FUEL CYCLE OVERSIGHT PROCESS
PROJECT PLAN AND RESOURCE ESTIMATE
Revision 0

Executive Summary

In 2000, the U. S. Nuclear Regulatory Commission (NRC) revised its rules to establish Subpart H, "Additional Requirements for Certain Licensees Authorized to Possess a Critical Mass of Special Nuclear Material," to the Title 10 of the *Code of Federal Regulations* (10 CFR) Part 70, "Domestic Licensing of Special Nuclear Material," and require certain fuel facility licensees to develop an integrated safety analysis (ISA) and identify items relied on for safety (IROFS) to manage the risk of certain high- and intermediate-consequence events. In the intervening decade, the staff has implemented limited revisions to inspection and enforcement guidance to incorporate ISA insights; however, the processes applied by the staff for evaluating licensee performance, determining the need for reactive and supplemental inspections, and communicating licensee performance to stakeholders continue to lack consistent application of risk insights and are overly subjective.

This plan provides a blueprint for a multi-year effort to systematically revise the fuel cycle oversight process (FCOP) to make it more risk-informed, performance-based, objective, predictable, repeatable and transparent. The products of this effort will be: (1) a risk-informed, repeatable significance determination process (SDP) to assess the risk significance of inspection findings and events; (2) an improved baseline inspection program incorporating risk insights into a sample selection and providing a more predictable and transparent level of effort; (3) an action matrix to provide a transparent, objective and repeatable method for staff decisions regarding increasing inspections above the baseline based on licensee performance; (4) a revised Enforcement Policy to incorporate ISA insights and provide credit for an effective corrective action program (CAP) as appropriate; (5) a new problem identification and resolution (PI&R) or CAP baseline inspection that provides an ongoing basis for crediting licensee corrective actions in the enforcement process; and (6) a program for ongoing oversight of the new FCOP to ensure effective implementation and continuous improvement.

In addition to developing and implementing the products described above, the staff will work to develop risk-informed quantitative performance metrics and potentially performance indicators to enhance the objective assessment of licensee performance and, where possible, reduce inspection efforts. Finally, the staff will re-examine the basis of previous staff decisions to conduct portions of the fuel facility inspection program (i.e., criticality safety and material control and accounting) from the program office rather than the region and make a recommendation regarding potential consolidation of the inspection program.

This plan describes program development through fiscal year (FY) 2013, with full implementation in FY 2014. The staff has estimated the resources needed to support this plan and schedule and will request these resources through the normal budget process.

Enclosure

I. Short-Term Actions (FY 2010-FY 2011)

Short-term actions focus on the development of the technical bases for the key elements of the FCOP. These technical bases will serve as the foundation for further development of the regulatory oversight process.

a. Option 1- Technical Basis Development for Qualitative Risk Assessment for Areas Related to ISA.

The ISAs include the areas of nuclear criticality safety, chemical process safety, radiation dose to the public from accidents, and radiation dose to workers from accidents.

i. Develop a tool to identify findings of very low safety significance.

(a) Task: Develop a flow chart screening tool for inspection staff to use to determine which ISA-related findings are of very low safety significance.

(b) Action: Licensees generally performed qualitative risk assessments as they developed their ISAs to meet the requirements of Subpart H of 10 CFR Part 70. The staff revised the Enforcement Policy, to focus on qualitative risk assessment based on these ISAs in determining the Severity Level of violations. (This revised Enforcement Policy is awaiting Commission approval.) The staff has developed an implementing procedure in the form of an Inspection Manual Chapter (IMC) that uses a qualitative risk assessment tool. This proposed IMC is undergoing internal NRC review. The staff plans to use the qualitative tools developed for the revised Enforcement Policy as a basis in the FCOP for development of a screening method and tool for inspection staff to use to identify inspection findings of very low safety significance. The staff plans to base this tool on each licensee's ISA and/or safety analysis report. The process will be based on the qualitative likelihood of the degraded condition as provided in the ISA, the consequences from the ISA, and the duration of the degraded condition. For findings involving an unanalyzed condition, the staff plans to perform an analysis of the finding using the risk assessment methods in NUREG-1520, "Standard Review Plan for the Review of License Applications for a Fuel Cycle Facility."

