC considered it an important addition to the regulation to enhance public health and safety, ensuring consistent application for present nuclear power plants as well as new power reactors. A RG is an effective tool to provide implementation methods, but is only guidance, does not carry the weight of regulation, and is therefore unenforceable. No change was made to the final rule in response to these comments.

Comment: One commenter stated that the NRC has "existing mechanisms to deny requests by licensees to reduce on-shift staffing levels." The commenter argued that these mechanisms make the rule requirements related to staffing levels unnecessary. [0084]

NRC Response: The NRC disagrees with the commenter. The final rule requires nuclear power reactor licensees to perform a staffing analysis to demonstrate that on-shift staffing levels are adequate. This is a new requirement not addressed under previous regulations. If a licensee decides to reduce staffing levels and determines that this change would also be a reduction in the effectiveness of its emergency plan, then the licensee would need to request NRC approval under the provisions of 10 CFR 50.54(q). No changes were made to the final rule in response to this comment.

3.1.2 NSIR/DPR-ISG-01: Draft Interim Staff Guidance – On-Shift Staffing Analysis

Additional and Revised Language for the Draft Interim Staff Guidance

Comment: One commenter suggested alternate language for Section IV.C of the ISG to clarify that a staffing analysis will be performed for the DBT and each DBA and to clarify that a staffing analysis is not required for a DBA if the initial conditions stipulate that any unit on the site is in Mode 5 or 6. The commenter suggested the following language:

> "Define the events that will require a staffing analysis. These events shall include the Design Basis Accidents (DBAs) presented in the Final Safety Analysis Report (FSAR), as updated, and which result in an emergency classification. They shall also include the DBT. A staffing analysis is not required for a DBA if the initial conditions stipulate that any unit on the site is in Mode 5 or 6 (i.e., in an outage)." [0102]

NRC Response: The NRC agrees in part and disagrees in part with the commenter. The NRC agrees with the language to specify that the analysis should be performed for the DBT and each DBA presented in the updated FSAR that result in an emergency classification because the Emergency Plan is implemented only for this type of event. However, the NRC does not agree with the statement that the staffing analysis is not required for a DBA if any unit onsite is in Mode 5 or 6 (i.e., in an outage). The commenter's basis for this statement was that if a unit is in an outage, then there are a significant number of licensee personnel onsite at all times ensuring that sufficient licensee resources would be available to support emergency response activities. The intent of the detailed analysis is to determine which emergency response functions are required for each DBA, as well as the number and expertise of responders that would be necessary to carry out those functions. Outage staffing numbers alone may not guarantee that sufficient staff resources are available. Changes were made to the ISG in response to this comment.

Comment: The same commenter suggested alternate language for Section IV.C of the ISG to clarify that the detailed analysis should include all actions to be performed in the period before the arrival of the augmenting ERO staff, not just in the first 30 minutes of the event. The commenter recommended the following proposed language:

"For the DBT and each DBA, identify the emergency response actions that on-shift personnel must perform prior to the arrival of the augmenting ERO staff (as described in the licensee's emergency plan). Action identification may be done by one or more methods including a job/task analysis (JTA), a time-motion study, Operating Experience reviews, document reviews, personnel interviews, etc." [0102]

NRC Response: The NRC agrees in part and disagrees in part with the commenter. The NRC agrees with the wording concerning actions that must be performed before the arrival of the augmenting ERO staff. Different licensees have different ERO augmentation times so the analysis should be performed using the augmentation times that are specified in each licensee's emergency plan. However, action identification must be done by a measurable analysis such as a job/task analysis, time-motion study, or equivalent. Other methods such as operating experience reviews, document reviews, and personnel interviews, are subject to interpretation and not in keeping with the intent of this guidance. Changes were made to the ISG in response to this comment.

Comment: The same commenter suggested alternate language for Section IV.C to clarify and add more detail regarding the process and expectation associated with collateral duty issues. The commenter recommended the following proposed language:

"For the DBT and each DBA, perform a detailed analysis to determine if the current minimum on-shift staff can effectively perform all required emergency response actions in a timely manner until arrival of the augmented ERO. Additional duties assigned to on-shift staff may be acceptable provided that those duties do not detract from the effective and timely performance of other assigned duties. Identify positions which have a collateral duty that could adversely impact the performance of an emergency response function/task. Licensees are expected to promptly enter any unsatisfactory results into their Corrective Action Program for resolution." [0102]

NRC Response: The NRC agrees in part with the commenter. The NRC generally agrees with the proposed language for Section IV.C which clarifies that additional duties may be assigned to on-shift staff provided that those duties do not detract from the timely performance of other assigned duties. However, the NRC substituted the term "their primary duties" in place of "other assigned duties." Also, the NRC agrees that if licensees identify positions which have a collateral duty that could adversely impact the performance of an emergency response function/task, then that issue should be promptly entered into the licensee's Corrective Action Program. This will ensure that the potential for overburdened on-shift staff will receive the necessary management attention for resolution. Changes were made to the ISG in response to this comment.

Comment: The commenter also suggested additional language for Section IV.C to add guidance on how to address functions or tasks identified in NUREG-0654, Table B-1. The commenter recommended the following proposed language:

"A DBT or DBA event description may not specify the performance of some major functions or tasks listed in NUREG-0654 Table B-1. Examples include 'Repair and Corrective actions', and 'Rescue Operations and First-Aid'. In these cases, the licensee's staffing analysis should specify the resources available to

perform these functions and tasks, if needed. They may be assigned as a collateral duty," and "With respect to the DBT analysis, it may be assumed that the threat is neutralized with no adverse consequences to plant safety. Licensees must ensure that sufficient staff is available to effectively implement both the Emergency Plan and the Security Plan." [0102]

NRC Response: The NRC agrees with the commenter. The proposed language for Section IV.C promotes consistent application of the guidance by clarifying how to address functions or tasks identified in NUREG-0654, Table B-1, for which there is no associated performance requirement in a site-specific DBT or DBA. It also adds guidance concerning threat neutralization with respect to the DBT analysis which was provided by the NRC during the September 17, 2009 public meeting. Changes were made to the ISG in response to this comment.

Comment: The commenter suggested additional language for Section IV.C to add a working definition for the task "repair and corrective action" to reflect real world limitations on the ability to perform this task until the arrival of the augmenting ERO. The commenter recommended the following proposed language:

> "As used in the context of on-shift staffing capability, the Major Task 'Repair and corrective action' means an action that can be performed promptly to restore a non-functional component to functional status (e.g., resetting a breaker), or to place a component in a desired configuration (e.g., open a valve), and which does not require work planning or implementation of lockout/tagout controls to complete.
>
> The Major Functional Area 'Rescue Operations and First-Aid' may be assigned to a Fire Brigade member(s) as it is assumed that this function, if needed, would commence upon extinguishment of the fire.
>
> Concerning the DBT staffing analyses, it may be assumed that the threat is neutralized in such a manner that responding offsite resources (e.g., law enforcement, Emergency Medical Services, etc.) will perform the Major Functional Area of 'Rescue Operations and First-Aid'." [0102]

NRC Response: The NRC disagrees with the commenter. Adding a definition for a Major Task specified in NUREG-0654 is beyond the scope of this guidance and not necessary. Licensees have the flexibility to utilize these responders in whatever manner they see fit until augmented responders arrive. The same would apply to the major functional area "Rescue Operations and First Aid," without adding to the guidance in Section IV.C. The assumption that the "Rescue Operations and First-Aid" function would commence upon extinguishment of the fire may not be accurate in that this function may be necessary for other emergencies. The assumption that this function would be performed by offsite resources during the DBT hostile action, although potentially accurate for some scenarios, is beyond the scope of this guidance and not necessary. No change was made to the ISG in response to this comment.

Comment: The commenter suggested additional language for Section IV.C to reflect information provided during the NRC public meeting on September 17, 2009. The commenter recommended the following proposed language: "The results should be documented and

available for NRC inspection. Staffing analyses and results are not considered to be part of the Emergency Plan." [0102]

NRC Response: The NRC agrees with the commenter's proposed language for Section IV.C. This language clarifies that the staffing analyses and results are not considered to be part of the emergency plan, reflecting information that the NRC provided during the September 17, 2009 public meeting. Changes were made to the ISG in response to this comment.

Revisions to NUREG-0654

Comment: One commenter recommended modifying NUREG-0654 by eliminating the 30-minute "capability for additions" column from Table B-1. The commenter argued that there is no technical basis for the existing 30-minute staff augmentation guidance and it has been problematic for licensees. The commenter explained that several of the positions listed in the 30-minute column cannot be utilized until the arrival of additional response personnel at 60 minutes, while some on-shift positions can be performed well past 30 minutes into an event. [0102]

NRC Response: The NRC disagrees with the commenter. There is no technical basis for eliminating the 30-minute responders. Although the technical support center (TSC) and operations support center (OSC) would be activated approximately 60 minutes after an Alert declaration, the 30-minute responders could be utilized by the control room, if needed, before those facilities are activated. No change was made to the final rule or the guidance documents in response to this comment.

Examples of Job/Task Analyses or Time-Motion Studies

Comments: Two commenters expressed a need for the NRC to provide examples of acceptable JTAs or time-motion studies. [0090, 0114] One of the commenters stated that examples would be helpful to licensees. [0090] The other commenter stated that there should be more information about the expectations of the JTAs and time-motion studies to ensure a consistent application across the industry. Further, the commenter stated that this analysis will be subject to individual inspector opinion resulting in conflicting approaches from site-to-site and Region-to-Region. [0114]

NRC Response: The NRC disagrees with the commenters. Although the NRC does not have examples of JTAs or time-motion studies, the Institute of Nuclear Power Operations (INPO) has guidance available on how to perform a JTA. Licensees can use this approach or some other method of their choosing to determine the tasks that must be completed in the "Major Functional Areas" of NUREG-0654, Table B-1. To ensure consistent NRC implementation, regional NRC inspectors will be trained on a standardized approach to evaluating these analyses to ensure objectivity. NRC Headquarters staff will also be available in a coaching role to ensure objectivity and standardization. No change was made to the guidance documents in response to these comments.

Corrective Action Programs

Comment: One commenter stated that the proposed rule does not provide adequate credit for the use of licensees' corrective action programs and the NRC's regulatory process. The industry's experience with drills, exercises, and actual events has allowed for sites to

demonstrate on-shift capabilities during multiple events. Problems identified with response have been addressed in the corrective action programs or in the regulatory process. The commenter stated that if poor performance related to shift staffing in actual events involved a significant number of sites, the proposed rule for shift staffing would be necessary. The commenter argued that this is not the case. [0114]

NRC Response: The NRC disagrees with the commenter. This issue does not concern the adequacy of licensee corrective action programs, but rather a clarification of the rule to ensure emergency responders are not overburdened during emergencies, resulting in inadequate response. There are sufficient examples of inadequate response and/or findings which could have led to inadequate response such that a clarification is warranted. The NRC has determined that this enhancement to the rule will have the beneficial effect of minimizing the potential occurrence of overburdened responders, resulting in improved public health and safety. No change was made to the guidance documents in response to these comments.

Timing of Comment Period

Comment: One commenter argued that because the proposed rule language and implementation guidance documents are subject to comment at this time, the NRC should establish an additional comment period for the ISG after the rule language has been finalized. [0089]

NRC Response: The NRC disagrees with the commenter. Commission policy provides that, to the extent possible, guidance supporting a proposed and final rule be published concurrently with the proposed and final rule, respectively, to help stakeholders understand the proposed and final rules and their implementation. The NRC supplied draft guidance for the proposed rule in this case, is responding to comments on it, and revised the final version of the ISG based on the comments received. The guidance issued with the final rule is one acceptable method to implement the final rule, but not the only method. Therefore, an additional comment period for the ISG is not necessary.

3.1.3 Other: On-Shift Staffing Analysis

Comment: One commenter stated that the NRC did not provide a sound justification for the changes being proposed under On-Shift Staffing Analysis. [0102]

NRC Response: The NRC disagrees with the commenter. Actual examples of inadequate licensee response, inspection findings, and multiple requests for on-shift staffing changes provide sufficient basis for this rulemaking. No change was made to the final rule or the guidance documents in response to this comment.

Comment: A commenter stated that the longer times before onset of releases for accident conditions allows additional time to complete on-shift duties, reducing competition between on-shift duties and emergency duties. In addition, the commenter noted that the Collateral Duties issue is more important in terrorist situations where less time may be available. [0048]

NRC Response: The NRC disagrees with the commenter. The new research concerning time to onset of releases would mainly impact health physics activities. Other events such as fires with complications will still require the same number of responders (e.g., fire brigade) and these are the types of events which have resulted in inadequate response in the past. Also, the NRC

concluded that the EP planning basis for NPP reactors remains valid, even considering the impact of hostile action contingencies unanticipated at the time the basis was established. A vulnerability assessment documented in SECY-03-0165, "Evaluation of Nuclear Power Reactor Emergency Preparedness Planning Basis Adequacy in the Post-9/11 Threat Environment," September 22, 2003, revealed that the timing and magnitude of releases related to hostile action events are no more severe than the shortest timing or largest magnitude sequences considered in the EP planning basis. No change was made to the final rule or the guidance document in response to this comment.

3.2 EALs for Hostile Action

3.2.1 Part 50, Appendix E, Section IV.B: EALs for Hostile Action

Opposition to the Proposed Requirements

Comment: One commenter argued that the proposed regulations would not allow for EAL schemes currently under NRC review such as Nuclear Energy Institute (NEI) 07-01, or any future EAL schemes. The commenter suggested that the NRC add more flexibility to the rule regarding new EAL schemes. [0084]

NRC Response: The NRC agrees with the commenter. The proposed regulation would have limited EAL schemes to those as described in NUMARC/NESP-007 and NEI 99-01. The text in Appendix E, Section IV.B.2, was revised as follows: "A licensee desiring to change its entire emergency action level scheme shall submit an application for an amendment to its license and receive NRC approval prior to implementing the change."

Comment: One commenter stated that the proposed rule is unnecessary because processes are already in place to assure the existence of EALs for hostile action. The commenter suggested that 10 CFR 50.54(q) requires licensees to maintain the credible threat EAL required by Order EA-02-026 and the EAL enhancements specified in Bulletin 2005-02. The commenter also explained that the proposed rule unnecessarily separates out hostile action as a special category of events and recommended that this detail is not needed because the current EAL schemes in use contain initiating conditions for hostile action, other hazards to station operation, abnormal radiological events, system malfunctions and fission product barrier breaches. [0135]

NRC Response: The NRC disagrees with the commenter. Although licensees have made revisions to their existing emergency plans to incorporate the guidance and orders issued by the NRC following the events of September 11, 2001, including adding hostile action EALs to their EAL schemes, the former NRC regulations did not require these EALs. The final rule requires licensees to maintain the enhancements made to their current emergency plans and establishes the requirement for the inclusion of hostile action EALs in the emergency plans of future licensees. No change was made to the final rule in response to this comment.

3.2.2 Other: EALs for Hostile Action

Other Suggestions to Improve EAL

Comment: One commenter argued that the NRC is not in a position to state that evacuations may not be needed in a hostile action where a General Emergency (GE) has been declared.

State and local authorities are responsible for determining appropriate actions during a GE. If the NRC and FEMA do not consider an evacuation necessary, it should be classified as a Site Area Emergency (SAE). [0064]

NRC Response: The NRC disagrees with the commenters. The EALs have two paths that can determine an emergency classification level (ECL): a reactor component and a security component. In the case of a GE based on a security EAL in which the licensee has lost control of the protected area, the potential exists that a hostile action may cause damage to plant equipment and may or may not cause a release. Without a release, but with unknown adversary capabilities in the plant and surrounding areas, it may be reasonable to expect that personnel should not evacuate the area in order to protect their lives. In this instance, law enforcement would work with the unified command to advise the licensee and State and local authorities regarding evacuation decisions affecting onsite personnel. Classifying this example as an SAE would ignore the premise that losing control of vital areas would keep the licensee from being proactive to address GE-like actions that responders must take to mitigate ensuing damage caused by the hostile action, which may lead to a release. Therefore, clear regulatory guidance to licensees is appropriate to effectively protect onsite personnel addressing hostile action toward NPP sites. No change was made to the final rule or the guidance documents in response to these comments.

Comments: Another commenter stated that hostile action has many potential outcomes, and that the NRC should analyze each potential scenario separately and develop situation-specific emergency responses. The commenter recommended that the NRC use SOARCA data to determine the onsets and magnitudes of releases and calculate necessary evacuation times. The commenter presented an example table of hostile action scenarios. [0048] Another commenter argued that the design basis threat rule that the NRC currently uses does not reflect all potential hostile threats to NPPs. Requiring licensees to only address accidents defined in their licensing basis will not be broad enough to cover all relevant hostile threats. [0109]

NRC Response: The NRC disagrees with the commenters. The SOARCA project is not complete and the NRC has not approved SOARCA data for any use, including the use as suggested by the commenter. When the study is completed and if the NRC approves it, the data may inform regulatory issues.

The NRC disagrees with the DBT comment as it relates to EALs because the DBT is associated with adversaries and the associated impact on special nuclear materials. The change in DBT will not change the physics related to the source term and core damage, even though an increase in the number of adversaries can increase the probability of reaching vital plant equipment faster. No change was made to the final rule or the guidance documents in response to this comment.

3.3 ERO Augmentation and Alternative Facilities

3.3.1 Part 50, Appendix E, Section IV.E.8: ERO Augmentation and Alternative Facilities

Support for the Proposed Requirements

Comments: One commenter supported the establishment of alternate facilities as outlined in Section IV.E.8.d as a safeguard in case access to the reactor site is cut off during a hostile action. [0068]

NRC Response: No response is necessary.

Opposition for the Proposed Requirements

Comment: One commenter suggested that the proposed rule is unnecessary because Order EA-02-026 required licensees to assess the adequacy of staffing plans at emergency response facilities during hostile action assuming the unavailability of the on-site TSC and to identify alternative facilities capable of supporting event response. The commenter explained that licensee commitments and actions have been inspected by NRC making the codification of the requirements unnecessary. [0135]

NRC Response: The NRC disagrees with the commenter. To resolve this issue, the NRC considered taking no further regulatory action or continuing the voluntary implementation currently in place. If no action had been taken, there would have continued to be no explicit regulatory requirement regarding the actions necessary during hostile action for the ERO to staff an alternative facility. Taking no further regulatory action may have resulted in inconsistent implementation of ERO augmentation guidelines, and less effective overall site response. The NRC also considered using a voluntary program; however, voluntary programs do not provide a consistent, NRC-approved means for addressing needed enhancements for hostile action. The use of voluntary programs would not have ensured long-term continuity of the enhancements for both licensees and applicants. Thus, the NRC is codifying in 10 CFR Part 50, Appendix E, Section IV.E, the Order EA-02-026 requirements and the enhancement examples described in NRC guidance, such as Bulletin 2005-02, concerning ERO augmentation to alternative facilities during hostile action to maximize the effectiveness of the site response. No change was made to the final rule in response to this comment.

Comment: One industry representative stated that the proposed Section IV.E.8.d requirements that the alternative facility have computers linked to the reactor site and have the capability to perform offsite notifications are inconsistent with Attachment 5 of Bulletin 2005-02. This commenter suggested that the NRC revise Appendix E, Section IV.E.8.d by inserting "(if the emergency operations facility is not performing this action)" after "the capability to perform offsite notifications;" and "(ideally)" before "computer links to the site." [0102]

NRC Response: The NRC agrees in part with the commenter in that the proposed Section IV.E.8.d rule language is not strictly consistent with the wording of Bulletin 2005-02, Attachment 5. The Bulletin stated that the alternative facility should have the "capability to notify offsite response organizations if the emergency operations facility is not performing this action." The intent of Bulletin 2005-02 was to provide a backup capability to perform offsite notifications

if the other licensee emergency response facilities were not available due to a hostile action. In the event of a hostile action, there is no guarantee that the EOF would be available to perform this action. Therefore, the NRC has determined that the capability to perform offsite notifications is a necessary characteristic of alternative facilities.

The NRC also agrees in part with the comment that alternative facilities "ideally" have computer links to the site. The Bulletin stated that alternative facilities should "have general plant drawings and procedures, phones, and (ideally) computer links to the site." The NRC has determined that since the alternative facility (or facilities) must have the capability for communication with the EOF, control room, and site security; to perform offsite notifications; and for engineering assessment activities, including damage control team planning and preparation, then licensees should have some flexibility in meeting these requirements based on site specific characteristics. Therefore, the NRC is not codifying the equipment that must be present in the alternative facility (or facilities) but rather allows licensees to achieve compliance with the required facility capabilities in a manner deemed most appropriate for their site. Changes were made to the final rule in response to this comment.

Comments: Three commenters presented aspects of the rule that need clarification. [0076, 0084, 0102] One of the commenters stated that the proposed rule is unclear regarding locations for alternate facilities, using terms including: "close to the site," "geographically separated," "30 miles… would be too far away," and "travel quickly to the site." [0076] Another commenter argued that the NRC should revise the phrase "under threat or actual attack" in Appendix E, Section IV.E.8.d to use the term "hostile action" in order to be consistent with other rule sections. [0084] The third commenter indicated that the use of the parenthetical "(or facilities)" in the same section can be interpreted in multiple ways. [0102]

NRC Response: The NRC agrees in part and disagrees in part with the commenters. The location of the alternative facility should be specified in the guidance and not in the rule. This would make any future necessary changes to the distance criteria easier since a guidance document revision can be less complicated and time consuming than rulemaking. No change was made to the final rule in response to this comment.

The NRC agrees with the commenter that the phrase "under threat or actual attack" should be revised to be consistent with other rule sections. Changes were made to the final rule in response to this comment.

The NRC agrees with the comment on the use of the parenthetical "(or facilities)." If licensees use multiple locations to function as the alternative facility, then this phrase could mean that either all the locations must have the characteristics of the alternative facility or that these locations will collectively have those characteristics. To clarify this provision, the NRC changed the final rule language to explicitly state that the alternative facility (or facilities) must collectively have the necessary characteristics. Changes were made to the final rule in response to this comment.

Comment: Another commenter suggested revising Appendix E, Section IV.E.8.d to read: "The requirement for a staging area required by this part may be satisfied by the backup facility, if so established, that meets the requirements of part 8.b of this part." [0090]

NRC Response: The NRC disagrees with the commenter. The sentence proposed by the commenter would explain one method by which a licensee could comply with a regulatory

requirement. Such language is more appropriately included in guidance. In fact, the NRC has described acceptable facilities for use as alternative facilities in the ISG. No change was made to the final rule in response to this comment.

3.3.2 NSIR/DPR-ISG-01: Draft Interim Staff Guidance – ERO Augmentation and Alternative Facilities

Suggested Revisions to the Draft Interim Staff Guidance

Comments: One commenter suggested revisions to NSIR/DPR-ISG-01, Section IV.D. The commenter stated that the NRC should revise the guidance to reflect the changes that the same commenter suggested for Appendix E, Section IV.E.8.d. In addition, the commenter recommended that the NRC remove the guidance paragraph suggesting that "'licensees strongly consider providing "event classification capability" at the alternative facility. The proposed rule does not require an alternative facility to have those capabilities. The commenter argued that the guidance document should not suggest actions beyond guidance for implementing the proposed EP requirements. [0102]

NRC Response: The NRC agrees in part and disagrees in part with the commenter. The guidance was not revised to state that the alternative facility should (ideally) have computer links to the site. For the reasons provided in the preceding related comment response, the NRC is not codifying the equipment that must be present in the alternative facility (or facilities), but rather allows licensees the flexibility to achieve the required facility capabilities in a manner most appropriate on a site-specific basis. Changes were made to the ISG in response to this comment.

The NRC also revised the ISG to reflect the change to the final rule that alternative facilities must collectively have the appropriate capabilities. This change was made for the reasons provided in the preceding related comment response.

The ISG wording was revised to state that licensees should "consider" (instead of "strongly consider") providing the capability for event classification at the alternative facility. This is a primary consideration if the EOF is in close proximity to the plant and would be inaccessible during a hostile action. Then the alternative facility would be the backup to the control room if it somehow lost the capability for event classification. This is guidance only for licensee consideration, and therefore not enforceable. Changes were made to the ISG in response to this comment.

Comment: Another commenter contended that Section IV.D of the guidance document contradicts the proposed rule language in Appendix E, Section IV.E. The rule states that an EOF should be between 10 and 25 miles from the site, and that a backup EOF facility is needed if the EOF is within 10 miles of the site. The guidance document states that it would be appropriate to use the EOF as the alternative facility if the EOF is located outside the owner controlled area and close to the site. The commenter requested clarification of the NRC's intent in the rule language and guidance document pertaining to the location of an alternative facility. [0090]

NRC Response: The NRC disagrees with the commenter. Section IV.D of the ISG does not contradict the rule language. The rule language of Section IV.E.8.d has no distance criteria for

the alternative facility. The language of Section IV.D reads that the alternative facility must be far enough removed from the site to be geographically separated from any hostile action, but within about 30 miles of the site. The EOF (or backup EOF) could function as the alternative facility if one of them meets this criterion. Licensees can also use other buildings, such as training centers, local emergency operations centers, or other enclosed assembly areas, as alternative facilities, and are not bound to use the EOF or backup EOF. No change was made to the final rule or ISG in response to this comment.

3.3.3 Other: ERO Augmentation and Alternative Facilities

Comment: One commenter stated that local emergency personnel should report to the TSC and OSC to participate in the decision-making at these centers, including decision-making for protective actions. [0048]

NRC Response: The NRC disagrees with the commenter. The TSC and OSC are licensee facilities that are located inside the protected area. There is no need for local responders to have access to these facilities because their primary purposes are licensee response and mitigation. The TSC functions to relieve the CR of onsite emergency response so the CR can focus on reactor plant safety. The OSC is an assembly area for site craft personnel who will staff site damage control teams. Protective action decision-making is generally done at local emergency operations centers which are accessible to the local response personnel. No change was made to the final rule or the ISG in response to this comment.

Comment: Another commenter mentioned that the requirements being proposed are similar to the requirements for an EOF. The commenter asked if the proposed change is applicable to licensees that have EOFs near their facilities. [0065]

NRC Response: Licensees must identify alternative facilities to support EOF activities. However, alternative facilities are not required to reproduce the full documentation present at primary emergency response facilities. This change is applicable to all licensees. Licensees with an EOF located near the site must decide if that facility is far enough removed from the site to utilize as the alternative facility. If not, another facility must be selected. No change was made to the final rule or the ISG in response to this comment.

3.4 Licensee Coordination with OROs During Hostile Action

3.4.1 Part 50, Appendix E, Section IV.A.7: Licensee Coordination with OROs During Hostile Action

Disagree with Rule Requirements

Comments: Many commenters disagreed with the proposed rule requirements in Appendix E, Section IV.A.7. Several of these commenters stated that the NRC and NPP licensees should not and do not have the authority to evaluate the appropriateness of ORO staffing, training, or access to response resources. The commenters explained that FEMA performs this function via the radiological emergency preparedness (REP) program and existing mutual aid agreements are in place to supplement response resources when needed. [0067, 0069, 0071, 0076, 0084, 0085, 0090, 0096, 0102, 0107, 0135] As a result, four commenters recommended that the NRC delete these proposed rule requirements. [0071, 0084, 0085, 0107] Three

commenters, suggested revisions to Appendix E, Section IV.A.7 to address these concerns. [0076, 0090, 0102]

NRC Response: The NRC disagrees in part with the commenters. The NRC recognizes that it does not have the authority to evaluate the appropriateness of ORO staffing, training, or access to response resources, and this was not the intent of the proposed rule. However, the NRC does have the authority to verify if a licensee has coordinated with, for example, local law enforcement, firefighting, and medical assistance organizations to respond to an emergency, including a hostile action, through letters of agreement or similar documentation. When the licensee clearly understands what resources will arrive for assistance during a hostile action, the licensee can incorporate logistics and support from OROs into the site's emergency plan. This will allow a licensee to establish in its plan any equipment and logistics support the ORO will require during a response. To clarify the NRC's intent, the proposed rule language was changed in the final rule by eliminating wording that could imply that the NRC has authority to evaluate the appropriateness of ORO activities. The final rule language kept the former rule text and added ", including hostile action at the site" to the end of the rule provision to ensure that each licensee identifies in its emergency plan the ORO resources that the licensee expects to respond to the site during a hostile action. This regulation will require NRC licensees to modify their plans and procedures to more effectively coordinate with OROs the responses to hostile action against the NPP sites. Changes were made to the final rule in response to these comments.

Comment: Another commenter stated that the requirements would force public safety agencies to evaluate the adequacy of mutual aid resources. The commenter further suggested that the requirements would create redundancies and potential conflicts with existing annual letters of certification. [FEMA-2008-0022-0125]

NRC Response: The NRC disagrees with the commenter. The NRC recognizes the need for OROs and licensees to determine that the mutual aid resources are adequate. NRC licensees are required to identify offsite resources that support onsite response during an emergency at the site. Licensees are also expected to review the adequacy of these resources as part of their annual emergency plan review process. State emergency management organizations are also required by FEMA to identify ORO resources relied upon in offsite REP plans and to annually review and document these resources in letters of certification provided to FEMA. The NRC does not agree that the new requirements for licensees would create redundancies or conflicts regarding annual letters of certification. No changes were made to the final rule or the ISG in response to this comment.

3.4.2 NSIR/DPR-ISG-01: Draft Interim Staff Guidance - Licensee Coordination with OROs During Hostile Action

Disagree with Proposed Guidance

Comments: Several commenters expressed opposition to the proposed guidance in the ISG. Five commenters stated that licensees and the NRC should not oversee offsite emergency response capabilities. [0060, 0069, 0100, 0102, 0135] One commenter suggested that the ISG unambiguously define NRC's expectations of licensees (i.e., have memoranda of understanding (MOUs) or LOAs that explain how OROs will provide resources even when their own resources are taxed). [0090] One commenter

recommended deleting the paragraph on page 19 of the ISG that starts off with "OROs should ....." The commenter also stated that the sections of the ISG on pages 19 and 20 that require the licensee to verify ORO program elements should be modified or deleted. [0060] Another commenter stated that those sections "required" licensees to verify ORO program elements, and should be deleted. [FEMA-2008-0022-0125]

NRC Response: The NRC agrees in part with the commenters. Certain aspects of the proposed changes to the ISG recommended by the commenters are attempting to clarify expectations raised by the proposed rule language. As described in previous comment responses, the NRC modified Section IV.A.7 of Appendix E in the final rule. Corresponding changes were made to the ISG in response to these and previous comments for the reasons provided in related previous comment responses. As clarification, the ISG is not a requirement and provides examples and/or ways to meet the requirements.

Comment: Another commenter urged that more specific, enforceable, performance-based standards for OROs need to be imposed. [0109]

NRC Response: The NRC disagrees with the commenter. The criteria for all of the demonstrable activities by OROs are outside of the NRC's authority. No change was made to the final rule or the guidance documents in response to this comment.

Disagree with Guidance Specific to Hostile Action

Comments: Two commenters argued that the distinct guidance provided for hostile action was not necessary. [0100, 0102] One of the commenters suggested that by proposing a separate set of expectations for hostile action, the ISG is in direct contrast with the goal of Presidential Directives, which seek to integrate the management of domestic incidents. [0102] The other commenter asked how a hostile action differs from a natural disaster, explaining that both types of events result in demand for limited resources. [0100]

NRC Response: The NRC disagrees with the commenters. Presidential Directives are not requirements for licensees, but licensees can voluntarily enhance their programs by adopting sound management principles of incident guidance at NPPs. The establishment of a separate set of expectations for hostile action affords the licensees the opportunity to ensure adequate planning, training, and interaction with OROs for this specific type of event which meets the goals of Presidential Directives. The NRC also disagrees with the comparison of natural disasters with hostile actions since there are unique aspects of a hostile action that are not paralleled by natural disasters. For example, a decision by the unified command to evacuate personnel while an NPP is experiencing a hostile action may place individuals in danger. In contrast, during natural disasters, emergency responders are free to move around the site without fear of weapons being fired at them. No change was made to the final rule or the guidance documents in response to these comments.

3.4.3 Other: Licensee Coordination with OROs During Hostile Action

General Disagreement

Comments: Six commenters opposed the use of the word "ensure" in the proposed rule and guidance. [0062, 0063, 0065, 0084, 0096, 0107] The commenters suggested that licensees would not be able to guarantee or "ensure" the availability of local resources during a hostile

action. Instead, many of these commenters suggested that licensees only be responsible for reviewing plans and MOUs, and that the NRC should rely on NIMS and State laws to "ensure" adequate resources. One commenter indicated that existing "State of Emergency" laws and regional public safety agency compacts already ensure the availability of offsite resources. The commenter claimed that the NRC's proposed requirements are unnecessary and would force OROs to generate and maintain additional MOUs. [FEMA-2008-0022-0125] One commenter stated that local governments will have additional duties to assist special groups in the emergency planning zone (EPZ), such as transportation-dependent groups. [0048] Another commenter disagreed with the new requirements because they would increase the burden on State and local government, and could affect the quality of emergency response. [0106]

NRC Response: The NRC agrees in part with the commenters. With the proposed rule language, the NRC did not intend to mandate that licensees require OROs to ensure the availability of resources during a hostile action. The requirement in the final rule is for each licensee to identify and provide a description of the resources required for a response to a hostile action and the expected assistance from those resources in the licensee's emergency plan. By the licensee listing these ORO resources in its plan, the licensee can review them with the OROs during licensee plan reviews.

MOUs or other agreements between licensees and OROs are required to identify in advance the offsite resources that may need to respond quickly for many types of emergencies at NPPs without having to rely on the declaration of a state of emergency by offsite authorities first. Maintaining such agreements is in the best interest of licensees for the protection of the public health and safety. MOUs may need to be amended to explicitly include hostile actions at the site among the types of emergencies to which OROs will respond. Changes were made to the final rule in response to these comments.

More Guidance Needed

Comments: Two commenters argued that the NRC needs to provide additional guidance. [0065, 0102] One of the commenters suggested that guidance is needed to clarify the acceptability of ORO capabilities (i.e., quantity and type of personnel). [0065] The other commenter stated that in order to understand NRC's expectations regarding OROs, licensees need guidance clarifying the extent of the radiological release that must be planned for in the event of a hostile action. [0102] The same commenter also indicated that the NRC did not provide specific guidance bounding the threat level beyond the DBT. [0102]

NRC Response: The NRC agrees in part and disagrees in part with the commenters. The NRC agrees with the commenter that clarification is needed on the expectation related to ORO responders. The NRC does not intend to require that licensees determine the acceptability of ORO capabilities. The language was revised in the final rule to require licensees to identify and describe the assistance expected from OROs to respond to an emergency, including hostile action, at each site. The NRC disagrees with the commenter regarding the need for guidance clarifying the extent of the radiological release that must be planned for in the event of a hostile action. The current EP planning basis for radiological releases won't change for releases caused by equipment damage due to hostile action. The comment regarding specific guidance for bounding of the DBT lacks specificity and cannot be assessed by the staff. Changes were made to the final rule in response to these comments.

