NRC INSPECTION MANUAL

MANUAL CHAPTER XXXX

FUEL CYCLE FACILITY INSPECTION PROGRAM—OPERATIONS PHASE

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XXXX-01 PURPOSE

To establish the policy for the fuel cycle facility inspection program

XXXX-02 OBJECTIVES

02.01 To obtain factual information providing objective evidence that fuel cycle facilities are operated safely and licensee activities do not pose an undue risk to public health and safety.

02.02 To determine the causes of declining performance before such performance reaches a level that may result in an undue risk to public health and safety.

02.03 To identify those safety significant issues that may have generic applicability.

02.04 To provide direction for modifying the baseline inspection program in the event of a pandemic.

XXXX-03 APPLICABILITY

This inspection program is implemented when a licensed fuel facility is in commercial operation, as opposed to constructing or long term layup. (Note: As the safety and safeguards inspection program is applied to facilities under 10 CFR 76, “license” shall read as “certificate,” and “licensee” shall read as “certificate holder” for such facilities.) Portions of the baseline inspection program may be implemented as appropriate as different areas of the facility transition into operation.

This inspection program will remain in effect until the facility is permanently shut down and enters the post-operational phase (Inspection Manual Chapter (IMC) 2602, "Decommissioning Oversight and Inspection Program for Fuel Cycle Facilities and Material Licensees").

As directed by section XXXX-13 and Appendix E of this Manual Chapter, the inspection program can be modified in the event of a pandemic that severely reduces available inspection resources.

XXXX-04 DEFINITIONS OF INSPECTION FREQUENCIES

04.01 Triennially or Every Three Years (T). The inspection will be performed at least once during Fuel Cycle Oversight Process (FCOP) cycle 1-3, FCOP cycle 4-6, etc. It is not intended for this to be based on a rolling 3 year cycle.

04.02 Biennially or Every Two Years (B). The inspection will be performed at least once during FCOP cycle 1-2, FCOP cycle 3-4, etc. It is not intended for this to be based on a rolling 2 year cycle.

04.03 Annually (A). The inspection effort will be performed at least once each FCOP annual cycle, once per calendar year.

04.04 Semiannually (S). The inspection effort will be performed two times each calendar year, once each half calendar year.

04.05 Triannually (TR). The inspection effort will be performed three times each calendar year, once every four months.

04.06 Quarterly (Q). The inspection effort will be performed four times each calendar year, once each calendar quarter.

04.07 As Needed (AN). The inspection effort should be performed when the activity or event occurs at the facility as specified in the guidance section of specific inspection procedures.

04.08 Baseline Inspection Program Completion. Baseline Inspection Program completion for an FCOP annual inspection cycle is defined to be: no more than four procedures incomplete for all plants and no more than one procedure incomplete for a single plant; other inspection procedures are completed within ten percent of required hours.

This allowance is intended to provide for unanticipated disruptions in inspection scheduling that unavoidably cause an inspection procedure or attachment to not be completed and presumes that at least the minimum inspection requirements will otherwise be completed as soon as possible within the quarter immediately following the annual inspection cycle. Achieving this level of Baseline Inspection performance provides a basis to conclude that the intent of the Baseline Inspection Program has been met and therefore, for the purpose of goal monitoring, can be reported as complete for that annual cycle.

XXXX-05 RESPONSIBILITIES AND AUTHORITIES

05.01 Director, Office of Nuclear Materials Safety and Safeguards (NMSS).

a. Provides overall program direction for the fuel cycle facility inspection program.

b. Oversees the implementation of the NMSS-assigned portion of the fuel cycle inspection program.

c. In the event of a pandemic, concurs on the regions' recommendations to the modification to the inspection program in accordance with the direction provided under section XXXX-13 and Appendix E of this Manual Chapter.

05.02 Regional Administrator, Region II.

a. Provides program direction for management and implementation of the inspection program elements performed by the regional office.

b. Ensures, within budget limitations, that the regional office staff includes adequate numbers of inspectors in the various disciplines necessary to carry out the inspection program described in this chapter, including that which may be needed for regional supplemental and reactive inspections.

c. Directs the implementation of the supplemental inspection program in accordance with the guidance in Appendix B of this document.

d. Applies inspection resources, as necessary, to deal with significant issues and problems at specific facilities.

e. Determines that a pandemic situation which affects inspection resource availability has occurred and recommends modification to the inspection program in accordance with the direction provided under section XXXX-13 and Appendix E of this Manual Chapter.

05.03 Director, Nuclear Security and Incident Response (NSIR).

a. Oversees the implementation of the safeguards portion of the fuel cycle inspection program.

b. Ensures, within budget limitations, that NSIR staff includes adequate numbers of inspectors necessary to carry out the inspection program described in this chapter, including that which may be needed for regional supplemental and reactive inspections.

c. Applies inspection resources, as necessary, to deal with significant issues and problems at specific facilities.

05.03 Director, Division of Fuel Cycle Safety and Safeguards (FCSS).

a. Develops and directs the implementation of policies, programs, and procedures for inspecting applicants, licensees, and other entities subject to Nuclear Regulatory Commission (NRC) jurisdiction.

b. Assesses the effectiveness, uniformity, and completeness of implementation of the fuel cycle inspection program.

c. Approves changes to the fuel cycle facility inspection program.

d. Approves changes to the Master Inspection Plan (MIP) that involve proposed deviations from the inspection program described herein.

e. Ensures, within budget limitations, that the Headquarters Office staff includes adequate numbers of inspectors in the various disciplines necessary to carry out the inspection program described in this chapter, including that which may be needed for regional supplemental and reactive inspections.

f. Implements the fuel cycle inspection program elements assigned to FCSS.

g. Assesses the effectiveness of the implementation of this inspection program throughout the agency.

