



NUCLEAR ENERGY INSTITUTE

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January 16, 2007

Ms. Catherine Haney
Director
Division of Operating Reactors
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: Pandemic Licensing Plan

PROJECT NUMBER: 689

Dear Ms. Haney:

The NEI Licensing Action Task Force (LATF) has prepared a draft white paper ("Pandemic Licensing Plan") to describe regulatory options for permitting nuclear plant operation during an influenza pandemic. The paper balances projected staffing reductions with the importance of continued operation to help maintain grid stability and provide reserve power to offset losses of other sources of generation.

The enclosed copy of the white paper is submitted for review and comment by the NRC staff. NEI recommends a public meeting at your earliest convenience to discuss the staff's comments.

If you have questions or require additional information, please contact me at 202.739.8138; jwr@nei.org or Mike Schoppman at 202.739.8011; mas@nei.org.

Sincerely,

A handwritten signature in black ink that reads "Jack W. Roe". The signature is written in a cursive, slightly slanted style.

Jack W. Roe

Enclosure

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NEI White Paper

Pandemic Licensing Plan

January 2007

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ABSTRACT

The Pandemic Threat

A pandemic is an outbreak of infectious disease, such as influenza, that spreads globally across large geographical regions. Pandemics occur when new viruses evolve and begin to transmit rapidly between humans. Given the potentially serious health, social, and economic impacts of a pandemic, the United States (U.S.) government, the private sector, and the international community are developing response strategies.

An important goal of the pandemic response strategy is assuring the continued reliability of the electric grid. Electricity production and delivery, two of the most important elements of the North American economic and social infrastructure, must remain dependable during a pandemic because many parts of the infrastructure (e.g., food supply, water, transportation, public health) cannot function without a stable, reliable supply of electric power. Continued operation of the 103 operating nuclear plants during a pandemic would help maintain grid stability and provide reserve power if there are major losses of other sources of power generation.

The principal threat to the operation of any facility during a pandemic is the absence of essential personnel from the workplace for extended periods. The federal government projects absentee rates during the first wave of an influenza pandemic of up to 40 percent for six to eight weeks, followed by one or more subsequent waves over a period of 12 to 18 months.

National Planning

The Department of Homeland Security (DHS) coordinates the response to national emergencies. DHS has prepared a National Response Plan¹ (the Plan) to integrate incident management disciplines (homeland security, emergency management, law enforcement, firefighting, public works, public health, responder and recovery worker health and safety, emergency medical services, and the private sector) into a unified structure. The Plan forms the basis for coordinating federal departments and agencies with state, local, and tribal governments and the private sector. It includes response protocols for terrorist attacks and other natural and manmade hazards, including influenza pandemics.

DHS has formed a Critical Infrastructure Partnership Advisory Council (CIPAC) to coordinate critical business sectors. The nuclear sector is represented on CIPAC by

¹ U.S. Department of Homeland Security, Pandemic Response Plan, “National Strategy for Pandemic Influenza” (November 2006).

the Nuclear Sector Coordinating Council (NSCC). The NSCC has published NEI 06-03² to describe the pandemic threat and assist nuclear plant owners and operators in developing response plans.

The NRC published its Interim Pandemic Response Plan on December 1, 2006.³ The plan identifies the agency's "pandemic priority functions" as incident response, threat assessment and dissemination, external communications, critical licensing activities, enforcement, and administrative support. The NRC's Plan notes that some routine licensing, exercises and inspections may be deferred, delayed or cancelled depending on the availability of staff, but only if operational safety and security can be maintained.

The purpose of this NEI white paper is to supplement NEI 06-03 and the NRC Interim Pandemic Response Plan. It recognizes the potential for an influenza pandemic to reduce nuclear plant staffing below the levels necessary to maintain full compliance with all NRC regulatory requirements. It then describes the regulatory actions necessary to permit continued operation with reduced staffing levels for approximately four to six weeks until pandemic conditions subside and staffing returns to normal levels. Regulatory relief to permit rescheduling of selected activities and deferral of most administrative and programmatic requirements would balance the risk from continued operation with the risk from regional blackouts and grid instability.

This white paper recommends NRC enforcement discretion as the most efficient and effective licensing response to a pandemic. The necessary criteria for evaluating and granting such discretion can be developed in advance. A pre-established NRC policy for granting enforcement discretion would create the flexibility to manage a range of pandemic-related situations while continuing to assure the safe operation of the plant. Other regulatory options (license amendments, exemptions, orders) could be used as needed to supplement enforcement discretion.

² Nuclear Energy Institute, NEI 06-03, "Nuclear Sector Coordination Council, *Influenza Pandemic Threat Summary and Planning, Preparation, and Response Reference Guide*" (March 2006).

³ U.S. NRC, Press Release 06-147, "Interim Pandemic Response Plan" (December 1, 2006).

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1.0 INTRODUCTION

An influenza pandemic is defined as a global outbreak in which influenza rates exceed baseline levels and cause high rates of serious illness and mortality worldwide. Health care professionals predict that an influenza pandemic that severely disrupts affected populations will occur within the next 10 years.

This white paper addresses the nuclear licensing aspects of an influenza pandemic in four main Sections:

- Section 1 introduces the planning assumptions for the nuclear industry's pandemic licensing plan.
- Section 2 lists the regulatory requirements that could become compliance challenges if plant staffing is reduced significantly due to absenteeism during an influenza pandemic.
- Section 3 lists the regulatory options available to the NRC staff for granting regulatory relief, and evaluates their suitability for use during a pandemic.
- Section 4 provides a licensing framework for responding to a pandemic.

1.1 Social and Economic Impact

The H5N1 influenza virus currently affects a large part of the bird population in Asia. A pandemic could result if the virus mutates to become transmissible to and between humans. A virulent pandemic would disrupt all sectors of business and society.

The U.S. economy has the following critical business sectors, which are all dependent on electricity to some extent:

- Chemical
- Dams
- Emergency Services
- Energy
- Food and Agriculture
- Information Technology
- Postal and Shipping
- Public Health
- Telecommunications
- Transportation
- Water

1.2 Planning Assumptions

For planning purposes, the five phases of a pandemic are:

- (1) Pandemic Alert – Responsible government authorities notify public and private sectors that a pandemic is possible. Response plans are prepared or updated.
- (2) Pre-Pandemic – Localized outbreaks occur with human-to-human transmission. The public and private sectors begin to assign resources, prepare staff, distribute planning information, and implement pandemic response plans.
- (3) Pandemic Outbreak – General outbreaks occur across borders and continents, and pandemic response plans are activated.
- (4) Maximum Disruption – High absentee rates (up to 40 percent) occur and impact the workforce for several months.
- (5) Prolonged Recovery – Recovery is slow and the underlying economy is weak. Altered business conditions prevail for three to six months.

The business continuity planning assumptions include the following:

- A pandemic occurs within 10 years.
- Once human-to-human virus transmission begins, the disease spreads worldwide within three to eight weeks.
- Infection rates exceed 25 % of the affected population.
- Infected employees experience serious illness for up to two weeks (or longer if there are complications).
- The time period away from work varies depending on family situation and recovery time.
- Absentee rates for employees approach 40 percent over a period of six to eight weeks.
- Mortality rates among infected persons approach two percent.
- Personnel and business processes focus on maintaining essential business functions and minimizing the spread of the disease.
- There is no vaccine until the actual virus appears and a limited quantity of vaccine is manufactured (several months).
- When a vaccine becomes available, it is distributed by government allotment first to the very ill and to workers in critical sectors.
- There are two or three waves of pandemic, each lasting six to eight weeks.

1.3 Pandemic Licensing Plan

This licensing framework described in this paper is intended for use by operating nuclear plant licensees to obtain temporary relief from a defined subset of NRC regulatory requirements during an influenza pandemic. Such relief would be necessary to permit U.S. commercial nuclear plants to continue operating without the staff normally available to comply with all regulatory requirements. Continued safe operation of nuclear plants is an important factor in maintaining a functioning electric grid that can support critical sectors of the US infrastructure during times of regional and national emergency. However, operation under such conditions would not be permitted if safety and security were jeopardized.

Safe plant operation and attendant protection of public health and safety are the primary considerations when evaluating and applying any of the licensing options discussed herein. Nuclear plant licensees seeking regulatory relief due to the impact of reduced staffing during a pandemic must assure safe plant operation by performing assessments of specific relief either in advance of the pandemic or at the time of need. Relief will become available on a licensee-by-licensee basis when the pandemic has reduced personnel availability for specific activities below pre-established thresholds. In all cases, the relief will be temporary. Relief will be withdrawn when stable staffing levels have risen above pandemic thresholds. If at any point the licensee cannot assure safe operation, the plant will be shut down.

1.4 Summary of NEI Recommendations

The body of this paper contains the following recommendations:

1. NRC should endorse NEI 06-09, “Risk-Managed Technical Specifications (RMTS) Guidelines” (November 2006), as an acceptable method for determining which limiting conditions for operation (LCOs) can be extended during a pandemic.
2. NRC should endorse NEI 04-10, “Risk-Informed Method for Control of Surveillance Frequencies” (July 2006), as an acceptable method for determining if surveillance test intervals that fall in pandemic categories A and B (the categories are defined in Section 2.2) can be delayed during a pandemic.
3. NRC should supplement its regulations with additional guidance to expand the operational flexibility available to licensees during temporary pandemic situations.

4. NRC should develop an interim enforcement policy regarding enforcement discretion for nuclear plants during a pandemic and publish the proposed policy in the *Federal Register* to give stakeholders an opportunity to participate in the policy development process.
5. NRC should authorize enforcement discretion in advance for requirements that do not have a material impact on the functionality of safety-related SSCs (pre-established discretion for Category C requirements is defined in Section 2.2 and Table 1).
6. NRC should post on the NRC website the correspondence and evaluations associated with approved plant-specific enforcement discretion actions.
7. NRC should use the consolidated line item improvement process (CLIIP) to review generic technical specification changes that are pandemic related.
8. NRC should define a regulatory framework for managing proposed emergency and exigent technical specification changes that are pandemic related.
9. NRC should develop an exemption-request template to facilitate the exemption process during a pandemic.

2.0 STAFFING REQUIREMENTS

This section of the white paper discusses NRC regulatory requirements that have staffing implications, the potential for noncompliances with staffing requirements during an influenza pandemic, and the licensing options for obtaining relief from selected staffing requirements to permit continued nuclear plant operation in support of a stable electric grid.

2.1 Explicit and Implicit Staffing Requirements

Appendix A provides excerpts from the NRC regulations and Standard Technical Specifications⁴ that contain explicit and implicit staffing requirements for nuclear reactors. The explicit requirements cite a minimum number of staff for certain job categories (licensed operators, non-licensed operators, shift advisor, fire brigade, and security supervisor). The implicit requirements do not cite staffing numbers, but establish various administrative and programmatic requirements that require staff to implement. Staffing-related requirements will become a compliance challenge if nuclear plant staffing is reduced significantly below normal levels.

Table 1 of this white paper lists the source of each staffing-related requirement (Column 1), provides a brief statement of the requirement (Column 2), provides a keyword for use in grouping related requirements (Column 3), places the requirement into one of three compliance categories (Column 4), provides the basis for the chosen relief category (Column 5), and recommends the appropriate vehicle for granting regulatory relief (Column 6).

2.2 Relief Categories

The benefits to public health and safety of continued nuclear plant operation with reduced staffing during an influenza pandemic (helping to ensure continued operation of the electric grid) can offset the temporary inability to comply with programmatic and administrative requirements. In many cases, compliance can be deferred, or compensatory measures can be implemented to mitigate the consequences of noncompliance. Whatever the case, each noncompliance must be documented and dispositioned during or after the pandemic.

⁴ NRC Standard Technical Specifications, NUREG series 1430-1434, Revision 3.1 (December 1, 2005).

In this context, the categories of regulatory relief include:

A. No Relief or Minimal Relief

Safety-related structures, systems, and components (SSCs) are designed to remain functional at all times to assure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, and the capability to prevent or mitigate the consequences of accidents that could result in an unacceptable release of radioactivity to offsite areas. The regulatory requirements associated with the functionality of safety-related SSCs cannot be compromised. Thus, no (or minimal) regulatory relief for this type of requirement may be sought during a pandemic.

Licensees requesting minimal relief would be required to use the appropriate administrative process defined in existing NRC regulations (typically a license amendment or an exemption) to obtain regulatory relief from these requirements.

B. Partial Relief

The intent of many technical requirements can be met through a combination of alternative actions and compensatory measures, many of which could be reviewed and approved in advance of a pandemic. In addition, risk-informed logic and analysis could be used to demonstrate that the risk impact of deferred compliance is acceptable, as discussed in Section 2.3.1 for Technical Specification (TS) Limiting Conditions for Operation (LCOs) and Section 2.3.2 for TS Surveillance Test Intervals (STIs). Thus, partial relief from this category of regulations could be sought during a pandemic. Licensees would be obliged to communicate with NRC staff to propose and justify any proposed alternatives or compensatory actions. A formal licensing action may be necessary to define and authorize partial relief.

C. Substantial Relief

Many administrative and programmatic requirements, and some technical requirements, may be deferred without material impact on the functionality of safety-related SSCs. Thus, substantial relief from this type of requirement could be sought during a pandemic, consistent with public health and safety. The scope of relief could be established in advance of a pandemic by a generic policy statement or other NRC-issued guidance, or it could be established plant by plant at time of need based on satisfying pre-established threshold criteria, as described below in Sections 3 and 4.

2.3 Bases for Regulatory Relief

The bases for regulatory relief can be qualitative, quantitative, or a mix of the two. Regulatory relief is highly plant-specific for compliance category A (no relief, or minimal relief); a combination of qualitative and quantitative for compliance category B (partial relief); and almost entirely qualitative for compliance category C (substantial relief).

The proposed framework for deriving quantitative conclusions in support of extending TS LCO completion times during a pandemic is described in Section 2.3.1. A similar framework for increasing TS surveillance test intervals is described in Section 2.3.2. Alternative licensing actions for obtaining regulatory relief are described in Section 2.3.3.

2.3.1 Risk Basis for Extending LCO Completion Times

All LCOs are in pandemic compliance category A. NEI 06-09⁵ describes a risk-informed methodology for extending LCO completion times that is based on the methodology used to comply with paragraph (a)(4) of the maintenance rule (10 CFR 50.65), consistent with NRC Regulatory Guide 1.174.⁶ Probabilistic risk assessment (PRA) tools are used to evaluate the risk impact of longer completion times by taking the configuration-specific risk into account. Deterministic backstop values are used to limit the LCO extension regardless of low risk impact.

Recommendation 1 – NEI recommends that NRC endorse NEI 06-09 as an acceptable method for determining which LCOs can be extended during a pandemic. Each licensee would use its current plant-specific PRA as the basis for the risk evaluation.

2.3.2 Risk Basis for Increasing Surveillance Test Intervals

Table 3 shows that surveillance test intervals (STIs) fall into all three pandemic compliance categories. NEI 04-10⁷ describes a methodology for evaluating the risk associated with extending a STI. The methodology was

⁵ Nuclear Energy Institute, NEI 06-09, “Risk-Managed Technical Specifications (RMTS) Guidelines” (November 2006).

⁶ U.S. NRC, Regulatory Guide 1.174, “An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis,” Revision 1 (November 2002).

⁷ Nuclear Energy Institute, NEI 04-10, “Risk-Informed Method for Control of Surveillance Frequencies” (July 2006).

developed as part of Risk Informed Technical Specifications (RITS) Initiative 5b. The Technical Specification Task Force (TSTF), under the auspices of the BWR and PWR Owners Groups, is developing a “surveillance frequency control program” based on NEI 04-10. Under Initiative 5b, surveillance requirements remain in TS, but individual STIs can be relocated to a licensee-controlled document.

Recommendation 2 – NEI recommends that NRC endorse NEI 04-10 as an acceptable method for determining whether surveillance test intervals that fall in pandemic categories A and B can be delayed during a pandemic. Each licensee would use its current plant-specific PRA as the basis for the risk evaluation.

2.3.3 Regulatory Relief Alternatives

For each requirement in Column 1 of Table 1, one of the following alternative approaches for seeking regulatory relief is listed in Column 6. The licensing actions necessary to implement the alternatives are discussed in greater detail in Section 3.

