WITS 200100018 - Quarterly CA Note on Status of New Reactor Licensing Activities
May 1 – July 31, 2008

New Reactor Licensing Reviews

Design Certifications:

To date, three Design Certifications (DCs) and one DC amendment are under review. The staff is currently conducting reviews of the Economic Simplified Boiling Water Reactor (ESBWR) DC (ESBWR Rev. 5 was submitted June 1, 2008); the US Evolutionary Power Reactor and the US-Advanced Pressurized Water Reactor DCs as well as the AP1000 DC Amendment. All acceptance reviews have been completed and review schedules issued except for the ESBWR Revision 5 which is expected to be issued in the near future.

The current status of the design certifications that are currently under review is provided in the table below.

Applicant	Design Type	Application Date	Acceptance Date	Status
GE Hitachi	ESBWR	Various	Various	Safety review underway.
Westinghouse	AP1000 DC Amendment	5/26/07	01/18/08	Review schedule published. Safety review underway.
Areva	EPR	12/11/07	02/26/08	Review schedule published. Safety review underway.
Mitsubishi	US APWR	12/31/07	2/29/08	Review schedule published. Safety review underway.

Early Site Permits:

The staff is continuing its review of the Vogtle Early Site Permit/Limited Work Authorization (LWA) application. A Level 1 schedule change was made associated with the safety review of the Vogtle ESP and LWA request. The staff changed the issuance date for the Vogtle ESP final safety evaluation report from August 8, 2008 to February 5, 2009. Most significantly, additional time is required by the staff to address a newly identified issue related to SNC's LWA request (which is part of the ESP application). Specifically, the staff needs to verify that the nuclear island will not slide during a seismic event. The staff needs to review the validity of the applicant's coefficient of friction at the soil and mudmat interface for resistance to sliding (the soil structure interaction). In order to complete this review, the staff must also understand the overall seismic demand, and the loading due to the AP1000 design. This portion of the review is on the critical path.

Combined License Applications:

To date, the staff has received 11 combined license applications (COLAs). The staff has completed nine acceptance reviews and issued six review schedules. The current status of the COLAs that are currently under review is provided in the table below.

Applicant	Design Type	Application Date	Acceptance Date	Status
UniStar (Calvert Cliffs)	EPR (Reference Plant)	7/13/07 3/17/2008	2/11/2008 (Part 1) 6/3/2008 (Part 2)	Part 2 of COL application submitted on March 17, 2008. Review schedule to be published.
NRG Energy (South Texas)	ABWR (Reference Plant)	9/20/07	11/29/2007	Schedule TBD. Applicant has requested staff stop review on portions of application pending resolution of vendor support issues.
TVA (Bellefonte)	AP1000 (Reference Plant)	10/30/07	1/18/2008	Review schedule published. Safety review underway.
Dominion (North Anna)	ESBWR (Reference Plant)	11/27/07	02/11/2008	Review schedule published. Safety review underway.
Duke (Lee)	AP1000	12/13/07	2/25/2008	Review schedule published. Safety review underway.
Progress Energy (Shearon Harris)	AP1000	2/19/2008	4/17/2008	Review schedule published. Safety review underway.
Entergy (Grand Gulf)	ESBWR	2/27/2008	4/17/2008	Review schedule published. Safety review underway.
Southern Nuclear (Vogtle)	AP1000	3/31/2008	5/30/2008	Review schedule to be published.
SCE&G (VC Summer)	AP1000	3/31/2008	7/31/2008	Review schedule to be published.
Callaway	US EPR	7/28/2008		Acceptance review underway.
Levy County	AP1000	7/30/2008		Acceptance review underway.

Details regarding review status as well as project risks and schedule changes associated with each of the new reactor licensing reviews discussed above are available at http://nrr10.nrc.gov/NRO/new-rx-status/status-reports/2008/index.cfm. In addition, review schedules and other pertinent information regarding these reviews are available on the public webpage at http://www.nrc.gov/reactors/new-reactor-licensing.html.

Other Licensing Activities:

During the period of May – July, 2008, the staff conducted public outreach meetings at Levy County, Comanche Peak, Callaway, and Vogtle. The purpose of these meetings is to inform the public of the new reactor(s) planned for each applicant's site, inform them of the COL process under the new 10 CFR Part 52 regulations, and to let them know when and how they can participate during the licensing process. In addition to the public outreach meetings, the staff conducted several environmental scoping meetings.

Also, the staff approved the Mitsubishi Heavy Industries, Ltd., Kobe, Japan office to handle and store Safeguards Information (SGI) on June 30, 2008. This is the first approval of an applicant's SGI storage facility located outside of the U.S.

