



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, DC 20555 - 0001**

February 26, 2013

The Honorable Allison M. Macfarlane  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**SUBJECT: CONSTRUCTION REACTOR OVERSIGHT PROCESS (cROP)  
PROGRAM AND THE cROP PILOT PROGRAM RESULTS**

Dear Chairman Macfarlane:

During the 601<sup>st</sup> meeting of the Advisory Committee on Reactor Safeguards (ACRS), February 7-8, 2013, we reviewed the new Construction Reactor Oversight Process (cROP) Program and the cROP Pilot Program Results. Our Regulatory Policies and Practices Subcommittee also reviewed this matter on March 6, 2012. During these meetings we had the benefit of discussions with representatives of the NRC staff. We also had the benefit of the documents referenced.

**CONCLUSION**

The new cROP Pilot Program is a meaningful first step in assessing construction performance under Part 50 and Part 52 licenses. The objectives outlined in the Staff Requirements Memorandum (SRM) to SECY-10-0140, dated March 21, 2011, are being adequately addressed.

**BACKGROUND**

In SECY-10-0140, "Options for Revising the Construction Reactor Oversight Process Assessment Program," dated October 26, 2010, the staff recommended that the Commission approve the development of a construction assessment program. In the Staff Requirements Memorandum (SRM) SECY-10-0140, "Options For Revising The Construction Reactor Oversight Process Assessment Program," dated March 21, 2011, the Commission approved actions to develop a construction assessment program that includes a regulatory framework, the use of a construction significance determination process (SDP) to determine the significance of findings identified during the construction inspection program, and the use of a construction action matrix to determine the appropriate NRC response to findings. For the SDP in the cROP, the staff was directed to use risk importance measures with selected thresholds that are comparable and technically consistent with risk threshold levels used in the current Reactor Oversight Process (ROP) for operating reactors.

The staff has developed a new construction assessment program as directed and initiated its use on January 1, 2012, at Vogtle Electric Generating Plant, Units 3 and 4, and at Virgil C. Summer, Units 2 and 3. The March 21, 2011 SRM also directed the staff to provide the pilot results to the ACRS for review. The staff presented preliminary results to us on February 7, 2013.

## **DISCUSSION**

The purpose of the cROP Pilot Program is to apply the proposed new construction assessment and enforcement programs to commercial reactor facilities under construction. Lessons learned from the Pilot Program will allow the initial programs and procedures to be refined and revised as necessary prior to full implementation.

The objectives of the Pilot Program are to (1) exercise the new construction assessment and enforcement programs to evaluate whether they can function efficiently, (2) identify program and procedure problems and make appropriate changes prior to full implementation, and (3) to the extent possible, evaluate the effectiveness of the new programs. The Pilot Program will also determine the agency and licensee resources required to implement the new assessment and enforcement processes. The results of the Pilot Program will be evaluated against pre-established success criteria. Full implementation of the new assessment and enforcement programs will commence pending successful completion of the Pilot Program.

Construction inspections under the Pilot Program have resulted in 6 findings at Vogtle and 4 findings at Summer. All findings have been of very low safety significance. The findings have been classified as 'construction' or 'ITAAC' issues and have included violations of 10 CFR Part 50, Appendix B Criterion III, "Design Control," Criterion VII, "Control of Purchased Material, Equipment, and Services," or Criterion XVII, "Quality Assurance Records."

The staff stated that all findings, regardless of significance, are evaluated with regard to potential cross-cutting issues and that this evaluation process will continue to be developed. We agree that this is an important aspect that should be emphasized.

All cROP findings have been evaluated through the cROP's SDP. The SDP appears to be a useful tool that allows evaluation and categorization of cROP findings. Development of the SDP should continue.

The effectiveness of the cROP depends upon the effectiveness of each licensee's Corrective Action Program (CAP). Corrective Action Program inspections have been conducted at Vogtle and Summer. The inspection at Vogtle determined that transfers of corrective action program tasks across organizational boundaries were not always effectively controlled. The inspection at Summer identified failure to follow corrective action program procedures and to take timely corrective action. The findings at both sites were evaluated under the cROP SDP as of very low safety significance. Based on the assessments to date, the CAPs at each site appear to be effective.

The new cROP Pilot Program is a meaningful first step in assessing construction performance under Part 50 and Part 52 licenses. The objectives outlined in the SRM are being adequately addressed.

