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June 15, 2005
2130-05-20112

Mr. Andy Heyl
Land Use Regulation Program
Bureau of Coastal Management
NJ Department of Environmental Protection
501 East State Street
Trenton, NJ 08625-0439

Subject: Reponse to Request for Necessary Data and Information for a Federal Consistency Determination
File No. 1500-02-0004.4 CDT050001
Project: Oyster Creek Generating Station

Dear Mr. Heyl:

On January 20, 2005, AmerGen Energy Company, LLC (AmerGen) submitted the Federal Coastal Zone Management Act consistency certification in support of the Oyster Creek Generating Station (OCGS) license renewal application to the New Jersey Department of Environmental Protection (NJDEP) Land Use Regulation Program for review. On March 31, 2005, NJDEP Land Use Regulation Program requested necessary data and information to support statements made by AmerGen in the consistency determination. The attached discussions address each of the requests for necessary data.

After your office reviews the attached information, AmerGen requests a letter concurring with the previously transmitted Federal Consistency Certification for Federal Permit and License Applicants. AmerGen will include a copy of this letter and your response in the license renewal application that we submit to the Nuclear Regulatory Commission.

If you have any questions or require any additional information, please contact Bill Maher at (610) 765-5939.

Sincerely,

Pamela B. Cowan
Director - Licensing & Regulatory Affairs
AmerGen Energy Company, LLC

C001

Enclosure: Response to Request for Necessary Data and Information for a Federal Consistency Determination

cc: Karen Tuccillo, NJ BNE
P. S. Tam, USNRC, Senior Project Manager, NRR
File No. 05100

Enclosure

Response to Request for Necessary Data and Information for a Federal Consistency Determination

The program requests the following three (3) items under the enforceable Coastal Zone Management Rules (Rules) at N.J.A.C. 7:7E-1.5(a)1i, 1viii, 6.2 and 8.2.

1. **Submit the data and information and an analysis of that data and information to support the statement on page 4 under the section identified as "Entrainment of fish and shellfish in early life stages" that "Results indicate that the water quality of the Bay, which had been in decline, is recovering and now supports a healthy fish population."**

The Barnegat Bay Estuary Program Characterization Report (BBEP 2001) indicated that the priority problems in the estuary were: (1) water supply and water quality, including the issues of contaminated stormwater and runoff, nutrient loading, pathogen contamination, groundwater contaminations, and future water supply deficits; (2) habitat loss and alteration; (3) fisheries decline; and (4) human activities and competing uses. The Barnegat Bay *Final Comprehensive Conservation and Management Plan* (CCMP), completed in May 2002, laid out an approach for restoring the Barnegat Bay ecosystem that was keyed to these priorities (BBEP 2002). It contains numerous "action plans" for improving water quality, slowing habitat loss, restoring ecological communities, and balancing the needs of competing users. It also contains a Monitoring Program Plan and a framework for tracking progress of the various program initiatives.

The Barnegat Bay Estuary Program and its cooperating agencies have already had a number of successes with regard to water quality. The CCMP singled out degraded storm water management (retention or detention) basins as sources of non-point source pollution and made "retrofit of stormwater basins to increase infiltration and recharge of rainfall runoff" an Action Item. (BBEP 2002, Chapter 5, Table 5-1, Action Item 5.2). Cooperating county, state, and federal agencies led by the Ocean County Planning Board identified three stormwater basins in the County that were no longer functioning as designed and restored them, amending soils as necessary to lower pH, adding compost to encourage growth of soil organisms, seeding the basins with drought-tolerant native grasses, and planting native shrubs and trees (EPA 2003a). This pilot project demonstrated that stormwater basins could be quickly and cost-effectively restored to create living systems that effectively treat stormwater while creating aesthetically pleasing areas that provide wildlife habitat. As more and more stormwater basins are retrofitted, the volume of polluted stormwater entering the Bay will decrease.

Another goal of the BBEP has been the reduction of bacterial contamination in Barnegat Bay. Studies in the 1980s documented only 4 sewage pump-out facilties in all of coastal New Jersey (EPA 2003b). Since that time, long-term collaborative efforts by BBEP partners have resulted in the installation of more than 70 marine sewage pump-out facilities in Barnegat Bay and its tributaries. Funding for the pump-out facilities was provided by the New Jersey Clean Vessel Program, which in turn is funded by the U.S. Fish & Wildlife Service (Wallop-Breaux monies) and the NJDEP. The Clean Vessel Program and other initiatives have reduced the amount of bacteria entering the Bay and improve water quality in many Ocean County swimming areas.

One of the specific goals of the CCMP was the establishment of a "No Discharge Zone" to make the discharge of raw sewage from boats illegal. Section 312 of the Clean Water Act provides for these zones. New Jersey DEP petitioned the EPA in March 2002 to

make Barnegat Bay a No Discharge Zone. The EPA determined that the Bay's 66 stationary pump-out facilities (many at marinas) and three pump-out vessels were adequate to accommodate the 28,000 recreational vessels using the Bay. On June 12, 2003 the EPA announced that Barnegat Bay had adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels and that the Bay had been officially designated a No Discharge Zone (Federal Register, Volume 68, No. 113, June 12, 2003, pg 35214-35215. Available online at http://access.gpo.gove/su_docs/federal/a030612c.html. Accessed 4/22/05).

Another indication of improving water quality in Barnegat Bay is the opening of shellfish beds over the last 4 to 5 years. In late 2000, 5,132 acres in Barnegat Bay previously closed to shellfishing were opened to shellfish harvesting. At that time, State Environmental Protection Commissioner Bob Shinn declared that, "The continued expansion of our shellfish harvesting waters is a clear and reliable yardstick of our progress in improving water quality" (NJDEP News Release dated 11-20-2000). In 2004, another 161 acres of shellfish beds in Barnegat Bay were upgraded, while 85 acres were downgraded, a net increase of 76 acres open to shellfishermen (NJDEP News Release dated 2-20-2004).

The available evidence suggests that Barnegat Bay, once in a state of decline, is beginning to recover. Water quality appears to be improving, benefiting from a number of county, state, and federal initiatives, as well as the work of countless volunteers and several non-profit organizations.

Anecdotal information suggests that many finfish populations are healthy and sport fishing for several species (e.g., striped bass, weakfish, bluefish) in the Bay is excellent (Flyfishing Connection 1999; Fishing and Hunting News 2004; Haughey 2004). One important forage species that is not faring well in Barnegat Bay, the Atlantic menhaden, is in a state of decline up and down the mid-Atlantic and south Atlantic coast. Landings of menhaden in New Jersey increased in the late 1980s and early 1990s, peaking in 1994 at 17,386 metric tons, but have declined steadily since that time, falling to 9,276 metric tons in 2003 (NMFS 2005). The reduction in Atlantic coast menhaden stocks has been attributed to poor recruitment, which may be the result of water quality degradation along the rapidly developing Eastern Seaboard, and to periodic disease outbreaks and mass die-offs in adults, which may also be exacerbated by water quality problems (AMTC 2001; CBEF 2004).

The National Marine Fisheries Service (NMFS) maintains records on recreational landings of important species, including many of the species sought by anglers in Barnegat Bay. These data are organized by region (e.g., north Atlantic, mid-Atlantic, south-Atlantic) and by state, but are not available by watershed or waterbody. Most of the species in question range up and down the mid-Atlantic coast and use Barnegat Bay seasonally; therefore, data for the state of New Jersey are assumed to reflect the state of Barnegat Bay populations.

The NMFS data indicate that striped bass landings in New Jersey reached an all time low in the 1980s, but have exceeded 1,000,000 fish in every year since 1999 (NMFS 2005). In 2004, an estimated 1,760,506 striped bass weighing more than 4.6 million

pounds were landed in New Jersey. These data, along with widely circulated stories of anglers and outdoor writers, indicate that striped bass fishing along the New Jersey shore and in Barnegat Bay is as good today as it was in the 1960s and 1970s, if not better.

Other species sought by anglers in Barnegat Bay include bluefish, weakfish, and summer flounder. Based on New Jersey recreational landings, bluefish numbers in recent years have been consistently high, more than 3,000,000 fish per year over the 2000 through 2004 period (NMFS 2005). In 2004 an estimated 4,151,920 bluefish weighing 3.3 million pounds were landed by N.J. fishermen. In the 1990s, bluefish landings ranged from 1,217,527 (1993) to 3,557,337 (1991) fish per year. These high bluefish landings are consistent with angler and outdoor writer reports of excellent fishing in Barnegat Bay. Based on anecdotal information, fishing for weakfish is excellent in Barnegat Bay. Data on weakfish landings in New Jersey, however, suggest that weakfish numbers peaked over the 1995-1996 period and have generally declined over the 1997-2004 period (NMFS 2005). Summer flounder landings have been high since 1990, ranging from 3 million to 13 million fish per year (NMFS 2005). No clearcut trend in landings are apparent. In 2004, an estimated 8.8 million summer flounder were landed by recreational fishermen (NMFS 2004).

2. **Submit the data and information and an analysis of that data and information to support the statement on page 4 under the section identified as "Entrainment of fish and shellfish in early life stages" that "...the impacts of entrainment during current operations are small..." Please quantify the term "small" in the previous sentence using the data and information to be submitted.**

The following material is from the 1984 monograph *Ecology of Barnegat Bay, New Jersey,* which was an attempt by a diverse group of utility biologists, academics, and resource agency scientists to assemble and synthesize several decades of research on Barnegat Bay's water quality and aquatic communities.

