

**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**



***INTERIM  
PANDEMIC RESPONSE PLAN***

## OVERVIEW

On November 1, 2005, President George W. Bush announced the *National Strategy for Pandemic Influenza (National Strategy)* and directed all Federal agencies to begin internal planning to ensure readiness in the event of an influenza pandemic. This document constitutes the Nuclear Regulatory Commission (NRC) Pandemic Response Plan.

In addition to the *National Strategy*, this Plan reflects considerations provided in the *National Strategy for Pandemic Influenza Implementation Plan* issued by Homeland Security Council in May 2006 and in the *Continuity of Operations Pandemic Influenza Guidance* memorandum issued by the Department of Homeland Security, via the Federal Emergency Management Agency's (FEMA) Office of National Security Coordination on March 1, 2006. Consistent with the guidelines presented in the *Implementation Plan*, this Plan was developed to ensure that the NRC will be able to maintain its essential functions and services in the face of a pandemic, i.e., to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment. In addition, the Plan recognizes the need for the NRC to anticipate and be prepared for responding to the Nation's needs during a pandemic to monitor and ensure adequate safety while allowing licensees to maintain essential services to the public during a pandemic.

The NRC Continuity of Operations (COOP) Plan provides for ensuring the NRC's mission-essential functions continue uninterrupted during a wide range of potential emergencies and disruptions, including the loss of all facilities and equipment at NRC Headquarters. The COOP Plan provides for continuity of mission essential functions for up to 30 days during and after natural or man-made emergencies that are expected to occur at times and places that are fairly well defined. The NRC Pandemic Response Plan, on the other hand, is intended to be complementary to the COOP Plan in that it provides for continuity of mission essential operations in response to a pandemic which could present a more persistent and widespread assault that may grow and fade across the Nation over a period of many months before finally dying out.

Because of the large uncertainty about how and when a pandemic could affect the United States, the Plan was designed to be flexible to accommodate changes brought on by a pandemic to enable rapid preparations and response. The pandemic threat is constantly evolving as is our level of preparedness. Therefore, this Plan will be revised over time. The Plan will be reviewed on a continuous basis and revised as appropriate to reflect changes in our understanding of the threat and the state of relevant response capabilities and technologies.

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## 1. BACKGROUND

On November 1, 2005, President George Bush announced the *National Strategy for Pandemic Influenza* and directed all Federal agencies to begin internal planning to ensure readiness in the event of a pandemic. This document constitutes the NRC Pandemic Response Plan. Implementation of this Plan, along with supporting Office-level procedures, will help to ensure NRC's mission to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment.

Pandemics occur when a disease such as a novel influenza virus emerges that infects and can be efficiently transmitted between humans. Animals are the most likely reservoir for these emerging viruses; avian viruses played a role in the last three influenza pandemics. Two of these pandemic-causing viruses remain in circulation and are responsible for the majority of influenza cases -- resulting in approximately 36,000 deaths and more than 200,000 hospitalizations each year in the United States.

The last three pandemics, in 1918, 1957, and 1968, killed approximately 40 million, 2 million, and 1 million people worldwide, respectively. Although the timing and severity cannot be predicted, history and science suggest that we will face one or more pandemics in this century.

The current potential pandemic threat stems from an unprecedented outbreak of avian influenza in Asia, Africa, and Europe, caused by the H5N1 strain of the Influenza A virus. Although the virus has not yet shown an ability to transmit efficiently between humans, there is concern that it will acquire this capability through genetic mutation or exchange of genetic material with a human influenza virus.

It is impossible to know whether the currently circulating H5N1 virus or a new unknown virus will cause a human pandemic. The widespread nature of H5N1 in birds and the likelihood of mutations over time raise concerns that the virus will become transmissible between humans with potentially catastrophic consequences. If this does not happen with the current H5N1 strain, history suggests that a different influenza virus may emerge and result in a future pandemic.

If a pandemic occurs, it is likely to come in waves for a period up to a year or more with each wave expected to last about 2 to 3 months, and pass through communities of all sizes across the Nation and the world. Although a pandemic will not directly damage power lines, banks, or computer networks; it could, if not adequately prepared for, threaten continued safe and secure operation of critical infrastructure, including nuclear facilities and materials, by removing essential personnel from the workplace for weeks or months. A high death toll could cause permanent changes in population demographics and disproportionate impacts in some communities and locations. The pandemic, in combination with response actions by people, governments, and business could significantly disrupt the functioning of society and economies.

The NRC's Pandemic Response Plan is intended to equip NRC managers and staff to maintain adequate protection of public health and safety, promotion of the common defense and security, and protection of the environment through the continuity of the agency's more important functions, identified as Pandemic Priority Functions (PPFs), in the event of a pandemic that could significantly increase absenteeism at NRC and in licensed activities. In conjunction with this Plan, each NRC Office and Region will develop Office-level procedures to support continuation of these priority functions during a pandemic.