We look forward to hearing from the staff again on this matter.

Sincerely,

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J. Sam Armijo  
Chairman

## REFERENCES

1. Construction Reactor Oversight Process (cROP) Assessment and Enforcement Programs Pilot, dated December 21, 2011 (ML112700583)
2. NRC Inspection Manual, Power Reactor Construction Inspection Reports – Pilot, Manual Chapter 0613P, dated December 19, 2012 (ML12292A062)
3. NRC Inspection Manual, Periodic Assessment of Construction Inspection Program Results – Pilot, Manual Chapter 2505P, dated December 21, 2011 (ML112700780)
4. NRC Inspection Manual, Construction Significance Determination Process – Pilot, Manual Chapter 2519P, dated December 21, 2011 (ML113180355)
5. NRC Inspection Manual, Construction Reactor Oversight Process General Guidance and Basis Document, Manual Chapter 2506, dated November 19, 2012 (ML13051A337)
6. NRC Inspection Reports, South Carolina Electric and Gas V.C. Summer Nuclear Station Units 2 And 3 - NRC Integrated Inspection Reports 05200027/2012- 003, 05200028/2012-003 and Notice of Violation, dated August 6, 2013 (ML12219A188)
7. NRC Inspection Report, South Carolina Electric and Gas V.C. Sumer Nuclear Station Units 2 and 3 - NRC Inspection Report 05200027/2012004, 05200028/2012004, and Notice of Violation, dated November 14, 2012 (ML12319A648)
8. NRC Inspection Reports, Mid-Cycle Assessment Letter For Virgil C. Summer Nuclear Station Units 2 and 3 (NRC Inspection Report Nos. 05200027/2012006 And 05200028/2012006), dated September 4, 2012 (ML12243A446)

9. South Carolina Electric and Gas V.C. Summer Nuclear Station Units 2 and 3 - 2012 Construction Reactor Oversight Process (cROP) Survey Input
10. NRC Inspection Reports, Southern Nuclear Operating Company Vogtle Electric Generating Plant Units 3 and 4 - NRC Integrated Inspection Reports 05200025/2012-002 and 05200026/2012-002, dated May 11, 2012 (ML12132A040)
11. NRC Inspection Reports, Southern Nuclear Operating Company Vogtle Electric Generating Plant Units 3 and 4 - NRC Integrated Inspection Reports 05200025/2012-003, and 05200026/2012-003, dated August 7, 2012 (ML12220A476)
12. NRC Inspection Reports, Southern Nuclear Operating Company Vogtle Electric Generating Plant Units 3 and 4 - NRC Integrated Inspection Reports 05200025/2012-004, 05200026/2012-004, and Notice of Violation, dated November 14, 2012 (ML12319A458)
13. NRC Inspection Reports, Southern Nuclear Operating Company Vogtle Electric Generating Plant Units 3 and 4 - NRC Inspection of Corrective Action Program, Reports 05200025/2012-006, 05200026/2012-006 and Notice of Violation, dated June 19, 2012 (ML12171A330)
14. NRC Inspection Report, Southern Nuclear Operating Company Vogtle Electric Generating Plant Unit 3 – NRC ITAAC Inspection- Inspection Report No. 05200025/2012-008 and Notice of Violation, dated May 18, 2012 (ML12139A192)
15. NRC Inspection Report, Mid-Cycle Assessment Letter For Vogtle Electric Generating Plant Units 3 And 4 (NRC Inspection Report Nos. 05200025/2012007 AND 05200026/2012007), dated September 4, 2012 (ML12243A503)
16. Southern Nuclear Operating Company Vogtle Electric Generating Plant Units 3 and 4 - 2012 Construction Reactor Oversight Process (cROP) Survey Input, December 2012

9. South Carolina Electric and Gas V.C. Summer Nuclear Station Units 2 and 3 - 2012 Construction Reactor Oversight Process (cROP) Survey Input
10. NRC Inspection Reports, Southern Nuclear Operating Company Vogtle Electric Generating Plant Units 3 and 4 - NRC Integrated Inspection Reports 05200025/2012-002 and 05200026/2012-002, dated May 11, 2012 (ML12132A040)
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16. Southern Nuclear Operating Company Vogtle Electric Generating Plant Units 3 and 4 - 2012 Construction Reactor Oversight Process (cROP) Survey Input, December 2012

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