3.5 Protection of Onsite Personnel

3.5.1 Part 50, Appendix E, Section IV.I: Protection of Onsite Personnel

Support of the Proposed Requirements

Comment: One commenter stated that the proposed requirement for onsite protective actions is consistent with the guidance it is meant to codify. [0102]
NRC Response: No response is necessary.

Opposition to the Proposed Requirements

Comment: One commenter suggested that the proposed rule was unnecessary because 10 CFR 50.47(b)(10) requires licensees to develop a range of protective actions for emergency workers and the public. The commenter stated that NRC should have considered adding evaluation criteria to Section II.J in NUREG-0654. [0135]

NRC Response: The NRC disagrees with the commenter. Although 10 CFR 50.47(b)(10) requires licensees to develop a range of protective actions for emergency workers and the public, the same actions may not be appropriate to take during hostile action. This new requirement ensures that licensees identify appropriate pre-planned actions to protect emergency responders who are expected to implement the emergency plan and licensee personnel responsible for safely shutting down the reactor in the event of hostile action. Adding an evaluation criterion to guidance (i.e., NUREG-0654) would not ensure that licensees would continue to provide the appropriate protective actions for these types of events. No changes were made to the final rule or ISG in response to this comment.

Suggested Revisions to the Proposed Requirements

Comment: One commenter objected to a "lack of specificity" in the proposed rule with regard to the protection of onsite personnel. The commenter stated that the NRC should require specific actions of licensees in order to actually improve the health and safety of onsite personnel. [0072]

NRC Response: The NRC disagrees with the commenter. While the final rule requires licensees to provide for the protection of onsite personnel, the range of protective actions will vary between sites. These protective actions will be specific to each site based on the physical layout of the site and the process for responding to an emergency. Guidance is provided in Bulletin 2005-02, Attachment 4, "Example Tools for the Development of Onsite Protective Measures," and licensees have already incorporated these protective actions in their procedures. NSIR/DPR-ISG-01 also provides additional guidance to licensees regarding the protection of onsite personnel. No change was made to the final rule or the guidance documents in response to this comment.

3.5.2 NSIR/DPR-ISG-01: Draft Interim Staff Guidance – Protection of Onsite Personnel

Suggested Revisions to the Draft Interim Staff Guidance

Comment: Two commenters stated that some licensees may utilize multiple operations procedures in response to security events, rather than a single procedure. [0102, 0103] One of the commenters suggested that the NRC revise a sentence in Section IV.F to read: "Licensees should consider developing procedures outlining station actions in response to security events." [0102]

NRC Response: The NRC agrees in part with the commenters. The ISG uses the language "operations procedure" to refer to the main procedure describing actions by operations personnel in response to hostile action and providing for protective measures that site personnel would be directed to take during such events. The NRC does not agree that a single procedure be developed for hostile action. The procedures for these events are written in the format of site specific emergency procedures and the event will determine procedure usage. A single procedure for all possible events would not be effective. No changes were made to the ISG in response to these comments.

Comment: One of the commenters also stated that some licensees may not have procedures in place for communication between security and site management. Accordingly, the commenter suggested adding "Examples of these communications should be placed in site procedures" in Section IV.E immediately after "Site management should be continually aware of the site security status and avoid actions that would potentially place onsite personnel in a dangerous environment." [0102]

NRC Response: The NRC disagrees with the commenter. Licensees have in place procedures and processes for communication between site security and the site CR/Emergency Director during routine operations and emergencies as required by 10 CFR Part 50, Appendix E, Sections IV.C, and IV.D. Licensees also modified and/or developed site specific procedures that define the communications between security and management as outlined in Bulletin 2005-02. No change was made to the ISG in response to this comment.

Comment: The other commenter objected that the NRC should not stipulate the content of the plant page announcement during a security event. The licensee should have the ability to tailor its announcement to the specific situation. [0103]

NRC Response: The NRC agrees with the commenter. However, neither the rule nor guidance stipulates the content of the plant page announcement. The licensee has been given latitude within existing regulations for procedural incorporation of appropriate content for the page announcement during a hostile action. No change was made to the final rule or the guidance documents in response to this comment.

3.5.3 Other: Protection of Onsite Personnel

No comments addressed this issue.

3.6 Challenging Drills and Exercises

3.6.1 Part 50, Appendix E, Section IV.F.2.a: Challenging Drills and Exercises

Change the Six-Year Exercise Cycle to Eight Years

Comment: Several commenters recommended that the NRC move to an eight-year schedule to allow OROs and licensees to demonstrate all of the exercise requirements. [0060, 0068, 0069, 0071, 0085, 0096, 0102]

NRC Response: The NRC agrees with the commenters. An 8-year cycle would allow more flexibility in scheduling the various exercise scenario requirements while maintaining challenging scenarios and additionally places the appropriate emphasis on hostile action scenarios. Changes were made to the final rule in response to this comment.

Support for the Proposed Rule Language

Comment: One commenter stated that the proposed changes to Appendix E, Section IV. pertaining to drills and exercises are acceptable. [0102]

NRC Response: No response is necessary.

Comments: One commenter offered two suggestions related to the proposed language in Appendix E, Section IV.F.2. First, the commenter stated that the reference to testing of the "public notification system" is unclear (i.e., is this the "alert and notification system" or something different?). The commenter also recommended that a conforming change to 10 CFR 50.4 is needed because 10 CFR 50.4 only references submittal of emergency plans, changes to emergency plans, and emergency plan implementing procedures. [0084]

NRC Response: The NRC agrees in part with the commenter. Appendix E, Section IV.F.2 of the proposed rule included the term "public notification system" whereas the term "public alert and notification system" was used elsewhere. Changes were made to the final rule in response to this comment.

The NRC disagrees that a conforming change to 10 CFR 50.4 is needed. The commenter referred to 10 CFR 50.4(b)(5), which provides instructions concerning the persons at the NRC to whom an emergency plan, an emergency plan change, or emergency implementing procedures should be submitted. Exercise scenarios would not fall under one of these categories in 10 CFR 50.4(b)(5). Exercise scenarios should be submitted under 10 CFR 50.4(a). No change was made to the rule in response to this comment.

3.6.2 Part 50, Appendix E, Section IV.F.2.b: Challenging Drills and Exercises

Comments: One commenter argued that the list of skills in Appendix E, Section IV.F.2.b needs to be more specific. The commenter suggested that the proposed language should be changed to make it clear that hostile action exercises must focus on both onsite and offsite training objectives. [0072]

NRC Response: The NRC disagrees with the commenter. The list of skills in Appendix E, Section IV.F.2.b of the proposed and final rules is much more specific than the former Section IV.F.2.b requirements, and the requirements are further elaborated upon in guidance.

The NRC disagrees that the proposed language should be changed to make it clear that hostile action exercises must focus on both onsite and offsite training objectives. Exercises always focus on both onsite and offsite demonstration objectives, and it is not clear what value could be added by making the change suggested by the commenter due to the comment's lack of specificity. No change was made to the final rule in response to these comments.

3.6.3 Part 50, Appendix E, Section IV.F.2.i: Challenging Drills and Exercises

Comments: With regard to Appendix E, Section IV.F.2.i., two commenters suggested that the exercise scenario requirements are more appropriate for a guidance document than rule language. [0084, 0135] Another commenter urged that more specific guidance is needed to provide boundaries on the threat levels beyond the DBT that EP exercises would have to cover. The commenter recommended that the NRC remove the requirement to perform hostile action exercises where more than a minimal radioactive release is assumed until more specific guidance bounding such exercises is developed. [0102]

NRC Response: The NRC disagrees with the commenters. Specific guidance is not necessary regarding threat levels beyond the DBT. Drill and exercise scenarios typically exceed the design basis and, in the case of hostile action scenarios, may be assumed to exceed the DBT. If they did not, there would be no demonstration of the key skills of emergency response because the plant design addresses the design basis accident. This is the case for the typical plant equipment failure scenarios as well as hostile action scenarios. The plant is designed to cope with design basis accidents and the security force is designed to cope with the design basis threat. However, there is no need to specify the threat or the security response to the threat in scenarios because this could involve safeguards information and adds no value for demonstration of emergency response. The guidance for hostile action scenarios specifies the need to demonstrate the key skills involved with recovery of damaged systems. The actual threat does not need to be described in any detail. No change was made to the final rule in response to these comments.

The NRC disagrees that scenario requirements should only be given in guidance. The specific requirements in the final rule are considered the minimum needed to ensure consistent implementation. As noted in the proposed rule SOC, the NRC identified several concerns with the content of exercise scenarios and undertook rulemaking to remedy the situation. Guidance alone would not allow consistent implementation and enforcement. No change was made to the final rule in response to these comments.

3.6.4 Part 50, Appendix E, Section IV.F.2.j: Challenging Drills and Exercises

<u>Scenarios with No or Minimal Radiological Releases</u>

Comments: Two commenters opposed the proposed rule requirement that some exercises involve scenarios with no or minimal radiological releases. The commenters stated that these exercises would not test many of the FEMA evaluation criteria for OROs. [0068, 0072] Another commenter suggested that hostile action exercises may not demonstrate reasonable assurance from FEMA's perspective because these scenarios may not include events needed to allow offsite agencies to demonstrate their FEMA objectives. [0135]

NRC Response: The NRC disagrees in part with the commenters. The proposed rule SOC stated many reasons for requiring variation in exercise scenario content, including radioactive release. The former system, which predictably resulted in large releases, caused negative training. Accident analyses indicate that reactor accidents would not likely result in large releases and that if they did, the accident would not resemble the timing of events often used in exercise scenarios (e.g., NUREG-1150, "Severe Accident Risks: An Assessment for Five U.S. Nuclear Power Plants, Final Summary Report"). In some past emergency responses, ORO personnel implemented actions inappropriate for the level of emergency, likely due to training received in exercises based on unrealistic scenarios. This results from the use of scenarios that always proceed to a large release and where preemptive actions are always correct. The commenters are correct in that exercises without large radiological releases may not train all aspects of on-site and off-site response. However, the NRC maintains that demonstration of protective action decision making when evacuation or sheltering is not appropriate must be evaluated. The NRC staff has reviewed FEMA's evaluation methodology with FEMA staff and determined that if an exercise with no or minimal release does not provide all necessary demonstrations to meet FEMA objectives, then alternative methods for demonstration and evaluation of FEMA objectives are available. However, any scenario, including a hostile action scenario that includes a significant radiological release and a General Emergency, would be sufficient to allow OROs to demonstrate FEMA objectives. The NRC expects that OROs and FEMA will develop an extent of play agreement to ensure understanding of the necessary demonstrations, as has been the practice for many years. No change was made to the final rule in response to these comments.

Length of the Exercise Cycle

Comment: A commenter suggested that hostile action exercises should occur more often than once every eight years. [0072]

NRC Response: The NRC disagrees that hostile action exercises should occur more often than once in eight years. An eight-year exercise cycle increases the variability of the required scenario elements as well as those contained in guidance. If the hostile action exercise were performed more often than once per cycle, it would reduce the level of variability and unduly emphasize one scenario over others. No change was made to the final rule in response to this comment.

Other Comments

Comment: One commenter noted that the first mention of the joint information center (JIC) is in Appendix E, Section IV.F.2.j of the proposed rule. The commenter recommended that the NRC clarify the requirements for the JIC. [0084]

NRC Response: The NRC disagrees that the requirements for the JIC need to be clarified. Requirements for JICs exist in 10 CFR 50.47(b)(7). The NRC did not propose new requirements except that licensees need to demonstrate during exercises the key skills specific to emergency response duties in the JIC. No change was made to the final rule in response to this comment.

Comments: Two commenters argued that the proposed changes in this section of the rule do not fix the predictability of exercises. The commenters suggested that the added exercise

elements make the exercises just as predictable as before the rule. [0096, 0135] One of the commenters made three suggestions to improve Appendix E, Section IV.F.2.j. First, the commenter suggested that the NRC delete the reference to 10 CFR 50.54(hh). In addition, the commenter urged the NRC to remove the requirement that hostile action drills be evaluated. Instead, the commenter suggested that hostile action drills be incorporated into NRC's triennial force-on-force (FOF) drills. [0096]

NRC Response: The NRC disagrees with the commenter. The final rule improves scenario variability. Under the former regulation, all exercise scenarios resulted in large releases and very unlikely accidents. By requiring different types of releases and other scenario elements, the final rule adds variability to the scenarios.

The NRC disagrees that the reference to 10 CFR 50.54(hh) be removed or that hostile action scenarios be performed in FOF exercises. The NRC added the use of mitigation equipment and procedures required by 10 CFR 50.54(hh)(2) and response to hostile action because they are important elements of nuclear plant defense-in-depth. Including the use of 10 CFR 50.54(hh)(2) equipment in FOF exercises would be inappropriate because the security responders would not use this equipment. Rather, use of 10 CFR 50.54(hh)(2) equipment would await the activation of the ERO, and their skills are demonstrated in biennial exercises. Additionally, the NRC has previously determined that combining EP and FOF drills would be extremely complicated due to differences in scope and the introduction of safeguards information issues. Further, the exercises are easily separated and performance addressed individually as the response is essentially serial. The aftermath of a security response can be simulated effectively in EP exercises. This has been demonstrated during the hostile action drill pilot program. No change was made to the final rule in response to these comments.

3.6.5 NSIR/DPR-ISG-01: Draft Interim Staff Guidance – Challenging Drills and Exercises

Type of Radiological Release During Scenarios

Comments: Two commenters suggested changes to the ISG related to the type of radiological release assumed during scenarios. The commenters stated that the following statement on page 29 of the ISG should be deleted: "Scenarios with no or an unplanned minimal radiological release should not be used in consecutive HAB exercises." [0060, 0102] One of the commenters argued that the statement specifies a sequence, which is predictable. This commenter urged that determination of release or no release and size of release should be left up to the scenario development team and should not be prescribed by the ISG. [0102]

NRC Response: The NRC agrees that statement "Scenarios with no or an unplanned minimal radiological release should not be used in consecutive hostile action based exercises" should be removed from the ISG. Changes were made to the ISG in order to allow more variability in scenario content during an exercise cycle.

Comment: A commenter argued that hostile action exercises should be limited to no release or minimal radiological release options as was demonstrated during the Phase 3 pilot drill program. [0102]

NRC Response: The NRC disagrees with the commenter. The proposed rule established significant variation in scenario content and other enhancements to the former requirements. There is no need to limit licensee flexibility to vary scenario content by requiring that hostile action scenarios only have a minimal or no release. Hostile action is one of many potential, but unlikely, initiating events that can be used in exercise scenarios. The NRC intends that the rule foster increased scenario variation for the many reasons stated in the SOC. No change was made to the ISG in response to this comment.

Length of the Exercise Cycle

Comment: A commenter suggested that Evaluation Criterion N.1.b is unacceptable because HSEEP requires a five-year planning cycle, rather than six years. [0100]

NRC Response: The NRC disagrees with the commenter. The NRC has determined that a longer exercise cycle will foster greater scenario variation while the shorter cycle of HSEEP would detract from scenario variation, limit flexibility, and increase predictability. No change was made to the ISG in response to this comment.

Other Comments

Comment: One commenter suggested that the ISG should include the NRC staff's expectation for licensees with multiple units at a single site with different reactor designs but a common site emergency plan. The commenter stated that the NRC's expectation should be that exercise demonstration would be rotated between the reactors with differing reactor designs and their respective supporting EROs. [0049]

NRC Response: The NRC agrees that the ISG should include the NRC staff's expectation for licensees with multiple units at a single site with different reactor designs but a common site emergency plan. Changes were made to the ISG in response to this comment.

Comment: A commenter argued that the ISG is unnecessarily prescriptive with regard to the conduct of drills and exercises. [0090]

NRC Response: The NRC disagrees with the commenter. The ISG is not overly prescriptive in that it provides licensees with flexibility by suggesting that some scenario elements may be performed in drills if not done in exercises. Section 50.47(b)(14) of the NRC's regulations requires that licensees exercise major portions of capabilities and licensees should already be developing scenarios to meet that requirement. The elements of the ISG articulate and clarify NRC expectations for drill and exercise scenarios. No change was made to the ISG in response to this comment.

Comments: One commenter suggested that the reason there are predicable elements to the exercise is that the NRC and FEMA require certain objectives be met by the ERO and OROs. The commenter also stated that exercises should be designed to allow enough time to adequately test the emergency plan and work the emergency plan. [0100]

NRC Response: The NRC agrees that the reason there are predicable elements to the exercise is due to NRC and FEMA requirements. The final rule improves the variability of scenarios and does not prevent scenario structure to allow time to test the plan. No change was made to the ISG in response to these comments.

Comment: Another commenter suggested that hostile action exercises should be tested or demonstrated outside of the biennial exercise cycle as other required elements are (i.e., after hours exercises). [0114]

NRC Response: The NRC disagrees with the commenter. The NRC originally proposed such a system several years ago. However, the nuclear power industry counter-proposed to include hostile action scenarios in biennial exercises. The NRC accepted that proposal and significant effort has been invested in achieving that goal. For example, every nuclear power plant site has conducted a pilot hostile action drill. There is no technical reason to now reverse this course of action. No change was made to the ISG in response to this comment.

Comments: One commenter disagreed with a statement in the last paragraph on page 23 of the ISG that states, "regulatory changes would be necessary to require enhancement of scenario content." The commenter argued that licensees are capable of addressing variations of scenarios by using guidance versus rulemaking. The commenter also disagreed with a statement on page 24 in the second paragraph. The commenter suggested that the statement that drill programs provide "the same negative training as found in the biennial exercise" is a generalization that does not apply to much of the industry. With regard to the last paragraph on page 24 of the ISG, the commenter stated that many of the elements listed are currently required by FEMA requirements and expectations to satisfy adequate offsite preparedness. In addition, the commenter recommended that the statement addressing PARs should clarify that plant conditions should be the initial driver of PARs, but may be supplemented by radiological assessment. [0114]

NRC Response: The NRC disagrees in part and agrees in part with the commenter. Regulatory changes are necessary to require the enhancement of exercise scenario content. The NRC cannot use guidance to impose requirements on licensees, and the NRC's former regulations did not allow the NRC to require licensees to improve their exercise scenario content. Therefore, rulemaking is necessary to achieve consistent improvement in scenario content. No change was made to the ISG in response to this comment.

The NRC agrees that the statement that drill programs provide "the same negative training as found in the biennial exercise" is a generalization that does not apply to much of the industry. The wording was changed in the ISG to indicate a trend rather than an absolute statement of fact.

The NRC disagrees that the ISG statement addressing protective action recommendations (PARs) should clarify that plant conditions should be the initial driver of PARs, but may be supplemented by radiological assessment. However, this guidance is provided in the revision of NUREG-0654, Supplement 3, Draft Report for Comment, "Guidance for Protective Action Recommendations for General Emergencies," (Agencywide Documents Access and Management System (ADAMS) Accession No. ML1001502680) and need not be repeated in the ISG. Changes were made to the ISG to remove this statement.

Comment: With regard to Evaluation Criterion N.1.a, one commenter argued that the NRC and FEMA must synchronize HSEEP and REP regulations and other exercise requirements. [0100]

NRC Response: The NRC agrees that NRC and FEMA should consider synchronizing HSEEP and EP regulations and other exercise requirements. In the proposed rule, the NRC did not

propose that NPP licensees be subject to HSEEP. The NRC maintains this position in the final rule. Because the exercise requirements and guidance for OROs and NPP licensees are not the same, the NRC and FEMA are exploring methods to integrate nuclear power plant EP oversight with broader national level preparedness initiatives. No change was made to the ISG in response to this comment.

Comments: With regard to Evaluation Criterion N.1.b, one commenter opposed the requirement for a rapid escalation to an SAE or GE because it "does nothing, exercise-wise, except make participants scramble." The commenter also asked what the NRC means by: "Implementation of strategies, procedures, and guidance developed under 10 CFR 50.54(hh)." The commenter also suggested that the scenario bullet, "Hostile action directed against the plant site," is equivalent to the scenario variation bullet entitled, "Integration of offsite resources with onsite response." [0100]

NRC Response: The NRC disagrees that a rapid escalation to an SAE or GE does nothing except make participants scramble. The rapid escalation element provides more realistic scenarios than the current slow progression and increases scenario variability, thereby enhancing participants' training. No change was made to the final rule or the guidance documents in response to this comment.

Section 50.54(hh) requires that licensees develop procedures to respond to an aircraft threat and develop guidance and strategies to restore core cooling capabilities after the loss of large areas of the plant due to explosion or fire. The NRC expects that these capabilities will be developed and maintained through the drill and exercise program.

The NRC disagrees that the scenario bullet entitled, "Hostile action directed against the plant site," is equivalent to the scenario variation bullet entitled, "Integration of offsite resources with onsite response." Integration of offsite and onsite response need not include a hostile action; it could be in response to a fire or medical emergency. However, hostile action challenges emergency response in unique ways and the NRC expects that key skills will be developed and maintained through the drill and exercise program. No change was made to the final rule or guidance documents in response to this comment.

Comments: A commenter stated that Evaluation Criterion N.1.c. conflicts with the 9th bullet on page 29 of the ISG, which reads: "Real-time staffing of facilities during off-hours (i.e., 6:00 pm to 4:00 am) (need not be performed in an exercise)." [0100] Another commenter urged the NRC to include guidance in the ISG calling for rapidly escalating drills on a more regular basis. The commenter also suggested that the guidance not allow licensees to only escalate to an SAE. [0109] A commenter opposed Evaluation Criterion N.1.c because it would intrude on FEMA's area of responsibility. According to the commenter, FEMA determined that there was no need or requirement for offsite organizations to participate in off-hours or unannounced evaluated exercises. [0100] Another commenter disagreed with Evaluation Criterion N.1.c that drills and exercises need to be performed under various weather conditions. The commenter stated that EAL conditions can be simulated. Further, the commenter recommended that the NRC needs to clarify Evaluation Criterion N.1.c so that the word "Some" is quantified or deleted. [0114]

NRC Response: The NRC agrees in part and disagrees in part with the commenters. The guidance for "Real-time staffing of facilities during off-hours (i.e., 6 00 pm to 4 00 am) (need not be performed in an exercise)," does not conflict with Evaluation Criterion N.1.c. Both items could be met with an off-hours drill but need not be. Real-time staffing could also be achieved

during a call out drill to test activation capability. No change was made to the final rule or the ISG in response to this comment.

The NRC disagrees that it should include guidance in the ISG calling for rapidly escalating drills on a more regular basis or that the guidance be changed to prevent licensees to only escalate to an SAE. The final rule requires licensees to include in each eight calendar year exercise cycle at least one exercise to include rapid escalation. It is the NRC's experience that elements required in exercises are practiced in drills. In effect, the rule requirement will cause many licensees to include this element in drills, even though it is not required and that will cause it to be practiced more often than the rule itself requires.

The rule allows but does not require rapid escalation to a GE. Licensees may meet the requirement by escalation to an SAE. This element will improve scenario variability and realism with respect to the practice under the previous regulations. No change was made to the final rule or the ISG in response to this comment.

The NRC disagrees that there is a requirement for offsite organizations to participate in off-hours or unannounced evaluated exercises. Evaluation Criterion N.1.c. does not require offsite participation and may be performed in a utility only drill. No change was made to the final rule or the ISG in response to this comment.

The NRC agrees that drills and exercises need not be performed under various weather conditions. The licensee has no control over weather and should not be required to simulate weather conditions. Changes were made to the ISG in response to this comment.

The NRC agrees that the word "Some" in Evaluation Criterion N.1.c should be clarified. The ISG was revised to change "Some" to "At least one."

Comment: Another commenter recommended that the NRC modify NUREG-0654 by updating Evaluation Criterion N.2.e as follows:

> "Evaluation Criterion N.2.e is being updated to reflect current regulatory positions and industry operating experience.
>
> e. Health Physics Drills
>
> Health Physics drills shall be conducted semi-annually which involve responses to abnormal radiological conditions. These conditions may include simulated elevated airborne and/or liquid radioactivity levels both in-plant or in the environment." [0102]

NRC Response: The NRC agrees that these changes could enhance guidance. However, the final rule does not require revision of this portion of the guidance. The NRC expects to revise NUREG-0654 in the future and this item could be addressed at that time. No change was made to the final rule or guidance documents in response to this comment.

Comments: One commenter suggested that the statements in the third paragraph on page 30 of the ISG should be reconsidered. The commenter stated that NRC approval of scenarios likely will delay the development of the final product. The commenter argued that this approval process would add unnecessary administrative burden. [0114]

NRC Response: The NRC disagrees in part with the commenter. The language in the ISG with which the commenter takes issue is based on the proposed rule requirement that would have required the NRC to review and approve all biennial exercise scenarios. The final rule maintains the review requirement because recent NRC experience shows that some licensees have not improved scenario content and in some cases have presented scenarios that were not challenging. The review of scenarios will eliminate this issue. However, the NRC will not approve exercise scenarios and will provide comments to the licensee if concerns are noted. The final rule requires licensees to submit scenarios to the NRC at least 60 days before the start of the biennial exercise. The NRC will provide the licensee with any comments no later than 30 days before the exercise begins. The final rule and ISG were revised in response to this comment.

Comment: A commenter suggested the NRC add the following language to the ISG to be consistent with NRC Inspection Procedure 71114.01:

> "A licensee may conduct a Hostile Action-Based (HAB) drill immediately prior to an HAB exercise. The hostile action (attack) should be varied between the two scenarios, e.g., attack type or direction, number of attackers, attack timeline, damage, results and consequences, etc. It is recognized that the planning, scheduling and logistical arrangements necessary to conduct a HAB drill or exercise challenge the normal expectations for scenario confidentiality, i.e., some participants may know that an HAB scenario will be used in a drill or exercise. Under no circumstances may a participant know any details of the scenario (i.e., specific event timeline and related information)." [0102]

NRC Response: The NRC agrees in part with the commenter with regards to normal expectations for scenario confidentiality. A portion of this language would add value to the ISG, but the number of attackers, the timeline, etc. is not necessary for an exercise scenario. Changes were made to the ISG in response to this comment.

<u>Recommendations on ISG</u>

Comments: An industry representative suggested a variety of changes to the guidance in the ISG. These comments and recommendations are discussed in detail below. [0102]

Section IV.G, Challenging Drills and Exercises, Page 27

With regard to the fourth bullet under the six-year cycle requirements in Evaluation Criterion N.1.b, the commenter recommended that the NRC revise the ISG as follows: "Implementation of strategies, procedures and guidance developed under 10 CFR 50.54(hh)(2). Actual movement and operation of equipment may be simulated." The commenter suggested that as currently written, the ISG would require a licensee to conduct an aircraft threat HAB exercise once every six years and would not allow land or waterborne threat scenarios. The commenter recommended that the NRC carefully consider the implications of the guidance on the exercise submittal, review, approval, and implementation process because these scenarios could meet the safeguards information (SGI) threshold (e.g., target set information), or otherwise provide information advantageous to an adversary. According to the commenter, EP exercise scenario materials are provided to personnel outside of the licensee's control. [0102]

NRC Response: The NRC agrees in part and disagrees in part with the commenter. The NRC disagrees that the ISG would require a licensee to conduct an aircraft threat hostile action exercise once every six years and would not allow land or waterborne threat scenarios. The ISG allows simulation of equipment operation, and the simulation could be used in response to any loss of cooling capacity or containment regardless of the initiating condition. Further, the demonstration may be performed during drills in addition to the demonstrations required in exercises to allow both armed attack and aircraft attack to be included in scenarios. No change was made to the ISG in response to this comment.

The NRC agrees that it should provide guidance with respect to handling SGI in drill and exercise scenarios. The NRC recognizes the importance of properly maintaining SGI. Nothing in the ISG requires that SGI be included in a scenario. Guidance was added to the ISG in response to this comment.

Section IV.G, Challenging Drills and Exercises, Page 28

Comment: With regard to the second bullet, the commenter recommended that the NRC revise the ISG as follows: "Shift staff response to an emergency initiating condition (e.g., a plant transient, fire, natural phenomenon, etc.) while implementing the emergency plan." The commenter explained that some drills or exercises start off with non-operational events that do not cause a plant transient (e.g., a fire, a gas release, a small earthquake). [0102]

NRC Response: The NRC agrees that some drills or exercises may start with non-operational events that do not cause a plant transient. Changes were made to the ISG in response to this comment.

Comment: With regard to the seventh bullet, the commenter suggested that the NRC revise the ISG as follows: "Development and implementation of radiological protective actions for onsite workers as appropriate to the exercise scenario." The commenter stated that the added text clarifies the NRC's intent regarding the selection of worker protective measures. [0102]

NRC Response: The NRC agrees that the statement in the ISG should be clarified to state that radiological protective actions for onsite workers should be appropriate to the exercise scenario. Changes were made to the ISG in response to this comment.

Comment: With regard to the ninth bullet, the commenter recommended that the NRC revise the ISG as follows: "Accident mitigation through the simulated repair of equipment." The commenter suggested that the term "simulated physical" is confusing. In addition, the commenter deleted "physical" because contact with plant equipment is not allowed during drills and exercises. [0102]

NRC Response: The NRC agrees that the term "simulated physical repair" is confusing. Changes were made to the ISG in response to this comment.

Section IV.G, Challenging Drills and Exercises, Page 29

Comment: In the list of "scenario elements" that should be included "during the conduct of drills and exercises over the course of an exercise planning cycle," the commenter suggested that the NRC revise the first bullet as follows: "Demonstration of all functions in each ERF (e.g., all ERFs that are responsible for dose assessment perform those duties in response to a

radiological release). Demonstration of a function may be performed out-of-sequence from the main scenario timeline, or as a stand-alone activity." The commenter stated that the suggested approach will avoid the need to present an unlikely series of events which may have adverse effects on other aspects of the drill, and will promote more realistic scenario content and timing. In addition, the commenter suggested that the revised version aligns better with the proposed rule in Appendix E, Section IV.F.2. [0102]

NRC Response: The NRC agrees with the commenter. The emergency response facility (ERF) functions may be performed out-of-sequence from the main scenario timeline, or as a stand-alone activity. Since the requirement is for a drill and exercise cycle, not just for exercises, these elements could be performed during drills, which could be quite limited in scope (e.g., a stand-alone activity) and yet be acceptable. The NRC did not intend to require these functions to be performed in a single scenario because this would lead to highly unlikely event timing. Changes were made to the ISG in response to this comment.

Comment: In the list of "scenario elements" that should be included "during the conduct of drills and exercises over the course of an exercise planning cycle," the commenter recommended that the NRC revise the third bullet as follows:

> "The ability to assess and simulate repair of critical equipment damaged by hostile action after the active attack. This includes engineering support, repair plan development, and formation and dispatch of repair teams. Dispatch of repair teams would occur when security and LLEA have determined that the site is secure enough to allow prioritized, limited movement of personnel." [0102]

NRC Response: The NRC agrees in part that simulated repairs be performed after an active attack has ended. However, this element may be performed before the site is deemed totally secure, as security sweeps and crime scene activities could take a day or more to accomplish and urgent safety related repairs cannot await completion of those activities. The guidance can be more flexible, but the scenario must provide opportunity for demonstration of prioritization of security resources to protect repair teams and allow rapid response to plant damage caused by hostile action. Changes were made to the ISG in response to this comment.

Comment: The commenter stated that the language of the third bullet in the list of "scenario elements" conflicts with the discussion of the alternate facility in Section IV.D, which stated that personnel would move after or when the site is secured. [0102]

NRC Response: The NRC agrees with the commenter. The intent of the third bullet is that personnel would move when it is safe to do so, but would demonstrate the capability to support the damage control efforts before the site is fully secured and/or all crime scene activities have been completed. Changes were made to the ISG in response to this comment.

Comment: In the list of "scenario elements" that should be included "during the conduct of drills and exercises over the course of an exercise planning cycle," the commenter recommended that the NRC revise the fourth bullet as follows: "Response to a scenario with radiological release that requires public protective actions, and response to a scenario with no radiological release or an unplanned minimal radiological release that does not require public protective actions." The commenter suggested that the revision will promote greater diversity (and unpredictability) of scenarios. [0102]

NRC Response: The NRC agrees that the proposed wording will promote greater diversity (and variability) of scenarios. Changes were made to the ISG in response to this comment.

Comment: In the list of "scenario elements" that should be included "during the conduct of drills and exercises over the course of an exercise planning cycle," the commenter recommended that the NRC revise the seventh bullet as follows: "The successful repair of simulated damaged equipment to prevent or mitigate loss of the fuel clad, reactor vessel or containment barriers, and/or restore a 'defense-in-depth' capability (twice per exercise cycle)." The commenter argued that the revision improves clarity. [0102]

NRC Response: The NRC agrees in part with the commenter. The ISG was revised to include reactor pressure boundary, instead of limiting the scenario element to the reactor pressure vessel. However, the NRC does not agree with inclusion of the "defense in depth" statement. This element could weaken the response demonstration (e.g., repair of an emergency generator not currently needed to protect fission product barriers) by not focusing on the licensee's demonstration of its ability to initiate damage control activities to mitigate a core damage sequence. Changes were made to the ISG in response to this comment.

Comment: In the list of "scenario elements" that should be included "during the conduct of drills and exercises over the course of an exercise planning cycle," the commenter recommended that the NRC revise the eighth bullet as follows: "The use of alternative facilities to stage the ERO for rapid activation during a hostile action (need not be performed in an exercise)." The commenter added the phrase "(need not be performed in an exercise)" to allow licensees additional flexibility. [0102]

NRC Response: The NRC agrees that the added phrase "need not be performed in an exercise" would allow licensees additional flexibility and increase scenario variability. Changes were made to the ISG in response to this comment.

Comment: In the list of "scenario elements" that should be included "during the conduct of drills and exercises over the course of an exercise planning cycle," the commenter recommended that the NRC revise the tenth bullet as follows: "The ability to provide medical care for injured, contaminated personnel (need not be performed in an exercise)." The commenter added the phrase "(need not be performed in an exercise)" to allow licensees additional flexibility. [0102]

NRC Response: The NRC agrees that the added phrase "need not be performed in an exercise" would allow licensees additional flexibility and increase scenario variability. Changes were made to the ISG in response to this comment.