> "Numerous investigations have been performed in Forked River, Oyster Creek, and Barnegat Bay to assess the effects of thermal discharges, impingement, and entrainment of the Oyster Creek Nuclear Generating Station on aquatic communities. Rutgers University scientists studied the bay and adjacent tributaries from 1965 through 1980, and this work produced 9 annual reports, 12 masters theses, and 5 doctoral dissertations. In 1975, Ichthyological Associates, a consultant for the Jersey Central Power and Light Company, initiated investigations of plankton and fish populations and impacts of station operation on these populations. Some of these investigations were continued to 1984..." (page 327, *Ecology of Barnegat Bay, New Jersey*)
>
> "A five-volume 316(a) and (b) Demonstration report prepared by the Jersey Central Power & Light Company for the New Jersey Department of Environmental Protection...summarized the information and conclusions drawn by these investigations...Conclusions of the report indicate that, **while impacts on aquatic communities have occurred because of the cooling system of the station, these impacts generally are localized to Oyster Creek."** (emphasis added) (page 327, *Ecology of Barnegat Bay, New Jersey*)
>
> "...some fishes and macroinvertebrates are affected by impingement on intake screens of the station....Population surveys of fishes and macroinvertebrates indicate that the standing crop lost through impingement was less than 10 percent for species in central Barnegat Bay. **No evidence exists that losses of organisms through impingement on intake screens have had a discernible effect on invertebrate and fish communities in Barnegat Bay."** (emphasis added) (page 331, *Ecology of Barnegat Bay, New Jersey*)
>
> "To mitigate future impingement effects, the conventional traveling screens (0.95 cm mesh) on the intake structure of the station were replaced starting in 1979 through 1983 with Ristroph screens composed of a continuously rotating traveling design modified with a low pressure spray wash and fish recovery and

> "Effects of operation of the Oyster Creek Nuclear Station on aquatic communities appear to be restricted to the discharge canal and Oyster Creek. The species composition, abundance, and distribution of phytoplankton, zooplankton, benthic invertebrates, and fishes in these two regions (areas) are substantially different than Barnegat Bay. **Fluctuations within Bay communities appear to be due to the natural population dynamics of constituent populations and not due to operation of the station. Aquatic communities in Barnegat Bay parallel those of other mid-Atlantic estuaries which are unaffected by operations of electric generating stations.**" (emphasis added) (page 331, *Ecology of Barnegat Bay, New Jersey*)

As noted above, extensive data on impingement and entrainment were submitted to NJDEP as part of a Section 316 Demonstration. These data were evaluated by NJDEP and its contractor, Versar. Versar (1988) used three independent population models to assess the impact of impingement and entrainment losses at OCGS: the Equivalent Adult Model, the Production Foregone Model, and the Spawning/Nursery Area of Consequences Model. In each case, Versar/NJDEP concluded that impacts, although non-trivial, were not sufficient to de-stabilize populations. Having evaluated the data as submitted by Jersey Central Power & Light/General Public Utilities Nuclear (GPUN) and having conducted its own analysis employing different assumptions and analytical methods, NJDEP concluded that:

> "...the Department has determined that the avoidance of heated areas, impingement and entrainment impacts of the Station do not present an unacceptable, substantial long-term population and/or ecosystem impacts and, in conjunction with limitations generally reflecting current operations, will assure the protection and propagation of a balanced indigenous population." (OCGS NJPDES Fact Sheet, June 30, 1994, page 71)

The Barnegat Bay Estuary Program, a non-profit environmental organization, reviewed impingement and entrainment studies conducted at OCGS in the 1970s and 1980s in its (2001) *Barnegat Bay Characterization Report.* The author(s) of the BBEP report note that;

> "despite the large numbers of eggs, larvae, and small life forms of Barnegat Bay organisms lost via in-plant passage at the OCNGS, these losses have not resulted in detectable impacts on biotic communities in Barnegat Bay. Effects of operation of the OCNGS on aquatic communities appear to be restricted to the discharge canal and Oyster Creek."

For its certification to the U. S. Nuclear Regulatory Commission (NRC), AmerGen will use the NRC definition of "small" in characterizing environmental impacts of OCGS license renewal 10 CFR 51 Subpart A, appendix B, Table B-1, Footnote 3). Page 3 of the certification provides the NRC definition of "small," which states in part the following:

> Small – For the issue, environmental effects are not detectable or are so small that they will neither destabilize nor noticeably alter any important attribute of the resource.

The NRC definition is qualitative, and AmerGen has not quantified the term "small." It is AmerGen's understanding, however, that regardless of whether the impact is small, at issue is whether the impact is consistent with enforceable provisions of the state's federally approved coastal zone management program. As AmerGen indicated in the certification text, New Jersey regulates OCGS entrainment impacts through its New Jersey Pollutant Discharge Elimination System (NJPDES) program.

To the best of AmerGen's knowledge, OCGS is in compliance with its NJPDES permit. Regulatory and permitting requirements regarding environmental impact control may change during the remainder of the OCGS current NRC license term or during the license renewal term. However, AmerGen is committed to complying with changes to enforceable provisions of the state's federally approved coastal zone management program, and the state has the authority to enforce compliance. These factors form the basis for the AmerGen consistency certification.

3. Submit the data and information and an analysis of that data and information to support the statement on page 4 under the section identified as "Impingement of fish and shellfish" that "...the impacts of impingement during current operations are small..." Please quantify the term "small" in the previous sentence using the data and information to be submitted.

As noted in the response to Question 2, studies of impingement and entrainment conducted by Jersey Central Power & Light and GPUN and subjected to considerable scrutiny (including re-analysis by NJDEP's third party reviewer, Versar) indicate that impingement and entrainment losses, which are, for some species, relatively high, do not "present unacceptable, substantial, long-term population or ecosystem impacts." Versar scientists determined that the impact of impingement at OCGS was so small that "the losses due to impingement at the Oyster Creek Generating Station were of no consequence to the [Section 316(b) compliance determination" (Summers et al. 1989, pg. VI-6). Species with relatively high losses (e.g., opossum shrimp, sand shrimp, bay anchovy) are common forage species whose abundance tends to fluctuate widely between years depending on environmental conditions and intensity of predation. As noted in the Fact Sheet for the 1994 OCGS NJDPDES permit (page 70), "the effects of these losses on the Barnegat Bay food web are small."

As discussed earlier, the Barnegat Bay Estuary Program, a non-profit environmental organization, reviewed impingement and entrainment studies conducted at OCGS in the 1970s and 1980s in its (2001) *Barnegat Bay Characterization Report.* The BBEP author(s) conclude that:

> ..."no evidence exists that losses of organisms through impingement on the intake screens have had a discernible effect on invertebrate and fish communities in the bay."

Most organisms impinged in these studies were either invertebrates (e.g., blue crab, sand shrimp, grass shrimp) or small, schooling (forage) fish (e.g., bay anchovy, Atlantic menhaden, Atlantic silverside).

See the response to Question 2 for a discussion of the NRC definition of "small" and AmerGen's use of the term. To the best of AmerGen's knowledge, OCGS is in compliance with its NJPDES permit. Regulatory and permitting requirements regarding environmental impact control may change during the remainder of the OCGS current NRC license term or during the license renewal term. However, AmerGen is committed to complying with changes to enforceable provisions of the state's federally approved coastal zone management program, and the state has the authority to enforce compliance. These factors form the basis for the AmerGen consistency certification.

4. **Submit the data and information and an analysis of that data and information to support the statement on page 4 under the section identified as "Impingement of fish and shellfish" that the Ristroph traveling screens currently being used reduces the number of fish impinged and impingement mortality.**

Ristroph traveling screens, which employ water-filled buckets to collect impinged fish, have been installed at power plants from coast to coast. The impinged fish are spilled into a trough or holding tank and then returned to the source waterbody by way of a pipe or sluiceway. In its *Technical Development Document for the Final 316(b) Phase I new Facilities Rule* (EPA 821-R-01-036, November 1, 2001. Available on line at http://www.epa.gov/waterscience/316b/technical/technicaldd.html/. Accessed 4/22/05), the EPA describes Ristroph-type screens as a "proven technology" that has been shown to have "good potential for alleviating impingement mortality" (CWIS Technology Fact Sheets, pages A-6 and A-7).

Facilities that have tested or employed Ristroph-type screens in the east include Surry Power Station (Virginia), Indian Point Nuclear Generating Station (New York), Kintigh (aka Somerset) Generating Station in New Jersey, Bowline Point Generating Station (New York), Roseton Generating Station (New York), Danskammer Generating Station (New York), Salem Generating Station (New Jersey), and Calvert Cliffs Nuclear Power Plant (Maryland). In its *Technical Development Document for the Final 316(b) Phase II Existing Facilities Rule* (EPA 821-R-04-007, February 12, 2004. Available on line at http://www.epa.gov/ost/316b/devdoc/final.htm. Accessed 4/22/05), the EPA discusses the relative effectiveness of modified traveling screens of the Ristroph type at 10 U.S. power plants and concludes (p. 4-9) that:

> "Studies conducted at steam electric power generating facilities over the last three decades have built a sizable record demonstrating the performance potential for modified traveling screens that include some form of fish return. Comprehensive studies...have shown that modified screens can achieve an increase in the post-impingement survival of aquatic organisms that come under the influence of cooling water intake structures. Hardier species, as might be expected, have exhibited survival rates as high as 100 percent. More fragile species, which are typically smaller and more numerous in the source waterbody, understandably have lower survival rates."

In this context, "hardier species" would include many of the recreationally-important fish and shellfish impinged at OCGS: blue crab, striped bass, white perch, bluefish, croaker, spot, and flounder. More fragile species would include the various small, schooling species that serve as forage for sport fish in Barnegat Bay, with bay anchovy, and Atlantic menhaden being the most important.

Both of the previously-mentioned EPA reports present data that demonstrate the effectiveness of Ristroph screens in reducing impingement mortality.