- (1) Current change-control regulations.
 - (a) 10 CFR 50.54(a)(3) – quality assurance program changes.
 - (b) 10 CFR 50.54(p)(1) – security program changes.
 - (c) 10 CFR 50.54(q) – emergency plan changes.
 - (d) 10 CFR 50.54(x) and (y) – departure from a license condition or technical specification in an emergency.
 - (e) 10 CFR 50.54(dd) – departure from a license condition or technical specification in a national security emergency.

- (2) Enforcement discretion.
 - (a) General policy statement for pandemic situations (to be published in the *Federal Register*).
 - (b) Plant-specific enforcement discretion.

- (3) License amendments.
 - (a) Use of the consolidated line item improvement process⁸ (CLIIP) to add a “pandemic response program” to the Administrative Controls section of the Standard Technical Specifications.
 - (b) Plant-specific emergency or exigent Technical Specification changes.
- (4) Exemptions.
 - (a) Specific exemptions (10 CFR 50.12).
 - (b) Alternative to, or relief from, codes and standards requirements (10 CFR 50.55a).
- (5) Orders.

⁸ U.S. NRC, Regulatory Issue Summary 2000-06, “Consolidated Line Item Improvement Process For Adopting Standard Technical Specifications Changes for Power Reactors” (March 20, 2000).

3.0 REGULATORY OPTIONS

A range of regulatory options is available to the NRC to address the staffing impacts anticipated in a pandemic. These are discussed below. Some options (e.g., enforcement discretion, license amendment, exemption, and order) require prior NRC approval. Other options are available to licensees without prior NRC approval (e.g., plant changes that satisfy 10 CFR 50.59 criteria, program changes permitted by 10 CFR 50.54, and departures from technical specifications in emergencies permitted by 10 CFR 50.54(x)).

Because the extent of the societal impact from a pandemic cannot be determined in advance, NRC should identify (1) the set of requirements for which temporary generic relief can be “pre-established” and (2) the corresponding set for which plant-specific relief must be granted on a case-by-case basis at the time of need. As described below, NRC enforcement discretion appears to be the most efficient, effective, and flexible means to provide operational flexibility while ensuring continued safe operation during a pandemic. Other regulatory options could be used to address plant-specific situations, as needed.

3.1 Current Change-Control Regulations

10 CFR 50.54 contains a number of provisions that permit licensees to make changes to selected programs without prior NRC approval.

3.1.1 Program Changes/Deviations

Certain regulations, including 10 CFR 50.54(a) for quality assurance, 10 CFR 50.54(p) for safeguards and security, and 10 CFR 50.54(q) for emergency preparedness, provide standards for licensees to modify, without prior NRC approval, the associated plant programs and processes so long as the modifications do not decrease program effectiveness or reduce licensee commitments.

Recommendation 3 – NEI recommends that NRC supplement these regulations with additional guidance to expand the operational flexibility available to licensees during temporary pandemic situations.

3.1.2 Emergency Operation

10 CFR 50.54(x) and (y) allow licensees to take reasonable action that departs from a license condition, technical specification, or regulation in an emergency when such action is needed to protect the public health and safety. These regulations would be available for licensee implementation during a pandemic.

The NRC considers the following factors whenever licensees implement 10 CFR 50.54(x) and (y):

- (1) Did the licensee have to act immediately to avert possible adverse consequences to public health and safety?
- (2) Was adequate or equivalent protective action that is consistent with the license immediately apparent?
- (3) Was the licensee's action reasonable, and based on information available at the time, did it serve to protect the public health and safety?
- (4) Did the licensee deviate from its license only to the extent necessary to meet the emergency?
- (5) Did the NRC staff have time to approve a license amendment?

An NRC response⁹ to a Task Interface Agreement states that a licensee may pre-plan for and proceduralize the use of 10 CFR 50.54(x) without violating the operating license, so long as permanent plant or procedure changes are also addressed in accordance with 10 CFR 50.59.

10 CFR 50.54(dd) allows a licensee to take reasonable action that departs from a license condition or a technical specification in a national security emergency. NEI believes that federal agencies are unlikely to classify an influenza pandemic as a national security emergency subject to the provisions of 10 CFR 50.54(dd). Accordingly, licensees are advised to consider other planning options.

3.2 Enforcement Discretion

Under normal circumstances, each nuclear plant licensee must comply with the requirements and conditions of its operating license. However, the NRC has the authority to exercise enforcement discretion. The authority derives from the broad discretionary power of administrative agencies to decline to enforce requirements in circumstances where the agency's regulatory purposes would not be served. Enforcement discretion is a defined process, often subject to stakeholder comment, that NRC could use to manage the operational and safety impact of an influenza pandemic.

In August 1999, the NRC established an interim policy for exercising enforcement discretion for noncompliance with license conditions and technical specifications

⁹ U.S. NRC, NRC memorandum, "Final Response to Task Interface Agreement (TIA) 2004-04" (September 12, 2006).

related to the “Year 2000” (Y2K) software transition.¹⁰ The Y2K interim policy establishes useful precedent for pandemic situations.

Appendix B (a proposed interim enforcement policy) contains recommended language for an interim policy statement that provides for enforcement discretion to permit temporary noncompliance with license conditions, technical specifications, and other applicable NRC requirements due to staffing reductions caused by a pandemic. Enforcement discretion would be an efficient, effective method for dispositioning the safety and licensing impacts of temporary staffing reductions caused by an influenza pandemic.

Appendix B addresses two aspects of pandemic enforcement discretion. First, it provides pre-established discretion applicable to all licensees for a range of programmatic and administrative requirements. Second, it provides a process for granting licensee-specific discretion for situations outside the scope of pre-established discretion.

This white paper proposes that NRC licensees not be permitted to request enforcement discretion for noncompliances that occur during a pandemic unless the noncompliances can be attributed to staffing reductions caused by the pandemic. By granting the requested discretion, the NRC would be acknowledging that affected licensees will be in noncompliance with one or more regulatory requirements. Typically, NRC would not take enforcement action against noncompliances that are within the scope of a pandemic-related enforcement discretion unless a licensee provided materially incomplete or incorrect information in support of its request for discretion, or if the licensee’s actions clearly were unreasonable considering all relevant circumstances.

Recommendation 4 – NEI recommends that NRC develop an interim enforcement policy regarding enforcement discretion for nuclear plants during a pandemic, and publish the proposed policy in the *Federal Register* to give stakeholders an opportunity to participate in the policy development process.

3.2.1 Pre-established Discretion

The pre-established enforcement discretion would provide temporary relief for LCOs, STIs, and administrative requirements that can be extended or deferred during a pandemic. A licensee would not be required to conduct a safety assessment to exercise pre-established discretion because such assessment would be inherent in the interim policy. Requirements eligible

¹⁰ Policy Statement, “Policy and Procedures for NRC Enforcement Action, Interim Enforcement Policy Regarding Enforcement Discretion for Nuclear Power Plants during the Year 2000 Transition,” 64 *FR* 41474 (July 30, 1999).

for pre-established discretion are listed in Table 1 as Category C items. The licensee would notify the NRC whenever the licensee exercised a provision of the pre-established discretion.

Recommendation 5 – NEI recommends that NRC authorize discretion in advance for requirements that do not have a material impact on the functionality of safety-related SSCs (“pre-established discretion for Category C requirements is defined in Section 2.2 and Table 1).

3.2.2 Plant-specific Discretion at Time of Need

Appendix B also permits plant-specific discretion if a situation falls outside the scope of pre-established discretion. The plant-specific enforcement discretion process is more streamlined than the current Notice of Enforcement Discretion (NOED) process,¹¹ although licensees would be expected to follow the existing NOED guidance to the extent practicable.

A licensee would be required to submit a safety assessment in support of its request for a plant-specific pandemic-related discretion. The NRC would consider granting discretion if the impact on safety of continued plant operation is acceptable.

3.2.3 Plant-specific Feedback into Pre-established Generic Discretion

The proposed interim policy provides for increasing the scope of pre-established generic discretion based on precedent that emerges as licensee-specific discretions are granted during the pandemic.

Recommendation 6 – NEI recommends that NRC post on the NRC website the correspondence and evaluations associated with approved plant-specific enforcement discretion actions. Other licensees seeking specific discretion could use the website to search for applicable precedent.

This data could also serve to establish a record and basis for determining that additional pre-established generic discretion items may be adopted.

3.3 License Amendments

As is the case with enforcement discretion, licensees may pursue generic and plant-specific options for requesting license amendments to accommodate pandemic-related conditions. The license amendment request (LAR) process is well

¹¹ U.S. NRC, Inspection Manual, Part 9900: Technical Guidance, “Operations – Notices of Enforcement Discretion” (February 7, 2006).

established.¹² However, license amendments would require more time and resources to process than pre-established enforcement discretion. Potential approaches for utilizing the license amendment process are described below.

3.3.1 Generic Pandemic Response Program

A process, such as the consolidated line item improvement process (CLIIP), could be used to add a “pandemic response program” to the Administrative Controls section of the Standard Technical Specifications. A CLIIP is initiated by an industry proposal, in this case to implement a pandemic program based on Table 1 in this white paper. Once the programmatic details were determined to NRC’s satisfaction, NRC could publish a “model safety evaluation” for comment in the *Federal Register*. Following satisfactory resolution of public comments, NRC could make the model SE available for reference by licensees in plant-specific license amendment requests. The subsequent LARs would reference the model SE and confirm that the plant satisfied its criteria.

Recommendation 7 – NEI recommends that NRC use the consolidated line item improvement process (CLIIP) to review generic technical specification changes that are pandemic related.

3.3.2 Plant-specific Emergency/Exigent License Amendments

Pandemic situations that cannot be dispositioned by the generic pandemic appendix to the enforcement policy or by a generic pandemic program in the TS could be addressed by plant-specific emergency or exigent license amendment requests under 10 CFR 50.91. Although plant-specific relief typically is more burdensome administratively than generic relief, the generic options may not accommodate all situations.

The NRC could define in advance the criteria for initiating a pandemic-related emergency or exigent LAR. In response to a plant-specific pandemic LAR, the NRC would prepare a safety evaluation and make it available on an expedited basis for public notice and comment in accordance with 10 CFR 50.90(a)(5) or (a)(6). LAR and SE templates could be prepared in advance to facilitate the plant-specific amendment process during a pandemic.

Recommendation 8 – NEI recommends that NRC define a regulatory framework for managing proposed emergency and exigent technical specification changes that are pandemic related.

¹² See Nuclear Energy Institute, NEI 06-02, “License Amendment Request Guidelines,” December 2006, for guidance on the LAR process.

3.4 Exemptions

The NRC's regulatory process anticipates situations that warrant exemptions from regulatory compliance without changing the regulation itself or modifying a plant-specific license. To the extent that the need for specific exemptions can be identified in advance, they would be effective alternatives to enforcement discretion or license amendments during a pandemic.

The exemption process is defined in 10 CFR 50.12. Section 50.12(a) provides that the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from 10 CFR 50 requirements that are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security.

The Commission will not consider granting an exemption unless special circumstances are present. The special circumstances on which basis the Commission may issue an exemption include those circumstances for which the exemption would provide only temporary relief and the licensee has made a good faith effort to comply. Such circumstances arguably would be satisfied in a pandemic context, based upon an appropriate factual showing.

In addition to the 10 CFR 50.12 exemption process, 10 CFR 50.55a(a)(3) provides a separate exemption-like process for alternatives to, or relief from, ASME requirements¹³ and IEEE requirements¹⁴ that are impractical or impossible to perform.

Recommendation 9 – NEI recommends that NRC develop an exemption-request template to facilitate the exemption process during a pandemic.

3.5 Orders

The NRC may issue orders to impose plant-specific requirements. The Atomic Energy Act and 10 CFR 2.202 provide that NRC may issue an order that is effective immediately when necessary or desirable to promote the common defense and security, or to protect health or to minimize danger to life or property. While such orders are atypical, NRC is not prohibited from using orders to direct licensees to take specific actions to provide operational flexibility in the event of a pandemic. For example, NRC orders would be an efficient way to specify the conditions under

¹³ American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code (Section III, Section XI, and OM Code).

¹⁴ Institute of Electrical and Electronic Engineers (IEEE), Standards for Protection and Safety Systems (IEEE-279 and IEEE-603).

which certain staffing requirements (e.g., licensed operators, fire brigade, and security) could be reduced temporarily to permit operation for a limited period of time during a pandemic with less than licensing-basis staffing levels.

4.0 PANDEMIC RESPONSE

General guidance for pandemic planning and preparation is contained in NEI 06-03. By contrast, this white paper goes into greater detail to describe the triggering criteria and the licensing processes that could be used by U.S. commercial nuclear plants and the NRC to request and grant regulatory relief during a pandemic.

A pandemic event may be declared by federal, state, or local authorities, or by a licensee. When a pandemic event is declared, affected licensees may take action authorized by means of generic, pre-established guidance (a pandemic appendix to the Enforcement Policy, a TS pandemic program, a generic exemption, or a generic order) or any plant-specific pandemic licensing action granted at time of need.

4.1 Pandemic Response Trigger

In the event that designated federal, state, or local health authorities determine that pandemic conditions exist in the vicinity of a U.S. nuclear plant, or a licensee determines that pandemic-related illness has reduced department-specific staffing for the job categories discussed in Section 4.2 below normal staffing levels (or that such reduction is imminent) the licensee may declare the onset of a pandemic event and must immediately notify the NRC.

Following the declaration of a pandemic event, a licensee would further notify the NRC of its intent to invoke generic, pre-authorized relief or request plant-specific relief, as discussed in Section 3. Relief cannot be exercised until NRC authorization to implement the generic or plant-specific relief as provided.

When staffing levels return to levels permitting full staffing for a particular activity for which generic or plant-specific relief has been authorized, and remain stable for a reasonable period of time, the licensee will notify the NRC that, for that activity, the pandemic event has ended and resume compliance with applicable staffing requirements. In the event of a subsequent reversal of staffing levels, a new pandemic event may be initiated for that activity.

4.2 Evaluation of Staffing Requirements

Following the declaration of a pandemic event, the minimum staffing levels for certain job categories and functions (operators, fire brigade, major departments, programs, and administration) may be reduced utilizing plant-specific requests for relief in accordance with the mechanisms described in this paper. Table 1 (Evaluation of Staffing Requirements) provides suggested mechanisms that may be appropriate for obtaining relief from enumerated NRC requirements. The Table lists (1) the source of the requirement, (2) a brief statement of the requirement, (3) key word,

(4) a relief category in accordance with Section 2.2, (5) the basis for the relief category, and (6) the compensatory action(s) or the form of regulatory relief that can be taken to support continued plant operation.

- (1) *Operations* – The licensee may initiate “N-1” staffing for the positions listed in 10 CFR 50.54(m) and plant-specific TS. “N” for a given job category is the more restrictive number specified by either the regulation or the TS.
- (2) *Fire Brigade* – The licensee may initiate “N-1” staffing for the fire brigade. Typically, “N” for the fire brigade is 5, as specified in 10 CFR 50 Appendix R.
- (3) *Major Departments* – The minimum pandemic staffing for maintenance, radiation protection, chemistry, engineering, and security is addressed in Table 2.
- (4) *Staffing to Satisfy Programmatic or Administrative Requirements* – Table 1 includes a list of programmatic or administrative requirements that represent implicit staffing requirements.

If staffing continues to fall and the minimum levels cannot be sustained, the licensee must initiate additional communication with the NRC (and possibly other government agencies) to ensure the safest operating condition based on a comparative evaluation of local plant conditions and, secondarily, regional grid conditions.

4.3 Risk-Informed Evaluation of LCO and STIs

Table 3 is a list of recurring, short-term surveillance intervals (i.e., the surveillance frequency is less than six months) associated with LCOs that could lead to a plant shutdown or a significant power reduction if not met. Some of these surveillances are not essential for near-term operations or safety, and therefore can be relaxed, deferred, or rescheduled, subject to NRC concurrence if they come due during a pandemic. Table 3 assigns a compliance category to each of these surveillance requirements and recommends how they may be dispositioned during a pandemic event. The options are full compliance, extension of the LCO interval, or deferral of the surveillance based on the risk-informed guidance in NEI 04-10 and NEI 06-09.

Table 1

Evaluation of Staffing Requirements

Table 1 is a list of explicit and implicit requirements in 10 CFR and technical specifications that have staffing implications. Explicit staffing requirements contain numerical criteria for specified job categories (e.g, licensed operators, non-licensed operators, shift advisors, security organization, and fire brigade). Implicit staffing requirements are those that could become compliance challenges if plant staffing is reduced significantly due to worker illness during an influenza pandemic.

