



Feedback on Combined License Application Inservice Testing Examples from August 8, 2007, Public Meeting

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IST Operational Program Review

- ASME OM Code provides Inservice Testing (IST) requirements for pumps, valves, and dynamic restraints for new plants
- 10 CFR 50.55a incorporates OM Code by reference with specific limitations and modifications
- Applicant must develop IST program that meets OM Code and 50.55a limitations and modifications
- Applicant may justify cold shutdown and RFO test frequencies
- Applicant may request relief from and alternatives to Code
- Regulatory Guide 1.206 provides guidance for COL application information
- More specific review at COL application stage needed for IST Program than for some other operational programs because different approaches can be applied to assess operational readiness

Regulatory Guide 1.206

Staff Position C.III.3.9.6

Functional Design, Qualification, and IST Programs for Pumps, Valves, and Dynamic Restraints

3.9.6.1 Equipment not included in certified design

3.9.6.2 IST Program for Pumps

3.9.6.3 IST Program for Valves

1. Motor-Operated Valves
2. Other Power-Operated Valves
3. Check Valves
4. Pressure Isolation Valve Leak Testing
5. Containment Isolation Valve Leak Testing
6. Safety and Relief Valves
7. Manually Operated Valves
8. Explosively Actuated Valves

3.9.6.4 IST Program for Dynamic Restraints

3.9.6.5 Relief Requests and Alternative Authorizations to OM Code

C.III.3.9.6.1

Equipment not included in certified design

- Identify any equipment not in design
- Provide information requested in RG 1.206 for any equipment not included in Design Control Document (DCD)

C.III.3.9.6.2

IST Program for Pumps

- No additional information needed for C.III.3.9.6.2 if no safety-related pumps in AP1000 or ESBWR
- Staff will review safety significant nonsafety-related pumps through Regulatory Treatment of Non-Safety Systems (RTNSS) process

C.III.3.9.6.3

IST Program for Valves

- COL application should provide information on IST Program for valves in this paragraph:
 - Supplement IST Table for AP1000 (Code class and actuator), and ESBWR (safety function and actuator)
 - Describe IST Program for preservice tests, replacement, repair, maintenance, and position
 - Describe methods for measuring reference and IST values
 - Describe test procedures and schedules
 - Describe implementation program with milestones

C.III.3.9.6.3.1

Motor-Operated Valves

- COL application should provide information on IST Program for MOVs in this paragraph:
 - Describe design-basis periodic verification
 - Show preservice and IST demonstrate functionality
- As part of MOV program, applicant could use
 - Approach similar to operating plants in response to GL 96-05 for valve and actuator performance
 - OMN-1 Code Case as accepted in RG 1.192
 - Joint Owners' Group Program for MOV Periodic Verification for valve performance degradation
- If rely on previously approved approaches, state and then summarize plant-specific program

C.III.3.9.6.3.2

Other Power-Operated Valves

- COL application should provide information on IST Program for power-operated valves (POVs) other than MOVs in this paragraph:
 - Qualification of POVs
 - POV IST Program and its incorporation of MOV lessons learned
 - Verification of solenoid-operated valves to meet electrical requirements

C.III.3.9.6.3.3 Check Valves

- COL application should provide information on IST Program for check valves (CVs) in this paragraph:
 - Describe preservice and IST on each CV
 - Describe nonintrusive techniques
 - Describe how preservice and IST demonstrates functionality
 - Confirm piping design accommodates CV testing
 - Show IST program meets OM Code Appendix II
- Address bidirectional testing per OM Code

C.III.3.9.6.3.4

Pressure Isolation Valve Leak Testing

- COL application should supplement IST Table in DCD by:
 - Identifying pressure isolation valves
 - Specifying allowable leakage rate as applicable

C.III.3.9.6.3.5

Containment Isolation Valve Leak Testing

- No additional information on containment isolation valves is requested for COL application in RG 1.206

C.III.3.9.6.3.6

Safety and Relief Valves

- Supplement IST Table in DCD with the following:
 - AP1000
 - Code class
 - Test parameters
 - ESBWR
 - Safety functions
 - Test parameters

C.III.3.9.6.3.7

Manually Operated Valves

- IST Table in DCD provides information requested for manually operated valves in this paragraph
- No comments on AP1000 or ESBWR example

C.III.3.9.6.3.8

Explosively Actuated Valves

- COL application should supplement IST Table in DCD by:
 - Identifying explosive operated valves
 - Indicating any applicable IST requirements

C.III.3.9.6.4

IST Program for Dynamic Restraints

- COL application should fully describe IST Program for dynamic restraints with information requested in this paragraph:
 - List safety-related components that use snubbers with requested information
 - Describe IST program related to visual inspections and functional testing
 - Describe steps to assure snubbers properly installed
 - Confirm accessibility
 - Describe implementation program with milestones

C.III.3.9.6.5

Relief Requests and Alternative Authorizations to OM Code

- COL application should
 - Discuss any planned relief or alternatives, or
 - Indicate that no relief or alternatives are currently planned

Overview Comments on COLA Example Text

- Text does not fully describe IST program but indicates how IST program might be developed
- Text does not provide reasonable assurance that IST requirements of 10 CFR 50.55a will be met (such as CV bidirectional testing, or MOV periodic verification)
- Text needs to address functional design and qualification of components per Standard Review Plan Section 3.9.6
- Text does not describe IST program as requested in RG 1.206 (such as dynamic restraints)
- Text language is not consistent with ASME OM Code
- Text does not justify any planned relief or alternatives