As noted previously in Response 2, experimental testing in the mid-1980s indicated that total fish mortality at the OCGS cooling water intake structure was reduced from 48% to

24% after Ristroph screens were installed (page 331, *Ecology of Barnegat Bay, New Jersey*). In the case of some species, however, impingement survival was improved dramatically. Studies by EA Engineering, Science, and Technology (1986; page 4-11) showed that the installation of Ristroph traveling screens at OCGS produced a three-fold increase in the total survival of impinged bay anchovy when compared to previous studies of impingement on the conventional traveling screens.

5. **Submit the data and information and an analysis of that data and information to support the statement on page 5 under the section identified as "Heat shock" that "...impacts of heat shock during current operations are small..." Please quantify the term "small" in the previous sentence using the data and information to be submitted.**

NJDEP hired Versar, Inc. in 1987 to review the Oyster Creek 316 Demonstration (composed of 1974, 1978, and 1986 submittals), evaluate potential impacts of OCGS operation on aquatic communities, and recommend appropriate limitations on cooling water withdrawals and discharge temperatures to meet the intent of Section 316 of the Clean Water Act. With regard to thermal impacts, the 1989 Versar report noted that OCGS effluents were not in compliance with state surface water quality standards (N.J.A.C. 7:9B-1.1 et seq.) but "the potential adverse effects of the thermal discharges on the Barnegat Bay ecosystem were determined and they were localized and had little or no regional significance" (Summer et al. 1989, pg IV-65).

Based on the 316 Demonstration and the Versar study, NJDEP determined that thermal discharges (specifically the avoidance of heated areas) from OCGS did not jeopardize aquatic populations and that water quality-based effluent limitations would be more stringent than necessary to assure the protection and propagation of the balanced indigenous population (community):

> "The Department is therefore, granting GPUN's request for a variance pursuant to Section 316(a) and is proposing thermal limitations which will allow the continued operation of the existing once-through cooling system." [OCGS NJPDES Fact Sheet, June 30, 1994, page 71]

These included limitations on effluent temperature (daily maximum of 106°F with 4 circulating water pumps operating), temperature rise across the condenser (daily maximum of 23°F with 4 pumps operating), and heat addition (daily maximum of 5,420 MBTU/hr with 4 pumps operating) (OCGS 1994 NJPDES permit, Outfall Number DSN 001).

Oyster Creek uses dilution pumps to moderate water temperatures in its discharge; in accordance with NPDES permit requirements. Procedures are in place to ensure that a dilution pump is activated when the temperature in Oyster Creek reaches 87°F, as measured four feet below the surface at the Route 9 bridge. If, two hours later, the temperature still exceeds 87°F, a second dilution pump is put into operation. So long as the plant is operated according to plant operating procedures, there is little chance of heat shock in the plant's discharge canal and even less chance of heat shock further downstream, east of the Route 9 bridge. There have been some infrequent instances of fish kills in the plant's discharge canal caused by high temperatures which occurred because dilution pumps were deactivated when temperatures in the discharge reached the (87°F) setpoint established by NJDEP. In addition to paying a substantial fine as a result of a 2002 heat-shock fish kill, AmerGen committed to improved training and increased vigilance where operation of the dilution pumps was concerned. After a lengthy discussion of potential impacts (OCGS NJPDES Fact Sheet, June 30, 1994, page 71), the permit writers conclude that:

> "...the Department has determined that the avoidance of heated areas, impingement and entrainment impacts of the Station do not present an unacceptable, substantial long-term population and/or ecosystem impacts and, in conjunction with limitations generally reflecting current operations, will assure the protection and propagation of a balanced indigenous population."

This language, crafted by NJDEP, is consistent with AmerGen's assertion that impacts of heat shock are small, using the criteria employed by the NRC at 10 CFR 51, Appendix B, Table B-1. These criteria state that "environmental effects are so minor that they will neither de-stabilize or noticeably alter any important attribute of the resource."

See the response to Question 2 for a discussion of the NRC definition of "small" and AmerGen's use of the term. To the best of AmerGen's knowledge, OCGS is in compliance with its NJPDES permit. Regulatory and permitting requirements regarding environmental impact control may change during the remainder of the OCGS current NRC license term or during the license renewal term. However, AmerGen is committed to complying with changes to enforceable provisions of the state's federally approved coastal zone management program, and the state has the authority to enforce compliance. These factors form the basis for the AmerGen consistency certification.

The Program requests the following items under the enforceable Coastal Zone Management Rules (Rules) at N.J.A.C. 7:7E-1.5(a)1iv, 1viii, 3.41 and 6.2

6. **Please submit a copy of the results of the NRC's requested re-initiation of Endangered Species Act Section 7 consultation with the National Marine Fisheries Service (NMFS) discussed on page 5 and 7.**

As of this date, NMFS has not completed its Biological Opinion, therefore, results are not available. The NRC sent its Biological Assessment (BA) to NMFS on March 29, 2005. A copy of the BA was sent to Mr. Kent Tosch, Chief, New Jersey Department of Environmental Protection, Bureau of Nuclear Engineering. The NRC ADAMS document accession number is ML050900162.

NMFS has, however, recommended that, until the Biological Opinion gets issued, the NRC continue to implement the requirements identified in the July 21, 2001 Opinion and the August 29, 2001 amended ITS. Attachment 6-1 is a copy of this recommendation.

The Program requests the following items under the enforceable Coastal Zone Management Rules (Rules) at N.J.A.C. 7:7E-1.5(a)1iv, 1viii, 3.41 and 6.2

7. **Submit the data and information and analysis of that data and information to support the statements on page 6 under the section identified as "Electromagnetic fields", acute effects (electric shock).**

Attachment 7-1 to this document is the calculation package for the electric shock analysis that was prepared as part of the license renewal application. It includes input data, methodology, and copies of the results of the ACDC analysis, the computer model used to calculate the shock potential.

8. **On page 28, the submittal advises "OCGS uses hazardous substances as defined by N.J.S.A.58:10-23.11b-k, including substances that are corrosive, ignitable, flammable or radioactive." Please submit a listing of those substances and any available data showing the extent and concentrations of their dispersal in to the environment. If any of the substances are being released in amounts lethal to organisms, please list those substances and the organisms potentially impacted and any data or information on the generating station's impact on those organisms.**

In accordance with the Superfund Amendments and Reauthorization Act, AmerGen reports OCGS hazardous chemical information to the NJDEP, Office of Pollution Prevention and Right to Know. The report for 2004 lists bromotrifluoromethan (fire extinguishing compound), diesel fuel, sodium hypochlorite (water treatment additive), propane, nitrogen liquid, gasoline, lead and sulfuric acid (in batteries), dichlorofluoroethane (air conditioning system fluid), and motor oil. Attachment 8-1 to this document is a copy of the cover letter for the 2004 report. OCGS toxic releases are below the SARA Title III thresholds that would trigger release inventory reporting requirements.

OCGS is a small-quantity generator of hazardous waste and reports waste types and quantities to the NJDEP. OCGS is also subject to NJDEP inspection. Attachment 8-2 of this document is a copy of the cover letter for the recent report that identifies the following as OCGS hazardous waste types: ignitable, corrosive, reactive, various heavy metals, tetrachloroethylene, spent halogenated and non-halogenated solvents, and other discarded commercial chemical products.

The 1994 NJPDES permit required an effluent characterization study. AmerGen (then GPUN) completed the study in 1998 and submitted the results to NJDEP on June 3, 1999. The measure of effluent toxicity that NJDEP and AmerGen rely on for current OCGS discharges is the annual effluent acute toxicity testing required by the NJPDES permit (Attachment 8-3). Results of these tests support the conclusion that releases of chemicals at OCGS do not pose a problem to aquatic organisms. In 2004, the survival of the test organisms met or exceeded that of the control organisms.

The U. S. Nuclear Regulatory Commission (NRC) regulates OCGS use of radioactive materials. AmerGen annually reports OCGS radioactive releases (Annual Radioactive Effluent Release Report) and measurements of radioactivity in the OCGS environment (Annual Radiological Environmental Operating Report). Attachments 8-4 and 8-5 are copies of the cover letters for recent reports. Concurrent with transmittal to NRC, AmerGen provides copies to Kent Tosch, Chief, Bureau of Nuclear Engineering, NJDEP.

The Barnegat Bay Estuary Program, a non-profit environmental organization, evaluated the impacts of the operation of OCGS on the Barnegat Bay Estuary (BBEP 2001). According to the report, the concentration of radionuclides released from OCGS "...is too low to be hazardous to aquatic organisms or humans who consume contaminated seafood from the bay."

OCGS use of corrosive, ignitable, flammable, and other hazardous substances is regulated by the NJDEP. The NRC regulates radioactive substances. To the best of AmerGen's knowledge, OCGS releases no substances in amounts lethal to organisms.

The Program requests the following items under the enforceable Coastal Zone Management Rules (Rules) at N.J.A.C. 7:7E-1.5(a)1i, 3.5 and 6.2

9. Submit the data and information, including but not limited to the species and number of fish killed during cold weather shutdowns, and an analysis of that data and information to support the statements on page 25 under the section identified as "Prime Fishing Areas" [sic] that supports the statement that "The thermal plume entering the Bay from Oyster Creek has temperatures a few degrees Fahrenheit above the ambient temperature of the Bay and does not interfere with any fish migrations." In addition, please include the date of and ambient bay temperature and plume temperatures at the time of each shutdown event.

The BBEP Characterization Report (2002) discusses OCGS's circulating water system and heated discharge. It also discusses the station's dilution pumps, which are designed to temper discharge temperatures and reduce impacts to aquatic biota in the receiving waters. The Report notes that the station's thermal plume is confined to roughly a 1.6-kilometer (one mile) radius about the mouth of Oyster Creek. On calm days, the plume "fans out" from the mouth of the creek; strong winds from the north or south cause the plume to be compressed against the shoreline. At times of peak operation, water temperatures are 3 to 5°C above ambient at the mouth of Oyster Creek (Chizmadia et al. 1984; BBEP 2002).