The Table contains six columns:

Column	Contents
1	Source of requirement
2	Excerpt from the text of the requirement
3	Keyword ¹⁵
4	Relief category ¹⁶
5	Type of Relief ¹⁷
6	Basis for Relief ¹⁸

¹⁵ Keywords: Admin, Operation, Oversight, Procedure, Process, Program, Records, Reporting, Staffing, Training

¹⁶ Relief categories:

A = no relief or minimal relief based on plant-specific request at time of need

B = partial relief based on plant-specific alternatives requested in advance or at time of need

C = pre-established enforcement discretion that would provide temporary relief for LCOs, STIs, and administrative requirements that can be extended or deferred during a pandemic

¹⁷ Types of relief: Postpone, Alternative, Drop

¹⁸ Bases for relief:

Note 1 – Delayed compliance will not adversely affect operation or safety during the limited pandemic time period. Compliance will be restored after the pandemic.

Note 2 – Develop a short-term alternative for use during the limited pandemic time period. Restore normal compliance after the pandemic.

Table 1

Evaluation of Staffing Requirements

Part 2 – Rules of Practice					
Subpart A – Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders					
10 CFR 2.100 – 2.111	Requirements for filing license amendments	Process	A	Comply, but reschedule non-essential license amendments	
Subpart B – Procedures for Imposing Requirements by Order					
10 CFR 2.200 – 2.206	Licensee and public participation in formal processes (Orders, NOV's, civil penalties, petitions)	Process	A	Comply, but reschedule non-essential proceedings	
Subparts C-G and I-O – rules and procedures for different types of hearings					
10 CFR 2.700 – 2.713	Formal and informal hearings	Process	A	Comply, but reschedule non-essential hearings	
Subpart H – Rulemaking					
10 CFR 2.800 – 2.810	Licensee and public participation in rulemaking proceedings	Process	A	Comply, but reschedule non-essential proceedings	
Part 19 – Notices, Instructions and Reports to Workers					
19.11 – Posting of notices to workers					
10 CFR 19.11(c)	Posting of new editions of NRC Form 3, Notice to Employees, within 30 days of receipt	Admin	C	Postpone	Note 1
10 CFR 19.11(e)	Post notices of violations, civil penalties, or orders within 2 working days; remain posted for at least 5 working days	Admin	C	Postpone	Note 1
19.12 – Instruction to workers					
10 CFR 19.12(a)	Instruction to workers – expected to receive > 100 mrem occupational dose	Process	A	Comply, but reschedule non-essential work	

Table 1
Evaluation of Staffing Requirements

19.13 – Notifications and reports to individuals					
10 CFR 19.13(a)	Notifications and reports to individuals – occupational dose > 100 mrem	Reporting	C	Postpone	Note 1
10 CFR 19.13(b)	Advise each worker annually of worker’s dose	Reporting	C	Postpone	Note 1
10 CFR 19.13(c)	Furnish exposure reports within 30 days of request from worker	Reporting	C	Postpone	Note 1
10 CFR 19.13(d)	Provide individuals with copies of exposure reports that are submitted to NRC pursuant to applicable sections of Part 20	Reporting	C	Postpone	Note 1
10 CFR 19.13(e)	Provide an exposure report to each worker at termination of employment	Reporting	C	Postpone	Note 1
19.18 – Sequestration of witnesses and exclusion of counsel in interviews conducted under subpoena					
10 CFR 19.18	Licensee participation in NRC inquiries	Process	A	Comply. but reschedule non-essential inquiries	
19.31 – Application for exemptions					
10 CFR 19.31	Application for exemption from Part 19	Process	A	Comply	

Table 1
Evaluation of Staffing Requirements

Part 20 – Standards for Protection Against Radiation					
Subpart B – Radiation Protection Programs					
10 CFR 20.1101(a)	Develop, document, and implement a program	Program	A	Comply	
10 CFR 20.1101(c)	Annual program review	Admin	C	Postpone	Note 1
Subpart C – Occupational Dose Limits					
10 CFR 20.1201 through 20.1208	<ul style="list-style-type: none"> • limits for adults • sum external + internal dose • airborne • internal exposure • special planned exposure • minors • embryo/fetus 	Program	A	Comply	
Subpart D – Radiation Dose Limits for Individual Members of the Public					
10 CFR 20.1301 and 20.1302	<ul style="list-style-type: none"> • dose limits • compliance 	Program	A	Comply	
Subpart F – Surveys and Monitoring					
10 CFR 20.1501 and 20.1502	<ul style="list-style-type: none"> • general criteria for surveys • conditions for individual monitoring 	Program	A	Comply	
Subpart G – Control of Exposure from External Sources in Restricted Areas					
10 CFR 20.1601 and 20.1602	<ul style="list-style-type: none"> • high radiation areas • very high radiation areas 	Program	A	Comply	
Subpart H – Respiratory Protection and Controls to Restrict Internal Exposure in Restricted Areas					
10 CFR 20.1701 through 20.1705	<ul style="list-style-type: none"> • access • exposure time • respiratory protection • protection factors 	Program	A	Comply	

Table 1
Evaluation of Staffing Requirements

Subpart I – Storage and Control of Licensed Material					
10 CFR 20.1801 and 20.1802	<ul style="list-style-type: none"> • in storage • not in storage 	Program	A	Comply	
Subpart J – Precautionary Procedures					
10 CFR 20.1901 through 20.1906	<ul style="list-style-type: none"> • signs • postings • labels • packages 	Program	A	Comply	
Subpart K – Waste Disposal					
10 CFR 20.2001 through 20.2007	<ul style="list-style-type: none"> • NRC approval • sewerage • incineration • transfer • other regulations 	Program	A	Comply	
Subpart L – Records					
10 CFR 20.2101 through 20.2110	<ul style="list-style-type: none"> • program • surveys • prior occupational dose • planned special exposures • individual monitoring results • public • waste disposal 	Records	C	Postpone	Note 1
Subpart M – Reports					
10 CFR 20.2201 through 20.2206	<ul style="list-style-type: none"> • theft or loss of licensed material • incidents • exposures & radiation levels • planned special exposures • exceeding dose limits • individual monitoring results 	Reporting	C	Postpone	Note 1

Table 1

Evaluation of Staffing Requirements

Subpart N – Exemptions and Additional Requirements					
10 CFR 20.2301 and 20.2302	<ul style="list-style-type: none"> • application for exemption from Part 20 • NRC may impose additional requirements 	Process	A	Comply	
Subpart O – Enforcement					
10 CFR 20.2401 and 20.2402	<ul style="list-style-type: none"> • violations • penalties 	Oversight	A	Comply	
Part 21 – Reporting of Defects and Noncompliance					
21.7 – Exemptions					
10 CFR 21.7	Application for exemption from Part 21	Admin	A	Comply	
21.21- Notification of failure to comply or existence of a defect and its evaluation					
10 CFR 21.21(a)	Notification of failure to comply or existence of a defect and its evaluation	Reporting	B	Alternative – Telephone notification with written follow-up after pandemic	Note 2
21.51 – Maintenance and inspection of records					
10 CFR 21.51(a)	Maintenance and inspection of records	Records	C	Postpone	Note 1
Part 25 – Access Authorization for Licensee Personnel					
25.11 – Specific exemptions					
10 CFR 25.11	Specific exemptions – from the requirements of Part 25	Admin	A	Comply	
25.13 – Maintenance of records					
10 CFR 25.13 (a)	Maintenance of records	Records	C	Postpone	Note 1
25.21 – Determination of initial and continued eligibility for access authorization					
10 CFR 25.21(b)	Determination of initial and continued eligibility for access authorization	Program	B	Alternative – temporary streamlined process	Note 2

Table 1

Evaluation of Staffing Requirements

25.23 – Notification of grant of access authorization					
10 CFR 25.23	Notification of grant of access authorization – nondisclosure agreement	Admin	B	Alternative – temporary streamlined process	Note 2
25.25 – Cancellation of requests for access authorization					
10 CFR 25.25	Cancellation of requests for access authorization	Admin	C	Postpone	Note 1
25.31 – Extensions and transfers of access authorizations					
10 CFR 25.31(c)	Extensions and transfers of access authorizations	Admin	C	Postpone	Note 1
25.33 – Termination of access authorizations					
10 CFR 25.33(b)	Termination of access authorizations – notify CSA	Admin	C	Postpone	Note 1
10 CFR 25.33(c)	Termination of access authorizations – security termination briefing	Admin	B	Alternative – temporary streamlined process	Note 2
Part 26 – Fitness for Duty Programs					
26.6 - Exemptions					
10 CFR 26.6	Application for exemption from Part 26	Admin	A	Comply	
26.20 – Written policy and procedures					
10 CFR 26.20	Establish and implement written FFD policies and procedures	Program	B	Alternative – temporary streamlined process	Note 2
26.21 – Policy communications and awareness training					
10 CFR 26.21(a)	Policy communications and awareness training	Training	C	Postpone	Note 1
10 CFR 26.21(b)	Policy communications and awareness training – complete prior to assignment	Training	B	Alternative – temporary streamlined process	Note 2

Table 1
Evaluation of Staffing Requirements

26.22 – Training of supervisors and escorts					
10 CFR 26.22(c)	Training of supervisors and escorts	Training	B	Alternative – temporary streamlined process	Note 2
26.23 - Contractors and vendors					
10 CFR 26.23(b)	Contractors and vendors – program and audits	Oversight	C	Postpone	Note 1
26.24 – Chemical and alcohol testing					
10 CFR 26.24(a)	Chemical and alcohol testing – implement program	Program	B	Alternative – temporary streamlined process	Suspend testing during pandemic (IN 2005-18)
26.25 – Employee assistance programs (EAP)					
10 CFR 26.25	Employee assistance programs (EAP)	Program	B	Alternative – temporary streamlined process	Note 2
26.27 – Management actions and sanctions to be imposed					
10 CFR 26.27(a)(1)	Management actions and sanctions to be imposed – written statement from individuals	Admin	C	Postpone	Note 1
26.29 – Protection of information					
10 CFR 26.29(a)	Protection of information – files system and procedures	Procedures	B	Alternative – temporary streamlined process	Note 2
26.71 – Recordkeeping requirements					
10 CFR 26.71	Recordkeeping requirements	Admin	C	Postpone	Note 1
26.73 – Reporting requirements					
10 CFR 26.73(a)	Reporting requirements – inform the Commission of significant fitness-for-duty events	Reporting	B	Alternative – temporary streamlined process	Note 2
26.80 – Audits					
10 CFR 26.80(a)	Audits – annual	Admin	C	Postpone	Note 1
10- CFR 26.80(c)	Audits – reports	Reporting	C	Postpone	Note 1

Table 1

Evaluation of Staffing Requirements

Part 50 – Domestic Licensing of Production and Utilization Facilities					
50.9 – Completeness and accuracy of information					
10 CFR 50.9(b)	Completeness and accuracy of information – notify the Commission of information identified by the applicant or licensee as having a significant implication for public health and safety or common defense and security	Reporting	B	Alternative – temporary streamlined process	Note 2
50.12 – Specific exemptions					
10 CFR 50.12	Application for exemption from Part 50	Admin	A	Comply	
50.30 – Filing of application for licenses; oath or affirmation					
10 CFR 50.30(b)	Filing of application for license – oath or affirmation	Admin	B	Alternative	Use written statement rather than notary
50.46 – Acceptance criteria for ECCS for light-water nuclear power reactors					
10 CFR 50.46(3)(i)	Acceptance criteria for ECCS for light-water nuclear power plants – evaluate changes/errors in LOCA models	Process	B	Alternative – temporary streamlined process	Note 2
10 CFR 50.46(3)(ii)	Acceptance criteria for ECCS for light-water nuclear power plants – report changes/errors in LOCA models	Reporting	B	Postpone	Note 1
50.47 – Emergency plans					
10 CFR 50.47(b)(1)	Emergency plans – Offsite emergency response planning standards	Program	B	Alternative – temporary streamlined program	Note 2
10 CFR 50.47(b)(2)	Emergency plans – Onsite emergency response planning	Program	B	Alternative – temporary streamlined program	Note 2

Table 1

Evaluation of Staffing Requirements

	standards				
50.48 – Fire protection					
10 CFR 50.48(a)(1)	Fire protection – fire protection plan	Program	B	Alternative – temporary streamlined program	Note 2
50.49 – EQ of electric equipment important to safety for nuclear power plants					
10 CFR 50.49(a)	Environmental qualification of electric equipment important to safety – EQ program	Program	B	Alternative – temporary streamlined program	Note 2
50.54 – Conditions of licenses					
10 CFR 50.54(a)	Conditions of licenses – QA program change control process	Process	B	Alternative – temporary streamlined process	Note 2
10 CFR 50.54(f)	Conditions of licenses – response to information requests	Reporting	A	Comply, but reschedule and minimize requests	
10 CFR 50.54(k)	Conditions of licenses – licensed operator “at the controls”	Staffing	A	Comply	
10 CFR 50.54(m)(1)	Conditions of licenses – Senior licensed operator present at the facility or readily available	Staffing	A	Comply	
10 CFR 50.54(m)(2)(i)	Conditions of licenses – Licensee shall meet operator staffing requirements specified in a Table	Staffing	A	Licensing action to allow N-1	
10 CFR 50.54(m)(2)(ii)	Conditions of licenses - Senior licensed operator(s) for fueled units	Staffing	A	Comply	
10 CFR 50.54(m)(2)(iii)	Conditions of licenses - Senior licensed operator “in the control room” and licensed operator “at the controls”	Staffing	A	Comply	

Table 1
Evaluation of Staffing Requirements

10 CFR 50.54(m)(2)(iv)	Conditions of licenses - Senior licensed operator present during core alteration	Staffing	A	Comply	
10 CFR 50.54(p)(1)	Conditions of licenses – safeguards contingency plan change control process	Process	B	Alternative – temporary streamlined process	Note 2
10 CFR 50.54(p)(3)	Conditions of licenses – maintain safeguards contingency plan	Program	B	Alternative – temporary streamlined program	Note 2
10 CFR 50.54(q)	Conditions of licenses – maintain emergency plan	Program	B	Alternative – temporary streamlined program	Note 2
10 CFR 50.54(t)(1)	Conditions of licenses – implement EP program	Program	B	Alternative – temporary streamlined program	Note 2
10 CFR 50.54(w)(1)	Conditions of licenses – restoration of minimum insurance coverage	Program	C	Postpone	Note 1
10 CFR 50.54(w)(3)	Conditions of licenses - insurance coverage report	Reporting	C	Postpone	Note 1
10 CFR 50.54(x)	Conditions of licenses – departure from a license condition or TS in an emergency	Operation	A	Comply	
10 CFR 50.54(y)	Conditions of licenses – approval of departure from a license condition or TS in an emergency	Operation	A	Comply	
10 CFR 50.54(z)	Conditions of licenses – notify NRC Operations Center of emergency events (Part 72)	Reporting	A	Comply	

Table 1
Evaluation of Staffing Requirements

10 CFR 50.54(dd)	Conditions of licenses – departure from a license condition or TS in a national security emergency	Operation	A	Comply	
50.55a – Codes and standards					
10 CFR 50.55a(a)(1)(3)	Codes and standards – request for alternatives to certain parts of 10 CFR 50.55a	Process	A	Comply, but reschedule ISI, IST, & ILRT	
10 CFR 50.55a(b)(2)(viii)(D)	Codes and standards – ISI summary report	Reporting	C	Postpone	Note 1
10 CFR 50.55a(f)(5)(ii)	Codes and standards – conformance of IST program with TS	Program	A	Comply, but reschedule IST	
50.59 – Changes, tests and experiments					
10 CFR 50.59(c)(1)(2)	Changes, tests and experiments – criteria for prior NRC approval	Oversight	A	Comply	
10 CFR 50.59(d)(1)	Changes, tests and experiments – records	Admin	C	Postpone	Note 1
10 CFR 50.59(d)(2)	Changes, tests and experiments – reports	Reporting	C	Postpone	Note 1
50.65 – Requirements for monitoring the effectiveness of maintenance at nuclear power plants					
10 CFR 50.65(a)(1)	Requirements for monitoring the effectiveness of maintenance – monitor the performance or condition SSCs against licensee-established goals	Program	A	Comply, but reschedule non-essential maintenance	
10 CFR 50.65(a)(3)	Refueling cycle (24-month) evaluation of performance and condition monitoring activities and associated goals.	Program	C	Postpone	Note 1