Comment: In the list of "scenario elements" that should be included "during the conduct of drills and exercises over the course of an exercise planning cycle," the commenter recommended that the NRC revise the eleventh bullet as follows:

> "The use of approximately 75% of initiating conditions identified in the site emergency plan implementing procedure for classification of emergencies in training, license exam, drill, or exercise scenarios. The variation of initiating conditions used over a planning cycle should yield the maximum range of realistic, predictable and credible scenarios for that plant's design." [0102]

The commenter suggested replacing “essentially 100%” with “approximately 75%” to allow licensees to select emergency initiating conditions that yield realistic, predictable and credible scenarios consistent with the goal of presenting a wide variety of conditions. In addition, the commenter added training and license exams as acceptable settings for presenting an emergency initiating condition to provide licensees with greater flexibility. [0102]

NRC Response: The NRC disagrees with the commenter. The exercise cycle was increased to 8 years in the final rule and allows for essentially 100% of initiating conditions to be included in drills or exercises in a reasonable manner without compromising the goal of realistic yet varied scenarios. There are several opportunities to complete this element, such as operator license training and exams. No change was made to the ISG in response to this comment.

Comment: In the list of “scenario elements” that should be included “during the conduct of drills and exercises over the course of an exercise planning cycle,” the commenter recommended that the NRC delete the following language from the twelfth bullet: “The use of wind direction and persistence representative of the site.” The commenter suggested that there is no clear basis or benefit for this requirement. [0102]

NRC Response: The NRC agrees with the commenter. This bullet would detract from scenario variability and licensee flexibility. Changes were made to the ISG in response to this comment.

Section IV.G, Challenging Drills and Exercises, Pages 29 and 30

Comment: The commenter recommended that the NRC reconsider the following guidance because of the limited availability of initiating conditions and EALs for use in drills and exercises: “Scenarios would be considered sufficiently diverse when no more than one EAL is shared,” and, “Where the design of plant systems makes variation difficult, circumstances and timing may be changed to effect the required variation (e.g., a fire or explosion causes the failure rather than a random mechanical fault). Drill scenarios should not be used for a biennial exercise within 3 years of use.” According to the commenter, there is a relatively limited number of EALs to select from for SAE and GE events. As a result, the commenter suggested the following guidance: “Scenarios would be considered sufficiently diverse when no more than one EAL is shared between consecutive biennial exercises.” [0102]

NRC Response: The NRC agrees in part that the limited availability of Initiating Conditions and EALs may not allow licensees to develop scenarios with wide variation. There may not be enough GE’s to allow 3 years worth of drills without repeating GE EALs in exercises, but there probably are enough SAE EALs to meet the guidance. Changes were made to the ISG in response to this comment.

Section IV.G, Challenging Drills and Exercises, Page 30

Comment: The commenter recommended that the NRC revise the ISG as follows: “A complete drill scenario should not be used for a biennial exercise within 24 months of use.” The commenter suggested that it should be acceptable to use some elements of a previous drill scenario in an exercise scenario if other, new, or changed material is added. [0102]

NRC Response: The NRC agrees in part with the commenter. Some elements of a previous drill scenario could be reused in an exercise scenario without detracting from the performance

enhancing experience, but the complete scenario should not be used. This may require licensees to provide information on which elements have been reused when the scenario is submitted for review. Twenty-four months is a long enough period of time for reuse of elements without concern regarding compromise of scenario content. Changes were made to the ISG in response to this comment.

Comment: The commenter recommended that the NRC revise the ISG as follows: "The NRC staff would review and approve all biennial exercise scenarios. Scenarios should be submitted at least 60 days prior to the exercise date. NRC staff comments on a scenario should be provided to the licensee no later than 45 days prior to the exercise date." The commenter suggested that the proposed change allows the staff two weeks to review and aggregate comments. In addition, the commenter stated that the 45-day window allows licensees adequate time to make and validate changes prior to conducting exercise controller briefings and providing updated scenario materials to FEMA. [0102] Another commenter provided suggestions on the NRC review of scenarios and recommended that NRC commit to reviewing and returning scenarios to the licensee within a set time period (e.g., 15 days). [0065]

NRC Response: The NRC agrees in part with the commenters that there should be a schedule for NRC review of scenarios and that the results should be provided to the licensee in a reasonable timeframe. The final rule requires licensees to submit scenarios to the NRC at least 60 days before the start of the biennial exercise. The NRC will provide the licensee with any comments no later than 30 days before the exercise begins. Changes were made to the ISG in response to this comment.

Comment: With regard to the second paragraph, first sentence, the industry representative recommended that the NRC revise the ISG to say: "Mitigative measures in hostile based scenarios should commence after the simulated active attack has ceased, and LLEAs and site security have determined that the site is secure enough to allow prioritized, limited movement of personnel." The commenter stated that this change reflects "lessons learned" from HAB drills. [0102]

NRC Response: The NRC disagrees that licensees need only demonstrate response to the aftermath of hostile action after LLEAs and site security have determined that the site is secure. It may take a day or more for this to occur and demonstration of response must be performed before the site is deemed totally secure to show the ability to prioritize protective action for teams that conduct urgent repairs. This decision cannot be left solely to LLEA or site security, but must be made in concert with site management considering nuclear and public safety. The scenario must challenge responders to demonstrate the capability to perform such repairs rather than declare the site safe and allow normal operations to proceed. No change was made to the ISG in response to this comment.

3.6.6 Other: Challenging Drills and Exercises

Opposed to No or Minimal Release Scenario

Comments: Several commenters opposed the use of no or minimal release scenarios in exercises and drills. The commenters explained that a release (at a GE) is needed to fully engage OROs. [0061, 0073, 0096, 0109] One commenter suggested that hostile action scenarios should reflect a fast-breaking radiological release caused by an intentional attack on spent fuel storage facilities. [0109]

NRC Response: The NRC disagrees with the commenters. Scenarios must provide the opportunity for protective action decision makers to demonstrate their ability to provide appropriate protective actions in a minimal release scenario. This decision making is also important and will contribute to correcting negative training that every accident results in containment failure and large releases, as discussed in the final rule SOC. Additionally, the final rule requires rapid escalation of an emergency and, to increase scenario variability, licensees need not specify the scenario in which that requirement is met. So, the new requirement to rapidly escalate classifications to an SAE or GE encompasses fast breaking scenarios, which could include a fast-breaking radiological release caused by an intentional attack on spent fuel storage facilities. No change was made to the ISG in response to this comment.

Length of the Exercise Cycle

Comment: A commenter suggested that exercises are predictable because FEMA's evaluation criteria must be met. [0063]

NRC Response: The NRC agrees with the commenter and recognizes that exercises have been predictable. That is a basis for the rulemaking which attempts to reduce predictability by increasing scenario variability.

Comment: One commenter suggested that hostile action scenarios should be demonstrated more often than every eight years. [0109]

NRC Response: The NRC disagrees with the commenter. The NRC considered this issue and recognized that such a focus could only be done at the expense of other credible accident scenarios. It was determined that this would focus training resources unnecessarily on hostile action to the detriment of other preparedness issues. No change was made to the ISG in response to this comment.

Other Comments

Comment: One commenter recommended that the NRC use analytical methods to design and evaluate exercises. [0048]

NRC Response: The NRC agrees with the commenter. The NRC is pursuing a multi-year process to establish a technical basis to expand the use of risk-informed analytical methods. However, these methods are not sufficiently developed to affect this rulemaking. No change was made to the ISG in response to this comment.

Comment: Two commenters suggested that NRC's proposal needs to synchronize onsite and offsite emergency plans and response via the exercise program. [0061, 0064]

NRC Response: The NRC agrees with the commenter. The EP drill and exercise program as enhanced by the final rule helps to synchronize onsite and offsite programs by requiring exercises that integrate local law enforcement and other offsite support organizations with the onsite response. No change was made to the ISG in response to this comment.

Comment: One commenter urged that NRC guidance should integrate onsite response activities with NIMS and the local and State emergency operations centers (EOCs). [0064]

NRC Response: The NRC agrees in part with the commenter. Licensees' ERO should be familiar with NIMS and ensure the ability to communicate adequately with OROs. However, no regulatory action is necessary because implementation of the EP regulations, as amended by this final rule, provide reasonable assurance that licensees will be able to adequately communicate with OROs. The drill and exercise program reinforces the communication requirements, in part by requiring the critique of licensee performance. The NRC requires that when weaknesses are identified that involve lack of coordination with OROs, due perhaps to lack of familiarity with NIMS, that they be corrected. No change was made to the ISG in response to this comment.

Comment: One commenter also stated that the NRC is establishing requirements for hostile action exercises before the hostile action response plan requirements have been developed. The commenter suggested that planning requirements and evaluation criteria for hostile action incidents need to be established first, then the hostile action response plan needs to be developed, and then the hostile action drills should be conducted. [0064]

NRC Response: The NRC disagrees with the commenter. The hostile action response plan should be the same as the existing emergency response plan because hostile action is just one of many possible initiating events that would cause the emergency plan to be implemented. Moreover, licensees will have at least one year to revise plans before conducting a hostile action exercise. No change was made to the ISG in response to this comment.

Comments: One commenter claimed that there is no basis for NRC review of scenarios. The commenter suggested that the NRC get involved in the licensee's scenario development process. [0090] Another commenter stated that NRC and FEMA should not dictate what scenarios should be demonstrated in an exercise. The commenter explained that state and local OROs work with the licensees to develop scenarios given the site and jurisdiction. [0096] Another commenter stated that FEMA reviews and approves scenarios through the affected State, and guidance is needed to address coordination of NRC and FEMA reviews early in the scenario development process, including the extent of participation agreements required by FEMA. In addition, the commenter suggested that licensees should not be placed in the position of dictating offsite participation scope based on NRC review comments. [0135]

NRC Response: The NRC disagrees that there is no basis for NRC review of scenarios. As stated in the proposed rule SOC, the NRC must ensure the quality of scenarios and that they are of sufficient variability. The NRC will be involved in the scenario process to verify the scenario is appropriate, a role that is appropriate for a regulator. The NRC agrees that its verification process should not cause licensees to dictate offsite participation. The NRC verification will be facilitated by the licensee submitting the scenario at least 60 days before the exercise as this schedule will allow the NRC to coordinate review efforts with FEMA. No change was made to the ISG in response to these comments.

Comment: Another commenter also suggested that OROs should be required to periodically include participation of actual decision-makers in exercises instead of surrogates. [0065]

NRC Response: The NRC agrees that actual decision-makers should participate in exercises instead of surrogates. However, the NRC has no authority regarding elected officials' participation in exercises. At least one NRC commissioner participates in each exercise when

the exercise involves the Operations Center at the NRC Headquarters. No change was made to the ISG in response to this comment.

Comment: One commenter urged the NRC to re-evaluate NRC and FEMA guidance to more clearly reflect expectations and goals for biennial exercises, rather than imposing additional requirements on licensees. [0084]

NRC Response: The NRC disagrees that it should not impose additional requirements on licensees for scenario quality. As explained in the proposed and final rule SOC, exercise scenarios are not becoming more challenging and the NRC has determined that rulemaking is necessary to ensure exercises are an adequate test and that the drill program covers all principal ERO functions. No change was made to the ISG in response to this comment.

Comment: A commenter argued that many State and local governments are experiencing "exercise burn-out," and NRC's additional exercise requirements will only make this worse. [0106]

NRC Response: The NRC agrees in part with the commenter. Although some State and local governments may be experiencing exercise burn-out, the NRC must ensure preparedness, and the conduct of exercises is an important activity to demonstrate key skills. The NRC understands that local responders have many hazards other than the NPP that they must prepare for. The final rule attempts to minimize additional burden by not requiring additional drills or exercises to address hostile action. However, the focus of exercises must now include hostile action. No change was made to the ISG in response to this comment.

Comment: Another commenter suggested that the NRC require licensees to conduct a detailed virtual evacuation exercise annually using the most current population counts and traffic studies for the region around each NPP. The commenter also urged the NRC to provide NRC's evaluation of the exercise on the NRC and FEMA websites. [0053]

NRC Response: The NRC disagrees with the commenter. The final rule's requirements for ETEs address this concern by elevating the quality of ETEs through periodic ETE updates that will incorporate the most current population data and traffic control strategies and requiring a virtual evacuation to be modeled with each new census and for certain population increases. Additionally, NRC exercise inspection results are on the NRC website. No change was made to the ISG in response to this comment.

Comment: Another commenter claimed that the NRC did not provide a sound justification for the changes being proposed regarding challenging drills and exercises. [0102]

NRC Response: The NRC disagrees with the commenter. The proposed rule SOC provided justification for each of the proposed rule changes related to EP drills and exercises. To the extent that the NRC made any changes to the proposed rule, the final rule SOC includes a basis for each of those changes.

Comment: One commenter suggested that security-based drill scenarios should also be required to consider various possible occurrences that would result in conjunction with a hostile event (e.g., simultaneous attack on other infrastructure within the EPZ). [0109]

NRC Response: The NRC agrees with the commenter. Licensees should consider including collateral damage, such as loss of offsite power, in hostile action scenarios. These elements would improve realism and preparedness for the accidents that responders may actually face. Changes were made to the ISG in response to this comment.

Comment: The commenter also recommended that the NRC provide more detail on the scope of hostile action based scenarios. The commenter also stated that the NRC must include performance based standards in the new rule to allow the NRC to make judgments as to the effectiveness of drills. [0109]

NRC Response: The NRC disagrees with the commenter. NEI developed detailed guidance for the conduct of drills and exercises in support of the hostile action drill pilot program. NEI is revising that guidance based on lessons learned and NRC comments.

The NRC inspects each licensee's critique of its exercise rather than each licensee's performance in the exercise. When the licensee's performance fails to satisfy the requirements, NRC regulations require the licensee to identify the performance weakness and take corrective action. No change was made to the ISG in response to this comment.

Comment: The same commenter recommended that NRC ensure adequate public participation is allowed, including eliciting input from the public both before and after the biennial drill, requiring increased public access to the JIC during the drill, and increasing public disclosure of the results and evaluations following the biennial drills, detailing problems encountered and required changes to the plan or its implementation that must be made within a prescribed time period. [0109]

NRC Response: The NRC disagrees with the commenter. The results of inspections are publicly available on the NRC website, and a public meeting takes place after each exercise to discuss findings. Public participation also occurs through hearings during licensing and annually in meetings to discuss the NRC's assessment of each licensee's performance. Additional public participation could take place through invitation by local authorities should they deem it appropriate, but there is no basis for the NRC to require more opportunities for local participation beyond those already provided. No change was made to the ISG in response to this comment.

Comment: One commenter recommended that the NRC require that drills and exercises more frequently reflect rapid escalation to an SAE or GE. The commenter also expressed concern that the proposed regulations require escalation only to an SAE, and recommended that the NRC require escalation to a GE. [0109]

NRC Response: The NRC disagrees that it should require that drills and exercises more frequently reflect rapid escalation to an SAE or GE. The proposed rule required rapid escalation to at least an SAE and allowed rapid escalation to a GE. The final rule maintains these requirements. This is a significant enhancement over the system under the former rule to eliminate negative training, whereas the commenter's suggestion would prolong negative training. No change was made to the ISG in response to this comment.

Comment: Another commenter expressed concern that the proposed regulations do not include performance-based measures for drills and exercises, and that licensees would plan

and train only enough to pass the exercises, not enough to adequately prepare for an actual incident or accident. [0100]

NRC Response: The NRC agrees in part with the commenter, in that performance-based measures for regulatory oversight of EP could potentially enhance NRC's ability to ensure adequate preparedness. The NRC is beginning a multiyear effort to determine the feasibility of risk informed and performance based oversight techniques. However the NRC disagrees that the current program does not adequately prepare licensees for emergency response. Nuclear power plant EP programs are recognized nationally for a high level of preparedness. Further, the Reactor Oversight Process for EP includes both exercise inspection and performance indicators of oversight to ensure that licensees are adequately trained for an actual radiological event. No change was made to the ISG in response to this comment.

4. Non-Security Related Issues

4.1 Backup Means for ANS

4.1.1 Part 50, Appendix E, Section IV.D.3: Backup Means for ANS

General Comments

Comment: One commenter stated that the requirements within this section were vague and did not conform to the guidelines in SECY-09-0007. The commenter claimed that in SECY-09-0007, the NRC deemed battery backup to be an adequate option, but the proposed rule went beyond that option and added new requirements. [0085]

NRC Response: The NRC disagrees with the commenter. In SECY-09-0007 and the proposed rule, the NRC did not determine that battery power backup alone would be an adequate backup ANS. In fact, the NRC concluded in the proposed rule that a battery backup "would address only one of several ANS failure modes (i.e., loss of AC power) for one alerting method (i.e., sirens). It would not address backup methods for other types of alerting devices or any part of the notification process." (74 FR 23254, 23262; May 18, 2009) For these reasons, the NRC proposed a backup capability requirement for the entire ANS. The final rule also includes this requirement. No change was made to the final rule in response to this comment.

Comment: Another commenter supported the requirement that all plants have backup power because loss of off-site power is a major source of accident risk. [0088]

NRC Response: The NRC disagrees in part with the commenter. As the proposed rule SOC and ISG explained, backup power by itself would not solve the problem. The final rule does not specify the means for the backup capability, but the final rule requires that the capability be established. The intent is to allow flexibility as new technologies become available. The NRC remains open to consideration of backup ANS systems that use alternative technologies and backup power could be a portion of such a system. No change was made to the final rule in response to this comment.

Definitions

Comment: A commenter requested that "alerting" and "notification" be defined within the statement "public alerting and notification decision." [0084]

NRC Response: The NRC disagrees that "alerting" and "notification" need to be further defined. The final rule SOC and ISG adequately describe the systems and define the terms used. No change was made to the final rule in response to this comment.

Comment: Another commenter stated that it was acceptable not to require specific backup measures but wanted a "standard of capability" to be defined. [0072]

NRC Response: The NRC agrees in part that a "standard of capability" must be defined in the regulation. Although it does not define the "standard of capability," the final rule requires that a backup capability exists. No change was made to the final rule or ISG in response to this comment.

Regulatory Authority

Comment: A commenter suggested that the requirement for licensees and applicants to implement the backup method of public ANS conflicted with NRC's position that these measures should be implemented by State and local authorities. The commenter concluded that this provision was beyond the authority of the applicant or licensee. [0084]

NRC Response: The NRC agrees with the commenter. This provision requires that backup ANS capability be available and not that licensees implement such measures. A change was made to the final rule in response to this comment.

Comment: Other commenters stated that the determination of the capabilities and effectiveness of public ANS is the responsibility of FEMA, and that NRC should revise this section to eliminate actions on the part of licensees that are the responsibility of FEMA. [0090, 0135]

NRC Response: The NRC agrees that determination of the capabilities and effectiveness of public ANS is the responsibility of FEMA. As with many areas of ORO support of a NPP EP, FEMA would be responsible for verification of the capability and review of any supporting plans or procedures. However, under 44 CFR 350.5, FEMA bases its review of State and local plans on NRC EP regulations. The final rule was changed to clarify the licensee's responsibility. No change was made to the ISG in response to this comment.

Primary and Secondary ANS

Comments: Several commenters expressed concern that the proposed language did not give credit for a robust primary ANS and that the language would discourage capital or other improvements to the primary ANS. [0060, 0085, 0102, FEMA-2008-0022-0125] One of the commenters stated that the public should be notified in the event of a problem with the primary ANS, but stated that the rule should allow this goal to be met with a single, highly robust ANS. This commenter also argued that route alerting systems and reverse 911-type wide-area telephone notification systems, potential forms of secondary ANS, were of "doubtful utility" and "unreliable." [0102] Another commenter agreed that route alerting could be used as a backup option, but also expressed concerns about the effectiveness of this option. [0065] Another commenter expressed concern that route alerting is a waste of scarce human resources and is not a good backup ANS option. [0072] A commenter suggested permitting licensees to satisfy the requirement if the primary ANS were "designed and installed such that no single failure could preclude the system from meeting its intended function." [0102]

NRC Response: The NRC disagrees that the proposed language would not have allowed the requirement to be met with a robust primary ANS and that the language would have discouraged capital or other improvements to the primary ANS. Although the single failure criteria proposed by the commenter could perhaps be adequate, the details of the proposal have not been specified. The expectation would be for a system with overlapping and independent siren coverage or other methods that precluded any single failure (including perhaps clusters of sirens). The use of innovative technological solutions to this problem could be considered as meeting this requirement.

The NRC agrees that route alerting may not be as timely as the primary ANS, but it is a widely used backup measure to the highly reliable primary alerting system and FEMA has determined

that it is an adequate backup method for many sites. However, the NRC remains open to other innovative solutions. Regardless of the backup system used, investments in the primary ANS would still have to be made to the extent needed to maintain high levels of ANS operability in line with established performance indicator (PI) standards. Licensees have upgraded ANS systems as a matter of public confidence building and to avoid the cost of outages and compensatory measures. The promulgation of the final rule should not affect those efforts. No change was made to the final rule in response to these comments.

Time Requirements

Comment: A commenter supported the lack of time requirements for using backup methods of alert and notification. [0063]

NRC Response: No response is necessary.

Comment: Three commenters suggested that NRC delete the 45 minute requirement from the rule language. [0060, 0102, FEMA-2008-0022-0125]

NRC Response: The NRC disagrees with the commenters. The 45-minute requirement is not in the rule, but is stated as a goal in guidance. No change was made to the final rule in response to this comment. The ISG was modified to clarify that the 45-minute goal applies specifically to the area closest to the NPP site (e.g., the area within a 2-mile radius).

Comment: Another commenter stated that the language was not clear regarding when the 15 minute clock begins, and requested that the NRC revise the rule language to clarify this point. [0084]

NRC Response: The NRC disagrees with the commenter that the regulatory language needs to be revised to clarify when the "15 minute clock" begins. The commenter presumably refers to the 15 minute goal for public alerting and initiation of public notification. That portion of the regulation was not proposed for revision. However, the regulations have been clarified to specify that the capability must exist to "essentially complete the initial alerting and initiate notification" of the public within about 15 minutes of the time officials are notified. This clarification was made because the NRC, consistent with the 1990 Seabrook decision (*Public Service Company of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-935, 32 NRC 57, 68 (1990)), has determined that notification of the public need not be completed within 15 minutes but that initiation of the notification process must begin within 15 minutes. No change was made to the final rule in response to this comment.

Backup ANS Methods

Comments: Two commenters argued that the proposed rule fails to recognize Federal directives to develop comprehensive emergency alert and notification systems that utilize a wide range of technologies. [0060, FEMA-2008-0022-0125] One of the commenters criticized NRC's focus on route alerting, and argued that robust siren systems with independent backup activation and backup power capabilities are sufficient. Furthermore, the commenter suggested that other technologies not specific to nuclear power hazards, such as the FEMA Integrated Public Alert and Warning System (IPAWS) would be more effective than a single purpose technology. [FEMA-2008-0022-0125]

NRC Response: The NRC disagrees with the commenters. The NRC has determined that an amendment to its regulations is necessary to ensure consistent implementation of a backup means for public alert and notification capabilities at all NPPs. Route alerting is currently widely used as a backup means for public alerting and notification. However, the proposed rule did not prohibit a diverse "range of technologies" to be used to meet this requirement. When the ongoing Federal initiatives to improve the emergency notification of the public reach maturity and are implemented in the environs of nuclear plants, the NRC would consider alternative means to meet the requirement. No change was made to the final rule in response to this comment.

4.1.2 NSIR/DPR-ISG-01: Draft Interim Staff Guidance - Backup Means for ANS

Inconsistencies with Other Regulatory Documents

Comments: A commenter stated that the guidance should be reviewed to ensure that it does not introduce additional requirements and is not more restrictive than the basis in SECY-09-0007. This commenter also suggested that there were discrepancies between the ISG and NUREG-0654, Supplement 4. This commenter recommended that ANS guidance be deleted from the ISG and only be within NUREG-0654, Supplement 4. [0102]

Another commenter noted that the NRC's proposed changes to Appendix 3 to NUREG-0654 and FEMA's proposed changes to NUREG-0654 through draft Supplement 4 could result in guidance on this issue being split into separate sections and result in confusion. The commenter recommended that the NRC and FEMA consolidate the guidance on backup ANS into a single section of NUREG-0654. [0069]

NRC Response: The NRC agrees in part with the commenters. NRC guidance does not impose requirements and the guidance is consistent with SECY-09-0007. The NRC disagrees that the guidance should be consolidated. Some of the guidance in the ISG is specific to NRC licensees and other NRC documents and, therefore, doesn't belong in Supplement 4. Some licensees may also take the lead in designing and/or implementing the backup ANS; it makes sense to leave the information in the ISG for use by these licensees. However, the NRC did review the ISG and corrected discrepancies with Supplement 4. Changes were made to the ISG in response to these comments.

Comment: Another commenter stated that NUREG-0654, Appendix 3, Section B.2.d is too broad and could require the use of "any present or new technological widget at the whim of the NRC." [0100]

NRC Response: The NRC disagrees with the commenter. The proposed change to Appendix 3, Section B.2.d of NUREG-0654 was written to provide licensees with flexibility in system design. Further, NUREG-0654 is the NRC's guidance document, and the NRC cannot impose requirements through its guidance documents. Once an adequate backup method is established at a site (e.g., route alerting), the NRC cannot require a change without following the normal regulatory process (e.g., issuance of an order, rulemaking). No change was made to the ISG in response to this comment.

Primary ANS

Comment: One commenter recommended that the guidance be revised to include a set of ANS design criteria or attributes that would eliminate the need for a backup ANS. [0102]

NRC Response: The NRC disagrees with the commenter. The NRC did not develop ANS criteria to meet the requirements of the backup ANS because the immediate need for such a standard does not exist. However, the final rule does not prohibit a diverse range of technologies to be used to meet this requirement. When the ongoing Federal initiatives to improve the emergency notification of the public reach maturity and are implemented in the environs of NPPs, the NRC may consider alternative means to meet the requirement. For instance, the licensee for the Indian Point NPP installed a primary ANS with sufficient redundancy to eliminate the need for a backup system. No change was made to the ISG in response to this comment.

Siren Systems

Comment: A commenter stated that not all licensees have sirens that can give both an alert signal and message. This commenter requested that the wording be changed to clarify that the siren does not need to have both capabilities. [0114]

NRC Response: The NRC disagrees with the commenter. The proposed rule SOC and supporting guidance explained that the NRC was not proposing a requirement that both capabilities exist in one device. No change was made to the final rule or the guidance documents in response to this comment.

Phased Route Alerting Methods

Comment: A commenter stated that backup alerting plans would differ between facilities, but should reflect the best judgment of OROs. [0102]

NRC Response: The NRC agrees that the suggested language can improve clarity of the guidance. Changes were made to the ISG in response to this comment.

Comment: Another commenter requested that the reference to “keyhole” be deleted from the language because not all OROs or licensees use the keyhole method. [0114]

NRC Response: The NRC agrees that word “keyhole” is not necessary and that other measures may be used as decided by OROs. Changes were made to the ISG in response to this comment.

State and Local Government Role

Comments: A commenter stated that in cases where the licensee is acting on the behalf of the State or local governments with regard to ANS, the licensee and FEMA should be able to correspond directly while keeping the State informed. This commenter requested that text be added that would allow this flexibility. [0114] A commenter stated that the proposed guidance should recognize current efforts at the Federal and State level to develop comprehensive emergency ANS. [0102]

NRC Response: The NRC agrees with the commenters. Where direct contact between the licensee and FEMA would facilitate effective completion of an ANS design project, direct contact should be allowed as the commenter suggests. The final rule and guidance do not preclude such arrangements. The NRC expects that such arrangements would happen naturally without the need for Federal guidance on project management methods.

When the ongoing Federal initiatives to improve the emergency notification of the public reach maturity and are implemented in the environs of nuclear plants, the NRC would consider alternative means to meet the requirement. No change was made to the ISG in response to these comments.

Requests for Clarification

Comment: A commenter recommended that the following language be added to the end of the second paragraph under Section IV.J: "An alternate emergency alert system (EAS) station would be an acceptable means to perform a backup notification function." [0102]

NRC Response: The NRC disagrees with the commenter. An alternate EAS station(s) that provide sufficient redundant coverage could be an acceptable means to perform the backup notification function. However, the system would be reviewed and approved by FEMA to ensure adequacy. No change was made to the ISG in response to this comment.

Comment: A commenter stated that the term "sufficient time" related to backup ANS will lead to disagreements in how to interpret this term. This commenter recommended that "sufficient time" be replaced with "3-hours." [0069]

NRC Response: The NRC disagrees with the commenter. The ISG sets 45 minutes as the goal for completing the alert and notification process by means of a backup ANS, with no specific time required. The backup capability should be implemented in a staged manner as deemed appropriate by OROs for the situation. The NRC would expect local authorities to use available resources in a manner to protect public health as best they can without further federal direction or guidance. No change was made to the ISG in response to this comment.

Comment: A commenter recommended that the NRC incorporate into its guidance the following language from the NRC's rulemaking technical basis document to clarify the requirements for backup measures for ANS:

> "The NRC would also revise its guidance to clarify that backup warning measures do not need to be implemented with a 15-minute timeframe (to ensure direct coverage of essentially 100 percent of the population within 5-miles of the site) or a 45-minute timeframe (to ensure 100 percent coverage of the population who may not have received the initial notification, such as those in rural or recreational areas), because this would impose the same design objectives on the backup system as those for the primary and compensatory alerting methods described in Appendix 3 to NUREG-0654 (Long Island Lighting Company (Shoreham Nuclear Power Station, Unit 1), ASLB-88-2, 27 NRC 85 (1988)). The staff recognizes some backup methods may not be capable of meeting the timeframes that are part of the primary ANS design objectives. The intent is not to have a duplicate primary ANS but to have a means of backup notification in place so that the populace can be alerted in sufficient time to allow offsite officials

to consider a range of protective actions for the public to take in the event of a severe accident with potential offsite radiological consequences. A graded approach in which the populations most at risk are alerted and notified first, followed by alerting and notification of people in less affected areas, is acceptable for the backup means. There would be no regulatory requirement for siren backup power. Although siren backup power would address one of the more common failure modes for fixed siren-based systems, other failure modes might still exist. Thus, it is important that the backup means be independent of the primary system so that it is not subject to the same type of failure mechanism." [0069]

NRC Response: The NRC agrees that portions of the commenter's suggested language would improve the ISG. However, the regulatory basis for the requirement that the public ANS have backup methods for both the alert and notification functions is contained in the SOC. Changes were made to the ISG in response to this comment.

4.1.3 Other: Backup Means for ANS

Primary and Secondary ANS

Comments: A commenter recommended that the NRC pursue alternate options for backup ANS and suggested that these options should be consistent with risk-based goals. This commenter also recommended that the NRC consider the timeliness, reliability, and robustness of the ANS as a function of distance from the reactor. [0042]

NRC Response: The NRC agrees that the EP regulations should be risk informed. The NRC has started a project to develop the technical basis for risk-informed regulatory oversight of EP. This multi-year process is expected to identify whether a sufficient technical basis can be established. If a technical basis can be established, the NRC will develop recommendations for consideration by the Commission. Risk informed regulatory oversight may be able to quantify the significance of ANS failures and perhaps system requirements as a function of distance from the nuclear power plant. However, the technical basis for risk-based goals is not considered sufficiently mature for the current rulemaking and was not considered. No change was made to the ISG in response to these comments.

Comments: A commenter also argued that the reliability of the notification system is important. [0065] Another commenter suggested that NRC consider "longer times until releases begin, smaller source terms and location differences" when developing backup means to alert the public. [0048]

NRC Response: The NRC agrees that the reliability of the ANS is important. The ANS PI licensee response band threshold is set very high, thereby reflecting its importance, and the PI status shows that the systems are highly reliable. The NRC disagrees that characteristics of the backup ANS should be based on longer times until releases begin and smaller source terms because the NRC is not currently aware of a technical basis to support such a determination. The rule does not prevent the backup ANS from reflecting location differences and these distinctions would be expected. No change was made to the ISG in response to these comments.

Comment: A commenter stated that backup systems could be concentrated in the first two miles surrounding a plant and that other means of communication should be used further away from the plant. [0048]

NRC Response: The NRC agrees in part with the commenter. The ISG notes that the close-in population should be addressed first. However, the NRC identified no basis to eliminate backup ANS from the rest of the EPZ, and the rule requires that there be a backup capability throughout the EPZ. No change was made to the ISG in response to this comment.

Comment: A commenter stated that backup ANS should include geocoded automatic dialers and stated that the use of such dialers should be required. [0088]

NRC Response: The NRC agrees in part with the commenter. Geocoded automatic dialers could be a part of proposals for innovative backup ANS systems. However, the final rule does not require the use of a specific means for demonstrating the backup ANS capability for the reasons explained in the final rule SOC. No change was made to the ISG in response to this comment.

Comment: A commenter argued that every plant should be required to install backup power to the primary ANS. The commenter added that if the NRC does not require this, then it will need to ensure that the backup alert and notification systems are as timely and effective as the primary system would have been. [0109]

NRC Response: The NRC disagrees with the commenter. As explained in the proposed and final rule SOC, backup power does not fully address the need for backup ANS. Furthermore, as also explained in the proposed and final rule SOC, a backup ANS does not need to meet the same timing criteria as a primary ANS. No change was made to the ISG in response to this comment.

Comments: A commenter stated that both the backup and primary systems should be measured for their effectiveness and that NRC should implement enforceable standards. [0109]

NRC Response: The NRC agrees in part with the commenter. The primary ANS is measured for effectiveness by the PI and focused inspection. The PI thresholds are essentially a standard that dictates the level of regulatory oversight of the system and the associated EP program. The NRC described in the proposed and final rule SOC the need for a backup ANS system, but indicated that it would not have the same acceptance criteria as the primary system because it is a backup to a very reliable system. The rule is enforceable in that each nuclear power reactor site must be supported by a backup ANS system or the licensee would be in noncompliance with regulations, for which the NRC could take enforcement action against the licensee. No change was made to the ISG in response to this comment.

Route Alerting

Comment: Another commenter recommended that FEMA remove the requirement to complete backup route alerting in the event of a failure of the primary method within 45 minutes, and replace this with wording such as: “with a sense of urgency and without undue delay and with an ideal planning target goal of 45-minutes.” [0063]

NRC Response: The NRC disagrees that there is a requirement to complete the backup alerting method within 45 minutes. This is a goal stated in the ISG and elsewhere. No change was made to the ISG in response to this comment.

Siren System

Comments: A commenter requested that the NRC require backup batteries for emergency sirens at all nuclear plants. [0053] The commenter suggested that the NRC require backup power for warning sirens for all nuclear plants. [0053] Another commenter also stated that older sirens should be replaced with more modern computer and telecommunication alert systems. [0063]

NRC Response: The NRC disagrees that backup power should be required for all systems. As explained in the proposed and final rule SOC, backup power alone does not fully address the need for a backup ANS. Based on the NRC's inspections and critiques of licensee exercises, all current siren systems adequately provide for public alerting. There is no regulatory basis to require systems be replaced unless they fail to meet requirements regardless of their age. No change was made to the final rule or ISG in response to these comments.

