August 10, 2004

The Reverend Michael Harriott
Conference Secretary
Greater New Jersey Annual Conference
The United Methodist Church
11 Madison Avenue
Montclair, NJ 07042

Dear Dr. Harriott:

I am responding on behalf of the Nuclear Regulatory Commission (NRC) to the "Oyster Creek Resolution," written by the Greater New Jersey Annual Conference (the Conference) of the United Methodist Church, transmitted to Chairman Nils J. Diaz of the NRC by your letter dated July 14, 2004. The resolution (1) expressed the reasons for the Conference's opposition to extending the operating license of the Oyster Creek Nuclear Generating Station (OCNGS), (2) expressed the Conference's opposition to any application to build other nuclear facilities on the OCNGS site, (3) called for decommissioning of OCNGS, and (4) called for Exelon Corporation to fund the decommissioning cost in its entirety.

OCNGS is owned and operated by AmerGen Energy Company, LLC (AmerGen), in Lacey Township, New Jersey. The NRC's response to the Conference's four requests may be found in the following item-by-item discussion of the issues identified in the resolution:

The Conference raised concerns about the age of OCNGS. The NRC requires plant operators to continuously test and monitor the condition of safety equipment and to keep equipment in top condition. The NRC has also required licensees to correct design deficiencies that could impact plant safety. While OCNGS has been in operation since December 1969, over the years, the licensee has replaced many pieces of equipment as well as performed overhauls of other plant equipment and will continue to do so in the future. The licensee has also installed new, more modern systems to replace or supplement original systems that are obsolete or no longer considered adequate. OCNGS meets all current applicable NRC requirements.

The current license expires on April 9, 2009. In a press release dated February 19, 2004, and in correspondence to the NRC, AmerGen announced its intention to seek renewal of the OCNGS operating license for a period of up to twenty (20) years. However, AmerGen has not yet submitted an application for NRC review. In the absence of an application, the NRC has no basis to take the action you requested. Should the NRC receive an application in the future, the NRC staff will review both the safety and environmental issues associated with this license renewal. Specifically, the licensee must provide the NRC with an evaluation that addresses the technical aspects of plant aging and must describe how the aging will be managed. In addition, the licensee must prepare an evaluation of the potential impact on the environment to support plant operation for the additional 20 years. The NRC reviews the application, documents its evaluations in a safety evaluation report and supplemental environmental impact statement, and performs verification inspections at the licensee's facilities. License renewal is a process

open to public participation in a number of ways, including public meetings and the opportunity for adjudicatory hearings. See the NRC website at http://www.nrc.gov/reactors/operating/licensing/renewal.html for more information.

The Conference was concerned that OCNGS, in particular, the facility's spent fuel, which is stored in the spent fuel pool and in storage casks at the OCNGS site, is vulnerable to terrorist attacks from the air and the ground. The NRC applies a fundamental defense-in-depth strategy for nuclear facilities such as OCNGS to protect public health and safety. The strategy encompasses design, construction, operation, training, event mitigation, and contingency planning, including emergency planning. Nuclear facilities are robust structures, constructed of thick concrete-reinforced walls and stainless steel liners. While these facilities were not specifically designed against the impact of the jumbo jets of today, they were designed to withstand the significant forces associated with earthquakes, hurricanes and tornadoes. We note that the OCNGS facility is required to meet the same stringent NRC security requirements as other, more modern NRC-licensed reactors. As a result of the terrorist attacks of September 11, 2001, the NRC has increased its focus on security and emergency preparedness at nuclear power plants. Contingency measures are in place to address situations associated with a terrorist attack on the OCNGS facility. Further, OCNGS is in the process of implementing additional security measures to meet recently enhanced NRC security requirements. Additional information on emergency preparedness, potential health effects, and actions taken since September 11th can also be found on the NRC website (http://www.nrc.gov).