Table 1

Evaluation of Staffing Requirements

50.70 – Inspections					
10 CFR 50.70(a)	Licensee must permit inspection, by authorized representatives of the NRC	Oversight	A	Comply, but reschedule non-essential inspections	
50.71 – Maintenance of records, making of reports					
10 CFR 50.71(a)	Maintenance of records, making of reports – maintain records and make reports	Records; Reporting	C	Postpone	Note 1
10 CFR 50.71(e)(4)	Maintenance of records, making of reports – timing of FSAR update	Reporting	C	Postpone	Note 1
50.72 – Immediate notification requirements for operating nuclear power reactors					
10 CFR 50.72(a)(1)	Immediate notification requirements – criteria for reporting to NRC Operations Center	Reporting	A	Comply	
50.73 – Licensee event report system					
10 CFR 50.73(a)(1)	Licensee event report system – criteria for LERS	Reporting	B	Alternative – temporary streamlined program	Note 2
50.74 – Notification of change in operator or senior operator status					
10 CFR 50.74	Notification of change in operator or senior operator status – criteria for reporting operator status	Reporting	C	Postpone	Note 1
50.75 – Reporting and recordkeeping for decommissioning planning					
10 CFR 50.75(f)(1)	Reporting and recordkeeping for decommissioning planning – timing of reports	Reporting	C	Postpone	Note 1

Table 1
Evaluation of Staffing Requirements

50.80 – Transfer of licenses					
10 CFR 50.80	Transfer of licenses	Process	A	Comply, but reschedule license transfer activities	
50.90 – Application for amendment of license or construction permit					
10 CFR 50.90	Application for amendment of license or construction permit – criteria for prior NRC approval	Process	A	Comply, but reschedule non-essential LARs	
50.91 – Notice for public comment; State consultation					
10 CFR 50.91	Notice for public comment; State consultation	Process	A	Comply, but reschedule non-essential LARs	
50.92 – Issuance of amendment					
10 CFR 50.92	Issuance of amendment	Process	A	Comply, but reschedule non-essential LARs	
50.120 – Training and qualification of nuclear power plant personnel					
10 CFR 50.120(b)(1)	Training and qualification – establish, implement, and maintain a training program	Program	C	Postpone	Note 1
10 CFR 50.120(b)(2)	Training and qualification – periodically evaluate and revise the training program	Program	C	Postpone	Note 1
10 CFR 50, Appendix E – Emergency Planning and Preparedness for Production and Utilization Facilities					
10 CFR 50, Appendix E.IV.B	Content of emergency plans; report EAL changes	Change Control	C	Postpone	Note 1
10 CFR 50, Appendix E.IV.D	Notification procedures; yearly dissemination of information to the public	Reporting	C	Postpone	Note 1
10 CFR 50, Appendix E.IV.F	Training; exercises, drills, and training	Training	C	Postpone	Note 1
10 CFR 50, Appendix E.V	Implementation procedures; submit changes within 30 days	Procedures	C	Postpone	Note 1

Table 1
Evaluation of Staffing Requirements

10 CFR 50, Appendix E.VI	Emergency response data system (ERDS) testing	Testing	B	Alternative – temporary streamlined process	Note 2
10 CFR 50, Appendix G – Fracture Toughness Requirements					
10 CFR 50, Appendix G.III	Fracture toughness testing per ASME Code	Testing	C	Postpone	Note 1
10 CFR 50, Appendix H – Reactor Vessel Material Surveillance Program Requirements					
10 CFR 50, Appendix H.IV	Report of test results	Reporting	C	Postpone	Note 1
10 CFR 50, Appendix I – Numerical Guides for Design Objectives and LCO to Meet the Criterion ALARA					
10 CFR 50, Appendix I.IV	Report release of effluents to unrestricted areas	Reporting	C	Postpone	Note 1
10 CFR 50, Appendix J – Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors					
10 CFR 50, Appendix J		Program	B	Alternative – temporary streamlined process	Note 2
10 CFR 50, Appendix R – Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979					
10 CFR 50, Appendix R.III.H	Fire Brigade complement	Staffing	B	Alternative (N-1)	Note 2
Part 52 - Early Site Permits; Standard Design Certifications; and Combined Licenses					
10 CFR 52.1 through 52.113	Applications and NRC reviews pertaining to new plants	Process	A	Comply, but reschedule new plant licensing activities	
Part 54 – Requirements for Renewal of Operating Licenses					
10 CFR 54.1 through 54.43	Applications and NRC reviews pertaining to license renewal	Process	A	Comply, but reschedule license renewal activities	

Table 1

Evaluation of Staffing Requirements

Part 55 – Operators’ Licenses					
55.21 – Medical examination					
10 CFR 55.21	Medical examination – medical exam frequency	Program	C	Postpone	Note 1
55.59 – Requalification					
10 CFR 55.59(a)(1)	Requalification – 24-month requalification program	Training	C	Postpone	Note 1
10 CFR 55.59(b)(1)	Requalification – duration and periodicity of requalification program	Training	C	Postpone	Note 1
Part 72 – Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, HLW, and > Class C Waste					
72.70 – Safety analysis report updating					
10 CFR 72.70(a)	Safety analysis report updating – to include latest requirements for ISFSI or MRS	Reporting	C	Postpone	Note 1
10 CFR 72.70(c)(6)	Safety analysis report updating – timing for ISFSI or MRS SAR update	Reporting	C	Postpone	Note 1
72.74 – Reports of accidental criticality or loss of special nuclear material					
10 CFR 72.74(a)	Reports of accidental criticality or loss of special nuclear material – 1-hour notification of accidental criticality or loss of SNM	Reporting	A	Comply	
72.75 – Report requirement for specific events and conditions					
10 CFR 72.75(a)	Reporting requirements for specific events and conditions – notify NRC Operations Center within 1 hour of declaring an emergency per 72.32	Reporting	A	Comply	

Table 1

Evaluation of Staffing Requirements

72.76 – Material status reports					
10 CFR 72.76(a)	Material status reports – reports of physical inventory	Reporting	C	Postpone	Note 1
72.192 – Operator training and certification program					
10 CFR 72.192	Operator training and certification program – training program for ISFSI and MRS personnel	Training	C	Postpone	Note 1
72.248 – Safety analysis report updating					
10 CFR 72.248(c)(6)	Safety analysis report updating – timing of CoC FSAR update	Reporting	C	Postpone	Note 1
Part 73 – Physical Protection of Plants and Materials					
73.26 – Transportation physical protection systems, subsystems, components, and procedures					
10 CFR 73.26(d)(1)	Transportation security organization	Program	A	Comply, but reschedule transportation activities	
10 CFR 73.26(d)(3)	Transportation management system	Program	A	Comply, but reschedule transportation activities	
10 CFR 73.26(e)	Safeguards contingency plan	Program	A	Comply, but reschedule transportation activities	
10 CFR 73.26(h)	Test/maintenance of physical protection related devices and equipment	Program	B	Alternative – temporary streamlined program	Note 2
73.40 – Physical protection: General requirements at fixed sites					
10 CFR 73.40	NRC-approved security plan	Program	A	Comply	

Table 1
Evaluation of Staffing Requirements

73.46 – Fixed site physical protection systems, subsystems, components, and procedures					
10 CFR 73.46(b)(1)	Security organization, including guards	Staffing	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.46(b)(2)	1 full-time member of security organization with authority to direct activities shall be onsite at all times	Staffing	A	Comply	
10 CFR 73.46(b)(4)	Tactical Response Team (TRT) – training; equipment; annual requalification; documentation	Program	C	Postpone	Note 1
10 CFR 73.46(b)(7)	TRT – additional annual requalification requirements	Training	C	Postpone	Note 1
10 CFR 73.46(b)(9)	TRT & guard exercises – every 4 months; 1/3 force-on-force; annual exercise observed by NRC; notify NRC 60 days in advance of exercise	Training	C	Postpone	Note 1
10 CFR 73.46(b)(10)	Continuing physical fitness training program	Training	C	Postpone	Note 1
10 CFR 73.46(b)(10)(ii)	Assess fitness of TRT, armed responders, and guards every 4 months	Program	C	Postpone	Note 1
10 CFR 73.46(b)(10)(iii)	Medical exam within 30 days before start of fitness program	Program	C	Postpone	Note 1
10 CFR 73.46(b)(11)(i)	Fitness criteria; annual demonstration	Program	C	Postpone	Note 1
10 CFR 73.46(b)(11)(ii)	Timing requirements for meeting qualification criteria	Program	C	Postpone	Note 1
10 CFR 73.46(b)(11)(iii)	Annual medical exam for TRT, armed responders, and guards	Program	C	Postpone	Note 1
10 CFR 73.46(b)(11)(iv)	Reassign TRT, armed responders & guards to other jobs if remedial	Program	B	Alternative – permit continued participation on TRT	Note 2

Table 1

Evaluation of Staffing Requirements

	fitness training is necessary				
10 CFR 73.46(b)(11)(v)	Licensee may waive performance testing (temporary), but individual cannot be on TRT	Program	B	Alternative – permit use on TRT	Note 2
10 CFR 73.46(b)(11)(vi)	Alarm/portal guards exempt from performance testing, provided no response duties	Program	B	Alternative – can be assigned to backup response duties	Note 2
10 CFR 73.46(b)(12)(ii)	Physical performance test alternative to (b)(10) and (b)(11)	Program	C	Postpone	Note 1
10 CFR 73.46(d)(4)(i)	Control of access (vehicles and personnel) to protected area	Program	A	Comply	
10 CFR 73.46(d)(4)(ii)	Pat-down searches for cause	Program	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.46(d)(5)	Package searches at access points	Program	A	Comply	
10 CFR 73.46(d)(6)	Protected area delivery searches	Program	A	Comply	
10 CFR 73.46(d)(7)	Transportation vehicle searches	Program	A	Comply, but reschedule transportation activities	
10 CFR 73.46(d)(8)	Protected area vehicle searches	Program	A		
10 CFR 73.46(d)(9)	Control of active material access points; at least 2 armed guards	Staffing	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.46(d)(10)	2 individuals scan and seal drums of contaminated waste before exit from material access area	Staffing	B	Alternative – temporary streamlined program	Note 2

Table 1
Evaluation of Staffing Requirements

10 CFR 73.46(d)(11)	2 individuals pack and seal strategic SNM for shipment offsite	Staffing	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.46(d)(12)	SNM access control	Program	A	Comply	
10 CFR 73.46(d)(13)	Escorts in protected areas	Staffing	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.46(g)	Test & maintenance program	Program	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.46(g)(3)(i)	Test intrusion alarms at least once every 7 days	Testing	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.46(g)(3)(ii)	Test communications equipment at least once per shift	Testing	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.46(g)(5)	2 trained individuals repair and maintain physical protection equipment; notify security organization before & after	Staffing	A	Comply, but reschedule non-essential maintenance	
10 CFR 73.46(g)(6)	Independent annual review of security program	Oversight	C	Postpone	Note 1
10 CFR 73.46(h)(1)	Safeguards contingency plan for responding to threats	Program	A	Comply	
10 CFR 73.46(h)(2)	Response arrangements with local law enforcement	Program	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.46(h)(3)	5-member Tactical Response Team (TRT), plus backup force based on site-specific characteristics	Staffing	B	Alternative (N-1)	Note 2
10 CFR 73.46(h)(7)	2 security personnel must assess (by remote means) alarms in unoccupied material access areas	Staffing	A	Comply	

Table 1
Evaluation of Staffing Requirements

10 CFR 73.46(h)(8)	Additional search requirements to supplement (h)(8) for encapsulated SNM	Program	B	Alternative – temporary streamlined program	Note 2
73.50 – Requirements for physical protection of licensed activities					
10 CFR 73.50(a)(1)	Requirements for physical protection of licensed activities	Program	A	Comply	N/A
10 CFR 73.50(a)(2)	1 supervisor on site at all times	Staffing	A	Comply	N/A
10 CFR 73.50(a)(4)	Annual qualification	Training	C	Defer	Note 1
10 CFR 73.50(f)	Test/maintenance requirements	Testing	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.50(h)	Training/qualification plan	Training	C	Defer	Note 1
73.51 – Requirements for the physical protection of stored spent nuclear fuel and high-level radioactive waste					
10 CFR 73.51(b)(1)	Establish a physical protection system	Program	A	Comply	N/A
10 CFR 73.51(b)(2)	Access control and communications	Program	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.51(d)(4)	Random patrols	Program	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.51(d)(5)	Trained security organization to monitor detection systems and conduct surveillance	Staffing	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.51(d)(9)	Searching individuals, vehicles, and packages	Program	A	Comply	N/A
10 CFR 73.51(d)(10)	Maintain procedures	Program	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.51(d)(11)	Line supervision of detection systems	Staffing	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.51(d)(12)	24-month review of physical protection program	Admin	C	Defer	Note 1

Table 1
Evaluation of Staffing Requirements

10 CFR 73.51(d)(13)	Documentation (access, screening, patrol logs, alarms, reports)	Records	C	Defer	Note 1
73.55 – Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage					
10 CFR 73.55(a)	Onsite organization; criteria for suspension of safeguards measures in an emergency	Program	A	Comply	
10 CFR 73.55(b)(2)	1 full-time member of security organization with supervisory authority on site at all times	Staffing	A	Comply	
10 CFR 73.55(b)(4)(i)	Annual requalification	Training	C	Postpone	Note 1
10 CFR 73.55(d)(7)(i)	Access authorization system	Program	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.55(d)(7)(i)(A)	Current authorization access list for all vital areas; monthly updates and quarterly approvals	Records	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.55(g)	Test and maintain alarms, communications equipment, physical barriers, and other devices	Testing	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.55(g)(2)	Test intrusion alarms at least once every 7 days	Testing	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.55(g)(3)	Test communications equipment at beginning of shift (once per day for offsite communications equipment)	Testing	B	Alternative – temporary streamlined program	Note 2
10 CFR 73.55(g)(4)(i)	Independent security program review (12 & 24 months)	Oversight	C	Postpone	Note 1
10 CFR 73.55(h)(3)	Nominal 10 guards for response requirements; no less than 5	Staffing	B	Alternative – temporary streamlined program	Note 2

Table 1
Evaluation of Staffing Requirements

73.56 – Personnel access authorization requirements for nuclear power plants					
10 CFR 73.56(b)(1)	Maintain access authorization program	Program	A	Comply	
10 CFR 73.56(g)(1)	Audit at least every 24 months	Oversight	C	Postpone	Note 1
10 CFR 73.56(g)(2)	Contractor/vendor audits every 12 months	Oversight	C	Postpone	Note 1
73.67 – Licensee fixed site and in-transit requirements for the physical protection of SNM					
10 CFR 73.67(d)(8)	At least 1 watchman per shift to assess/respond to unauthorized activities in controlled access areas	Staffing	A	Comply	
10 CFR 73.67(e)(3)(vii)	1-hour notification of lost shipment	Reporting	A	Comply	
73.71 – Reporting of safeguards events					
10 CFR 73.71(a)(1)	1-hour notification of lost shipment	Reporting	A	Comply	
10 CFR 73.71(a)(4)	60-day followup report of lost shipment	Reporting	C	Postpone	Note 1
10 CFR 73.71(a)(5)	Supplemental reports as warranted	Reporting	C	Postpone	Note 1
10 CFR 73, Appendix B – General Criteria for Security Personnel					
Appendix B		Program	B	Alternative – temporary streamlined program	Note 2
10 CFR 73, Appendix C – Licensee Safeguards Contingency Plans					
Appendix C		Program	B	Alternative – temporary streamlined program	Note 2
Part 74 – Material Control and Accounting of Special Nuclear Material					
10 CFR 74.7	Specific exemptions – from Part 74	Process	A	Comply	

Table 1
Evaluation of Staffing Requirements

Part 140 – Financial Protection Requirements and Indemnity Agreements					
10 CFR 140.8	Specific exemptions – from Part 140	Process	A	Comply	
Standard Technical Specifications – Chapter 5 (Administrative Controls)					
Tech Specs	Non-licensed operator assignments for fueled reactors and at-power reactors	Staffing	B	Alternative (N-1)	Note 2
Tech Specs	Shift crew less than 50.54(m)(2)(i), 5.2.2.a, or 5.2.2.f for no more than 2 hours	Staffing	B	Alternative (N-1)	Note 2
Tech Specs	Work hour controls for licensed operators, health physicists, auxiliary operators, and key maintenance personnel	Staffing	B	Alternative – temporary increase in work hour limits	Note 2
Tech Specs	Advisory technical support to the shift crew	Staffing	B	Alternative – increase number of personnel authorized to support the shift crew; remote communications	Note 2
Tech Specs	Programmatic requirements	Programs	C	Postpone	Note 1
Miscellaneous					
	Commitments	Program	A	Comply, but reschedule non-essential commitments	
	Corrective Action Program	Program	A	Comply, but reschedule non-essential corrective actions	
	NRC inspections	Program	A	Comply, but reschedule non-essential inspections	
	NRC meetings	Oversight	C	Postpone	Note 1
	NRC plant visits	Oversight	C	Postpone	Note 1
	Performance indicators	Oversight	C	Postpone	Note 1

Table 2

MAJOR DEPARTMENT STAFFING GUIDELINES

Department	Multiple Unit Site Staffing	Single Unit Site Staffing
Operations (excluding required licensed personnel addressed above)	7 (3 for Fire Brigade, 3 for Safe Shutdown, 1 for outside rounds)	6 (3 for Fire Brigade, 2 for Safe Shutdown, 1 for outside rounds)
Maintenance	17 total (1 supervisor and 4 technicians for Electrical; 1 supervisor and 4 technicians for Instrument; and 1 supervisor and 6 technicians for Mechanical)	11 total (1 supervisor and 2 technicians for Electrical; 1 supervisor and 2 technicians for Instrument; and 1 supervisor and 4 technicians for Mechanical)
Radiation Protection	10 total (2 management and 3 technicians per shift)	10 total (2 management and 3 technicians per shift)
Chemistry	12 total (2 management and 4 technicians per shift)	10 total (2 management and 3 technicians per shift)
Engineering	16 total (2 managers, 6 design, 8 systems)	15 total (1 manager, 6 design, 8 systems)
Security	Safeguards Information	Safeguards Information

Table 3

EVALUATION OF TS SURVEILLANCE TEST INTERVALS (STIs)

Table 3 is a list of surveillance test intervals that could come due during a pandemic. The Table contains six columns:

Column	Contents
1	Technical specification number ¹
2	Summary description of surveillance requirement ^{2,3}
3	Surveillance test interval ^{4,5}
4	Relief category ⁶
5	Type of relief ⁷
6	Basis for relief ⁸

¹ Based on NUREG-1431, Rev. 3.1, STS for Westinghouse Plants (December 1, 2005).