05.04 Director, Division of Fuel Facility Inspection (DFFI).

a. Manages the implementation of the inspection program elements assigned to the regional office.

b. Develops and updates the agency-wide Master Inspection Program for fuel facility inspections.

c. Coordinates with FCSS to obtain specialized inspection expertise, as necessary.

d. Develops and maintains the fuel cycle inspection program for approval by the Director, FCSS.

e. Ensures that branch chiefs assign inspectors who are appropriately trained and have the necessary knowledge and skills to successfully implement inspection procedures.

05.05 Director, Division of Reactor Safety (DRS).

a. Manages the implementation of the inspection program safeguard elements assigned to the regional office.

b. Develops and updates the agency-wide Master Inspection Program for fuel facility inspections.

c. Develops and maintains the fuel cycle inspection program for approval by the Director, FCSS.

d. Ensures that branch chiefs assign inspectors who are appropriately trained and have the necessary knowledge and skills to successfully implement inspection procedures.

XXXX-06 REGULATORY OVERSIGHT FRAMEWORK

The fundamental building blocks that form the framework for the fuel cycle oversight process are eight cornerstones of safety: emergency preparedness, chemical process safety, criticality safety, public radiation safety, occupational radiation safety, information security, physical security, and material control and accountability. These cornerstones have been grouped into three strategic areas: facility operational safety, radiological material safety, and security. This framework is based on the principle that the agency's mission of assuring public health and safety and safety of the environment is met when the agency has reasonable assurance that licensee's are meeting the objectives of the eight cornerstones of safety. The fuel cycle facility inspection program is an integral part, along with assessment,and enforcement,of the fuel cycle oversight process. Acceptable performance in the cornerstones, as measured by the risk-informed baseline inspection program, is indicative of overall licensee performance that provides for adequate protection of public health and safety. The oversight program is structured to allow for future inclusion of a performance indicator program.

Another principle of the framework is that there is a level of licensee performance in the cornerstones above which the NRC does not need to engage the licensee beyond some minimum level. When this level of licensee performance is maintained, the risk-informed baseline inspection is sufficient to provide reasonable assurance of public health and safety.

The supplemental portion of the inspection program will provide more diagnostic inspections of identified problems and issues beyond the baseline. Supplemental inspections will be planned in response to issues that result in crossing an Action Matrix threshold. These changes to the inspection program are factored into the inspection program through the assessment process, as further discussed in Section 8.0, below.

06.01 Material Control & Accounting (MC&A) Inspection Program. This inspection program is described in IMC 2683. The associated procedures are listed in the IMC. It should be noted that even though the procedures are described and listed in a separate IMC, the MC&A Inspection Program shall be included as part of the FCOP.

06.02 Physical Protection and Transport of Special Nuclear Material (SNM) Program. This inspection program is described in IMC 2681. The associated procedures are listed in the IMC. It should be noted that even though the procedures are described and listed in a separate IMC, the Physical Protection Inspection Program shall be included as part of the FCOP.

XXXX-07 FUEL CYCLE FACILITY INSPECTION PROGRAM ELEMENTS

The inspection program described in this Manual Chapter is comprised of the following three major program elements:

a. Risk-Informed Baseline Inspection Program (Baseline) Inspections

b. Plant Specific Supplemental Inspections

c. Generic Safety Issue, Special, and Infrequent Inspections

Overall, the inspection program emphasizes achieving a balanced look at a cross section of licensee activities important to plant safety, reliability, and risk. The baseline inspections constitute an appropriate level of inspection at plants whose overall performance remains in the licensee response band. Plants, whose performance is outside the licensee response band, will receive additional plant specific supplemental inspection based on their assessed performance in the cornerstones of safety.

Additionally, Appendix D is provided for use by the resident inspectors in conducting routine activities such as plant tours that may assist them in identifying potentially risk significant activities.

The supplemental inspections, described in Appendix B, are only performed as a result of performance issues that are identified by baseline inspections,or event analysis. The depth and breadth of specific supplemental inspections chosen for implementation will depend upon the risk characterization of the issues as shown in the Action Matrix of the fuel cycle facility assessment program (IMC-FCOP – Assessment).

The need for additional inspections to address emergent generic safety issues will be assessed on a case by case basis. Also, the need for performing additional inspections to review major licensee evolutions such as testing and operation of new processes will be assessed.

In addition to the three elements, the inspection program also provides for the agency's response to operational events. The guidance for determining the level of response to an event is contained in NRC Management Directive 8.3, "Incident Investigation Program."

07.01 Risk-Informed Baseline Inspections. The baseline inspection program element, described in Appendix A, is to be performed at all operating fuel cycle facilities. It requires inspections of licensee performance in the eight cornerstones of safety.

The baseline inspections provide sufficient examination of the plants and licensee activities to determine whether licensees are meeting the objectives of all eight cornerstones, and to identify indications of performance problems to allow further engagement by the NRC before the objectives of the cornerstones are compromised.

The inspection procedures included in the baseline inspection program are based on "inspectable areas" for the eight cornerstones of safety. The oversight framework identified key attributes for each cornerstone that need to be verified to have a reasonable assurance that the cornerstone objectives are met. Licensee performance within the key attributes is then measured by a risk-informed inspectable area.

