

Appendix B

INSPECTION PROGRAM GUIDANCE FOR AWAY FROM REACTOR SITE ISFSIs

A. SCOPE

This appendix describes the inspection program for away-from-reactor site (AFR) ISFSI activities authorized by a site-specific license. Guidance is provided on the scheduling and conducting inspections of the applicant's programs that support operation of the ISFSI and of design, fabrication, construction, preoperational testing, loading and unloading, and storage-monitoring activities. Guidance is also provided on the frequency of performing periodic inspections once spent fuel has been placed in the ISFSI for storage. For the purposes of this Appendix, AFR ISFSI activities are viewed as occurring in the following four phases: (Note: Phases 3 and 4 activities may occur concurrently)

Phase 1 - Design, fabrication, and construction activities

Phase 2 - Preoperational testing and dry runs

Phase 3 - Spent fuel loading and unloading operations

Phase 4 - Storage monitoring of the loaded ISFSI

B. ISFSI SUPPORT PROGRAM REVIEW

In addition to the inspections described in the following four Phases, inspection of the applicant's programs that support operation of the ISFSI should also be performed. These programs include, but are not limited, to the following:

- Quality Assurance Program
- Operations Program
- Maintenance Program
- Radiation Protection Program
- Radioactive Waste Management Program (Radwaste)
- Radiological Effluents and Environmental Monitoring Program (REMP)
- Packaging, Shipping, and Transportation Program
- Emergency Preparedness Program
- Training Program
- Security Program
- Material Control and Accounting Program
- Fitness for Duty Program
- 10 CFR Part 21 Program
- Fire Protection
- Administration

The applicant for a site-specific ISFSI license has provided information on these programs as part of its application and SAR. After SFPO has reviewed the applicant's programs as part of the licensing process, a list of the programs that require inspection of implementing procedures should be provided to the Regional Branch Chief for inclusion as elements in the IIP (see Section 05.05 of the IMC). For each program that is required to be inspected, SFPO and the Region should identify which NRC

Inspection Manual IPs or sections of IPs will be used to perform the inspections. This information should be included in the IIP.

When establishing the scope of these inspections any questions raised during review of the SAR and the applicant's previous experience and performance should be considered. Questions on applicant programs that support operation of the ISFSI should be referred to the SFPO/PM for further assistance, if required. For timekeeping purposes, all time spent in inspecting the implementation of these programs should be charged to IP 60855.

C. CONDUCT OF ROUTINE INSPECTIONS

Table B-1 provides milestones for completing inspection activities during Phases 1, 2, and 3, before initial storage of spent fuel in the ISFSI. Although performance of these IPs is mandatory, individual sections may be omitted if the licensee has recently demonstrated satisfactory performance in the inspected area or if this would duplicate inspection activities. The scope and dates of these inspections should be defined in the IIP.

The completion milestones in Table B-1 should be viewed as "by no-later-than (NLT)" dates for each IP. Conversely, sections of specific IPs may need to be completed before the overall milestone specified in Table B-1 due to the need to observe in-process work or because of weak prior performance in some areas. If several casks are being fabricated at one time, then the milestone associated with IP 60852 should be completed before the fabricator finishes manufacturing the last of that series of casks.

Selected IPs from Table B-1 should be re-performed if a licensee intends to use a new model or type of DCSS. Specifically, portions of IPs 60854 through 60856 should be re-performed to verify that the licensee can safely use the new model or type of DCSS.

Subsequent to initial cask loading, Phases 3 and 4 inspection activities should focus on loading/unloading activities, modifications, 10 CFR 72.48 safety evaluations, 10 CFR 72.212(b) evaluations if new DCSS designs are used, and surveillance monitoring of active ISFSIs. Inspection guidance for these activities is contained in IPs 60851, 60855, 60856, and 60857. Table B-2 provides guidance on scheduling Phase 3 and 4 inspection activities. Scheduling and performance of these inspections should be tracked in accordance with Section 05.05 of this IMC.

During Phases 3 and 4 activities, periodic reinspection of programs reviewed in Part B should be performed at the frequencies given in Table B-3. Scheduling of these inspections should be tracked in accordance with Section 05.05 of this IMC. These repeat inspections are intended to verify that the licensee's programs are still being effectively implemented.

TABLE B-1

| IP NUMBER | IP SUBJECT | NLT MILESTONE |
|-----------|------------------------------------|--------------------------|
| 60851 | Design control of ISFSI components | Beginning of fabrication |

| | | |
|-------|---|------------------------------------|
| 60852 | ISFSI component fabrication by outside fabricators | Completion of fabrication |
| 60853 | On-Site fabrication of components and construction of an ISFSI | Completion of construction |
| 60854 | Pre-operational testing of an ISFSI | Completion of preop testing |
| 60855 | Operation of an ISFSI (other than initial fuel loading, unloading, and surveillances) | Before loading begins ¹ |
| 60857 | Review of 10 CFR 72.48 evaluations | As needed to support above IPs |

Table B-2

| IP NUMBER | INSPECTION ACTIVITY | FREQUENCY |
|-----------|---|-----------|
| 60851 | Modifications to the ISFSI | W |
| 60855 | Loading additional casks (each occurrence), performing surveillances, and unloading casks (each occurrence) | W |
| 60856 | First use of different DCSS design | W |
| 60857 | Modifications to the ISFSI or DCSS design | W |

Table B-3

| IP NUMBER | IP TITLE | FREQUENCY |
|-----------|--|-----------|
| 35701 | Quality Assurance Program Annual Review | TA |
| 64704 | Fire Protection Program | TA |
| 82701 | Operational Status of the Emergency Preparedness Program | BA |
| 83728 | Maintaining Occupational Exposures ALARA | TA |
| 86740 | Inspection of Transportation Activities | TA |

The Regional Division Director should adjust the inspection frequency of these inspections based on the licensee's performance and the presence of activity (e.g., review of the transportation program should be deferred if no shipments of radioactive material are occurring). Similarly, the licensee's fire protection program should only be reinspected if the ISFSI has significant fire hazards (e.g., a radwaste storage area or maintenance area where flammable liquids are stored). The Regional Branch Chief should inform the SFPO/PM of any changes to inspection frequencies.

¹ Note: All loading and unloading procedures should be reviewed before initial loading of spent fuel into the ISFSI.

D. CONDUCT OF REACTIVE INSPECTIONS

The SFPO/PM and the Regional Branch Chief should coordinate with each other regarding the conduct of reactive inspections at AFR ISFSIs. Reactive inspections of abnormal situations and events may use the IPs given in Table B-2. However, this inspection guidance may be supplemented by other IPs from the IMC 2515 and IMC 2561 inspection programs, as appropriate.

The SFPO/PM and the Regional Branch Chief should coordinate with each other regarding the conduct of Augmented Inspection Team (AIT) inspections at AFR ISFSIs. The conduct of AITs should be in accordance with IP 93800, "Augmented Inspection Team Implementing Procedure."

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