² Includes surveillance requirements that are applicable in Mode 1, have a recurring frequency, and are associated with TS LCOs that could lead to plant shutdown or significant power reduction if not met.

³ Excluding event-based surveillances (e.g., reactor startup).

⁴ h = hours; d = days; EFPD = effective full power days.

⁵ Excluding STIs greater than six months (184 days) and STIs defined in the context of a programmatic requirement (e.g., ISI, IST, steam generator inspection program, etc.).

⁶ A = minimal relief; B = partial relief.

⁷ Comply = no relief; x2 = the STI may be doubled during a pandemic.

⁸ Note 8 = Not risk significant during a pandemic (estimated 6-week duration). N/A = not applicable.

Table 3

EVALUATION OF TS SURVEILLANCE TEST INTERVALS (STIs)

TS #	Description	STI	Relief Category	Type of Relief	Basis for Relief
3.1.1.1	Verify SDM to be within the limits specified in the COLR	24 h	B	x2	Note 8
3.1.2.1	Verify measured core reactivity is within $\pm 1\% \Delta k/k$ of predicted values.	31 EFPD	A		
3.1.4.1	Verify individual rod positions within alignment limit.	12 h	B	x2	Note 8
3.1.4.2	Verify rod freedom of movement (capability to trip) by moving each rod not fully inserted in the core ≥ 10 steps in either direction.	92 d	A		
3.1.5.1	Verify each shutdown bank is within the insertion limits specified in the COLR.	12 h	B	x2	Note 8
3.1.6.2	Verify each control bank insertion is within the insertion limits specified in the COLR.	12 h	B	x2	Note 8
3.1.6.3	Verify sequence and overlap limits specified in the COLR are met for control banks not fully withdrawn from the core.	12 h	B	x2	Note 8
3.2.1.1	Verify measured values of $FQ(Z)$ are within limits specified in the COLR.	31 EFPD	A		
3.2.1.2	Verify $F^C_{XY} < F^L_{XY}$.	31 EFPD	A		
3.2.2.1	Verify $F^{\Delta H}$ is within limits specified in the COLR.	31 EFPD	A		
3.2.3.1	Verify AFD is within limits for each OPERABLE excore channel.	7 d	A		
3.2.3.2	Update target flux difference.	31 EFPD	A		
3.2.3.3	Determine, by measurement, the target flux difference.	92 EFPD	A		
3.2.4.1	Verify QPTR is within limit by calculation.	7 d	A		
3.3.1.1	Perform CHANNEL CHECK.	12 h	B	x2	Note 8

Table 3

EVALUATION OF TS SURVEILLANCE TEST INTERVALS (STIs)

TS #	Description	STI	Relief Category	Type of Relief	Basis for Relief
3.3.1.2	Compare results of calorimetric heat balance calculation to power range channel output. Adjust power range channel output if calorimetric heat balance calculations results exceed power range channel output by more than +2% RTP.	24 h	B	x2	Note 8
3.3.1.3	Compare results of the incore detector measurements to Nuclear Instrumentation System (NIS) AFD. Adjust NIS channel if absolute difference is $\geq 3\%$.	31 EFPD	A		
3.3.1.4	Perform TADOT.	62 d on a STAGGERED TEST BASIS	A		
3.3.1.5	Perform ACTUATION LOGIC TEST.	92 d on a STAGGERED TEST BASIS	A		
3.3.1.6	Calibrate excore channels to agree with incore detector measurements.	92 EFPD	A		
3.3.1.9	Perform TADOT.	92 d	A		
3.3.2.1	Perform CHANNEL CHECK.	12 h	B	x2	Note 8
3.3.2.2	Perform ACTUATION LOGIC TEST.	92 d on a STAGGERED TEST BASIS	A		
3.3.2.3	Perform ACTUATION LOGIC TEST.	31 d on a STAGGERED TEST BASIS	A		
3.3.2.4	Perform MASTER RELAY TEST.	92 d on a STAGGERED TEST BASIS	A		
3.3.2.6	Perform SLAVE RELAY TEST.	92 d	A		
3.3.2.7	Perform TADOT.	92 d	A		

Table 3

EVALUATION OF TS SURVEILLANCE TEST INTERVALS (STIs)

TS #	Description	STI	Relief Category	Type of Relief	Basis for Relief
3.3.3.1	Perform CHANNEL CHECK for each required instrumentation channel that is normally energized.	31 d	A		
3.3.4.1	Perform CHANNEL CHECK for each required instrumentation channel that is normally energized.	31 d	A		
3.3.5.1	Perform CHANNEL CHECK.	12 h	B	x2	Note 8
3.3.5.2	Perform TADOT.	31 d	A		
3.3.6.1	Perform CHANNEL CHECK.	12h	B	x2	Note 8
3.3.6.2	Perform ACTUATION LOGIC TEST.	31 d on a STAGGERED TEST BASIS	A		
3.3.6.3	Perform MASTER RELAY TEST.	31 d on a STAGGERED TEST BASIS	A		
3.3.6.4	Perform ACTUATION LOGIC TEST.	92 d on a STAGGERED TEST BASIS	A		
3.3.6.5	Perform MASTER RELAY TEST.	92 d on a STAGGERED TEST BASIS	A		
3.3.6.6	Perform COT.	92 d	A		
3.3.6.7	Perform SLAVE RELAY TEST.	92 d	A		
3.3.7.1	Perform CHANNEL CHECK.	12 h	B	x2	Note 8
3.3.7.2	Perform COT.	92 d	A		
3.3.7.3	Perform ACTUATION LOGIC TEST.	31 d on a STAGGERED TEST BASIS	A		
3.3.7.4	Perform MASTER RELAY TEST.	31 d on a STAGGERED TEST BASIS	A		

Table 3

EVALUATION OF TS SURVEILLANCE TEST INTERVALS (STIs)

TS #	Description	STI	Relief Category	Type of Relief	Basis for Relief
3.3.7.5	Perform ACTUATION LOGIC TEST.	92 d on a STAGGERED TEST BASIS	A		
3.3.7.6	Perform MASTER RELAY TEST.	92 d on a STAGGERED TEST BASIS	A		
3.3.7.7	Perform SLAVE RELAY TEST.	92 d	A		
3.3.8.1	Perform CHANNEL CHECK.	12 h	B	x2	Note 8
3.3.8.2	Perform COT.	92 d	B	x2	Note 8
3.3.8.3	Perform ACTUATION LOGIC TEST.	31 d on a STAGGERED TEST BASIS	B	x2	Note 8
3.4.1.1	Verify pressurizer pressure is greater than or equal to the limit specified in the COLR.	12 h	A		
3.4.1.2	Verify RCS average temperature is less than or equal to the limit specified in the COLR.	12 h	A		
3.4.1.3	Verify RCS total flow rate is \geq [284,000] gpm and greater than or equal to the limit specified in the COLR.	12 h	A		
3.4.2.1	Verify RCS Tavg in each loop \geq [541] $^{\circ}$ F.	12 h	A		
3.4.4.1	Verify each RCS loop is in operation.	12 h	A		
3.4.9.1	Verify pressurizer water level is \leq [92] %.	12 h	A		
3.4.11.1	Perform a complete cycle of each block valve.	92 d	A		
3.4.13.1	Verify RCS operational LEAKAGE is within limits by performance of RCS water inventory balance.	72 h	A		
3.4.13.2	Verify primary to secondary LEAKAGE is \leq 150 gallons per day through any one SG.	72 h	A		
3.4.15.1	Perform CHANNEL CHECK of the required containment atmosphere radioactivity monitor.	12 h	B	x2	Note 8

Table 3

EVALUATION OF TS SURVEILLANCE TEST INTERVALS (STIs)

TS #	Description	STI	Relief Category	Type of Relief	Basis for Relief
3.4.15.2	Perform COT of the required containment atmosphere radioactivity monitor.	92 d	A		
3.4.16.1	Verify reactor coolant gross specific activity $\leq 100/\bar{E}$ $\mu\text{Ci/gm}$.	7 d	B	x2	Note 8
3.4.16.2	Verify reactor coolant DOSE EQUIVALENT I-131 specific activity $\leq 1.0 \mu\text{Ci/gm}$.	14 d	B	x2	Note 8
3.4.17.1	Verify each RCS loop isolation valve is open and power is removed from each loop isolation valve operator.	31 d	A		
3.5.1.1	Verify each accumulator isolation valve is fully open.	12 h	B	x2	Note 8
3.5.1.2	Verify borated water volume in each accumulator is \geq [7853 gallons ()% and \leq 8171 gallons ()%].	12 h	B	x2	Note 8
3.5.1.3	Verify nitrogen cover pressure in each accumulator is \geq [385] psig and \leq [481] psig.	12 h	B	x2	Note 8
3.5.1.4	Verify boron concentration in each accumulator is \geq [1900] ppm and \leq [2100] ppm.	31 d	A		
3.5.1.5	Verify power is removed from each accumulator isolation valve operator when RCS pressure is \geq [2000] psig.	31 d	A		
3.5.2.1	Verify the following valves are in the listed position with power to the valve operator removed.	12 h	B	x2	Note 8
3.5.2.2	Verify each ECCS manual, power operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position.	31 d	A		
3.5.2.3	Verify ECCS piping is full of water.	31 d	A		
3.5.4.1	Verify RWST borated water temperature is \geq [35] $^{\circ}\text{F}$ and \leq [100] $^{\circ}\text{F}$.	24 h	B	x2	Note 8
3.5.4.2	Verify RWST borated water volume is \geq [466,200 gallons ()%].	7 d	B	x2	Note 8
3.5.4.3	Verify RWST boron concentration is \geq [2000] ppm and \leq [2200] ppm.	7 d	B	x2	Note 8

Table 3

EVALUATION OF TS SURVEILLANCE TEST INTERVALS (STIs)

TS #	Description	STI	Relief Category	Type of Relief	Basis for Relief
3.5.5.1	Verify manual seal injection throttle valves are adjusted to give a flow [resistance] of \leq [40 gpm] with [centrifugal charging pump discharge header] pressure \geq [2480] psig and the [charging flow] control valve full open or \geq [0.2117] ft/gpm ² or within the limit of Figure 3.5.5-1.]	31 d	B	x2	Note 8
3.5.6.1	Verify BIT borated water temperature is \geq [145] ^o F.	24 h	B	x2	Note 8
3.5.6.2	Verify BIT borated water volume is \geq [1100] gallons.	7 d	B	x2	Note 8
3.5.6.3	Verify BIT boron concentration is \geq [20,000] ppm and \leq [22,500] ppm.	7 d	B	x2	Note 8
3.6.3.1	Verify each [42] inch purge valve is sealed closed, except for one purge valve in a penetration flow path while in Condition E of this LCO.	31 d	B	x2	Note 8
3.6.3.2	Verify each [8] inch purge valve is closed, except when the [8] inch containment purge valves are open for pressure control, ALARA or air quality considerations for personnel entry, or for Surveillances that require the valves to be open.	31 d	B	x2	Note 8
3.6.3.3	Verify each containment isolation manual valve and blind flange that is located outside containment and not locked, sealed, or otherwise secured and required to be closed during accident conditions is closed, except for containment isolation valves that are open under administrative controls.	31 d	B	x2	Note 8
3.6.3.5	Verify the isolation time of each automatic power operated containment isolation valve is within limits.	92 d	A		

Table 3

EVALUATION OF TS SURVEILLANCE TEST INTERVALS (STIs)

TS #	Description	STI	Relief Category	Type of Relief	Basis for Relief
3.6.3.6	Cycle each weight or spring loaded check valve testable during operation through one complete cycle of full travel, and verify each check valve remains closed when the differential pressure in the direction of flow is \leq [1.2] psid and opens when the differential pressure in the direction of flow is \geq [1.2] psid and $<$ [5.0] psid.	92 d	A		
3.6.4.1	Verify containment pressure is within limits.	12 h	B	x2	Note 8
3.6.5.1	Verify containment average air temperature is within limit.	24 h	B	x2	Note 8
3.6.6.1	Verify each containment spray manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	31 d	A		
3.6.6.2	Operate each [required] containment cooling train fan unit for \geq 15 minutes.	31 d	B	x2	Note 8
3.6.6.3	Verify each [required] containment cooling train cooling water flow rate is \geq [700] gpm.	31 d	B	x2	Note 8
3.6.7.1	Verify each spray additive manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	31d	B	x2	Note 8
3.6.8.1	Verify annulus negative pressure is $>$ [5] inches water gauge.	12 h	B	x2	Note 8
3.6.8.2	Verify one shield building access door in each access opening is closed.	31 d	B	x2	Note 8
3.6.9.1	Operate each HMS train for \geq 15 minutes.	92 d	A		
3.6.10.1	Energize each HIS train power supply breaker and verify \geq [32] igniters are energized in each train.	92 d	A		
3.6.10.2	Verify at least one hydrogen igniter is OPERABLE in each containment region.	92 d	A		

Table 3

EVALUATION OF TS SURVEILLANCE TEST INTERVALS (STIs)

TS #	Description	STI	Relief Category	Type of Relief	Basis for Relief
3.6.11.1	Operate each ICS train for ≥ 10 continuous hours with heaters operating or (for systems without heaters) ≥ 15 minutes].	31 d	B	x2	Note 8
3.6.13.1	Operate each SBACS train for ≥ 10 continuous hours with heaters operating or (for systems without heaters) ≥ 15 minutes].	31 d	B	x2	Note 8
3.6.14.1	Verify each ARS fan starts on an actual or simulated actuation signal, after a delay of $\geq [9.0]$ minutes and $\leq [11.0]$ minutes, and operates for ≥ 15 minutes.	92 d	A		
3.6.14.2	Verify, with the ARS fan dampers closed, each ARS fan motor current is $\geq [20.5]$ amps and $\leq [35.5]$ amps [when the fan speed is $\geq [840]$ rpm and $\leq [900]$ rpm].	92 d	A		
3.6.14.3	Verify, with the ARS fan not operating, each ARS fan damper opens when $\leq [11.0]$ lb is applied to the counterweight.	92 d	A		
3.6.14.4	Verify each motor operated valve in the hydrogen collection header that is not locked, sealed, or otherwise secured in position, opens on an actual or simulated actuation signal after a delay of $\geq [9.0]$ minutes and $\leq [11.0]$ minutes.	92 d	A		
3.6.15.1	Verify maximum ice bed temperature is $\leq [27]^{\circ}\text{F}$.	12 h	B	x2	Note 8
3.6.16.1	Verify all inlet doors indicate closed by the Inlet Door Position Monitoring System.	12 h	B	x2	Note 8
3.6.16.2	Verify, by visual inspection, each intermediate deck door is closed and not impaired by ice, frost, or debris.	7 d	B	x2	Note 8
3.6.16.7	Verify, by visual inspection, each top deck [door]: a. Is in place; and b. Has no condensation, frost, or ice formed on the [door] that would restrict its opening.	92 d	A		