## 2. INTRODUCTION

## 2.1 Planning Assumptions

Pandemics are unpredictable, and it is difficult to know the characteristics of a pandemic virus before it emerges. Nonetheless, assumptions need to be made for planning purposes based on best estimates using current knowledge. Consistent with the guidance provided in the *National Strategy for Pandemic Influenza Implementation Plan*, the following assumptions were considered in developing the NRC Pandemic Response Plan:

- Efficient and sustained person-to-person transmission signals an imminent pandemic.
- The clinical disease attack rate will be 30 percent in the overall population during the pandemic. Illness rates will be highest among school-aged children (about 40 percent) and decline with age. Among working adults, an average of 20 percent will become ill during a community outbreak.
- Some people will become infected but will not develop clinically significant symptoms. Asymptomatic or minimally symptomatic individuals can transmit infection and develop immunity to subsequent infection.
- While the number of patients seeking medical care cannot be predicted with certainty, about half of those who became ill during previous pandemics sought care. Depending on the availability of effective antiviral medications for treatment, this proportion could be higher in the next pandemic.
- Risk groups for severe and fatal infections are more likely to include infants, the elderly, pregnant women, and persons with chronic or immunosuppressive medical conditions.
- Depending on the severity of a pandemic, absenteeism attributable to illness, the need to care for ill family members, and fear of infection may reach 40 percent during the peak weeks of a community outbreak with lower rates of absenteeism during the weeks before and after the peak. Certain public health measures (e.g., closing schools) are likely to increase rates of absenteeism.
- Typical incubation period (interval between infection and onset of symptoms) for influenza is approximately 2 days.
- Persons who become ill may shed virus and can transmit infection for 12 to 24 hours before the onset of illness. Viral shedding and risk of transmission will be greatest during the first 2 days of illness. Children will play a major role in transmission of infection as their illness rates are likely to be higher; they shed more virus over a longer period of time, and they control their secretions less well.
- Epidemics will last 6 to 8 weeks in affected communities.
- Multiple waves of illness (periods during which community outbreaks occur across the country) are likely to occur with each wave lasting 2 to 3 months.

## 2.2 Objectives

Consistent with the *National Strategy for Pandemic Influenza Implementation Plan*, the goal of this Plan is to address how NRC will (1) ensure that the NRC will be able to maintain its essential functions and services in the face of significant and sustained absenteeism – to ensure adequate protection of public health and safety, promote the common defense and

security, and protect the environment; (2) provide for the health and safety of the NRC employees; (3) prepare for potential adverse impacts of a pandemic and mitigate their impacts; and (4) communicate pandemic preparedness and response guidance to all stakeholders of the NRC.

### 2.3 NRC Pandemic Priority Functions

The NRC's responsibilities during a pandemic remain unchanged in ensuring adequate protection of public health and safety, promotion of the common defense and security, and protection of the environment through effective regulation of civilian use of radioactive material. Although safety remains paramount, the margin of safety may need to be adjusted to accommodate national and Regional needs to maintain essential services during the emergency caused by a pandemic. Depending on the severity of a pandemic, the impacts of absenteeism on licensees and at the NRC and consequently on the agency's ability to maintain its day-to-day functions and activities could be wide-ranging.

The anticipated scenario presumes 40 percent absenteeism during the peak of a pandemic wave. For such a condition, this Plan has identified a core set of NRC functions, called Pandemic Priority Functions (PPFs), that must be maintained throughout a pandemic to preserve the agency's statutory obligations. Although these functions represent a reduced set of day-to-day functions at the NRC, implementation of these functions is expected to maintain continuity of priority operations at the NRC and sufficient oversight of licensed activities to maintain adequate protection of public health and safety. The PPFs along with their support requirements are identified in Table 1.

As shown in Table 1, the PPFs are divided into seven general categories: Incident Response, Threat Assessment and Dissemination, Pandemic-related Communications, Licensing, Enforcement, Inspection, and Enterprise Support Functions. The functions within these categories comprise the mission-essential and supporting functions that the NRC plans to maintain during a pandemic in accordance with the planning assumptions provided in Section 2.1 of this Plan.

If the severity of a pandemic is not as serious as assumed with a concomitant lowering of the absenteeism rate, challenges to licensee staff in performing safety and security functions will be reduced and the NRC staff will maintain agency functions beyond those identified as PPFs, albeit at a level lower than the agency's full set of day-to-day functions under normal conditions. Even if a presumed set of pandemic conditions described in Section 2.1 is eventually reached or experienced, it may be possible to shed functions on a gradual basis from the full set of functions to performing only PPFs.

The staff plans to shed work functions (from the typical full set to PPFs), consistent with the standard add-shed process used, and employ remote decisionmaking by and for each program, support, or Regional Office in their respective Office-level procedures or instructions. As an example, baseline inspection which is not identified as a PPF could be continued even after the onset of a pandemic if conditions allow for this function to be continued (e.g., inspector availability, plant accommodation, functioning transportation infrastructure, infection control). If conditions deteriorate where the level of effort needed to perform a baseline inspection is no longer available or is otherwise constrained, then this function would be deferred.

### 2.4 Responsibilities

At the direction of the Commission, the Executive Director for Operations (EDO) established a Task Group, led by the Deputy Executive Director for Information Services and Administration

and Chief Information Officer, for the development of this Plan and the associated Annexes with major support from Offices of Administration (ADM), Human Resources (HR), Nuclear Material Safety and Safeguards (NMSS), Nuclear Reactor Regulation (NRR), Nuclear Security and Incident Response (NSIR), Chief Financial Officer (OCFO), Enforcement (OE), General Counsel (OGC), Information Services (OIS), Public Affairs (OPA), Nuclear Regulatory Research (RES), and State and Tribal Programs (STP). NSIR, has the responsibility for the maintenance of this Plan and the associated Annexes. NSIR will coordinate and confirm the development of individual Office-level procedures for the agency's Pandemic Response Plan, and will confirm that the preparedness requirements within those documents are performed.

- With support from other Offices, NSIR will lead in annually reviewing and updating the Pandemic Response Plan and its associated Annexes.
- The Offices with responsibilities for performing any of the PPFs and the Offices responsible for supporting those Offices will develop and maintain the following:
  - Personnel qualified to perform the functions
  - Procedures required to implement the Pandemic Response Plan
  - Systems required to support those functions
  - Staff and contractors qualified to operate and maintain the support systems

Offices will manage and report on progress in achieving items noted above in their respective operating plans.