The baseline inspection procedures are organized by cornerstone and include the inspectable areas associated with the cornerstone. The baseline inspections are performance-based and risk-informed and emphasize the observation and evaluation of ongoing facility operations and supporting activities affecting the safety function of all facility structures, systems, and components which may affect plant safety. Appendix D has been provided to assist the resident inspectors in conducting activities that may identify potentially risk significant activities. The baseline inspections are risk informed through: (1) the inspectable areas, which are based on their risk importance in measuring a cornerstone objective; (2) the inspection frequency and sample size for each inspectable area, which are based on risk information; and (3) sample selection of activities and equipment to inspect in each inspectable area, which is based on risk insights modified by plant-specific information.

Appendix A contains a list of baseline inspection procedures and specifies the required frequency for their performance. The baseline inspection procedures must be completed at every plant at a prescribed interval. The expectation is that the region should normally complete the nominal (average) number of inspection samples identified in the inspection procedure. The region may vary the inspection samples within the ranges as indicated in each baseline inspection procedure, based on licensee performance and inspector insights. For the purposes of completing the baseline inspection program, the number of samples completed must be within the range of values specified in each inspection procedure.

Inspection requirements are the controlling factor in determining the amount of inspection effort necessary to complete the baseline inspections. Appendix A provides an estimate of the hours associated with each inspection procedure for overall resource planning only. The baseline Inspection procedures are contained in Attachment 3 of Appendix A. The inspection effort is expressed for seven different facility types:

a. Category I Fuel Fabrication Facilities.

b. Category III Uranium Fuel Fabrication Facilities.

c. Gaseous Diffusion Plants.

d. Enrichment Facilities, other than Gaseous Diffusion Plants.

e. Category III Uranium Fuel Assembly Facilities.

f. Uranium Conversion Facilities.

g. Other Category II/Category III Facilities.

Attachment 4 of Appendix A describes the baseline inspection procedures used at Category I Fuel Fabrication Facilities and Gaseous Diffusion Plants for resident inspectors.

For Physical Protection inspection and MC&A inspection program areas, inspectors select the appropriate procedures to use from a set, or suite, of procedures, rather than use a single procedure. In these cases, the specification of a Core Inspection pertains to use of the multiple procedures in the aggregate (i.e. the entire procedure suite). The suite of procedures for Physical Protection inspections can be found in IMC 2681 and the suite of procedures for MC&A inspections can be found in IMC 2683.

07.02 Plant Specific Supplemental Inspections. The supplemental element of the inspection program is designed to apply NRC inspection assets in a graded manner when performance issues are identified by inspection findings evaluated using the significance determination process (SDP). Accordingly, the NRC regional office will assess the need for supplemental inspections after identifying an inspection finding categorized as risk significant (i.e., white, yellow, or red) with the SDP. The scope and breadth of these inspections will be based upon the guidance provided in the assessment program Action Matrix and expanded upon in the "Supplemental Inspection Selection Table" included in Appendix B.

The supplemental inspections provide a graded response to the identified performance issues, which include: oversight of the licensee's root cause evaluation of the issues; expansion of the baseline inspection sample or a focused team inspection (as necessary to evaluate extent of condition); or a broad scope, multi-disciplined team inspection, which would include inspection of multiple cornerstone areas and inspection of crosscutting issues. Any new issues identified during the supplemental inspections will be evaluated by the SDP. The need for additional NRC actions, including additional supplemental inspections, will be governed by the Action Matrix.

A supplemental inspection will be performed for all white, yellow, or red inspection findings. The region may choose not to perform a supplemental inspection for white issues identified as part of a licensee's self assessment, although such exceptions are expected to be infrequent. In such instances, the region will still ensure that the issue is entered into the licensee's corrective action program and that an appropriate evaluation is performed. The licensee's evaluation for such an issue will be reviewed as part of baseline inspection procedure 88152, "Problem Identification, Resolution, and Corrective Action." Additionally, the regional office may choose to propose a deviation from the Action Matrix when the level of supplemental inspection is not appropriate for the particular circumstances. Examples of when the level of supplemental inspection may need to be increased or decreased include (but are not limited to): 1) a single red finding that does not appear to be indicative of broad programmatic concerns; 2) a single red inspection finding, particularly those that meet the criteria for old design

issues; 3) multiple examples of non-SDP Severity Level III or greater enforcement actions; 4) a type of finding unanticipated by the SDP that results in an inappropriate level of regulatory attention when entered into the Action Matrix. A deviation from the Action Matrix may be authorized in accordance (IMC-FCOP – Assessment).

07.03 Generic Safety Issues, Special, and Infrequent Inspections. Concerns with specific safety issues that arise may be addressed solely through the NMSS license review process and the use of regulatory communications issued to licensees. If the concern is of safety significance, it may be appropriate to perform a one-time inspection under the safety issues program element. These inspections will be established by temporary instructions (TIs). For example, when it is determined that a safety issue addressed in a bulletin or generic letter requires inspection verification or follow-up, requirements and guidance for the inspection will be developed and issued in a TI. Unless such a TI is issued, inspection follow-up is not required to verify completion of licensees' actions discussed in a bulletin or generic letter. When a TI is issued, overall assessment ratings may be considered in establishing priorities for conducting these inspections. The plants to be inspected will be designated in the TIs.

The resources budgeted to safety issues inspections are established by NMSS. It is the intent that the inspections be conducted within the resources budgeted for that element of the program.

Specific criteria for closing a TI will be addressed in the TI itself. In general, TIs should not be closed until all relevant safety issue items have been completed by the licensee and verified by inspection. However, exceptions may be considered when the licensee's schedule for completing items remaining is acceptable, properly documented, and is not a critical element to resolving the safety issue.

The need may arise for specific inspections to address major evolutions limited to a few licensees such as upgrading to a digital control system. The need for these inspections will also be assessed on a case-by-case basis and conducted under the guidance of a temporary instruction.

