

**NUCLEAR ENGINEERING SECTION  
NUCLEAR ENVIRONMENTAL ENGINEERING SECTION  
2008-2009 FACT SHEET**

**HOPE CREEK AND SALEM GENERATING STATIONS LICENSE RENEWAL**

The Atomic Energy Act and NRC regulations limit commercial power reactor licenses to an initial forty years but also permit such licenses to be renewed. This original forty year term for reactor licenses was based on economic and antitrust considerations -- not on limitations of nuclear technology. Due to this selected period, however, some structures and components may have been engineered on the basis of an expected forty year service life.

The NRC has established a timely license renewal process and clear requirements, codified in [10 CFR 51](#) and [10 CFR 54](#), to assure safe plant operation for an additional twenty years of extended plant life.

Before submission of a renewal application, an applicant must analyze the management of aging effects in sufficient detail to conclude that the plant can be operated safely during the period of extended operation. The renewal application is the principal document in which the applicant provides the information needed to understand the basis upon which this conclusion has been reached. The NRC has approved renewal applications for fifty-four nuclear units and has sixteen applications under review.

In July 2007, PSEG formed a License Renewal Project for seeking twenty year operating license renewals from the NRC for the units at Salem and Hope Creek. The forty year operating licenses will expire as follows: Salem Unit 1 on August 8, 2016; Salem Unit 2 on April 4, 2020; Hope Creek on April 11, 2026. The present schedule for submittal to the NRC of all three license renewal applications is August 2009. If the applications are accepted for review by the NRC, the renewal process is expected to take approximately thirty months, including the time to conduct an adjudicatory hearing, if necessary, or twenty-two months without a hearing. If the applications are accepted and approved, the new licenses could be received by PSEG in July 2011.

The license renewal process will proceed along two tracks – one for review of safety issues (10 CFR 54) and another for environmental issues (10 CFR 51). PSEG's applications must provide the NRC an evaluation that addresses the technical aspects of plant aging for each plant and describes the ways those effects will be managed. PSEG must also prepare an evaluation of the potential impact on the environment if each plant operates for an additional twenty years. The NRC reviews the applications and verifies the safety evaluations through inspections.

The New Jersey Bureau of Nuclear Engineering (BNE) has the reviewed portions of the PSEG scoping of plant systems, structures and components for aging analysis and the PSEG basis documents for the aging management program. In addition, the BNE has taken the lead for coordinating the interface between the sections of the New Jersey Department of Environmental Protection (DEP) and PSEG in order to insure that all state environmental aspects of the license renewal are adequately addressed including the federal consistency review. The BNE will remain active in the license renewal process through observation of selected NRC inspections and review of various aspects of the renewal applications. Public participation will be encouraged during the renewal process via public meetings and dissemination of information by PSEG and the NRC.

For further information refer to [www.nrc.gov/reactors/operating/licensing/renewal.html](http://www.nrc.gov/reactors/operating/licensing/renewal.html)

## **Coastal Zone Management Act Compliance Certification**

Coastal states have the authority over a broad range of activities that could affect coastal zone resources. In the U.S., coastal areas are managed through the federal Coastal Zone Management Act of 1972 (CZMA). Federal consistency is the CZMA requirement that federal actions that have reasonably foreseeable effects of any land or water use or natural resource of the coastal zone must be consistent with the enforceable policies of a coastal State's federally approved Coastal Management Program. Federal actions requiring a consistency review include activities not performed by a federal agency, but requiring federal permits, licenses or other forms of federal approvals, for example Nuclear Regulatory Commission (NRC) licenses (including license renewals or amendments) for nuclear power plants. The NJDEP's Land Use Regulation Program conducts the Department's Federal Consistency Reviews. Information on the NJDEP's Coastal Zone Management Program and Federal Consistency Determinations can be found at the following website address:[http://www.state.nj.us/dep/cmp/czm\\_federal.html](http://www.state.nj.us/dep/cmp/czm_federal.html).

## **New Jersey Pollutant Discharge Elimination System**

New Jersey Pollutant Discharge Elimination System (NJPDES) permits are administered by the Department's Division of Water Quality. The Program's goal is to improve the State's water quality by reducing or eliminating pollutants discharged into the waters or onto lands of the State. The regulatory major tool used to achieve this goal is the NJPDES permit which establishes limits on the pollutants discharged through direct and/or indirect pathways. Below is the status of NJPDES permits at Salem & Hope Creek.

On February 16, 2004, the US Environmental Protection Agency (EPA) released its final regulations for section 316(b) of the Clean Water Act ("Phase II rule") for large, existing power generating facilities, including Salem & Hope Creek. The Phase II rule established national standards for cooling water intake structures where Salem utilizes a once-through cooling system and Hope Creek utilizes a natural draft cooling tower. In March of 2007, as the result of litigation over the Phase II regulations, EPA suspended its rule and directed states and permitting authorities to issue permits in accordance with Best Professional Judgment. However, the US Supreme Court held April 1, 2009, that it is permissible for the licensee and regulators to apply a cost-benefit analysis under the Clean Water Act in deciding what technology is needed to protect fish from being killed by large industrial cooling water intake structures (*Entergy v. Riverkeeper Inc.*, U.S. No. 07-588, 4/1/09).

The NJPDES permits for Hope Creek (NJPDES Permit No. NJ0025411) and Salem (NJPDES Permit No. NJ0005622) are expired but are administratively continued in accordance with the Administrative Procedures Act. Hope Creek's NJPDES Permit No. NJ0025411 expired in February 2008 and Salem's Permit No. NJ0005622 expired in August 2006. The DEP is actively working on issuing a draft renewal permits for Hope Creek and Salem. The draft NJPDES permits will be subject to public comment and notice procedures as specified at N.J.A.C. 7:14A-16.10-1et seq. Additional information on the NJPDES program can be found on the Division of Water Quality's website address at: <http://www.nj.gov/dep/dwq/njpdess.htm>.