Regulatory Infrastructure Activities

Aircraft Impact Assessment Rulemaking:

The staff has developed regulations and is continuing to assess and pursue rulemakings to support the licensing of new reactors and address major policy issues such as the need to address possible aircraft impacts during the design of new reactors. The staff issued a proposed rule for comment which was published in the Federal Register on October 3, 2007. In this rule, the NRC is proposing that applicants for new nuclear power reactor designs to assess the effects of the impact of a large, commercial aircraft on the nuclear power plant. Based on the insights gained from this assessment, the applicant would be required to describe and evaluate design features, functional capabilities, and strategies to avoid or mitigate the effects of the aircraft impact. In addition, the staff briefed the ACRS members on July 9, 2008. The ACRS provided a letter recommending approval of the draft final rulemaking. The draft final aircraft impact assessment rulemaking is in the concurrence process to support delivery to the OEDO by mid-September 2008.

The staff is continuing to interact with industry regarding their development of guidance for performing assessments of aircraft impacts with hopes of being able to reference the industry guidance in a future regulatory guide. Interactions with industry regarding specific reactor designs and their assessments will follow activities related to the guidance and rulemaking. It is expected that applicants will submit revisions to their applications in early 2009 to address the aircraft impact assessment rulemaking, and other requirements within the security rulemaking.

Part 73 Security Rulemaking:

The Part 73 security rulemaking is primarily the vehicle to codify the requirements imposed on operating reactors by Orders issued after September 11, 2001. The draft final rulemaking was provided to the EDO on June 30, 2008, and has been forwarded to the Commission. The final rulemaking needs to be effective before the final SER for the first COL application is completed.

The staff is beginning discussions with NEI and the design centered working groups (meetings held on July 2 and July 22) on the development of guidance for mitigating strategies for loss of large areas due to explosions or fires.

The security rulemaking includes a new provision for cyber security. A draft of the associated guidance document was issued for public comment. A meeting on the associated draft regulatory guide was held on July 18, 2008.

Advanced Reactors:

The staff prepared and issued a memorandum to the Commission regarding criteria for funding the review of future small, grid-appropriate reactors. In addition, the staff supported pre-application meetings with vendors regarding the International Reactor Innovative & Secure, the Super-safe, Small and Simple, and NuScale designs.

A more complete status of guidance development and rulemaking, as well as activities associated with Advanced Reactors is available under the section entitled, "Regulatory Infrastructure," at Hot Topics.

Contracting Activities:

The staff committed $30.4M of contract funding dollars in the third quarter, which represents 45 percent of NRO's total FY 2008 contract budget.

Construction Inspection Activities

The staff held two additional public workshops in its continuing series of meetings to develop the construction inspection program. The topics discussed include a range of policy and programmatic issues, including agency and industry guidance documents, the construction findings assessment and enforcement processes, and safety culture/cross-cutting issues. The program also completed 4 additional vendor inspections, including parallel inspections with the Korean Institute for Nuclear Safety at Doosan Heavy Industries in Korea.

Activities Associated with Watts Bar Nuclear Plant Unit 2 Reactivation of Construction

In a letter dated August 3, 2007, the Tennessee Valley Authority (TVA) officially notified the NRC of its intent to reactivate and complete construction activities at Watts Bar Nuclear Plant (WBN) Unit 2. In the letter, TVA indicated that it intended to resume construction activities on December 3, 2007, and expected to complete construction and request an operating license prior to April 1, 2012. In order to finish construction, TVA requested an extension to the construction permit. In this regard, the NRC issued an Order extending the construction completion date from December 31, 2010, to March 31, 2013.

NRR staff is developing a project plan and project organization to perform the reviews necessary for licensing the facility in accordance with a July 25, 2007, Staff Requirements Memorandum (SRM). In the SRM, the Commission stated that it supported a review approach that employs the current licensing basis for WBN Unit 1 as the reference basis for review and licensing Unit 2. This approach ensures safety while preserving design and operational consistency between the units.

Many licensing issues for WBN Unit 2 have been originally resolved in the Safety Evaluation Report (NUREG-0847 and its supplements). The staff has examined the previous review documentation to identify those topics that remain unresolved. The staff has completed a similar review of all generic communication documents and will review TVA's status of corrective action and special programs in order to confirm the entire scope of previously-completed evaluations.

International Activities

Through our bilateral cooperation with China, a contract was awarded for the development of the second phase of training to the Chinese regulator on the AP1000 design evaluation process. The training is scheduled for October 2008.

In addition, the staff established three issue-specific working groups under the Multinational Design Evaluation Program, which include: Vendor Inspections, Digital Instrumentation and Controls, and Pressure Boundary Codes & Standards. Also, under the auspices of the Committee on Nuclear Regulatory Activities, a working group on Regulating New Reactors was organized with membership by the regulators of approximately 15 countries initially to be led by NRO management.