The Fact Sheet to the 1994 NJPDES permit contains excerpts of a 1989 Versar review of the OCGS 316(a) studies and quotes the Versar report's findings relative to the thermal plume and avoidance studies conducted by GPUN. Quoting the Fact Sheet:

> "Although Versar found that best methods reasonably available to assess "avoidance effects" were not used because avoidance studies were not conducted with opossum shrimp and sand shrimp, Versar concluded that 'avoidance effects' were not a serious problem. Specifically, Versar stated that:
>
> the overall exclusionary effect of the thermal plume was localized and small. The exclusion of fish was primarily confined to the Discharge Canal which comprised about 2-4% of the total volume of Barnegat Bay. The avoidance temperatures used in the 316 Demonstration were the lowest of several available estimates and should be protective of the resource. Finally, the entire thermal plume in August is small relative to the total area of Barnegat Bay (6-10%)."

Table 1 lists fish kills at OCGS that were believed to be related to cold shock or cold-weather shutdowns of the station. The last of these fish kills was in November 2001.

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Table 1. Known fish kills at OCGS associated with cold-weather shutdowns.

DATE	NUMBER	SPECIES	SIZE RANGE (mm)	PROBABLE CAUSE	INTAKE TEMPERATURE °C (°F)
1/29/72	100,000-1,000,000	Atlantic menhaden	76-127	Thermal Shock	1.7 (35)
1/5-1/8/73	18,000-1,200,000	Atlantic menhaden	102-356	•	5.6 (42)
	20	bay anchovy	---	•	
2/16-2/21/73	Several Thousand	Atlantic menhaden	---	•	4.4 (40)
1/11 -1/15/74	9,900-180,000	Atlantic menhaden	102-356	Thermal Shock	1.7 (35)
	100-3,600	bluefish	228-356	•	
10/9/74	200	crevalle jack	---	•	13.9 (57)
2/4/75	100	Atlantic menhaden	---	•	3.3 (38)
	50-100	bluefish	---	•	
11/24/75	7-100	crevalle jack	---	•	8.9 (48)
12/29/75	15-100	Atlantic menhaden	100-250	Thermal Shock	2.8 (37)
	3-200	bluefish	90-170	•	
10/21/77	120-200	blue runner		Thermal Shock	12.2 (54)
		crevalle jack			

Table 1. Known fish kills at OCGS associated with cold-weather shutdowns.

DATE	NUMBER	SPECIES	SIZE RANGE (mm)	PROBABLE CAUSE	INTAKE TEMPERATURE °C (°F)
1/15/79	682	Atlantic menhaden	165-225	Thermal Shock	0 (32)
12/17/79	Unknown	Unknown	Unknown	Unknown	1.83 (35.3)
12/20/79	12	bluefish	---	Unknown	3 (37.4)
	1	weakfish	---		
	1	sea robin	---		
	1	black sea bass	---		
	1	menhaden	---		
1/5/80	5483	menhaden	240*	Thermal Shock	2.1 (35.8)
	952	bluefish	295*		
	43	weakfish	501*		
	544	spot	120*		
	5	scup	200*		
	1	butterfish	---		
	1	kingfish	240		
11/22/80	3,638 (actual count)	blue runner	206.1*	Thermal Shock	5.7 (42.1)
	17,402 (Petersen estimate)	crevalle jack	173.0*		
	1,038	bluefish	266.5*		
	17	smooth dogfish	600.9*		

Table 1. Known fish kills at OCGS associated with cold-weather shutdowns.

DATE	NUMBER	SPECIES	SIZE RANGE (mm)	PROBABLE CAUSE	INTAKE TEMPERATURE °C (°F)
	3	ladyfish	292.7*		
	2	Northern kingfish			
	1	gray snapper	118.0		
	1	American eel			
	1	mojarra	221.0		
12/10/81	13	bluefish	---	Thermal Shock	3.6 (38.5)
	12	Atlantic menhaden			
	5	spot			
	3	butterfish			
	2	scup			
	2	jack			
	1	striped mullet			
12/10/82	5,000 (estimate)	bluefish	274-476	Thermal Shock	8.9 (48.0)
	2,655 (estimate)	crevalle jack	110-204		
	80	blue runner	171-218		
	28	Atlantic neddlefish	250-661		

Table 1. Known fish kills at OCGS associated with cold-weather shutdowns.

DATE	NUMBER	SPECIES	SIZE RANGE (mm)	PROBABLE CAUSE	INTAKE TEMPERATURE °C (°F)
	9	scup	205-247		
	1	ladyfish	410		
	1	Northern kingfish	185		
2/2/85	16	Atlantic menhaden	150-275	Thermal Shock	2.2 (36.0)
	1	blueback herring	---		
12/15/85	52	weakfish	---	Thermal Shock	4.3 (39.7)
	1	black sea bass			
	1	spot			
	1	white perch			
12/8/89	2,641	Atlantic menhaden	152-305	Thermal Shock	1.1 (34)
	166	bluefish	216-521		
	5	weakfish	495-533		
	3	spotted seatrout	464-597		
	7	northern kingfish	203-356		
	1	spot	165		
	500-1,000	crevalle jack			
	4	red drum			
	2	American eel			

Table 1. Known fish kills at OCGS associated with cold-weather shutdowns.

DATE	NUMBER	SPECIES	SIZE RANGE (mm)	PROBABLE CAUSE	INTAKE TEMPERATURE °C (°F)
	1	spiny dogfish			
2/15 -2/16/91	1,114	bluefish	220-910	Thermal Shock	2.4-5.8 (36.4-42.4)
	20	spot	120-140		
	11	spotted seatrout	480-525		
	3	smooth dogfish	250-300		
	1	northern kingfish	300		
	1	weakfish			
	1	Atlantic herring			
12/18/95	6	bluefish	308-457	Thermal Shock	1.7 (35)
	5	black drum	210-290		
	3	spotted sea trout	435-560		
	3	smooth dogfish	600-668		
	1	weakfish	430		
	1	scup	210		

Table 1. Known fish kills at OCGS associated with cold-weather shutdowns.

DATE	NUMBER	SPECIES	SIZE RANGE (mm)	PROBABLE CAUSE	INTAKE TEMPERATURE °C (°F)
12/27-12/28/95	620	striped bass	296-758	Thermal Shock	-1.2 (29.9)
	229	white perch	228-361		
	5	American eel	640-714		
	1	gizzard shad	365		
03/20/98	30	bluefish	575-756	Thermal Shock	6.1-7.4 (43-45.5)
01/21/00 – 02/01/00	2981	Striped bass	338-860	Thermal Shock	-1.5 – 0.5 (29.22-32.94)
	305	White perch	285-299		
	117	Black drum	185-525		
	34	Bluefish	360-648		
	9	Striped mullet	285-524		
	8	Gizzard shad	280-305		
	7	American eel	510-660		
	5	Mummichog	35-52		
	4	Tautog	225-342		
	2	Atlantic herring	252-258		
	2	Spotted seatrout	433-502		

Table 1. Known fish kills at OCGS associated with cold-weather shutdowns.

DATE	NUMBER	SPECIES	SIZE RANGE (mm)	PROBABLE CAUSE	INTAKE TEMPERATURE °C (°F)
	2	Weakfish	560-608		
	2	Winter flounder	232-295		
	1	Cunner	60		
	1	Red drum	446		
	1	Smooth dogfish	580		
	66	Unidentified	Unknown		
11/11/01-11/14/01	1306	Crevalle jack / Blue runner	128-214	Thermal Shock	8.99 - 13.09 (48.19-55.56)
	78	Lookdown	117-155		
	11	Bluefish	328-384		
	7	Bluespotted cornetfish	340		
	2	Greater amberjack	470-495		
	1	Southern stingray	310		
	1	Spanish mackerel	324		
	1	Spotfin butterflyfish	83		

10. Submit data and information and an analysis of that data and information to support the statement on page 25 under the section identified as "Prime Fishing Areas" [sic] with regard to the impingement of alewife or river herring (*Alosa pseudoharengus*), blueback herring (*A. aestivalis*), American shad (*A. sapidissima*), striped bass (*Morone saxatilis*), Atlantic sturgeon (*Acipenser oxyrhynchus*), shortnose sturgeon (*A. brevirostrum*), and American eel (*Anguilla rostrata*) that "OCGS is in compliance with the rules protecting finfish migrations."

AmerGen has not conducted any recent studies on the impingement of fish at OCGS. However, the 316(b) determination and the issuance of an NJPDES permit by the state of New Jersey are implicit concurrence by the state that the operation of OCGS is in compliance with the rules protecting finfish migrations. See Question 2 for a more complete discussion of the impingement of organisms at OCGS.

AmerGen also notes that the NRC, in performing its generic review of impacts of nuclear plant operation and license renewal, characterized plant impact on finfish migrations as small (NRC 1996).

11. The submittal does not discuss public access to the waterfront. Please identify any public access to the waterfront provided on property owned by AmerGen. If no public access to the waterfront is available, can public access be provided to Oyster Creek, Forked River, or Barnegat Bay through the Finninger Farm? If AmerGen's response is negative, please detail why public access to the waterfront can not be provided.

AmerGen recognizes that the CZMA generally contemplates consideration be given to a wide range of uses of the coastal zone - but it does not mandate that every approved use of the coastal zone allow for multipurpose uses and widespread access at every location. Sometimes multipurpose uses can coexist, but in other circumstances, only one activity may be conducted in a particular location. When dealing with a major pre-existing project, other uses of that portion of the coastal zone are limited, especially for the very special situation of a pre-existing nuclear power plant. Finninger Farm is currently the state-approved location for placement of dredged spoils for the plant's intake structure, and intake and discharge canals. The New Jersey Bureau of Nuclear Engineering (NJBNE) maintains a radiation monitor on the Finninger Farm. NJBNE should be consulted about what additional uses could be made at this location.

