UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
55 Great Republic Drive
Gloucester, MA 01930-2276

June 3, 2011

Bo Pham, Chief
Project Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation
US Nuclear Regulatory Commission
Washington, DC 20555-0001

Attn: Leslie Perkins

Re: Essential Fish Habitat (EFH) Assessment for License Renewal of the Hope Creek Nuclear Generating Station and Salem Nuclear Generating Station, Units 1 and 2

Dear Mr. Pham:

We have reviewed the U. S. Nuclear Regulatory Commission's (NRC) essential fish habitat (EFH) assessment concerning an application submitted by Public Service Enterprise Group (PSEG) Nuclear, LLC for the renewal of the operating licenses for Hope Creek Nuclear Generating Station (Hope Creek) and Salem Nuclear Generating Station, Units 1 and 2 (Salem). The EFH assessment was prepared under the provisions of Section 305 (b) (2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA).

The NRC has concluded that impacts to fish and shellfish from entrainment, impingement, and heat shock at Salem and Hope Creek would not warrant additional mitigation beyond those presently undertaken by the PSEG Estuary Enhancement Program. The NMFS has identified power plants as a potential threat to critical to habitats of living marine resources because of a plant's use of coastal waters for cooling and discharge of heated water back into the marine environment. Coastal power plants operating with once-through cooling systems, may affect NOAA trust resource habitat by discharging heated water effluent, discharge of effluents with harmful chemicals, and by the potential impingement and entrainment of species. Impingement occurs when fish and other organisms are trapped against screens where water is drawn into a facility's cooling system. The injuries often prove fatal within a few days, often due to gill damage. Young or small fish are most susceptible to being killed by impingement. Entrainment happens when organisms are drawn into the facility. Once inside of the facility, entrained organisms are exposed to lethal pressure and high temperatures. Egg, larvae and juvenile stages of fish are most susceptible to death caused by these conditions.

The potential adverse individual and cumulative effects that operations of Hope Creek and Salem plants could impose on NOAA trust resources warranted an expanded consultation as described in the EFH regulations at 50 CFR 600.920 (f). This expanded consultation process with NRC allows the maximum opportunity for NOAA Fisheries to work together to review the action's impacts on EFH, and to develop EFH consultation recommendations. Under the expanded consultation procedures, the NMFS is allowed 60 calendar days to review, comment, and respond to the information that has been provided to us.

General Comments

Salem and Hope Creek are located along the Delaware River in an area of Salem County, New Jersey known as Artificial Island. The facilities are located on the lower region portion of the river, at the southern end of Artificial Island on the New Jersey (eastern) bank of the Delaware River at river mile (RM) 50 (River kilometer (RK) 80) and RM 51 (RK 82), respectively. The region is designated by the Delaware River Basin Commission as the area of the river subject to tidal influence, between the Delaware Bay and Trenton, NJ (DRBC, 2008). The lower, tidally inundated region of the river and the Delaware Bay together form the Estuary, and is part of EPA's National Estuary Program (EPA, 2010).

The Delaware Estuary is the primary source of the cooling water for both Salem and Hope Creek and receives their effluents. The plants use different systems for condenser cooling water and service water (PSEG, 2009a; 2009b). Salem is a two-unit (Units 1 and 2) plant each operating open-cycle cooling water using once-through cooling water system (CWS), while Hope Creek operates a closed-cycle cooling system with a natural draft cooling tower. Once-through cooling systems withdraw water from a waterbody, send it through the cooling system one time, and then discharge the heated water back to the waterbody. A closed-cycle cooling system recycles or re-circulates cooling water within its facility, and thus withdraws only 2% to 5% of the water of that required for once-through cooling. Closed cycle cooling of water is accomplished by cooling towers.

Salem's service water system (SWS) intake is located approximately 400 ft (122 m) north of the CWS intake. The SWS intake structure is equipped with trash racks, traveling screens, and filters to remove debris and biota from the intake water stream, but does not have a modified Ristroph type travelling screen or fish return system. Backwash water is returned to the estuary.

