# Simulated ITAAC Closure and Verification Demonstration



OFFICE OF NEW REACTORS
PUBLIC WORKSHOP

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# Project Plan

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The demonstration is divided into 4 stages:

(1) ITAAC Performance and NRC Assessment

(2) ITAAC Closure

(3) Exercise Workshop

(4) Lessons Learned

# Communication

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- Applicant submit all ITAAC related information under Project Number 0783
- Proprietary information is made available for NRC staff review in a "virtual reading room"
- Requests for technical support from NRO according to TAR process
- NRO/DE & NRO/DSRA provide inspection report feeder IAW IMC 0613
- NRO/CQVP document vendor inspection IAW IMC 0617
- Schedule biweekly telecon to discuss schedule, expectations, and progress starting 08/25/2010

# Demonstration Milestones

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- 8/19/2010 Public Meeting – Stage 1 Progress
- 9/22/2010 Applicant Provides Support Information
- 10/07/2010 Public Meeting – Progress Update
- 10/29/2010 Stage 1 Complete
- 12/16/2010 Stage 2 Complete
- 1/13/2011 Stage 3 Complete
- 3/31/2011 Stage 4 Complete
- Biweekly Call starting on 08/25/2010

## Stage 1: ITAAC Performance & NRC Assessment

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NRC Objectives:

- Demonstrate the infrastructure that will be used for construction inspection
- Demonstrate the communication paths for inspection, technical report reviews, and closure letters
- Develop lessons learned

## Stage 1: ITAAC Performance & NRC Assessment

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Overview of Stage 1:

- 7/29/2010 Formal Kickoff Meeting
- 8/19/2010 Public Meeting
- 9/22/2010 Westinghouse Provides Support Information
- 10/29/2010 Stage 1 Complete
  - Inspection report issued
  - Closure letters submitted

# Participants & Expectations:

- Westinghouse/SNC:
  - Develop documentation to support simulated inspection and ITAAC closure
  - Prepare ITAAC closure letters (ICLs) & submit to NRC
- NRC Region II:
  - Develop inspection plans
  - Simulate conducting the inspections
  - Document inspection results using IMC 0613, including violations
  - Issue inspection report
- NRC Office of New Reactors
  - Review technical reports, analyses, and procedures as specified by inspection plans
  - Document inspection results using IMC 0613 or IMC 0617

# ITAAC Selected

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Six ITAAC from AP 1000, DCD Revision 17:

(1) ITAAC 2.1.02.07a.i – Reactor Coolant System Harsh Environment Type Test

(2) ITAAC 2.2.01.04a.ii – Containment System Impact Testing

(3) ITAAC 2.2.02.01 – Passive Containment Cooling Functional Arrangement

(4) ITAAC 2.2.03.08c.i – Injection Line Flow Resistance Testing and Analysis

(5) ITAAC 2.6.03.08 – DC System Fault Current Analysis

(6) ITAAC 3.7.01 – Design Reliability Assurance Program (D-RAP)

# ITAAC 2.1.02.07a.i – The Reactor Coolant System Harsh Environment Type Test

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- Simulate an inspection of one RCS component (ADS Squib Valve) with finding
- Westinghouse provide environmental qualification report
- NRO/DE/EEB review report and document inspection results
- NRO/DCIP/CQVP simulate pre-COL type testing observation at vendor facility and document inspection results
- RII/DCI/CIB1 assist in documenting the inspection results and draft a NOV for an ITAAC Related Construction Finding based on incorrect radiation and temperature parameters
- RII/DCP/CPB4 develop an integrated inspection report
- Westinghouse prepare closure package and submit closure letter, including corrective actions for the finding

# ITAAC 2.2.01.04a.ii – Containment System Impact Testing

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- Simulate inspection of the material hardness testing results for the containment
- Westinghouse provide test report
- RII/DCI/CIB3 conduct inspection and document results
- RII/DCP/CPB4 include results in integrated inspection report
- Westinghouse prepare closure package and submit closure letter

# ITAAC 2.2.02.01 – Passive Containment Cooling Functional Arrangement

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- This ITAAC has not been targeted for inspection. It will become part of Stage 2
- Simulate ITAAC finding during closure review
- Westinghouse prepare closure package and submit closure letter
- NRO/DCIP/CTSB transmit TAR to RII describing an ITAAC Finding based on identifying a missing valve during closure review
- RII/DCP/CPB4 simulate inspection, document results, draft a NOV, and include in integrated inspection report

# ITAAC 2.2.03.08c.i – Injection Line Flow Resistance Testing and Analysis

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- Simulate the overlap between ITAAC inspections and program inspections for pre-operational testing
- Westinghouse provide test procedure
- NRO/DSRA/SRSB review test procedure and provide evaluation to RII
- RII/DCP/CPB4 simulate witnessing test and reviewing results
- RII/DCP/CPB4 document inspection results and include in integrated inspection report
- Westinghouse prepare closure package and submit closure letter

# ITAAC 2.6.03.08 – DC System Fault Current Analysis

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- Simulate the review of fault current analysis for fuses and breakers on one train of the DC System
- Westinghouse provide fault current analysis for one train
- NRO/DE/EEB review report and document inspection results
- RII/DCI/CIB1 assist in documenting the inspection results and draft a NOV for a Construction Finding based on inadequate accounting of the fault current
- RII/DCP/CPB4 include in integrated inspection report
- Westinghouse prepare closure package and submit closure letter

# ITAAC 3.7.01 – Design Reliability Assurance Program

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- Westinghouse develops analysis report for a system designed under D-RAP
- NRO/DSRA/SPRA review design analysis and document inspection results
- RII/DCP/CPB4 include results in integrated inspection report
- Westinghouse prepare closure package and submit closure letter

# ITAAC 3.7.01 – Design Reliability Assurance Program

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| Design Commitment | Inspections, Tests, and Analyses | Acceptance Criteria |
|---|---|---|
| The D-RAP ensures that the design of SSCs within the scope of the reliability assurance program (Table 3.7-1) is consistent with the risk insights and key assumptions (e.g. SSC design, reliability, and availability). | An analysis will confirm that the design of RAP SSCs identified in Table 3.7-1 has been completed in accordance with applicable D-RAP activities. | An analysis report documents that safety-related SSCs identified in Table 3.7-1 have been design in accordance with a 10 CFR 50 Appendix B quality program.<br><br>An analysis report documents that non-safety related SSCs identified in Table 3.7-1 have been designed in accordance with a program which satisfies quality assurance requirements for SSCs important to investment protection. |

# QUESTIONS AND DISCUSSION