Table 3

EVALUATION OF TS SURVEILLANCE TEST INTERVALS (STIs)

TS #	Description	STI	Relief Category	Type of Relief	Basis for Relief
3.6.18.1	Verify, by visual inspection, that: a. Each refueling canal drain plug is removed, b. Each refueling canal drain is not obstructed by debris, and c. No debris is present in the upper compartment or refueling canal that could obstruct the refueling canal drain.	92 d	A		
3.7.5.1	Verify each AFW manual, power operated, and automatic valve in each water flow path, [and in both steam supply flow paths to the steam turbine driven pump,] that is not locked, sealed, or otherwise secured in position, is in the correct position.	31 d	B	x2	Note 8
3.7.6.1	Verify the CST level is \geq [110,000 gal].	12 h	B	x2	Note 8
3.7.7.1	Verify each CCW manual, power operated, and automatic valve in the flow path servicing safety related equipment, that is not locked, sealed, or otherwise secured in position, is in the correct position.	31 d	B	x2	Note 8
3.7.8.1	Verify each SWS manual, power operated, and automatic valve in the flow path servicing safety related equipment, that is not locked, sealed, or otherwise secured in position, is in the correct position.	31 d	B	x2	Note 8
3.7.9.1	Verify water level of UHS is \geq [562] ft [mean sea level].	24 h	B	x2	Note 8
3.7.9.2	Verify average water temperature of UHS is \leq [90]°F.	24 h	B	x2	Note 8
3.7.9.3	Operate each cooling tower fan for \geq [15] minutes.	31 d	B	x2	Note 8
3.7.12.1	Operate each ECCS PREACS train for \geq 10 continuous hours with the heaters operating or (for systems without heaters) \geq 15 minutes].	31 d	B	x2	Note 8
3.7.14.1	Operate each PREACS train for \geq 10 continuous hours with heaters operating or (for systems without heaters) \geq 15 minutes].	31 d	B	x2	Note 8

Table 3

EVALUATION OF TS SURVEILLANCE TEST INTERVALS (STIs)

TS #	Description	STI	Relief Category	Type of Relief	Basis for Relief
3.7.18.1	Verify the specific activity of the secondary coolant is $\leq [0.10]$ $\mu\text{Ci/gm}$ DOSE EQUIVALENT I-131.	31 d	B	x2	Note 8
3.8.1.1	Verify correct breaker alignment and indicated power availability for each [required] offsite circuit.	7 d	A		
3.8.1.2	Verify each DG starts from standby conditions and achieves steady state voltage $\geq [3740]$ V and $\leq [4580]$ V, and frequency $\geq [58.8]$ Hz and $\leq [61.2]$ Hz.	31 d	B	x2	Note 8
3.8.1.3	Verify each DG is synchronized and loaded and operates for ≥ 60 minutes at a load $\geq [4500]$ kW and $\leq [5000]$ kW.	31 d	B	x2	Note 8
3.8.1.4	Verify each day tank [and engine mounted tank] contains $\geq [220]$ gal of fuel oil.	31 d	B	x2	Note 8
3.8.1.5	Check for and remove accumulated water from each day tank [and engine mounted tank].	31 d	B	x2	Note 8
3.8.1.6	Verify the fuel oil transfer system operates to [automatically] transfer fuel oil from storage tank[s] to the day tank [and engine mounted tank].	92 d	A		
3.8.3.1	Verify each fuel oil storage tank contains $\geq [33,000]$ gal of fuel.	31 d	B	x2	Note 8
3.8.3.2	Verify lubricating oil inventory is $\geq [500]$ gal.	31 d	B	x2	Note 8
3.8.3.4	Verify each DG air start receiver pressure is $\geq [225]$ psig.	31 d	A		
3.8.3.5	Check for and remove accumulated water from each fuel oil storage tank.	31 d	B	x2	Note 8
3.8.4.1	Verify battery terminal voltage is greater than or equal to the minimum established float voltage.	7 d	B	x2	Note 8
3.8.6.1	Verify each battery float current is $\leq [2]$ amps.	7 d	B	x2	Note 8
3.8.6.2	Verify each battery pilot cell voltage is $\geq [2.07]$ V.	31 d	B	x2	Note 8

Table 3

EVALUATION OF TS SURVEILLANCE TEST INTERVALS (STIs)

TS #	Description	STI	Relief Category	Type of Relief	Basis for Relief
3.8.6.3	Verify each battery connected cell electrolyte level is greater than or equal to minimum established design limits.	31 d	B	x2	Note 8
3.8.6.4	Verify each battery pilot cell temperature is greater than or equal to minimum established design limits.	31 d	B	x2	Note 8
3.8.6.5	Verify each battery connected cell voltage is $\geq [2.07]$ V.	92 d	B	x2	Note 8
3.8.7.1	Verify correct inverter voltage, [frequency], and alignment to required AC vital buses.	7 d	A		
3.8.9.1	Verify correct inverter voltage, [frequency,] and alignment to required AC vital buses.	7 d	A		

APPENDIX A

Excerpts from 10 CFR and Technical Specifications

Summary of Regulatory Requirements Containing Explicit or Implicit Staffing Requirements

PART 19 – NOTICES, INSTRUCTIONS, AND REPORTS TO WORKERS

§ 19.11 Posting of notices to workers.

(a) Each licensee shall post current copies of the following documents: *[see the regulation for details]*

(e) Commission documents posted pursuant to paragraph (a)(4) of this section shall be posted within 2 working days after receipt of the documents from the Commission; the licensee's response, if any, shall be posted within 2 working days after dispatch by the licensee. Such documents shall remain posted for a minimum of 5 working days or until action correcting the violation has been completed, whichever is later.

§ 19.12 Instruction to workers.

(a) All individuals who in the course of employment are likely to receive in a year an occupational dose in excess of 100 mrem (1 mSv) shall be *[see the regulation for details]*.

§ 19.13 Notifications and reports to individuals.

(a) Radiation exposure data for an individual, and the results of any measurements, analyses, and calculations of radioactive material deposited or retained in the body of an individual, shall be reported to the individual as specified in this section.

§ 19.31 Application for exemptions.

The Commission may upon application by any licensee or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not result in undue hazard to life or property.

PART 20 – STANDARDS FOR PROTECTION AGAINST RADIATION

§ 20.1101 Radiation protection programs.

(a) Each licensee shall develop, document, and implement a radiation protection program commensurate with the scope and extent of licensed activities and sufficient to ensure compliance with the provisions of this part. *[See § 20.2102 for recordkeeping requirements relating to these programs.]*

(c) The licensee shall periodically (at least annually) review the radiation protection program content and implementation.

PART 21 – REPORTING OF DEFECTS AND NONCOMPLIANCES

§ 21.7 Exemptions.

The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest. Suppliers of commercial grade items are exempt from the provisions of this part to the extent that they supply commercial grade items.

§ 21.21 Notification of failure to comply or existence of a defect and its evaluation.

(a) Each individual, corporation, partnership, dedicating entity, or other entity subject to the regulations in this part shall adopt appropriate procedures to *[see the regulation for details]*.

§ 21.51 Maintenance and inspection of records.

(a) Each individual, corporation, partnership, dedicating entity, or other entity subject to the regulations in this part shall prepare and maintain records necessary to accomplish the purposes of this part, specifically *[see the regulation for details]*.

PART 25 – ACCESS AUTHORIZATION FOR LICENSEE PERSONNEL

§ 25.11 Specific exemptions.

The NRC may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part.

§ 25.13 Maintenance of records.

(a) Each licensee or organization employing individuals approved for personnel security access authorization under this part, shall maintain records as prescribed within the part. These records are subject to review and inspection by CSA representatives during security reviews.

§ 25.21 Determination of initial and continued eligibility for access authorization.

(b) The CSA must be promptly notified of developments that bear on continued eligibility for access authorization throughout the period for which the authorization is active.

§ 25.23 Notification of grant of access authorization.

The determination to grant or renew access authorization will be furnished in writing to the licensee or organization that initiated the request. Upon receipt of the notification of original grant of access authorization, the licensee or organization shall obtain, as a condition for grant of access authorization and access to classified information, an executed "Classified Information Nondisclosure Agreement" (SF-312) from the affected individual.

§ 25.25 Cancellation of requests for access authorization.

When a request for an individual's access authorization or renewal of an access authorization is withdrawn or canceled, the requestor shall notify the CSA immediately by telephone.

§ 25.31 Extensions and transfers of access authorizations.

(c) Requests for an extension or transfer of an access authorization.

§ 25.33 Termination of access authorizations.

(b) A representative of the licensee or other organization that employs the individual whose access authorization will be terminated shall immediately notify the CSA.

(c) When an access authorization is to be terminated, a representative of the licensee or other organization shall conduct a security termination briefing of the individual involved.

PART 26 – FITNESS FOR DUTY PROGRAMS

§ 26.20 Written policy and procedures.

Each licensee subject to this part shall establish and implement written policies and procedures.

§ 26.21 Policy communications and awareness training.

(a) Persons assigned to activities within the scope of this part shall be provided with appropriate training.

(b) Initial training must be completed prior to assignment to activities within the scope of this part. Refresher training must be completed on a nominal 12 month frequency or more frequently where the need is indicated.

§ 26.22 Training of supervisors and escorts.

(c) Initial training must be completed prior to assignment of duties within the scope of this part and within 3 months after initial supervisory assignment, as applicable.

§ 26.23 Contractors and vendors.

(b) Each licensee subject to this part shall assure that contractors whose own fitness-for-duty programs are relied on by the licensee adhere to an effective program, which meets the requirements of this part, and shall conduct audits pursuant to § 26.80 for this purpose.

§ 26.24 Chemical and alcohol testing.

(a) To provide a means to deter and detect substance abuse, the licensee shall implement the following chemical testing programs *[see the regulation for details]*.

§ 26.25 Employee assistance programs (EAP).

Each licensee subject to this part shall maintain an employee assistance program.

§ 26.27 Management actions and sanctions to be imposed.

(a)(1) The licensee shall obtain a written statement from the individual as to whether activities within the scope of this part were ever denied the individual.

§ 26.29 Protection of information.

(a) Each licensee subject to this part, who collects personal information on an individual for the purpose of complying with this part, shall establish and maintain a system of files and procedures for the protection of the personal information.

§ 26.71 Recordkeeping requirements.

Each licensee subject to this part and each contractor and vendor implementing a licensee approved program under the provisions of § 26.23 shall *[see the regulation for details]*.

§ 26.73 Reporting requirements.

(a) Each licensee subject to this part shall inform the Commission of significant fitness-for-duty events.

§ 26.80 Audits.

(a) Each licensee subject to this part shall audit the fitness-for-duty program nominally every 12 months.

(c) The result of the audit, along with recommendations, if any, must be documented and reported to senior corporate and site management.

PART 50 – DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

§ 50.9 Completeness and accuracy of information.

(b) Each applicant or licensee shall notify the Commission of information identified by the applicant or licensee as having for the regulated activity a significant implication for public health and safety or common defense and security.

§ 50.30 Filing of application for licenses; oath or affirmation.

(b) *Oath or affirmation.* Each application for a license, including whenever appropriate a construction permit, or amendment of it, and each amendment of each application must be executed in a signed original by the applicant or duly authorized officer thereof under oath or affirmation.

§ 50.46 Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors.

(3)(i) Each applicant for or holder of an operating license or construction permit shall estimate the effect of any change to or error in an acceptable evaluation model or in the application of such a model to determine if the change or error is significant.

(ii) For each change to or error discovered in an acceptable evaluation model or in the application of such a model that affects the temperature calculation, the applicant or licensee shall report the nature of the change or error and its estimated effect on the limiting ECCS analysis to the Commission at least annually as specified in § 50.4. If the change or error is significant, the applicant or licensee shall provide this report within 30 days and include with the report a proposed schedule for providing a reanalysis or taking other action as may be needed to show compliance with § 50.46 requirements.

§ 50.47 Emergency plans.

(b) The onsite and, except as provided in paragraph (d) of this section, offsite emergency response plans for nuclear power reactors must meet the following standards: *[see the regulation for details]*.

§ 50.48 Fire protection.

(a)(1) Each operating nuclear power plant must have a fire protection plan that satisfies Criterion 3 of appendix A to this part.

§ 50.49 Environmental qualification of electric equipment important to safety for nuclear power plants.

(a) Each holder of or an applicant for a license for a nuclear power plant, other than a nuclear power plant for which the certifications required under § 50.82(a)(1) have been submitted, shall establish a program for qualifying the electric equipment defined *[see the regulation for details]*.

§ 50.54 Conditions of licenses.

(m)(1) A senior operator licensed pursuant to part 55 of this chapter shall be present at the facility or readily available on call at all times during its operation, and shall be present at the facility during initial start-up and approach to power, recovery from an unplanned or unscheduled shut-down or significant reduction in power, and refueling, or as otherwise prescribed in the facility license.

(m)(2)(i) Each licensee shall meet the minimum licensed operator staffing requirements in the following table: *[see the regulation for details]*.

(m)(2)(ii) Each licensee shall have at its site a person holding a senior operator license for all fueled units at the site who is assigned responsibility for overall plant operation at all times there is fuel in any unit.

(m)(2)(iii) When a nuclear power unit is in an operational mode other than cold shutdown or refueling, as defined by the unit's technical specifications, each licensee shall have a person holding a senior operator license for the nuclear power unit in the control room at all times. In addition to this senior operator, for each fueled nuclear power unit, a licensed operator or senior operator shall be present at the controls at all times.

(m)(2)(iv) Each licensee shall have present, during alteration of the core of a nuclear power unit (including fuel loading or transfer), a person holding a senior operator license or a senior operator license limited to fuel handling to directly supervise the activity and, during this time, the licensee shall not assign other duties to this person.

(p)(1) The licensee shall prepare and maintain safeguards contingency plan procedures in accordance with appendix C of part 73 of this chapter for effecting the actions and decisions contained in the Responsibility Matrix of the safeguards contingency plan. The licensee may make no change which would decrease the effectiveness of a security plan, or guard training and qualification plan.

(p)(3) The licensee shall provide for the development, revision, implementation, and maintenance of its safeguards contingency plan.

(q) A licensee authorized to possess and operate a nuclear power reactor shall follow and maintain in effect emergency plans.

(t)(1) The licensee shall provide for the development, revision, implementation, and maintenance of its emergency preparedness program.

(w)(1) If a licensee's *[insurance]* coverage falls below the required minimum, the licensee shall within 60 days take all reasonable steps to restore its coverage to the required minimum.

(w)(3) The licensee shall report to the NRC on April 1 of each year the current levels of this insurance or financial security it maintains and the sources of this insurance or financial security.

(x) A licensee may take reasonable action that departs from a license condition or a technical specification (contained in a license issued under this part) in an

emergency when this action is immediately needed to protect the public health and safety and no action consistent with license conditions and technical specifications that can provide adequate or equivalent protection is immediately apparent.

(y) Licensee action permitted by paragraph (x) of this section shall be approved, as a minimum, by a licensed senior operator, or, at a nuclear power reactor facility for which the certifications required under § 50.82(a)(1) have been submitted, by either a licensed senior operator or a certified fuel handler, prior to taking the action.

(z) Each licensee with a utilization facility licensed pursuant to sections 103 or 104b of the Act shall immediately notify the NRC Operations Center of the occurrence of any event specified in § 50.72 of this part.

(dd) A licensee may take reasonable action that departs from a license condition or a technical specification (contained in a license issued under this part) in a national security emergency:

§ 50.55a Codes and standards.

(a)(1)(3) Proposed alternatives to the requirements of paragraphs (c), (d), (e), (f), (g), and (h) of this section or portions thereof may be used when authorized by the Director of the Office of Nuclear Reactor Regulation. The applicant shall demonstrate that: *[see the regulation for details]*.

(b)(2)(viii)(D) The licensee shall report the following conditions, if they occur, in the ISI Summary Report required by IWA-6000.