Both the Salem CWS and SWS discharge water back to the Delaware Estuary through a single return that serves both systems and is located between the Salem CWS and SWS intakes. Cooling water from Salem is discharged through six adjacent pipes 7 ft in diameter and spaced 15 ft apart on center that merge into three pipes 10 ft in diameter (PSEG, 2006c). The discharge piping extends approximately 500 ft from the shore (PSEG, 1999). The discharge pipes are buried for most of their length until they discharge horizontally into the water of the estuary at a depth at mean tidal level of about 31 ft. The discharge is approximately perpendicular to the prevailing currents. The EPA estimates that 2.1 billion fish, crabs, and shrimp are killed annually by impingement and entrainment at the Salem plant (USEPA, 2010).

Hope Creek is a one-unit station which uses a closed-cycle circulating water system for condenser cooling that consists of a single natural draft cooling tower and associated withdrawal, circulation, and discharge facilities. The Hope Creek cooling tower is a 512-foot high single counter-flow, hyperbolic, natural draft cooling tower (PSEG, 2008a).

Like Salem, Hope Creek withdraws brackish water from the Delaware River from a single intake structure, to supply an SWS, which cools auxiliary and other heat exchange systems (PSEG, 2009b). The Hope Creek SWS intake is located on the shore of the river and is equipped with pumps and associated equipment (trash racks, traveling screens, and a fish-return system). Water is drawn into the SWS through trash racks and passes through the traveling screens. After passing through the traveling screens, the estuary water enters the service water pumps. The cooling tower blow-down and other facility effluents are discharged to the estuary through an underwater conduit located 1,500 ft upstream of the Hope Creek SWS intake. The Hope Creek discharge pipe extends 10 ft offshore and is situated at mean tide level.

The discharge from Hope Creek is also regulated under the terms of NJPDES permit number NJ0025411 (NJDEP, 2001a). The withdrawal of Delaware River water for the Hope Creek CWS and SWS systems is regulated under the terms of Hope Creek NJPDES Permit No. NJ0025411 and is also authorized by the

Delaware River Bay Commission. Although it requires measurement and reporting, the NJPDES permit does not specify limits on the total withdrawal volume of Delaware River water for Hope Creek operations (NJDEP, 2003).

Fish and Wildlife Coordination Act

The inland and open waters of the Delaware River, Bay and estuary support an abundance of ecologically sensitive aquatic resources. They are present in the estuary at various life stages in a variety of hydrologic habitats and in a range of salinities including oceanic, tidally-influenced water, and tidal freshwater areas. Since the Delaware Estuary provides an important migratory pathway and critical spawning, nursery and forage habitat for many anadromous fishes, and an ecological connection to the coastal/ocean environment, impacts to the ecosystem can have consequences to the abundance of commercial and recreational fisheries within the watershed, on the continental shelf, and along the Mid-Atlantic coast, which is a significant concern for the NMFS.

The estuary provides many different habitats, each supporting ecologically diverse faunal communities that serve as forage and are prey species for many federally-managed NOAA trust resources, including specific resource species monitored under PSEG's Estuary Enhancement Program (EEP). In addition, the NJDEP has sampled the Delaware River in the project area since 1980. The species of concern comprise American eel (*Anguilla rostrata*), Atlantic croaker (*Micropogonias undulatus*), hickory shad (*Alosa mediocris*), spot (*Leiostomus xanthurus*) tautog (*Tautoga onitis*), hogchoker (*Trinectes maculatus*), bay anchovy (*Anchoa mitchilli*), Atlantic silverside (*Menidia menidia*), striped killifish (*Fundulus majalis*), mummichog (*Fundulus heteroclitus*), weakfish (*Cynoscion regalis*), blueback herring (*Alosa aestivalis*), alewife (*Alosa pseudoharengus*), American shad (*Alosa sapidissima*), Atlantic herring (*Clupea harengus*), Atlantic sturgeon (*Acipenser oxyrinchus*), Atlantic menhaden (*Brevoortia tyrannus*), bluefish (*Pomatomus saltatrix*), gizzard shad (*Dorosoma cepedianum*), striped bass (*Morone saxatilis*), spot (*Leiostomus xanthurus*), white perch (*Morone americana*), and many others (NJDEP, 2010). PSEG's monitoring data is consistent with these results.