### 3. CONCEPT OF NRC OPERATIONS DURING A PANDEMIC

#### 3.1 Decision Authorities

Based on the nature and severity of the situation, the decision to implement the NRC Pandemic Response Plan can be made in several different ways:

- The President may direct each department and agency to implement their pandemic response plan.
- The Secretary of the Department of Homeland Security (DHS), or designated representative, may direct implementation based on a relevant national emergency or threat under the National Response Plan.
- The NRC Chairman, or designee (typically a member of the Commission), may direct that the Plan be implemented based on information related to elevated concerns of a pandemic threat that could affect NRC or NRC-regulated activities.

#### 3.2 Pandemic Response Considerations

Unlike the NRC Continuity of Operations (COOP) Plan which provides for continuity of mission-essential agency functions for up to 30 days during and after natural or man-made emergencies that are expected to occur at times and places that are fairly well defined, this Plan provides for continuity of NRC operations in response to a pandemic which could present a more persistent and widespread assault that may grow and fade over a period of many months before finally dying out. A pandemic is not expected to be localized in either time or space, and it will likely cause increasing absenteeism at many NRC and licensee locations concurrently. Although Headquarters is expected to lead the agency throughout a pandemic, it is possible that the agency may not be able to lead its responses from any single location, including the alternate

COOP site. Preparedness for a pandemic requires new concepts for management and response.

A pandemic is expected to manifest its onset by growing rates of absenteeism. NRC and other organizations regularly adapt to some “normal” rate of absenteeism before extraordinary procedures must be invoked to keep up with the most important work. For example, licensees deal with such situations during strikes and related labor actions. The NRC deals with similar situations during the winter holiday period. Based on an assessment of the potential adverse impacts of a pandemic on NRC operations, the staff has identified the need to execute the following preparations or actions for a pandemic:

- Implement a pandemic-related communication plan that addresses topics like known characteristics of avian flu, personal hygiene techniques, and prevention.
- Establish a process for reporting absentee rates throughout the NRC to senior agency managers.
- Implement a process for initiating and terminating NRC’s response to a pandemic as provided in Annex A, “Guidance for Developing Pandemic Response Procedures” and in Annex B, “Pandemic Preparedness Roles and Responsibilities.”
- Confirm that licensees are prepared to respond to a pandemic as necessary to protect public health and safety, promote the common defense and security, and protect the environment (analogous to oversight of strike preparations). This could include confirming that licensees have sufficient staffing levels in key positions to maintain safety and security of licensed facilities and materials during a pandemic.
- Current established procedures provide for NRC to assume jurisdiction if an Agreement State informs NRC that the State cannot fulfill its responsibility because of a pandemic influenza and relinquishes its authority under 274b, or terminate its contract under Section 274i, back to NRC. NSIR and NMSS will assume responsibility for ensuring the protection of public health and safety and the environment. STP will pursue actions for the continuation of other PPFs with the applicable NRC Regional office and NSIR and NMSS, until such time that the State may resume its responsibilities as an Agreement State under Section 274b or resume its contract under Section 274i.
- Maintain communications with the NRC staff, domestic, international, State, local, and Native American Tribal government officials, licensees, media, and public.
- Each Office and Region will develop and implement pandemic related processes and procedures to execute the PPFs in Table 1 including orders of succession, and delegation of authority.
- Office Directors will use an add/shed process consistent with PPFs and other agency priorities to delay, defer, or cancel planned activities to support implementation of this Plan. Office Directors may choose to delay, defer, or cancel functions other than the PPFs at one time, in preplanned stages as absenteeism increases, or as a gradual shedding of work.
- The staff will prepare primary and alternate staffing plans required to meet NRC PPF obligations. Although this is nominally an NSIR function (for Priority Mission Essential Function within COOP Plan), staffing is a management function. (See the memorandum from the Executive Director for Operations to Office Directors and Regional Administrators concerning such staffing, which is available in ADAMS as ML050810158).

- Each Office will prepare assignments for adequately staffing each of the PPFs defined in Table 1. Offices should collaborate in order to:
  - Identify critical skills and the individuals who possess the skills to perform the PPFs as well as those who can be reassigned due to delayed or cancelled functions.
  - Identify and designate qualified staff required to provide sufficient depth for each PPF and, where necessary, request additional staff and training.
- Offices will expand flexible work schedules, alternate work locations, and telecommuting to support the PPFs. The plans and procedures for this mission will:
  - Establish requisites and criteria for remote decisionmaking by key managers and members of the technical staff.
  - Establish effective controls for sensitive information management.
- Include anticipated costs of preparing for a flu pandemic in Office budgets.
- To prepare for safety or security incidents or work situations requiring communication coordination through the Headquarters Operations Center, NSIR will prepare concepts and expected requirements for “distributed management” and “distributed operations” to be used during a pandemic and concurrent responses to emergencies defined in the COOP Plan. If pandemic effects prevent the agency from staffing a lead location, NRC could support a lead decisionmaker with appropriate technical teleconferences, as discussed further in the following section.
- Review Presidential Emergency Action Documents (PEADS), select those most likely to be needed by NRC, and prepare potential requests to be modified and submitted only as the Commission directs. (Readiness is recommended because demands for White House actions will likely be heavy when the NRC’s own needs are highest.)

### 3.3 Distributed Management and Distributed Operations

Distributed management involves establishment of communications links for the NRC staff to engage with one another to perform various NRC functions during a pandemic if such gatherings cannot take place at the Headquarters facilities or at a Regional facility either because the facility is uninhabitable, people cannot make it to the facility, or social distancing guidelines restrict face-to-face communications. NRC has tested distributed management and operations for potential COOP situations and noted its potential value during a pandemic. It is fundamental to proper functioning of the Pandemic Executive Team (PET) as discussed in Section 4, “Pandemic Executive Team,” of this Plan. The application of this concept depends on the following:

- Keeping either the Headquarters Operations Officers (HOO) or the Regional Operations Officers (ROO) functional in their normal locations because the NRC does not have the necessary communications equipment anywhere else.