(c) Deliverables: A flowchart to be used by inspectors to identify findings of very low safety significance.

ii. Develop SDP flowcharts.

(a) Task: Develop SDP flow-charts for ISA-related findings.

(b) Action: In addition to the screening tool for inspection findings of very low safety significance, the staff will also develop a flowchart that could be used in an SDP that will establish thresholds for safety significant findings. This flowchart will, as above, use the tools developed as part of the Enforcement Policy revision, based on the ISA, as a basis.

This tool will be used to determine the safety significance of findings that were screened as being potentially greater than very low safety significance.

(c) Deliverables: A flowchart for use in an SDP for ISA-related inspection findings.

iii. Compare findings using the SDP and the traditional process.

(a) Task: Test SDP flow chart against previous findings and violations

(b) Action: The staff will use the screening tool and SDP flowchart to determine the safety significance of recent (within the past 5 years) inspection findings to evaluate the results against findings whose risk significance was established using traditional enforcement. The staff will evaluate the results to determine what changes, if any, should be made to the screening tool and SDP flowchart, and then make any needed changes.

(c) Deliverables: Evaluation of the screening tool and SDP flowchart to prepare a final draft screening tool and flow chart suitable for incorporation into IMCs and procedures.

iv. Evaluate potential performance metrics.

(a) Task: Evaluate the use of performance metrics in the oversight program.

(b) Action: The staff plans to evaluate information reported by licensees under existing requirements (e.g., effluents, worker dose) to assess its potential use in assessing and communicating licensee performance.

(c) Deliverable: Report on potential performance metrics.

v. Include non-ISA facilities (i.e., gaseous diffusion plants).

(a) Task: Assess issues in applying the FCOP to non-ISA facilities.

(b) Action: The staff will review and document the status of risk-related information at fuel cycle facilities that do not perform ISAs. The staff will assess the feasibility and other issues if the FCOP were to be applied to these facilities. This assessment will occur in two stages: an initial quick look and a more thorough examination that includes some test cases of risk-significance determination. A preliminary report will include information from the initial quick look. The currently proposed FCOP only uses ISA information to supplement the information needed by the NRC risk analyst to perform assessments. The staff will determine if barriers exist that will prevent independent risk assessments for inspection findings of potentially greater than low significance.

(c) Deliverables: Preliminary report on risk-related information and issues at non-ISA facilities; report on issues in applying the fuel cycle oversight program to non-ISA facilities.

b. Option 2 - Technical Basis Development for Quantitative Risk Assessment for Areas Related to ISA

i. Review ISA methodologies used by licensees.

(a) Task: Review ISA methodologies.

(b) Action: The staff has already completed a preliminary summary of the status of ISA methods used by licensees and needs to document it as a reference guide for NRC risk analysts. The staff will include Agencywide Documents Access and Management System (ADAMS) accession numbers for documents describing current licensee ISA methods. The guide will include only top level descriptions of methods, likelihoods, and consequence criteria, not detailed descriptions of licensee procedures. This project will require a small level of NRC staff effort. This information will not be included in IMC guidance on significance determination but kept as a separate reference.

c) Deliverables: Memorandum summarizing ISA methods.

ii. Document and further review of qualitative risk-significance determination screening criteria for inspectors.

(a) Task: Document qualitative risk-significance determination screening criteria and guidance for inspectors, and review of existing assessment of actual inspection findings by NRC inspection staff.

(b) Action: The staff has completed preliminary work on developing a qualitative significance determination screening process and criteria for application by inspectors. The staff tested these criteria by applying them to past inspection findings. This application was hypothetical in that insufficient information was available to assess actual situations, so assumptions were made. The staff has prepared draft guidance documentation. Additional review is needed for these criteria. The inspection staff needs clear screening criteria and guidance so a wider group of inspectors should review the documents, which likely will lead to additional clarification in the guidance. This guidance will appear in the SDP section of an IMC. The agency will discuss the guidance at a public meeting, issue it for public comment, and revise it as appropriate.

(c) Deliverables: Final draft input to IMC SDP guidance on qualitative risk-significance determination screening by inspectors.

iii. Establish a basis for risk-informed significance determination thresholds.

(a) Task: Develop and document the basis for SDP risk-significance metrics and thresholds.

