

October 21, 2015

Patrick Troy
Program Licensing Manager
Nuclear Systems & Solutions
Lockheed Martin Missiles and Fire Control
459 Kennedy Drive
Archibald, PA 18403

SUBJECT: REGULATORY AUDIT PLAN FOR OCTOBER 26-30, 2015, AUDIT OF
LOCKHEED MARTIN TOPICAL REPORT NUPAC_ED610000-047-P
REVISION-, "GENERIC QUALIFICATION OF THE NUPAC PLATFORM FOR
SAFETY-RELATED APPLICATIONS PROPRIETARY" (TAC NO. ME7900)

Dear Mr. Troy:

By letter dated June 28, 2011 (Agencywide Documents Access and Management System Accession No. ML11201A323), Lockheed Martin Nuclear Systems and Solutions (LMNSS) submitted Topical Report (TR) NuPAC_ED610000-47-P, Revision, "Generic Qualification of the NuPAC Platform for Safety-related Applications Proprietary." The TR is supported by documentation that includes plans, requirements, design specifications, programming and hardware testing, independent verification and validation, and equipment qualification testing.

The U.S. Nuclear Regulatory Commission (NRC) staff is currently reviewing the TR for use in safety system equipment at nuclear power plants. As part of its review, the NRC staff will be performing a regulatory audit of Lockheed Martin. The dates for this audit will be October 26-30, 2015.

The audit will determine the degree that the processes and outputs used have resulted in satisfying regulatory requirements for safety system applications at nuclear power plants. This audit will provide information necessary to complete the NRC staff's evaluation of the LMNSS TR. Enclosed for your information is a copy of the plan the NRC staff will follow on the audit.

P. Troy

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If you any questions or require any additional information, please feel free to contact me at 301-415-7297 or Joseph.Holonich@nrc.gov.

Sincerely,

/RA/

Joseph J. Holonich, Project Manager
Licensing Processes Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Project No. 780

P. Troy

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If you any questions or require any additional information, please feel free to contact me at 301-415-7297 or Joseph.Holonich@nrc.gov.

Sincerely,

/RA/

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AUDIT PLAN

LOCKHEED MARTIN NUCLEAR SYSTEM AND SOLUTIONS

NUPAC ED610000-47-P, "GENERIC QUALIFICATION OF THE NUPAC PLATFORM FOR

SAFETY-RELATED APPLICATIONS PROPRIETARY" TOPICAL REPORT

(TAC NO. ME7900)

Background: By letter dated June 28, 2011 (Agencywide Documents Access and Management System Accession No. ML11201A323), Lockheed Martin Nuclear Systems and Solutions submitted Topical Report (TR) NuPAC_ED610000-47-P, Revision -, which proposes to use a generic digital safety instrumentation and control platform (i.e., the Nuclear Protection and Control (NuPAC) platform) to implement Class 1E safety-related applications in United States nuclear power plants. The TR is for a generic platform, not a plant-specific implementation.

The U.S. Nuclear Regulatory Commission staff has reviewed the instrumentation and controls aspects of the application and concluded that an audit is needed to complete the review.

Necessary Material:

- Electronic Access (for viewing and printing) to all project documents

Team Assignments: Norbert Carte: Team Lead
Rui Li: Cyber Security
Royce Beacom: Peer Reviewer

1) Kickoff/Introductions

2) Programmable Logic

- Development and Implementation Process
- Baseline Design Definition Documents
- Design-side Verification
- Software Tools: (1) Design Tools and (2) Software Tool Validation
- Requirements Traceability
- Programmable Logic Failure Mode and Effects Analysis/Hazard Analysis

3) Additional Topics

- Configuration Management
- Quality Program
- Corrective Action Program/Corrective Action Reports/Action Review
- Security Secure Development and Operational Environment (SDOE):
(1) Whitepaper and (2) SDOE Whitepapers
- Digital Communications Whitepaper
- Determinism and Watchdogs Whitepaper

ENCLOSURE

4) Audit Conclusion

Logistics: Audit to start Monday, October 26, 2015 (Kickoff and Introductions)
Audit to be completed Friday, October 30, 2015