As stated in AmerGen's Federal Consistency Certification For Federal Permit And License Applicants, dated January 20, 2005, Enclosure page 2, AmerGen has not identified any refurbishment activities necessary to allow operation for an additional 20 years, and have identified no significant environmental impacts from programs and activities for managing the effects of aging.

Further, in AmerGen's certification, Enclosure page 23, in consideration of Coastal Permit Program Rules (NJAC 7:7), AmerGen states that they are not performing any activities (construction within the coastal area, dredging, excavation, or deposition of material, and erection of any structure in any coastal wetlands; and filling or dredging, or construction in certain upland areas adjacent to tidal wetlands) as a result of license renewal, has no plans to perform such activities as a result of license renewal, and is not seeking a coastal permit for such activities.

Finally, in AmerGen's certification, Enclosure page 32, under Subchapter 8 – Resource Rules, AmerGen states that, since this subchapter applies to development, which AmerGen will not undertake during the license renewal term, the requirements are not relevant. The rationale for AmerGen's statement come from NJAC 7:7E8-1(a), where it states, Purpose and scope, in addition to satisfying the location and use rules, <u>a proposed development</u> must satisfy the requirements of this subchapter. This subchapter contains the standards the Department utilizes to analyze <u>the proposed development</u> in terms of its effects on various resources of the built and natural environment of the coastal zone, both at <u>the proposed site</u> as well as in its surrounding region (emphasis added).

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Attachment 6-1

Oyster Creek Nuclear Generating Station, Formal Section 7 Consultation Initiation

Rec'd 6-10 05 MB

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2298

JUN - 3 2005

Pas-Tsin Kuo, Program Director
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Re: Oyster Creek Nuclear Generating Station, Formal Section 7 Consultation Initiation

Dear Mr. Kuo:

This correspondence acknowledges the receipt of your March 29, 2005 letter regarding the reinitiation of formal consultation pursuant to section 7(a)(2) of the Endangered Species Act (ESA) of 1973, as amended, for continued operation of the Oyster Creek Nuclear Generating Station (OCNGS). Previous section 7 consultation was completed with the issuance of a biological opinion (Opinion) on July 18, 2001. The 2001 Opinion along with the revised incidental take statement (ITS) issued on August 29, 2001 authorized the annual take of five loggerhead, four Kemp's ridley, and two green sea turtles during the annual operation of OCNGS. During 2004, eight Kemp's ridley sea turtles occurred at OCNGS, exceeding the authorized ITS. Due to the number of Kemp's ridley sea turtle takes, the Nuclear Regulatory Commission (NRC) has requested reinitiation of formal consultation.

The Biological Assessment dated March 2005, enclosed with your letter, has provided information for this consultation. Upon review of the submitted information, it is NOAA's National Marine Fisheries Services' (NMFS) determination that all of the information required to initiate formal consultation has been received.

NMFS will prepare an Opinion analyzing whether or not the continued use of the OCNGS is likely to jeopardize listed sea turtles. Your March 29, 2005 letter was received by NMFS Northeast Region, Protected Resources Division on April 28, 2005, which will serve as the commencement date of the formal consultation process. The ESA and the section 7 regulations require that formal consultation be concluded within 90 calendar days of initiation, and the biological opinion be delivered to the action agency within 45 days after the conclusion of formal consultation. As such, we expect to provide you with our biological opinion no later than September 10, 2005. As a reminder, the NRC must not make any irreversible or irretrievable commitments of resources that would prevent NMFS from proposing or implementing any reasonable and prudent alternatives to avoid jeopardizing sea turtles.

Until the final biological opinion is completed and signed, NMFS recommends that the Nuclear Regulatory Commission continue to implement the requirements identified in the July 21, 2001 Opinion and the August 29, 2001 amended ITS.

If you have any questions concerning these comments or the section 7 consultation requirements, please contact Sara McNulty of my staff at (978) 281-9300 x6520.

Sincerely,

Mary Colligan
Assistant Regional Administrator
for Protected Resources

cc: Malcolm Browne, AmerGen
Collins, GCNE
Williams, GCNE
Riportella, F/NER-SH
Seida, F/NER
Nash, NRC

File code: NRC Oyster Creek, remitiation letter, 2005

Attachment 7-1

Calculation Package for Oyster Creek Transmission Line Induced Current Analysis

Calculation Package for Oyster Creek Transmission Line Induced Current Analysis

July 8, 2004

Prepared for:

Exelon Nuclear
Lacey Township, New Jersey

Prepared by:

Steven J. Connor
Tetra Tech NUS
Aiken, South Carolina

I. Problem Statement

These calculations were performed in support of *Applicant's Environmental Report, Operating License Renewal Stage, Oyster Creek Nuclear Generating Station*, specifically section 4.13 on induced current. NRC regulations and guidance for preparing license renewal environmental reports requires that licensees demonstrate that their transmission lines comply with the induced shock provisions of the National Electrical Safety Code (NESC) in Part 2, Rules 232C1c and 232D3c. NESC requires that vertical clearances for transmission lines exceeding 98-kilovolts be sufficient to ensure that the induced current due to electrostatic effects is not greater than 5 milliamperes for the largest anticipated truck, vehicle, or equipment parked beneath the lines.

The Oyster Creek transmission lines consist of two 230 kV lines that are hung on double-circuit towers in a vertical configuration. The lines run 11.1 miles from the Oyster Creek 230 kV substation to the Manitou Substation.

II. Model Input Data

The computer code ACDCLINE by the Electric Power Research Institute was used for the calculations. The inputs necessary for running ACDCLINE were obtained from the following drawings provided by First Energy (2004).

- Plan and Profile drawings D-48825, Manitou-Oyster Creek 230 kV Transmission Line, sheets 1 - 12.
- Standard 230 kV Transmission Line Sag & Tension Charts A-35801 through A-35805 and A-35928 through A-35932.
- 230 kV Double Circuit Transmission Line Suspension Tower Type KR, Drawing T-11070

In general, the plan and profile drawings for each line were used to identify two types of locations: (1) at all paved roads (2) any location with clearance lower than the least road clearance, regardless of terrain or structures beneath. The candidate locations are cataloged in Table 1 along with the data used for selecting locations to analyze.

Table 1. Candidate analysis locations

Location	Description	Clearance (ft)
27+68	Proposed 3rd Avenue	48
30+07	Proposed 2nd Avenue	48
32+48	Proposed 1st Avenue	60
51+05	Intersection of Hill Street and proposed 5th Avenue	35
54+33	Proposed Mill Street	52
57+26	Proposed Shepherd Street	73
61+10	Intersection of Proposed 6th Avenue and Emanuel	39
64+55	Proposed Johnson Street	52
68+00	Proposed Ingard Street	72
71+40	Proposed Factory Street	49
74+78	Dover Road	51
122+69	Proposed Milton Avenue	47
193+63	Pinewald-Keswick Road	51
350+14	Proposed Alpine Street	54
352+63	Proposed Chesler Street	58
355+13	Proposed Clifton Street	54
357+63	Proposed Elwood Street	54
360+13	Proposed Center Street	59
362+63	Proposed Hoyt Street	52
365+13	Proposed Devon Street	40
367+86	Proposed River Street	49
431+17	Proposed Clearview Street	61
433+91	Proposed Fairview Street	39
436+63	Proposed Ocean Street	40
439+34	Proposed State Street	64
442+50	Proposed Cedar Avenue	46
444+77	Proposed Grove Street	37
518+38	Estimated parking position on Garden State Parkway - southbound	42
523+67	Estimated parking position on Garden State Parkway - northbound	50
102+00	Edge of swamp land – no road	32
177+00	Medium woods – no road	29
187+00	Medium woods – no road	29

Examination of the data in Table 1 resulted in selection of the locations identified in Table 2 for analysis. These locations should yield the bounding case among those identified in Table 1. Additional location-specific data needed for analysis are also provided.

Table 2. Data for locations selected for analysis.

Location	Description	Clearance (ft)	Span (ft)	Sag[1] (ft)	Angle[2]	Conductor Height[3] (ft)	Tower Type
51+05	Intersection of Hill Street and proposed 5th Avenue	35	1100	@167° 44 @120° 41	45°	79'	KR-KR
444+77	Proposed Grove Street	37	1050	@167° 42 @120° 38	30°	78'	KR-KR
177+00	Medium woods – no road	29	1000	@167° 36 @120° 34	NA	67	KR-KR

1. Plan and Profile drawings indicate 167°F sag. Sag at 120°F determined from sag charts.
2. Angle of transmission line to road. Due to an error in ACDCLINE, the value entered into the code is the complementary angle.
3. Weighted average height of lowest conductor attachment to towers, above road or location of interest. See Attachment A for calculation of these values.

The Type KR towers were the only ones used at the locations of interest. Data on these towers are provided in Table 3. The conductors are arranged in a vertical configuration with one circuit occupying each side of the tower phased A-B-C, top-to-bottom on both sides.

Table 3. Type KR Tower Dimensions

Phase	Horizontal Distance from Centerline (ft)	Connection Height Above Lowest Conductor (ft)
Left static	-10.5	63
Left A	-18	42
Left B	-20.5	21
Left C	-18	0
Right static	+10.5	63
Right A	+18	42
Right B	+20.5	21
Right C	+18	0

As identified on the Plan and Profile drawings, the conductors are 1590 MCM 45/7 ACSR Lapwing. The static wires are 7#6 AW. ACDCLINE selected the parameters for these conductors and static wires from its library.