(b) Action: The objective is to develop and document the basis for SDP risk-significant metrics and thresholds. The staff has already completed initial documentation of trial thresholds and their bases. These have been reviewed but responses to comments and documentation remain. Metrics may also be supplemented by qualitative criteria, based on the review of actual inspection findings. The product will consist of preliminary SDP risk-significance metrics, thresholds, and criteria, to be made available for a trial application to actual inspection findings.

(c) Deliverables: Final draft SDP quantitative risk-significance basis document.

iv. Test risk thresholds against a limited set of inspection findings.

(a) Task: Conduct a limited test of the risk-significance determination process.

(b) Action: Brookhaven National Laboratory (BNL), with input from the NRC staff have selected eight fuel cycle events and prepared preliminary parts of their risk analysis. They will calculate the trial SDP risk metrics for these events and compare them to the trial thresholds to determine levels of significance. The NRC staff, with input from BNL, will make determinations regarding the usefulness of thresholds; the need for other criteria; and the need for further methods, data, and guidance to support such risk-significance analyses. Contractors will primarily perform the work with staff review.

(c) Deliverables: Initial report on the trial test of risk-significance determination thresholds.

v. Test risk thresholds against a wider set of actual and hypothetical inspection findings.

(a) Task: Test risk thresholds and significance determinations.

(b) Action: There is a need to test the trial risk significance determination metrics, thresholds, and process against a set of past actual and hypothetical inspection findings that represents a wide spectrum of possible findings. Such tests will result in a spectrum of examples, each rated in significance levels for public and worker metrics. The frequency of occurrence of each sample type of finding may be estimated to determine how often each level of significance may occur in practice. This will communicate the practicality of the trial thresholds and criteria. Hypothetical test cases are needed, because actual findings that are of greater than very low safety significance are too few to be representative. NRC staff, including inspectors, will develop these hypothetical findings.

(c) Deliverables: Report on tests of trial risk thresholds and significance determinations.

vi. Prepare the preliminary Risk-Significance Assessment Handbook for fuel cycle facilities.

(a) Task: Prepare final draft quantitative risk-significance assessment guidance for fuel cycle facilities.

(b) Action: This guidance will provide procedures, guidance, and references for the NRC inspectors and risk analysts to use in assessing the quantitative risk significance of inspection findings for fuel cycle facilities.

(c) Deliverables: Outline of guidance and final draft guidance on quantitative risk-significance determination for fuel cycle facilities.

vii. Develop and validate human-reliability risk-assessment tools and data applicable to fuel cycle processes.

(a) Task: Develop human reliability tools for fuel cycle risk-significance assessment.

(b) Action: The majority of fuel cycle inspection findings involve human errors, such as a lack of current procedures, absence of postings, failure to follow procedures, or unauthorized process changes. Events have occurred involving human errors that were not analyzed in ISAs. The types of human error situations often do not fit the few categories for which error probabilities are available in the Savannah River Site Human Error Database. Thus, the NRC needs a simple tool analogous to that database that fits past experience at fuel cycle facilities. The NRC currently has simplified tools used in the Reactor Oversight Process (ROP) for human reliability analysis failure rates, but the agency will have to validate the tool for the new use. Based on staff scoping in FY 2010, it will conduct a small project in FY 2011 to develop an initial guidance document tool. This document may require supplementation to incorporate experience gained from applying the preliminary SDP to actual inspection findings in FYs 2012 - 2013.

(c) Deliverables: Fuel cycle human reliability tool.

viii. Develop and validate hardware-reliability risk-assessment tools and data applicable to fuel cycle processes.

(a) Task: Confirm the use of hardware risk-assessment tool for fuel cycle facilities.

(b) Action: Hardware failure data relevant to many fuel cycle processes already exists in WSRC-TR-93-262, “Savannah River Site Generic Database Development,” dated May 1998, and its successors. The staff should review this document to assess the reasonableness of its data for use in evaluating change in risk caused by deficiencies in process equipment in NRC-regulated fuel cycle facilities. The product will be an

NRC staff memorandum recommending the use of these data in the implementation phase in FY2012 – 2013. The agency will present this recommendation at a public meeting for comment.

(c) Deliverables: Memorandum with recommendations on hardware reliability data.

ix. Develop performance metrics.

(a) Task: Evaluate the use of performance metrics in the oversight program.