Comment: A commenter also requested that the NRC define what they consider to be acceptable backup alert and warning systems above and beyond siren systems. [0063]

NRC Response: The NRC disagrees that further definition of an acceptable backup ANS is required. The acceptable criteria and numerous examples were provided in the draft ISG, existing guidance, proposed rule SOC, and proposed rule language. No change was made to the final rule or the ISG in response to this comment.

Comment: A commenter stated that "backup power to sirens is only helpful if the cause of siren failure is lack of power." The commenter claimed that it would be better to require an alternate or backup system of "rapid notification" for the same area of coverage as the primary ANS. [0063]

NRC Response: The NRC agrees with the commenter. The final rule requires a backup alerting and notification method without specifying the method. No change was made to the final rule or ISG in response to this comment.

Comment: Another commenter expressed concern that sirens were the primary method of public notification. This commenter recommended that rapid dialing systems, electronic reader boards, low frequency dedicated radio capability, and EAS also be required. [0072]

NRC Response: The NRC disagrees that the current ANS is not adequate. The ANS is a highly reliable system, as demonstrated by performance indicator data. The final rule provides an adequate level of emergency preparedness by requiring a back up method should the primary system be unavailable. However, the NRC will remain open to proposals for innovative technical systems for backup ANS. No change was made to the ISG in response to this comment.

Requests for Language Clarifications

Comment: A commenter stated that the backup ANS wording in the proposed rule is unclear and added that the current system around the NPP near the commenter is adequate. [0071]

NRC Response: The NRC disagrees that the backup ANS wording in the proposed rule is unclear. The commenter did not indicate which words were unclear. The guidance provided allows licensees and supporting OROs to develop a backup method of public alerting and notification. Most sites, such as the one near the commenter, already have a backup ANS implemented and would need to take few, if any, steps to comply with the final rule. No change was made to the final rule or ISG in response to this comment.

Local Resources

Comment: A commenter stated that the need for backup ANS will present a huge burden on local resources and requested that the NRC clarify the basis for requiring backup power to the ANS. [0084]

NRC Response: The NRC disagrees with the commenter. Most sites already have a backup ANS capability, so local governments should not experience a "huge burden." Also, the proposed rule did not suggest that the NRC would require backup power for ANS. The proposed and final rule cited the Energy Policy Act of 2005 as requiring the Commission "to require backup power for the emergency notification system, including siren systems, for NPPs located where there is a permanent population, as determined by the 2000 decennial census, in excess of 15,000,000 within a 50-mile radius of the power plant." Only one NPP meets that criteria – Entergy Nuclear Operations Inc.'s Indian Point – and that plant is the only one that is required to have backup power for its ANS. No change was made to the final rule or the ISG in response to this comment.

Inconsistencies with Other Regulatory Agencies and Documents

Comments: A commenter stated that the NRC should align the rulemaking with the national policy described in Executive Order 13407. The commenter suggested that this would eliminate barriers to constituents adopting alternative ANS. The commenter also wanted the NRC to take into account existing requirements of the FCC and a FEMA initiative for IPAWS. This commenter requested that the NRC adopt language that would define NRC's, DHS/FEMA's, and FCC's alert and notification responsibilities. [0090] Another commenter also stated that this is a redundant activity because FEMA already requires this action. [0071]

NRC Response: The NRC agrees in part and disagrees in part with the commenters. The NRC is responsible for, among other things, regulating NPPs to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment. As explained in the proposed and final rule SOC, the NRC has determined that amendments to its regulations are necessary to ensure consistent implementation of public alert and notification capabilities at all NPPs. These regulatory changes were coordinated with FEMA to avoid conflicts and promote consistency. The final rule does not prohibit a diverse "range of technologies" to be used to meet the requirements and this flexibility will allow for technological improvements and initiatives such as IPAWS. No change was made to the final rule or ISG in response to these comments.

4.2 Emergency Declaration Timeliness

4.2.1 Part 50, Appendix E, Section IV.C.2: Emergency Declaration Timeliness

Support for the Proposed Requirements

Comment: One commenter expressed support for the proposed requirement to declare an emergency within 15 minutes as "a positive change and long overdue." [0069]

NRC Response: No response is necessary.

Suggested Revisions to the Proposed Requirements

Comments: A few commenters identified areas in which the NRC could improve its emergency declaration timeliness requirements. Three commenters argued that the 15-minute time limit to declare an emergency is not appropriate for all four emergency classes. The commenters suggested that the NRC implement time limits according to the severity of the emergency [0084, 0090, 0102] One of the commenters argued that the declaration timeframe for a Notification of Unusual Event (NOUE) should be 30 minutes rather than 15 minutes because there are no urgent onsite or offsite actions that would benefit from such a rapid declaration, and additional time would improve the accuracy of the declaration. [0102] Another commenter agreed that the limit for an NOUE should be 30 minutes, and suggested that the limit for an Alert be 20 minutes. [0090] Both commenters approved of the 15-minute declaration time limit for an SAE and GE. [0090, 0102]

NRC Response: The NRC disagrees in part with the commenters. In resolving these comments, the NRC re-considered the suitability of a single 15-minute criterion for all four ECLs. The declaration of a GE requires the licensee to provide a recommendation for public protective actions to State and local governments. These protective actions can be more effective in reducing the consequences of the emergency on the public if the action is implemented in a timely manner, preferably prior to the onset of a major release of radioactive materials. The steps that need to be taken by offsite officials to consider the licensee's recommendation and to decide upon and implement an action cannot start until the licensee has classified and declared the emergency and provided the appropriate recommendation. As such, time is of the essence.

The basis for emergency planning for NPPs provided in NUREG-0654 addresses a spectrum of accidents. That discussion provides that the onset of the release to the environment following the onset of the event may range from 0.5 hours to one day. Furthermore, Section IV.D.3 of Appendix E to Part 50, as amended by the final rule, requires the licensee to have the capability to notify State and local officials within 15 minutes after declaring the emergency and that the ANS be capable of alerting the public and initiating notification of the public within about 15 minutes. The 15-minute timeliness expectation for emergency declarations now being codified is consistent with these regulatory requirements and the planning basis.

Although protective actions are not necessary at the lower ECLs and these lesser events have less significant potential consequences on the public, the same timeliness criterion for each of the four ECLs is necessary. The ECL, be it an NOUE or a higher ECL, cannot be known until

the classification is completed and the declaration is made. This argues against the use of different timeliness criteria for NOUE and higher ECLs because emergency events may not proceed step-wise through the four ECLs. The NRC cannot be assured that the first classification would not be an Alert or higher, so ECLs cannot have different timeliness criteria. Further, the actions to assess, classify, and declare an emergency, and the resources needed to accomplish those actions, do not differ by ECL. Although there are more EAL thresholds to consider during an NOUE than there are at the higher ECLs, this is somewhat balanced by increasing demands on the on-shift staff (such as assessment, corrective actions, and mitigative actions needed to address the degraded plant condition) associated with the higher ECLs. As such, the conditions (e.g., insufficient staffing, procedures, training, etc.) that would reduce a licensee's capability for declaring an NOUE within 15 minutes would likely have a similar effect on the licensee's capability for declaring higher ECLs. Also, the licensee's performance in declaring an NOUE is a viable predictor of licensee performance at the less frequently declared higher ECLs. Such performance deficiencies would not be identified and corrected if the NRC were to establish longer criterion for NOUE and 15 minutes for the higher classification level emergencies. No change was made to the final rule in response to these comments.

Comments: One commenter argued that requiring a declaration too quickly can lead to rushed and incorrect emergency declarations. [0102] Two other commenters suggested that the urgency to make an emergency declaration within 15 minutes might interfere with a licensee's efforts to mitigate the effects of an accident, [0072, 0084] although one of those commenters did feel that a 15-minute limit was appropriate for notification of the public offsite. [0072]

NRC Response: The NRC disagrees with the commenters. The NRC recognized the suggested possibility in developing the proposed rule and provided for this in the rule language. First, the NRC proposed a capability criterion rather than a performance criterion. A performance criterion would require a licensee to declare an emergency with 15 minutes without regard to the circumstances. The use of a capability criterion appropriately allows a licensee to demonstrate their capability during typical emergency declarations but to have the flexibility to exceed this criterion during extenuating circumstances when emergency declarations may need to be delayed in the interest of performing unanticipated plant operations that are urgently needed to protect public health and safety. However, the NRC expects licensees to consider such scenarios in establishing ERO staffing and resources so that this distraction occurs only for these limited classification scenarios. Ultimately, the licensee can avoid plant operator distraction by ensuring adequate on-shift resources. No change was made to the final rule in response to these comments.

Comment: One commenter stated that the proposed rule language could result in declaring a lower level emergency when a higher emergency classification might be warranted and provided two example scenarios to illustrate the concern. [0102]

NRC Response: The NRC agrees with the commenter. The NRC did not intend to require that the declaration be made once the first EAL was exceeded, as might be inferred from the proposed language. Changes were made to the final rule in response to this comment.

Comment: One commenter pointed out that the proposed requirements should not refer to "plant operators" only, as other ERO decision-makers may be involved in declaring an emergency. [0102]

NRC Response: The NRC disagrees with the commenter. The NRC retained the phrase "plant operators," in the final rule and guidance since this phrase is suitably generic to encompass different ERO structures. The NRC amended the SOC for the final rule to provide guidance on the types of individuals who could be considered "plant operators" for purposes of this requirement. Also, the NRC's intent is that the licensees have the capability to complete all necessary assessment, classification, and declaration activities within 15 minutes of the data being available to any plant operator. This would include any member of the plant staff, licensed operators or members of the ERO, who by virtue of training and experience, are qualified to assess the indications or reports for validity and to compare the same to the EALs in the licensee's emergency classification scheme. Delays involved in a plant operator, be it a licensed operator observing an alarm in the control room or a non-licensed operator discovering an adverse condition in the plant, transferring the information to a distant emergency operations facility must be considered in meeting the 15-minute timeliness criterion. No change was made to the final rule in response to this comment. Changes were made to the SOC to clarify the NRC expectations regarding "plant operator."

Comments: One commenter suggested that the proposed requirements should not require licensees to make a declaration for a transient event or one discovered after the fact. The commenter suggested that NRC revise the rule language to make it clear that the emergency declaration time requirement pertains to real events only. [0135]

NRC Response: The NRC disagrees with the commenter. The proposed and final rule language requires the licensee to have the capability to assess, classify, and declare an emergency condition within 15 minutes. Whether specific situations, such as a transient event or an event discovered after the fact, actually warrant a declaration is not a matter of capability, but rather performance. The NRC disagrees with the characterization that transient events may not be "real events." The NRC-endorsed EAL schemes have provisions to discount transient events (e.g., "fire lasting greater than 15 minutes…" or "loss of all AC power for greater than 15 minutes…"), but still have EAL thresholds for which the occurrence alone warrants declaration. In an accident transient a delay in a reactor trip of even a few seconds can result in some core damage. Regarding the situation in which events are discovered after the fact, the issue will remain of whether the licensee should have recognized the event earlier. A blanket exclusion of such events from the capability requirement would be inappropriate. No change was made to the final rule in response to this comment.

Opposition to the Proposed Requirements

Comments: One commenter argued that there is not enough field observation or inspection evidence that indicates a need for the proposed change to Appendix E, Section IV.C. [0090] Another commenter stated that current regulations already require licensees to classify events promptly, and this requirement is enforced by NRC. [0135]

NRC Response: The NRC disagrees with the commenters. Between 2000 and 2009, the NRC identified 13 situations in which an emergency declaration was either not done or inappropriately delayed during an actual event, which resulted in findings and cited and non-cited violations. Two additional situations were subsequently evaluated. All of these situations are described in inspection reports that are publicly available from the NRC's ADAMS document system. However, the absolute number of observations is not, in and of itself, significant to the NRC's decision to pursue this rule change. The circumstances of these observations, namely,

deficient procedures, inadequate staffing, and/or failures on the part of the ERO, etc. are all under the control of the licensee, are preventable, and need to be corrected.

The NRC also disagrees that current regulations already require licensees to classify events promptly. As stated in the SOC, there are NRC expectations and guidance, but there is currently no regulatory timeliness criterion. No change was made to the final rule in response to these comments.

4.2.2 NSIR/DPR-ISG-01: Draft Interim Staff Guidance - Emergency Declaration Timeliness

Suggested Revisions to the Draft Interim Staff Guidance

Comments: One commenter stated that the guidance should not refer to "plant operators" as other individuals may make an emergency declaration [0102]

NRC Response: The NRC disagrees with the commenter. As discussed in the responses to the proposed rule comments above, the NRC has decided to retain the term "plant operators" in the final rule. The draft ISG discussion already defines the phrase "plant operators" and recognized that this responsibility may be transferred. Changes were made to the SOC and the ISG to clarify the NRC expectations regarding "plant operator."

Comment: One commenter suggested a scaled emergency declaration time requirement: "A period of 30 minutes for NOUE, and 15 minutes for Alert, SAE, and GE was determined to be a reasonable time for assessing and classifying an emergency. These time periods should not be viewed as a grace period in which a licensee may attempt to restore plant conditions and avoid declaring an emergency. A delay in classification of up to 30 minutes for NOUE, and 15 minutes for an SAE and GE was deemed to have minimal impact on the overall emergency response and the protection of public health and safety." [0102]

NRC Response: The NRC disagrees with the commenter. For the reasons discussed in the response to a similar comment on the proposed rule above, the NRC will retain the single timeliness criterion in the final rule. No change was made to the ISG in response to this comment.

Comment: One commenter argued that the ambiguity of the moment of "event discovery" could create unnecessary pressure on the emergency declaration decision-maker, and suggested the following language for the guidance document: "The on-shift licensed and non-licensed operators are responsible for identifying off-normal conditions and bringing them to the attention of operation's shift supervision. The emergency plan charges this shift supervision to include a responsible emergency classification decision maker, with the responsibility for declaring the emergency until relieved. Regardless of the organizational structure, status of emergency plan activation, or the location where the declaration is performed, the Commission's intent is that the applicants or licensees demonstrate the capability to assess, classify, and declare an emergency condition within 15 minutes after information is available to the responsible emergency classification decision maker, providing the function of emergency declaration, to recognize that an EAL has been exceeded and to make the declaration promptly once the decision is made that an emergency condition exists. The emergency declaration

period commences when indication of an off-normal condition is available to shift supervision capable of recognizing that an EAL threshold has been exceeded." [0102]

NRC Response: The NRC disagrees with the commenter. The suggested language inherently accepts a potentially open-ended delay in the information moving from the plant operators who received the information initially to the designated "emergency classification decision maker" or the shift supervisor. The NRC expects that all structural delays in the information getting to the individual doing the classification, wherever located, are counted in the 15-minutes criterion. The comment and the suggested language indicate that more guidance is needed. Changes were made to the ISG in response to this comment.

Comment: One commenter stated that the determination when a declaration is warranted is not a clearly defined or readily recognizable event. The commenter stated that most licensees have a procedural process for making an emergency classification and suggested that the NRC revise the guidance to read: "The declaration period ends when the emergency has been declared. Declaration occurs when the appropriate decision-maker makes known the selected Emergency Classification Level (ECL) in accordance with the applicable licensee procedure." [0102]

NRC Response: The NRC disagrees with the commenter. It would be inappropriate to establish a performance expectation based upon an "applicable licensee procedure" because the licensee procedure may not comply with the final rule or be consistent with the ISG guidance. The final rule contains two requirements: First, to have the capability to assess, classify, and declare an emergency within 15-minutes, and second, to promptly declare the emergency once the appropriate emergency classification is determined. The comment and the suggested language indicate that more guidance is needed. Changes were made to the ISG in response to this comment.

Comment: The commenter requested a revision to the guidance document clarifying the meaning of the word "promptly," as follows: "If the fire is still burning after the specified duration has elapsed, the EAL is exceeded, no further assessment is necessary, and the emergency declaration would be made promptly. As used here, 'promptly' means at the first available opportunity (e.g., if the Shift Manager is receiving an update from the Fire Brigade Leader at the 15-minute mark, it is expected that declaration would occur as the next action immediately after the call ends)." [0102]

NRC Response: The NRC agrees with the commenter. The comment and the suggested language indicate that the guidance in the ISG needs to be expanded to clarify how "promptly" is to be interpreted. The NRC included the intent of the suggested language in the changes made to the ISG. Changes were made to the ISG in response to this comment.

Comment: The commenter also requested the NRC revise the ISG as follows to clarify when the 15-minute timeliness criterion starts: "This situation should not be confused with an analysis performed to confirm or verify (unless the analysis to confirm or verify is a component of the EAL or basis) an indication (e.g., channel check) or report of an off-normal condition, as opposed to identifying the condition, for which the 15-minute timeliness criterion starts when indication of an off-normal condition is available to plant operators to recognize that an EAL threshold has been exceeded." [0102]

NRC Response: The NRC agrees with the commenter. The comment and the suggested language indicate that the guidance in the ISG needs to be expanded to clarify how confirmation or verification of observed conditions are to be considered in establishing when the 15-minute timeliness criterion starts. The NRC included the intent of the suggested language in the changes made to the ISG. Changes were made to the SOC for the final rule and the ISG in response to this comment.

4.2.3 Other: Emergency Declaration Timeliness

Other Comments on Emergency Declaration Timeliness

Comment: One commenter indicated that the names currently assigned to the four classes of emergency are too wordy and difficult for OROs and the general public to understand. The commenter suggested applying a numbered or colored system to identify the severity of emergency events. [0063]

NRC Response: The NRC disagrees with the commenter. The current emergency classification names have been successfully in use since 1980 by EROs and OROs. Because of the lengthy period of use and the expenditure of resources in ERO and ORO training, procedures, etc., a change of this nature should be undertaken only if sufficient benefit would result from the change. The commenter did not establish a justifiable reason for the NRC to reconsider the existing classification scheme. A colored system would not be any more, and could be less, understandable than the current four textual names. No change was made to the final rule or ISG in response to this comment.

Comment: One commenter argued that the NRC should use a “performance criterion” instead of a “capability criterion” to evaluate licensees’ ability to declare an emergency in a timely manner. [0109]

NRC Response: The NRC disagrees with the commenter. As stated in the SOC for the proposed rule, an inflexible timeliness performance requirement could have an adverse impact on reactor safety by keeping operators from performing needed actions to prevent further deterioration of the plant conditions. The use of a capability criterion appropriately allows a licensee to demonstrate their capability during typical emergency declarations but to have the flexibility to exceed this criterion during extenuating circumstances when emergency declarations may need to be delayed in the interest of performing unanticipated plant operations that are urgently needed to protect public health and safety. However, the NRC expects licensees to consider such scenarios in establishing ERO staffing and resources so that this distraction occurs only in a limited number of classification scenarios. No change was made to the final rule or ISG in response to this comment.

4.3 EOF – Performance-Based Approach

4.3.1 Part 50, Appendix E, Section IV.E.8: EOF – Performance-Based Approach

Support for the Establishment of Performance-Based Criteria

Comment: One commenter expressed general support for the codification of distance requirements for emergency operations facilities (EOFs) as proposed in Section IV.E.8.b and the establishment of performance-based criteria for EOFs proposed in Section IV.E.8.c. [0068]

NRC Response: No response is necessary.

4.3.2 10 CFR 52.79(a)(17): EOF – Performance-Based Approach

No comments addressed this section.

4.3.3 Removal of the term "near-site:" EOF – Performance-Based Approach

Opposition to Revised EOF Requirements

Comments: Three commenters objected to the exemptions in Section IV.E.8.e that would allow some licensees to continue using existing EOFs that are more than 25 miles away. The commenters argued that having a nearby EOF is important to facilitate coordination of emergency responses. [0065, 0068, 0072] One of the commenters highlighted the importance of access to real-time information from the plant and face-to-face interaction between decision makers as the benefits of having the EOF close to the plant. [0065]

NRC Response: The NRC disagrees with the commenters. The effectiveness of EOFs located more than 25 miles from a site has been demonstrated in drills, exercises, and actual events for several years. Exemptions previously granted to the requirement for a near-site EOF have included provisions for a facility closer to the site to facilitate face-to-face interactions with personnel entering and leaving the site. The final rule also includes this provision. No change was made to the final rule in response to these comments.

Comment: One commenter objected to the NRC allowing consolidated EOFs. Having a single EOF for each plant is useful because of site-by-site differences in reactor design, age, repair history, and quirks, and the surrounding communities. [0072]

NRC Response: The NRC disagrees with the commenter. The effectiveness of consolidated EOFs has been demonstrated in drills, exercises, and actual events for several years. The proposed rule required that a consolidated EOF and staff have the capabilities to respond to an event for any type of reactor served by the facility. No change was made to the final rule in response to this comment.

4.3.4 NSIR/DPR-ISG-01: Draft Interim Staff Guidance - EOF – Performance-Based Approach

Comment Regarding the Distance of the EOF from the Plant Site

Comment: One commenter pointed out that the guidance states that an EOF "more than 30 miles from the site entrance would be too far away to use as an alternative facility," but does not state what distance would be acceptable. [0114]

NRC Response: The NRC disagrees in part with the comment. Although the NRC did not provide a specific acceptable distance for the alternative facility (or facilities), the NRC used this approach to allow flexibility in determining the location of the alternative facility (or facilities) based on site-specific characteristics. No change was made to the final rule or ISG in response to this comment.

4.3.5 Other: EOF – Performance-Based Approach

Other Comments Regarding EOFs

Comments: One commenter stated that a consolidated EOF should be well shielded and located at least 4 miles from a potential point of release. [0048] Another commenter objected to the possibility of a licensee using both "near and consolidated" EOFs. The commenter said that such an arrangement could lead to split control and authority which would impede decision making and communication. [0072]

NRC Response: The NRC disagrees with the commenters. EOF siting and shielding criteria are already addressed in NUREG-0696, "Functional Criteria for Emergency Response Facilities," and NUREG-0737, "Clarification of TMI Action Plan Requirements," Supplement 1, "Requirements for Emergency Response Capability." A licensee would not staff and use more than one EOF at the same time in a situation where more than one facility was available, such as a site with an EOF within 10 miles and a backup EOF more than 10 miles from the same site. The final rule provides for a facility (not another EOF) closer to the site where NRC and other offsite response personnel can report when the EOF is located more than 25 miles from a site. No change was made to the final rule in response to these comments.

Comments: One commenter recommended that the "grandfather" provisions for existing EOFs should remain intact. [0135]

NRC Response: The NRC agrees with the commenter. Existing EOFs that deviated from NRC requirements and guidance regarding distance from a site, backup EOF characteristics, EOF consolidation, or other EOF attributes were evaluated and approved by the Commission, and continue to be acceptable under the final rule. Section IV.E.8.e of Appendix E was included in the proposed rule to allow for existing approved EOFs to be exempt from the requirements of new Section IV.E.8.b of Appendix E. Section IV.E.8.e has been retained in the final rule.

4.4 ETE Updating

4.4.1 10 CFR 50.47(b)(10): ETE Updating

Location of ETE Requirements

Comments: Commenters were concerned about the ETE updating requirement being in the proposed rule language. Five commenters stated that the ETE revisions should be presented in a guidance document and not within the Code of Federal Regulations (CFR). [0060, 0084, 0085, 0102, FEMA-2008-0022-0125] Another commenter suggested that because ETE updates are covered in the draft FEMA REP Manual, it is redundant to also cover it in the NRC rulemaking. [0071]

NRC Response: The NRC disagrees with the commenters. The NRC has determined that the requirement for updating ETEs needs to be in its regulations. Improving the accuracy of ETE values helps licensees recommend and offsite officials determine the most appropriate public protective action during an event. Current licensee response to guidance regarding updating of ETEs is inconsistent and not enforceable. A regulatory means of enforcing periodic ETE updates is necessary for consistent implementation. No change was made to the final rule or the guidance documents in response to these comments.

10 Percent Population Increase

Comments: Three commenters stated that the ETE updating threshold should not be based on a generic 10 percent increase criterion, but rather on a population sensitivity study that would assess the effect of a population change on ETEs. [0060, 0102, FEMA-2008-0022-0125] Another commenter agreed and argued that ETE updates should be based on the impact to evacuation times a population change has and not on a numerical change in population. [0085] A commenter argued that the greatest impact on evacuation time is the density of the population that feeds into major evacuation routes and not the size of the population. This commenter stated that this is because of "shadow evacuation" both inside and outside the EPZ and concluded that this phenomenon is not fully appreciated by the NRC. [0072] Another commenter agreed stating that the ETE update should be based on changes in population density. The commenter recommended a change in the language for 10 CFR 50.47(b)(10) that would reflect this comment: "If at any time during the decennial period, the population density (persons per square mile) within the emergency planning zone changes to the extent that the ETE for the area within 0-2 miles increases by 25% or 30 minutes, whichever is less, the ETE must be updated within 360 days to reflect the impact of that population density change. The ETE update must be maintained and be available for inspection." [0090]

NRC Response: The NRC agrees in part with the commenters. The 10 percent population change criterion was changed. The final rule adopts the approach that licensees will determine when ETE values change by 25 percent or 30 minutes, whichever is less, to trigger an ETE analysis update. The NRC determined that basing ETE analysis updates on a population change alone without consideration of its impact on the ETE values may not have resulted in useful ETE updates. In addition, each licensee is required to update its ETE analysis after each decennial census. Implementation of such an approach will address the comments regarding shadow evacuation and population density. Note that comments pertaining to the details of ETE updates more appropriately address the regulation in 10 CFR Part 50, Appendix E, than 10 CFR 50.47(b)(10).

The NRC disagrees that it does not fully appreciate the effect of shadow evacuation inside and outside the EPZ. The NRC recognizes that shadow evacuations may occur and included an evaluation of shadow evacuations in NUREG/CR-6863, "Development of Evacuation Time Estimates for Nuclear Power Plants," in 2005. Assessment of the effects of a potential shadow evacuation is expanded upon in the new guidance document NUREG/CR-7002, "Criteria for Development of Evacuation Time Estimate Studies." Changes were made to the final rule and NUREG/CR-7002 in response to these comments.

State and Local ETEs

Comment: A commenter stated that the NRC should consider state and local ETEs that meet the requirements for EP as an alternative to licensee or applicant submittals of ETEs. [0084]

Another commenter stated that setting a "trigger point" that indicates the need for a revision of an ETE should not be done by a Federal agency. This commenter stated that the "trigger points" should be set by local emergency management leaders and that the decision to revise an ETE should remain at the local level. [0063]

NRC Response: The NRC disagrees with the commenters. The NRC does not have regulatory authority over State and local agencies, and therefore would have no enforcement authority over the quality or update frequency of their ETEs. Licensees have the option of submitting State or local ETEs or ETE updates as their own, which would be subject to NRC review.

The trigger point for changing the ETE should not be set at the local level. Placing the trigger point at the local level could result in inconsistent rule implementation across the nation and the NRC has no regulatory authority over State and local authorities to ensure consistency. No change was made to the final rule or the guidance documents in response to this comment.

ETE Modeling

Comment: Another commenter supported the requirement to update ETEs, but believed that the premise upon which the current ETEs are configured is flawed. This commenter noted that the "straight-line Gaussian plume modeling is not appropriate for use for reactors in complex terrain" and urged the NRC to incorporate changes to its plume modeling. [0083]

NRC Response: The NRC disagrees with the commenter. ETEs are developed with consideration of when an event may occur, weather conditions, traffic volume, and other unique EPZ characteristics, and are not based upon plume modeling. No change was made to the final rule or the guidance documents in response to this comment.

4.4.2 Part 50, Appendix E, Section IV: ETE Updating

Location of ETE Requirements

Comments: A commenter stated that the ETE revisions should be presented in a guidance document and not within the CFR. [0060] A commenter requested that the NRC remove the ETE requirements from the requirements for "Content of Emergency Plans." [0084]

NRC Response: The NRC disagrees with the commenters. Improving the accuracy of ETE values helps licensees recommend and offsite officials determine the most appropriate public protective action during an event. Current licensee response to guidance regarding updating of ETEs is inconsistent and not enforceable. Therefore, the NRC determined that it needs to require its licensees to update their ETEs and include this requirement in its regulations. No change was made to the final rule or the guidance documents in response to these comments.

10 Percent Population Increase

Comments: Several commenters submitted comments on the 10 percent population increase being the triggering event that would require licensees to update their ETEs and some suggested alternatives. Two commenters stated that the threshold should not be based on a generic 10 percent population increase criterion, but rather on a population sensitivity study that would assess the effect of a population change on

ETEs. [0060, 0102] Two commenters suggested that the threshold to warrant an update should be based on a 25 percent change in the ETE baseline rather than on a 10 percent change in the EPZ population. [0096, 0102] One commenter requested that the NRC change the proposed rule to require that a new ETE be conducted when the EPZ population changes by 15 percent or when an ETE report is older than 20 years. [0043] A commenter stated that the NRC did not sufficiently explain or justify the statement "not requiring licensees to assess their ETEs until the population changes by more than 15 percent or 20 percent would allow too large a population change before assessing the impact on ETEs" and cited a sensitivity study where the population increased by 25 percent and the change for the ETE was only 5 minutes. [0102] Another commenter suggested that the requirement to update ETEs based on a 10-percent population change should only apply to sites with 10-mile EPZ populations greater than 50,000 people. [0062]

NRC Response: The NRC agrees in part with the commenters. The 10 percent population change criterion was changed. The final rule adopts the approach that the licensee will determine when the longest ETE for the 2-mile region, 5-mile region, or the entire EPZ changes by 25 percent or 30 minutes, whichever is less, to trigger an ETE analysis update. This ensures that only population changes that have a material impact on ETE values will trigger an update, regardless of the EPZ population. The NRC determined that basing ETE analysis updates on a population change alone without consideration of its impact on the ETE values may not have resulted in useful ETE updates. The wording concerning a sensitivity study to determine when an ETE update is necessary was not included in the rule language, but in the SOC. Licensees can determine how much of a population increase is necessary to trigger an ETE update (i.e., how much of a population increase causes the ETE values to increase by the threshold amount) by whatever method they deem acceptable. One method would be to perform a population sensitivity analysis. Changes were made to the final rule and NUREG/CR-7002 in response to these comments.

Comment: Another commenter recommended that revising NUREG-0654 to state that ETEs "should be updated as local conditions change" would achieve the desired safety benefits while allowing discretion to communities in determining when an ETE update is necessary. [0071]

NRC Response: The NRC disagrees with the commenter. Current licensee response to guidance regarding ETE updates is inconsistent and not enforceable. Therefore, the NRC has determined that the requirement for ETE updates must be in its regulations. Also, the NRC has no regulatory authority over State and local agencies, and therefore would have no enforcement authority over the quality or update frequency of their ETEs. No change was made to the final rule or the guidance documents in response to this comment.

Transient Residents

Comment: A commenter stated that the regulatory language is not clear as to whether this section addresses the permanent resident and transient populations independently or as a total population. This commenter pointed out that the decennial census data and licensee estimates of permanent resident population changes would not reflect changes in transient populations and requested that the NRC clarify the treatment of transient population changes for ETE updates. [0084]

NRC Response: The NRC agrees with the commenter. NUREG/CR-7002 was revised to clarify that when the licensee performs its annual EPZ population review to determine if an ETE analysis update is required, it may assume that the transient population is unchanged from the baseline analysis. Changes were made to NUREG/CR-7002 in response to this comment.

Protective Actions

Comments: A commenter pointed out that ETEs only analyze the time that is required to evacuate areas within the EPZ. The commenter requested that the NRC clarify the sentence "time required…for taking other protective actions" because the only other protective action is to shelter-in-place and would not fall under the ETE. The same commenter noted that ETEs are used primarily by offsite officials to determine the most appropriate protective action and recommended alternative rule language to reflect this point: "NRC-approved evacuation time estimates (ETEs) and updates to the ETEs must be provided to State and local governmental authorities for use in developing protective action strategies." [0102]

NRC Response: The NRC agrees in part with the commenter. The NRC agrees with the comment concerning the present rule language phrase "time required…for taking other protective actions." The only other protective action would be to shelter in place. Therefore, the NRC has removed this phrase from the final rule language.

The NRC agrees in part with the suggested language. The NRC agrees that the ETEs and ETE updates must be provided to State and local authorities for use in developing protective action strategies, but the intent of the final rule language is to also require licensees to use the ETE in the protective action recommendation (PAR) process. Changes were made to the final rule in response to this comment.

Census Bureau Data

Comments: Two commenters stated that the decennial ETE should only be developed once all needed data, including transients and permanent residents, have been released by the Census Bureau. [0098, 0102] One of the commenters added that the data should only come from the U.S. Census and not from State or local population. [0102]

NRC Response: The NRC agrees in part and disagrees in part with the commenters. The NRC agrees that the decennial ETE should be developed after U.S. Census Bureau data is available. The final rule requires nuclear power reactor licensees to develop an ETE analysis using the most recent U.S. Census Bureau data and submit it to the NRC for review to confirm adequacy within 365 days of availability of the decennial census data from the U.S. Census Bureau. The NRC disagrees on the use of only U.S. Census Bureau data for annual population estimates in between decennial censuses. The final rule permits licensees to use Federal, State, or local governmental population data for these estimates. NUREG/CR-7002 explains that licensees should use U.S. Census Bureau population data or State/local population estimates, if available, for determining population increases. Changes were made to the final rule and guidance document in response to these comments.

Comments: A commenter suggested that the 180-day ETE update deadline (after the release of the census data) may be unrealistic. The commenter pointed out that census data is released between April 2011 and September 2013. This commenter suggested that ETE updates should not be updated until all of the needed data has been released by the U.S.

Census Bureau. [0102] Another commenter agreed, stating that the proposed 180-day turn-around time for ETE studies to the NRC for review is not realistic. [0130] The commenter proposed the following revision: "Within 180 days of issuance of the decennial census data for transient and permanent populations by the U.S. Census Bureau, nuclear power reactor licensees and license applicants shall develop an ETE and submit it to the NRC for review and approval under § 50.4." [0130]

NRC Response: The NRC agrees with the commenters. The NRC agrees that 180 days to complete ETE updates could be challenging based on the number of licensees and the limited number of commercial contractors available to complete the updates. Therefore, the NRC is extending the amount of time to complete ETE analysis updates from 180 to 365 days from when a population change triggers the update or the availability of census data. Changes were made to the final rule and NUREG/CR-7002 in response to these comments.

Offsite Planning

Comments: A commenter argued that ETEs provide useful information to offsite response agencies. The commenter recommended that an ETE's impact on offsite planning should be considered within the proposed regulation. This commenter added that the proposed regulation fails to recognize that updating ETEs must be coordinated with offsite agencies and concluded that NRC approval is an unnecessary burden. [0084]

NRC Response: The NRC disagrees with the commenter. Licensees will follow the guidance in NUREG/CR-7002, or an acceptable alternative, when completing ETE updates. First, the licensee will coordinate with OROs in order to understand ORO emergency response resources. Then the licensee will develop the ETE update based on the available resources. There is no maximum or expected ETE so the OROs just provide the resources at their disposal. OROs then review the update for accuracy concerning available resources. ORO impact is minimal other than coordination with the licensee and review of the ETE update. The NRC has determined that review to confirm adequacy of ETE updates is necessary for consistency in implementation. No change was made to the final rule or NUREG/CR-7002 in response to these comments.