- Keeping the HOOs and the ROOs aware of the all-hours telephone numbers for core members and potential members of the PET whose memberships could potentially be changing.

The concept of distributed operations is an extension of the concept of distributed management and can also be referred to as a “virtual work place” because it is based on forming staff (pre-designated by their Office Directors) into teams and linking them by teleconferences. These concepts are wide in scope, and they can be applied to all PPFs beyond incident response and threat assessment and dissemination. The HOOs or the ROOs are expected to serve as the central communications link to key decisionmaking managers and technical staff for arranging teleconferences.

Distributed management and operations depends on preparations (led by NSIR with support from OIS, ADM, HR, and the Regions) to address the following issues:

- The HOOs and ROOs must be physically in place at their respective stations, as noted above. Otherwise, the NRC must devise a communications alternative.
- The HOO or ROO staffs must be protected from the pandemic. Sequestering should be considered although expert opinions are divided on this approach. The staff must be protected, while providing for rest, food, and family responsibilities. The Occupant Emergency Plan will be reexamined and modified, as appropriate, to address this potential need.
- Consider augmenting the HOO or ROO staffs to support pandemic-related communications, team conferences, the PET, possibly increased event reports from licensees, and other calls concerning the status of their operations. Former HOOs should be re-qualified to augment the pool, as necessary.
- Telephone and computer technicians are needed for support for equipment operations and maintenance. When developing contracts for these activities, consider addressing the changing needs during a pandemic.
- Consider assessing communications upgrades to Headquarters (and the alternate COOP site) to ensure the new capabilities will support the pandemic scenario, including an automated telephone answering, forwarding, and messaging system.

### 3.4 Incident Response during a Pandemic

The NRC’s response to safety or security-related incidents involving licensed facilities or materials is one of the most important functions the agency performs to fulfill its mission. This Plan identifies this function as a PPF. The job tasks and support requirements are provided in Table 1, “Pandemic Priority Functions.” The NRC Incident Response Plan (NUREG-0728) provides the NRC implementing procedure for supporting the National Response Plan, including issues related to pandemic hazards. Any incident response unique to a pandemic condition not addressed in the agency COOP Plan or the Incident Response Plan is addressed below.

If an incident requiring activation of the COOP Plan (e.g., loss of communications systems at the Headquarters or any local problem that could render the Headquarters facility to be uninhabitable such as loss of water) occurs during a pandemic, implementation of the COOP Plan and its Priority Mission Essential Functions will take precedence over implementation of the Pandemic Response Plan.

A more challenging scenario would be if a pandemic uniformly and severely affects the Nation and creates conditions that could make it impossible for HOOs or ROOs to be physically established in their respective stations. For such a situation, the NRC must devise a communications alternative in accordance with existing plans, recognizing that such alternate means for re-establishing HOO/ROO communications capability will be limited, which in turn will limit the staff's capability to perform distributed management and operations. For this reason, NSIR will prepare to implement the Incident Response Plan with full staffing capability at the Headquarters Operations Center for as long as possible before the Center becomes uninhabitable and necessitates a transition to alternate communications means.

Decisions to implement the Pandemic Response Plan may occur in conjunction with other NRC and Federal emergency plans:

- The agency may be operating normally with no other emergency plans or emergency staffing implemented.
- The agency may have implemented its Incident Response Plan and is staffed to respond to an emergency involving NRC-licensed activities.
- The agency may have implemented the NRC COOP Plan in response to a local problem. This would change staffing levels at Headquarters and in the Regional Offices, including the possibility that any NRC facility may be evacuated under the Occupant Emergency Plans.
- More serious national problems may have required NRC to provide staff to meet its Federal Continuity of Government (COG), COOP, and other responsibilities.

Incident Response, COOP, and Federal responsibilities may, therefore, be required in any combination. The Pandemic Response Plan is not intended to change the way in which any of the established plans are implemented. The NRC COOP Plan provides umbrella guidance for ensuring temporary continuity of the agency's few mission-essential functions (defined in accordance with Presidential Decision Directive 67) throughout a wide range of incidents. The Pandemic Response Plan complements these existing plans and provides guidance to ensure that staffing and support for those mission-essential functions, as well as for other PPFs detailed in this Plan, are sustainable during persistent assaults on NRC's ability to function.

### 3.5 Reconstitution

Reconstitution may be as simple as employees returning to work, a much more complex and extended process involving decontamination and relocation to new work locations, and/or the replacement of staff that have died. There may even be partial reconstitution between peaks of the pandemic waves. Complete details cannot be planned until the characteristics of the pandemic are more fully assessed. See Section 5.3, "Stage III: Reconstitution," and Annex I, "Reconstitution Procedure." The agency could establish a health screening unit for returning employees if and when screening techniques become feasible.

### 3.6 Orders of Succession

Identifying an order of succession is critical to ensure effective leadership during a pandemic. In the event that an incumbent is unavailable to fulfill essential duties, successors have been identified to ensure there is no lapse in essential decisionmaking authority. The NRC orders of succession for pandemic preparedness are provided in Annex D, "Orders of Succession, Delegation of Authority, and Devolution Plans," and in Office-specific procedures.

In the event a PET member becomes debilitated or is unavailable to perform his or her duties, roles, and responsibilities, the HOO will ensure that a successor is notified. The successors must notify the HOOs that they have assumed the responsibilities of their new positions. Office Directors will maintain cognizance of in-office successions.