(b) Action: The staff plans to evaluate information reported by licensees under existing requirements (e.g., effluents, worker dose) to assess its potential use in assessing and communicating licensee performance.

(c) Deliverable: Report on potential performance metrics.

x. Assess risk-related information for non-ISA facilities (i.e., gaseous diffusion plants).

(a) Task: Assess issues in applying the FCOP to non-ISA facilities.

(b) Action: The staff will review and document the status of risk-related information at fuel cycle facilities that do not perform ISAs. The staff will assess the feasibility and other issues if the FCOP were to be applied to these facilities. This assessment will occur in two stages: an initial quick look and a more thorough examination that includes some test cases of risk-significance determination. A preliminary report will include information from the initial quick look. The currently proposed FCOP only uses ISA information to supplement the information needed by the NRC risk analyst to perform assessments. The staff will determine if barriers exist that will prevent independent risk assessments for inspection findings potentially greater than low significance.

(c) Deliverables: Preliminary report on risk-related information and issues at non-ISA facilities; report on issues in applying the fuel cycle oversight program to non-ISA facilities.

c. Technical Bases for Significance Determination for Non-ISA Areas.

The areas not included in the ISAs are emergency preparedness, occupational radiation protection (nonaccident), public radiation protection (nonaccident), physical security, and material control and accounting. (Information security will be considered for inclusion at a later date.)

i. Task: Develop a technical basis for significance determinations.

ii. Actions: The NRC staff plans to develop significance determination tools and a process for areas not included in the ISAs. The staff plans to use available non-ISA risk insights, such as radiation dose limits for workers and members of

the public, that are based on the health risk from radiation doses. Nonetheless, several of the SDP tools will be deterministic, as they are in the ROP. The staff plans to evaluate the SDP tools used in the ROP to determine if they provide insights on how to proceed with the fuel cycle SDP. For example, under public radiation protection, the FCOP process for evaluating findings in transportation safety might be very similar to that used in the ROP, given that the ROP significance determination is based on risk from radiation or contamination from, or on, shipping packages. The regulatory limits and public safety impacts for certain issues related to packages shipped by power reactors will relate directly to a similar shipment from a fuel cycle facility.

iii. Deliverables: Draft SDP flow charts for non-ISA areas suitable for incorporation into an SDP IMC in the medium-term phase.

d. Technical Basis for Baseline Inspections.

The baseline inspection program will apply to ISA-related and non-ISA-related areas. These technical bases will be developed in FY 2011.

i. Task: Develop technical bases for baseline inspections.

ii. Actions: The NRC staff plans a baseline inspection program that is risk informed and performance-based and that identifies the minimum level of inspection required for a licensee (regardless of performance) to give the NRC sufficient information, (1) to determine whether licensee performance is acceptable and the licensee is operating safely and securely in accordance with NRC requirements, and (2) to allow the NRC to identify indications of declining licensee performance before it affects public safety or security.

The staff plans to establish an expert panel of NRC technical staff to develop a baseline inspection program. Starting with the objective for a cornerstone, the expert panel will use ISA risk insights, operational experience, and regulatory requirements to develop key attributes that reflect whether each cornerstone's objectives are met. For example, the key attributes of an effective emergency response might include the readiness and availability of the emergency response organization (ERO), the reliability of appropriate facilities and equipment, appropriate ERO procedures, and adequate ERO training and testing. Based on key attributes, the expert panel will develop methods to monitor the licensee's performance regarding these key attributes, considering the use of performance metrics, performance indicators, and inspections. The expert panel will define what should be inspected, the scope of inspection, and methods of inspection (inspectable areas) to determine if all of the key attributes are adequate at a licensee's facility.