The NMFS responsibilities under the Fish and Wildlife Coordination Act (FWCA) are to provide federal agencies such as the NRC with recommendations to avoid, minimize and to mitigate for direct, indirect and cumulative impacts to NOAA trust resources that are present within the Delaware River Basin. The need for resource protection is underscored in the case of alewife and blueback herring in that landing statistics and the number of fish observed on annual spawning runs indicate a drastic decline in alewife and blueback herring populations throughout much of their range since the mid-1960. As such, they have been designated as species of concern by NMFS in a Federal Register Notice dated October 17, 2006 (71 FRN 61022). "Species of concern" are those species about which NMFS has some concerns regarding status and threats, but for which insufficient information is available to indicate a need to list the species under the Endangered Species Act. The shallow water environment in this section of the Delaware River provides valuable habitat for these species as well as striped bass and American shad.

By taking advantage of best available technology to reduce impingement, entrainment, and thermal impacts, best represented by the use of cooling towers that use a closed cycle cooling system, the potential for impacts to NOAA trust resources would be reduced. Incorporating such ameliorative measures such as cooling towers to control temperature would result in a proportionate reduction in fish and shellfish mortalities. In facilities where open-cycle cooling systems exist, the NMFS would encourage implementation of the use of this technology.

Magnuson-Stevens Act (MSA)

EFH has been defined in 50 CFR Section 600.10 as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity."

50 CFR Section 600.10 further states:

> For the purpose of interpreting the definition of essential fish habitat, 'Waters' include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate 'substrate' includes sediment, hard bottom, structures underlying waters, and associated biological communities; 'necessary' means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; 'spawning, breeding, feeding, or growth to maturity' covers a species full life cycle.

Salem and Hope Creek are located within an area of the Delaware estuary classified by the NMFS as the salinity mixing zone. The area adjacent to Artificial Island has been designated as EFH for various life stages of several species of fish including red hake (*Urophycis chuss*), winter flounder (*Pseudopleuronectes americanus*), windowpane flounder, bluefish, Atlantic butterfish (*Peprilus triacanthus*), scup (*Stenotomus chrysops*), summer flounder, scup (*Stenotomus chrysops*), black sea bass (*Centropristis striata*), king mackerel (*Scomberomorus cavalla*), Spanish mackerel (*Scomberomorus maculatus*), cobia (*Rachycentron canadum*), little skate (*Leucoraja erinacea*), winter skate (*Leucoraja ocellata*) and clearnose skate (*Raja eglanteria*).

Section 305 (b) (2) of the MSA requires all federal agencies to consult with the NMFS on any action authorized, funded, or undertaken by that agency that may adversely affect EFH. Included in this consultation process is the preparation of a complete and appropriate EFH assessment to provide necessary information on which to consult. Our EFH regulation at 50 CFR 600.905 mandates the preparation of EFH assessments and generally outlines each agency's obligations in this consultation procedure.

The EFH final rule published in the Federal Register on January 17, 2002 defines an adverse effect as: "any impact which reduces the quality and/or quantity of EFH." The rule further states that:

> An adverse effect may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat and other ecosystems components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

The rule also states:

> Loss of prey may be an adverse effect on EFH and managed species because the presence of prey makes waters and substrate function as feeding habitat and the definition of EFH includes waters and substrate necessary to fish for feeding. Therefore, actions that reduce the availability of a major prey species, either through direct harm or capture, or through adverse impacts to the prey species' habitat that are known to cause a reduction in the population of the prey species, may be considered adverse effects on EFH if such actions reduce the quality of EFH.

Any actions that affect prey species adversely also affect EFH. Impingement, entrainment, thermal shock caused by release of heated effluent discharge from the station, and overall plant operations at both Salem and Hope Creek will have substantial and unacceptable impacts to a wide variety of NOAA trust resources. Buckel and Conover (1997) in Fahay et al. (1999) report that the diet items of juvenile bluefish include *Alosa* species such American shad, blueback herring and alewife as well as bay anchovy, silversides and other fish species. All juvenile *Alosa* species have been identified as prey species for windowpane flounder, (*Scophthalmus aquosus*), winter skate (*Leucoraja ocellata*) and summer flounder (*Paralichthys dentatus*) in Steimle et al. (2000). Bluefish, windowpane, winter skate and summer flounder are federally managed species whose EFH has been designated in the mixing zone of the Delaware River. As a result, activities that adversely affect the spawning success and the quality for the nursery habitat of these anadromous fish will adversely affect the EFH for these species by reducing the availability of prey items.

