

Control Room Habitability



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History

- **30% U.S. Commercial Control Rooms Tested**
 - **Unfiltered In-Leakage**
- **All but one did not meet design basis input**
- **One did meet design basis input**
 - **Not accounting for uncertainties**

Guidance

- **NEI 99-03**
- **NRC Proposed Generic Letter**
- **NRC Regulatory Guide**
 - **Analyses (AST)**
 - **Hazardous Chemical Release**
- **NRC Draft Regulatory Guides**
 - **Analyses (TID)**
 - **Testing**
 - **Meteorology**
 - **Control Room Habitability (Comprehensive)**

Key Issues

- **Testing**
- **Technical Specifications Surveillance**
- **Composite**
 - **Relaxed Criteria**
 - **Removed Over conservatism**
 - **Removed Under conservatism**
- **Smoke and other Toxic Gases**

Working Relationships

- **Good communication with licensees**
 - **Many constructive comments**
 - **Excellent dialogue at meetings & conferences**
 - **Discussing issues**
 - **Focusing on common ground and successes**

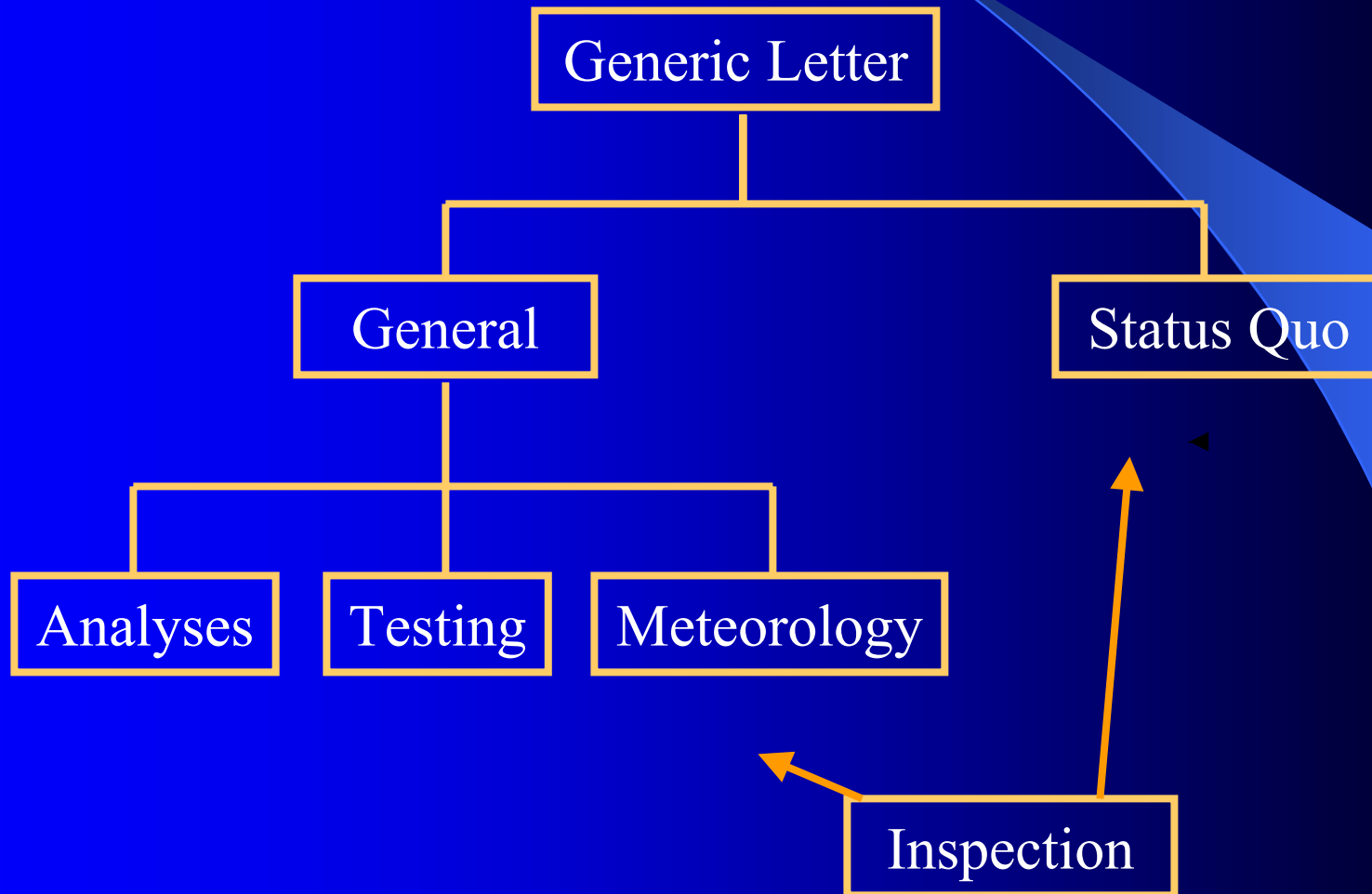
Stakeholder Interface

- **One Day Workshop, Regional Office Cities**