This element of the inspection program also includes other special or infrequently performed inspections. These inspections may be in response to events, infrequent major activities at fuel cycle facilities, or to fulfill the NRC’s obligations under interagency memoranda of understanding. The applicable procedures are listed in Appendix C, “Special and Infrequently Performed Inspections.”

07.04 Related Activities Associated with the Fuel Cycle Facility Inspection Program. All inspection findings provide input to the fuel cycle facility performance assessment process. The performance assessment process is to be conducted in accordance with (IMC-FCOP – Assessment).

XXXX-08 DISCUSSION

08.01 General. The inspection program described in Appendices A, B, and C is intended to provide the framework for managing inspection resources without being overly prescriptive. At the same time, a level of inspections necessary to complete predefined objectives at a facility is specified, below which inspection should not decrease.

It is intended to place inspection emphasis on elements of licensee activities most important to facility operational safety, radiological material safety, and security.

Because FCOP uses inspection findings which are evaluated for risk to determine whether all cornerstone objectives were met at a facility, only those inspection findings which rise above a minimum significance threshold (i.e., findings are greater than minor) are documented in inspection reports. Therefore, inspection findings which are determined to be minor do not need to be nor shall be tracked or trended by either inspectors or regional managers. Instead, minor findings are to be reported to the licensee for action in accordance with the licensee's corrective action program. Licensees are expected to track and trend minor findings and issues as stated in their program. When implementing baseline inspection procedure 88152, "Problem Identification, Resolution, and Corrective Action", inspectors may include minor findings and issues as part of their semiannual/annual trend review. This review will determine whether the licensee has adequately identified and corrected an adverse trend, if any, resulting from all identified deficiencies, including minor findings, during the period of review.

Using a performance-based, risk-informed approach, inspectors focus their attention on activities important to safety. This includes evaluation of design features and support systems important to safety, in addition to review of management measures associated with items relied on for safety (IROFS). Performance-based inspection emphasizes observing activities and the results of licensee programs over reviewing procedures or records. For example, an inspector may identify an issue through observing an activity in progress, monitoring equipment performance, or the in-plant results of an activity (e.g., an engineering calculation). Discussions with plant personnel and reviewing documents should be used to enhance or verify performance-based observations. These procedures are designed to emphasize observation of activities, or those portions that are most risk significant in terms of safety and reliability. It is expected that resident and/or region-based inspectors will have the necessary technical capability to accurately observe and evaluate the activity.

Regional Division Directors and branch chiefs must ensure that inspectors assigned to implement the baseline inspection procedures have the necessary training, knowledge, and skills to successfully implement the NMSS programs. The inspector training and qualification program will be in accordance with IMC 1247, "Formal Qualification Programs in the Nuclear Material Safety and Safeguards Program Area."

NRC inspectors perform a basic mission in determining whether a licensee operates the facility safely and meets current regulatory requirements and commitments. Limiting

inspection to identification of specific instances where a licensee fails to meet such requirements and commitments could result in correction of symptoms rather than correction of underlying causes of licensee problems. The inspection and assessment processes establish thresholds for determining the significance of issues and whether those issues may require additional evaluation and follow up. Thus, the inspection program requires that inspectors and their managers evaluate problems to determine if follow up inspections are necessary to diagnose whether a safety concern represents an isolated case or may signify a broader, more serious problem based on the evaluated significance of the issues. Licensee management controls (e.g., QA, safety committees, etc.) may need to be examined to determine if weaknesses in these controls contributed to identify safety concerns.

The NRC inspection program covers only small samples of licensee activities in any particular area. The sample sizes specified in the inspection procedures are based on the relative importance of the area covered by the procedure to the other areas inspected by the program. They are also based on the inspectors choosing a "smart" sample instead of a statistically based random sample because the risk-informed nature of the inspection program requires the inspections to be focused on those aspects of plant operations and licensee activities that could pose the greatest risk to public health and safety. The philosophy behind this concept is that the licensee's processes are effective if they deal properly with the items of greatest significance. Some areas do not have a direct connection with risk and inspection sample sizes in these areas are chosen to provide periodic indications of a licensee's performance in those areas.

08.02 Allocation of Resources as a Function of Performance Assessment. The results of plant performance assessments are an important factor in defining the inspection program for each plant. The baseline inspections are the level of defined requirements for all plants and additional regional supplemental inspections will be planned for plants whose performance is below a certain level, i.e., the licensee response band. The amount and focus of the additional supplemental inspections will be proportional to the plant's assessed performance and the nature of the issues that provide the indication of that performance. See with (IMC-FCOP – Assessment) for more detailed guidance on responding to issues with licensee performance.

Only baseline inspections, applicable generic safety issues, and special and infrequent inspections will be planned and conducted at plants whose overall performance (all inspection findings) is determined to be in the licensee response band.

Plants whose performance is determined to be outside of the licensee response band (see with IMC-FCOP – Assessment) should have supplemental inspections planned to examine the root causes of the change in performance and corrective actions of identified findings or safety issues that have indicated the performance change.

08.03 Allocation of Resources among Program Elements. The allocation of resources among the three principal inspection program elements (baseline, supplemental and generic safety issues) is provided for each year in the budget process.

08.04 Completion of Inspection Procedures. The baseline inspection procedures represent the inspections necessary to allow the NRC to assess performance. This means that the inspector is to perform the requirements most appropriate to the activity being inspected in each inspectable area by completing the number of inspection activities (samples) within the range of sample values specified in each inspection procedure, thus meeting the objectives of the procedure.

Performance of one inspection procedure sample may be counted as a sample for another procedure only if completed inspection requirements are common to each procedure.

