



U.S. NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

AP1000 DI&C ITAAC

Inspection Approach

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T.R. Fredette, PE

NRO/DCIP/CIPB

thomas.fredette@nrc.gov



DI&C ITAAC Focus

- **ITAAC 2.5.2.11 (Protection & Safety Monitoring System (PMS) Design & Development)**
- **ITAAC 2.5.2.12 (PMS Life Cycle Quality Processes); SMP, CMP, V&VP**
- **ITAAC 2.5.2.14 (PMS Component Interface Module (CIM) Design & Development)***

*** Design Acceptance Criteria**



ITAAC 2.5.2.12 Issue

Licensee / Consortium query:

“What constitutes satisfactory completion of inspection for this ITAAC?”



ITAAC 2.5.2.12

Design Commitment

The PMS software is designed, tested, installed, and maintained using a process which incorporates a graded approach according to the relative importance of the software to safety and specifies requirements for Software Management, Configuration Management, and Verification & Validation

Inspections, Tests, Analyses

Inspection will be performed of the process used to design, test, install, and maintain the PMS software.

Acceptance Criteria

A report exists and concludes . . . that requirements are provided for the following software development functions:

Software management (SMP)

Software configuration management (CMP)

V&V (V&V Plan)



Inspection Approach

- **Inspection uses sampled approach- for DI&C there is reliance on rigorous process and IV&V**
- **Seek to gain confidence in the implementation of the rigorous process and IV&V throughout the PMS development life cycle**
- **Inspection will verify implementation as part of each PMS inspection**
- **Expect inspections to continue through life cycle installation phase (pre-op), and verification of operations & maintenance processes (back end of life cycle)**



ITAAC Completion (projected sequence)

(1) ITAAC 2.5.2.14 (CIM)

(2) ITAAC 2.5.2.11 (PMS)

(3) ITAAC 2.5.2.12 (Process)

**It is expected that 2.5.2.12 will be the last
DI&C ITAAC to be completed and closed.**