The expert panel will recommend the number of samples for inspectable areas. For example, it might recommend that an inspection procedure (IP) require between three and five scenario walkthroughs of emergency actions with a licensee's emergency directors to determine the effectiveness of their training. The expert panel might recommend the use of performance metrics in determining samples and sample sizes. For example, it might specify a lower sample number for walkthroughs for a facility that conducts quarterly emergency

drills with effective critiques.
The expert panel will also identify potential performance metrics for consideration in the future.

iii. Deliverables: A list of inspectable areas by cornerstone, recommended sample sizes, and potential performance measures in a form suitable for the development of IMCs and IPs as well as basis summary sheets (inspectable area, cornerstone, scope, basis, and performance metrics) for each inspectable area.

e. Technical Bases for PI&R Inspections.

i. Task: Develop a technical basis for PI&R inspections (CAP inspections)

ii. Actions: The staff intends the PI&R inspection to be a key part of the baseline inspection program. The staff plans to develop an IP for reviewing the PI&R, using, as acceptance criteria, basic well-established elements of effective PI&R programs. The staff will not expect licensees to have programs that meet the criteria in Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, Domestic Licensing of Production and Utilization Facilities," except for those few facilities for which compliance with Appendix B is a requirement. For those licensees with effective PI&R programs, the staff plans to apply a revised Enforcement Policy that allows licensees to place NRC findings of very low safety or security significance in their CAPs for resolution. For these licensees, the NRC will not require descriptions of the proposed corrective actions for violations of low safety or security significance to be sent to the NRC and will not inspect corrective actions for each violation of low safety or security significance.

The IP will recognize that fuel cycle licensees have a range of PI&R programs and processes, many of which go beyond regulatory requirements. The staff plans that the IP will be one of the few to evaluate both program content and process, as well as program implementation. The IP will review the elements of a licensee's PI&R program, as well as a sample of items in a licensee's CAP, to determine if items are being properly identified, assessed for significance, and corrected. This inspection will include consideration of cross-cutting and other safety culture elements when a licensee has difficulty resolving issues in the CAP. The staff recognizes that the Commission has issued a draft safety culture policy statement for public comment and will not complete cross-cutting or other safety culture aspects of the IP until after Commission action on the draft policy statement. Because this IP will be central to the FCOP, the staff plans to develop a full draft of the IP in the short-term phase, recognizing that safety culture aspects will be completed later, in the medium-term phase.

iii. Deliverables: A draft PI&R IP that includes criteria for an effective CAP

f. Technical Bases for Supplemental Inspections.

i. Task: Develop technical bases for supplemental inspections.

ii. Actions: The staff plans to develop the objectives for supplemental

inspections to apply NRC resources in a graded manner when a licensee or the NRC identifies risk-significant performance issues. The staff plans two or three supplemental IPs that will be based on the risk-significance and breadth of identified performance issues. The IPs could range from a review of a licensee's root cause investigation, to expansion of the baseline samples, to a focused team inspection, or to a broad-scope team review of multiple cornerstone areas that will include an independent evaluation of root causes of licensee performance issues. The staff plans that the type of inspection will be based on objective measures of licensee performance.

iii. Deliverables: Objectives for supplemental inspection types that should be suitable for developing IPs in the medium-term phase

g. Technical Basis for Reactive Inspections.

i. Task: Develop a technical basis for reactive inspections.

iii. Actions: The staff plans to develop the technical bases to revise Management Directive (MD) 8.3, "NRC Incident Investigation Program," dated March 27, 2001, to provide more risk-informed criteria (based on ISAs or other risk insights) for determining the type of inspection or investigation of operational events. The staff plans to provide criteria for a range of inspections, based on the seriousness of an event. These reactive inspections include incident investigation teams, augmented inspection teams (AITs), and special inspections (SIs). The staff will use these criteria in the medium term to revise the IPs for reactive inspections. The staff does not plan for licensee or other stakeholder comment on the development of the revised MD 8.3 criteria during the short-term phase.

iii. Deliverables: Criteria to be used to revise MD 8.3 for reactive inspections.

h. Technical Basis for Assessment of Licensee Performance.

i. Task: Develop the basis for a more risk-informed, objective, predictable and transparent process for assessing safety and security performance to replace the licensee performance review (LPR).

ii. Actions: The NRC staff plans to develop a more objective process to assess licensee safety and security performance. The process will include periodic internal meetings within the NRC to evaluate planned inspections and interfaces with licensees in light of their performance, periodic letters to licensees documenting the conclusions for NRC assessments, and periodic public meetings to discuss those conclusions. The staff plans to develop criteria for classifying performance in a cornerstone (for example, two safety-significant findings in an assessment period might result in defining a cornerstone as degraded). These criteria will be based on the safety or security significance of inspection findings (and on exceeding thresholds for performance indicators, if applicable).