(f)(5)(ii) If a revised inservice test program for a facility conflicts with the technical specification for the facility, the licensee shall apply to the Commission for amendment of the technical specifications to conform the technical specification to the revised program. The licensee shall submit this application, as specified in § 50.4, at least 6 months before the start of the period during which the provisions become applicable, as determined by paragraph (f)(4) of this section.

§ 50.59 Changes, tests and experiments.

(c)(1)(2) A licensee shall obtain a license amendment pursuant to Sec. 50.90 prior to implementing a proposed change, test, or experiment if the change, test, or experiment would: *[see the regulation for details]*.

(d)(1) The licensee shall maintain records of changes in the facility, of changes in procedures, and of tests and experiments made pursuant to paragraph (c) of this section.

(d)(2) The licensee shall submit, as specified in Sec. 50.4, a report containing a brief description of any changes, tests, and experiments, including a summary of the evaluation of each. A report must be submitted at intervals not to exceed 24 months.

§ 50.65 Requirements for monitoring the effectiveness of maintenance at nuclear power plants.

(a)(1) Each holder of a license to operate a nuclear power plant under Secs. 50.21(b) or 50.22 shall monitor the performance or condition of structures, systems, or components, against licensee-established goals.

(a)(3) Performance and condition monitoring activities and associated goals and preventive maintenance activities shall be evaluated at least every refueling cycle interval

§ 50.70 Inspections.

(a) Each licensee and each holder of a construction permit shall permit inspection, by duly authorized representatives of the Commission.

§ 50.71 Maintenance of records, making of reports.

(a) Each licensee and each holder of a construction permit shall maintain all records and make all reports.

(e) Each person licensed to operate a nuclear power reactor pursuant to the provisions of § 50.21 or § 50.22 of this part shall update periodically, as provided in paragraphs (e)(3) and (4) of this section, the final safety analysis report (FSAR).

(e)(4) Subsequent revisions must be filed annually or 6 months after each refueling outage provided the interval between successive updates does not exceed 24 months.

§ 50.72 Immediate notification requirements for operating nuclear power reactors.

(a)(1) Each nuclear power reactor licensee licensed under Sec. 50.21(b) or Sec. 50.22 of this part shall notify the NRC Operations Center via the Emergency Notification System of: *[see the regulation for details]*.

§ 50.73 Licensee event report system.

(a)(1) The holder of an operating license for a nuclear power plant (licensee) shall submit a Licensee Event Report (LER) for any event of the type described in this paragraph within 60 days after the discovery of the event.

§ 50.74 Notification of change in operator or senior operator status.

Each licensee shall notify the appropriate Regional Administrator as listed in appendix D to part 20 of this chapter within 30 days of the following in regard to a licensed operator or senior operator: *[see the regulation for details]*.

§ 50.75 Reporting and recordkeeping for decommissioning planning.

(f)(1) Each power reactor licensee shall report, on a calendar-year basis, to the NRC by March 31, 1999, and at least once every 2 years thereafter on the status of its decommissioning funding.

§ 50.90 Application for amendment of license or construction permit.

Whenever a holder of a license or construction permit desires to amend the license or permit, application for an amendment must be filed with the Commission.

§ 50.120 Training and qualification of nuclear power plant personnel.

(b)(1) Each nuclear power plant applicant, by November 22, 1993 or 18 months prior to fuel load, whichever is later, and each nuclear power plant licensee, by November 22, 1993 shall establish, implement, and maintain a training program.

(b)(2) The training program must be periodically evaluated and revised as appropriate.

10 CFR 50, Appendix E to Part 50—Emergency Planning and Preparedness for Production and Utilization Facilities

IV.B Content of Emergency Plans

Submit a report of each EAL change made within 30 days after the change is made.

IV.D Notification Procedures

Yearly dissemination to the public within the plume exposure pathway EPZ of basic emergency planning information.

IV.F Training

Several requirements for different types of training, exercises, and drills.

V. Implementing Procedures

Submit changes to the emergency plan or procedures to NRC within 30 days of such changes.

VI. Emergency Response Data System

Test the ERDS periodically to verify system availability and operability. The frequency of ERDS testing will be quarterly unless otherwise set by NRC based on demonstrated system performance.

10 CFR 50, Appendix G to Part 50--Fracture Toughness Requirements

III. Fracture Toughness Tests

Test in accordance with the appropriate ASME Code Edition and Addenda.

PART 55 – OPERATORS’ LICENSES

§ 55.21 Medical examination.

An applicant for a license shall have a medical examination by a physician. A licensee shall have a medical examination by a physician every two years.

§ 55.25 Incapacitation because of disability or illness.

If, during the term of the license, the licensee develops a permanent physical or mental condition that causes the licensee to fail to meet the requirements of § 55.21 of this part, the facility licensee shall notify *[see the regulation for details]*.

§ 55.40 Implementation.

(b)(2) Pursuant to § 55.49, power reactor facility licensees shall establish, implement, and maintain procedures to control examination security and integrity.

§ 55.59 Requalification.

(a)(1) This program shall be conducted for a continuous period not to exceed 24 months in duration.

(b)(1) *Schedule.* The requalification program must be conducted for a continuous period not to exceed two years, and upon conclusion must be promptly followed, pursuant to a continuous schedule, by successive requalification programs.

PART 72 – LICENSING REQUIREMENTS FOR THE INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL, HIGH-LEVEL RADIOACTIVE WASTE, AND REACTOR-RELATED GREATER THAN CLASS C WASTE

§ 72.70 Safety analysis report updating.

(c)(6) Updates shall be filed every 24 months from the date of issuance of the license.

§ 72.74 Reports of accidental criticality or loss of special nuclear material.

(a) Each licensee shall notify the NRC Operations Center within one hour of discovery of accidental criticality or any loss of special nuclear material.

§ 72.75 Reporting requirements for specific events and conditions.

(a) *Emergency notifications:* Each licensee shall notify the NRC Headquarters Operations Center upon the declaration of an emergency as specified in the licensee's approved emergency plan addressed in § 72.32. The licensee shall notify the NRC immediately after notification of the appropriate State or local agencies, but not later than one hour after the time the licensee declares an emergency.

§ 72.76 Material status reports.

(a) Each report must be submitted within 60 days of the beginning of the physical inventory required by § 72.72(b).

§ 72.142 Quality assurance organization.

(a) The licensee, applicant for a license, certificate holder, and applicant for a CoC shall be responsible for the establishment and execution of the quality assurance program.

(c) The persons and organizations performing quality assurance functions shall report to a management level that ensures that the required authority and organizational freedom ... are provided.

§ 72.192 Operator training and certification program.

The applicant for a license under this part shall establish a program for training, proficiency testing, and certification of ISFSI or MRS personnel.

§ 72.248 Safety analysis report updating.

(a) Each certificate holder for a spent fuel storage cask design shall update periodically, as provided in paragraph (b) of this section, the final safety analysis report (FSAR).

(c)(6) Updates shall be filed every 24 months from the date of issuance of the CoC.

PART 73 – PHYSICAL PROTECTION OF PLANTS AND MATERIALS

§ 73.26 Transportation physical protection systems, subsystems, components, and procedures.

(d)(1) The licensee or his agent shall establish a transportation security organization.

(d)(3) The licensee or the licensee's agent shall establish, maintain, and follow a written management system.

(e) *Contingency and Response Plans and Procedures.* (1) The licensee or the licensee's agent shall establish, maintain, and follow a written safeguards contingency plan.

(h) *Test and maintenance programs.* The licensee or his agent shall establish, maintain, and follow a test and maintenance program for communications equipment and other physical protection related devices and equipment.

§ 73.40 Physical protection: General requirements at fixed sites.

... the licensee shall establish and maintain physical security in accordance with security plans approved by the Nuclear Regulatory Commission.

§ 73.46 Fixed site physical protection systems, subsystems, components, and procedures.

(b)(1) The licensee shall establish a security organization, including guards.

(b)(2) The licensee shall have onsite at all times at least one full time member of the security organization with authority to direct the physical protection activities of the security organization.

(b)(7) In addition to the weapons qualification and requalification criteria of appendix B of this part, Tactical Response Team members, armed response personnel, and guards shall qualify and requalify, at least every 12 months, for day and night firing with assigned weapons in accordance with Appendix H of this part.

(b)(9) The licensee shall conduct Tactical Response Team and guard exercises.

(b)(10) ... each Tactical Response Team member, armed response person, and guard, except as provided in paragraph (b)(10)(v) of this section, shall participate in a physical fitness training program on a continuing basis.

(b)(10)(ii) The licensee shall assess Tactical Response Team members, armed response personnel, and guards for general fitness once every 4 months.

(b)(10)(iii) Within 30 days prior to participation in the physical fitness training program, the licensee shall give Tactical Response Team members, armed response personnel, and guards a medical examination.

(b)(11) ... Tactical Response Team members, armed response personnel, and guards shall meet or exceed the requirements in paragraphs (b)(11)(i) through (b)(11)(v) of this section, except as provided in paragraph (b)(11)(vi) of this section, initially and at least once every 12 months thereafter.

(b)(11)(ii) Within 30 days before the first administration of the physical fitness performance test, and on an annual basis thereafter, Tactical Response Team members, armed response personnel, and guards shall be given a medical examination including a determination and written certification by a licensed physician that there are no medical contraindications, as disclosed by the medical examination, to participation in the physical fitness performance test.

(g) *Test and maintenance programs.* The licensee shall have a test and maintenance program for intrusion alarms, emergency exit alarms, communications equipment, physical barriers, *[etc.]*.

(6) The security program must be reviewed at least every 12 months by individuals independent of both security program management and personnel who have direct responsibility for implementation of the security program.

(3) A Tactical Response Team consisting of a minimum of five (5) members must be available at the facility.

§ 73.50 Requirements for physical protection of licensed activities.

(a)(1) The licensee shall establish a security organization, including guards.

(a)(2) At least one supervisor of the security organization shall be on site at all times.

(a)(4) Each guard, watchman, armed response person, and other member of the security organization shall requalify in accordance with appendix B to this part at least every 12 months.

(f) *Testing and maintenance.* Each licensee shall test and maintain intrusion alarms, emergency alarms, communications equipment, physical barriers, and other security related devices or equipment utilized pursuant to this section as follows: *[see the regulation for details]*.

(h) Each licensee shall establish, maintain, and follow an NRC-approved training and qualifications plan.

§ 73.51 Requirements for the physical protection of stored spent nuclear fuel and high-level radioactive waste.

(d)(5) A security organization with written procedures must be established.

§ 73.55 Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage.

(a) *General performance objective and requirements.* The licensee shall establish and maintain an onsite physical protection system and security organization ... In accordance with §§ 50.54(x) and 50.54(y) of part 50, the licensee may suspend any safeguards measures pursuant to § 73.55 in an emergency when this action is immediately needed to protect the public health and safety and no action consistent with license conditions and technical specification that can provide adequate or equivalent protection is immediately apparent. This suspension must be approved as a minimum by a licensed senior operator prior to taking the action. The suspension of safeguards measures must be reported in accordance with the provisions of § 73.71. Reports made under § 50.72 need not be duplicated under § 73.71.

(b)(2) At least one full time member of the security organization who has the authority to direct the physical protection activities of the security organization shall be onsite at all times.

(b)(4)(i) Each guard, watchman, armed response person, and other member of the security organization shall requalify in accordance with appendix B to this part at least every 12 months. This requalification must be documented. The licensee shall retain the documentation of each requalification as a record for three years after the requalification.

(d)(7)(i) Establish an access authorization system.

(d)(7)(i)(A) Establish a current authorization access list for all vital areas. The access list must be updated by the cognizant licensee manager or supervisor at least once every 31 days and must be reapproved at least quarterly. The licensee shall include on the access list only individuals whose specific duties require access to vital areas during nonemergency conditions.

(g) *Testing and maintenance.* Each licensee shall test and maintain intrusion alarms, emergency alarms, communications equipment, physical barriers, and other security related devices or equipment utilized pursuant to this section as follows: *[see the regulation for details]*.

(g)(2) Each intrusion alarm shall be tested for performance at the beginning and end of any period that it is used for security. If the period of continuous use is longer than seven days, the intrusion alarm shall also be tested at least once every seven (7) days.

(g)(3) Communications equipment required for communications onsite shall be tested for performance not less frequently than once at the beginning of each security personnel work shift. Communications equipment required for communications offsite shall be tested for performance not less than once a day.

(g)(4)(i) The licensee shall review implementation of the security program by individuals who have no direct responsibility for the security program either:

(A) At intervals not to exceed 12 months, or

(B) As necessary, based on an assessment by the licensee against performance indicators and as soon as reasonably practicable after a change occurs in personnel, procedures, equipment, or facilities that potentially could adversely affect security but no longer than 12 months after the change. In any case, each element of the security program must be reviewed at least every 24 months.

(h)(3) The total number of guards, and armed, trained personnel immediately available at the facility to fulfill these response requirements shall nominally be ten (10), unless specifically required otherwise on a case by case basis by the Commission; however, this number may not be reduced to less than five (5) guards.

§ 73.56 Personnel access authorization requirements for nuclear power plants.

(a) *General.* (1) Each licensee who is authorized on April 25, 1991, to operate a nuclear power reactor pursuant to §§ 50.21(b) or 50.22 of this chapter shall comply with the requirements of this section. By April 27, 1992, the required access authorization program must be incorporated into the site Physical Security Plan as provided for by 10 CFR 50.54(p)(2) and implemented. By April 27, 1992, each licensee shall certify to the NRC that it has implemented an access authorization program that meets the requirements of this part.

§ 73.67 Licensee fixed site and in-transit requirements for the physical protection of special nuclear material of moderate and low strategic significance.

(d)(8) Establish a security organization or modify the current security organization to consist of at least one watchman per shift able to assess and respond to any unauthorized penetrations or activities in the controlled access areas.

(e)(3)(vii) Notify the NRC Operations Center within one hour after the discovery of the loss of the shipment and within one hour after recovery of or accounting for such lost shipment in accordance with the provisions of § 73.71 of this part.

§ 73.71 Reporting of safeguards events.

(a)(1) Each licensee subject to the provisions of §§ 73.25, 73.26, 73.27(c), 73.37, 73.67(e), or 73.67(g) shall notify the NRC Operations Center within one hour after discovery of the loss of any shipment of SNM or spent fuel, and within one hour after recovery of or accounting for such lost shipment.

(a)(4) The initial telephonic notification must be followed within a period of 60 days by a written report submitted to the NRC by an appropriate method listed in § 73.4. In addition to the addressees specified in § 73.4, the licensee shall also provide one copy of the written report addressed to the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response. The report must include sufficient information for NRC analysis and evaluation.

(a)(5) Significant supplemental information which becomes available after the initial telephonic notification to the NRC Operations Center or after the submission of the written report must be telephonically reported to the NRC Operations Center

and also submitted in a revised written report (with the revisions indicated) to the Regional Office and the Document Control Desk. Errors discovered in a written report must be corrected in a revised report with revisions indicated. The revised report must replace the previous report; the update must be a complete entity and not contain only supplementary or revised information. Each licensee shall maintain a copy of the written report of an event submitted under this section as record for a period of three years from the date of the report.

Appendix B to Part 73--General Criteria for Security Personnel

Appendix C to Part 73--Licensee Safeguards Contingency Plans

Part 74 – MATERIAL CONTROL AND ACCOUNTING OF SPECIAL NUCLEAR MATERIAL

§ 74.7 Specific exemptions.

The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest.

PART 140--FINANCIAL PROTECTION REQUIREMENTS AND INDEMNITY AGREEMENTS

§ 140.8 Specific exemptions.

The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and are otherwise in the public interest.

STANDARD TECHNICAL SPECIFICATIONS, excerpts from Chapter 5, Administrative Controls (based on NUREG-1431, Rev. 3.1, STS for Westinghouse Plants, December 1, 2005).

5.1 Responsibility

- 5.1.1 The plant manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence.
- 5.1.2 The [Shift Supervisor (SS)] shall be responsible for the control room command function. During any absence of the [SS] from the control room while the unit is in MODE 1, 2, 3, or 4, an individual with an active Senior Reactor Operator (SRO) license shall be designated to assume the control room command function. During any absence of the [SS] from the control room while the unit is in MODE 5 or 6, an individual with an active SRO license or Reactor Operator license shall be designated to assume the control room command function.

5.2 Organization

5.2.1 Onsite and Offsite Organizations

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting safety of the nuclear power plant.

- a. Lines of authority, responsibility, and communication.
- b. The plant manager shall be responsible for overall safe operation of the plant and shall have control over those onsite activities necessary for safe operation and maintenance of the plant.
- c. A specified corporate officer shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety.