The sample size may be reduced to a number below the minimum value in situations where there are an insufficient number of samples with appropriate risk significance available for inspection (e.g., a reduction of sample size to zero, if necessary, when no samples exist). Where no sample is specified, completion of all applicable inspection requirements constitutes completion of the procedure. The inspection hours estimate, which is included in the inspection procedure attachments for planning purposes, should not be used to determine whether the inspection attachment was satisfactorily completed. This estimate is intended to provide guidelines for inspection planning and budgeting.

Approval by the Director, FCSS, NMSS, is required when the inspection requirements in an inspectable area cannot be met.

Likewise, each inspection requirement contained in the supplemental inspection procedures must be adequately addressed.

Inspection procedures identify requirements that the inspector must consider while evaluating the associated area. These requirements may not be the same as NRC requirements placed on a specific licensee. As such, it is not implied or intended that inspection program requirements are to be levied on the licensee. Any attempt to force inspection program requirements on the licensee constitutes misinterpretation of NRC inspection philosophy and misuse of inspection requirements.

TIs are issued for specific inspection purposes. For inspections performed using a temporary instruction, the inspector is expected to complete all inspection requirements listed.

08.05 Baseline Inspection Program Completion and Documentation. The following guideline shall be followed when it is expected that required inspections for which the region is responsible will not be completed by the end of the calendar year:

a. The missed inspection(s), if any, must be scheduled such that it will be completed during the first quarter of the next calendar year.

b. Inspection procedures which should be implemented during an outage cannot be deferred.

c. Inspections may only be deferred at a plant in the licensee response column of the action matrix.

d. Acceptable reasons for deferring an inspection include unanticipated inspection resource demands resulting from providing additional regulatory attention to plants which are placed in the (IMC-FCOP – Assessment) process or in multiple/repetitive degraded cornerstone or unacceptable performance columns.

e. The Director, DFFI must notify the Director, FCSS, NMSS, via a memorandum if the region cannot complete all the required inspections for which the region is responsible by the end of the calendar year. This memorandum should contain a brief explanation for the reason(s) for deferring the inspection(s), the proposed schedule for completing the deferred inspection(s), and the tracking method used for completing the required inspections.

In addition, the region must maintain an inspection tracking system which will allow them to track which inspections cannot be completed in the calendar year so that no more than four procedures are deferred for completion in the next FCOP cycle.

The region should use the guidance provided in IMC 0306, "Information Technology Support for the Reactor Oversight Process," to track the baseline inspection program completion for each calendar year and ensure that: any procedure not complete is documented and rescheduled as appropriate; no more than four procedures are incomplete for all plants; other inspection procedures are completed within ten percent of required hours.

By mid-February of each calendar year, the Director of DFFI must notify the Director, FCSS, NMSS, via a memorandum which states that the required baseline inspections for which the region is responsible have been completed for the previous calendar year inspection cycle in accordance with IMC-FCOP – Assessment.

08.07 Program Feedback. The fuel cycle facility inspection program is expected to be dynamic and to respond to changes in the industry and operational experience. Therefore, the program office expects the region and inspectors to identify problems in implementing the program, and to recommend changes to the program for consideration by the program office. Any such feedback and recommendations should be submitted to FCSS through the associated regional office using the FCOP feedback process.

XXXX-09 INSPECTION PLANS

Regional offices must develop annual site-specific inspection plans consistent with the inspection planning module of the Reactor Program System (RPS) to help manage

inspection resources and monitor the inspection programs. The regional inspection plan should project the planned inspection activities and available resources for all sites for at least the next 12 months. The inspection plan should also provide for a summary of the fraction of regional resources allocated to each of the individual program elements discussed in section XXXX-06 of this Manual Chapter for each site.

Planning significant alterations to the baseline inspection program for a facility's annual inspection plan to accommodate the facility's particular situation needs the concurrence of the Director of Fuel Cycle Safety and Safeguards as well as the Regional Administrator. Significant alterations include increasing or decreasing the frequency of inspections or sample sizes from those stated in the baseline inspection procedures. The factors to consider when planning alterations to the baseline inspection program at a plant include: (1) known plant activities (or lack thereof); (2) the plant's size, design, and age; and (3) complexity of the licensee's programs.

The results of the end-of-cycle and mid-cycle performance reviews, conducted in accordance with IMC-FCOP – Assessment shall be used to schedule baseline inspections and to determine the amount and focus of planned supplemental inspections at each site. The basis for the allocation or significant reallocation of resources among the sites will be documented. It is expected that the integrated plans will be living documents and be reviewed periodically, adjusted, and reissued to reflect shifts in plant performance and safety concerns. Individual site plans and the regional integrated inspection plan should be reviewed by regional management and updated at least semiannually as part of the assessment process that is discussed in IMC-FCOP – Assessment.

XXXX-10 INDEPENDENT INSPECTION

As a general rule, inspections should be conducted in accordance with inspection procedures. However, it is not possible to anticipate all the unique circumstances that might be encountered during the course of a particular inspection and, therefore, individual inspectors are expected to exercise initiative in conducting inspections, based on their expertise and experience and risk insights, as needed to assure that all the inspection objectives are met.

XXXX-11 INSPECTOR POLICY

11.01 Resident Inspector Policy. The resident inspectors provide the major onsite NRC presence for direct observation and verification of licensees' ongoing activities. Resident inspectors provide prompt response and initial inspection and assessment of events and incidents and provide recommendation for additional NRC response. In addition to event response, the responsibilities of resident inspectors include maintaining awareness of major activities and current plant status and completing core and assigned supplemental inspections, in accordance with Appendices A and D.

