



U.S. NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

Digital I&C DAC Inspection

Development Status

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Background

- **South Texas Project (STP) requested review of early I&C DAC products (6/09)**
- **Task Working Group initiated 11/09 to develop DAC inspection methodology**
- **Methodology to be demonstrated in test case (pilot) w/ STP in 2010**



Why a Pilot?

- **Gain confidence in licensee's I&C design activities (at early stages)**
- **Inform and optimize inspection process and resources**



DAC Inspection Objective –

Verification that the Design detail meets the established Acceptance Criteria (compliance with the licensing basis)



Working Group

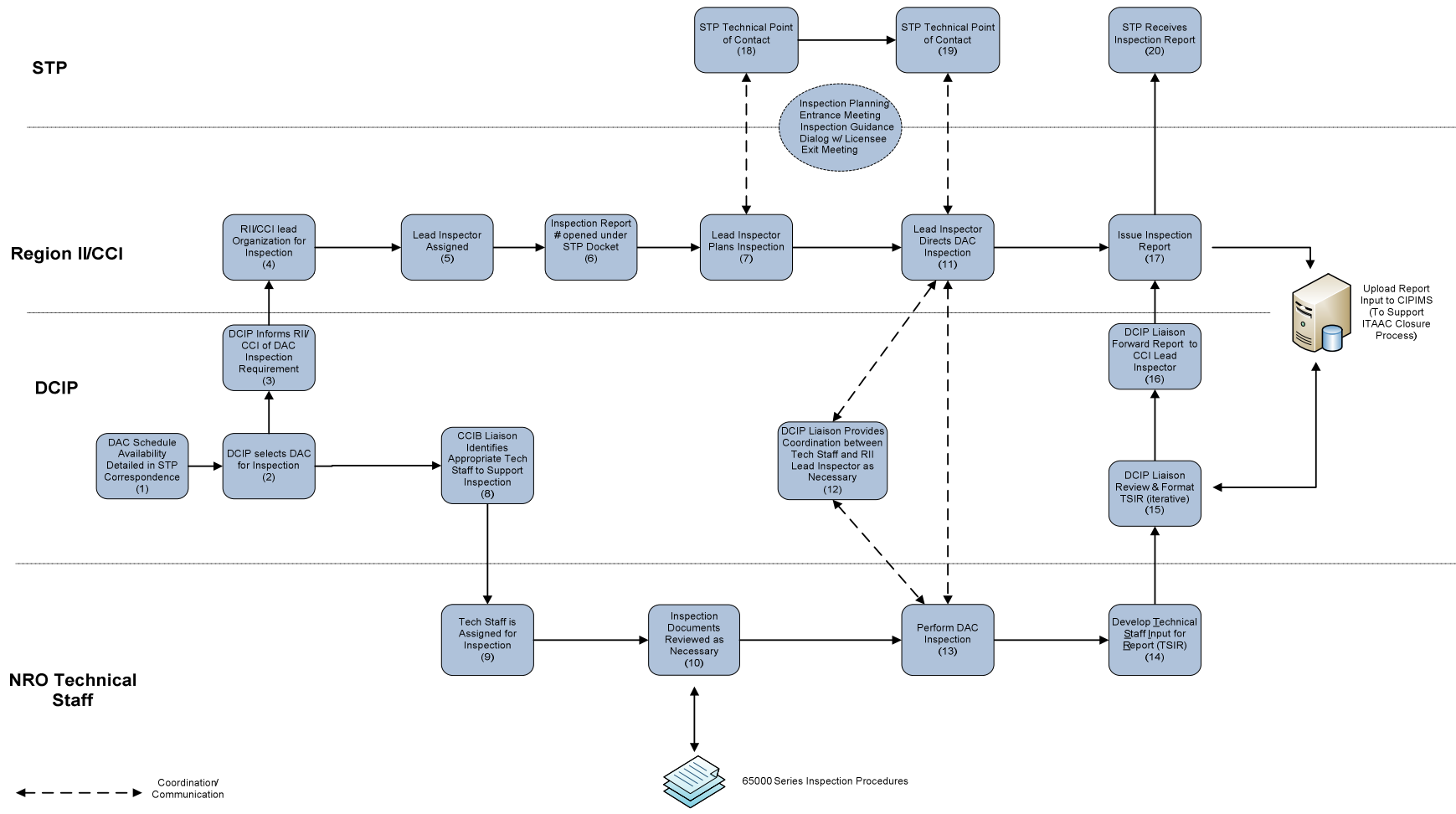
- **Development of inspection process framework**
- **Development of DAC inspection procedure (new ITAAC IP)**



