

CHARTER FOR BUILDING A SMARTER FUEL CYCLE INSPECTION PROGRAM

I. BACKGROUND:

The fuel cycle inspection program applies to operating fuel cycle facilities licensed by the U.S. Nuclear Regulatory Commission (NRC) including nuclear fuel fabrication facilities, uranium enrichment plants, and uranium conversion plants. Inspection Manual Chapter (IMC) 2600 “Fuel Cycle Facility Operational Safety and Safeguards Inspection Program” defines the inspection program. The program is designed to determine whether licensed fuel cycle facilities are operated safely and securely, in accordance with regulations, and to identify indications of declining safety or safeguards performance. The program defines the minimum core inspection effort to be performed at each type of fuel cycle facility and provides guidance for reactive, supplemental, and generic safety issue inspections.

The core inspection program is implemented through inspection procedures (IPs). Inspection procedures identify requirements that the inspectors must consider while evaluating the associated areas related to safety and safeguards. Each IP provides a resource estimate to complete the inspection requirements of that procedure. The core inspections for each type of facility are specified in Appendix B of IMC 2600.

Resident inspectors are assigned to Category I fuel cycle facilities. The resident inspection program is described in more detail in Appendix C of IMC 2600. However, a resident inspector may occasionally perform inspections other than resident inspections in coordination with regional management if he/she is qualified to do so.

The material control and accounting portion of the fuel cycle inspection program is referenced in IMC 2600 as part of the program description and included in the resource estimates specified in Appendix B of IMC 2600. IMC 2683 “Material Control and Accounting Inspection of Fuel Cycle Facilities” defines objectives for the material control and accounting inspections and includes the list of IPs.

II. PURPOSE:

Charter a working group (WG) to conduct a holistic assessment of the Fuel Cycle inspection program for the purpose of improving the effectiveness and efficiency of the program inspections in areas of safety and safeguards. Consistent with the January 15, 2019, memorandum from the Director of the Office of Nuclear Material Safety and Safeguards (ADAMS Accession Number ML19015A290), the working group should look for areas of transformation and innovation in the Fuel Cycle inspection program while adhering to the key principles that guide the manner in which we conduct our work and make decisions, particularly with respect to the concept of “reasonable assurance of adequate protection.”

Accordingly, the WG will solicit and assess feedback from internal and external stakeholders (public, industry, etc.) on any proposed changes to the inspection program. The working group will review the suite of IPs referenced in IMC 2600 and IMC 2683 to determine if overlaps of inspection areas exist and to make recommendations on areas of enhancements. Additionally, the WG will leverage, as appropriate, operating experience, international experience, and inspection data to determine whether the inspection program guidance applies the appropriate focus on areas with demonstrated performance issues and areas that provide the greatest benefit to determine that a facility is operating safely and securely in accordance with regulatory requirements. The working group should consider ways to make all phases of the inspection program smarter (scheduling, preparation, inspection, enforcement, documentation, etc.). The WG will document any recommendations for potential changes to the Fuel Cycle

inspection program and develop, as appropriate, metrics to measure the effectiveness and efficiency of the implementation of the changes.

III. TASKING:

- A. Gather feedback from a broad range of internal and external stakeholders and consider that feedback in the development of recommendations for changes to the Fuel Cycle inspection program. In addition, the working group will identify subject matter experts and Region II inspectors among the different communities of practice who have experience implementing the inspection procedures to gather recommendations. Engage with staff from the Office of Nuclear Reactor Regulation (NRR) and staff from the Division of Spent Fuel Management (DSFM) to gather insights on initiatives to improve the effectiveness and efficiency of the oversight program.
- B. Assess the IPs referenced in IMC 2600 and IMC 2683 to identify areas for enhancement, if any, in inspection guidance and areas of overlap or redundancy taking into consideration the following factors: operating experience, international experience, inspection data, and changes to the program as a result of the Westinghouse Lessons Learned and risk insights. The assessment should also evaluate the area of inspection requirements and guidance to evaluate recommendations to enhance the clarity of the guidance to meet the program requirements.
- C. Determine if more efficient and effective ways exist to accomplish agency goals while further integrating risk-informed insights. Consider, as a minimum, the following:
 - 1. Inspection guidance structure including scope and frequency of inspections;
 - 2. Overlap areas between the IPs;
 - 3. Areas of enhancements for the IPs; and
 - 4. Inspection structure (including resource estimate and shift of inspection effort from region to residents).

In addition, the working group should consider the licensee performance as defined in IMC 2604 "Licensee Performance Review" in the establishment of recommendations to the oversight program.