NRC's most recent evaluation acknowledges that impacts to federally-managed species will take place, and that closed-cycle cooling would drastically reduce the amount of water (and species) withdrawn from the Delaware Estuary by PSEG. NRC has concluded that overall, the range of effects to EFH caused by operational activities (e.g., impingement, entrainment, heat shock, and loss of forage/prey species) associated with license renewal for Salem and Hope Creek would vary widely depending upon the individual species. Further, NRC asserts that any impacts incurred would be offset by ecological gains elsewhere within the ecosystem through a series of facility and site-specific conservation measures including best management practices that would reduce potential adverse environmental impacts to EFH associated with entrainment and impingement.

NMFS contends that the ongoing mortality caused by specific plant operations could have a much greater substantial impact on populations and communities. The independent impact analysis conducted by ESSA Technologies, a consultant for the New Jersey Department of Environmental Protection, indicates that the applicant may have significantly underestimated the total biomass of fish lost to the ecosystem because of data collection biases, and because of overlooked impingement of fish, eggs and larvae onto material clogging the traveling screens. Species potentially affected by this underestimate are bay anchovy, spot, striped bass, Atlantic croaker and weakfish. While these species are not federally managed, their early life stages provide critical forage to federally managed species (ESSA, 2000). Overall, technologies such as cooling towers will minimize present impacts to all NOAA trust resources.

Conservation Recommendations
As a steward of our nation's living marine resources, the NMFS has an obligation and legal mandate to conserve, protect, and manage these resources and must consult with federal agencies that fund, authorize or undertake actions that may affect living marine resources and their habitats. The New England and Mid-Atlantic Fishery Management Councils have designated EFH for many of the species listed above. We anticipate that this action will have adverse impacts to EFH. Therefore, the NMFS must provide the NRC with conservation recommendations to avoid and minimize the impacts.

On June 3, 1994, a NMFS letter to Mr. Dennis Hart, Administrator for the Wastewater Facilities Regulation Program of the New Jersey Department of Environmental Protection and Energy expressed concern about an application to allow the continued operation of the Salem Nuclear Generating Station, Public Service Electric and Gas of New Jersey (PSEG) in conjunction with an offset program to offset egg, larvae and fish losses at the cooling water intake at Salem. The program included wetland habitat restoration, fish ladder installation, new cooling water intake technology, and a biological monitoring program. Wetland habitat restoration was the core component. The wetland restoration program used ecological engineering principles to restore approximately 4550 ha to tidal wetlands, and protects upland buffers and other lands for a total of over 8700 ha (Balletto, et al. (2005).

Fish ladders were installed to allow anadromous river herring to return to previously blocked spawning habitat at twelve sites in the Delaware Estuary, four in New Jersey and eight in Delaware. In 2008, the most successful fish ladder appears to be the ladder at Coursey Pond with 1,096 fish counted (PSEG 2008b). Lower numbers of fish were reported several of the other fish ladders with zero counted at Garrison Lake and Silver Lake (Milford) and between one and eight reported at Noxontown Pond, Silver Lake (Dover), Cooper River Lake, Newton Lake, and Stewart Lake (PSEG 2008b). The ladders at

Moorse Lake and McColley Pond showed passage of 639 and 652 fish, respectively. PSEG also implemented operational modifications in the Salem plant by installing advanced cooling water intake technology to reduce losses of invertebrates and early life stages of fish, and conducted studies of behavioral deterrents. The biological monitoring program continues to assess the abundance and distribution of juvenile coastal migratory fish species while they are in the Delaware River Estuary; it also monitors use of wetlands by fish and invertebrates.