### 3.6.1 Order of Succession to Head the Agency

The Chairman is the head of the agency and may delegate some or all of his or her authority to an Acting Chairman. Under Section 3 of Reorganization Plan No. 1 of 1980, the Chairman may exercise all functions of the Commission pertaining to an emergency; the Chairman may delegate such authority in whole or in part to another member of the Commission or the NRC staff. In the event that a COOP Plan is required to be activated during a pandemic, the COOP Plan provides for an order of succession for the Chairman.

### 3.6.2 Order of Succession Within Offices

Each Office will prepare and maintain an order of succession, by position, to head the Office and each management position down to the branch level as appropriate to perform the PPFs. Where practical, there should be three or more successors to each position that supports performance of PPFs. Office Directors will maintain cognizance of in-office successions.

## 4. PANDEMIC EXECUTIVE TEAM

NRC procedures and the National Response Plan inform and guide NRC management and staff actions before any kind of pandemic concern becomes a predictably developing threat to NRC or licensee operations. Once a clear and predictable threat is apparent, the Executive Team, led by the Chairman or designee (typically a member of the Commission), will consider forming a special management team, or the Pandemic Executive Team (PET), to follow the progress of the pandemic threat and to monitor the situation, communicate and coordinate with external and internal stakeholders, and prepare to implement the Pandemic Response Plan. The PET will provide for a focused response, much like the Executive Team for licensee safety and security incidents and the COOP Management Team (CMT) for threats to continuity of agency operations. The PET will be challenged by potentially massive and frequent information exchanges that will need to be sorted, assessed, and summarized to guide agency and Federal decisions, including periodic situation summaries expected from DHS. A more detailed description of the PET function and membership is provided in Annex H, "Pandemic Executive Team Response."

### 4.1 Pandemic Executive Team Membership

The PET is unlike the CMT, which must be formed quickly from readily available managers and must begin immediately to respond to rapidly changing consequences of singular incidents. The formation of an initial PET is likely to be potentially less urgent, but will require backfilling in case members of the PET become affected by the pandemic illness. Initially, there should be adequate time for organizing the PET. The membership of the PET should be similar to that of the CMT, and it should consist of the following members:

- Chairman or designee as the PET Leader (designee will typically be a member of the Commission)
- Executive Director for Operations
- Deputy Executive Director for Reactor and Preparedness Programs

- Deputy Executive Director for Materials, Research, State, and Compliance programs
- Deputy Executive Director for Information Services and Administration and Chief Information Officer
- Regional Administrators  
[Provides information about Regional programs and staff concerning PPFs]
- General Counsel (OGC)  
[Provides legal advice from the Office of the General Counsel]
- Director, Office of Information Services (OIS)  
[Provides information regarding internal NRC information systems and network infrastructure]
- Chief Financial Officer (CFO)  
[Provides financial management direction and support]
- Director, Office of Administration (ADM)  
[Provides facilities maintenance, facilities security, contract, and critical administrative services direction and support]
- Director, Office of Human Resources (HR)  
[Provides human capital support/advice and status information for employees]
- Director, Office of Public Affairs (OPA)  
[Provides status information for the media and the public]
- Director, Office of Nuclear Reactor Regulation (NRR)  
[Provides advice and support concerning NRR PPFs and staff]
- Director, Office of Nuclear Material Safety and Safeguards (NMSS)  
[Provides advice and support concerning NMSS PPFs and staff]
- Director, Office of Nuclear Regulatory Research (RES)  
[Provides advice concerning RES staff availability and support to others' PPFs]
- Director, Office of Nuclear Security and Incident Response (NSIR)  
[Provides advice and support concerning NSIR PPFs and staff]
- Director, Office of State and Tribal Programs (STP)  
[Provides advice and support concerning STP PPFs and staff]

The PET Leader (PETL) may choose to add other members as necessary and appropriate.

#### 4.2 Pandemic Executive Team Responsibilities

The responsibilities of the PET include the following:

- The PET will advise the PETL (Chairman or designee - a designee will typically be a member of the Commission) on the current situation, communication and coordination, and status of pandemic operations.

- The PET will determine if any of the preparations described in Annex B, “Pandemic Preparedness Roles and Responsibilities,” still need to be completed and make assignments as necessary.
- The PET will determine if further preparations, based on newer information, are reasonable and, if so, assign them. As a general rule in emergencies, it is useful to proceduralize in advance actions that can reasonably be predicted, thereby freeing response teams to concentrate on the unique circumstances and concerns that arise as the incident progresses.
- Initiate the use of the preparations in Section 3.2, “Pandemic Response Considerations.”
- Direct each Office and Region to begin implementation of pandemic procedures unless exceptions are warranted.
- Decide whether to authorize implementation of expanded flexible work schedules, alternative work locations, and telecommuting.
- Monitor and respond to Federal staffing and reporting obligations, e.g., COG.
- Assign responsibilities for managing responses to other concurrent agency or Federal emergencies using existing plans, e.g., managing an NRC building emergency (like a loss of water or power) in conjunction with the implementing National Response Plan.
- Monitor performance of PPFs and direct adjustments as necessary.
- Review Presidential Emergency Action Document requests and make appropriate recommendations to the Chairman or designee (typically a member of the Commission) for action.
- Decide to terminate implementation of Pandemic Response Plan and assign follow-up actions or transition to the NRC’s COOP Plan or Incident Response Plan.