5.2.2 Unit Staff

The unit staff organization shall include the following:

- a. A non-licensed operator shall be assigned to each reactor containing fuel and an additional non-licensed operator shall be assigned for each control room from which a reactor is operating in MODES 1, 2, 3, or 4.
- b. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.f for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.
- c. A radiation protection technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
- d. Administrative procedures shall be developed and implemented to limit the working hours of personnel who perform safety related functions (e.g., *[licensed Senior Reactor Operators (SROs), licensed Reactor Operators (ROs), health physicists, auxiliary operators, and key maintenance personnel]*).
- e. The operations manager or assistant operations manager shall hold an SRO license.
- f. An individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.

5.3 Unit Staff Qualifications

5.4 Procedures

5.4.1 Written procedures shall be established, implemented, and maintained.

5.5 Programs and Manuals

The following programs shall be established, implemented, and maintained.

5.5.1 Offsite Dose Calculation Manual (ODCM)

- 5.5.2 Primary Coolant Sources Outside Containment
- 5.5.3 Post Accident Sampling *[if applicable]*
- 5.5.4 Radioactive Effluent Controls Program
- 5.5.5 Component Cyclic or Transient Limit
- 5.5.6 Pre-Stressed Concrete Containment Tendon Surveillance Program *[if applicable]*
- 5.5.7 Reactor Coolant Pump Flywheel Inspection Program
- 5.5.8 Inservice Testing Program
- 5.5.9 Steam Generator (SG) Program
- 5.5.10 Secondary Water Chemistry Program
- 5.5.11 Ventilation Filter Testing Program (VFTP)
- 5.5.12 Explosive Gas and Storage Tank Radioactivity Monitoring Program
- 5.5.13 Diesel Fuel Oil Testing Program
- 5.5.14 Technical Specifications (TS) Bases Control Program
- 5.5.15 Safety Function Determination Program (SFDP)
- 5.5.16 Containment Leakage Rate Testing Program
- 5.5.17 Battery Monitoring and Maintenance Program

5.6 Reporting Requirements

The following reports shall be submitted in accordance with 10 CFR 50.4.

- 5.6.1 Annual Radiological Environmental Operating Report
- 5.6.2 Radioactive Effluent Release Report
- 5.6.3 CORE OPERATING LIMITS REPORT (COLR)

5.6.4 Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)

5.6.5 Post Accident Monitoring Report

5.6.6 Tendon Surveillance Report *[if applicable]*

5.6.7 Steam Generator Tube Inspection Report

5.7 High Radiation Area

5.7.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation

5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation

APPENDIX B

DRAFT INTERIM ENFORCEMENT POLICY REGARDING ENFORCEMENT DISCRETION FOR NUCLEAR POWER PLANTS DURING A HUMAN PANDEMIC EVENT

NUCLEAR REGULATORY COMMISSION

[NUREG-1600, Revision _]

Policy and Procedure for NRC Enforcement Actions; Interim Enforcement Policy Regarding Enforcement Discretion for Nuclear Power Plants During a Human Pandemic Event

AGENCY: Nuclear Regulatory Commission.

ACTION: Policy statement; amendment.

SUMMARY: The Nuclear Regulatory Commission (NRC) is amending its “General Statement of Policy and Procedure for NRC Enforcement Actions,” NUREG-1600, Revision __ (Enforcement Policy), by adding Appendix __. This amendment adds an enforcement policy that the NRC will follow to exercise enforcement discretion for noncompliance with license conditions, including technical specifications (TSs), or other applicable NRC requirements, that may occur as a result of human pandemic events.

DATES: This action is effective _____. Comments on this revision should be submitted within 30 days of publication in the *Federal Register* and will be considered by the NRC prior to the next Enforcement Policy revision.

ADDRESSES: Submit written comments to _____, Chief, Rules and Directives Branch, Division of Administrative Services, Office of Administration, Mail Stop T-6 D59, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. Hand deliver comments to 11555 Rockville Pike, Rockville, Maryland, between 7:30 a.m. and 4:15 p.m., Federal workdays.

FOR FURTHER INFORMATION CONTACT:

SUPPLEMENTARY INFORMATION:

Background

A pandemic is an epidemic, or outbreak of an infectious disease, such as influenza, that spreads globally or across large regions. A pandemic can occur, for example, when a novel influenza virus arises and is readily transmitted among humans. Given the potentially serious health, social, and economic impacts of a

pandemic, governmental entities at all levels, the private sector, and the international community are developing preparedness and response strategies to mitigate pandemic-related impacts. For example, the U.S. Government published the “National Strategy for Pandemic Influenza” in November 2006 (available at <http://www.whitehouse.gov/homeland/pandemic-influenza.html>). That strategy seeks to provide a framework for U.S. Government pandemic-related planning efforts, and specifically recognizes the need to integrate non-health sectors, including the private sector and critical infrastructure entities, in those planning efforts.

Ongoing federal government planning is addressing potential adverse effects of pandemics on numerous critical infrastructure sectors, including health care, energy, transportation, communications, food, and financial services. The electricity production and delivery systems, two important elements of the North American economic and social infrastructure, must remain dependable during a pandemic. Most other critical elements of the infrastructure depend on the availability of an interconnected, stable, and reliable supply of electrical power. There is no doubt that cascading or even localized outages of generators and transmission facilities could have serious short-term and long-term consequences.

The 103 nuclear power plant units currently operating in the U.S. constitute a critical component of the U.S. electricity infrastructure. Continued safe operation of those plants during a pandemic event is essential to maintaining stable and reliable electrical power supply systems, and providing necessary reserve power if there are major losses at other generating facilities. To further these planning efforts, and to provide assurances of safe operation of nuclear power facilities, the NRC is actively planning to address the consequences of a pandemic on the nuclear component of our energy supply. These efforts are intended to address emergency measures to minimize the spread of the infectious disease among essential federal and private sector personnel, and to ensure that power plants continue to operate safely and reliably in the event of a pandemic outbreak.

The principal threat to nuclear and other generating facilities posed by a pandemic is the absence of essential personnel from the workplace for extended periods, possibly on the order of weeks to months. Federal government projections suggest that in the event of a pandemic, such as might be associated with the avian flu, local absenteeism of up to 40 percent for a period of weeks, and over a period of 12 to 18 months nationally (due to multiple waves of illness), could occur. The NRC recognizes that operators of nuclear power plants must be accorded some regulatory flexibility if they are to maintain plant operation during a pandemic event that adversely impacts their workforces. The need for such flexibility must be balanced with the need to ensure adequate protection of the public health and safety, the common defense and security, and the environment.

Accordingly, the NRC is issuing this guidance concerning the process for exercising enforcement discretion in certain situations where power reactor licensees encounter compliance issues caused by pandemic-related impacts. The exercise of enforcement discretion may provide the regulatory flexibility needed to allow continued plant operation so long as the licensee and the NRC have determined that safety will not be unacceptably affected. This policy is intended to provide a mechanism for assuring continued safe operation of nuclear power plants in a pandemic, while minimizing adverse impacts on the electrical operation infrastructure and other elements of critical infrastructures. As noted above, the NRC also is assessing the implications of a pandemic for its own workforce, with a particular focus on how to maintain mission-critical functions during extended periods of worker absenteeism.

Scope

This enforcement policy provides for the exercise of enforcement discretion to address noncompliance with operating licenses (including TSs) and other applicable NRC requirements because of workforce shortages related to pandemic events. Thus, this interim enforcement policy applies only to situations in which plant operation is impacted by a pandemic. If such situations occur, licensees are expected to follow the existing guidance in NRC Inspection Manual Part 9900 for Notices of Enforcement Discretion to the extent practicable, particularly regarding safety determinations and notification of the NRC. Licensees may decide to continue operations upon making a determination that it is safe and prudent to do so. Further, although the NRC does not anticipate that a pandemic would cause a loss of all communications between the NRC and its licensees, this enforcement discretion does extend to situations in which the licensee may be unable to communicate with the NRC.

With respect to future enforcement, to the extent noncompliance with otherwise applicable requirements is involved, the NRC staff would normally take enforcement action for the root causes that led to the noncompliance for which enforcement discretion was used. In the pandemic context, the NRC would consider enforcement only if the underlying cause of the non-compliance is not pandemic-related. Enforcement action also will be considered in those cases in which materially incorrect or incomplete information was provided to the NRC by a licensee in its justification. The NRC recognizes that a licensee will need to exercise judgment in making a determination under this discretion provision. Consistent with the NRC's position involving 10 CFR 50.54(x), enforcement action for a violation of a license condition, including a TS, will not be taken unless a licensee's action was clearly unreasonable considering all the relevant circumstances. Enforcement action could include the assessment of civil penalties and the issuance of orders.

Paperwork Reduction Statement

This interim policy statement does not contain a new or amended information collection requirement subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing requirements were approved by the Office of Management and Budget, approval number ____-____.

Public Protection Notification

If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection. The NRC is revising the NRC Enforcement Policy by adding Appendix __ to read as follows:

General Statement of Policy and Procedure for NRC Enforcement Actions

* * * * *

Appendix __: Interim Enforcement Policy Regarding Enforcement Discretion for Nuclear Power Plants During a Human Pandemic Event

This appendix sets forth the interim enforcement policy that will govern the exercise of enforcement discretion by the NRC staff when licensees of operating nuclear power plants find it necessary to deviate from their license, including technical specifications (TSs), and other applicable NRC requirements in the event of pandemic impacts. Under certain circumstances this policy may extend to situations in which a licensee is unable to communicate with the NRC.

Effective Date: The policy is effective _____ and will remain in effect unless and until the Commission determines otherwise. This policy statement does not identify specific periods of applicability because the precise cause, timing, and duration of a pandemic outbreak are uncertain and depend on many factors. Furthermore, impacts on individual licensees could, and likely will, vary significantly. Further, this guidance is interim insofar as it applies only when a pandemic exists, as determined by the appropriate international and/or U.S. health authorities, or the pandemic results in plant-specific impacts that warrant consideration of NRC enforcement discretion.

Initiation and Termination: This interim enforcement policy will apply only where (1) appropriate international, U.S., or state health authorities determine that a pandemic exists in regions in which nuclear power facilities are located, or (2) a power reactor licensee determines that there are plant-specific staffing impacts

that have occurred or are known to be imminent at its nuclear station due to pandemic illness.

Upon licensee notification to the NRC of such impacts [*reference template*¹], the NRC will confirm that the licensee may apply this Interim Policy for its facility. When the pandemic ceases to cause plant-specific staffing impacts for a particular activity at its nuclear station, and the staffing levels remain stable for a reasonable period of time, the licensee will declare that the pandemic event for the particular plant activity has ended and so notify the NRC.

Application of Enforcement Discretion: Upon satisfaction of applicability criterion (1) or (2), the NRC will consider the exercise of enforcement discretion with regard to the potential noncompliance with the license, including TSs, or other NRC regulatory requirements, in accordance with this interim policy.

This interim policy addresses both pre-established pandemic enforcement discretion for specific requirements and plant-specific pandemic enforcement discretion to be considered when needed.

Pre-established discretion provisions are listed below in the Table, which is based on the staff's independent review of the NEI Pandemic Licensing Plan that was submitted to NRC by NEI letter dated _____. The pre-established enforcement discretion criteria generally provide temporary relief to licensees from administrative or surveillance requirements that can readily be deferred until the pandemic has ended. Pre-established discretion criteria also address certain site-specific staffing levels otherwise required by regulation or license, including TSs. For the pre-established enforcement discretion, a safety assessment has already been performed, and licensees do not need to conduct additional assessments. Licensees should notify the NRC in writing [*reference template*] of their intent to apply one or more of these provisions prior to their application. If a licensee does not notify the NRC in writing of its intent prior to applying one or more of the pre-established discretion provisions, the licensee must notify the NRC in writing within 30 days of its application of each discretion.

Plant-specific discretion may be sought and considered when needed where the particular relief is not set forth in the pre-established discretion provisions. Application of such discretion would require the licensee to perform a safety assessment and notify the NRC prior to taking specific action during a pandemic [*reference notification template*]. Based on the safety assessment the Commission may determine that any decrease in safety as a result of continued plant operation

¹ NEI proposes that for ease of administration and recordkeeping standard templates be employed in connection with the application of this policy, including templates for licensee notification of pandemic conditions, requests for discretion, and NRC confirmation of discretion approval.

is small (considering both risk and deterministic aspects), and reasonable assurance of public health and safety, the environment, and security is maintained with the enforcement discretion. The Commission will notify the licensee of its approval or disapproval of the discretion.

[Insert Table]

Supplementation of Pre-Established Discretion: In the event experience with plant-specific discretion requests during the pandemic indicates that a particular action appropriately may be included in the pre-established discretion provisions, the NRC shall so notify licensees and such requests will thereafter be treated as meeting the requirement for pre-established discretion.

Safety Assessments for Licensee-Specific Discretion: Licensees are expected to follow the existing guidance as stated in NRC Inspection Manual Part 9900 for Notices of Enforcement Discretion to the extent practicable, for the safety assessment performed for licensee-specific enforcement discretion requests. A licensee must provide a written justification, or in circumstances in which good cause is shown, an oral justification followed as soon as possible by written justification. The justification must document the need and safety basis for the request and provide whatever other information the NRC staff needs to make a decision regarding whether the exercise of discretion is appropriate.

The NRC staff may grant enforcement discretion on the basis of balancing the public health and safety or common defense and security of not operating against potential radiological or other hazards associated with continued operation, and a determination that safety will not be unacceptably affected by exercising the discretion. The Director of the Office of Nuclear Reactor Regulation, or designee, will orally advise the licensee whether the NRC has approved the licensee's request and, if so, will subsequently confirm the exercise of discretion in writing. Confirmation of approval may be documented utilizing *[reference template]*.

Enforcement discretion will only be exercised if the NRC staff is satisfied that the action is consistent with protecting public health and safety and is warranted in the circumstances presented by the licensee. Contrary to Part 9900 Section B.3 guidance, it is not necessary for an emergency to be declared by a government entity before exercising enforcement discretion. Licensees are encouraged to contact NRC early in their evaluation process, particularly if time is of the essence, even though complete information as specified in Part 9900 may not be available.

If the volume of requests to the NRC Headquarters Operations Center is such that the NRC staff cannot review and approve all licensee requests in a timely fashion, the NRC staff will obtain, either orally or in writing, the safety-significant information from the licensee to enable the NRC staff to make a prompt initial

assessment. Unless the initial assessment is unfavorable, the licensee would be permitted to proceed with its planned course of action based on oral approval. Documentation of this communication may be made utilizing *[reference template]*. The NRC staff will complete the assessments as time permits and the licensee will be advised of the results orally, if possible, and then in writing. If the NRC staff's prompt initial assessment or subsequent assessment determines that a licensee's actions raise safety concerns, the licensee would be so informed. The licensee would then be required to follow its license conditions, including TSs, or other applicable NRC requirements from which the licensee seeks temporary relief.

Application in the Event of Communication Difficulties: If there are communications difficulties between the licensee and the NRC Headquarters Operations Center, the licensee is encouraged to communicate with the NRC inspector onsite. The inspector should be able to facilitate communication with the NRC Headquarters Operations Center and/or the _____. If communication with the NRC Headquarters Operations Center is not possible, then the licensee should contact _____ to request enforcement discretion. Similarly, if _____ cannot be reached, then the licensee should attempt to contact _____. If communication with NRC is not possible, the licensee may continue to apply pre-established discretion criteria. With respect to the licensee-specific discretion requests, the licensee should follow the plant license conditions, including technical specifications.

Enforcement: The decision to exercise enforcement discretion does not change the fact that the licensee will be in noncompliance, nor does it imply that enforcement discretion is being exercised for any noncompliance that may have led to the noncompliance at issue. In the pandemic context, the NRC staff will consider enforcement action only if the underlying cause of the noncompliance is not pandemic-related. Enforcement action will also be considered in those cases in which materially incorrect or incomplete information was provided to the NRC by a licensee in its justification. The NRC recognizes that a licensee will need to exercise judgment in making a determination under this discretion provision. Consistent with the NRC's position involving 10 CFR 50.54(x), enforcement action for a violation of a license condition, including a TS, or any other applicable NRC requirement, will not be taken unless a licensee's action was clearly unreasonable considering all the relevant circumstances. Enforcement action could include assessment of civil penalties and the issuance of orders.

Dated at Rockville, Maryland, this __ day of _____, ____.