4.4.3 Draft NUREG/CR-7002: ETE Updating

ETE Updating

Comments: A commenter stated that the guidance should require utilities to annually update the population data in the EPZ and conduct a full update of the ETE whenever there is a 5 percent increase in population. In addition, this commenter argued that the ETE update should be done every five years or at the request of State or local authorities based on changes in the EPZ. The commenter also stated that the FEMA REP Program Manual requires pets to be included in the evacuation planning and urged that this guidance include this requirement. [0064]

NRC Response: The NRC disagrees with the commenter. The final rule adopts the approach that the licensee will determine when the longest ETE for the 2-mile region, 5-mile region, or the entire EPZ changes by 25 percent or 30 minutes, whichever is less, to trigger an ETE analysis update. Licensees are required to estimate permanent resident population annually during the years between decennial censuses, and update the ETE analysis if these criteria are met. The

NRC determined that basing ETE analysis updates on a generic population change alone, without consideration of its impact on the ETE values, may not result in useful ETE updates. The NRC does not believe that changes are needed to accommodate pets. The ETE mobilization time takes into account family preparation time for evacuation, which would include the transportation of pets if applicable. No changes were made to the final rule or NUREG/CR-7002 in response to these comments.

Transportation During an Evacuation

Comment: A commenter expressed concern about the NRC's assumptions regarding the ability for transit-dependent populations to obtain access to transportation during evacuations. This commenter requested that the NRC review and clarify its assumptions regarding this population. [0088]

NRC Response: The NRC disagrees with the commenter. The guidance accounts for the time necessary to evacuate transit dependent personnel, which would include the time to obtain access to transportation. The guidance advises that this time be included in the ETE. No change was made to the final rule or NUREG/CR-7002 in response to this comment.

Comment: A commenter suggested that the guidance's definition of "background traffic" double counts vehicles: "Any traffic that is not passing through the EPZ ('pass through traffic') must be people that either live, work or are visiting the EPZ." Thus, "background traffic" is already accounted for in the vehicle estimates for permanent and transient populations and recommended that the NRC remove the discussion on "background traffic." [0123]

NRC Response: The NRC disagrees with the commenter. Background traffic includes vehicles that are already on the road when an evacuation order is issued. This would include some people from the permanent and transient population, who may need time to return home before evacuating. Therefore, the consideration of background traffic is needed to support the calculation of the ETE. Although the NRC disagrees with the comment, NUREG/CR-7002, Section 2.5.3 was clarified to point out the importance of considering that this traffic may be on the roadway during an emergency and the ETE should include the time for these individuals to return home and evacuate, if necessary. A clarification was made to NUREG/CR-7002 as a result of this comment.

Comment: A commenter stated that most offsite agency plans and public information advise parents to not pick their children up from schools, but that most parents would ignore this advice. This commenter recommended that the NRC take this into consideration when determining the number of buses that would be needed to evacuate elementary and middle schools. [0121]

NRC Response: The NRC disagrees with the commenter. The evacuation of children is discussed in NUREG/CR-7002, Section 2.4. For planning purposes and calculation of the ETE, transportation resources for elementary and middle schools should be based on 100 percent school capacity. Although this assumption is conservative, there is no guarantee that parents will pick up elementary and middle school students, so planning is done for evacuation of all of these students. Some high school students drive to school and these students would be expected to evacuate in their own vehicles. No change was made to the final rule or NUREG/CR-7002 in response to this comment.

Comment: Another commenter questioned the value to the ETE of knowing vehicle queue length for special facilities. This commenter also recommended that the NRC add in bus driver rest time when discussing return trips for buses. [0126]

NRC Response: The NRC disagrees with the commenter. The queue length may not directly affect an ETE; but it provides supportive information used in the review of an ETE document. For example, these facilities may require 20 or more vehicles with a loading time of 15 minutes each. The analyst should consider these logistics when performing the ETE analysis. The logistics for bus drivers will vary by site and scenario and prescribing a rest time would not be appropriate for many situations. No change was made to the final rule or NUREG/CR-7002 in response to this comment.

Comment: A commenter stated that the majority of EPZs are low population density sites that do not have roadways which exceed capacity, even during evacuation. The commenter recommended that sentences within the "capacity analysis" section be revised to reflect this point. [0124]

NRC Response: The NRC disagrees with the commenter. There are some low population density sites where roadway capacity may not be exceeded, but this is not reflective of the majority of EPZs. No change was made to the final rule or NUREG/CR-7002 in response to this comment.

Treatment of Shadow Evacuation

Comments: A commenter stated that a higher voluntary evacuation percentage be used within the EPZ and recommended values based on the experience of ETE subject matter experts. [0102] A commenter stated that they were unsure how the NRC derived the estimate of 20 percent shadow evacuation. This commenter argued that shadow evacuations could encompass 40 percent of the population and argued that this assumption should be the default for shadow evacuations. [0088] Another commenter stated that the shadow evacuations contradict NUREG-6864, Volume 1, "Identification and Analysis of Factors Affecting Emergency Evacuation," and questioned whether the guidance should be followed. [0043] One commenter referenced Figure 2-1 in NUREG/CR-7002 and suggested an additional figure to reflect shadow populations beyond the 10 mile radius. The commenter also asked if the shadow population should be measured as an actual or estimated (i.e., 20 percent) figure. [0122]

NRC Response: The NRC disagrees with the commenters. First, there is no quantitative basis for a higher shadow evacuation value than the 20 percent value used by the NRC. Second, the value of 20 percent was derived from NUREG/CR-6953, Volume II, based on responses of individuals who had evacuated when they had been requested not to do so. Third, the shadow evacuation does not contradict NUREG/CR-6864, which states that in the evacuations studied, the shadow evacuation did not impact the effectiveness of the evacuation. NUREG/CR-7002, which is guidance, states that the rings and sectors of Figure 2-1 may be extended to 15 miles to show the shadow populations. The document did not state that a shadow evacuation could not affect an evacuation. NUREG/CR-7002, Section 2.5.2 was changed to clarify that the 20 percent value is static to support a standardized assessment. A clarification was made to NUREG/CR-7002 as a result of these comments.

Evacuation Estimate Studies

Comments: A commenter stated that the proposed methodology for ETE studies is too detailed and requires data that is obscure and hard to obtain. [0043] Two commenters expressed concern that data required for the ETE studies will not be available. This data included population information from medical and correctional facilities. These commenters requested further guidance to address cases where the required information is not available. [0128, 0130] One of the commenters stated that the goal of this guidance is a comprehensive ETE study, but expressed concern that the "prescriptive nature" of this guidance document would encourage "unrealistic" or "unverifiable" assumptions in the absence of accurate/verifiable data. The commenter asked several questions about the guidance in NUREG/CR-7002. First, the commenter asked if licensees will be responsible for confirming the completeness of the detail contained in community plans as required by the NUREG/CR-7002. Second, the commenter asked if NRC's guidance overlapped with FEMA's responsibility to oversee community preparedness. Third, the commenter asked how ETE contractors should address situations where community resources and planning do not meet the standards set forth in the guidance document. [0130]

NRC Response: The NRC agrees in part with the commenters. The detail of the methodology is consistent with NUREG/CR-4831, "State of the Art in Evacuation Time Estimate Studies for Nuclear Power Plants," and NUREG/CR-6863, "Development of Evacuation Time Estimates for Nuclear Power Plants." The methodology in these NUREG/CRs has been applied to most ETEs currently in use. The data needed to develop ETEs is typically available and has not been a significant issue in the development of most ETE studies. However, the NRC agrees that there is a potential for data to be difficult to obtain for certain facilities. NUREG/CR-7002, Section 2.3, "Special Facility Residents," specifies the use of assumptions when needed, as long as a basis for the assumptions is provided.

NUREG/CR-7002 is a guidance document, not enforceable requirements, and therefore licensees are not responsible for confirming the completeness of community plans. Licensees do not have the authority to require State and local agencies to meet planning standards, but should perform the ETE study based on the local resources that are available.

The prescriptive nature of the guidance is necessary for consistency and thoroughness. It also supports the review of data input and output values to ensure the data is realistic and verifiable, which will assist the analysis reviewer. Changes were made to NUREG/CR-7002 in response to these comments.

Inconsistencies with Other Regulatory Documents

Comment: A commenter stated that there are inconsistencies and conflicts between ETE guidance and requested that the NRC clarify the relationship between the documents. [0084] This and subsequent comments below list the specific sections of the guidance document that need to be clarified by the NRC, according to the commenter:

With regard to the Executive Summary on page vii, the last sentence on page vii states: "When the 0-2 mile evacuation is about complete, the 2-5 mile zone is ordered to evacuate." The commenter explained that this statement needs to be clarified on whether the evacuation order for the 2-5 mile zone occurs when the evacuees from the 0-2 mile zone leave the EPZ, when they leave the 0-2 mile zone, or at some other point. [0084]

NRC Response: The NRC agrees with the commenter that the timing of the staged evacuation needs to be clarified in the guidance. When approximately 90 percent of the 0-2 mile zone has cleared the 2 mile zone boundary, based on the ETE, the 2-5 mile zone would be ordered to evacuate. The 2-5 mile residents enter the roadway network as the 0-2 mile population is passing through the area. Changes were made to the guidance documents in response to this comment.

Comment: With regard to Table 1-2, Assumption 1 indicates that the ETE is measured from the start of the initial EAS broadcast. The commenter stated that this assumption conflicts with Section 4.1.1, page 22, which indicates that the notification time, which precedes the EAS message, is considered part of the trip generation time. The commenter suggested that the NRC clarify the treatment of notification time. [0084]

NRC Response: The NRC agrees with the commenter. NUREG/CR-7002, Section 4.1.1 was revised to be consistent with Assumption 1, which states that the ETE is measured from the start of the initial EAS broadcast. Changes were made to the NUREG/CR-7002 in response to this comment.

Comment: With regard to Section 2.1 on page 11, the text states that the ETE should use population values for the year the ETE is prepared. However, Section C.1.13.3 of RG 1.206 and NUREG-0800 indicate that projections of the population over the requested duration of the application are necessary. The commenter suggested that many requests for additional information on ESP and COL applications have questioned the use of current population data and resulted in use of population projections for projected construction years and operational years. The commenter requested that the NRC provide consistent guidance regarding the use of current and projected population data. [0084]

NRC Response: The NRC disagrees with the commenter. The guidance document provides the methodology for development of ETE studies. Depending upon the reason the ETE is prepared, such as an application for a Part 52 combined license, additional requirements may apply, such as projecting the population values. Under the final rule, the ETE is required to be updated periodically based on the effect of population changes. Therefore, projecting future populations is not needed, although licensees are required to provide annual population estimates. No change was made to NUREG/CR-7002 in response to this comment.

Comment: With regard to Section 2.5.1 on page 15, the text indicates that: “This is based on site specific characteristics as there may be seasonal events that warrant development of additional ETEs.” The commenter stated that this sentence conflicts with the previous sentence, which indicates that only one special event ETE requires analysis. The commenter suggested that the NRC clarify the guidance for performance of multiple special event ETEs. [0084]

NRC Response: The NRC agrees with the commenter. The referenced sentence was deleted to clarify that only one special event ETE should be analyzed. Changes were made to the NUREG/CR-7002 in response to this comment.

Comment: Section 2.5.2 on page 16 states: “A shadow evacuation of 20 percent of the permanent resident population...should be assumed to occur in areas outside the evacuation area.” A subsequent sentence indicates that: “For a staged evacuation, when developing the 0-2 mile ETE, it should be assumed that 20% of the remaining EPZ permanent resident

population evacuates as a shadow evacuation." The commenter suggested the NRC needs to clarify if the 0-2 mile analysis is supposed to consider a shadow evacuation of the 15-mile radius, or of only the remainder of the plume exposure pathway EPZ (i.e., the 2-10 mile zone). [0084]

NRC Response: The NRC agrees with the commenter. Section 2.5.2, "Shadow Evacuation," of the final guidance document was revised to clarify the approach in the analysis of the shadow evacuation. This section now reads, "A shadow evacuation of 20 percent of the permanent resident population, based on U.S. Census Bureau data, should be assumed to occur in areas outside of the evacuation area being assessed extending to 15 miles from the NPP. The 20 percent value is static to support a standardized assessment. A shadow evacuation would likely occur in a graded manner with the potential for a 20 percent shadow evacuation to occur from the areas that are closer to the declared evacuation area, decreasing with distance away from the affected area."

The NRC recognizes that the percent of population participating in a shadow evacuation would be graded with a larger percent (about 20%) nearer the evacuation area, decreasing with distance away from the hazard. However, for consistency in analysis, a 20% value is assigned. Changes were made to NUREG/CR-7002 in response to this comment.

Comment: Section 3.1 on page 17 indicates that: "In all cases, a field survey of the key routes ... should be performed." The commenter stated that the NRC should clarify if a field survey is necessary for an ETE update in the absence of significant changes to the road network. [0084]

NRC Response: The NRC disagrees with the commenter. Field surveys provide more than just information on roadway changes. These surveys provide first hand information regarding potential impediments, access points, new developments, etc., that are not necessarily significant changes to the road network, but could affect the evacuation time estimate. No change was made to NUREG/CR-7002 in response to this comment.

Comment: Section 5.4 on page 32 addresses the need for an ETE update when the population changes by 10 percent or more. The commenter stated that the NRC should provide guidance allowing for sensitivity studies in lieu of full ETE updates. [0084]

NRC Response: The NRC agrees in part with the commenter. The licensee must update the ETE analysis when a population increase causes a material increase to ETE values. The final rule adopts the approach that the licensee will determine when the longest ETE for the 2-mile region, 5-mile region, or the entire EPZ changes by 25 percent or 30 minutes, whichever is less, to trigger an ETE analysis update. Licensees are required to estimate permanent resident population annually during the years between decennial censuses, and update the ETE analysis if these criteria are met. Changes were made to the final rule and NUREG/CR-7002 in response to this comment.

<u>Other Protective Actions</u>

Comment: A commenter requested that guidance be provided for performing an analysis of the time required to take "other protective actions." [0084]

NRC Response: The NRC agrees with the commenter. The NRC determined that the former rule language phrase "time required…for taking other protective actions" was not needed

because the only other protective action is to shelter in place. Therefore the NRC removed this phrase from the final rule language. Changes were made to the final rule in response to this comment.

Sensitivity Studies

Comment: One commenter noted that the majority of EPZs are of low population (Type I), and the relatively few EPZs with high population (Type II) skew the population distribution and produce a mean that is about double the median. The commenter recommended that it is necessary to recognize the importance of the relation between EPZ types and the ETE. As such, the commenter stated that the ETE updates should include a sensitivity study and recommended what it should include and how the results should be used. The commenter then listed the advantages of conducting a sensitivity study. [0102]

NRC Response: The NRC agrees with the commenter. The final rule adopts the approach of determining when the longest ETE for the 2-mile region, 5-mile region, or the entire EPZ changes by 25 percent or 30 minutes, whichever is less, to trigger an ETE analysis update. The NRC determined that a population increase must have a material impact on ETE values before an ETE update is required, regardless of the total EPZ population. Licensees should use a population sensitivity study or other appropriate method to determine when this trigger is reached. Licensees are required to estimate permanent resident population annually during the years between decennial censuses, and update the ETE analysis if these criteria are met. Changes were made to the final rule and NUREG/CR-7002 in response to this comment.

Staged Evacuation

Comments: A commenter noted that the study assumes 99.5 percent of those advised to shelter will comply. The commenter suggested that this assumption is unrealistic. As a result, the commenter requested that the NRC justify the duration of time for sheltering of people in the 2-5 mile zone. This commenter stated that sensitivity tests with a simulation model could identify the minimum shelter duration for those within the 2-5 mile zone that would allow those in the 0-2 mile zone to evacuate the area. This commenter also requested that the NRC discuss how staged evacuations will be accomplished. [0102] Another commenter stated that some plants define their emergency response planning area (ERPA) in a 5-mile radius and do not break it down by 2 and 5-mile zones. This commenter asked how staged evacuations will be computed for these plants. [0112]

NRC Response: The NRC agrees in part and disagrees in part with the commenters. The NRC disagrees that the study makes an assumption that 99.5 percent of those advised to shelter will comply. The study contains no specific assumption regarding the percentage of the public who would comply with sheltering, but does account for shadow evacuations that could include some members of the public in areas directed to shelter.

The NRC agrees that the guidance document needed clarification regarding shelter duration. For a staged evacuation, when approximately 90 percent of the 0-2 mile zone has cleared the 2 mile zone boundary, based on the ETE, the 2-5 mile zone would receive an evacuation order.

The NRC disagrees with the need to discuss the method for staged evacuations. The ETE provides the time necessary for evacuation, but does not prescribe the methods. Each licensee has the flexibility to determine the best method based on site specific criteria.

The NRC agrees that clarification is needed for staged evacuations of large ERPAs that extend beyond two miles. Licensees are directed to take site specific PAR logic into account in the ETE analysis. Therefore, ETE values should be based on this logic, which takes into account local ERPA boundaries. Changes were made to the guidance document in response to these comments.

Traffic Signal Timing Field Data Requirement

Comments: A commenter stated that the use of intersection signal timing is not realistic for an emergency situation. This commenter recommended that traffic demand patterns should be estimated using an iterative procedure. In addition, this commenter requested that ETE contractors contact local agencies in order to determine whether any special signal timing plans exist. [0102] Another commenter stated that the traffic control plans (signal timing) are rarely available and added that collection of this data in the field will take longer than 180 days. [0130] Another commenter questioned what value the information obtained from "the 10 highest volume intersections within the EPZ" would have in developing the ETE and questioned how the agencies would use this data. [0125]

NRC Response: The NRC agrees in part with the commenters. The guidance to use actual intersection signal timing was removed. NUREG/CR-7002, Section 3.3, "Intersection Control," was revised to allow a graded approach to modeling of intersections depending on the type of signalization or traffic control in place at the intersection. Changes were made to NUREG/CR-7002 in response to these comments.

Delivery of ETE Reports

Comment: A commenter recommended that a database of the EPZ populations be developed for all 65 sites. This commenter also recommended a delivery schedule for decennial year ETE updates. [0102]

NRC Response: The NRC disagrees with the commenter. There is no need for a central database of EPZ populations, which would be an administrative burden to maintain. The NRC intends to establish a schedule for review to confirm the adequacy of the updated ETEs. However, this information is not needed in the final rule or guidance document. No change was made to the final rule or the guidance document in response to this comment.

Truncation of Trip Generation Time

Comments: One commenter referenced page 27 of NUREG/CR-7002 and asked NRC to clarify what constitutes an "adequate basis" for truncating survey data. For example, the commenter asked whether the results of a "statistical outlier analysis" would be an adequate basis for truncating trip generation time values collected by public survey. [0127]

NRC Response: The NRC agrees with the commenter. The results of a "statistical outlier analysis" would be a valid basis for truncating data received from public surveys. NUREG/CR-7002, Section 4.3, "Evacuation Time Estimates for the General Public," was revised to clarify this issue. Changes were made to NUREG/CR-7002 in response to this comment.

4.4.4 Other: ETE Updating

Alternatives to the 10-Percent Population Increase

Comments: A commenter stated that the ETE section of the rule needs to be "overhauled." This commenter recommended that the NRC replace the scenario where evacuation of the whole EPZ is analyzed with sensitivity studies on health effects and compensatory actions. This commenter also requested that additional analyses be restricted to a few high population sites. [0048] Another commenter agreed that it should be possible to assess the impact of population changes by conducting a sensitivity analysis. [0084] A commenter stated that population changes should not be viewed as the sole basis for conducting an ETE. This commenter also stated that licensees should not be required to revise their ETEs if the population decreases. [0096] A commenter argued that the NRC's proposed trigger of a 10-percent change in population may not be sufficient to always ensure timely updating. This commenter recommended that ETE updates be based on traffic volume or a preset time period. [0109] A commenter suggested that the proposed rule take into consideration population density as a factor rather than treating all sites equally. [0090] Another commenter stated that the proposed rule applies a set of criteria to a wide variety of situations (e.g., small or large population, small or large ERPAs). The commenter called for further rationale and definition of terms before the proposed rule is implemented. The commenter concluded that "one size does not fit all situations." [0135]

NRC Response: The NRC agrees in part and disagrees in part with the commenters. The NRC does not believe that the ETE section of the rule needs to be overhauled. The intent of the final rule is to ensure that licensees have the most up-to-date ETE information to support protective action decision-making. The ETE analysis and the final rule are not the appropriate forums for assessing potential health effects and compensatory actions. The NRC also disagrees that maintaining current ETE analyses be limited to a few high population sites. All reactor sites could experience population changes that impact ETE values, and therefore the final rule should apply to all nuclear power reactor licensees.

The NRC agrees that "one size does not fit all situations" regarding the trigger for updating ETEs and the threshold for ETE updates in the proposed rule should be changed. Suggested alternative thresholds included various population sensitivity studies that would assess the effects of population changes on ETE values; a 25 percent change in the ETE baseline rather than a 10 percent change in the EPZ population; and population changes resulting in a change to ETE values of 25 percent or 30 minutes, whichever is less. The final rule adopts the approach of a 25 percent or 30 minute increase in ETE values to determine when an ETE analysis update is warranted. Licensees would first perform a population sensitivity analysis to determine the population increase that would cause this increase in ETE values. The NRC determined that basing ETE analysis updates on a population change alone without consideration of its impact on the ETE values may not result in useful ETE updates. The rationale and methodology for performing ETE updates are described in detail in the final rule and NUREG/CR-7002; therefore, the NRC disagrees that any further information is needed prior to publication of the final rule.

The NRC disagrees that ETE updates are not necessary if the EPZ population decreases. An ETE decrease is beneficial information to ORO protective action decision-making. However, the NRC determined that population decreases would be accounted for during the decennial census update. The NRC also disagrees that ETE updates be based on traffic volume. Sandia

National Laboratory (SNL), based upon their expertise developed from years of researching evacuations, confirmed that the major contributor to changes in ETE values is changes in population. Population changes have a direct correlation to the volume of vehicles on the roadway, which directly affects the roadway capacity. Therefore, the NRC determined that population change is the more appropriate metric to monitor the potential effect on roadway capacity.

Changes were made to the final rule and NUREG/CR-7002 in response to these comments.

Comments: A commenter stated licensees would be required to continuously monitor changes in population to determine when a 10-percent population change has occurred. The commenter suggested that the NRC change this requirement so that licensees only have to perform reviews five years after submitting the last ETE. [0076] Another commenter agreed, and stated that the updates should be done every three to five years or at the request of the State or local government. [0064] A commenter stated that all licensees should be required to update their ETE estimates within two years of any changes to the requirements for ETE studies and methods used. [0088]

NRC Response: The NRC disagrees with the commenters. There is no basis for developing ETEs on a five-year or a three to five year period. Also, there is no reason for an update within two years of new guidance being issued if there is no population change to warrant an update. The NRC determined that ETE updates would be more effective if based on a population increase that has a material impact on ETE values, rather than a generic 10 percent population change. The final rule adopts the approach of a 25 percent or 30 minute increase in ETE values to determine when an ETE analysis update is warranted. Licensees would first perform a population sensitivity analysis to determine the population increase that would cause this increase in ETE values. The NRC determined that basing ETE analysis updates on a population change alone without consideration of its impact on the ETE values may not result in useful ETE updates. No change was made to the final rule or NUREG/CR-7002 in response to these comments.

Phased Approach

Comments: A commenter objected to implementing a phased evacuation approach and gave four reasons why. First, the commenter stated that officials have no clear idea what population is most at risk. Second, the commenter explained that today's communications capabilities assure the news will travel quickly through the affected population and those not considered "at risk" will self-evacuate. Third, the commenter asserted that the phased approach ignores shadow evacuation. Finally, the commenter explained that employing a phased approach will undermine authority. The commenter suggested that the regulation provide detailed functional requirements for the ETE. [0072] A commenter disagreed with the first commenter and stated that a phased approach within the evacuation plan should be used that focuses more attention on the region within 0-2 miles rather than the entire EPZ. [0090]

NRC Response: The NRC disagrees with the commenters. First, local officials do have an understanding of the population most at risk based on many years of participating in biennial EP exercises. Second, studies such as NUREG/CR-6864, "Identification and Analysis of Factors Affecting Emergency Evacuations," show that residents largely follow the orders of officials. Self evacuation is not expected to affect the staged evacuation. Third, a shadow evacuation is not ignored in the staged evacuation scenario. Every scenario assumes a shadow evacuation

of 20 percent of the permanent resident population in areas outside of the evacuation area being assessed extending out to 15 miles from the NPP. There is no basis to show that a staged evacuation undermines authority. Lastly, NUREG/CR-7002 considers all areas within the EPZ equally. The NRC has determined that the necessity for ETE studies and periodic updates be included in the regulations while the details of how to perform the study be documented in guidance. This would provide licensees flexibility in performing the ETE study and permit changes to the guidance without a formal rulemaking process. No change was made to the final rule or NUREG/CR-7002 in response to these comments.

Shadow Evacuations

Comments: A commenter stated that the shadow evacuation assumed by the NRC in NUREG/CR-7002 was conservative. This commenter added that licensees should be required to use a more accurate estimate of shadow evacuation. The commenter recommended that NRC impose performance standards for ETEs that require licensees to demonstrate timely evacuations under varying relevant conditions. [0109]

NRC Response: The NRC disagrees with the commenter. Quantitative data for shadow evacuations is not available on a site-specific basis. However, to better define the expectations in the analysis of the shadow evacuation, NUREG/CR-7002, Section 2.5.2, "Shadow Evacuation," was revised to clarify the approach. This section states, "A shadow evacuation of 20 percent of the permanent resident population, based on U.S. Census Bureau data, should be assumed to occur in areas outside of the evacuation area being assessed extending to 15 miles from the NPP. The 20 percent value is static to support a standardized assessment. A shadow evacuation would likely occur in a graded manner with the potential for a 20 percent shadow to occur from the areas that are closer to the declared evacuation area, decreasing with distance away from the affected area."

The NRC recognizes that the percent of population participating in a shadow evacuation would be graded with a larger percent (about 20%) nearer the evacuation area, decreasing with distance away from the hazard. However, for consistency in analysis, a 20% value is assigned. Licensees are required to calculate the ETE based on site-specific characteristics and not meet a specific time standard in order to be acceptable. Requiring licensees to perform regular evacuations would needlessly place the public at risk and therefore should not be required. A clarification was made to NUREG/CR-7002 in response to this comment.

Evacuation Plans

Comments: A commenter stated that the emergency evacuation plan is unrealistic in heavily populated areas. [0053] Another commenter stated that because the State and counties will be implementing the evacuation plans, they should be the ones to decide what is best for their jurisdiction. [0056] A commenter also stated that without accurate assessment of plume transport, evacuation plans will continue to be designed without knowing what portion of the population will be affected by a radiological release. This commenter also urged the NRC to expand the evacuation zone to at least 50 miles. The commenter also stated that the ETEs should take into consideration commuter traffic during rush hour. [0109]

NRC Response: The NRC disagrees with the commenters. Large scale evacuations have been successfully completed in the US about once every 3 weeks for more than 20 years as described in NUREG/CR-6864, "Identification and Analysis of Factors Affecting Emergency

Evacuations." States and counties make the protective action decisions and are the authorities that decide what is best for their jurisdiction. Licensees provide the ETE analysis to these authorities so that they have information regarding the estimated time to evacuate, and can use that information when making the protective action decision.

No connection exists between the ETE and assessment of plume transport. These are separate analyses and although evacuation speed may be an input to a plume model, the development of the ETE is in no way related to the plume model.

No basis is provided in the comment to consider expanding the evacuation zone to 50 miles.

The guidance does not explicitly include consideration of a rush hour scenario. Such a scenario may have more traffic on roadways at the start of an action, but does not necessarily provide the more challenging scenario or a longer ETE because the summer midweek daytime and winter midweek daytime scenarios would bound a rush hour scenario in that they would take into account the same number of workers, but those workers would be located the farthest distance from home (i.e., at work). When notified, the workers would then travel home, prepare, and evacuate. During rush hour, workers are already on the road and potentially closer to home when they receive notification of the emergency. No change was made to the final rule or NUREG/CR-7002 in response to these comments.

Comments: A commenter stated that the NRC should require realistic modeling for deciding how to stage the evacuation of institutionalized populations. This commenter also asserted that institutions containing immobile populations should be equipped with radiation monitors and contingency plans. [0088]

NRC Response: The NRC disagrees with the commenter. Licensed institutions are required to meet the conditions of their State license. The NRC does not have authority over these institutions. The ETE guidance provides a methodology to assure that resources needed to support evacuation of these facilities are quantified and used in estimating the time to evacuate these facilities. No change was made to the final rule or NUREG/CR-7002 in response to this comment.

Resource Use

Comment: A commenter expressed concern about the burden this regulation would place on the NRC, licensees, and State and local government resources. This commenter recommended that the NRC make an assessment of the resources needed to complete ETE revision, review, and approval and reconsider the proposed requirements based on those findings. [0084]

NRC Response: The NRC disagrees with the commenter. The NRC considered the burden to licensees of conducting ETE updates in the regulatory analysis and it was deemed acceptable. There is minimal impact on State and local governments because only key decision-makers would use this information. No training would be necessary since the decision-makers are already acquainted with the process of using ETE values for protective action decisions. The NRC will factor the ETE reviews into its future resource planning. No change was made to the final rule or NUREG/CR-7002 in response to this comment.

Requests for Clarification

Comments: A commenter requested that the NRC clarify what "regulations are in place" in cases where infrastructure changes occur due to a catastrophic event and added that these regulations should be cited. The same commenter stated that the timeframe for NRC review and approval of ETEs should be specified. The commenter also requested that the NRC re-evaluate the statement: "NRC believes that the 10% threshold would balance potential inadequacies and burdens." [0102]

NRC Response: The NRC agrees in part and disagrees in part with the commenter. The NRC acknowledges that the wording "regulations are in place" for cases where infrastructure changes occur due to a catastrophic event was not valid and this wording was deleted from the final rule SOC.

The NRC disagrees that the timeframe for NRC review be specified. The NRC intends to establish a schedule for review to confirm the adequacy of the updated ETEs. This information is not necessary for the final rule or guidance document.

The NRC agrees that the 10 percent population change criterion for ETE updates should be changed. The final rule adopts the approach of a 25 percent or 30 minute increase in ETE values to determine when an ETE analysis update is warranted. Changes were made to the final rule and the guidance document in response to these comments.

ETE Updates

Comment: A commenter requested that the proposed rule address the submittal of ETEs for new plants that submit applications for COLs or ESPs between decennial census updates. This commenter stated that the ETEs for new applicants should be developed using the latest decennial data and only updated prior to actual operation. [0102]

NRC Response: The NRC agrees with the commenter. The final rule directs license applicants to use "the most recent U.S. Census Bureau data as of the date the applicant submits its application to the NRC" when developing their ETE analyses. After the Part 52 license applicant receives its combined license, the licensee is required to conduct at least one review of any changes in the population of its EPZ, using the same process as currently operating nuclear power reactor licensees, at least 365 days prior to its scheduled fuel load. Changes were made to the final rule in response to this comment.

Comment: A commenter stated that there needed to be an enforcement structure and that the NRC should require annual submittals by licensees to explain their population estimate reviews. [0109]

NRC Response: The NRC disagrees with the commenter. Licensees are required to maintain these estimates so that they are available for NRC inspection during the period between censuses and to submit these estimates to the NRC with any updated ETE analysis. Therefore, there is no need for the NRC to review annual licensee population estimates. No change was made to the final rule or NUREG/CR-7002 in response to this comment.

Comment: A commenter requested that the NRC impose "ETE standards of performance" that would require licensees to demonstrate that they used proper assumptions and methodologies. [0109]

NRC Response: The NRC disagrees with the commenter. The guidance document establishes a methodology that will be used by the NRC to review ETE submittals. Licensees have the flexibility to use this methodology or an alternative that the NRC finds acceptable to develop their ETE analyses. No change was made to the final rule or NUREG/CR-7002 in response to this comment.

Requests for Changes in Federal Register Language

Comment: A commenter recommended a change to the FRN language on page 23265 because licensees do not typically use ETEs to recommend PARs. The commenter suggested the following language: "Improving the accuracy and quality of ETE values would help offsite officials determine the most appropriate protective action." [0102]

NRC Response: The NRC disagrees with the commenter. The intent of the final rule language is to require licensees to use the ETE analysis in the protective action recommendation process. No change was made to the final rule or SOC in response to this comment.

Comment: A commenter recommended a change to the FRN language on page 23265 because OROs are primarily responsible for protective action strategies. The commenter suggested the following language: "Further, the NRC concluded that the effect of population change upon evacuation times should be understood by OROs and incorporated into offsite protective action strategies." [0102]

NRC Response: The NRC agrees with the commenter. The SOC wording was changed to clarify that the effect of population changes should be incorporated into offsite protective action strategies. Changes were made to the final rule and SOC in response to this comment.

Comment: A commenter recommended changes to the FRN language on page 23265 because population is more likely to change than infrastructure. [0102]

NRC Response: The NRC agrees in part with the commenter. Population and infrastructure changes can affect the ETE, and population changes that could impact the ETE can occur in less time than changes to infrastructure, which can take many years. The NRC did not make the changes recommended by the commenter but did revise the final rule to adopt the approach of a 25 percent or 30 minute increase in ETE values to determine when an ETE analysis update is warranted. No change was made to the final rule in response to these comments.

Comments: Two commenters argued that a material change in ETE was not discussed and that a material change would be a change in baseline ETE of 25 percent or 30 minutes or more. These commenters also were concerned that the use of ETEs in the development of public protective action strategies is not addressed. [0098, 0102]

NRC Response: The NRC agrees in part with the commenters. As discussed in previous comment responses, the 10 percent population criterion was changed, for reasons other than those mentioned in these comments, to a criterion that takes into account the effect of population change on the ETE values that would cause a change in those values of 25 percent

or 30 minutes, whichever is less. No change was made to the final rule in response to these comments.

Comment: A commenter noted that ETEs are used primarily by offsite officials to determine the most appropriate protective action and recommended a change in language to the FRN language on page 23270. The commenter suggested the following language: "The NRC would expect that the updated ETEs would be shared with OROs to be incorporated into offsite protective action strategies." [0102]

NRC Response: The NRC agrees with the commenter. The word "offsite" was inserted into the SOC to clarify that the NRC would expect OROs to incorporate the updated ETEs into their offsite protective action strategies. Changes were made to the final rule NUREG/CR-7002 in response to this comment.