It is difficult to determine the success of the actions for restoration projects within the Delaware Bay, to enhance and protect fishery resources. Both empirical and predictive (i.e. mathematical modeling) methods have been employed to measure the scale of improvements and/or damages associated with each project as well as any cumulative effects on the resources. In time series modeling analyses, gains achieved from the various restoration components were reflected in total ecosystem biomass for some trophic groups such as benthic meiofauna, benthic macrofauna, phytoplankton, and mesoplankton, but decreases in biomass of marsh fishes, blue crabs, littoral zone forage fishes, bluefish and American eels. Nemerson and Able, (2005) found that three sciaenid species were equally or more abundant at the restored marshes. Moreover, measures of fish forage habitats were generally equal or higher at the restored site as was stomach fullness which was equal to or significantly higher at the restored marsh compared with the reference marsh. Their studies also indicated that a seasonal pattern typical of mid-Atlantic estuaries of recruitment, change in food habits and emigration of transient fishes was apparent at both restored and un-restored sites.

A few studies, including Able, et al. (2008), compared structural (distribution, abundance) and functional (feeding, growth, survival, reproduction, production) aspects of the estuary's migratory fish populations so as to evaluate the restored marshes in an essential fish habitat context. They compared nine years (1995 – 2004) of field measurements between three restored marshes and a reference marsh in the mesohaline portion of Delaware Bay by channel morphology, geomorphology, vegetation, sediment organic matter, fish assemblages, blue crabs, horseshoe crabs, and benthic infauna. Marsh vegetation and drainage density responded gradually and positively with restored marshes approximating the state of the reference marsh within the nine-year study period. The fauna responded more quickly and dramatically with most measures equal or greater in the restored marshes within the first one or two years after restoration. Differences in response time between the vegetation and the fauna imply that the faunal response was more dependent on access to the shallow intertidal marsh surface and intertidal and subtidal creeks than on characteristics of the vegetated marsh. The fish in created subtidal creeks in restored marshes responded immediately and maintained fish assemblages similar to the reference marsh over the study period. The intertidal creek fish assemblages tended to become more like the reference marsh in the last years of the comparison.

Monitoring studies of fish assemblages at specific restoration sites, indicated that wide variations in fish assemblages occurred (Grothues and Able, 2003), so much so that no definitive conclusion in favor of success could be made. Difficulty separating out actual enhancement value from natural variability was encountered. Further, it is a logical concern that any increase in fish abundance as a result of the marsh restorations may result in proportional increase in losses due to impingement and entrainment at the facilities. Notwithstanding, the plant operations still maintain significant levels of impact mortality by impingement and entrainment. Data in the generic EIS (US NRC 2010) provided by PSEG (2006), show estimated annual entrainment losses at the Salem plant were 1.571 billion in 2002, 527 million in 2003 and 2.522 billion in 2006. Some species level examples include alewife annual entrainment losses from 9.4 to 2.4 million, and blueback herring losses from 934,000 to 1.6 million Total impingement losses at Salem for the representative species are estimated as 7.8 billion in 2002, 3.5 billion in 2003 and 4.4 billion in 2004 (US NRC 2010). Annual alewife losses range from 10,996 in 2002 to 63, 492 in 2004, and weakfish losses totaled 2.1 billion in 2004. In addition, the final report prepared by ESSA (2000) indicates that the open cycle cooling operation of the plant may be responsible for more fish losses than the monitoring can determine. We also note that in our 1994 letter to Mr. Dennis Hart, we recommended that the permit issued for the proposed mitigation should not extend beyond the life of the existing operating license.

As a steward of our nation's living marine resources, NMFS has an obligation and legal mandate to conserve, protect, and manage these resources. The MSA, FWCA and other mandates require that we provide advice and recommendations to federal action agencies on ways to first avoid, and then minimize adverse impacts to living marine resources and their habitats. The data show that entrainment and impingement losses at the Salem facility total billions of fish annually. Species lost are commercially and/or recreationally valuable, ecologically valuable as prey species and, in the case of alewife and blueback herring, have been designated as species of concern to NOAA. In an effort to avoid, minimize and reduce potential impacts to EFH for NOAA trust resources and federally-managed species, associated with the renewal of the operating licenses for Hope Creek Generating Station (Hope Creek) and Salem Nuclear Generating Station, Units 1 and 2 (Salem), the NMFS recommends the following plant specific EFH conservation recommendations:

<u>Salem Generating Station</u>

Implement closed-cycle cooling featuring cooling towers that employ sufficient safeguards to ensure against release of blow down pollutants into the aquatic environment

Minimize water intake flow and associated entrainment and impingement by not locating intake systems in areas where fishery organisms are concentrated.