In addition to the age of OCNGS, the Conference mentioned that design standards had changed dramatically since OCNGS was constructed. The NRC frequently updates its regulations as a result of improvements to technology and based on operating experience. When requirements are changed, the NRC applies a rigorous evaluation standard to determine if the safety benefit of the new requirements justifies imposing the changes on existing licensees. For example, OCNGS was designed and constructed before the General Design Criteria (GDC) were promulgated by the Atomic Energy Commission on July 11, 1967. The final GDC were made a part of the NRC's regulations on February 20, 1971. When the final GDC were approved, the Commission stressed that the final GDC were not new requirements, but were promulgated to more clearly articulate the licensing requirements and practice in effect at that time. Each plant licensed before promulgation of the final GDC, including OCNGS, was evaluated by the NRC on a plant-specific basis, and was determined to be safe. The Commission determined that imposing the final GDC on these plants would provide little or no safety benefit while requiring an extensive commitment of resources. In other cases, the Commission has imposed new regulations on nuclear facilities based on the substantial increase in safety that would be provided (e.g., environmental qualification of electrical equipment).

Regarding your concern that the Mark I containment system "is of faulty design and there would be a 90 percent failure rate in case of an accident," we note that OCNGS installed a hardened vent on the containment torus air space in the early 1990s to address this concern. In the remote event that the containment will require venting after an accident, the hardened plant vent design allows operators to reduce the pressure in the containment before any core damage occurs, therefore, limiting the release of radioactive material to the environment.

You raised a concern about emergency evacuation. It is important to note that emergency planning is one of many layers of NRC's defense-in-depth approach to protecting public health and safety. The NRC has established requirements to design, operate, and maintain nuclear facilities, such as OCNGS, to minimize the likelihood of a severe accident that would result in a release of radioactive material and necessitate initiation of the emergency plan. However, to ensure readiness for the unlikely occurrence of a significant release, Federal regulations require that comprehensive emergency plans be prepared and periodically exercised to assure that actions can and will be taken to notify and protect the public in the vicinity of a nuclear facility in the event of a radiological emergency. While the NRC has overall responsibility for nuclear safety, the Federal Emergency Management Agency (FEMA) takes the lead in reviewing and assessing offsite planning and response and in assisting State and local governments. Federal evaluation of emergency preparedness is an ongoing process. Commercial nuclear power plants and offsite response authorities are required to regularly conduct exercises to demonstrate their ability to implement their emergency plans. Based on the most recent full-scale emergency exercise for OCNGS conducted in September 2003, both FEMA and NRC determined that the plans in place for OCNGS provide reasonable assurance that the public would be protected. We also recognize that emergency plans must be regularly reviewed and improved.

Emergency planning for commercial nuclear power plants specifies two concentric emergency planning zones (EPZs), centered around a plant. The EPZs are the areas for which planning is needed to assure that prompt and effective actions can be taken to protect the public in the unlikely event of an accident. The first zone, called the plume exposure pathway EPZ, is an area of about 10 miles in radius. The major protective actions planned within this EPZ are evacuation and sheltering in order to protect members of the public from adverse health effects due to inhalation or direct exposure to airborne radioactive material (i.e., the plume) which may be released by the plant during an accident. The second zone, called the ingestion pathway EPZ, is an area of about 50 miles in radius from the plant to deal with potential lower-level, long-term risks primarily due to exposure from ingestion of contaminated food and water. Outside of 10 miles, direct exposure is expected to be sufficiently low that evacuation or sheltering should not be necessary. Exposure to a radioactive plume would not likely result in immediate or serious long-term health effects. Consideration of public sheltering and evacuation in the emergency plans is very conservative and recommended at very low dose levels, well below the levels where health effects would be expected to occur.