III. Methods

In most cases the elevation of the two towers of a span of interest were different, and the elevation of the location of interest was different than the nearest tower base. Because AC/DCLINE does not accommodate non-level geometries, a surrogate geometry was constructed that uses weighted average height for conductor attachments above the location of interest. The surrogate geometry had the two towers at the same elevation. This surrogate geometry would not have identical impact with that of the actual geometry, but it should be close. Calculations of weighted average heights for the surrogate geometry are found in Attachment A.

The code was first run to give electric field with no coupled objects to find the transverse location with the highest electric field strength. The code was then rerun with a long box coupled object with dimensions of the largest tractor-trailer truck that is expected to be on the roads, 12 by 8 by 65 feet. The 12-foot height is a weighted average of the cab and the trailer. At the non-road location, a combine of dimensions 11.5 by 7.5 by 30 feet was used. The truck or combine was placed at the longitudinal location of interest and at the transverse location with the highest electric field strength.

IV. Results

Analytical results for each analysis is provided in the table below to three significant digits, as provided in the ACDCLINE printouts in Attachment B. All values are in compliance with the NESC limit, which is presented as one significant digit, 5 milliamperes.

Survey Location	Description	Induced Current (millamps)
51+05	Intersection of Hill Street and proposed 5th Avenue	2.76
444+77	Proposed Grove Street	2.75
177+00	Medium woods – no road	2.10

References

First Energy, 2004. Letter from Barry Sensenig, First Energy to William D. Maher, Exelon, with attachments, First Energy, Reading, Pennsylvania, June 1.

Attachment A
Calculation of Weighted Average Heights

Oyster Creek Induced Current Analysis
Weighted Average Conductor Heights

Location 51+05		Location 444+77		Location 175+00	
Tower 93	feet	Tower 134	feet	Tower 106	feet
conductor elevation	138	conductor elevation	114	conductor elevation	132
distance to road	555	distance to road	477	distance to road	500
Tower 94		Tower 135		Tower 107	
conductor elevation	140	conductor elevation	122	conductor elevation	130
distance to road	545	distance to road	573	distance to road	500
road elevation	60	road elevation	40	road elevation	64
Span	1100	Span	1050	Span	1000
Weighted average elevation	139	Weighted average elevation	118	Weighted average elevation	131
Weighted average height above road - lowest conductor	79	Weighted average height above road	78	Weighted average height above road	67
Weighted average height above road - middle conductor	100	Weighted average height above road - middle conductor	99	Weighted average height above road - middle conductor	88
Weighted average height above road - highest conductor	121	Weighted average height above road - highest conductor	120	Weighted average height above road - highest conductor	109
Weighted average height above road - static wire	142	Weighted average height above road - static wire	141	Weighted average height above road - static wire	130

Attachment B
ACDCLINE Printouts

Results of AC/DCLINE program EFION (EPRI/HVTRC 7-93) for:

ELECTRIC FIELD & IONS WITHOUT SHIELDING OBJECTS

Configuration file name: C:\TLW30\ACDCLINE\DATA\ACT93
Date: 7/ 8/2004 Time: 15:33

T93 Intersection of Hill Street and 5th Avenue at 51+05

BUNDLE INFORMATION

BNDL #	CIRC #	VOLTAGE VOLTAGE (kV)	VOLTAGE ANGLE (DEG)	CURRENT LOAD (A)	CURRENT ANGLE (DEG)	# OF COND	BUNDLE COORDINATES X (feet)	Y (feet)	SAG (feet)	PH
1	1	230.0	0.	500.	0.	1	-18.0	121.0	41.0	A
2	1	230.0	240.	500.	240.	1	-20.5	100.0	41.0	B
3	1	230.0	120.	500.	120.	1	-18.0	79.0	41.0	C
6	2	230.0	0.	500.	0.	1	18.0	121.0	41.0	A
7	3	230.0	240.	500.	0.	1	20.5	100.0	41.0	B
8	4	230.0	120.	1000.	120.	1	18.0	79.0	41.0	C
4	1	.0	0.	0.	0.	1	-10.5	142.0	35.0	GND
5	2	.0	0.	0.	0.	1	10.5	142.0	35.0	GND

MINIMUM GROUND CLEARANCE = 38.00 feet
POWER SYSTEM FREQUENCY = 60. Hz
SOIL RESISTIVITY = 100. ohm meter

SUBCONDUCTOR INFORMATION - REGULAR BUNDLES

BNDL #	CONDUCTOR NAME	DIAMETER (inch)	SPACING (inch)	DC RESIST (ohm/mile)	AC RESIST (ohm/mile)	AC REACT (ohm/mile)
1	LAPWING	1.500	18.000	.0580	.0620	.3640
2	LAPWING	1.500	18.000	.0580	.0620	.3640
3	LAPWING	1.500	18.000	.0580	.0620	.3640
6	LAPWING	1.500	18.000	.0580	.0620	.3640
7	LAPWING	1.500	18.000	.0580	.0620	.3640
8	LAPWING	1.500	18.000	.0580	.0620	.3640
4	7#6AW	.490	18.000	1.5070	1.5360	.7210
5	7#6AW	.490	18.000	1.5070	1.5360	.7210

```
*************************************
*                                   *
*     AC  ELECTRIC FIELD PROFILE    *
*    at   3.28 feet above ground    *
*                                   *
* longitudinal  distance: 545.00 feet *
*                                   *
*************************************
```

LATERAL DISTANCE (feet)	(meters)	MAXIMUM FIELD (kV/m)	MINOR/MAJOR ELLIPSE AXES (ratio)	VERTICAL (kV/m)	HORIZONTAL (kV/m)	SPACE POTENTIAL (kV)
-50.0	-15.24	.861	.035	.848	.155	.853
-45.0	-13.72	1.115	.030	1.100	.182	1.105
-40.0	-12.19	1.407	.025	1.392	.204	1.396
-35.0	-10.67	1.725	.020	1.712	.215	1.712
-30.0	-9.14	2.049	.016	2.038	.209	2.034
-25.0	-7.62	2.346	.011	2.339	.181	2.331
-20.0	-6.10	2.588	.006	2.584	.137	2.573
-15.0	-4.57	2.755	.002	2.754	.087	2.743
-10.0	-3.05	2.850	.000	2.850	.045	2.841
-5.0	-1.52	2.892	.000	2.892	.017	2.887
.0	.00	2.903	.000	2.903	.000	2.899
5.0	1.52	2.892	.000	2.892	.017	2.887
10.0	3.05	2.850	.000	2.850	.045	2.841
15.0	4.57	2.755	.002	2.754	.087	2.743
20.0	6.10	2.588	.006	2.584	.137	2.573
25.0	7.62	2.346	.011	2.339	.181	2.331
30.0	9.14	2.049	.016	2.038	.209	2.034
35.0	10.67	1.725	.020	1.712	.215	1.712
40.0	12.19	1.407	.025	1.392	.204	1.396
45.0	13.72	1.115	.030	1.100	.182	1.105
50.0	15.24	.861	.035	.848	.155	.853
100.0	30.48	.090	.102	.090	.013	.089
150.0	45.72	.118	.009	.118	.002	.118
100.0	30.48	.090	.102	.090	.013	.089
150.0	45.72	.118	.009	.118	.002	.118

```
-------------------------------------------------------------
 Results of AC/DCLINE program COUPLE (EPRI/HVTRC  7-93) for:
-------------------------------------------------------------
     COUPLING to OBJECTS & SHIELDING by OBJECTS

Configuration file name: C:\TLW30\ACDCLINE\DATA\ACT93
Date:  7/ 8/2004   Time: 15:33
```

```
DATE:  7/ 8/2004 TIME: 15:33
*****************************************************
*                                                   *
*           ELECTRICAL COUPLING TO OBJECTS          *
*     INCLUDING EFFECTS OF  6 SHIELDING OBJECTS     *
*                                                   *
*                  OBJECT TYPE =  2                 *
*              LONG  BOX (LONG VEHICLE)             *
*                                                   *
*****************************************************
```

EQUIVALENT COUPLED OBJECT AREA = 3255.98 ft**2
CALCULATED CAPACITANCE TO GROUND = 2500. pF
CALCULATED RESISTANCE TO GROUND = .72 kohms
(1% RESISTANCE VALUE MEASURED FOR VEHICLES WITH THE SAME CAPACITANCE,
IN DIFFERENT WEATHER CONDITIONS AND ON DIFFERENT PAVEMENTS - NORTHEAST USA)

LATERAL AND LONGITUDINAL DISTANCE TO OBJECT CENTER = .00 545.00 feet

AC SHORT CIRCUIT CURRENT = 2.76 mA

THEORETICAL MAXIMUM AC VOLTAGE TO GROUND = 2925. V
1% AC VOLTAGE TO GROUND = 1644. V
50% AC VOLTAGE TO GROUND = 243. V

Results of AC/DCLINE program EFION (EPRI/HVTRC 7-93) for:

ELECTRIC FIELD & IONS WITHOUT SHIELDING OBJECTS

Configuration file name: C:\TLW30\ACDCLINE\DATA\ACT134
Date: 7/ 8/2004 Time: 15:37

T134 Grove Street at 444+77

BUNDLE INFORMATION

BNDL #	CIRC #	VOLTAGE VOLTAGE (kV)	VOLTAGE ANGLE (DEG)	CURRENT LOAD (A)	CURRENT ANGLE (DEG)	# OF COND	BUNDLE COORDINATES X (feet)	Y (feet)	SAG (feet)	PH
1	1	230.0	0.	500.	0.	1	-18.0	120.0	38.0	A
2	1	230.0	240.	500.	240.	1	-20.5	99.0	38.0	B
3	1	230.0	120.	500.	120.	1	-18.0	78.0	38.0	C
6	2	230.0	0.	500.	0.	1	18.0	120.0	38.0	A
7	3	230.0	240.	500.	0.	1	20.5	99.0	38.0	B
8	4	230.0	120.	1000.	120.	1	18.0	78.0	38.0	C
4	1	.0	0.	0.	0.	1	-10.5	141.0	32.0	GND
5	2	.0	0.	0.	0.	1	10.5	141.0	32.0	GND