Resident inspectors are assigned to the Category I Fuel Facilities, operating Gaseous Diffusion Plants (GDP's), and other facilities as deemed necessary by the NRC.

a. Inspection Requirements. Resident inspectors are expected to perform general inspections of all areas, and should maintain awareness of plant status utilizing the guidance of Appendix D. The resident inspectors should concentrate on implementation of safety-basis commitments and various management control systems, such as the conduct of operations, problem identification and resolution, and configuration management systems. Resident inspectors will primarily use the resident inspector procedures for guidance and may select from among the fuel facility IPs for additional guidance in the area being examined. The resident inspectors are expected to keep informed of site performance issues, events, and other significant activities. Most inspections should emphasize the observation and evaluation of ongoing facility operations and supporting activities affecting the safety or safeguards function of facility structures, systems, or components that impact plant safety.

b. Site Coverage. For sites with at least two resident inspectors, at least one resident inspector or qualified region-based alternate should provide site coverage during the regular NRC workday, Monday through Friday. The intent of this guidance is that site coverage by someone qualified as an inspector should not be interrupted for more than three consecutive NRC working days. Consequently, for extended absences of the resident inspectors, such as for attending inspector counterpart meetings, arrangements should be made for coverage by region-based staff. The region-based inspectors should be qualified in accordance with IMC 1247, "Formal Qualification Programs in the Nuclear Material Safety and Safeguards Program Area." For sites staffed with only a single qualified resident inspector, at least one qualified resident inspector or qualified region-based alternate should provide site coverage during normal site working hours (Monday through Friday) such that there are no more than five consecutive normal work days in which there is no coverage. When qualified region-based inspectors are not available, site coverage can be provided by an individual that is both knowledgeable and experienced in plant operations, and capable of communicating with licensee and NRC management on emerging

issues and plant conditions. In order to maximize NRC's efficiency, regional management should attempt to schedule region-based inspections for this time period.

i. The Regional Administrator will be notified when the guidance (three or five consecutive working days) cannot be met. All exceptions will be highlighted in the quarterly update of the regional operating plan.

ii. Inspections performed on Saturdays and Sundays, NRC holidays that are concurrent with licensee holidays, and weeknight hours between about 10:00 p.m. and 5:00 a.m., are called “deep” backshift inspections. There are no set hours for backshift inspections because it is expected that the baseline inspection program will involve some backshift coverage on a routine basis. Resident inspectors should collectively devote at least 50 hours of direct inspection and plant status effort per year per site to deep backshift inspections (This is a combined effort; no hours are assigned to an individual inspector). These efforts should be of at least several hours duration. If deemed appropriate by regional management, this coverage may be provided by regional inspectors in lieu of or in addition to that performed by resident inspectors. Credit may be taken for regional and headquarters inspection coverage in achieving deep backshift coverage goals. Inspection on holidays will count as deep backshift only if the licensee holiday is concurrent with the NRC holiday.

iii. Inspectors should be sensitive to and avoid being predictable in scheduling their backshift and deep backshift coverage. In order to maximize the benefit of deep backshift coverage, inspectors should not develop a predictable pattern. Effort should be made to spread the deep backshift coverage over a variety of days and working conditions [outage, normal operations, weekends, nights (including 10 pm to 5 am), etc.].

iv. There is not a specific goal for performing backshift inspections by regional inspectors, but backshift inspections should be performed whenever required to complete the intended scope of the inspection.

11.05 Regional Inspector Policy. Regional inspectors conduct inspections as directed by their supervisors. In addition to baseline inspection program procedures, regional inspectors often will conduct inspections under other program elements described in this Manual Chapter. Certain aspects of their inspection activity may be conducted in the regional office (e.g., portions of procedure review and administrative program inspection).

11.06 Inspection Coordination. The senior resident inspector and DFFI must be kept advised of regional and headquarters inspectors’ activities at the facility. The associated regional branch chief must ensure coordination of regional and headquarters inspection activities.

Regional and headquarters-based inspectors should contact the senior resident inspector (if available) before each inspection for added perspective during inspection planning, as well as to get information concerning the availability of specific licensee personnel and plant conditions that may affect the planned inspection. In addition, they should contact the senior resident inspector (if available) and licensee personnel as soon as is convenient after they arrive at the site to ensure a coordinated NRC presence at the facility. The visiting inspectors should advise the senior resident inspector or licensee personnel of changes to their planned inspection effort and schedule for the exit interview with the licensee. The senior resident inspector (if available) should inform the regional and headquarters inspectors of any unique activities in progress and offer specific inspection suggestions. The regional and headquarters inspectors should brief the senior resident inspector (if available) about the results of their inspection before the exit meeting with the licensee's management. The senior resident inspector (or resident inspector in his absence) should attend most exit meetings, and should attend all exit meetings where significant issues are expected to be discussed.

11.07 Third Party Assistance. On occasion licensees ask inspectors for recommendations for obtaining help solving programmatic problems. Inspectors are prohibited from recommending the services of individuals or organizations for a project under NRC regulatory jurisdiction. Providing such a recommendation violates 5 C.F.R. 2635.702, which prohibits Federal employees from using public office for endorsement of any product, service, or enterprise. For further information refer to the Executive Director for Operations' (EDO's) Field Policy Manual No. 19, "Guidance For Recommending Third Party Assistance to Licensees," which can found at the following Internet Web address: http://www.nrc.gov.

XXXX-12 GENERAL INSPECTION POLICIES

12.01 Management Entrance and Exit Meetings. Inspectors are required to meet with licensee management as part of every inspection. Region-based inspectors should hold an entrance meeting with the senior licensee representative who has responsibility for the areas to be inspected. Each inspection conducted by resident inspectors and region-based inspectors must include discussing inspection results with licensee management. At the conclusion of an inspection, inspectors must discuss their preliminary findings with the licensee's management at a scheduled exit meeting. Management and exit meetings with licensee personnel should be scheduled to have the minimum impact on other licensee activities necessary to assure the safe operation of the facility.

