

September 12, 2013

MEMORANDUM TO: Samuel S. Lee, Chief
Environmental Projects Branch 2
Division of New Reactor Licensing
Office of New Reactors

FROM: William R. Ward, Senior Project Manager */RA/*
Licensing Branch 2
Division of New Reactor Licensing
Office of New Reactors

SUBJECT: AUDIT REPORT FOR THE KOREA HYDRO AND NUCLEAR
POWER CO. LTD ADVANCED POWER REACTOR 1400
DESIGN CERTIFICATION APPLICATION DEVELOPMENT

During the period of June 3 - 7, 2013, a team from the U.S. Nuclear Regulatory Commission's (NRC) Office of New Reactors (NRO) performed a pre-application audit of the Korea Hydro and Nuclear Power Co. Ltd. (KHNP), Advanced Power Reactor (APR1400) Design Certification (DC) application documents at the Hilton Hotel and Executive Meeting Center in Rockville, Maryland. The purpose of the audit was to review and evaluate the higher-level portions of the APR1400 DC application including the Design Certification Document (DCD), supporting technical reports, and calculations, for any issues that could affect the completeness or clarity of the information in the application. This report provides the observations made by NRC staff during the audit period. These observations were discussed with KHNP during the audit and later in noticed public meetings. Since the June 2013 audit, KHNP has used the observations to improve the completeness and clarity of the information in the PAR1400 DC application in preparation for its submission in late September 2013.

The audit focused on the following major areas which were identified from previous DC applications to have required the greatest staff effort to review and/or caused the greatest impacts for review schedules:

- Seismic Analysis (Chapter 3 of the DCD);
- Long-term cooling and Generic Safety Issue 191 (GSI-191) (Chapters 4 and 6);
- Instrumentation and Controls (Chapter 7);
- Radiation Protection (Chapters 11 and 12);
- Severe Accident Analysis and Probabilistic Risk Analysis (Chapters 15 and 19);
and
- Human Factors Engineering (Chapter 18).

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S. Lee

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The plan for this audit, dated May 29, 2013, is documented and can be found in the Agencywide Document Access and Management System (ADAMS) under accession number ML13143A529. The results of the audit are documented in Enclosure 1. A List of Attendees is provided as Enclosure 2. A List of Documents Made Available to the NRC Staff is provided as Enclosure 3. Additional Enclosures are provided as discussed in Enclosure 1. The NRC audit team found the applicant's staff very cooperative and forthcoming in their support of this audit.

Docket No. PROJ0782

Enclosures:

As stated

cc: See next page

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