MINIMUM GROUND CLEARANCE = 40.00 feet
POWER SYSTEM FREQUENCY = 60. Hz
SOIL RESISTIVITY = 100. ohm meter

SUBCONDUCTOR INFORMATION - REGULAR BUNDLES

BNDL #	CONDUCTOR NAME	DIAMETER (inch)	SPACING (inch)	DC RESIST (ohm/mile)	AC RESIST (ohm/mile)	AC REACT (ohm/mile)
1	LAPWING	1.500	18.000	.0580	.0620	.3640
2	LAPWING	1.500	18.000	.0580	.0620	.3640
3	LAPWING	1.500	18.000	.0580	.0620	.3640
6	LAPWING	1.500	18.000	.0580	.0620	.3640
7	LAPWING	1.500	18.000	.0580	.0620	.3640
8	LAPWING	1.500	18.000	.0580	.0620	.3640
4	7#6AW	.490	18.000	1.5070	1.5360	.7210
5	7#6AW	.490	18.000	1.5070	1.5360	.7210

```
*************************************
*                                   *
*     AC  ELECTRIC FIELD PROFILE    *
*    at   3.28 feet above ground    *
*                                   *
* longitudinal  distance: 477.00 feet *
*                                   *
*************************************
```

LATERAL DISTANCE (feet)	(meters)	MAXIMUM FIELD (kV/m)	MINOR/MAJOR ELLIPSE AXES (ratio)	VERTICAL (kV/m)	HORIZONTAL (kV/m)	SPACE POTENTIAL (kV)
-50.0	-15.24	.866	.030	.855	.144	.859
-45.0	-13.72	1.101	.026	1.089	.166	1.093
-40.0	-12.19	1.366	.022	1.354	.184	1.356
-35.0	-10.67	1.651	.018	1.640	.191	1.640
-30.0	-9.14	1.937	.014	1.928	.184	1.925
-25.0	-7.62	2.200	.010	2.194	.161	2.187
-20.0	-6.10	2.416	.006	2.413	.125	2.404
-15.0	-4.57	2.572	.003	2.571	.084	2.561
-10.0	-3.05	2.668	.001	2.667	.047	2.660
-5.0	-1.52	2.715	.000	2.715	.020	2.710
.0	.00	2.729	.000	2.729	.000	2.724
5.0	1.52	2.715	.000	2.715	.020	2.710
10.0	3.05	2.668	.001	2.667	.047	2.660
15.0	4.57	2.572	.003	2.571	.084	2.561
20.0	6.10	2.416	.006	2.413	.125	2.404
25.0	7.62	2.200	.010	2.194	.161	2.187
30.0	9.14	1.937	.014	1.928	.184	1.925
35.0	10.67	1.651	.018	1.640	.191	1.640
40.0	12.19	1.366	.022	1.354	.184	1.356
45.0	13.72	1.101	.026	1.089	.166	1.093
50.0	15.24	.866	.030	.855	.144	.859
100.0	30.48	.071	.145	.070	.014	.069
150.0	45.72	.110	.010	.110	.002	.110
100.0	30.48	.071	.145	.070	.014	.069
150.0	45.72	.110	.010	.110	.002	.110

```
-------------------------------------------------------------
 Results of AC/DCLINE program COUPLE (EPRI/HVTRC  7-93) for:
-------------------------------------------------------------
     COUPLING to OBJECTS & SHIELDING by OBJECTS

Configuration file name: C:\TLW30\ACDCLINE\DATA\ACT134
Date:  7/ 8/2004   Time: 15:37
```

```
DATE:  7/ 8/2004 TIME: 15:37
*****************************************************
*                                                   *
*           ELECTRICAL COUPLING TO OBJECTS          *
*     INCLUDING EFFECTS OF  6 SHIELDING OBJECTS     *
*                                                   *
*                  OBJECT TYPE =  2                 *
*              LONG  BOX (LONG VEHICLE)             *
*                                                   *
*****************************************************
```

EQUIVALENT COUPLED OBJECT AREA = 3255.98 ft**2
CALCULATED CAPACITANCE TO GROUND = 2500. pF
CALCULATED RESISTANCE TO GROUND = .72 kohms
(1% RESISTANCE VALUE MEASURED FOR VEHICLES WITH THE SAME CAPACITANCE,
IN DIFFERENT WEATHER CONDITIONS AND ON DIFFERENT PAVEMENTS - NORTHEAST USA)

LATERAL AND LONGITUDINAL DISTANCE TO OBJECT CENTER = .00 477.00 feet

AC SHORT CIRCUIT CURRENT = 2.75 mA

THEORETICAL MAXIMUM AC VOLTAGE TO GROUND = 2915. V
1% AC VOLTAGE TO GROUND = 1638. V
50% AC VOLTAGE TO GROUND = 242. V

Results of AC/DCLINE program EFION (EPRI/HVTRC 7-93) for:

ELECTRIC FIELD & IONS WITHOUT SHIELDING OBJECTS

Configuration file name: C:\TLW30\ACDCLINE\DATA\ACT106
Date: 7/ 8/2004 Time: 15:42

T106 least clearance, no road - 175+00

BUNDLE INFORMATION

BNDL #	CIRC #	VOLTAGE VOLTAGE (kV)	VOLTAGE ANGLE (DEG)	CURRENT LOAD (A)	CURRENT ANGLE (DEG)	# OF COND	BUNDLE COORDINATES X (feet)	Y (feet)	SAG (feet)	PH
1	1	230.0	0.	500.	0.	1	-18.0	109.0	36.0	A
2	1	230.0	240.	500.	240.	1	-20.5	88.0	36.0	B
3	1	230.0	120.	500.	120.	1	-18.0	67.0	36.0	C
6	2	230.0	0.	500.	0.	1	18.0	109.0	36.0	A
7	3	230.0	240.	500.	0.	1	20.5	88.0	36.0	B
8	4	230.0	120.	1000.	120.	1	18.0	67.0	36.0	C
4	1	.0	0.	0.	0.	1	-10.5	130.0	29.0	GND
5	2	.0	0.	0.	0.	1	10.5	130.0	29.0	GND

MINIMUM GROUND CLEARANCE = 31.00 feet
POWER SYSTEM FREQUENCY = 60. Hz
SOIL RESISTIVITY = 100. ohm meter

SUBCONDUCTOR INFORMATION - REGULAR BUNDLES

BNDL #	CONDUCTOR NAME	DIAMETER (inch)	SPACING (inch)	DC RESIST (ohm/mile)	AC RESIST (ohm/mile)	AC REACT (ohm/mile)
1	LAPWING	1.500	18.000	.0580	.0620	.3640
2	LAPWING	1.500	18.000	.0580	.0620	.3640
3	LAPWING	1.500	18.000	.0580	.0620	.3640
6	LAPWING	1.500	18.000	.0580	.0620	.3640
7	LAPWING	1.500	18.000	.0580	.0620	.3640
8	LAPWING	1.500	18.000	.0580	.0620	.3640
4	7#6AW	.490	18.000	1.5070	1.5360	.7210
5	7#6AW	.490	18.000	1.5070	1.5360	.7210

```
*************************************
*                                   *
*     AC  ELECTRIC FIELD PROFILE    *
*    at   3.28 feet above ground    *
*                                   *
* longitudinal  distance: 500.00 feet *
*                                   *
*************************************
```

LATERAL DISTANCE (feet)	(meters)	MAXIMUM FIELD (kV/m)	MINOR/MAJOR ELLIPSE AXES (ratio)	VERTICAL (kV/m)	HORIZONTAL (kV/m)	SPACE POTENTIAL (kV)
-50.0	-15.24	.807	.060	.786	.188	.795
-45.0	-13.72	1.122	.048	1.099	.237	1.108
-40.0	-12.19	1.514	.039	1.488	.285	1.496
-35.0	-10.67	1.972	.031	1.947	.320	1.950
-30.0	-9.14	2.462	.023	2.441	.322	2.436
-25.0	-7.62	2.921	.014	2.908	.277	2.893
-20.0	-6.10	3.274	.007	3.269	.186	3.246
-15.0	-4.57	3.470	.000	3.469	.083	3.448
-10.0	-3.05	3.525	.003	3.525	.015	3.513
-5.0	-1.52	3.507	.003	3.507	.017	3.505
.0	.00	3.490	.000	3.490	.000	3.493
5.0	1.52	3.507	.003	3.507	.017	3.505
10.0	3.05	3.525	.003	3.525	.015	3.513
15.0	4.57	3.470	.000	3.469	.083	3.448
20.0	6.10	3.274	.007	3.269	.186	3.246
25.0	7.62	2.921	.014	2.908	.277	2.893
30.0	9.14	2.462	.023	2.441	.322	2.436
35.0	10.67	1.972	.031	1.947	.320	1.950
40.0	12.19	1.514	.039	1.488	.285	1.496
45.0	13.72	1.122	.048	1.099	.237	1.108
50.0	15.24	.807	.060	.786	.188	.795
100.0	30.48	.158	.050	.158	.009	.157
150.0	45.72	.140	.008	.139	.003	.139
100.0	30.48	.158	.050	.158	.009	.157
150.0	45.72	.140	.008	.139	.003	.139

```
-------------------------------------------------------------
 Results of AC/DCLINE program COUPLE (EPRI/HVTRC  7-93) for:
-------------------------------------------------------------
     COUPLING to OBJECTS & SHIELDING by OBJECTS

Configuration file name: C:\TLW30\ACDCLINE\DATA\ACT106
Date:  7/ 8/2004   Time: 15:42
```

```
DATE:  7/ 8/2004 TIME: 15:42
*****************************************************
*                                                   *
*           ELECTRICAL COUPLING TO OBJECTS          *
*     INCLUDING EFFECTS OF  6 SHIELDING OBJECTS     *
*                                                   *
*                  OBJECT TYPE =  2                 *
*              LONG  BOX (LONG VEHICLE)             *
*                                                   *
*****************************************************
```

