

ISFSI INSPECTION PROCEDURES ENHANCEMENTS - IMPLEMENTATION PLAN

Inspection and Oversight Branch (IOB),
Division of Fuel Management (DFM),
Office of Nuclear Material Safety and Safeguards (NMSS)

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Overview

i Starting in June 2019, a working group was formed as part of the Independent Spent Fuel Storage Installation (ISFSI) Inspection Program Enhancements Initiative to evaluate and enhance the NRC's existing ISFSI inspection program by developing a clearer, more risk-informed, comprehensive, and consistent approach to ISFSI inspections across the four regions that focuses on those areas most important to safety. The working group used probabilistic risk analyses, byproduct material radiation exposure studies, subject matter expertise, operating experience, and lessons learned from the last 30 years of ISFSI inspection history to inform the recommended revisions to the program.

The final report of the working group's recommendations was completed and made publicly available on March 18, 2020 (ADAMS Accession No. ML20078P093). The Director of the Division of Fuel Management (DFM) approved the working group's recommendations in full considering the final recommendations report and all feedback received. Issuance of the final decision memo (ADAMS Accession No. ML20079E064) was on March 19, 2020.

Objective

Implement the working group recommendations to enhance the ISFSI's inspection manual chapters (IMCs) and inspection procedures (IPs) endorsed by the Director of DFM on March 19, 2020 (ADAMS Accession No. ML20079E064)

Specifically, the working group will be implementing the following recommendations:

- Recommendation 1: The inspection frequency for routine loading campaigns and monitoring operations at ISFSIs should be extended from every two years, not to exceed three years, to a triennial frequency. The working group also recommends that the inspection frequency for extended loading campaigns be quarterly.
- Recommendation 2: ISFSI inspectors should be qualified using the formal qualification process in IMC 1246 and supplemented with the new cross-qualification program for IMC 1245, Appendix C1/C2 qualified inspectors.
- Recommendation 3: The level of effort for each IP should be adjusted as outlined in final recommendations report Section 3.

NOTE: Recommendation 4 is not included in this plan as it has already been completed and Recommendation 5 regarding future efforts is not being undertaken at this time therefore is not addressed in this plan.

At a minimum, high-level considerations for conducting remote inspections should be included in this effort. The staff will be involved in conducting a more holistic lessons-learned evaluation as a result of modifications to the inspection program due to the COVID-19 public health emergency (PHE) while these inspection procedures are being revised. Should this assessment result in potential changes to the inspection program guidance, the staff will be recommending those changes to DFM management via separate correspondence. Please note that guidance is

included in the current revision process for inspection modifications during a PHE. Similarly, the staff will start the development of an appendix in parallel to the ongoing revisions to the inspection guidance for the timely disposition of very low safety significance issues tied to licensing basis and will build on this initial work during subsequent revisions.

Project Approach

The revisions to the IMCs and IPs will be a closely coordinated effort between NMSS, the regional offices, and other HQ offices that will be affected by these revisions.

Since the implementation of the recommendations encompass revising inspection manual chapters (IMCs) and inspection procedures (IPs), most of the work will be performed using the IMC 0040 issuance process for the NRC inspection manual. As part of the working group's efforts during the summer of 2019, draft IMCs and IPs were written during the development of the recommendations. Therefore, before each draft IMC and IP is entered into the IMC 0040 process, it will only need to be reviewed for minor fine-tuning for consistency and any necessary updates. Headquarters implementation lead will initiate and manage the revisions to the IMCs and IPs and resolution of comments in the issuance process. Once the initial review has been completed for each document by the HQs implementation lead, it will be sent to the NMSS IMC Coordinator for ISFSI inspections for IMC 0040 processing per the schedule below. The IMC 0040 processing schedule is staggered for the IMCs and IPs to ensure those involved in the review process are not overburdened with too many document reviews at once.

An implementation working group member was requested from each region at the time a final decision was made on the recommendations by the Director of DFM. The IMC 0040 issuance process includes 30 days for regional review of each draft IMC and IP. The working group members will serve as the lead reviewer for their respective regional office for each draft document to ensure consistency and efficiency in the regional review process. The HQs implementation lead will manage the regional working group and coordinate and meet with the members for resolution of comments, as necessary, to ensure expedient decision making and concurrence. During the regional review period for IMC 2690, the implementation lead will meet and work with the working group, as necessary, to ensure the regions understand the revised inspection frequency requirements and have the information needed to adequately plan for CY21 inspections.

