

February 10, 2014

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

FROM: Joseph Donoghue, Chief */RA/*
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SUBJECT: AUDIT SUMMARY FOR THE KOREA HYDRO AND NUCLEAR
POWER CO. LTD ADVANCED POWER REACTOR 1400
SUMP STRAINER PERFORMANCE TESTS

The purpose of this memorandum is to provide input to Licensing Branch 2 pertaining to the Regulatory Audit conducted on August 28-29 and September 9, 2013. During the period of August 28-29 and September 9, 2013, a team from the U.S. Nuclear Regulatory Commission's (NRC) Office of New Reactors (NRO) performed an audit of two Korea Hydro and Nuclear Power Co. Ltd. (KHNP), Advanced Power Reactor 1400 (APR1400) sump strainer performance tests at Continuum Dynamics, Inc. (CDI) in Ewing, New Jersey. The purpose of the audit was to evaluate whether the tests demonstrated consistency with staff guidance in Regulatory Guide 1.82, "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident," and resolved issues related to Generic Safety Issue 191 "Assessment of Debris Accumulation on Pressurized-Water Reactors Sump Performance." The two tests were conducted on two separate occasions that consisted of the strainer head loss test on August 28-29, 2013, and the strainer bypass test on September 9, 2013.

The audit was conducted to observe the performance of the protective strainer test assemblies to ensure long-term recirculation cooling capability following potential debris generation in the reactor containment, and its associated effects. These effects include debris screen blockage and the impact of debris penetration on long-term cooling of the reactor core under postulated post Loss-of-Coolant-Accident conditions. The enclosed report provides the observations made by NRC staff during the audit. The report should be provided to the applicant to be reviewed for proprietary information.

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S. Lee

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The plan for this audit, dated August 27, 2013, is documented and can be found in the Agencywide Document Access and Management System (ADAMS) under accession number ML13238A302. The results of the audit are documented in the Strainer Test Audit Report, Enclosure 1, which includes the names of the NRC audit team and a list of the reference documents. 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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