The staff also plans to develop a process for integrating licensee performance across cornerstones to performance categories columns in the ROP action

matrix (for example one degraded cornerstone, multiple degraded cornerstones). In addition, the staff plans to develop NRC actions and expected licensee actions for levels of degraded licensee performance. The staff expects that the keystone of the assessment will be an action matrix to categorize licensee performance and define NRC actions and expected licensee actions, based on this categorization. The staff recognizes that the action matrix might result in a tool that looks similar to that of the ROP action matrix, but the staff expects that the risk differences between power reactors and fuel cycle facilities will result in different thresholds of significance, performance columns, and NRC actions and expected licensee actions.

iii. Deliverables: An assessment process flow chart for internal NRC actions and NRC public actions, a method to determine when a cornerstone is degraded, a method to integrate performance across cornerstones, performance categories, types of reviews at different levels of degraded performance, and NRC actions and expected licensee actions for levels of degraded performance all of which should be suitable for developing an action matrix and supplemental IPs in the medium-term phase.

1. Framework Development.

i. Task: Develop an oversight framework.

ii. Actions: The NRC staff plans to further develop the oversight framework, making changes as needed as it develops the components of the framework. Attachment 2 provides current versions of the draft FCOP framework and process.

iii. Deliverables: A framework to be updated, as necessary, as its components are developed.

j. Stakeholder Communication.

i. Task: Develop a process to ensure that stakeholders have access to, and are informed of, the results of the oversight program, once it is implemented.

ii. Actions: The staff plans to develop a process to ensure that stakeholders could review the results of inspections and assessment. The NRC will continue to make inspection reports available to the public in its ADAMS, except for those reports containing security-related or proprietary information. The staff plans to post summaries of performance results on its Web site. The staff also plans to post assessment reports on the Web and to hold periodic assessment meetings with licensees that are open to the public.

iii. Deliverables: Outline of information that will be available on the Web site (other than through ADAMS) and other processes (such as assessment) that should involve the public, such as meetings open to the public; information will be suitable for incorporation into IMCs and will include a list of items that should be available on the Web site and their format.

II. Medium-Term Actions (FY 2012–FY 2013)

The medium-term tasks are, for the most part, actions to integrate the technical bases that were developed in the short-term phase into program documents (attachment 4) and procedures.

a. Oversight Process Development

i. Improve the inspection program.

(a) Task: Revise the fuel cycle facility inspection program documents and IPs, based on the technical bases developed above.

(b) Actions: The staff plans to revise the inspection program documents to incorporate the FCOP framework. Attachment 2 lists the documents that the staff expects to revise. The staff plans to use the technical bases developed in the short-term phase to revise IMCs and IPs. During these revisions, the staff will delete previous inspection areas that were not identified as inspectable areas from the baseline IPs. Based on recommendations from the expert panel and line management decisions, the staff might incorporate these deleted areas into supplemental IPs. In addition, the staff will revise any other IPs that could be used as part of the supplemental program. The staff will develop supplemental IPs and revise reactive IPs (AITs, SIs).

(c) Deliverables: Revised inspection program documents (IMCs) and revised IPs.

ii. Develop the SDP.

(a) Task: Incorporate the screening tool and SDP flow charts drafted in the short-term phase into an SDP IMC and procedures.

(b) Actions: During the medium-term phase, the staff plans to use the screening tool and SDP flow charts developed during the short-term phase to develop the SDP IMC and any implementing procedures, while coordinating the revision of the Enforcement Policy. The staff plans a parallel test of the SDP process with the legacy process to gain lessons learned to use in completing the FCOP SDP process.

(c) Deliverables: A final SDP IMC and implementing procedures.

iii. Develop performance metrics.

(a) Task: Incorporate quantitative performance metrics into IPs and assessment, as appropriate. Identify any performance measures that might be appropriate as performance indicators.

(b) Actions: The staff plans to integrate performance metrics developed in the short-term phase into oversight process documents, as appropriate. For example, if meeting a certain performance metrics will result in a

reduction in the number of samples in an area of inspection, the IP will include this guidance for sample selection.

(c) Deliverables: Inspection program documents and procedures that incorporate performance metrics developed in the short-term phase.

iv. Develop a safety and security assessment process.

(a) Task: Develop an assessment process.