 - July 11 Region I (COMPLETE)
 - July 16 Region II (COMPLETE)
 - July 18 Region IV (COMPLETE)
 - July 23 Exelon (invited) (COMPLETE)
 - August 6 Region III with NHUG (Columbus, Ohio)
- **Review History, Guidance, Key Issues**
- **Discuss Licensee Perspectives**
- **Comment Period extended to September 6, 2002**
- **Website: <http://www.nrc.gov/reactors/operating/ops-experience/control-room.html>**

Success

- **Licenseses Understand Staff Reasoning**
 - Don't have to agree but understand
- **Feedback in Two Categories**
 - Where Guidance does not reflect reasoning
 - Disagreement with Fundamental Reasoning
 - Basis
- **Mutually Agreeable Solutions**
 - Ideal Goal

Integrated Overview



Testing Proposal

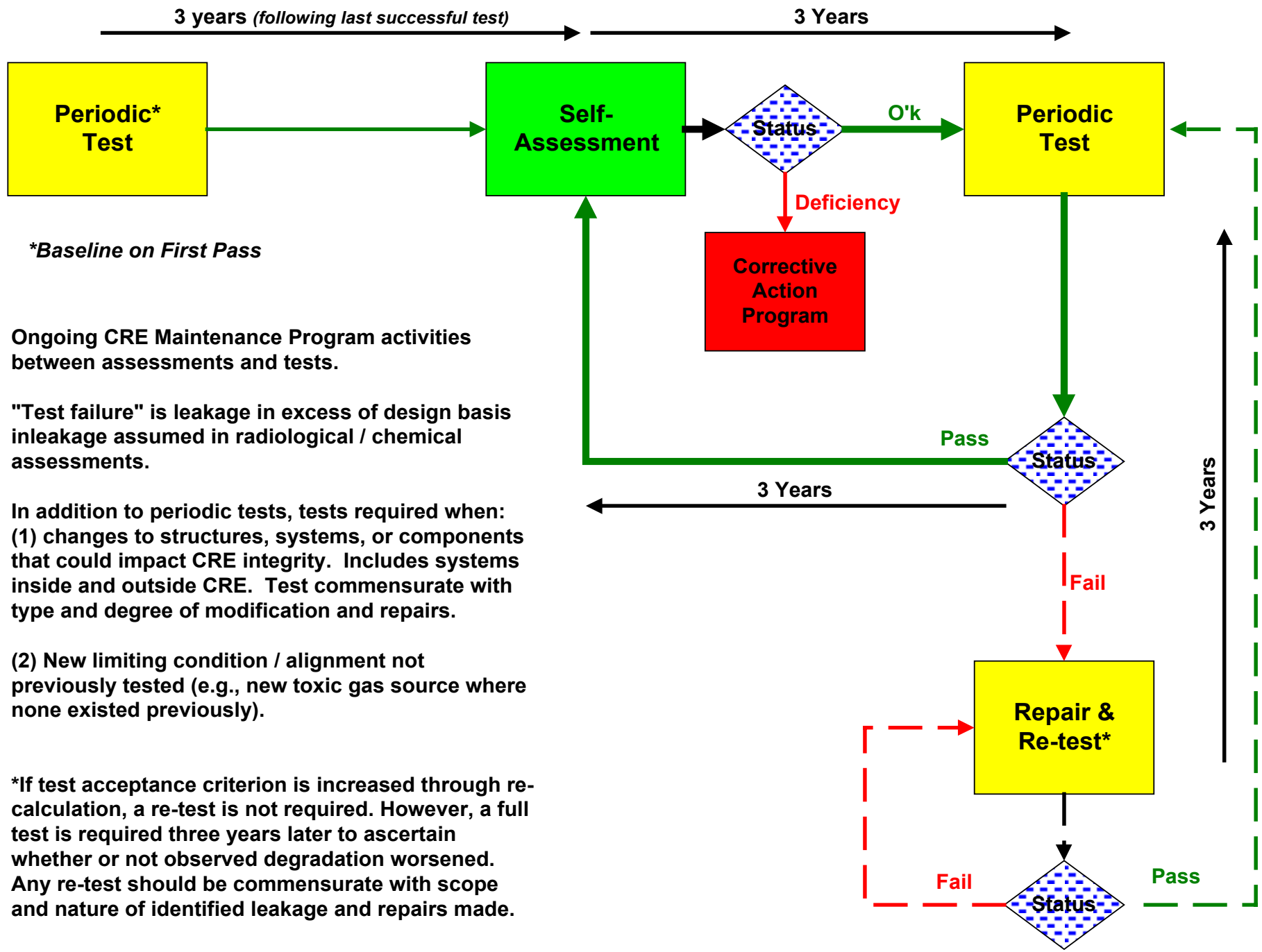
- **Self Assessment, Control Room Envelope**
 - *Comprehensive, Very Thorough*
 - **Identify & Repair Sources Unfiltered Inleakage**
- **Test**
 - **ASTM 741 (Preferred and Most Prevalent)**
 - **Correlation to ASTM 741 (Next Preference)**
 - *Other Convincing* **Baseline Test**
- **Note: Oral description has been progressively improving**