## 5. IMPLEMENTING THE PANDEMIC RESPONSE PLAN

The NRC Pandemic Response Plan will be implemented in the following three stages:

- *Stage I: Initiation* – The Chairman or designee (typically a member of the Commission) initiates implementation of the agency Pandemic Response Plan. The Chairman or designee (typically a member of the Commission) may initiate implementation of the Pandemic Response Plan based on the NRC’s assessment of the situation or in response to a directive issued by the President or DHS, e.g., declaration of Incident of National Significance.
- *Stage II: Execute Pandemic Priority Functions* – This stage is anticipated to be a prolonged period that could last for weeks or months, depending on the severity of a pandemic and the number of pandemic waves experienced. The duration of this stage could be a single wave if another wave is not expected in the foreseeable future or it could continue through several waves until the completion of a final wave. The implementation of the Pandemic Response Plan is expected to be continued throughout this phase. At a minimum, the PPFs are to be maintained as fluctuations in absenteeism are expected throughout this phase. Implementing this Plan will balance adjustments in safety and security margin with the

importance of maintaining essential services for critical infrastructure as provided in the National Infrastructure Protection Plan.

- Stage III: *Reconstitution* – This stage begins when one or more pandemic waves have passed and there is no foreseeable threat, as determined by the Chairman, or designee (typically a member of the Commission) in coordination with other Federal officials. The PET would prepare to exit the Pandemic Response Plan and reconstitute normal operations. On the other hand, if there are uncertainties about when the next wave would come, the agency may choose to remain in the pandemic response mode (Stage II) for an extended period of time until the final wave has passed. Regardless of whether this stage would be entered upon completion of each wave or when the entire pandemic has passed, the beginning of this stage would be marked by coordination among Federal, State, and local officials resulting in an official declaration concerning the status of direction to restore normal operations. Development of lessons-learned may also be initiated during this stage.

Each of these stages is presented in more detail in the following sections.

#### 5.1 Stage I: Initiation of NRC Response to a Pandemic

The Chairman, Commission, and senior NRC Leadership will be kept informed of the situation through official Government reports and national/local reporting channels. Developing situations will be monitored, and when appropriate, briefed to the Commission and senior leadership. The following actions will be performed if a pandemic threat becomes imminent:

- NSIR, in consultation with Headquarters and Regional Duty Officers, will discuss the need to escalate pandemic concerns to the PET, Chairman, and the Commission.
- The Headquarters Operations Officer (HOO) will arrange a teleconference between the Chairman, or designee (typically a member of the Commission), the PET, and other counterparts in Department of Health and Human Services (HHS) and DHS, as appropriate. NSIR will inform COG contacts and DHS of the NRC situation and determine if other departments or agencies have reported problems.
- The PETL, position assumed by the Chairman or designee (typically a member of the Commission), will ensure that all Regional Offices are notified. Each member of the PET will make notifications required by operational plans and procedures in their areas of responsibilities. Offices and Regions will confirm the safety and security of licensed activities and materials in accordance with their respective procedures.
- The PETL will ensure notification of NRC employees and NSIR/DPR will send status updates as needed to COG contacts, DHS, and the HHS.
- The Chairman, or designee (typically a member of the Commission), will direct the Office of Congressional Affairs to make notifications as appropriate.
- The Chairman, or designee (typically a member of the Commission), will direct the PET or Office of Public Affairs to make appropriate announcements through the media.
- The Chairman, or designee (typically a member of the Commission), will direct the Office of State and Tribal Programs to make appropriate announcements to the States and Native American Tribal governments.

- Supervisors will notify NRC staff, including staff who are not currently at work in NRC facilities, of implementation of the Pandemic Response Plan.
- Chairman, or designee (typically a member of the Commission), will consult with other members of the Commission to determine whether they should be deployed to other designated sites.

Specific notification protocols and processes will be illustrated in greater detail under Annex C, “Pandemic Communications,” and HOO/ROO procedures.

## 5.2 Stage II: Execution of Pandemic Priority Functions

Under the leadership of the PET, the Offices shall execute the PPFs utilizing the Office-specific procedures and human resources available. Office Directors will coordinate through the PET, in accordance with procedures and pre-planned lists of persons qualified to perform functions (including cross-trained personnel) to execute the PPFs. Primary actions expected during Stage II include performing the PPFs or more, if possible.

NRC Headquarters will continue to lead operations from the Headquarters complex or via distributed management/operations until ordered to cease operations due to unavailability of the Headquarters facilities and the distributed operations capability, at which point the agency Mission Essential Functions will be transferred to the alternate COOP site, if available, in accordance with the procedures contained in the COOP Plan. If the alternate COOP site is also not available due to a pandemic or other reasons, the NRC must devise a pre-planned communications alternative in accordance with existing plans, recognizing that such alternate means for re-establishing HOO/ROO communications capability will be limited.

It is possible that during this phase, the conditions could improve to allow for restoration of some of the deferred, delayed, or cancelled functions (functions other than the PPFs). The Offices will implement the restoration of these functions in accordance with their own processes and procedures.

## 5.3 Stage III: Reconstitution

The reconstitution phase will commence when the Chairman, or designee (typically a member of the Commission), in coordination with other Federal officials and the PET determines that a pandemic threat has ended and is unlikely to recur in the foreseeable future. Rather than entering this stage after one wave of a pandemic, the agency may choose to enter this stage after the apparent final wave of a pandemic is passed due to uncertainties associated with timing of the “next” wave or simply to avoid entering and exiting the pandemic response mode multiple times. Once the decision is made to enter into this stage, the Reconstitution process in Annex I, “Reconstitution,” and related procedures will be initiated to begin or continue restoring to normal level of NRC operations by adding individual functions as sufficient resources become available. Reconstitution would then be a continuation of the anticipated restoration of NRC functions.

The PETL will ensure notification of NRC employees, COG contacts, and coordinating organizations that have been kept informed in accordance with Annex C, “Pandemic Communications.”