Any radioactive release and consequent exposure would be affected by wind direction, wind speed, humidity, distance from the source, and other factors. In general, based on the wind direction, most people in the EPZ will be unaffected by a release of radioactive material. For those affected, plans are in place to minimize their exposure. Emergency plans typically only call for protective measures for a portion of the EPZ (i.e., the area downwind of the plant). The State and local agencies in concert with the licensee would continually reassess the need to expand the protective measures as conditions dictate. Additionally, all licensees are required to have an Evacuation Time Estimate (ETE) for the area surrounding the plant. The ETE is used in the development of the emergency plan, and during the emergency phase of a response by the licensee, local, State, and Federal emergency management agencies. The ETE is factored into the protective measures that the State implements. These ETEs identify potential traffic impediments and allow for development of traffic management plans and the efficient use of

traffic control personnel during an evacuation. It is our understanding that the ETEs for the affected communities around OCNGS are currently being updated using the latest Census data. Additional information on emergency preparedness, potential health effects, and evacuation can be found on the NRC website (http://www.nrc.gov).

The Conference referred to an issue identified during our triennial fire protection inspection conducted in late 2002. One violation of NRC requirements was identified; however, it was of minor safety significance. Therefore, no enforcement action was warranted in accordance with NRC's enforcement policy. AmerGen took prompt and appropriate compensatory actions for this deficiency and planned long-term corrective actions. The inspectors also identified an unresolved item involving manual operator actions required for shutdown of the plant in the event of a fire in certain areas. An issue is considered unresolved when it cannot be determined whether it is acceptable or in compliance with NRC regulations. In this case, there are generic open issues in the industry with regard to the use of manual operator actions for safe shutdown in the event of a fire. This issue was left unresolved pending resolution of these generic issues or re-analysis by AmerGen. The triennial fire protection inspection report (IR 50-219/2002-011) can be found on the NRC website. Additional information on the NRC enforcement policy and fire protection issues can also be found on the NRC website (http://www.nrc.gov).

Regarding the Conference resolution issue concerning strontium-90, we note that the facility operates well within stringent NRC regulations regarding such releases to the environment. Your resolution did not provide any information regarding strontium-90 releases from OCNGS that indicated that these requirements are not being met.

The Conference was concerned that an additional 20 years of OCNGS operation would generate additional high-level waste in the form of spent fuel. The NRC had generically addressed the issue of temporary storage of spent nuclear fuel in the Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants (NUREG-1437) and in Title 10 of the *Code of Federal Regulations*, Section 51.23 (10 CFR 51.23). Specifically, the regulation states that "if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor at its spent fuel storage basin or at either onsite or offsite independent spent fuel storage installations." Absent the introduction of any new and significant information, the conclusions of NUREG-1437 regarding spent nuclear fuel are adopted in the license renewal environmental impact statements. More information regarding spent fuel storage can be found at http://www.nrc.gov/waste/spent-fuel-storage.html.

The Conference stated that the Government Accounting Office has found that the decommissioning fund for the OCNGS is sufficient. The Conference then called for the owner of OCNGS to fund the decommissioning process in its entirety. Please note that according to NRC requirements, AmerGen has submitted a decommissioning cost estimate and the NRC staff is reviewing that estimate to ensure that AmerGen would have accumulated sufficient funding for decommissioning OCNGS at the end of its operating life in accordance with requirements of 10 CFR 50.75. Additional information on decommissioning can be found on the NRC website (http://www.nrc.gov).

Regarding the issues of projected electric generation surplus and alternative energy sources, the NRC does not have jurisdiction over such matters. These issues would involve an economic decisions made by utility companies and electricity generation companies, and would involve meeting requirements and expectations of governmental groups such as the Department of Energy, State Public Service Commissions, and the Environmental Protection Agency.

We appreciate you taking the time to share your opinions and concerns in this matter with the NRC. If you have any further questions regarding these issues, please call the Project Manager for OCNGS, Mr. Peter Tam, at 301-415-1451.

Sincerely,

/RA by RLaufer for/

Cornelius F. Holden, Director
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

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*Concurred by e-mail.
**By e-mail, S. Hoffman of RLEP informed that RLEP does not need to be on concurrence since the paragraph on license renewal had been used in many previous letters.

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