Comments: A commenter argued that when ETEs are reviewed, all ERPAs should be reviewed to see the cumulative impacts on the EPZ clearance times. This commenter also suggested that reviewing a single ERPA on the basis of largest population would not capture population trends. [0096] Another commenter agreed and commented that the most populous ERPA does not necessarily impact the ETE for the entire EPZ. [0102]

NRC Response: The NRC agrees in part with the commenters. The 10 percent population criterion was modified to a criterion that takes into account the effect of population change on the ETE values. However, the new criterion is specific to the effect of population change on the ETE rather than level of service. As part of this change, the population of the largest ERPA will no longer be considered. Changes were made to the final rule and NUREG/CR-7002 in response to these comments.

Comment: A commenter recommended the NRC change the language on page 23270 of the FRN because the details of the ETE updates belong in a guidance document and not in the rule language. [0102]

NRC Response: The NRC agrees in part with the commenter. Some of the details concerning ETE updates and submissions are provided in guidance. However, the update criteria, including the population trigger value and necessity of annual population reviews, must be included in the rule to ensure consistent implementation. No change was made to the final rule in response to this comment.

Comment: A commenter argued that the licensee should discuss potential enhancements to improve evacuation times with OROs because they will decide whether to implement enhancements. The commenter recommended that the NRC revise the FRN on page 23273 as follows: "Licensees would also be expected to identify and analyze potential enhancements to improve evacuation times and discuss with OROs whether implementation of potential enhancements is appropriate." [0102]

NRC Response: The NRC agrees in part with the commenter. The NRC will expect licensees to identify potential enhancements to improve evacuation times and discuss them with OROs. The OROs have the responsibility to analyze potential enhancements for implementation. No change was made to the final rule or NUREG/CR-7002 in response to this comment.

Comment: A commenter stated that a sensitivity study should determine when an ETE needs to be updated and not the generic 10-percent criterion. This commenter recommended the NRC change the language on page 23273 of the FRN as follows: "Sites with little population change that does not materially affect ETE would not be substantially impacted by the proposed requirement, while those sites with population change that does materially affect ETE would be required to perform more frequent updates." [0102]

NRC Response: The NRC agrees with the commenter. The 10 percent population criterion was changed to the approach using a population sensitivity study to determine when a population change materially impacts ETE values. The final rule SOC language was also modified to note that those sites that experience a population change that materially affects the ETE would be required to perform more frequent updates. Changes were made to the final rule in response to this comment.

Comment: A commenter stated that the U.S. census should be used instead of State and local data. This commenter recommended that the NRC revise the language on page 23273 of the FRN as follows: "The review would consist of analysis of population growth based on U.S. Census Bureau data (e.g., Subcounty Population Datasets for population estimates) and would examine the whole EPZ." [0102]

NRC Response: The NRC disagrees in part with the commenter. Licensees are required to use the most recent U.S. Census Bureau annual resident population data to determine if an ETE update is necessary. State and local population data may also be used, if available. This provides licensees flexibility to use all available data in determining when ETE update criteria have been met. No changes were made to the final rule in response to this comment.

4.5 Amended Emergency Plan Change Process

4.5.1 10 CFR 50.54(q): Amended Emergency Plan Change Process

Recommended Changes to Proposed Rule

Comments: Some commenters disagreed with the NRC introduction of the term "emergency planning function," and suggested that the rule instead directly refer to the 10 CFR 50.47(b) planning standards and the requirements of Appendix E. These comments generally stated that the use of the "emergency planning function" phrase was not necessary to address power and non-power reactors, that planning standards should be used because compliance is based on the planning standards and that emergency planning functions would be treated as regulatory requirements. The use of "emergency planning functions" would increase ambiguity and confusion. [0084, 0102]

NRC Response: The NRC disagrees with the commenters. The 10 CFR 50.54(q) change process establishes a two-criteria test to establish whether the licensee has the authority to make a change without prior NRC approval. First, the plan as modified must continue to comply with the requirements of Appendix E, and for power reactors, the planning standards of 10 CFR 50.47(b). Second, the licensee must establish that the change does not reduce the effectiveness of the emergency plan. The proposed rule used the requirements of Appendix E, and for power reactors, the planning standards of 10 CFR 50.47(b) for the first test factor. The proposed rule defined a "reduction in effectiveness" in terms of "emergency planning functions"

for evaluating the second test factor. The two factors are distinct and separate and, accordingly, so are the criteria they are compared against. The effect of the comments would be to inappropriately use the same criterion for both test factors.

Under 10 CFR 50.47(a)(1)(i), an operating license is issued only if the NRC finds that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. This finding continues in force subject to 10 CFR 50.54(s)(2)(ii). A reasonable assurance finding is based, in part, on a licensee's compliance with the requirements of Appendix E, and for nuclear power reactor licensees, the planning standards of 10 CFR 50.47(b). However, the NRC's EP regulations are intentionally broadly-worded to provide for addressing plant-specific, site-specific, and EPZ-specific constraints to emergency preparedness and emergency response. During the licensing process, the licensee (or the NRC) may have identified planning constraints and vulnerabilities that required the licensee to commit to site-specific methods, capabilities, and resources beyond those found to be in compliance at another reactor facility. For example, an applicant at a site with complex topography may have been required to establish a more advanced emergency dose assessment capability. Also, after receiving its license, a licensee may have identified newly developed planning or response constraints, or self-identified weaknesses in its emergency plan, and implemented corrective actions beyond that identified in its emergency plan. For example, a licensee may add additional people on-shift as a corrective action to an observed inability to augment the ERO in a timely manner. A licensee seeking to relax either of these example requirements under 10 CFR 50.54(q) would need to determine that the emergency plan can continue to be effective, as modified. This determination will generally require that the licensee establish that the considerations that made the site-specific requirements necessary are no longer applicable to that site, or that an alternative approach would maintain the effectiveness. Thus, what may be adequate to demonstrate compliance at one facility may not be adequate for a different facility, even if the same corporate entity holds the licenses for both facilities.

The NRC disagrees with the comment that the use of "emergency planning function*"* would create confusion regarding the basis for violations cited by the NRC any more than the use of "planning standard function" does in the assessment of the significance of violations in the EP SDP. With regard to emergency plans, the proposed and final 10 CFR 50.54(q)(2) is a license condition that extends the applicability of the requirements of Appendix E and, for power reactors, the planning standards of 10 CFR 50.47(b) from the licensing phase to the operational phase. With few exceptions, citations for emergency plan non-compliances have referenced the corresponding requirement in the former 10 CFR 50.54(q) followed by the citation to the particular non-compliance in Appendix E or, for nuclear power reactor licensees, in the planning standards of 10 CFR 50.47(b). The applicability of the definition of "emergency planning functions" is explicitly limited to 10 CFR 50.54(q). Within 10 CFR 50.54(q), the phrase "emergency planning function" is used only in the definition of a "reduction in effectiveness" (10 CFR 50.54(q)(1)(iv)), which is then used in 10 CFR 50.54(q)(3) and (4) to differentiate what changes a licensee may make without prior NRC review and those for which prior NRC review is necessary. Section 50.54(q)(2) explicitly identifies the planning standards and/or the requirements in Appendix E, but not "emergency planning functions," as the bases for compliance.

In summary, the arguments raised by the commenters do not establish a substantiated concern that would cause the NRC to reconsider the "emergency planning function" construct and

language as proposed. No change was made to the final rule or the guidance document in response to these comments.

Comment: A commenter recommended that the NRC remove the phrase "emergency planning function" for the reasons identified in the comment on "emergency planning functions" above. The commenter suggested revising this subparagraph as follows:

> "(q) Emergency Plans. (1) Definitions for the purpose of this section:
> (i) Change means a modification of, addition to, or removal from:
>
> (a) A nuclear power reactor licensee's emergency plan that affects the licensee's capability to meet the planning standards in § 50.47(b) or the requirements in Appendix E; or
>
> (b) A research reactor or fuel facility licensee's emergency plan or implementing procedures that affects the licensee's capability to meet the requirements in Appendix E." [0102]

NRC Response: The NRC agrees in part and disagrees in part with the commenter. The NRC disagrees with the commenter's suggested replacement of the "emergency planning function" concept for the reasons set forth in the NRC response to earlier similar comments. Accordingly, there is no need to separate the power and non-power requirements as suggested. No change was made to the final rule or the guidance document in response to this comment.

The NRC agrees with the commenter's suggested omission of the phrase "or the resources, capabilities, and methods identified in the plan." The NRC recognizes that the phrase inappropriately dilutes the emphasis that should be placed on the content of the emergency plan. Changes were made to the final rule and the guidance document in response to this comment.

The NRC disagrees with the commenter's suggested deletion of the phrase "All such changes are subject to the provisions of this section except where the applicable regulations establish specific criteria for accomplishing a particular change." The commenter provided no supporting justification for removing the phrase. No change was made to the final rule or the guidance document in response to this comment.

Comments: A commenter stated that the proposed definition of "emergency plan" in 10 CFR 50.54(q)(1)(ii) could be read expansively to include documents over which the licensees have little or no control, such as ORO plans. The commenter stated that the suggested language would focus on the emergency plan as a single, up-to-date document. The commenter also stated that the definition is confusing because it creates the impression that multiple historical plans are simultaneously in effect and suggested the following wording for 10 CFR 50.54(q)(1)(ii):

> "(ii) Emergency plan means the document, prepared and maintained by the licensee, that identifies and describes:
>
> (a) A nuclear power reactor licensee's capability to meet the planning standards in § 50.47(b) and the requirements in Appendix E; or

(b) A research reactor or fuel facility licensee's capability to meet the requirements in Appendix E." [0102]

Another commenter stated that the "emergency plan" definition is ambiguous and that NRC should clarify it to specifically identify components that are considered as the "emergency plan," such as emergency plan implementing procedures. [0084]

NRC Response: The NRC disagrees with commenters. The proposed rule clearly stated that the definition applies to content that "identif[ies] and describe[s] the licensee's methods" (emphasis added). Also, proposed 10 CFR 50.54(q)(3) and (4) effectively limited the applicability to changes that the licensee initiates to its emergency plan. No change was made to the final rule or the guidance document in response to these comments.

The NRC disagrees with the commenter's focus on the emergency plan as a single document. The NRC is aware that licensees have, over time, removed information from the emergency plan document and placed it into sub-tiered documents. The language proposed by the NRC clarified that such sub-tiered documents need to be treated pursuant to 10 CFR 50.54(q) to the extent that they identify and describe the licensee's methods of maintaining preparedness and responding to emergencies. No change was made to the final rule or the guidance document in response to this comment.

The NRC disagrees with the commenter's suggestion that the NRC specifically identify components that are considered to be part of the emergency plan. The language of the "emergency plan" definition adequately identifies the characteristics of the documents that require treatment under 10 CFR 50.54(q)(3) without creating a prescriptive list that would require frequent updating. No change was made to the final rule or the guidance document in response to this comment.

The NRC disagrees with the commenter's assertion that the proposed rule language required multiple plans to be in effect simultaneously. The licensing basis of the licensee's EP program is the emergency plan as originally approved by the NRC and all subsequent changes made by the licensee with, and without, prior NRC review and approval under 10 CFR 50.54(q). As explained in the proposed DG-1237 and the final RG 1.219, "Guidance on Making Changes to Emergency Plans for Nuclear Power Plants", the NRC expects the licensee to consider its licensing basis in making the determinations required by 10 CFR 50.54(q)(3). A proper evaluation is not possible without understanding the bases of the particular elements being considered for revision. No change was made to the final rule or the guidance document in response to this comment. However, editorial changes were made in the final rule and the guidance document to consistently use the phrase "plan" rather than "plans" unless the context was in the sense of emergency plans for multiple sites or plants.

The NRC agrees in part with the commenter's suggested replacement of the phrase "maintaining and performing emergency planning functions" in this subparagraph. Although the NRC has decided to retain the emergency planning function concept in the final rule, this phrase, when used in conjunction with the final 10 CFR 50.54(q)(2), could be misinterpreted as requiring compliance with emergency planning functions. This was not the NRC's intent. Changes were made to the final rule and the guidance document in response to this comment.

The NRC disagrees with the commenter's suggested separation of power reactor and non-power reactor requirements. With the retention of the "emergency planning function" phrase,

there is no need to separate the requirements as suggested. No change was made to the final rule or final guidance in response to this comment.

Comments: A commenter stated that the proposed definition of "reduction in effectiveness" in 10 CFR 50.54(q)(1)(iv) needed to be revised to reflect the suggested deletion of 10 CFR 50.54(q)(1)(iii):

> "(iii) Reduction in effectiveness means a change in an emergency plan that results in a significant reduction of the licensee's capability to meet an emergency planning standard or the requirements of Appendix E in the event of a radiological emergency."

The commenter also suggested that the use of "significant reduction in capability" would allow the change process to be comparable with the "more than a minimal increase" used in 10 CFR 50.59. [0102]

NRC Response: The NRC disagrees with the commenter. As discussed in the NRC response to the previous comments on "emergency planning functions," the NRC has decided for the reasons stated therein to retain the use of the phrase in the final rule and in the guidance document.

The NRC disagrees with the commenter's suggestion that a reduction in effectiveness be defined in the context of compliance with regulations. Compliance with the applicable regulations is already one of the two criterion in 10 CFR 50.54(q)(3). However, compliance with regulations is not necessarily synonymous with not causing a "reduction in effectiveness." No change was made to the final rule or final guidance in response to this comment.

The NRC disagrees with the commenter's proposal to use the modifier "significant" in the context of a "reduction in effectiveness." Once the licensee determines that the change would reduce the licensee's capability to perform an emergency planning function by any amount, the change is to be considered a reduction in effectiveness. The proposed alternative language implies that a reduction in a licensee's compliance with regulation may be considered acceptable if it isn't significant. Although the significance of a non-compliance may vary under the ROP, the non-compliance is still a violation. No change was made to the final rule or the guidance document in response to this comment.

Comment: A commenter stated that the NRC's proposed use of "maintain the effectiveness" in 10 CFR 50.54(q)(2) creates a confusing situation when taken in conjunction with the proposed change process based on a reduction in effectiveness under 10 CFR 50.54(q)(4). The commenter stated that, in order to approve a change which constitutes a reduction in effectiveness, the NRC would need to make a finding that the plans are being maintained in accordance with 10 CFR 50.54(q)(2). [0102]

NRC Response: The NRC disagrees with the commenter. The commenter confuses the intent of 10 CFR 50.54(q)(2) and 10 CFR 50.54(q)(3) and (4). Section 50.54(q) is a license condition placing a burden upon the licensee, not the NRC. The NRC need not make a finding under 10 CFR 50.54(q)(2) in approving a proposed change identified by the licensee under 10 CFR 50.54(q)(3) as a reduction in effectiveness. Instead, the NRC needs to find that the plan, as modified, continues to meet the applicable regulations and that the NRC continues to have reasonable assurance that adequate protective measures can and will be taken in the

event of a radiological emergency. The NRC's approval of the change establishes a new benchmark by which licensee compliance with 10 CFR 50.54(q)(2) will be assessed. No change was made to the final rule or the guidance document in response to this comment.

Comments: Two commenters stated that the NRC is not legally compelled to require that licensees submit changes which constitute reductions in effectiveness for NRC review and approval as a license amendment pursuant to 10 CFR 50.90. [0095, 0102]

NRC Response: The NRC disagrees with the commenters. In *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI–96–13, 44 NRC 315 (1996) (*Perry*), the Commission found that NRC staff approval of a licensee proposal to make changes to the plant's reactor vessel material specimen withdrawal schedule, once the withdrawal schedule was removed from the licensee's technical specifications, would not require a license amendment. The Commission concluded that the withdrawal schedule changes would neither alter the terms of the *Perry* license nor allow the licensee any greater operating authority. The Commission noted that the withdrawal schedule was established by a standard of the American Society for Testing and Materials (ASTM), which was incorporated by reference in Appendix H of 10 CFR Part 50. In fact, the licensee's license "specifie[d] an NRC-approved methodology - the ASTM standard - to be used in developing either an initial or a revised schedule." *Id*. at 328. The ASTM standard established "specific technical criteria" and "delineated parameters for Cleveland Electric to use in calculating an appropriate withdrawal schedule." *Id*. In these circumstances, the Commission decided that staff approval of withdrawal schedule changes that met the applicable ASTM standard did not grant the *Perry* licensee greater operating authority, so a license amendment would not be required.

In contrast to the facts of *Perry*, the NRC's regulations do not contain specific technical criteria that can be generically applied to emergency plan changes that reduce the effectiveness of the plan because each licensee's emergency plan is specific to that licensee and its facility. These licensee-unique plans result from the lack of prescriptive requirements in 10 CFR 50.47(b). Instead, these regulations give licensees the flexibility to develop plans and procedures that best fit their individual needs. Consequently, the NRC's approval of a reduction in emergency plan effectiveness is more than a ministerial, non-discretionary act. Consideration of the acceptability of a proposed reduction in emergency plan effectiveness does not involve, as in *Perry*, a simple review of the proposed plan change to determine if previously-approved objective criteria are satisfied. Rather, the determination of the acceptability of the proposed reduction in effectiveness necessitates consideration and resolution of technical and regulatory issues - none of which are the subject of objective evaluation criteria. In some instances, the evaluation of the plan change may involve the balancing of competing regulatory objectives and policies. Thus, NRC approval of a reduction in effectiveness constitutes an exercise of agency discretion. For these reasons, under the principles of *Perry*, an emergency plan change that would reduce the effectiveness of the plan would grant the licensee greater operating authority and would require a license amendment request. See also *Citizen Awareness Network, Inc.* v. *NRC,* 59 F.3d 284, 294 (1st Cir. 1995); *Sholly* v. *NRC,* 651 F.2d 780 (D.C. Cir. 1980) (*per curiam*), *vacated on other grounds,* 459 U.S. 1194 (1983); and *in re Three Mile Island Alert,* 771 F.2d 720, 729 (3rd Cir. 1985), *cert. denied,* 475 U.S. 1082 (1986). No change was made to the final rule or final guidance in response to these comments.

Comments: A commenter noted that proposed 10 CFR 50.54(q)(5) would have required the licensee to include the analysis of the change in a report to the NRC, but the NRC provided no justification for this new expectation. The commenter noted that the NRC had an opportunity to

review the analysis under the 71114.04 inspection module. The comment stated that the required submittal date for the report should be revised to read "within 30 days after the change is implemented" since a change could be made and approved but not implemented until required. [0102] Another commenter stated that the requirement to include the decrease in effectiveness analysis for each change is a new requirement that has not been justified and is overly burdensome. [0105]

NRC Response: The NRC agrees in part with the commenters. Although the former rule did not explicitly require the submitted report to include the analysis, the NRC expected the basis for the change be included in the report. The final rule codifies the NRC expectation using language that is consistent with a similar reporting requirement in 10 CFR 50.59(d)(2). The NRC notes that the inspection module 71114.04 is normally performed in the regional offices against the submitted reports as opposed to an onsite inspection. In considering this comment, the NRC decided to reduce the potential burden by requiring only a summary of the analysis because a summary is sufficient for initial NRC oversight purposes. Changes were made to the final rule and the guidance document in response to this comment.

The NRC agrees in part with the commenter's suggested report submittal timing. The NRC decided to use the phrase "change is put into effect," rather than "change is implemented," because it provides a more specific point in time. The change is put into effect when the modified emergency plan is available for use in the emergency response facilities. At that point, the change can affect the licensee's response to an emergency condition, whether or not all typical implementation activities, such as distribution of the updated emergency plan and ERO training, have been completed. Changes were made to the final rule and the guidance document in response to this comment.

Other Comments

Comment: One commenter stated that, based in part on agency practice, requiring a licensee to submit a license amendment request for a proposed change to an emergency plan that would reduce the effectiveness of the plan would not constitute a clarification of an existing regulatory position, but instead would reflect a new position on what emergency plan changes require a license amendment. [0102]

NRC Response: The NRC agrees, in part, with the commenter. The NRC agrees that the NRC's use of the license amendment process to review a licensee's proposed change to an emergency plan that would reduce the effectiveness of the plan could be perceived as a change in the NRC's practice.

Although the NRC's search has not been exhaustive, it has reviewed the examples provided by the commenter. In addition, the NRC has reviewed other cases. The vast majority of the NRC's responses to 10 CFR 50.54(q) submittals have used text similar or identical to the following.

> The NRC staff has completed its review of the proposed emergency plan changes as discussed in the enclosed safety evaluation report. The staff concludes that the proposed changes meet the standards in 10 CFR 50.47(b) and the requirements in Appendix E of 10 CFR Part 50 and provide reasonable assurance that…. Therefore, the proposed changes are acceptable.

The NRC letters do not state that the NRC has concluded that the licensee submittal describes a change that is a reduction in effectiveness. The NRC has also identified several examples where the licensee has withdrawn the submittal after communication with the NRC staff indicated that the change would be a reduction in effectiveness. It is apparent from discussions with involved NRC staff that many (perhaps most) of the changes in emergency plans, when evaluated by NRC staff, were determined to not be decreases in effectiveness requiring NRC approval.

As previously identified by the NRC staff and discussed in this comment, there is one example in which the NRC advised the licensee that if it requested NRC review of a proposed change that would decrease the effectiveness of the licensee's emergency plan, such a request had to be submitted under 10 CFR 50.90.[2] This request was later resubmitted to the NRC in modified form.[3] This resubmittal was made in accordance with 10 CFR 50.54(q) and 50.4 as a decrease in effectiveness, not 10 CFR 50.90. The resubmittal makes no reference to 10 CFR 50.90. The NRC closed its review of this revised submittal by letter dated February 5, 1999, with language similar to that above. Finally, one example can reasonably be read as an approval of a decrease in effectiveness by letter.[4] While a specific example was not identified of an emergency plan change that was approved by license amendment, this could be the result of proposals that were determined to be decreases in effectiveness having been withdrawn after communications from the NRC (as noted above) and, in addition, the NRC's search of prior actions was not exhaustive.

Given inconsistent prior NRC practice, the absence of a clear record of using the license amendment process (i.e., 10 CFR 50.90) for approving emergency plan changes involving decreases in effectiveness, and the lack of prior guidance specifically stating that the use of the license amendment process is required for approval of 10 CFR 50.54(q) submissions that involve a decrease in effectiveness, the perception offered by the commenter is understandable. No change was made to the final rule or the guidance document in response to this comment.

Comment: One commenter stated that licensees would need to modify their procedures for obtaining NRC approval of emergency plan changes by requesting a license amendment. The commenter suggested that these procedure changes constitute backfitting under 10 CFR 50.109(a)(1). [0102]

NRC Response: The NRC disagrees with the commenter. The NRC does not dispute that some licensees may have to revise their procedures to clarify the process for emergency plan changes. However, procedural changes to address NRC administrative requirements do not constitute changes to procedures to "operate" a facility within the meaning of 10 CFR 50.109(a)(1). The NRC only intended to provide backfitting protection to those aspects of licensee procedures needed to comply with the NRC's substantive technical requirements involving radiological health and safety and common defense and security.[5] The Backfit Rule

[2] Thomas, K.M., U.S. Nuclear Regulatory Commission, letter to J.M. Levine, Arizona Public Service Company, October 24, 1997.
[3] Levine, J.M., Arizona Public Service Company, letter to U.S. Nuclear Regulatory Commission, September 8, 1998.
[4] Sekerak, S.P., U.S. Nuclear Regulatory Commission, letter to W.A. Eaton (Entergy Operations, Inc.), September 29, 2000 (ML003756919).
[5] The NRC notes that some NRC-compelled changes to procedures needed to comply with the NRC's substantive technical requirements involving radiological health and safety or common defense and security, would not constitute backfitting under 10 CFR 50.109(a)(1). The most common example is an

was not intended to address changes in aspects of licensee procedures needed to comply with changes or clarifications in NRC administrative requirements such as acceptable document formats, number of copies, or – as in this case – the process by which an NRC approval is provided. Accordingly, the need to request an NRC approval as a license amendment does not represent a subject matter within the scope of "backfitting" as defined in 10 CFR 50.109(a)(1). No change was made to the final rule or the guidance document in response to this comment.

Comment: Two commenters stated that NRC approvals of changes to emergency plans constituting a reduction in effectiveness do not constitute an expansion of the licensee's operating authority. The commenters argued that no license amendment is required to make the plan change and the modification to 10 CFR 50.54(q) is a backfit that should have been included in the NRC's backfit analysis. [0095, 0102]

NRC Response: The NRC disagrees with the commenters. A licensee's emergency plan is part of the licensing basis for the licensee's facility. The plan describes the licensee's responsibilities, activities, and actions to be undertaken to comply with the NRC's requirements governing emergency preparedness and response. Failure to have an acceptable emergency plan, a failure to implement the plan, or an unauthorized departure from the plan during its implementation, are all subject to NRC enforcement action, including revocation of the operating license. Thus, the emergency plan is part of the licensee's operating authority granted under its operating license because it constrains the nature and/or scope of licensed activities (i.e., operation of an NPP).

A change to the emergency plan constituting a reduction in effectiveness of that plan essentially allows the licensee to disclaim responsibility for performing[6] activities and actions (or specific portions thereof) formerly required (or prohibited) under the superseded provisions of the emergency plan. It allows the licensee to perform, without fear of NRC regulatory response (e.g., an order, including an enforcement action), activities and actions formerly precluded. This is equivalent to an expansion of the licensee's operating authority.

The NRC notes that it is not simply that the emergency plan has "changed" that leads to the conclusion that there is an expansion of operating authority. Otherwise, any change to the emergency plan, regardless of effect on licensee authority to operate, would be deemed an expansion of operating authority for which NRC approval via a license amendment is required. Rather, it is the effect of the change (i.e., allowing the licensee to operate in a manner with respect to radiological health and safety that it was not allowed to do so under the superseded provision of the emergency plan) that forms the essence of the test of "expanded" operating authority.[7]

NRC-compelled change necessitated by a new statutory provision, where the statutory provision affords the NRC little discretion in implementing the statutory mandate. *See* U.S. Nuclear Regulatory Commission, "Criminal Penalties: Unauthorized Introduction of Weapons," *Federal Register*, Vol. 74, No. 197, October 14, 2009, pp. 52667-52675.

[6] This also includes any changes in a threshold prescribed in an emergency plan for performing an activity or action.

[7] Consistent with the former 10 CFR 50.54(q), 10 CFR 50.54(q) in the final rule requires that only those emergency plan changes that reduce the effectiveness of the plan need prior NRC approval. Those plan changes that increase the effectiveness of the plan may expand the licensee's operating authority but would not require prior NRC approval.

Moreover, the Commission has determined that the NRC must approve reductions in effectiveness to ensure compliance with the requirements of Appendix E, and for nuclear power reactors, the planning standards of § 50.47(b) so that the proposed changes provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. This approval is more than a ministerial, non-discretionary act. The determination of the acceptability of the proposed reduction in effectiveness necessitates consideration and resolution of technical and regulatory issues. In some instances, the evaluation of the plan change may involve the balancing of competing regulatory objectives and policies. Thus, NRC approval of a reduction in effectiveness constitutes an exercise of agency discretion. For these reasons, under the NRC's legal precedents, NRC approval of an emergency plan change that would reduce the effectiveness of the plan would grant the licensee greater operating authority and would require a license amendment request.

For these reasons, the NRC does not agree that emergency plan changes reducing the effectiveness of the emergency plan do not constitute an expansion of the licensee's operating authority. No change was made to the final rule or final guidance in response to these comments.

Comment: One commenter contended that so long as a modified emergency plan meets the standards of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50, the licensee is not exceeding the operating authority granted in its license and no license amendment is required for the modification. [0102] Another commenter stated that the determination of whether or not the emergency plan's effectiveness has been reduced should be defined in terms of meeting the regulatory planning standards. [0084]

NRC Response: The NRC disagrees with the commenters. Under 10 CFR 50.54(q), a nuclear power reactor licensee may revise its emergency plan without NRC approval only if the plan, as revised by the proposed changes to the plan, continues to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E and does not result in a reduction in effectiveness of the plan. This latter determination is separate from the determination of whether the emergency plan, as revised by the proposed changes, still meets the requirements of 10 CFR 50.47(b) and Appendix E. The former 10 CFR 50.54(q) contained this two-part test:

> The nuclear power reactor licensee may make changes to these plans without Commission approval only if the changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the standards of Sec. 50.47(b) and the requirements of appendix E to this part.

Section 50.54(q)(3) of the final rule also contains the two-prong test:

> The licensee may make changes to its emergency plan without NRC approval only if the licensee can demonstrate through analysis that the changes do not reduce the effectiveness of the plan and the plan, as changed, continues to meet the requirements in appendix E to this part and, for nuclear power reactor licensees, the planning standards of § 50.47(b).

If a proposed change to an emergency plan could be judged to be a reduction in effectiveness based only on whether the revised emergency plan would still meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E, then the two-part test of the decades-old former 10 CFR 50.54(q) and 10 CFR 50.54(q) under the final rule would be redundant and

unnecessary. The interpretation advocated by the commenters is inconsistent with the plain language of the regulation. Even if a proposed change meets the standards of 10 CFR 50.47(b) and the requirements of Appendix E, the proposed change still could result in a reduction in effectiveness, as explained in a prior comment response in this section, and in an expansion of the licensee's operating authority, as explained in another prior comment response in this section. No change was made to the final rule or final guidance in response to these comments.

4.5.2 Part 50, Appendix E, Section IV.B: Amended Emergency Plan Change Process

No comments addressed this section.

4.5.3 DG-1237: Draft Regulatory Guide – Amended Emergency Plan Change Process

General Comments on the Draft Regulatory Guide

Comment: One commenter noted that the NRC is prematurely requesting comments on DG-1237 given that the proposed rule language is subject to comment. [0089]

NRC Response: The NRC disagrees with the commenter. The NRC has adopted the policy that, whenever possible, guidance documents that support a proposed rulemaking should be available for public comment at the time that the proposed rule is published for public comment, as was done in the current proceeding (see SRM-SECY-07-0134, "Evaluation of the Overall Effectiveness of the Rulemaking Process Improvement Implementation Plan," dated October 25, 2007, ADAMS Accession No. ML072980427). Stakeholders have explained to the NRC that they cannot fully evaluate a proposed rule if the supporting guidance that the NRC will use to evaluate licensee compliance with the rule is not available for review. No change was made to the guidance document in response to this comment.

Comment: Two commenters argued that an additional comment period is necessary to evaluate the draft Regulatory Guide against the finalized rule language. [0089, 0102]

NRC Response: The NRC disagrees with the commenters. As noted in the responses to comments on 10 CFR 50.54(q) of the proposed rule, the changes being incorporated into the final guide do not constitute a substantive revision from the draft guide. Accordingly, no additional review period is warranted. Further, the NRC process provides for only one comment period during the development of a regulatory guide. No change was made to the guidance document in response to this comment.

Comment: A commenter stated that the NRC's use of examples throughout the document is problematic. The commenter suggested that the examples convey a standard of acceptance for making changes that actually varies from one licensee to another. [0089]

NRC Response: The NRC agrees with the commenter. The NRC intended to use the examples to convey a standard of acceptance for making changes that varies from one licensee to another. Emergency preparedness is inherently local, and the adage "one size doesn't fit all" applies especially to EP. The apparent standard of acceptance will be appropriately different

from one licensee to another because of plant-specific, site-specific, and EPZ-specific considerations that establish planning or response constraints that need to be addressed. For example, a plant in a rural area may need a dedicated onsite fire department if the response time for a public department to arrive would be protracted. Sections C.1.6, C.4.a, and C.5.2.2 of the draft and final Regulatory Guide address the need to consider plant-specific, site-specific, and EPZ-specific considerations in performing 10 CFR 50.54(q) analyses. No change was made to the guidance document in response to this comment.

Comment: Two commenters recommended that the NRC move the examples to an industry guidance document equivalent to NEI 96-07, Revision 1, which provides guidance on the implementation of the 10 CFR 50.59 rule, or to a resource manual. [0089, 0102]

NRC Response: The NRC agrees with the commenters that the examples could be relocated to an industry guidance document. Any stakeholder is free to submit an alternative approach to a published regulatory guide for NRC consideration. This activity would need to be initiated by the industry. In the absence of such an approved alternative approach, the NRC is proceeding with issuance of the final guidance document. No change was made to the guidance document in response to this comment.

Comments: Two commenters suggested that the 10 CFR 50.54(q) evaluation should be based on the planning standards set forth in 10 CFR 50.47(b) and not "emergency planning functions" introduced in DG-1237 and proposed rule language, or discussed in NRC Inspection Manual Chapter 0609, Appendix B (Emergency Preparedness Significance Determination Process). [0089, 0102] With regard to Section B. of the draft Regulatory Guide, a commenter suggested that the introduction of emergency planning functions creates an unnecessary complication of the rule intent. [0102] Another commenter agreed that the NRC should revise all references to "emergency planning functions" to "emergency planning standards." [0089] This commenter asked whether, if the NRC retains the "emergency planning function" concept, the basis for violations cited by the NRC will be the emergency planning function or the emergency planning standard. [0089] With regard to Section C., a commenter suggested that the use of emergency planning functions as evaluation criteria during 10 CFR 50.54(q) evaluations is inappropriate. The commenter urged that evaluations of proposed changes to emergency plans should be evaluated against the current emergency planning standards to determine compliance. [0102]

NRC Response: The NRC disagrees with the commenters. As discussed in the NRC responses to similar comments on use of "emergency planning functions" in the proposed rule, the NRC decided for the reasons stated therein to retain the use of the phrase in the final rule and in the final guide. Further, as explained in a prior comment response, 10 CFR 50.54(q)(2) explicitly identifies the planning standards of 10 CFR 50.47(b) and/or the requirements in Appendix E, but not emergency planning functions, as the bases for compliance. In addition, the 10 CFR 50.54(q) change process establishes a dual criteria test to establish whether the licensee has the authority to make a change without prior NRC approval. As discussed in previous NRC comment responses, even if the proposed change resulted in the licensee's compliance with the regulations, the proposed change still could result in a reduction in effectiveness. No change was made to the guidance document in response to these comments.

Comment: A commenter also recommended that the NRC clarify the evaluation of reduction in effectiveness to address the issue of "significance." [0102]

NRC Response: The NRC disagrees with the commenter. A similar comment was made in the context of the proposed 10 CFR 50.54(q). As discussed in the NRC response to that comment, the NRC decided for the reasons stated therein not to revise the definition of "reduction in effectiveness" in the final rule or in the final guide. No change was made to the guidance document in response to this comment.

Comment: One commenter recommended that the NRC provide clear guidance in the draft RG and the inspection guidance for inspectors regarding the retroactive application of the new emergency plan change standard. [0089]

NRC Response: The NRC agrees with the commenter. The final rule and the final guide will not be applied retroactively to changes made under the requirements of former 10 CFR 50.54(q). The NRC has revised Section D of the final guide to emphasize this protocol. Changes were made to the guidance document in response to this comment. Conforming changes will be made to the inspection procedures in a future revision.