Offices will prepare plans and schedules for restoring activities to meet normal business performance goals and Operating Plans. After terminating pandemic activities, the PET will perform the following:

- Prepare lessons learned from the response to the pandemic based on guidance in Management Directive 6.8, “Lessons Learned Program.” Lessons learned will include both NRC’s and licensees’ inputs concerning program performance.
- Ensure that records of the event and the response are assembled and catalogued for review.
- When it has been established that the pandemic is over, prepare for information a final report to the Commission.

## 6. PANDEMIC SUPPORT REQUIREMENTS

The support requirements identified in Table 1 identified as Enterprise Support Functions, a subset of the PPFs, will be provided to ensure that the agency’s PPFs can be performed as efficiently and effectively as possible under pandemic conditions. NRC Offices will develop procedures and action plans, as appropriate, to accomplish essential support functions.

### 6.1 Workspace, Health, and Security for Personnel

The NRC must maintain a suitable environment for employees who continue to report to work in its facilities during a pandemic. Facilities and equipment must be kept clean of influenza viruses, which in practice, will require that no infected person comes in contact with facility and equipment surfaces or, if they do, that these surfaces are promptly and effectively disinfected. One infected person not only can contaminate surfaces but also can infect many other people. Employees will not be able to concentrate and work efficiently unless they feel secure from the threat of contamination. Therefore, the agency will need to provide:

- Common area (e.g, elevators, stairwells, rest rooms, cafeterias) decontamination on a regular schedule to prevent and mitigate spreading of germs and viruses;
- Workspace decontamination in areas used by those who showed symptoms and left;
- Screening for infection as employees, contractors, and suppliers arrive at the worksite and/or return following illness; and
- Physical security to prevent facility access by unscreened or infected individuals.

These provisions will be needed to ensure that employees will be protected; however, effective and quick screening is not yet possible. As an example, NSIR plans to have the capability to staff the Headquarters Operations Center as long as possible to have full current capabilities to respond to a serious incident involving a nuclear facility or nuclear materials. The options include the following:

- Maintain Headquarters Operations Center, Incident Response Center, and threat assessment facilities as “clean” areas by limiting personnel access.
- Predesignate shifts for response, support, and security that would simply report for 12 hours, then go home to rest and return the following day for their next shift if they feel healthy. This is a normal shift staffing approach to incident response duties. There will likely be some infection; however, with sufficient team depth and limited mortality rates, the risk should be kept relatively low. Response personnel would be expected to continue to report for duty as their health and needs dictate.

- If mortality rates are higher, sickness could become more virulent and shift teams would have to report up to 2 days early and be sequestered before entering the Operations Center. More team depth would be needed, but sequestering could reduce or eliminate the need for quick screening (which is currently not possible).
- Ultimately, teams may have to be sequestered for the duration of Operations Center staffing. Relief shifts, if needed, would need to be sequestered before entering the Operations Center. Food and other supplies would need to be decontaminated before delivery to the clean workspace. One option for ensuring uncontaminated food is supplied to the Operations Center staff is to provide meals ready to eat (MREs) or other types of pre-packaged and pre-delivered foods. Sequestering for days or weeks will require substantial provisions for dealing with family issues.
- The number of employees reporting to the worksite could be reduced by performing some functions by teleconference. Response to an incident would necessarily be degraded because some functions would be challenging to perform at home. Threat assessment is one example. However, those functions might be performed in a more limited manner or at other pre-approved locations, and overall response capabilities would be comparable to those used successfully in the past.

In coordination with other Federal departments and agencies, the NRC will use current information about the medical, operational, technical, and human issues in order to make informed decisions. The NRC will determine the best way to maintain and function from a clean and secure workspace, establish screening centers as techniques become available, maintain clean space for clearance of returning employees as the influenza emergency abates, and manage a distributed system to perform the PPFs.

## 6.2 Personnel Support

NRC personnel should be fully trained in accordance with the training requirements established within Annex F, "Pandemic Testing, Training, and Exercise Program." The following are some specific training provisions for NRC personnel:

- NRC personnel will be provided training on the basic characteristics of avian flu, characteristics of a pandemic, health effects, hygiene, social distancing factors, individual and social risk. In addition, NRC personnel identified for certain PPFs will be provided position-specific training developed by their respective Offices. Re-qualification training will also be developed by the Office in need of additional personnel who have been cross-trained to perform certain PPFs (e.g., HOO functions).
- During Pandemic Operations, NRC personnel can obtain information on the status of the Pandemic Response Plan implementation by contacting the NRC pandemic hotline or via the NRC Web page.
- Personnel are required to stay in contact with their Office or Regional management to receive updates on status. Further contact information and protocols can be obtained through Annex L, "Human Capital."

## 6.3 Essential Equipment, Supplies, and Capabilities

Pre-identified equipment, including technology and telecommunications hardware needed to perform the agency's PPFs have been identified and are described under Annex E, "Pandemic Site Facilities, Equipment, and Capabilities." ADM will provide emergency procurement

services to the extent feasible and, as necessary to acquire equipment/supplies not already in place.

#### 6.4 Telecommunications and Information Systems Support

In general, the telecommunications and information systems support provided at NRC facilities must be robust and capable of supporting extensive use of flexiplace/work at home assignments for agency personnel to support performance of the PPFs.

The telecommunications and information support requirements are detailed in Annex K, "Pandemic Telework Plan."

#### 6.5 Logistics Support

The Headquarters and Regions will facilitate assistance needed during pandemic operations. In addition, provisions will be made to ensure the ability of the NRC personnel to continue performance of their priority functions during pandemic operation and look after the safety and well-being of all concerned throughout the duration of the emergency.