(b) Actions: The staff plans to use the technical bases developed in the short-term phase to develop an action matrix, an assessment IMC, and any implementing procedures. During the medium-term phase, the NRC staff plans to conduct parallel tests of the proposed and legacy processes to incorporate lessons learned and feedback into the final IMC.

(c) Deliverables: A final assessment IMC that integrates the action matrix into an IMC and the necessary implementing procedures.

v. Develop a revised Enforcement Policy.

(a) Task: Develop a revised Enforcement Policy that incorporates the fuel cycle SDP and recognizes effective licensee CAPs.

(b) Actions: The staff plans to develop, issue for formal comment, and implement a revised Enforcement Policy. The staff plans to conduct parallel tests of the draft revised Enforcement Policy and the legacy processes to develop lessons learned and feedback into the proposed Enforcement Policy.

(c) Deliverables: Revised Enforcement Policy and necessary implementing procedures.

vi. Action matrix.

(a) Task: Complete the action matrix and integrate it into the assessment process.

(b) Actions: The staff intends to develop an action matrix based on the technical bases developed in the short-term phase. The action matrix will include thresholds of significance, performance columns, and NRC and expected licensee actions.

(c) Deliverables: Action matrix integrated with the assessment process.

b. Transition Plan

i. Revise the communications plan and develop a training plan.

(a) Task: Revise the communications plan to include details on

implementing the FCOP, including reference to a training plan for staff and a plan for informing stakeholders.
(b) Actions: The staff plans to implement a revised communications plan and update it, as necessary. The staff plans to develop a training plan for the NRC staff that will recognize the different needs of the NRC staff, given their different roles. It will include basic modules for all staff, and other modules customized to a staff member's specific assignments. The staff also plans to revise the qualification journals for new staff training and qualification.

(c) Deliverables: An updated communications plan, a staff training plan, and stakeholder briefing materials.

ii. Conduct initial implementation.

(a) Tasks: Evaluate each licensee's CAP to determine if it meets the criteria for an effective CAP. Test part of the FCOP at selected licensee facilities.

(b) Actions: The staff plans to evaluate each licensee's CAP using the PI&R IP during calendar year 2012. These inspections will determine if the licensee has a CAP that will support implementation of the FCOP.

The staff plans an initial implementation of selected parts of the FCOP at selected licensee facilities that have effective CAPs or for all licensees. This "test" implementation will be for one calendar year, beginning in January 2013. (For those licensees without a CAP, the staff plans to continue to implement a legacy oversight process that meets the criteria for the FCOP). The test use of the FCOP will take the place of the legacy oversight in the areas tested. The staff plans to develop a transition plan that will include licensee staff and stakeholder orientations before its initial implementation. During initial implementation, the staff will use a process that will require NRC staff feedback and encourage stakeholder feedback. The staff will evaluate this feedback and use it to revise the FCOP before its full implementation at the beginning of 2014.

(c) Deliverables: Reviews of all licensees' CAPs; test of certain parts of the FCOP at certain licensee facilities; and revised FCOP, based on the test use.

iii. Conduct full implementation.

(a) Task: Implement the FCOP.

(b) Actions: The staff plans to fully implement the FCOP starting in January 2014. To do this, it will complete all processes, documentation, and training by the end of calendar year 2013.

(c) Deliverables: Final program documents and procedures, trained staff, and program management tools.

iv. End the LPR program.

The NRC will terminate the legacy LPR process at the end of FY2013 and replace it with the assessment process.

c. Stakeholder Involvement

i. Task: Ensure stakeholder involvement in the development of the FCOP.

ii. Actions: The NRC staff intends to continue to implement and revise, as appropriate, a communications plan that provides information and plans to stakeholders.

iii. Deliverables: Implementation of a communications plan.

d. FCOP Oversight

i. Task: Implement a process to ensure FCOP oversight during implementation.

ii. Action: The staff will establish program oversight functions in the Office of Nuclear Material Safety and Safeguards (NMSS) and the Office of Nuclear Security and Incident Response (NSIR). This oversight will include the role of revising oversight processes and procedures, as needed, and developing temporary instructions and generic issue inspections, as needed. The staff plans to develop the FCOP self-assessment process, considering in this development the ROP self-assessment process used as part of the preparation for the Agency Action Review Meeting (AARM) (MD 8.14, "Agency Action Review Meeting," dated March 16, 2009).

iii. Deliverables: Oversight organizations, with roles, responsibilities, and processes, and a self-assessment process for the FCOP.

