U.S.NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

ITAAC Inspection Schedule

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INSPECTION SCHEDULING

- A generic AP-1000 NRC inspection schedule was developed, using a recent Westinghouse construction schedule to include:
  - major construction & licensing milestones
  - inspection of the 233 targeted ITAAC
  - other NRC planned inspection activities

- The generic AP-1000 schedule also includes:
  - Inspection-hour estimates for the ITAAC
  - Indication of NRC vendor inspection needs
  - Opportunity for NRC Division of Engineering review

- Sample sizes for the SSC associated with any of the targeted ITAAC were recommended for Region II consideration
- Region II is developing a more detailed protocol for the inspection of ITAAC families

ITAAC INSPECTION
(Level-of-Effort Estimates)

- Earlier reviews (based upon Part 50 inspection procedures) for the inspection of the ITAAC for the AP-1000 & ABWR designs resulted in an estimate of 15,000 (± 1,500) inspection hours
- Consistent with the development of the AP-1000 inspection schedule, the ITAAC inspection level of effort was re-assessed, using the following general categories of ITAAC inspection scope:
  - 1 single point of inspection verification
  - 2 walk-down, field verification, or report review
  - 3 complex inspection requiring multiple trips
  - 4 complex inspection involving diverse SSC

LEVEL-OF-EFFORT CONCLUSION

- An estimate of approximately 15,000 inspector-hours for ITAAC inspections for the AP-1000 design (IMC-2503) is a reasonable projection for NRC planning purposes
- This estimate does not include:
  - Pre-COL activities (IMC-2501, IMC-2502)
  - Post-COL pre-ops test & program reviews (IMC-2504)
  - NRO engineering resources
  - Problem identification & resolution, allegations, or other follow-up inspections
- These additional inspection activities are expected to add 12,000 to 20,000 inspection hours to the CIP estimate for planning purposes
- A similar estimate for the ABWR level of effort required for NRC ITAAC inspections is currently under development

NRC INSPECTION DETAILS

ITAAC Number	Level of Effort	NRC Inspection Content (IP 65001)	DE Chk	Start/ Compl
2.1.2.8d.iii	1	Walk down ADS stage 4 valves and measure valve flow area. Inspection: A/C - Each 4th stage ADS valve flow area is satisfactory. IP:03 IP:A 100% review	X	1/1/15 - 5/1/15

NRC INSPECTION DETAILS

ITAAC Number	Level of Effort	NRC Inspection Content (IP 65001)	DE Chk	Start/ Compl
2.1.2.1	2	Inspection effort involves walk-down of completed RCS system. Functional arrangement is defined as the physical arrangement of systems and components to provide the service for which the system is intended, and which is described in the system design description. Inspection: A/C - As-built RCS system functional arrangement meets design description. IP:14 IP:A 100% review	-	1/1/15 - 4/30/15

NRC INSPECTION DETAILS

ITAAC Number	Level of Effort	NRC Inspection Content (IP 65001)	DE Chk	Start/ Compl
2.1.3.13	3(v)	Inspection effort includes opportunities for vendor inspections to witness fabrication of fuel assemblies and rod control cluster assemblies for initial fuel load and/or receipt inspections to review associated documentation including final design report. Analysis: A/C - Report exists and concludes that fuel assemblies and rod cluster control assemblies (see below) intended for initial core load have been designed and constructed IAW principal design requirements. IP: 05 IP: F Sample Population Fuel Assemblies - 157 RCCAs - 53 Select one of each type of component.		2/1/12 - 2/1/13

NRC INSPECTION DETAILS

ITAAC Number	Level of Effort	NRC Inspection Content (IP 65001)	DE Chk	Start/ Compl
2.1.2.7a.i	4(v)	Inspection effort includes multiple opportunities for vendor inspections to witness EQ testing, test set-up, and test conditions; and/or multiple receipt inspections to review EQ qualification documentation including final EQ report. Type Test/Analyses: A/C - Report exists and concludes that specified EQ equipment can withstand harsh environment and perform safety function. IP: 10 IP: E Sample Population ADS MOVs - 16 Squib Valves - 4 RV Head Vent Valves - 4 Temperature Sensors - 47 Pressure Sensors - 8 Level Sensors - 6 Speed Sensors - 4 Select one of each type of component identified above. Ensure selected sample sufficiently bounds different types of MOVs, temperature sensors, etc.	X	6/1/08 - 6/1/11

AP-1000 INTEGRATED SCHEDULE

(NRC Demonstration)