

## ISI/IST Reviews for COLs

### Background

- Under Part 50, NRC staff approved ISI/IST programs before commercial operation
- 25-30 new plants in 1980's created a backlog of ISI/IST programs needing approval
- Part 52 process necessitated revision to 50.55a
- Revised 50.55a will cause similar backlog and is inconsistent with revised 52.79 and Commission policy

### Regulatory Requirements and Policy Issues

- SRM for SECY-02-0067 (September 11, 2002): An ITAAC for an operational program is unnecessary if the program and its implementation are "fully described in the application and found to be acceptable by the NRC at the COL stage. The burden is on the applicant to provide the necessary and sufficient programmatic information for approval of the COL without ITAAC."
- "Fully described" is defined in the SRM for SECY-04-0032 (May 14, 2004): "the program is clearly and sufficiently described in terms of the scope and level of detail to allow a reasonable assurance finding of acceptability." Required programs should always be described at a functional level and at an increasing level of detail where implementation choices could materially and negatively affect the program effectiveness and acceptability.
- SECY-05-0197 (October 28, 2005): Staff concludes that all operational programs (except EP) can be fully described in a COL application.
- revised 52.79(a): The [COL] final safety analysis report shall include the following information, at a level sufficient to enable the Commission to reach a final conclusion on all safety matters that must be resolved by the Commission before issuance of a combined license:
  - (11) A description of the program(s), and their implementation, necessary to ensure that systems and components meet the requirements of the ASME Boiler and Pressure Vessel Code and ASME Code for Operation and Maintenance of Nuclear Power Plants in accordance with 50.55a of this chapter.
- revised 50.55a(f)(4)(i) and (g)(4)(i): ISI/IST conducted during the first 120-month interval must comply with the latest edition and addenda to the Code incorporated by reference on the date:
  - (For Part 50) 12 months before the date of issuance of the operating license
  - (For Part 52) 12 months before the date scheduled for initial loading of fuel

Conflict: If the Code Edition/Addenda is required to be established several years after COL issuance, how can the staff reach a safety finding concluding that ISI/IST programs are fully described at the COL stage?

## Discussion

What is needed by staff to reach a “reasonable assurance finding of acceptability?”

- (1) scope must be clearly and sufficiently described (i.e., scope of ISI/IST programs)
  - (2) program level of detail must be sufficiently described (i.e., program meets regulations in 50.55a)
    - acceptability of alternatives to regulations
    - demonstration that Code requirements are impractical
  - (3) program must meet regulations and be consistent with Commission policy and regulatory guidance
- Per SECY-05-0197, NRC will inspect ISI/IST programs and their implementation during construction (NOTE: NRC inspections do not evaluate and authorize relief requests and alternatives to regulations. Inspections verify compliance with regulations.)

## Options

- (1) Establish an initial Code edition/addenda during the COL stage;  
Update ISI/IST programs to final Code edition/addenda per revised 50.55a

As part of the COL application, the licensee would submit its ISI/IST program plans, relief requests, and alternatives using an initial Code edition/addenda. The staff will review this initial ISI/IST program plan and scope in order to make a reasonable assurance finding of acceptability, and will authorize alternatives and grant relief requests prior to COL issuance.

One year prior to commercial operation, the licensee would submit its final ISI/IST program plan including any new relief requests, new alternatives, and changes to the previously approved program plan using the latest Code edition/addenda in effect 12 months prior to the scheduled initial fuel load date. The staff shall review and authorize new or revised alternatives and program changes prior to commercial operation, and shall grant new or revised requests for relief from impractical Code requirements within the first 12 months of commercial operation pursuant to 50.55a requirements. The staff will inspect ISI/IST programs and their implementation prior to commercial operation to verify that the ISI/IST program implementation meets Code requirements.

- meets revised 50.55a
- meets revised 52.79(a)(11)
- consistent with SECY-05-0197
- consistent with RG 1.206 (except for Class 2 and 3 ISI guidelines)

- (2) Establish an initial Code edition/addenda during the COL stage;  
NRC authorizes an alternative to use the interim Code edition/addenda as the final edition/addenda prior to commercial operation.

As part of the COL application, the licensee would submit its ISI/IST program plans, relief requests, and alternatives using the initial Code edition/addenda. The staff will review this initial ISI/IST program plan and scope in order to make a reasonable assurance finding of acceptability, and will authorize alternatives and grant relief requests prior to COL issuance.

One year prior to commercial operation, the licensee would submit its final ISI/IST program plan

including any new relief requests, new alternatives, and changes to the previously approved program plan and request authorization for an alternative to continue using the initial Code edition/addenda as the final Code of record for the first 120-month interval. The staff shall review the program changes and authorize new or revised alternatives prior to commercial operation, and shall grant new or revised requests for relief from impractical Code requirements within the first 12 months of commercial operation pursuant to 50.55a requirements. The staff will inspect ISI/IST programs and their implementation prior to commercial operation to verify that the ISI/IST program implementation meets Code requirements.

- meets revised 50.55a (with the use of an alternative to the regulations)
- meets revised 52.79(a)(11)
- consistent with SECY-05-0197
- consistent with RG 1.206 (except for Class 2 and 3 ISI guidance)

### **Recommendations**

Use either Option 1 or 2.