- Reduce withdrawal and discharge of large volumes of water by lowering intake rate and instituting recycling of present quantities within the system. Discharge points should be located in areas that have low concentrations of living marine resources.

- Intakes should be designed to minimize impingement. Velocity caps that produce horizontal intake/discharge currents should be employed and intake velocities across the intake screen should be determined that cause the least acceptable amount of mortality to marine organisms.

- Discharge temperatures (both heated and cooled effluent) should not exceed the thermal tolerance of the majority of the plant and animal species in the receiving body of water; and

- Employ additional mitigation measures (e.g., Ristroph traveling screens) intended to minimize entrainment. Intake screen mesh should be sized to avoid entrainment of most larval and post-larval marine fishery organisms. Acceptable mesh size is generally in the range of 0.5 to 0.7 mm and rarely exceeds 1.0 mm in estuarine waters or waters that support anadromous fish eggs and larvae.

<u>Hope Creek Generating Station</u>

- Carry on the continuous operation of the Ristroph traveling screens; Evaluate opportunity for further mitigation effectiveness such as altering and lowering discharge rates, and relocating discharge pipes to areas of least impact to resources.

- Continue to implement provisions in the general discharge permit.

Please note that Section 305 (b)(4)(B) of the MSA requires the NRC to provide NMFS with a detailed written response to these EFH conservation recommendations, including the measures adopted by the

NRC for avoiding, mitigating, or offsetting the impact license renewal would have on EFH. In the case of a response that is inconsistent with NMFS' recommendations, Section 305 (b) (4) (B) of the MSA also indicates that the NRC must explain its reasons for not following the recommendations. Included in such reasoning would be the scientific justification for any disagreements with NMFS over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate or offset such effect pursuant to 50 CFR 600.920 (k).

In addition, a distinct and further EFH consultation must be reinitiated pursuant to 50 CRF 600.920 (j) if new information becomes available, or if the project is revised in such a manner that affects the basis for the above EFH conservation recommendations.

Conclusion

The Delaware Estuary and the aquatic life that inhabit it are commonly recognized as an ecosystem that is severely ecologically stressed by a number of anthropogenic sources. The distress is reflected in declining stocks of specific estuarine organisms. Environmental impacts related to the operation of Salem Nuclear Generating Station, Units 1 and 2 (Salem) are of principal concern to the NMFS. Environmental Effects from the Hope Creek Generating Station are significantly less.

NMFS maintains a longstanding position that the continued operation of both Salem facilities under current conditions cause significant adverse impacts to a number of NOAA trust resources and federally-managed species that use the Delaware Estuary as a migratory corridor, forage area or spawning and nursery ground. NMFS conservation recommendations are offered to address the loss of considerable numbers of the early life stages of various anadromous fish species discussed above that are critical to the ecological health of the estuary.

We hope that this letter clarifies our position on the renewal of the operating licenses for Hope Creek Nuclear Generating Station (Hope Creek) and Salem Nuclear Generating Station, Units 1 and 2 (Salem). We recognize that many factors must be considered in any decision to move forward on the project and therefore, we must recommend that the NRC implement certain modifications to each facility. Should a decision be made to consent to our conservation recommendations, we will work with the NRC as well as other state and federal agencies to ensure that appropriate mitigation and conservation measures are put into practice to offset impacts to NOAA trust resources to the maximum extent possible.

We look forward to continued coordination with the NRC as it moves ahead with the relicensing process for both Salem and Hope Creek facilities. Should you have any questions, need additional information, or would like to arrange an informal meeting to further discuss specific elements of the EFH consultation process or impacts to resources of concern to NMFS, please contact Karen Greene at 732-872-3023 or Stanley Gorski at 732-872-3037.

Sincerely,

Peter D. Colosi

Peter D. Colosi, Jr.
Assistant Regional Administrator
Habitat Conservation Division

cc: EPA - Region III –
FWS - State College – J. Kagel
NJDEP – DFW -
PA DEP
PRD – J. Crocker
PA Fish and Boat Commission – M. Kaufman
DRFWMC

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