The duration of exit meetings, the level of detail involved in the meetings, and the level of interest of the licensee in the exit meeting (as manifested by the number of attendees or their positions in the licensee's organization) will vary from one inspection to another; however, the following guidelines should be considered when preparing for exit meetings:

a. Throughout the inspection process, the principle of "no surprises" should be observed. Through a combination of regular communications during the course of the inspection and pre-exit status meetings (for those licensees who wish them) the licensee should have knowledge of the issues which will be summarized in the exit meeting before the meeting occurs.

b. The inspection exit meeting is an NRC-led meeting convened to allow the inspector(s) to present preliminary inspection results to the licensee. As such, the NRC representative tasked with leading the meeting must maintain control of the meeting, ensuring that the discussion remains professional, on-track and efficient. The meeting must not be allowed to degrade into a technical debate, a lecture, or a discussion of non-inspection-related issues. If the NRC exit leader finds that the purpose of the exit meeting cannot be realized (due, for example, to an overly argumentative licensee), the meeting should be terminated and the appropriate NRC manager should be notified.

c. The NRC representative tasked with leading the exit meeting may allow the licensee to record the exit meeting (either in audio or audio/video formats) provided the NRC is given a copy of the recording.

d. The exit meeting should be summary in nature. It is not necessary to go into great detail on inspection items that meet regulatory requirements; a statement describing the scope of inspection and reporting satisfactory performance can suffice.

e. The information presented at an exit meeting is predecisional in nature and subsequent management review of the inspection results may lead to changes in the characterization of issues; this should be made clear at the outset of the meeting. The inspector should also point out that if changes are made in the characterization of issues, NRC will communicate the changes to the licensee prior to the issuance of the inspection report.

f. When findings are involved, the exit meeting should include a description of the finding, and the standard which was not met. If there is a cross-cutting aspect associated with the finding, it needs to be presented at the exit meeting to ensure licensee awareness of the cross-cutting aspect.

g. When discussing findings which are potentially greater than green, the inspector should communicate the results of the initial SDP evaluation or the information needed in order to assess the significance.

h. If the licensee expresses strong opinions or disagreement with the characterization of an issue presented at the exit meeting, the inspector should inform regional management. Such a licensee response is not documented in the inspection report.

i. If proprietary information is reviewed in the course of an inspection, the inspector should confirm with the licensee at the exit meeting that NRC has (or has not) returned proprietary materials used during the inspection.

Time spent on scheduled and periodic entrance and exit meetings (including preparing for the meetings) is considered inspection time and should be divided among the procedures being performed for the entire inspection. Daily communication with licensee management is considered to be an integral part of every inspection procedure and the time used for such routine communications should be charged to the inspection procedures used.

Communicating inspection observations also is an integral and important part of every inspection, whether done daily during the course of an inspection, or periodically with status meetings. Many licensees have expressed the desire to hear inspector insights related to safety/regulatory performance even in instances where they do not reach the threshold for documentation in an inspection report (see IMC 0616, "Fuel Cycle Safety and Safeguards Inspection Reports"). When deciding which observations and insights to pass on to the licensee, inspectors should consider the following:

a. Inspectors should share the same insights with their regional managers and/or the senior resident inspector.

b. The insights must relate to areas within NRC's jurisdiction and responsibilities.

c. Comments should be objective and supported with examples when possible. Avoid generalizations such as "procedure adherence was good." Instead, just state the objective facts: "Procedures were followed in each case we observed." Negative observations or insights must be supported with specific examples.

d. Inspectors should not express an expectation for actions taken by licensee managers. The inspector may comment on whether or not the actions comply with NRC requirements.

e. Inspectors should determine before the exit if the licensee wants to hear the observations and insights. If the licensee does not want the observations or insights at the exit meeting, the inspectors should not discuss them.

f. Inspectors should avoid "consulting" for the licensee and not advise them on how to improve draft documents or in-process work, or pass on to licensees how other licensees do the same thing.

12.02 Findings Related to Non-NRC Regulations. Inspections might uncover safety issues or other problems outside the scope of NRC regulatory authority. These should be described to the inspector's management and conveyed to the licensee. In cases where the hazard is corrected before the end of the inspection, no further action is

required (see IMC 1007, "Interfacing Activities between Regional Offices of NRC and OSHA"). In all cases where the finding involves a potential effect on the safety of radioactive material, the inspector should ask what actions the licensee plans to take. Findings of safety issues that could impact the safety of radioactive materials shall be reviewed during subsequent inspections until the licensee has addressed the concern. However, special follow-up inspections solely on the basis of an Occupational Safety and Health Administration (OSHA) issue are not required unless the potential hazard also directly involves radiological health or safety. Findings involving occupational risk that do not affect the safety of radioactive materials, will be identified to the licensee and processed in accordance with IMC 1007.

12.03 Review of Integrated Safety Analysis Summary (ISA Summary). For planning inspections, several baseline inspection procedures specify reviewing applicable portions of the plant's ISA Summary. This review is intended to provide the inspectors with design bases insights in preparing for inspections and is not intended to be a review of ISA Summary accuracy. The general focus of the baseline inspection program is to monitor licensee performance; therefore ISA Summary accuracy will not be routinely inspected, although it is a source of information for inspections.

However, the NRC does rely on the accuracy of the ISA Summary in making informed licensing decisions on changes; therefore limited requirements for ISA Summary accuracy may be incorporated into specific inspection procedures. Perform these inspection requirements as directed by the implementing procedure.