EQUIVALENT COUPLED OBJECT AREA = 1864.91 ft**2
CALCULATED CAPACITANCE TO GROUND = 1000. pF
CALCULATED RESISTANCE TO GROUND = 1.80 kohms
(1% RESISTANCE VALUE MEASURED FOR VEHICLES WITH THE SAME CAPACITANCE,
IN DIFFERENT WEATHER CONDITIONS AND ON DIFFERENT PAVEMENTS - NORTHEAST USA)

LATERAL AND LONGITUDINAL DISTANCE TO OBJECT CENTER = 10.00 500.00 feet

AC SHORT CIRCUIT CURRENT = 2.10 mA

THEORETICAL MAXIMUM AC VOLTAGE TO GROUND = 5582. V
1% AC VOLTAGE TO GROUND = 3137. V
50% AC VOLTAGE TO GROUND = 463. V

Attachment 8-1

SARA Right to Know 2004 Survey Cover Letter

AmerGen
An Exelon Company

AmerGen Energy Company, LLC
Oyster Creek
US Route 9 South, PO. Box 388
Forked River, NJ 08731-0388

www.exeloncorp.com

February 28, 2005
2120-052-2889

New Jersey Department of Environmental Protection
Office of Pollution Prevention and Right to Know
P.O. Box 405
Trenton, NJ 08625-0405

Dear Sir or Madam:

Subject: OYSTER CREEK GENERATING STATION (OCGS)
2004 SARA TITLE III, SECTION 312 REPORT

In accordance with the reporting requirements of SARA Title III, Section 312, attached is the following information for hazardous chemicals used by AmerGen at the OCGS.

Section 312 - Community Right-to-Know Survey for 2004

If there are any questions regarding this submittal, please contact me at (609) 971-4029.

Sincerely,

Douglas R Weigle
Environmental Specialist
Chemistry/Radwaste

Attachment

cc: Chief William A. Nally
Lacey Township Office of Emergency Management
P.O. Box 184
Forked River, NJ 08731

cc: Ocean County Health Department
Community Right-to-Know Coordinator
P.O. Box 2191
Toms River, NJ 08754

Chief, Forked River Fire Department
P.O. Box 32
Forked River, NJ 08731

Lacey Police Department
108 West Lacey Road
Forked River, NJ 08731

Attachment 8-2

Small Quantity Hazardous Waste Generator Annual Report Cover Letter

AmerGen Energy Company, LLC
Oyster Creek
US Route 9 South, P.O. Box 388
Forked River, NJ 08731-0388

www.exeloncorp.com

AmerGen
An Exelon Company

File # 05009
2130-05-20076

April 12, 2005

2120-052-2896

State of New Jersey
Department of Environmental Protection
Division of County Environmental and Waste Enforcement Programs
Bureau of Hazardous Waste Compliance and Enforcement
300 Horizon Center
P.O. Box 407
Trenton, NJ 08625-0407

Attention: Ms. Aneeta Sakheja

Dear Ms Sakheja:

Attached is completed USEPA Form 8700-13 for the year 2003, pertaining to the Oyster Creek Generating Station in Lacey Township, Ocean County, NJ. This form is being forwarded to you in response to the request made during the conference call that occurred on March 22, between yourself and Theresa Pagodin of the DEP and the following members of the station environmental staff – Lynn Newton, Douglas Weigle and Zigmund Karpa. We appreciate your time and attention to resolving the matter regarding the station status as a Small Quantity Generator (SQG) of hazardous waste.

During the conference call it was agreed that upon receipt of this USEPA Form 8700-13, that the station would receive a written confirmation that the Notice of Violation, dated January 21, 2005, would be rescinded. Please send this correspondence to Mr. Douglas R Weigle of our Chemistry Department. If you have any further questions, please do not hesitate to contact Mr. Weigle at (609) 971-4029.

Thank you for your assistance.

Very truly yours,

James J Randich

Mr. James J. Randich
Plant Manager - Oyster Creek

cc. Theresa Pagodin
Kim Moyer

Attachment 8-3

Effluent Toxicity Annual Test Cover Letter.

GPU NUCLEAR

GPU Nuclear, Inc.
U.S. Route #9 South
Post Office Box 388
Forked River, NJ 08731-0388
Tel 609-971-4000

6530-992-2373
JUN 0 9 1999

Mr. Jeffrey Thein
New Jersey Department of Environmental Protection
Bureau of Point Source Permitting Region I
PO Box 029
401 East State Street, 2nd Floor East Wing
Trenton, NJ 08625-0029

Dear Mr. Thein:

Subject: GPU Nuclear Inc. (GPUN)
Oyster Creek Nuclear Generating Station (OCNGS)
NJPDES DSW Permit No. NJ0005550
Effluent Characterization Study Final Report

GPU Nuclear, Inc. hereby submits the Effluent Characterization Study Final Report in fulfillment of Additional Requirement 2 of Part IV-B/C of the subject permit. This report summarizes the data collected during the Effluent Characterization Study by each outfall/sampling point for each parameter analyzed. We will be happy to meet with the NJDEP, at your convenience, if you would care to discuss any aspect of the report.

If you have any questions, please contact Malcolm Browne (609) 971-4124, or Jay Vouglitois (609) 971-4021 of our Environmental Affairs Department.

Very truly yours,

Michael B Roche

Michael B. Roche
Vice President & Director, OC

MBR/MEB/ew

AmerGen

AmerGen Energy Company, LLC
Oyster Creek
US Route 9 South, P.O. Box 388
Forked River, NJ 08731-0388
www.exeloncorp.com

An Exelon Company

2120-042-2866

DEC 10 2004

NJ Department of Environmental Protection
Division of Water Quality
Bureau of Standard Permitting
P.O. Box 029
Trenton, NJ 08625-0029
Attn: Industrial Biomonitoring Program

Dear Sir or Madam:

Subject: AMERGEN ENERGY COMPANY, LLC
OYSTER CREEK GENERATING STATION
NJPDES DSW PERMIT NO. NJ 0005550
BIOMONITORING REPORT- 2004

In accordance with Part IV-B/C of the above subject permit, please find enclosed two copies of the following forms for discharge points DSN001, DSN002, and DSN004 for 2004:

- NJPDES Biomonitoring Report Form - Acute Bioassays (Annual)

If you have any questions concerning this report, please do not hesitate to contact Mr. Malcolm Browne of our Chemistry/Radwaste Department at (609) 971-4124.

Very truly yours,

Michael J. Massaro

Michael J. Massaro
Plant Manager
Oyster Creek

MJM/MEB/dm
Attachment

cc: Geoffrey Pritchard
NJ Dept. of Environmental Protection
Central Bureau of Water Compliance & Enforcement
P.O. Box 407
Trenton, NJ 08625-0407

Attachment 8-4

2003 Annual Radioactive Effluent Release Report Cover Letter

AmerGen℠
An Exelon Company

AmerGen Energy Company, LLC
Oyster Creek
US Route 9 South, P.O. Box 388
Forked River, NJ 08731-0388

www.exeloncorp.com

Technical Specification 6.9.1.e

April 29, 2004
2130-04-20096
2120-042-2823

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Oyster Creek Generating Station
Facility Operating License No. DPR-16
NRC Docket No. 50-219

Subject: Annual Radiological Environmental Operating Report - 2003

Enclosed is a copy of the Annual Radiological Environmental Operating Report for calendar year 2003, for the Oyster Creek Generating Station. This submittal is made in accordance with Oyster Creek Generating Station Technical Specification 6.9.1.e.

If any further information or assistance is needed, please contact David Fawcett at 609-971-4284.

Sincerely,

C. N. Swenson
Vice President, Oyster Creek Generating Station

CNS/DW/DIF
Enclosure

cc: H. J. Miller, Administrator, USNRC Region I
P. S. Tam, USNRC Senior Project Manager, Oyster Creek
R. J. Summers, USNRC Senior Resident Inspector, Oyster Creek
File No. 04004

IE25

Attachment 8-5

2004 Annual Radiological Environmental Operating Report Cover Letter

AmerGen
An Exelon Company

AmerGen Energy Company, LLC
Oyster Creek
US Route 9 South, P.O. Box 388
Forked River, NJ 08731-0388

www.exeloncorp.com

Technical Specification 6.9.1.e

April 29, 2005
2130-05-20082
2120-052-2904

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Oyster Creek Generating Station
Facility Operating License No. DPR-16
NRC Docket No. 50-219

Subject: Annual Radiological Environmental Operating Report - 2004

Enclosed is a copy of the Annual Radiological Environmental Operating Report for calendar year 2004, for the Oyster Creek Generating Station. This submittal is made in accordance with Oyster Creek Generating Station Technical Specification 6.9.1.e.

If any further information or assistance is needed, please contact David Fawcett at 609-971-4284.

Sincerely,

C. N. Swenson
Vice President, Oyster Creek Generating Station

CNS/DRW/DIF
Enclosure

cc: S. J. Colllins, Administrator, USNRC Region I
P. S. Tam, USNRC Senior Project Manager, Oyster Creek
R. J. Summers, USNRC Senior Resident Inspector, Oyster Creek
File No. 05004

JE25