Testing Uncertainty

	Parameter	Comprehensiveness
ASTM E741	Can be High for Low Leakage Control Rooms	Measures Total Leakage
“Component”	Could be Lower than ASTM E741 for Low Leakage Control Rooms	Strongly Dependent on Quality of Self-Assessment

Testing Frequency Proposal

- **Test**
 - **Baseline**
 - **6 Years After Previous Successful Test**
- **Assessment**
 - **3 Years After Previous Successful Test**
- **Ongoing Maintenance Program**
- **Performance Based**
 - **If a Test Fails, the Next 3 Year Assessment Must be a Test**
 - **If the 3 Year Test Passes, Frequency Returns to 6 Years**



**Baseline on First Pass*

Ongoing CRE Maintenance Program activities between assessments and tests.

"Test failure" is leakage in excess of design basis inleakage assumed in radiological / chemical assessments.

In addition to periodic tests, tests required when:
 (1) changes to structures, systems, or components that could impact CRE integrity. Includes systems inside and outside CRE. Test commensurate with type and degree of modification and repairs.

(2) New limiting condition / alignment not previously tested (e.g., new toxic gas source where none existed previously).

*If test acceptance criterion is increased through recalculation, a re-test is not required. However, a full test is required three years later to ascertain whether or not observed degradation worsened. Any re-test should be commensurate with scope and nature of identified leakage and repairs made.

Technical Specifications

- **Section 5.0, Administrative Controls**
 - **Program**
 - **Describe Expectations**
 - **Program Content Details (Sample Program)**

Smoke and Toxic Gas

- **GDC-19:**
- **Control reactor from either**
 - **Control Room**
 - **Alternate Shutdown Panel**

Thoughts on Incorporation of Resolution

- **Comment Resolution**
 - **Revise Regulatory Guides**
 - **Conforming Revision to NEI 99-03**
 - **Before end of comment period**
 - **Subsequently Revise Regulatory Guides and Generic Letter Accordingly**