III. Long-Term Actions (FY 2014 and beyond)

a. Conduct stable implementation.

i. Task: Fully implement the FCOP, beginning in January 2014, including a feedback process like that used in the ROP.

ii. Action: The staff will implement the program.

iii. Deliverables: Ongoing program.

b. Implement an alignment process.

i. Task: Develop and implement a periodic review to ensure the most effective overall application of resources.

ii. Action: The staff plans to use the ROP realignment process as a guide to develop a simplified alignment process for the FCOP.

iii. Deliverables: An IMC and the necessary procedures to implement an alignment process and the FCOP.

IV. Public Process, Industry Engagement, Federal Advisory Committee Act Considerations

The NRC staff plans to continue stakeholder involvement in the development of the FCOP that began in the initial stage of development in 2009. This involvement included a *Federal Register* notice to the public requesting input and the establishment of a Web page at www.regulations.gov for stakeholders to provide comments. In addition, the staff plans to continue to hold periodic meetings, open to the public, to discuss with licensees proposed FCOP processes and draft documents. The staff plans to continue to offer participation in these meetings through teleconference calls and the "Go to Meeting" Web tool. Program office and regional office staff will review draft documents to be discussed at these meetings and then provide them to licensees and the public and post them on www.regulations.gov, before the public meetings during which they are discussed. The NRC staff plans to collect public and internal staff comments and consider each in developing the FCOP.

The process for oversight of and participation in FCOP development is based on the Working Group process defined in MD 5.3, "Agreement State Participation in Working Groups," dated August 22, 2007. Under this process, a steering committee made up of senior managers from NMSS, Region II, NSIR, the Office of Enforcement, and Office of Nuclear Reactor Regulation directs staff actions. This steering committee establishes a charter for the staff developing the FCOP and provides continuing direction, guidance, and support. The staff considered whether it will be appropriate to place FCOP development under the provisions of the Federal Advisory Committee Act, but, in consultation with the Office of the General Counsel, the staff determined that it best fit under MD 5.3 oversight, because the process and work products were best developed by the NRC staff, with stakeholder and other public comments, rather than by a committee of NRC and non-NRC experts. The evaluation of FCOP governance appears at ADAMS Accession No. ML092310052.

V. Schedule and Resources

The staff estimates that, given the resources shown below, it could fully implement the FCOP in January 2014. Short-term actions involve developing the technical bases for FCOP elements and the staff will complete them from mid-FY 2010 through the end of FY 2011. Medium-term actions involve developing the formal processes and procedures to implement the FCOP and are planned for FY 2012 through FY 2013. Such actions include parallel testing of certain new processes with the legacy processes. Long-term actions are those in FY 2014 and beyond. They involve full implementation of the FCOP and the development and use of tools to evaluate the FCOP (self-assessment and realignment). Long-term actions could also include the development of performance indicators for the FCOP.

For FY 2011, the staff estimates it will require 3.7 full time equivalents (FTE) to complete the short-term tasks for the qualitative option. The staff estimates it will require 3.7 NRC FTE and $810,000 in contract support to complete the short-term tasks for the quantitative option.

The staff estimates it will require 9.2 FTE and $500,000 to complete the medium-term tasks for either the qualitative or quantitative option.

On a fiscal year basis, the resources are:

	Qualitative		Quantitative	
FY	FTE	Contract Dollars	FTE	Contract Dollars
11	3.7	0	3.7	810
12	4.6	250	4.6	250
13	4.6	250	4.6	250
Total	12.9	500	12.9	1,310

VI. Status Reports to Commission

The staff will provide status reports to the Commission every 6 months, beginning 6 months after the staff requirements memorandum providing initial Commission approval and direction on this plan.

Attachments:
1. Staff Actions in Response to OIG Audit of Fuel Cycle Oversight (OIG-07-A-06)
2. Oversight Framework – Cornerstones and Cross Cutting Areas
3. Administrative Considerations in the Development of a Performance Indicator Program
4. Documents that may be Updated as Part Of the Revision to the Fuel Cycle Oversight Process