- D. Develop recommendations for changes to current fuel cycle inspection program. For each recommendation identify the pros and cons of implementation. Evaluate the proposed changes with regards to our NRC Principles of Good Regulations and our mission. Specifically, consider the following aspects as applicable:
 - 1. Mission impact (degree to which the option would deliver confidence that the objectives are met in support of reasonable assurance of adequate protection);
 - 2. Independence of NRC inspection conclusions;
 - 3. Resident and regional inspector inspection scope;
 - 4. Impact on regional ability to respond to events and emergent issues;
 - 5. Flexibility and suitability of the program to meet future needs, such as advanced fuel designs and medical isotopes;
 - 6. Reduction of inspection procedures infrastructure (reduction in the number of inspection procedures);
 - 7. Efficiency (resource reduction and budgetary assumptions);
 - 8. Reliability and effectiveness (e.g., knowledge base, training requirements);
 - 9. Openness with stakeholders; and
 - 10. Clarity (e.g., clear expectation of program requirements, consistent terminology).

- E. Develop and document in a report, conclusions and recommendations from the review that include specific recommendations to improve the effectiveness and efficiency of the inspection program. Develop, as appropriate, metrics to measure the effectiveness and efficiency of the implementation of the recommendations. The plan for collaboration with stakeholders and the timeline for implementation are shown in the schedule below.

V. WORKING GROUP MEMBERSHIP:

Mike King, NMSS/FCSE, Director (Sponsor)
LaDonna Suggs, RII/DFFI, Director (Sponsor)
Margie Kotzalas, FCSE/LOB, (Chair)
James Rubenstone, FCSE/MCAB
Robert Williams, DFFI/Projects Branch 1
Eric Michel, DFFI/Projects Branch 2
Thomas Vukovinsky, DFFI/Projects Branch 2
Jonathan Marcano, FCSE/LOB, (Technical Lead)

Advisors to the Working Group:

Representative from NRR
Representative from NMSS/DSFM
Representative from Office of Enforcement

Additional working group members may be identified to participate on the working group depending on the areas considered.

VI. DURATION:

The charter will remain until issuance of report requested in Section III.E.

VII. LEVEL OF EFFORT:

Periodic meetings (or teleconferences) of the working group will be coordinated approximately monthly by the Chair. These meetings may be slightly more frequent during project startup and wrap-up. In addition, public meetings will be scheduled as described in Section IX below. These meetings may require travel to either Headquarters or to one of the Regional offices. Active participation and meeting attendance is expected of members.

The Chair will coordinate and engage periodically with the Chair of the working group for building a smarter fuel cycle licensing program initiative to leverage areas of commonality between the licensing and inspection initiatives. In addition, the Chair will engage with the advisors on an as needed basis, to gather feedback on any of the proposed recommendations.

As part of the working group activities, the chair may propose to the sponsors of this charter, implementation of any recommendations to the oversight program that could be implemented without the formal deliberation process described in Section III of this charter.

VIII.CHARTER MODIFICATIONS:

The chair of the WG will obtain approval from the WG Sponsors prior to making substantive change to the charter tasking or desired outcome.

IX. PROPOSED PROJECT PLAN:

Activity	Target Date
Introduction of Initiative at the NRC Regulatory Information Conference	03/13/19
Issue Charter	April 26, 2019
Conduct Public Meeting #1: Discuss the NRC Charter, communicate ideas for collaboration, and future meetings.	April 3, 2019
Conduct Public Meeting #2: Interactive workshop for stakeholders to provide areas for potential improvement for the Fuel Cycle Inspection Program. To facilitate this discussion, the working group should update the public website (https://www.nrc.gov/materials/fuel-cycle-fac/public-involve.html#effects) one week prior to this workshop with presentation materials.	May 2019
Evaluation of Overlaps and areas of enhancement	May 31, 2019
Conduct Public Meeting #3: Present draft results of overlaps and areas of enhancement, present and gather preliminary ideas for further consideration. To facilitate this discussion, the working group should update the public website (https://www.nrc.gov/materials/fuel-cycle-fac/public-involve.html#effects) three weeks prior to this workshop with presentation materials. One week prior to this workshop, stakeholders are requested to provide to the NRC contacts listed below, their perspectives and feedback on the presentation materials.	July 2019
Develop draft report with identification of enhancements to program. Develop slides from draft report to present at Public Meeting #3.	September 2019
Conduct Public Meeting #4: Discuss draft proposed enhancements to inspection program and gather feedback on proposed enhancements. Discuss timeline for implementation. To facilitate this discussion, the working group should update the public website (https://www.nrc.gov/materials/fuel-cycle-fac/public-involve.html#effects) three weeks prior to this workshop with presentation materials. One week prior to this workshop, stakeholders are requested to provide to the NRC contacts listed below, their perspectives and feedback on the presentation materials.	September 2019
Issuance of report	November 2019
Implementation of enhanced program	Calendar Year 2020-2021

X. CONTACTS

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