If prior arrangements are made for the following, the agency could facilitate a quicker and smoother transition to pandemic operations:

- Arrange for food services and lodging for individuals, if any, sequestered in support of pandemic operations.
- Security: Access to operating NRC facilities must be controlled and maintained safe and secure. To the maximum extent feasible, there should be backup electrical power for lighting, support systems, security systems, ventilation, heating and air conditioning, and personal comfort as arranged by ADM in advance or by either ADM or the Regional Administrator during an emergency. ADM will arrange for the availability of temporary additional guard service and other provisions that it deems essential for general physical security.

Plans for pandemic conditions must cover the possibility that some people will be on duty for extended periods. Their personal concerns may range from personal medical needs to the safety of their homes and families and are not definable in advance. The following personal assistance provisions will be available:

- HR offers an Employee Assistance Program (EAP) through an interagency agreement between NRC and FedSource, a Governmentwide program sponsored by the Treasury Department. This service is coordinated through ADM/Division of Contracts. Although not specifically intended for use in situations like a pandemic, EAP counselors may be able to help reduce personal stress, obtain information about the status of a relative, or otherwise help alleviate concerns. Cooperation with other organizations is encouraged.
- HR in the Regional Offices will have a staff member responsible for identifying one or more local contractors who are willing and able to arrange for whatever employee assistance services may be needed during an emergency.
- OCFO will provide for employee benefits in coordination with HR and Governmentwide plans and procedures.

- The PET will track plans and actions for these kinds of activities during an emergency and will contact OGC as necessary for legal opinions about activities not approved in advance.
- The Office of International Programs (OIP) and the PET will coordinate to provide for notifications to successors and to core and supplemental PET members on foreign travel.

## 7. TESTING, TRAINING, AND EXERCISES

The conduct of the Pandemic Response Plan testing, training, and exercise (TT&E) activities are essential elements of a viable NRC pandemic response program. The NRC will conduct TT&E activities using the guidance in Federal Preparedness Circular (FPC) 65. The agency must test this Plan and its implementing procedures, provide training, and conduct exercises to demonstrate and improve the ability of the NRC to ensure continued execution of the PPFs. The NRC pandemic TT&E plan is provided in Annex F, "Pandemic Testing, Training, and Exercise Program."

## 8. MULTI-YEAR STRATEGY AND PROGRAM MANAGEMENT PLAN

### 8.1 Multi-year Strategy

Offices and Regions should fully reflect their pandemic response-related responsibilities in the 5-year NRC Strategic Plan and annual Operating Plans. NSIR will also reflect pandemic response-related umbrella responsibilities (such as tests, training, and exercises) that are not included in other Office plans. (Pandemic-related activities are those required by this Plan but not also required by other emergency or contingency plans).

OIS will work with Offices and Regions to provide necessary infrastructure to enable remote decisionmaking and teleworking for a majority of NRC Headquarters and Regional personnel. Offices will establish procedures to implement this Plan and to test remote working capability of key managers and technical staff.

OCFO will define the formats and common categories to be used for reporting budget information as necessary. Refer to Annex J, "Multi-Year Strategy and Program Management Plan," for further detail.

### 8.2 Program Maintenance

NSIR is designated as the responsible Office for consolidating Office implementing procedures and for maintaining a coordinated and effective Pandemic Response Plan that is consistent with the *National Strategy for Pandemic Influenza Implementation Plan*. NSIR will maintain the implementing procedures for its own functions and those of the PET. Each Office responsible for pandemic functions defined in this Plan will maintain its own implementing procedures in separate documents. Offices will reflect pandemic responsibilities in their Operating Plans or in similar plans maintained for accountability. NSIR will review the Pandemic Response Plan and procedures with participating Offices annually to ensure overall coordination and effectiveness.

## 9. NECESSARY RECORDS AND DATABASES

The Information and Records Services Division (IRSD) of the Office of Information Services (OIS) has overall responsibility for administering the Vital Records Program in accordance with Federal regulations and Management Directive 3.53, "NRC Records Management Program." OIS defines vital records as those essential to NRC's continued operations during a national emergency, which includes reconstitution. Records are divided into two groups: Emergency

Operating Records (for which responsibility has been delegated to NSIR) and Legal and Financial Rights Records (for which OIS retains responsibility). Annex G, "Necessary Records and Database," contains examples of each type of record.

Offices responsible for their respective PPFs must identify to OIS (1) the documents that they believe should be defined as vital legal and financial rights records, and (2) the form in which they would be used in an emergency. Similarly, they must identify documents that they believe should be defined as vital emergency operating records to NSIR.

## 10. REFERENCES

The following list of authorities and references provide the framework for developing the NRC Pandemic Response Plan and provide guidance regarding its development:

- *The National Strategy for Pandemic Influenza*, Homeland Security Council, November 2005
- Memorandum from Frances Fragos Townsend, Assistant to the President for Homeland Security and Counterterrorism, to Heads of Departments, *Pandemic Planning by Departments and Agencies; Revised Timeline and Additional Guidance*, February 6, 2006
- Memorandum from Charles L. Hopkins, III, Director, Office of National Security Coordination, Federal Emergency Management Agency to various Federal agencies and Departments, *COOP Pandemic Influenza Guidance*, March 1, 2006
- *National Strategy for Pandemic Influenza Implementation Plan*, Homeland Security Council, May 2006
- National Response Plan, Department of Homeland Security, December 2004
- National Infrastructure Protection Plan, Department of Homeland Security, November 2, 2005 (Draft)
- FEMA's *Federal Preparedness Circular (FPC) 65*, Federal Executive Branch Continuity of Operations (COOP), June 15, 2004
- U.S. Nuclear Regulatory Commission Continuity of Operations (COOP) Plan, May 2006 Draft
- U.S. Nuclear Regulatory Commission Incident Response Plan (NUREG-0728), Rev 4, April 2005