Once all the draft IMCs and IPs have been approved by DFM management, the HQs implementation lead will ensure training is performed for all ISFSI inspectors on the new IMCs and IPs. The training is planned to be performed in the October timeframe, if possible, during two separate virtual sessions for 2 hours each. The training sessions will consist of a presentation on the major changes in the program and time for questions. The implementation working group will support the training sessions in developing the presentations and presenting on them.

Final issuance of the revised IMCs and IPs will be performed by the NRC inspection manual lead in the Office of Nuclear Reactor Regulation (NRR). The IOB staff will provide the NRC lead with the schedule of planned document review and issuance milestones to help facilitate a more effective and efficient issuance process. Updates to the schedule will also be provided as needed. A meeting is also planned two weeks before the first IP is scheduled to be sent to NRR for issuance.

With regards to communications during the implementation of the recommendations, it will include both internal and external communications. The implementation lead will ensure a project one-pager is updated monthly for distribution to DFM management and other interested stakeholders. The lead will also ensure the public website is updated monthly with the status of the implementation activities and the industry is kept informed through updates during NEI drop-ins with NRC management. Updates could also be communicated through briefing materials for senior executives and the Commission, as requested, Commissioner Assistants' Note, communications supporting NMSS drop-ins with the Commissioners, Commission briefings, and daily notes.

Roles and Responsibilities

The implementation of the IMCs and IPs revisions will be executed by the HQs implementation lead (and backup as necessary), the NMSS IMC coordinator for ISFSI inspections, and the regional working group members.

Project Execution Timeline

The timeline of events for the issuance of the revised IPs and IMCs is consistent with the agency process outlined in IMC 0040. This includes regional and office review and comment resolution, DFM BC and Division management review and comment resolution, and NRC inspection manual owner review and issuance. IMCs and IPs will be entered in the issuance process on a staggered schedule to facilitate timely review and issuance. Dates will overlap to account for this approach.

This schedule provides 4-weeks of flexibility to issue all documents as the critical date for issuance of the final document is November 20, 2020, to facilitate training of inspectors in December 2020 at the latest. The goal is to perform the training in the October timeframe after DFM management approvals. Staff is cognizant of the schedule challenges for this project due to the large amount of documents going through the IMC 0040 revision process; especially considering the parallel fuel cycle inspection procedures enhancement effort going through this same process. Therefore, staff will closely monitor and manage the implementation of this project and balance this with the high number of high priority activities ongoing in DFM to support training of the ISFSI inspectors before planned implementation in January 2021.

Description	Start Date	End Date
Project Start	5/11/2020	
Initial draft IMC and IP updates	5/11/2020	7/3/2020
Present status update at August RSLO monthly call and ROP monthly call (as requested thereafter)	8/1/2020	12/31/2020
Regional and other office review complete	8/24/2020	
DFM reviews complete	10/5/2020	
Issuance of documents for implementation in January 2021 – required 2-week NRR review and issuance timeframe	9/14/2020	10/26/2020
FINAL date to have all documents issued so training can occur in December at the latest with the goal for training to occur in October (reflects only 4 weeks of potential schedule slip)	11/20/2020	
Training Completed on all revised IMC/IPs	12/18/2020	

A detailed schedule for the processing of all guidance documents is being maintained by DFM/IOB.

EXPECTED RESULTS

Implementing an enhanced ISFSI inspection program in January 2021. The approach described above will achieve this result only if we strive to meet each of the target completion dates above and provide the necessary training by the end of calendar year (CY) 2020.

PLANNED FUTURE ENHANCEMENTS AND ADDITIONAL CONSIDERATIONS

Starting in CY21 with the implementation of the revised program, the monthly ISFSI counterpart call will include an agenda item to collect feedback on implementation of the revised IPs and IMCs. These discussions will help to inform the need for additional training or further enhancements.

The staff is aware of several desired ISFSI inspection enhancements in addition to those developed by the ISFSI inspection enhancement working group last summer and incorporated into the draft IMCs and IPs. These are planned for future revision(s) to the IPs and IMCs as the implementation plan is on a tight timeline to complete by the end of CY 2020. Any additional enhancements have a significant potential to cause issues with the current regional alignment on the enhanced inspection program and would need to be incorporated by June 26. The enhancements include, but are not limited to, issues of very low safety significance process, remote inspection guidance during normal operations, NOED process for Part 72, NEI 12-04 updates, Part 71 and 72 vendor inspection program enhancement, CISF inspection guidance, any applicable enhancements from the spent nuclear fuel transportation working group, ISFSI inspection program self-assessment process, and metric revisions for the ISFSI inspection program. The IOB is tracking these additional enhancements to ensure they are prioritized and evaluated/implemented in coordination with DFM management and as resources allow.