

September 3, 2009

MEMORANDUM TO: Joseph Colaccino, Chief
EPR Projects Branch (NARP)
Division of New Reactor Licensing
Office of New Reactors

FROM: James A. Steckel, Project Manager */RA Getachew Tesfaye for/*
EPR Projects Branch (NARP)
Division of New Reactor Licensing
Office of New Reactors

SUBJECT: REGULATORY AUDIT SUMMARY: VERIFICATION OF INFORMATION
TO SUPPORT THE BASIS OF LICENSING AND REGULATORY
DESIGN CERTIFICATION DECISIONS RELATED TO SPECIFIC AREAS
OF CHAPTER 8, SECTION 8.3.1 OF THE AREVA NP, INC., U.S. EPR
FINAL SAFETY ANALYSIS REPORT

By letter dated December 11, 2007, AREVA NP Inc., submitted to the U.S. Nuclear Regulatory Commission (NRC) its application for design certification of its single unit U.S. EPR design in accordance with the requirements contained in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants."

On April 2, 2009, technical review staff from NRC's Office of New Reactors (NRO) Electrical Engineering Branch (EEB), along with the EEB Branch Chief and the project manager for the Electric Power chapter (Chapter 8) of the NRC Final Safety Evaluation Report (FSER), conducted an audit of the U.S. EPR electrical power system calculations that utilized the electrical transient analyzer program (ETAP), Nuclear Version 5.5.6N. This program was used to analyze the U.S. EPR alternating current (ac) distribution system for load flow and voltage regulation, along with short-circuit and motor starting studies. The purpose of the audit was to examine and evaluate non-docketed technical, procedural and process information associated with the electric power detailed design engineering phase, the dynamic modeling associated with the emergency diesel generators, and development of various calculations used in final electrical equipment specifications. The audit also identified potential documentation that will require docketing to support the basis of Final Safety Evaluation Report (FSER) Chapter 8 licensing and regulatory decisions. An audit plan was developed and submitted to AREVA in advance of the audit.

CONTACT: James A. Steckel, NRO/DNRL
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LEAD AUDITOR: Peter Kang, NRO/DE
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Enclosures: Summary of Chapter 8 Audit
NRC Audit Plan
Agenda

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Docket No. 52-020

Enclosures: Summary of Chapter 8 Audit; NRC Audit Plan; Agenda

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