

NEXTERA CONTROL OF CONTRACTORS FOR ASR ISSUES

Resource Estimate:

1. 3 inspection weeks (90 hrs direct inspection) from November, 2011 to February, 2012
2. Time charge to IP 71111.15, Operability (92701, Follow-up on URI, 05000443/2011003-03).
3. Report No. 05000443/2011005, resident quarter
4. Outside R1 support is anticipated. For such support all issues of concern should be brought the attention of Region I, Suresh Chaudhary (610-337-5335) or Richard Conte (610-337-5183)

Inspection Criteria:

1. Procurement control document (available in CERTEX)
2. ANSI N 45.2.11,
3. NEXTERA QA Plan should commit to the above ANSI Standard. (Exceptions should be Noted)

Scope of review:

Priority of review: observe implementations as it occurs or a review test results, the adequacy of plans/procedures should be sampled as it undercuts implementation and test results.

1. Review NEXTERA implementation review and associated action plans in order to understand activities including walk-down assessments and testing for the ASR problem and establish a comprehensive list of disconnects between the contractor plans and implementation schedules – tentative list noted below.
2. Identify activities and tests not to be done by NEXTERA, but potentially need to be done by either NextEra or NRC – tentative list noted below e.g., Triaxial test.
3. Laboratory testing on a selective basis (first time use at WJE, in IL, Nov. 16-18, 2011) with emphasis on:
 - a. Calibration of test equipments,
 - b. Proper implementation of Procurement Documents and Test Procedures,
 - c. Observe set-up and test conditions are consistent with test procedures and standards,
 - d. Observe and assure that the failure mode of the test cores are properly documented.
 - e. Review and assure that test personnel are properly qualified and certified.
4. Review Phase 1 walk-down results prepared by MPR, and Reviewed by NEXTERA, including additional testing, if required, based on initial walk-down results (Week of Nov. 28, 2011).
5. Assess progress of Phase 2 walk-downs for Maintenance Rule Structures affected by ASR, including the adequacy of wlk-down procedures(Week of Nov. 28, 2011).
6. Based on inputs from R3 inspectors, and independent review of test results, assess compressive strength values for the B Electrical Tunnel (Final review mat be delayed till January, 2012)

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7. Assess test results of Tensile tests on concrete core samples from B Electrical Tunnel based on inputs from R3 inspectors, and independent review of test result (Final review may be delayed till January, 2012).

LONGER TERM PROJECTS:

1. Review results of long term laboratory monitoring for residual concrete expansion and aggregate reactivity (Procurement plans should be available mid December 2011).
2. Assess NEXTERA in-situ monitoring of concrete expansion (Mapping pins for CEVA to be installed early to mid December, 2011).
3. Consider TIA for SGH reanalysis for CEB. Report may be available mid January to early February, 2011 (Assess crack mapping progress in January, 2012).
4. Based on results of the TIA for the Control Bldg, consider the need for additional TIA for structural assessment ASR affected structures.
5. Decide on approach for Engineering Evaluation in March 2012, who has the lead NRR/DE or NRR/DLR.

QUESTIONS RELATED TO ADDITIONAL ACTIVITIES/TESTING – not evident from implementation schedule:

Site VP promised a gap analysis between what MPR action plan suggests and implementation schedule BUT when ??? Is there a need for a NextEra produced corrective action plan (requirement not needed; a license is being held up).

Discrepancies between Action Plans and Implementation Schedule:

1. In-situ monitoring of temperature and moisture conditions (last bullet of 4.3.2 in ASR Action Plan from MPR)
2. Use of alternative surfaces such as in Unit 2 in order to assess investigations that might damage surfaces both internal or external in Unit 1 (section 4.3.3 in ASR Action Plan from MPR).
3. Impl. Schedule does not describe an interim and long term structural evaluation of each affected building by ASR per section 4.4 of the ASR action plan – only a structural evaluation is stated.
4. Long Term monitoring and Remedial Plan are suggested in ASR action plan per pp13-14, not evident in the implementation schedule or is it to be assumed in the project SBRK.EN.05.03.20.09, Develop Eng. eVal. To address requests identified in RAI B.2.1.31-1
5. Page 12 of ASR Action Plan on Core Analysis suggest the use of a Stiffness Damage Test (qualitative but shorter term results on progression of ASR reaction) – not evident that it will be done on implementation schedule.

6. Need for additional Core samples from Buildings other than Control Bldg in Unit 1 – Implementation schedule does point to Phase I and II assessment walkdowns and the potential to identify additional core/tests – Phase II won't get done until the end of Jan. 2012 which appears relatively late in the schedule.
7. Why isn't the Mitigation of Water Intrusion (section 4.2 of Action Plan from MPR) not on the implementation schedule of 24 Oct 2011
8. Building floor slabs, most of the discussion has been on basement walls.

Needed Tests and other Activities not planned by NextEra:

9. Need to review how NEXTERA is establishing a correlation between Compressive strength and modulus of elasticity, if no tensile test are done (tensile strength testing current planned per Test Plan for ASR section 3.2)
10. NOTE: pull out test section 3.4 is contingent on tensile strength testing, if tensile testing not done the pull out testing may not be done.
11. Need for Triaxial Tests by NEXTERA and/or NRC (pro/con analysis needed). Not listed on the Test Plan for ASR
12. Need to calculate Poisson's ratio for the Core samples – not listed on the Test Plan for ASR.