12.04 Responding to Events and Event Reports. Region II is responsible for determining the seriousness of reported events and whether an immediate reactive inspection is necessary. This determination is performed in coordination with NMSS and NSIR, when appropriate.

Routine events of low significance will be followed up by resident or region-based inspectors to verify that the events are not complicated by loss of IROFS or other factors. This event follow up is part of the baseline inspection program, and emphasizes collecting information about the event for use by inspectors and/or risk analysts in evaluating the risk significance of the event to help regional and headquarters management determine if a response beyond the baseline program is warranted.

Non-reportable events are those events which fall outside of the NRC's reporting criteria. Although these events are not reported formally to the NRC, licensees occasionally contact NRC staff informally to describe the event. Licensees are often required, through license conditions, to maintain records of off-normal events onsite. Inspectors should examine non-reportable events, and associated licensee responses, for the particular program area being inspected in order to obtain a perspective on emerging problems or declining performance. It is not the intent of inspections that inspectors issue violations for items identified by a licensee's off-normal event or problem identification and resolution system if the licensee has taken or is taking

appropriate corrective actions. As noted in IMC 0616, licensee identified issues in the licensee's problem identification and resolution system need not be documented in inspection reports unless there is an overriding safety issue or potential generic issue important to safety. Technical details of the issue may provide useful insight on equipment or system reliability, or on some aspect of human performance.

The agency's response to significant events is described in NRC Management Directive 8.3, "NRC Incident Response Program." In general, significant operational events may be investigated by multi-disciplined Incident Investigation Teams (IITs) that are initiated by the EDO, and are comprised of both regional and headquarters personnel. Operational events of lesser significance may be investigated by Augmented Inspection Teams (AITs) that are initiated by Regional Administrators. Regional Administrators may also initiate special inspection (SI) teams that use only regional personnel. The applicable procedures for AITs and SI teams are listed in Appendix C, "Special and Infrequently Performed Inspections." In addition, for an event of extraordinary safety significance or profound regulatory implications, an Accident Review Group may be formed that reports directly to the Commission, as described in Management Directive 8.9, "Accident Investigation."

12.05 Findings Outside of Inspector's Qualifications. Inspectors sometimes identify issues or violations outside of the inspector's qualifications or expertise. In these cases the inspector is responsible for: (1) determining if an immediate threat to public or worker health or safety exists, and if one does exist to notify licensee management immediately; and (2) determining if the issue is better addressed by an inspector with different qualifications. Inspectors may follow issues outside of their qualifications or expertise with the concurrence of a regional manager responsible for the area associated with the issue and the inspector's supervisor.

Such issues are associated with the most applicable cornerstone and inspectable area, regardless of the baseline inspection procedure in use when the issue is identified. The inspector's time associated with the issue is charged to the baseline procedure that best corresponds to the issue. If the issue is found during inspections other than baseline inspections, the time is charged to the procedure in use.

12.06 Communication with Local Public Officials. As a matter of management philosophy, the NRC maintains an "open door" policy with regard to access by the public or state and local officials to the NRC staff or to publicly available electronic documentation concerning a licensee's performance. Some local officials may desire increased interaction with the NRC's regional office and/or Resident Inspectors. The degree of interaction that is considered necessary to enhance openness in the NRC is expected to vary widely dependant upon the situation at each facility. In each case where inspectors are utilized for this purpose, regional management must carefully balance the use of inspection resources to complete inspections with the need to enhance openness. Any meeting between local emergency preparedness officials and the NRC must be coordinated with the Federal Emergency Management Agency

(FEMA) in accordance with the Memorandum of Understanding between FEMA and the NRC.

XXXX-13 INSPECTION PROGRAM MODIFICATIONS IN EVENT OF A PANDEMIC

In the event of a pandemic, the NRC's Pandemic Response Plan (PRP) requires that aspects of the inspection program, identified as priority functions, be maintained. Additionally, the NRC's PRP allows modifications to less critical aspects of the inspection program in order to address limited inspection resources. Therefore, "supplemental" and "generic safety" inspections may be postponed when authorized by the regional administrator. Baseline inspection activities may be reduced commensurate with available inspection and licensee resources. Inspections of facility and security events (e.g., special inspections, AITs, and IITs) will continue. If necessary, the baseline inspection program will be reduced. Normal inspection activities will resume once the pandemic has passed and reasonable efforts will be made to complete missed baseline inspection activities before the end of the calendar year. Appendix E of this Manual Chapter provides additional background and basis for these actions and implementation details.

END

Appendices:
A. Risk-Informed Baseline Inspection Program (LATER)
B. Supplemental Inspection Program (LATER)
C. Generic, Special, and Infrequent Inspections (LATER)
D. Plant Status (LATER)
E. Inspection Program Modifications in the Event of a Pandemic (LATER)

ATTACHMENT 1

Chart of FCOP Cycles

FCOP Year	1	2	3	4	5	6
Start Date	1/1/2010	1/1/2011	1/1/2012	1/1/2013	1/1/2014	1/1/2015
End Date	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015
Biennial Cycles	1st Biennial		2nd Biennial		3rd Biennial	
Triennial Cycles	1st Triennial			2nd Triennial		

FCOP Year	7	8	9	10	11	12
Start Date	1/1/2016	1/1/2017	1/1/2018	1/1/2019	1/1/2020	1/1/2021
End Date	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021
Biennial Cycles	4th Biennial		5th Biennial		6th Biennial	
Triennial Cycles	3rd Triennial			4th Triennial		

ATTACHMENT 2

Revision History - IMC XXXX - Inspection

Commitment Tracking Number	Issue Date	Description of Change	Training Needed	Training Completion Date	Comment Resolution Accession Number