Comment: One commenter stated that the proposed rule and the associated implementation guidance provided in DG-1237 restrict licensee authority. The commenter stated that the guidance indicates that prior approval is needed for changes to actions that implement the planning standards. In particular, licensees would need NRC review and approval of changes in operation of a volunteer fire department which might affect effectiveness. The commenter suggested that NRC establish specific criteria and standards to require prior NRC approval and any other provision should rest solely within the licensee's purview. [0135]

NRC Response: The NRC agrees in part with the commenter. Section 50.54(q) of the Commission's regulations authorizes the licensee to make changes to its emergency plan without prior NRC approval if the change (1) complies with the planning standards of 10 CFR 50.47(b) and the requirements of Appendix E to Part 50, and (2) the change does not reduce the effectiveness of the plan. The proposed and final rule do not in any way restrict the licensee's authority that has always existed under 10 CFR 50.54(q). However, the proposed guidance addressing the particular example of a volunteer fire department was unclear. In response to similar comments, the NRC revised or deleted the examples considered to be ambiguous. The NRC notes that it is important to recognize that 10 CFR 50.54(q), as amended by the final rule, has two major requirements: 10 CFR 50.54(q)(2), which requires a licensee to follow and maintain the effectiveness of an emergency plan, and 10 CFR 50.54(q)(3) and (4), which establishes a change process. If a volunteer fire department relied upon in the plan ceases operation, the licensee must take action to restore the lost capability that was relied upon in the plan. If in doing so, the licensee has cause to revise its plan, then the change is subject to 10 CFR 50.54(q)(3) and (4). If the response time of the replacement fire department is longer than that for the original fire department, then there may be a reduction in effectiveness. The final regulatory guide was revised to make this clarification.

Recommended Changes to Draft Regulatory Guide

Comments: Two commenters recommended that the NRC remove the reference to 10 CFR 50.90 being the vehicle for applying for emergency plan changes that result in a reduction in effectiveness from Section B., page 4, third bullet. [0102, 0110] One of the commenters suggested that the 10 CFR 50.4 process to obtain NRC approval has been effective. [0110]

NRC Response: The NRC disagrees with the commenters. Similar comments were made in the context of the proposed rule. As discussed in the NRC response to the comment on use of the license amendment process in the proposed rule, the NRC decided for the reasons stated therein to retain the requirement in the final rule and in the final guide. No change was made to the guidance document in response to these comments.

Comment: A commenter asked what the acceptable threshold is for a plan change. The commenter argued that the FRN and Section C.1.1 present the threshold as the effective preservation of compliance with the planning standards, but examples in the emergency planning functions appear to provide the threshold at a level of "anything less than the standard currently contained in the emergency plan." [0089]

NRC Response: The NRC disagrees with the commenter. The licensee is free to relax requirements in its emergency plan without prior NRC review and approval, if, under 10 CFR 50.54(q)(3), the licensee can show that, first, the emergency plan, as modified, continues to comply with regulations and, second, the change does not reduce the effectiveness of the emergency plan. As explained in Section C.4.a of the guide, the examples identify changes that could require prior NRC approval. The guidance also states that the licensee should use the examples only to inform their decisions involving various changes. The examples are not intended to be all-inclusive or exclusive, may not be applicable to all sites, and are not to be used as thresholds or standards. Instead, the licensee must evaluate the change under consideration against the two criteria test of 10 CFR 50.54(q)(3) within the context of the licensing basis for the plant's emergency plan. No change was made to the guidance document in response to this comment.

Comments: A commenter stated that the discussion in Section C.1.1.c regarding "minimal impact" further confuses the issue. The commenter asked the NRC to clarify the evaluation standards. [0089]

NRC Response: The NRC disagrees with the commenter. The phrase "minimal impact" appears in Section C.1.1.c. of the draft Regulatory Guide in a general, narrative context intended only to introduce the term "reduction in effectiveness," which is defined later in Section C.3.7. As specified in the first sentence of this regulatory position, the 10 CFR 50.54(q) change process does not establish whether a proposed change would impact the reasonable assurance determination. The licensee is required only to assess whether or not the change constitutes a reduction in effectiveness. The definition of "reduction in effectiveness" is set forth in 10 CFR 50.54(q)(iv) of the final rule, and expanded upon in Section C.3.7 of the final guide, neither of which require the licensee to assess the magnitude of the impact of the change on the reasonable assurance determination. No change was made to the guidance document in response to these comments.

Comment: A commenter stated that Section C.1.1 conveys the concept that preservation of reasonable assurance is the minimum performance standard for any implemented change process. Therefore, the NRC must clearly establish the "reasonable assurance" delimiter to be used by the licensee to determine when prior NRC review and approval is required. [0102]

NRC Response: The NRC agrees in part with the commenter. The commenter is correct in stating that preservation of reasonable assurance is the minimum performance standard. However, the licensee does not assess whether the change affects a reasonable assurance determination; this is the NRC's burden. The first sentence in Section C.1.1.c provides that the

10 CFR 50.54(q) change process does not establish whether a proposed change would impact the NRC's reasonable assurance determination. See also 10 CFR 50.54(q)(3) of the final rule. As stated in the guide, the 10 CFR 50.54(q) change process establishes only whether the licensee has the authority to implement the proposed change without prior NRC approval. The determination of whether there continues to be reasonable assurance after the emergency plan is modified rests with the NRC. Accordingly, the NRC need not establish a reasonable assurance delimiter as suggested. No change was made to the guidance document in response to this comment.

Comment: A commenter requested that NRC revise the second sentence of Section C.1.1.c to replace the word "exclude" with "identify." [0102]

NRC Response: The NRC disagrees with the commenter. In the context of the sentence, "exclude" is the correct word. The intent of the change process is to identify those changes that are reductions in effectiveness for which NRC approval is necessary. As such, the change process excludes from the requirement to seek NRC approval those changes that are not reductions in effectiveness. No change was made to the guidance document in response to this comment.

Comment: A commenter recommended that NRC delete the phrase "through appropriate analysis" from the third sentence of Section C.1.1.c because it adds ambiguity to the discussion. [0102]

NRC Response: The NRC agrees with the commenter. The phrase "through appropriate analysis" is unnecessary in this context because the guidance on performing a thorough analysis is provided elsewhere in the guide (e.g., Section C.5.2.5). Changes were made to the guidance document in response to this comment.

Comment: A commenter stated that the examples in Section C.1.1.b should be deleted (e.g. "For example, changes that ..."). [0102]

NRC Response: The NRC disagrees with the commenter. The examples help to explain the concepts discussed in Section C.1.1.b. No change was made to the guidance document in response to this comment.

Comment: A commenter suggested that the purpose of Section C.1.2 needs clarification. In particular, the commenter recommended that Section C.1.2 should convey the guiding principles and define the characteristics and criteria for the application of conservatism and not just offer a specific application. [0102]

NRC Response: The NRC agrees in part with the commenter. The detailed discussion in the example in Section C.1.2 detracts from the clarity of this section. Nonetheless, the specific application provided is an example that helps to explain the concepts addressed in the section. The NRC has condensed the example in the final guide. Changes were made to the guidance document in response to this comment.

Comment: A commenter asked for the NRC to clarify whether "ERO actively performing its function" in Section C.1.4.a aligns with the regulatory requirements. [0102]

NRC Response: The NRC disagrees with the commenter. Section 50.47(b)(2) calls for timely augmentation of response capabilities. The fundamental objective for augmentation is relieving the control room personnel of emergency response functions and allowing them to focus on plant control manipulation. Augmentation is not complete until the response functions assigned to the augmented staff in the individual emergency response facilities are being performed. If the control room is still performing the functions of the TSC and the EOF, then augmentation hasn't fully occurred. The NRC's position derives from the stated function of the TSC and EOF in regulatory guidance (NUREG-0696, NUREG-0737) and Appendix E to Part 50. In considering this comment, the NRC decided to revise the subject example in the interest of clarity. Changes were made to the guidance document in response to this comment.

Comment: A commenter suggested that the language of Section C.1.7 of the draft regulatory guide (i.e., "notify all offsite organizations within 15 minutes") incorrectly interprets Appendix E, Section IV.D.3. The commenter claimed that the current language of Appendix E, Section IV.D.3, "does not mean to notify ALL agencies and complete the notifications within 15 minutes." The commenter recommended that the NRC correct the statement to reflect the intent of the current regulation. [0102]

NRC Response: The NRC disagrees in part with the commenter. The subject example properly reflects current regulatory intent. Appendix E, Section IV.D.3 requires the licensee to have the capability to notify responsible State and local government agencies within 15 minutes after declaring an emergency. Although the commenter is correct in stating that the language in Appendix E does not explicitly state "all" State and local government agencies, it does provide that the licensee have the capability to notify "responsible agencies" (note the plural form of "agency"). A failure to notify any single responsible agency could result in the public in the areas under the cognizance of that agency not being adequately protected. This is obviously not the regulatory intent.

NUREG-0654, Section II.E.3 identifies the information that is expected to be provided in initial notifications. Although Section IV.D.3 of Appendix E does not explicitly state that the licensee have the capability to "complete" the notification within 15 minutes, it does require the licensee to have the capability of notifying responsible State and local agencies, that is, providing the information with which to initiate and carry out their emergency response functions, including protective measures. Section 50.47(b)(4) provides, in part, that "State and local response plans call for reliance on information provided by the facility licensees for determinations of minimum offsite response measures." The fundamental objective of the notification hasn't been achieved until the requisite information has been provided to the responsible State and local agencies.

Although the statement quoted in the comment is consistent with regulatory intent, the NRC has decided to re-phrase the statement in a manner that identifies the regulatory intent as an NRC expectation rather than a regulatory requirement. Changes were made to the guidance document in response to this comment.

Comment: A commenter asked what the first sentence in the first paragraph of Section C.2 means: "submitted to the NRC for review and approval under 50.4." [0102] Another commenter stated that Section 2 uses the word "should" rather than "shall." The commenter recommended that NRC make this change or clarify if the intent is not all changes to the emergency plan listed in Section 2 need NRC prior review. [0110]

NRC Response: The NRC agrees with the commenters. The NRC's intent was to suggest to licensees considering a change involving one or more of the items in Section C.2.a-f that they interface with the NRC and obtain NRC input before finalizing the change evaluation that determines that the change is NOT a reduction in effectiveness. The section does not apply to changes that the licensee has determined are reductions in effectiveness. Based on these comments and the questions raised at the various public meetings on this rulemaking, the NRC recognizes that the proposed language is not fully consistent with that intent. Changes were made to the guidance document in response to these comments.

Comments: A commenter recommended that the NRC use the reference "10 CFR 26.4(a)(1)-(5) and (c)" in Section C.2.b. to include other NUREG-0654, Table B-1, functions such as fire brigade and security. [0110] With regard to Section C.2.b, two commenters recommended that the NRC replace "(see 10 CFR 26.4(a)(2) and (c))" with a reference to 10 CFR Part 26. [0089, 0102]

NRC Response: The NRC agrees with the commenters that the positions need to be included and that the less specific reference is appropriate because it inherently incorporates 10 CFR 26.4(a)(1)-(5) and (c). Changes were made to the guidance document in response to these comments.

Comments: A commenter stated that Section C.2.f imposes additional requirements on submittals to the NRC. Based upon this, updates to the ETEs as a result of the availability of new census data (every 10 years) will require all licensee to submit the updated ETE for approval from the NRC prior to its being available for use. [0102] With regard to Section C.2.f, two commenters recommended that the NRC delete the expectation for requesting review and approval under 10 CFR 50.4 for updated ETEs. The commenters suggested that separate regulatory guidance is being promulgated for this activity, so there is no value added to the process by submitting this for "review and approval." [0102, 0110]

NRC Response: The NRC agrees with the commenters. The submittal requirements for ETE updates are provided in 10 CFR 50.47(b)(10) and Appendix E to Part 50, as amended by the EP final rule. Changes were made to the guidance document in response to these comments.

Comment: A commenter recommended that the NRC add a new item to Section C.2 on page 9: "Revision to the Emergency Action Level scheme as specified in 10 CFR Part 50, Appendix E, Section IV.B.2." [0110]

NRC Response: The NRC disagrees with the commenter. The regulatory requirement for EAL scheme changes is already addressed in Part 50, Appendix E, Section IV.B. No change was made to the guidance document in response to this comment.

Comment: A commenter suggested that the NRC relocate paragraph C.3.3.b entirely to Section C.5.1 or C.5.2 of the Regulatory Guide. [0102]

NRC Response: The NRC agrees in part with the commenter. The information in Section C.3.3.b, a definition section, would be useful in Section C.5.2, the evaluation section, because it could facilitate the evaluation and because the information in Section C.3.3.b is fundamental to the discussion in Section C.3.3. Section C.3.3.b will be retained in the final guide. Changes were made to the guidance document in response to this comment.

Comment: A commenter identified a conflict between the definition of regulatory requirement in Section C.3.4 and a similar definition in Inspection Manual Chapter 0609, Appendix B. [0102]

NRC Response: The NRC agrees with the commenter. The definitions differ and they should be made consistent. The NRC has revised the definition in Section C.3.4 and will revise the definition in IMC 0609, Appendix B upon its next revision. Changes were made to the guidance document in response to this comment.

Comment: A commenter stated that NRC should relocate paragraph C.3.4.b entirely to Section C.5.1 or C.5.2 of the Regulatory Guide. [0102]

NRC Response: The NRC agrees in part with the commenter. The NRC has revised the final guide to address the intent of Section C.3.4.b in Section C.5.2.2 as suggested, but will retain Section C.3.4.b since the information is fundamental to the discussion in Section C.3.4 because it applies to "commitments made in the emergency plans." Changes were made to the guidance document in response to this comment.

Comment: A commenter asked if the NRC can clarify the applicability of 44 CFR 350.14 versus 10 CFR 50.54(q) as they apply to emergency notification ANS design reports. [0102]

NRC Response: The NRC disagrees that additional clarification is necessary. As stated in Section C.1.6.f.c, footnote 3 on Page 11, and Sections C.4.5.c, and.5.1.4.d of the guide, if the licensee has assumed responsibility for the installation and maintenance of the ANS on behalf of the State or local governments, and the licensee makes changes to its commitments documented in the approved ANS design report, then the licensee should evaluate those changes against the criteria of 44 CFR 350.14, "Amendments to State Plans." If the licensee deems it warranted, the proposed changes are to be submitted to FEMA via the cognizant State official for review and approval as provided in 44 CFR 350.14. No review under the 10 CFR 50.54(q) change process is necessary unless the licensee makes a change to its onsite emergency plan. No change was made to the guidance document in response to this comment.

Comment: Two commenters suggested that the definition of "Emergency Plans" in Section C.3.5 is structurally flawed. In particular, the commenters stated that there can only be one emergency plan, so the NRC should delete the second sentence. [0089, 0102]

NRC Response: The NRC disagrees with the commenters. Similar comments were made in the context of the proposed rule. As discussed in the NRC response to the comment on the definition of "emergency plan" in the proposed rule, the NRC has decided for the reasons stated therein to retain the requirement in the final rule and in the final guide. No change was made to the guidance document in response to this comment.

Comment: A commenter stated that "emergency plan," and "emergency plans" are used interchangeably throughout the document. [0089]

NRC Response: The NRC agrees with the commenter regarding the inconsistent use of singular and plural and performed a global search to use "emergency plan" except where the context was to emergency plans of multiple sites or licensees. Changes were made to the guidance document in response to this comment.

Comment: Two commenters also identified inconsistencies in the guidance with respect to the application of the word "change." Part of the time, the text presents a "change" as being the effect the activity has on the physical emergency plan document, while frequently the text provides examples of changes based on the attribute of the activity and not its effect on the emergency plan. The commenters first identified this issue in Sections C.3.5.a and b and C.3.6, but requested that the NRC check elsewhere in the draft Regulatory Guide as well. [0089, 0102]

NRC Response: The NRC agrees with the commenters that there are inconsistencies. The NRC intended to focus the licensee's attention on the content of the emergency plan, but as identified by the commenter, this focus was not always apparent. Changes were made to the guidance document in response to this comment.

Comment: A commenter recommended the NRC delete paragraph C.3.5.d in its entirety. The commenter stated that the requirement or expectation to aggregate activities and evaluate incremental changes is unworkable. The commenter also stated that 10 CFR 50.47 is the required acceptance standard. The commenter stated that if Section C.3.5.d remains in the final guide, that incremental conservatisms added at licensee discretion must be credited to the licensee and kept available for reduction without being considered a reduction in effectiveness. [0102]

NRC Response: The NRC disagrees with the commenter. The commenter did not substantiate the assertion that the requirement to consider the original NRC-approved plan and changes made by the licensee without prior NRC approval is unworkable. The NRC expects the licensee to consider its EP licensing basis in performing 10 CFR 50.54(q) evaluations. Unless the licensee understands the basis for the current emergency plan, it cannot adequately evaluate whether a reduction in effectiveness is involved. The NRC disagrees with the commenter's implication that there is margin between the content of its plan and the planning standards (and Appendix E) and that the licensee somehow "owns" that margin. The NRC also disagrees with the implication that reducing this margin does not cause a reduction in effectiveness. The change process in 10 CFR 50.54(q)(3) has two criteria. First, the emergency plan as modified will continue to comply with regulations, and second, that the changes will not reduce the effectiveness of the plan. The fact that there may be apparent margin between the commitments in the plan and the associated regulatory requirements only addresses the first criterion—compliance with regulations. It does not address the second criterion—reduction in effectiveness. The licensee's burden is to demonstrate that the change does not decrease the effectiveness of the plan. The existence of margin does not necessarily equate to no reduction in effectiveness. The NRC added a new Section C.1.8 to further clarify its position. Changes were made to the guidance document in response to this comment.

Comments: Two commenters recommended that Section C.3.6.b should be relocated to the implementation guidance in Section C.5.1 and broken into separate discussions regarding the treatment of recognized degraded/nonconforming conditions versus planned activities such as maintenance. The commenters argued that the current paragraph mixes multiple concepts. [0089, 0102] With regard to Section C.3.6.d, a commenter suggested that the NRC relocate this section to Section C.5 on implementation guidance. [0102]

NRC Response: The NRC agrees in part with the commenters. The NRC has replaced the proposed Sections C.3.6.b and C.3.6.d as part of its response to earlier comments regarding the dual treatment of the term "changes" in the rule and the guide. Changes were made to the guidance document in response to these comments.

Comments: A commenter suggested that the NRC revise the definitions for Resources, Capabilities, and Methods in Section C.3.6.c to make them stand-alone (i.e., their own C.3.6.x sections) given their critical contribution to the change screening process. Regarding Section C.3.6.d, the commenter suggested that the NRC relocate this section to Section C.5 on implementation guidance. [0102]

NRC Response: The NRC disagrees with the commenter. Although the definitions are used in Section C.3.6.b as revised in the final guide, they no longer make a critical contribution to the change screening process because the final rule language no longer includes the three terms. Standalone treatment is not necessary. No change was made to the guidance document in response to this comment.

Comment: A commenter stated that, in Section C.3.7.a, the definition of "capabilities" should be deleted and should instead reference the prior definition, and the definition of "emergency" should be a stand-alone definition. [0102]

NRC Response: The NRC disagrees with the commenter. As discussed in the response to an earlier comment, the NRC decided that a standalone treatment of the definitions for "Resources," "Capabilities," and "Methods, was not necessary. As such, the definition of "capabilities" must be retained in Section C.3.7.a because the term "Capabilities" is used in Section C.3.7.a discussion. The commenter provided no justification for the suggestion regarding a standalone definition of "emergency." No change was made to the guidance document in response to this comment.

Comment: A commenter recommended that the NRC divide Section C.4 of the draft Regulatory Guide into two categories: one that applies to operating power reactors and one that applies to non-power reactors. [0102]

NRC Response: The NRC disagrees with the commenter. The title of the proposed and final guide is "Guidance on Making Changes to Emergency Plans for Nuclear Power Reactors." Because the guide applies to only nuclear power reactors, the suggestion to divide Section C.4 into two categories, one for power reactors and one for non-power reactors, is unnecessary. No change was made to the guidance document in response to this comment.

Comment: A commenter suggested that for operating power reactors, Section C.4 should contain discussions on significant reduction in effectiveness to meet a planning standard and non-power reactors should have a section on emergency planning functions. [0102]

NRC Response: The NRC disagrees with the commenter. A similar comment was made in the context of the proposed rule. As discussed in the NRC response to that comment, the NRC decided for the reasons stated therein not to revise the definition of "reduction in effectiveness" in the final rule or in the final guide to incorporate significance. No change was made to the guidance document in response to this comment.

Comment: With regard to Section C.4.14.b(1), a commenter stated that the first sentence is problematic because when taken literally, "the effect of reducing the challenge" prohibits drill variation and undermines the basis for the rulemaking. The commenter recommended that this emergency planning function should simply indicate that a variety of challenge levels are required. [0089]

NRC Response: The NRC agrees in part with the commenter. The proposed sentence contained an editorial error that may have made the sentence unclear. The corresponding sentence in the final guide was revised to read: "A change in the conduct of drills and exercises that would have the effect of reducing the challenge to ERO personnel such that they are not provided an opportunity to practice key functional areas and major tasks, including use of plans, procedures, and equipment associated with those functions and tasks." However, as the proposed text that started with "such that" indicated, to the extent that the licensee's program allows key functional areas and major tasks to be exercised over the planning cycle, as allowed by regulation, variation in drills and exercises are not circumscribed by this sentence. Changes were made to the guidance document in response to this comment.

Comment: A commenter recommended that the NRC remove the word "Effectiveness" from the title of Section C.5.0, because this section's purpose is to convey the overall review process. [0102]

NRC Response: The NRC agrees with the commenter. Section C.5.0 does address aspects of the change process beyond determination of whether a plan change reduces the effectiveness of the plan. Accordingly, the commenter's suggestion is appropriate. Changes were made to the final guidance in response to this comment.

Comment: A commenter requested that the NRC provide more clarity in Section C.5.1 of the draft Regulatory Guide on licensee commitment above planning standard(s) to address the ability to reduce capability without significantly reducing effectiveness of the emergency plan. [0102]

NRC Response: The NRC disagrees with the commenter. The guide, taken as a whole, provides sufficient guidance for licensees to perform an adequate analysis of a proposed change to an emergency plan.

The NRC disagrees that consideration of licensee commitment above planning standards (the so-called "margin") is properly involved in determining whether a change constitutes a reduction in effectiveness. The change process in 10 CFR 50.54(q)(3) has two criteria. First, the emergency plan as modified will continue to comply with regulations, and second, that the changes will not reduce the effectiveness of the plan. The fact that there may be apparent margin between the commitments in the plan and the associated regulatory requirements only addresses the first criterion—compliance with regulations. It does not address the second criterion—reduction in effectiveness. The licensee's burden is to demonstrate that the change does not decrease the effectiveness of the plan. The existence of margin does not necessarily satisfy this burden. The NRC added a new Section C.1.8 to the final guide to further clarify its position. Changes were made to the guidance document in response to this comment.

Comment: A commenter recommended that the NRC remove the words "to the emergency plans" from the first sentence of Section C.5.1 because the focus is on the "change" activity and not just the plan. [0102]

NRC Response: The NRC disagrees with the commenter. As stated in the response to an earlier comment, the NRC acknowledged some inconsistency regarding the proper focus of the change process. The NRC performed a review on the entire document and corrected inconsistent references to ensure the proper focus. The use of the phrase "emergency plan" is

necessary in the first sentence of Section C.5.1 to ensure that all licensee documents meeting the 10 CFR 50.54(q)(1)(ii) definition of "emergency plan" are considered. No change was made to the guidance document in response to this comment. In response to an earlier editorial comment, the NRC did change all references to "plans" to read "plan" unless the reference was to plans of multiple sites.

Comment: A commenter disagreed with the second sentence in Section C.5.2.2 and the concept of multiple simultaneous "plans" being in effect at the same time. The commenter recommended that the NRC delete the word "original." [0102]

NRC Response: The NRC disagrees with the commenters. The final Section C.5.2.2 is consistent with the final rule. As discussed in the NRC responses to similar comments on the definition of "emergency plan" in the proposed rule, licensees will not have multiple simultaneous emergency plans in effect at the same time. For the reasons stated in those comment responses, the NRC has decided to retain the definition in the final rule and in the final guide. No change was made to the guidance document in response to this comment.

Comment: A commenter recommended that the NRC replace the word "change" with "reduction in effectiveness" in the last sentence of Section 5.2.4. [0102]

NRC Response: The NRC agrees with the commenter. The NRC's intent with Section C.5.2.4 was to determine whether or not a reduction in effectiveness is involved. The last sentence is inconsistent with this intent, and has been omitted. Changes were made to the guidance document in response to this comment.

Comment: A commenter stated that Section 5.2.6 is problematic. The commenter suggested that effective review criteria and good guidance should negate the necessity for addressing cases where the "licensee is unsure" of the outcome of the 10 CFR 50.54(q) review. [0102]

NRC Response: The NRC agrees in part and disagrees in part with the commenter. Effective review criteria and good guidance should negate the need for consultation with the NRC. The NRC has provided improved guidance with the issuance of the final guide. However, the NRC is also aware that these determinations are necessarily subjective and that there will be unanticipated change situations that fall outside of the guidance. The NRC included Section 5.2.6 as a suggestion to assist licensees with these situations. No change was made to the final rule or the guidance document in response to this comment.

Comment: A commenter suggested that the draft Regulatory Guide needs to reference 10 CFR 51.22 in Section C.5.3. [0102]

NRC Response: The NRC disagrees with the commenter. The final guide provides guidance on making emergency plan changes; it does not provide guidance on how to submit a license amendment. Also, 10 CFR 51.22 addresses categorical exclusions for the preparation of environmental assessments or environmental impact statements. Since there are currently no categorical exclusions for most if not all emergency plan changes, the reference is unneeded. No change was made to the guidance document in response to this comment.

Comment: A commenter asked if the NRC evaluated the attributes of a license amendment request submitted under 10 CFR 50.90 for their appropriateness to an EP amendment requesting a reduction in effectiveness. For example, the commenter identified the No

Significant Hazards Consideration (NSHC), which asks a number of questions that the commenter suggested are not pertinent to EP. [0102]

NRC Response: The NRC disagrees with the commenter. The requirements for a license amendment request for a change to an emergency plan are no different than the requirements for any other license amendment request under 10 CFR 50.90 and 50.91. The NRC is aware of the three determinations of 10 CFR 50.92(c) related to an NSHC. Although it may be unlikely that an emergency plan change would (1) cause an increase in the probability or consequences of an accident, (2) create a new or different accident, or (3) involve a significant reduction in a margin of safety, this does not change the NRC's statutory obligations under the Atomic Energy Act and the National Environmental Policy Act. Many non-EP license amendments do not result in a significant hazards concern. No change was made to the guidance document in response to this comment.

Comment: A commenter recommended that the NRC change the word "made" in the first sentence of Section C.5.4 to "implemented." [0102]

NRC Response: The NRC agrees in part with the commenter. As discussed in the NRC responses to a similar comment on the proposed rule, the NRC has decided for the reasons stated therein to change the word "made" in the first sentence of Section C.5.4 to read "put into effect" in the final rule and in the final guide. Changes were made to the guidance document in response to this comment.

Comment: A commenter stated that the last sentence of Section C.5.4 eliminates the use of a screening tool to show that a proposed change does not impact any of the 16 planning standards and, by inference, would require a statement be made for each planning standard indicating why each proposed change does not impact that planning standard item. The commenter suggested that the NRC revise this sentence so that licensees provide documentation similar to what is required under 10 CFR 50.59(d)(2). [0102]

NRC Response: The NRC agrees in part with the commenter. In considering this comment, the NRC recognized that the structure of the first paragraph of Section C.5.4 may lead to confusion as it interspersed requirements for retaining a record and making reports. The NRC expects that all 10 CFR 50.54(q) evaluations will be rigorously performed and well documented. Some screening steps (such as those discussed in Section C.5.1) could be dispositioned by a simple yes or no, but other determinations, such as the applicability of a particular planning standard, should include documentation of the basis of those determinations. A check mark in and of itself cannot explain why the planning standard was considered not to be affected. What did the analyst consider in coming to that conclusion? What was the basis of the conclusion? The NRC expects the evaluation to provide a clear record of why the change is not a reduction in effectiveness. However, the NRC recognizes that the provision in Section C.5.4 may be overly restrictive in certain cases. Changes were made to the guidance document in response to this comment.

Comment: A commenter urged that the NRC needs to resolve the ambiguity of the last paragraph in Section 5.4 and the NRC's option "to review all emergency plan changes that have been made." Specifically, the commenter stated that if the NRC wants a permanent record of the changes, then it should be the stated position. [0102]

NRC Response: The NRC agrees in part with the commenter. In considering this comment, the NRC recognizes the need to clarify the statement in question. The current language implies that the NRC has a right to inspect the 10 CFR 50.54(q) change evaluation for the duration of the license. Once the licensee has disposed of change evaluations more than three years old, they are no longer inspectable. Nonetheless, the NRC has the authority and the responsibility to inspect the emergency plan for the duration of the facility license. If the inspector identifies a questionable plan provision that was not implemented as approved by the NRC, the inspector will ask for a justification for the change, generally starting with the 10 CFR 50.54(q) change evaluation. If the change evaluation isn't available, the licensee will be asked to provide a justification for the change. The fact that the 10 CFR 50.54(q) analysis was greater than three years old and had been disposed of, does not excuse the licensee from needing to justify the change. Changes were made to the guidance document in response to this comment.

Comment: A commenter suggested that the records retention guidance in Section 5.4 is inconsistent with the finite retention period prescribed by regulation (current and proposed). The commenter suggested that NRC delete the infinite records retention guidance in DG-1237, and instead describe NRC's role during the 3-year records retention period. [0135]

NRC Response: The NRC agrees in part with the commenter. The subject text in the proposed guide was a suggestion and remains as such in the final regulatory guide. As suggested by the commenter, the final guide was revised to clarify the NRC's role by noting that a lack of change documentation (because evaluations greater than three years old were destroyed) does not absolve the licensee from having to justify any change which is subsequently questioned regarding its impact on the effectiveness of the licensee's emergency plan. As such, it may be prudent to save change evaluations longer than required. Changes were made to the guidance document in response to this comment.

Comment: One commenter suggested that the NRC does not provide guidance on implementation in Section D. The commenter asked what process will be used to revise or rescind RIS 2005-02 after the new 10 CFR 50.54(q) is implemented. [0102]

NRC Response: The NRC agrees with the commenter. The proposed Section D did not provide implementation guidance. Included in the examples cited by the commenter was the lack of guidance to NRC inspectors on inspecting 10 CFR 50.54(q) evaluations performed prior to the effective date of the final rule. The NRC extensively revised Section D in the final regulatory guide to provide additional guidance on the staff's and licensee's use of this regulatory guide. Although Section D does not discuss the status of previous guidance, the section does state that the NRC would use the guidance in the regulatory guide to evaluate a licensee's new determination of a reduction in effectiveness resulting from changes to the licensee's plan made by the licensee on or after the effective date of this guide. The NRC also revised Section D to provide that the final guide will not be applied retroactively in evaluating emergency plan changes which were put into effect prior to the effective date of the guide. NRC inspectors will evaluate such changes using the prior rule language and previous guidance. Changes were made to the guidance document in response to this comment.

Comment: A commenter stated that the NRC does not reference RIS 2005-02, Rev. 0, in the References section of the draft Regulatory Guide. The commenter urged that absence of this revision or draft Revision 1 leads to conflicting guidance. [0102]

NRC Response: The NRC disagrees with the commenter. See the NRC response to previous comment. Since neither RIS was used in the preparation of the final regulatory guide, their inclusion in the "References" is unnecessary.

Comments: A commenter provided several comments on Appendix A of the draft Regulatory Guide. [0102]

- Flowchart is flawed and missing key steps. Flowchart is not consistent with proposed rule language.
- Reference to DG sections is needed in flowchart.
- Flowchart does not align with DG-1237 sections.
- Appendix A, flowchart, third block down – The block includes "complies with regulations". It is not clear what the intent of this block is.
- Determination regarding compliance should be reflected as a decision block.
- Appendix A, flowchart, first block – Using the draft guide's definition of change, there should first be the determination of whether the activity constitutes a change.
- Appendix A, block containing "Submit for NRC review and approval under 10 CFR 50.4" – Section C.2 describes this as a "recommended" action. Revise the Appendix to reflect this as a recommendation.

NRC Response: The NRC agrees with the commenter. The NRC deems these suggestions as desirable improvements to the final guide and the Appendix was revised accordingly. With regard to the first bulleted suggestion, the NRC revised the illustration to reflect changes made to the final guide in response to the comments on the proposed rule and proposed guide. With regard to the last bulleted suggestion, which is related to the first suggestion, the NRC decided instead to omit the action block as being unnecessary given changes made to Section C.2 in response to other comments. Changes were made to the guidance document in response to this comment.

Comment: A commenter stated that Appendix A, Section C.2, and Section C.5.1 all refer to NRC's "review and approval" of changes not constituting reductions in effectiveness but strongly suggested for review, and these sections indicate that the proposed change is submitted under 10 CFR 50.4. The commenter asked what form and submittal format licensees would use for such submittals. The commenter also asked if these changes do not constitute reductions in effectiveness, what form of approval by the NRC would be provided. [0102]

NRC Response: The NRC agrees in part with the commenter. The NRC has revised Appendix A and Section C.5.1 for consistency with Section C.2 as revised in response to earlier comments. Changes were made to the guidance document in response to this comment.

4.5.4 Other: Amended Emergency Plan Change Process

Conforming Change to 10 CFR 51.22

Comment: Two commenters urged the NRC to make a conforming change to 10 CFR 51.22, "Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review." The commenters stated that many emergency plan changes requiring an amendment per 10 CFR 50.90 would not qualify for the categorical exclusion established in 10 CFR 51.22 because of the specificity of that language. Thus, generally administrative emergency plan changes would necessitate an environmental assessment. The commenters argued that the NRC should include a conforming change in the rule to avoid this unintended consequence. [0089, 0095]

NRC Response: The NRC disagrees with the commenters. A revision to 10 CFR 51.22 is not necessary to avoid preparation of an environmental assessment for "generally administrative plan changes." The NRC has previously developed environmental assessments for license amendment requests that were essentially administrative changes. Also, truly administrative changes would not cause a reduction in effectiveness and would not be required to be submitted for prior NRC approval. No change was made to the final rule or the guidance document in response to this comment.