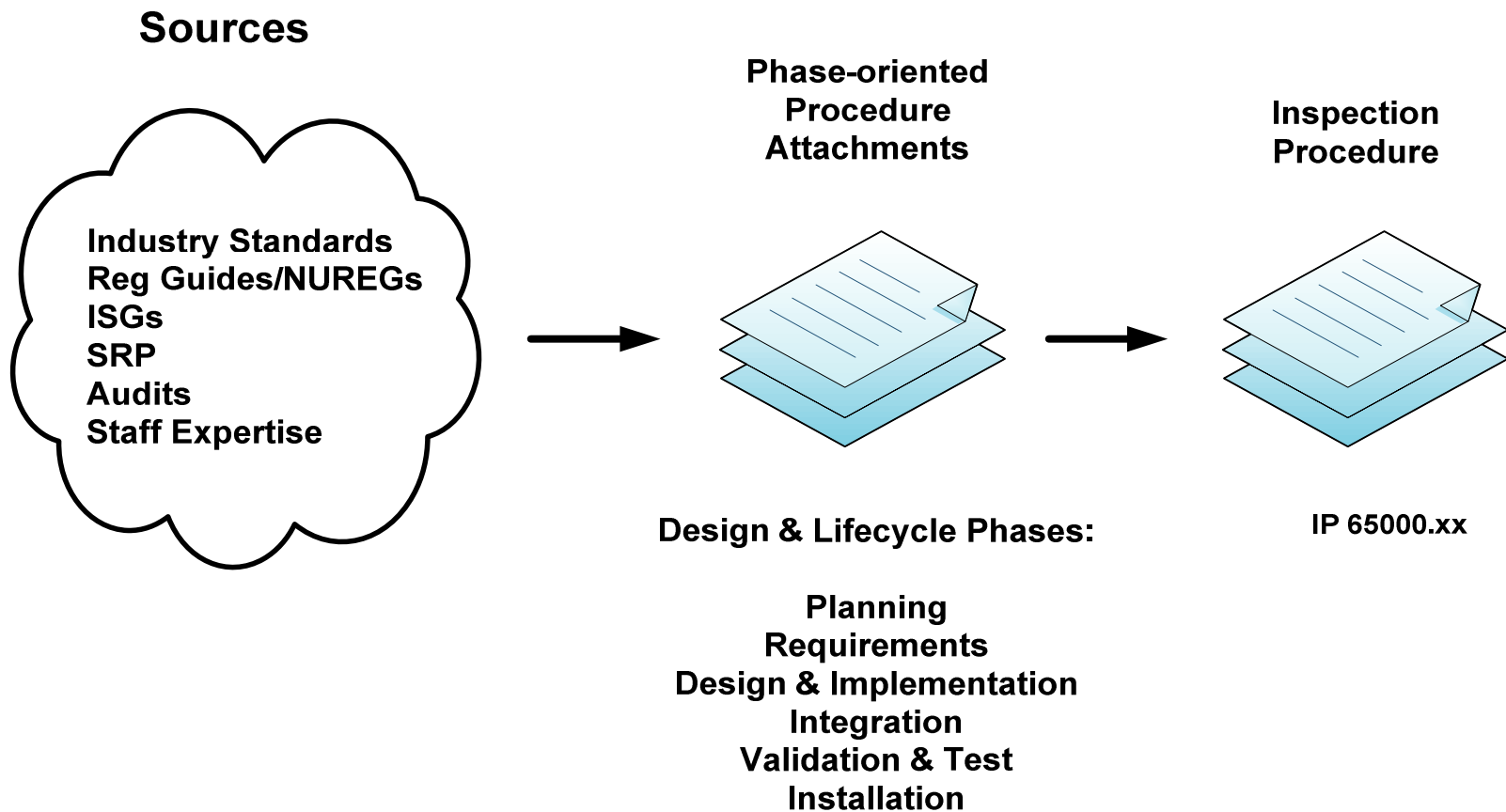
Process

- **Inspection lead by RII/CCI**
- **Tech Staff conducts the inspection**
- **DCIP acts as coordinator between RII and tech Staff**
- **Inspection Report a collaborative effort between all parties (RII, DCIP, Tech Staff)**
- **Report uploaded to CIPIMS**

Process (note- STP specific)



DI&C DAC Inspection Procedure





Inspection Focus

- **Front-loaded emphasis on Planning and Requirements**
- **System (Hardware & Software) design captures functional and regulatory requirements**
- **Traceability of Requirements through Design and Testing**



Inspection Focus (cont.)

- **Sampling of technical attributes within development Phases**
- **Transition activities between Phases**
- **QA, CM and IV&V processes and activities across all Phases**



Pilot Activities (short-term)

- **Finalize Inspection Procedure**
- **Select a “target” DAC for pilot inspection**
- **Tabletop the pilot process**
- **Identify inspection team**
- **Conduct inspection**



Pilot Inspection w/ STP

- **Part 1: Programmatic inspection of high-level DI&C lifecycle planning and process (June 2010)**
- **Part 2: Implementation inspection of selected DI&C platform planning phase activities (Nov 2010 (tentative))**



Post-Pilot (long-term)

- **Compile Lessons Learned**
- **Work w/ Industry to incorporate feedback and enhance the process**
- **Work w/ Industry to modify process as necessary for generic application**
- **Revise NEI 08-01 to include DAC resolution methodology**



Questions / Discussion