Other Comments

Comment: One commenter recommended that the NRC and licensees use quantitative analytical methods to evaluate emergency plan changes and whether they reduce the effectiveness of the plan. [0048]

NRC Response: The NRC disagrees with the commenter. Although the NRC agrees in concept that a quantitative analytical approach could be advantageous, the Commission's EP regulations include few numerical criteria that could be evaluated in a quantitative analytical approach. Such numerical criteria could be counterproductive as the prescriptiveness of that approach would largely preclude needed flexibility to develop resources, capabilities, and methods that are reflective of plant-specific, site-specific, and EPZ-specific considerations. The Commission noted in *Long Island Lighting Company* (Shoreham), CLI-86-13, 24 NRC 22, 30 (1986): "Our emergency planning requirements do not require that an adequate plan achieve a preset minimum radiation dose saving or a minimum evacuation time for the plume exposure pathway emergency planning zone in the event of a serious accident. Rather they attempt to achieve reasonable and feasible dose reduction under the circumstances; what may be reasonable or feasible for one plant site may be for another." No change was made to the final rule or guidance document in response to this comment.

Comment: A commenter stated that the NRC did not provide a sound justification for the amended emergency plan change process rule changes being proposed. [0102]

NRC Response: The NRC disagrees with the commenter. The NRC provided its justification in the proposed rule SOC and in its supporting regulatory analysis. The commenter provided no substantiated evidence that the proposed changes were unnecessary or that the proposed approach would not be an improvement over the former approach. No change was made to the final rule or guidance document in response to this comment.

Comment: A commenter mentioned that the NRC would continue to use the letter approval process for EAL scheme changes, while individual EAL changes that would reduce the effectiveness of the plan would be submitted and processed as license amendments. The

commenter suggested that there is no reason to treat EAL scheme changes differently than individual EAL changes. [0095]

NRC Response: The NRC agrees with the commenter that the NRC should use the same process to review a licensee's EAL scheme changes as it will to review individual EAL changes that would reduce the effectiveness of the licensee's emergency plan. The Commission previously determined that a licensee's proposal to convert from one EAL scheme to another EAL scheme is of sufficient significance to require prior NRC review and approval (70 FR 3591; January 26, 2005). For the reasons provided in the final rule SOC, the NRC has determined that the license amendment process is the appropriate method for requesting NRC approval for EAL scheme changes, and the § 50.54(q) change process is to be used for all other EAL changes. Changes were made to the final rule based on this determination.

4.6 Removal of Completed One-time Requirements

Comment: One commenter supported the proposed elimination of one-time regulatory requirements. [0135]

NRC Response: No response is necessary.

4.6.1 10 CFR 50.54(r)

No comments addressed this section.

4.6.2 10 CFR 50.54(s)(1)

Comments on Retained Rule Language Regarding the EPZ

Comments: One commenter noted that the proposed regulation discusses the content of plans for the ingestion pathway EPZ, but does not do the same for the plume exposure pathway. The same commenter suggested that NRC allow additional flexibility for licensees to adjust their EPZs to account for new reactor technologies. [0084]

NRC Response: The NRC disagrees with the commenter. The content of licensee emergency plans is discussed in detail in Part 50, Appendix E, and not in 10 CFR 50.54(s)(1). The content of offsite emergency plans is addressed in FEMA regulations found in 44 CFR Part 350. No additional detail regarding the content of emergency plans is needed in 10 CFR 50.54(s)(1). Allowing additional flexibility for licensees to adjust the size of their EPZs to account for new reactor technologies is beyond the scope of this rulemaking. No change was made to the final rule in response to these comments.

4.6.3 10 CFR 50.54(s)(2)(i)

No comments addressed this section.

4.6.4 10 CFR 50.54(u)

No comments addressed this section.

5. Other Comments

5.1 Finding of No Significant Environmental Impact

No comments addressed this issue.

5.2 Paperwork Reduction Act Statement

No comments addressed this issue.

5.3 Regulatory Analysis

Detailed Comments on the Regulatory Analysis

Comments: One industry representative compared NRC's regulatory cost estimates for five rule areas with the results of a survey of three NPPs. The commenter concluded that NRC's cost estimates for on-shift staffing and evacuation time estimate updating are reasonably accurate. The commenter claimed that it could not estimate the full costs of licensee coordination with OROs because of a lack of clarity in the ISG. However, the commenter did determine that the NRC overestimated the cost of verifying mutual aid agreements. The commenter agreed with NRC's one-time cost estimate to implement drills and exercises, but stated that NRC's cost estimates to conduct the exercises are too low because they omit costs to State and local governments. The commenter further argued that NRC's cost estimates for backup means for alert and notification are inconsistent with the proposed requirements. The NRC calculated the cost of this provision as equal to the cost of upgrading plants' sirens. A siren upgrade would not satisfy the proposed requirements. The commenter suggested that the NRC revise the rule to make a siren upgrade sufficient. [0102]

NRC Response: The NRC agrees with the commenter regarding the estimates for licensee coordination with OROs and has revised the cost of verifying mutual aid agreements as suggested.

Regarding the cost for Challenging Drills and Exercises, the NRC agrees with the commenter that the costs of State and local participation should be included and has revised the regulatory analysis accordingly.

Concerning the cost for backup means for ANS, the NRC does not agree that the regulatory analysis was inconsistent with the proposed rule. Like the cost estimate for the proposed rule, the regulatory analysis for the final rule assumes that some licensees will upgrade their siren activation systems, as opposed to their sirens, to provide a redundant method of activating sirens. As stated in the assumptions for Table A.11 of the regulatory analysis, those sites that already have backup power for sirens could use this approach to comply with the requirement for a backup means for the alert portion of their ANS. Therefore, the NRC has not revised these cost estimates.

Other Comments Applicable to the Regulatory Analysis

Comments: One commenter suggested that the NRC use SOARCA data to update calculations of potential economic losses in an emergency event. [0048] Another commenter

argued that the proposed changes will cause a significant cost increase for OROs, and will have "no positive impact on protecting the public safety and health." [0060]

NRC Response: The NRC disagrees with these commenters. The SOARCA study is currently under review, so it would not be appropriate to use the study as the basis for changes to EP regulations at this time.

Regarding the benefit of the amendments relative to the cost to OROs, the final rule is cost-justified because it increases the effectiveness of important aspects of licensees' emergency plans, thereby potentially saving lives in the event of an emergency. The primary benefits of the final rule that affect OROs are to increase assurance that: (1) resources are available to respond to a hostile action at a NPP, and (2) emergency plans will be successfully implemented during any emergency. These benefits improve protection of public health and safety during an emergency. As a result, the regulatory analysis and backfit analysis for the final rule conclude that, when considered in the aggregate and relative to the associated one-time cost of approximately $485,000 and annual cost of $40,000 per NPP site, and one-time cost of $14,000 per non-power reactor site, the changes in the final rule constitute a substantial increase in EP and are justified in view of the enhanced protection of public health and safety. No change was made to the regulatory analysis in response to these comments.

5.4 Regulatory Flexibility Certification

No comments addressed this issue.

5.5 Backfit Analysis

Comment: One commenter suggested that the regulatory analysis for the proposed rule, which states that "[t]he Backfit Rule protects licensees from Commission actions that arbitrarily change license terms and conditions," reflects a misunderstanding of the purpose of the Backfit Rule. The commenter stated that the fundamental purpose of the Backfit Rule is not to prohibit arbitrary or otherwise illegal agency action but to ensure that changes in agency regulations or positions are properly justified and imposed in an orderly fashion. [0102]

NRC Response: The NRC agrees in part with the comment that the purposes of the Backfit Rule are not solely "to prohibit arbitrary or otherwise illegal agency action," and that an objective of the Backfit Rule is to ensure that changes in NRC regulations or positions interpreting the regulations (and other NRC requirements) are justified and imposed in an orderly fashion, as well as to "ensure order, discipline, and predictability and to enhance optimal use of NRC staff and licensee resources." U.S. Nuclear Regulatory Commission, NUREG-1409, "Backfitting Guidelines," July 1990, ADAMS Accession No. ML032230247. The regulatory analysis' discussion was intended to be a "shorthand" for the full panoply of regulatory/policy concerns to which the Backfit Rule is addressed. The NRC has revised the final regulatory analysis to address this comment.

However, the NRC disagrees with the comment's implicit assertion that the Backfit Rule protects a licensee from changes in all NRC requirements. As discussed in a previous comment response, the Backfit Rule does not apply to changes in the NRC's procedural and administrative requirements governing the manner in which a licensee must obtain an otherwise undisputed NRC approval (that is, the need for NRC approval is unquestioned). Clearly, any

such changes may not be illegal or arbitrary, and should be imposed in an orderly fashion to ensure optimal use of NRC and licensee resources. However, the NRC uses the regulatory analysis and Paperwork Reduction Act clearance processes, rather than the Backfit Rule, to achieve those objectives. The comment did not mention these processes, which are generally applicable to all Federal agencies. The NRC assumes that the comment is not implicitly suggesting that all other Federal agency decision making is defective because they are not subject to restrictions analogous to the Backfit Rule – restrictions which were voluntarily adopted by the NRC without statutory mandate or direction from the President.

5.6 Requests for an Extension of the Comment Period

Requests for an Extension of the Comment Period Beyond August 3, 2009

Comments: Fourteen commenters, including four members of the nuclear power industry and ten State or local government agencies, requested an extension of the comment period beyond the initial August 3, 2009 deadline. The commenters requested between 75 and 105 additional days to provide comments due to the substantive nature of the proposed amendments to NRC EP requirements; significant legal, regulatory, and policy issues requiring extensive review; additional time to discuss possible consequences of the proposed changes with affected State and/or local jurisdictions; and to allow for a more comprehensive review that will result in more meaningful comments. [0025, 0026, 0027, 0028, 0029, 0030, 0031, 0032, 0035, 0036, 0037, 0038, 0039, 0040]

NRC Response: The NRC granted the requests for an extension of the comment period and extended the public comment period to October 19, 2009 in view of the NRC's desire to receive high quality comments from external stakeholders, and recognizing the quantity of information to be analyzed and the coordination efforts needed by and among stakeholders.

5.7 Need for Further Public Outreach/Guidance

Requests for Additional Implementation Guidance for States

Comment: One commenter from a State government agency expressed a need for additional guidance from the NRC as to how States with multiple reactor sites should implement and schedule the exercises required by Part 50, Appendix E, Section IV.F.2.j. [0068]

NRC Response: The NRC agrees with the commenter. The rule language in Section IV.F.2.d was modified such that States with multiple sites should fully participate in one hostile action biennial exercise per exercise cycle and partially participate in other hostile action biennial exercises each cycle similar to how these States participate in the ingestion pathway portion of biennial exercises. In addition, the overall time period for conducting the initial hostile action biennial exercise was extended to December 31, 2015 to allow more time for States with multiple sites to prepare for these exercises.

5.8 Implementation

Request for NRC to Publish an Implementation Timeline

Comment: One commenter pointed out the absence of an implementation timeline for the proposed requirements. The commenter stated that the NRC should develop such a timeline, and should provide State and local agencies with an opportunity to provide their input. [0064]

NRC Response: The NRC agrees in part with the commenter. A proposed implementation plan or timeline was developed in conjunction with FEMA and provided in the proposed rule. Several comments were received on the proposed timeline and adjustments were made to it in the final rule. In addition, the NRC and FEMA conducted a public meeting on November 15, 2010 to obtain additional stakeholder feedback on the proposed implementation time periods. State and local agencies provided feedback on the implementation timelines at this session and additional adjustments were made as described in the final rule SOC.

5.9 Editorial Changes in the Proposed Rulemaking

5.9.1 Proposed change of "Radiation" to "Radiological"

No comments addressed this issue.

5.9.2 Proposed change of "DHS" to "FEMA"

No comments addressed this issue.

5.9.3 Other

Miscellaneous Editorial Changes

Comment: One commenter suggested revising Appendix E, Section IV.E.5 to replace references to "physicians" with the term "medical providers," because licensees typically negotiate with providers rather than individual physicians. The commenter offered revised phrasing as follows: "Arrangements for medical service providers and other personnel qualified to handle on-site medical emergencies." [0102]

NRC Response: The NRC agrees with the commenter that licensees typically do not make arrangements for emergency medical services with individual physicians, but rather through medical service providers. The final rule language in Appendix E, Section IV.E.5 addresses the change suggested by the commenter.

Comment: A commenter suggested revising Appendix E, Section IV.E.9.d to require licensees to contact only NRC headquarters during emergencies, eliminating the reference to contacting the NRC Regional Office. In current practice, the licensee notifies NRC Headquarters using the Emergency Notification System (ENS). NRC Headquarters then contacts appropriate response locations including NRC Regional Offices. The commenter offered revised phrasing as follows: "Provisions for communications by the licensee with NRC Headquarters from the nuclear power reactor control room, the onsite technical support center, and the emergency operations facility. Such communications shall be tested monthly." [0102]

NRC Response: The NRC disagrees with the commenter. Although the licensee notifies NRC Headquarters for initial and subsequent emergency declarations via ENS, a communications link between the licensee's facilities and the NRC Regional Office can be used for providing

follow-up information directly to NRC regional staff if needed and requested by the NRC Regional Base Team. No change was made to the final rule in response to this comment.

Comment: One commenter recommended that NRC revise Appendix E, Section IV.F.2.a(iii) as follows: "For a combined license issued…." [0135]

NRC Response: The NRC agrees with the commenter. This was a typographical error and the final rule language in Appendix E, Section IV.F.2.a(iii) was changed as recommended by the commenter.

5.10 Other Miscellaneous Comments

Miscellaneous Comments

Comments: A commenter recommended a change to the FRN language on page 23265 regarding highway construction to recognize that planned construction may never begin or come to completion. The commenter also suggested that the NRC revise the FRN language on page 23265 as follows:

> "The NRC has traditionally taken the lead in reviewing the ETE analyses with the assistance of a traffic expert contractor during the initial licensing of a plant, especially for contested licensing cases involving ETE contentions." [0102]

NRC Response: The NRC agrees in part with the commenter. However, the NRC concluded that these sections of the SOC were not necessary to support the discussion of ETE updates and they were deleted. Therefore, a response to this commenter is unnecessary.

Comment: Several commenters provided comments on the FRN language on page 23265. One commenter argued that the rulemaking language as written implies that capacity and level of service (LOS) are synonymous, which is not correct. This commenter also argues that the HCM analysis focuses on traffic volume and does not discuss population. [0102] Another commenter stated that the language of this section assumes that roadways in all EPZs are near capacity in an evacuation. The commenter argued that this is not true for low population density EPZs. [0096] A third commenter agreed with this concern. [0098] Two of the commenters discussed the assumptions that were made regarding the roadways within the EPZ. The commenters suggested that the NRC re-evaluate the technical basis for the 10 percent criterion because almost all roadways within an EPZ are two-lane highways and not freeways. [0098, 0102]

NRC Response: The NRC changed the 10 percent population criterion as a result of other stakeholder comments, to a criterion that takes into account the effect of population change on the ETE values. Therefore, the NRC removed from the final rule SOC the language on which these comments were based because it was no longer needed to support the rule change. As a result, a response to the commenters is unnecessary.

Comment: One commenter argued that the proposed EP regulations should apply to NRC licensed activities beyond those in Parts 50 and 52. In particular, the commenter stated that the geologic repository at Yucca Mountain, Nye County, Nevada, which is licensed pursuant to Part 63, should be subject to the proposed regulations. [0047]

NRC Response: The NRC disagrees with the commenter. The emergency planning criteria for a facility licensed pursuant to Part 63 are contained in 10 CFR 73.32(b). No basis is provided for subjecting facilities licensed under Part 63 to additional emergency planning criteria resulting from the rule changes for facilities licensed under Part 50 or 52. No changes were made to the final rule in response to this comment.

Comments: Three commenters expressed concerns regarding the interactions between the stakeholders affected by the proposed regulations. [0048, 0057, 0084] One of the commenters stated that the NRC generally needs to improve its communication with other Federal agencies and the public and its elected officials regarding emergency planning and nuclear risks. [0048] Another commenter stated that several of the proposed regulations will directly impact State and local planning, which are under FEMA's jurisdiction. [0084] The third commenter claimed that the proposed rulemaking will empower nuclear utilities as governing bodies over their State and local governments. The commenter stated that the proposed arrangement would negatively affect the relationship between these entities, and could create conflicts of authority between the utilities and FEMA. [0057]

NRC Response: The NRC agrees in part with the commenters. This rulemaking was coordinated closely with FEMA to ensure that offsite agencies were aware of the proposed changes to EP regulations and potential impacts to offsite EP programs, and to align onsite and offsite guidance on implementing these changes. Comments and issues affecting both onsite and offsite EP programs were jointly resolved by the two agencies. The comment regarding the proposed rulemaking empowering nuclear utilities as governing bodies over State and local governments was addressed in Section 3.4 of this document. No changes were made to the final rule in response to these comments.

Comment: One commenter expressed concern that the NRC may not develop and maintain the ISG document to the level of detail that it would maintain another form of guidance such as a RG or NUREG. The commenter requested further dialogue with the NRC regarding the ISG after the NRC has considered comments on the proposed rule. [0102]

NRC Response: The NRC disagrees with the commenter. ISGs are developed and maintained following processes equivalent to those used for other types of NRC guidance documents. The NRC does not believe there is a need to conduct another comment period on the ISG after revisions are made based on changes in the final rule and comments received during the public comment period.

Comment: Another commenter suggested that enforcement actions for offsite infractions—such as a fine for deficiencies exhibited in an emergency drill—should be consistent with enforcement actions for onsite infractions of comparable significance. [0048]

NRC Response: The NRC disagrees with the commenter. The NRC does not have the regulatory authority to impose enforcement actions or penalties on OROs. No changes were made to the final rule in response to this comment.

Comments: One commenter stated that licensees' emergency plans and procedures are not coordinated and integrated with licensees' security plans and procedures. According to the commenter, this lack of synchronization will prevent OROs and licensees from effectively coordinating hostile action responses, drills, and exercises. The commenter also stated that the lack of integration may lead to the double-counting of certain resources. [0064]

NRC Response: The NRC disagrees with the commenter. The NRC has observed several drills that integrated security and EP, and the NRC expects that the drill and exercise program will continue to integrate security and EP. If there are site-specific integration problems, they should be worked out between the OROs and licensee. However, the NRC enforces its regulations and requires licensees to address any inadequacies. The burden is upon the licensees to ensure that their programs are integrated appropriately with those of OROs (per 10 CFR 50.47(b)(3) and (6)).

In addition, the development of an integrated hostile action response plan falls under the purview of each emergency response stakeholder working with each other to achieve integration. The barriers between interdisciplinary (Federal, State, and local) laws and regulations preclude a single entity to mandate this level of integration, except for the Congress of the United States. No changes were made to the final rule in response to these comments.

Comment: Another commenter recommended that the NRC amend its definition of hostile action to include cyber attacks. [FEMA-2008-022-0079]

NRC Response: The NRC disagrees with the commenter.

Section 73.54 of the NRC's regulations requires nuclear facility licensees to implement a cyber security program that provides high assurance that safety, security, and emergency preparedness functions of nuclear facilities are protected from cyber attacks. Licensees are expected to have an NRC-approved cyber security program. Additionally, the NRC provided a method to aid licensees in implementing 10 CFR 73.54 by developing Regulatory Guide 5.71, "Cyber Security Program for Nuclear Facilities" and the nuclear power industry indicated that it had voluntarily implemented cyber security programs in accordance with NEI 04-04, "Cyber Security Program for Power Reactors," at all power reactor sites. These documents provide the licensees with clear expectations on the plans, scope, and definition of cyber hostility.

Whereas cyber attacks directed at licensee facilities are associated with digital computer and communication systems and networks, "hostile action" is defined in the final rule as an act associated with individuals who can potentially achieve an end to harm public health and safety through the use of physical violence. The current regulatory requirements for cyber attacks are adequately and reasonably separated from the definition of "hostile action." No changes were made to the final rule in response to this comment.

5.11 Comments Outside the Scope of the Rulemaking

Communication with Public

Comments: One commenter recommended that the NRC communicate to the public that individuals should take protective actions in the event of a radioactive release beyond the edge of the EPZ. In addition, the commenter suggested that the public does not understand much about fatality risks. The commenter stated that the NRC should educate the public about how protective actions vary with distance and scenario. The commenter also stated that the NRC should inform the public that over-evacuation is undesirable because it slows down evacuees and could result in small increases in health consequences for evacuees nearest the site. In addition, the commenter suggested that the NRC inform the public that modern science

indicates that nuclear accidents are less likely than thought before and that only a small subset of nuclear accidents might result in a release of radioactive material, and that these releases would be much weaker than thought before and would take longer to enter the environment. The commenter also recommended that in the final rule the NRC should address public acceptance issues. [0048]

NRC Response: The NRC considers these comments to be beyond the scope of the rulemaking because this rule does not concern the NRC's public outreach efforts in the area of EP. No change was made to the final rule in response to these comments.

ANS Time Requirements

Comment: A commenter expressed concern that the requirement to complete an initial alerting within 15 minutes may result in increased use of "non-informative notifications" rather than "actionable notifications." [0065]

NRC Response: The 15 minute goal in 10 CFR Part 50, Appendix E, Section IV.D.3, for the initial alerting of the public is not under consideration in this rulemaking.

Protective Actions

Comments: One commenter provided several comments related to PARs under various scenarios, such as when offsite power is lost or an armed ground terrorist attack occurs at the site. The commenter submitted tables with various scenarios and recommended emergency responses and PARs under each scenario. The commenter also suggested that the NRC examine data and use modern emergency planning technology to help determine appropriate emergency response and PARs. The commenter also recommended that the application of protective action guides (PAGs) should be implemented on a group basis rather than on an individual basis to achieve the lowest overall exposure. With regard to evacuating people, the commenter suggested that the NRC consider psychological health consequences when balance different risks. [0048]

NRC Response: The NRC considers these comments to be beyond the scope of the rulemaking because this rule does not concern PARs. However, the NRC issued NUREG-0654, Supplement 3, Draft Report for Comment, "Guidance for Protective Action Recommendations for General Emergencies," for public comment on March 8, 2010. This draft guidance document would enhance protective action strategies for response to serious nuclear power plant emergencies. No change was made to the final rule in response to these comments.

Comments: Another commenter requested that the NRC require the following of licensees as protective measures: (1) pay the cost for evacuation plans for pre-school and day-care centers; (2) pay for additional vehicles and drivers to complete immediate transport of all students from every school district in the EPZ at one time; (3) expand the evacuation zone to at least 50 miles; (4) account for the wind direction at the time of the radiation release; (5) pay to build shelters at least 50 miles away in each direction from the nuclear plant; (6) immediately notify the public of any radiation release due to an accident or attack; (7) pay substantial fines for failure to provide immediate notification of any accident or attack; (8) provide funding for independent public education in regions around nuclear plants; and (9) guard against air strikes, missile attacks, and large numbers of terrorists. [0053] The commenter also suggested that potassium iodide

(KI) pills could lead to a false sense of protection among the public. [0053] Another commenter argued that the consequences of an accident may extend beyond the 10-mile EPZ. [0072] Another commenter recommended that the NRC take a conservative approach when establishing the size of the EPZ, and stated that the proposed rule should address the size of the EPZ. Further, the commenter recommended that the EPZ be subdivided into four regions. These regions would consist of an inner circle of two miles, a wedge area, a downwind sheltering area, and an unaffected area. [0048]

NRC Response: The NRC considers these comments to be beyond the scope of this rule. Although the topics addressed by these comments are enveloped within the overall scope of the Commission's EP regulations, the particular topics were not addressed in this proposed rule on which the NRC requested comments. The regulatory process for affecting changes such as those requested by the comments is provided in 10 CFR 2.802, "Petition for Rulemaking." With regard to Comment #6, although the scope of the proposed rule includes codifying a timeliness criterion for emergency classification, it does not include any changes to existing requirements regarding notification of State and local officials and the notification of the public by these officials. No change was made to the final rule in response to these comments.

Comment: Two commenters argued that the NRC is not using the most advanced modeling technique concepts for meteorology. The commenters indicated that the proposed enhancements to the regulations fail to meet current scientific understanding regarding meteorology, dose assessment, and speed at which an accident requiring protective actions for the public may develop. The commenters requested that the NRC include accurate dose assessments as part of the rulemaking. [0072, 0088]

NRC Response: The NRC considers these comments to be beyond the scope of this rule. Although dose assessments are enveloped within the overall scope of the Commission's EP regulations, dose assessment was not addressed in this proposed rule on which the NRC requested comments. The regulatory process for affecting such changes is provided in 10 CFR 2.802, "Petition for Rulemaking." No change was made to the final rule in response to this comment.

Comment: Another commenter stated that the proposed regulations do not assure public safety because the rule does not establish: (1) an upper limit on the allowable radiation dose members of the public may receive or the risk they may be exposed to, and (2) the risks caused by unnecessary evacuation. [0088]

NRC Response: The NRC considers these comments to be beyond the scope of this rule. Although protective actions and the guidelines for initiating those actions are enveloped within the overall scope of the Commission's EP regulations, these two topics were not addressed in the proposed rule on which the NRC requested comments. The regulatory process for affecting such changes is provided in 10 CFR 2.802, "Petition for Rulemaking." No change was made to the final rule in response to this comment.

Comment: A commenter stated that the proposed rule language says that the NRC may approve an emergency plan change if it is provided "reasonable assurance" that adequate measures can and will be taken in the event of a radiological emergency and that the rule needs to define "reasonable assurance." [0072]

NRC Response: The NRC considers this comment to be beyond the scope of this rule because the term "reasonable assurance" is not used in 10 CFR 50.54(q) of the proposed or final rule. The licensee's burden is only to determine whether the change "reduces the effectiveness" of the plan—a phrase which is defined in the final rule. No change was made to the final rule or the guidance document in response to this comment.

Comment: A commenter also objected to NRC's effort in Regulatory Issue Summary (RIS) 2005-02, Revision 1, to compel licensees to prepare license amendment requests in connection with emergency plan changes in advance of the completion of this rulemaking. The commenter stated that this violates the Administrative Procedure Act, and is inconsistent with the Commission's Principles of Good Regulation. [0102]

NRC Response: The NRC considers the comment to be beyond the scope of this rulemaking. RIS 2005-02, Revision 1 was a separate administrative action and was separately published for public comment on August 24, 2009 (74 FR 42699), in keeping with the Commission's Principles of Good Regulation. The EP rulemaking, which is the subject of this comment resolution, was independent of the RIS. Accordingly, this comment is out of scope. No change was made to the final rule in response to this comment.

Comments That Are Not Germane to the Rulemaking

Comment: One commenter submitted comments that focused on the limitations and capabilities of available transport technologies for use in the EAS construct. [0052]

NRC Response: The NRC considers this comment to be beyond the scope of this rulemaking. The NRC does not have the regulatory authority to set standards for the capabilities of transport technologies for use in the EAS. Such standards would be set by other Federal agencies, such as the Federal Communications Commission. No change was made to the final rule in response to this comment.

Opposed to Nuclear Power Plants

Comments: One commenter suggested that the facts indicate that NPPs are a clear and present danger, and argued that it is negligent for the NRC to claim that a meltdown is highly unlikely. The commenter called for the NRC to make decisions to hold the nuclear industry accountable for their "threat to society." [0053]

NRC Response: The NRC considers this comment to be beyond the scope of this rulemaking. No change was made to the final rule in response to these comments.

Comment: Another commenter argued that nuclear power is environmentally hazardous and requested that NRC not issue licenses for current applications for NPPs. [0044]

NRC Response: The NRC considers this comment to be beyond the scope of this rulemaking. If a stakeholder has concerns about an applicant for a new nuclear power reactor license, the stakeholder has opportunities to participate in the applicant's licensing proceeding to raise those concerns.

Scenarios and Vulnerabilities That Nuclear Power Plants Need to Protect Against

Comments: One commenter suggested that the NRC conduct a classified review of security issues. [0048] Another commenter suggested that the NRC require nuclear plant owners to guard against air strikes, missiles, and large group terrorists' attacks. [0053] The commenter stated that GE Mark II design reactors are vulnerable to terrorists' attacks for several reasons that should result in required nuclear industry protection against air strikes and missiles. The commenter also mentioned that small aircraft loaded with fuel could cause a significant radiation leak or a fire that could lead to a meltdown. [0053] Three commenters recommended that the NRC require NPPs to protect against attacks on spent fuel storage facilities. [0053, 0072, 0088]

NRC Response: The NRC considers these comments to be beyond the scope of this rulemaking because this rulemaking involves security matters only to the extent that they relate to EP. The commenters raised specific security issues independent of any connection to EP. Information on the security issues stated by the commenters can be found on the NRC's public website, such as the "Security Spotlight," which addresses layers of defense such as protecting against air attacks, defending against adversaries, securing materials and strengthening regulations (http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/security-spotlight/overview.html). No change was made to the final rule in response to these comments.

Comments: To help protect against attacks, a commenter suggested that the NRC require websites to remove high resolution mapping information immediately, including all on-line aerial views of NPPs. [0053] The commenter also cited issues with lax security, and claimed that NPPs remain vulnerable to terrorist attacks due to the NRC's reluctance to detect and/or address lax security, such as sleeping security guards. [0053]

NRC Response: The NRC considers these comments to be beyond the scope of this rulemaking because this rulemaking involves security matters only to the extent that they relate to EP. The commenters raised specific security issues independent of any connection to EP. No change was made to the final rule in response to these comments.

Comment: A commenter stated that the NRC plans for "best case scenarios" when they should assume the "worst case scenario." As an example, the commenter suggested that plans and the proposed rule assume slow breaking accidents. [0072]

NRC Response: The NRC considers this comment to be beyond the scope of this rulemaking. Nevertheless, the NRC does not plan for the "best case scenario." If it did, the extensive emergency planning regulations would not exist, nor would the requirements for a robust containment building around NPPs. The emergency planning zone is not based on a best case scenario, but rather addresses, in a conservative manner, the potential for an accident and the need to protect public health and safety. Additionally, the final rule requires exercise scenarios to include fast breaking events to enhance preparedness efforts and ensure adequate capabilities are demonstrated. However, if the commenter has information that would show the NRC's regulations are inadequate, that information should be forwarded to the NRC for review and analysis. No change was made to the final rule in response to this comment.

Comments: Another commenter recommended that all bridges at NPPs must be protected. [0070] The commenter stated that the NRC must re-examine this failure in the final rule. [0070] The commenter also suggested that the rule should prescribe a timeframe in which a licensee must determine that a cyber attack has occurred or is occurring. [0070]

NRC Response: The NRC considers these comments to be beyond the scope of this rule because this rulemaking involves security matters only to the extent that they relate to EP. The commenters raised specific security issues independent of any connection to EP. The regulatory process for rule changes such as those requested by the commenters is provided in 10 CFR 2.802, "Petition for Rulemaking." No change was made to the final rule in response to these comments.

Comment: One commenter suggested that telephone service is not reliable during emergencies, so licensees should have at least three satellite telephones. [0070]

NRC Response: The NRC considers this comment to be beyond the scope of this rule. The topic addressed by this comment is enveloped within the overall scope of the Commission's EP regulations but was not addressed in this proposed rule on which the NRC requested comments. The regulatory process for rule changes such as those requested by the commenter is provided in 10 CFR 2.802, "Petition for Rulemaking." No change was made to the final rule in response to this comment.

Performance Requirement

Comments: Two commenters recommended that the NRC set a performance requirement for emergency response plans. The commenter explained that the standard could be defined in terms of the net effect on the public in accident or sabotage scenarios or the degree of risk reduction achieved by the plan. [0088, 0109]

NRC Response: The NRC considers this comment to be beyond the scope of this rule. This rulemaking was not intended to replace the current regulatory scheme with a completely new program. However, the NRC is beginning work on technical bases to develop a more risk-informed regulatory oversight process that may address some of the commenters' concerns. No change was made to the final rule in response to these comments.

SOARCA Study

Comments: One commenter urged the NRC to continue with the SOARCA study and to expand it to deal with hostile action. The commenter also recommended that the NRC not take actions that would contradict the knowledge of severe accidents and their consequences that has been established thus far by the SOARCA effort. The commenter also suggested that the NRC explain the SOARCA to the public (its methods and conclusions). [0090] Another commenter suggested that the NRC use the SOARCA analyses to change other areas of EP not covered in proposed rule. [0048]

NRC Response: The NRC considers these comments to be beyond the scope of this rule. No change was made to the final rule in response to these comments.

6. Comments Shared With FEMA

Several commenters addressed topics that involve FEMA oversight. In some cases, the comments involved one of the NRC's rulemaking topics. For these comments, the NRC addressed the comment (with input from FEMA) within this document under the appropriate rulemaking issue category. In other cases, comments were submitted to the NRC's rulemaking docket involving issues or documents that were a part of FEMA's rulemaking docket. For these comments, the NRC provided FEMA with the comment submission so that the issue could be addressed as part of FEMA's docket.

NUREG-0654/FEMA-REP-1, Supplement 4

Comments: Several of the comments submitted to the NRC docket that FEMA addressed as part of its docket discuss NUREG-0654, Supplement 4. Four commenters provided detailed comments on the content of the document. [0060, 0064, 0065, 0102] Another commenter stated that the FEMA FRN implies that NUREG-0654 is a regulation, contrary to NRC's interpretation. The commenter recommended that FEMA add a statement regarding NUREG-0654 to the REP Program Manual similar to the one the NRC used in SECY-08-0182. [0069] Another commenter felt that the request for comment on NUREG-0654 was premature, and requested an additional comment period on the document after the rule language is finalized. [0089]

Alert and Notification Systems

Comments: One commenter stated the FEMA documents currently under review do not adequately address the evaluation criteria for backup alert and notification systems. [0069] Another commenter requested clarification of a paragraph in NRC's ISG document (NSIR/DPR-ISG-01) regarding FEMA's statistical sampling of residents to assess the public's ability to hear or receive alerts and notifications. The paragraph states that the notification capability "may be verified on a statistical basis," yet it also states that FEMA will take such a sample "Every year, or in conjunction with an exercise of the facility." [0100]

Use of FEMA/DHS Source Information in NRC's Interim Staff Guidance

Comments: One commenter stated that it appears that the ISG document (NSIR/DPR-ISG-01) appears to disregard stakeholder input from the regional meetings held by FEMA. [0100] The same commenter argued that the guidance document utilizes DHS Comprehensive Reviews as justification for the proposed regulation. The commenter states that States participating in the Comprehensive Reviews were not aware that the information they provided might be used as justification for regulatory changes. [0100]

7. Support of Other Comments

Comments: Fifteen commenters endorsed or voiced support for the comments on the proposed rule made by the Nuclear Energy Institute. [0075, 0076, 0082, 0087, 0089, 0090, 0091, 0092, 0093, 0094, 0099, 0101, 0103, 0104, 0135]

One commenter expressed support for the comments submitted by Pilgrim Watch. [0108]

NRC Response: No response is necessary.