

Michael P. Gallagher, PE
Vice President
License Renewal Projects

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An Exelon Company

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10 CFR 50
10 CFR 51
10 CFR 54

2130-07-20505
August 21, 2007

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: Consolidated Record for AmerGen Energy Company, LLC Appeal of an Objection by the State of New Jersey, Department of Environmental Protection, to a Coastal Zone Management Act (CZMA) Consistency Determination, Related to Oyster Creek Generating Station License Renewal Application (TAC No. MC7624)

References: 1. AmerGen Letter 2130-06-20425 dated December 1, 2006, "Federal Consistency Certification for Oyster Creek Generating Station License Renewal Application"

2. State of New Jersey Department of Environmental Protection Letter dated May 31, 2007, "Federal Consistency Request for License Renewal of AmerGen's Oyster Creek Nuclear Generating Station"

In Reference 1, AmerGen Energy Company, LLC ("AmerGen") submitted its certification to the U.S. Nuclear Regulatory Commission ("NRC") and the New Jersey Department of Environmental Protection ("NJDEP") that (1) the proposed renewal of the NRC operating license for the Oyster Creek Nuclear Generating Station ("OCNGS") would comply with enforceable policies of the New Jersey Coastal Management Program and (2) the continued operation of the OCNGS would be conducted in a manner consistent with that Program. On May 31, 2007, pursuant to Section 307 of the Coastal Zone Management Act (CZMA), the NJDEP filed its objection to AmerGen's consistency certification for OCNGS (Reference 2). AmerGen intends to appeal NJDEP's objection with the Secretary of the U.S. Department of Commerce.

Enclosed, for inclusion in the consolidated record defined in 15 CFR 930.123(d), please find the following information relating to the proposed renewal of the NRC operating license for the OCNGS and the certification of CZMA consistency:

- Hard copies of 14 documents that are not already present in the NRC's Agencywide Documents Access and Management System (ADAMS); and
- Index of the enclosed documents.

Also enclosed is a separate index of documents (with Accession Numbers), which already exist in the NRC's ADAMS, that AmerGen requests be incorporated into the consolidated record. In

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accordance with discussions with NRC staff, hard copies of these documents are not being provided.

If you have any questions, please contact me at 610-765-5958.

Respectfully,

A handwritten signature in black ink, reading "Michael P. Gallagher". The signature is fluid and cursive, with the first name "Michael" being the most prominent part.

Michael P. Gallagher
Vice President, License Renewal
AmerGen Energy Company, LLC

Enclosures: (1) Hard Copies of 14 Documents for Consolidated Record
(2) Index of Enclosed Documents
(3) Index of Documents Already in ADAMS to be Included In Consolidated Record

cc:

Jennifer Davis, USNRC Division of License Renewal, with Enclosures
Mary Baty, USNRC Office of General Counsel, w/o Enclosure (1)
Regional Administrator, USNRC Region I, w/o Enclosure (1)
USNRC Director, License Renewal Division, w/o Enclosure (1)
USNRC Project Manager, NRR - License Renewal, Safety, w/o Enclosure (1)
USNRC Project Manager, NRR - License Renewal, Environmental, w/o Enclosure (1)
USNRC Project Manager, NRR - Project Manager, OCGS, w/o Enclosure (1)
USNRC Senior Resident Inspector, OCGS, w/o Enclosure (1)
Bureau of Nuclear Engineering, NJDEP, w/o Enclosure (1)
File No. 05040

INDEX OF AMERGEN CZMA-RELATED DOCUMENTS SUBMITTED IN HARD COPY

Tab Number	Description	Date
1	Letter from Mary A. Colligan, Assistant Regional Administrator for Protected Resources, U.S. Department of Commerce, NOAA, to Rani L. Franovich, Branch Chief, NRC re: Oyster Creek Nuclear Generating Station TAC No. MC7625 (updated concurrence with Biological Opinion regarding threatened and endangered turtle species)	February 8, 2007
2	Letter from Timothy Rausch, AmerGen, to Andy Heyl, New Jersey Dept of Environmental Protection Checklist of Information to Be Submitted Pursuant to 15 C.F.R. §§ 930.58 and 930.60 in Support of the Forthcoming Federal Consistency Certification for Renewal of Operating License for AmerGen's Oyster Creek Generating Station	August 15, 2006
3	Letter from Andrew Heyl (NJDEP) to Timothy Rausch (OCNGS Site Vice President) re: State Guidance for Forthcoming Federal Consistance Request for License Renewal of AmerGen's Oyster Creek Nuclear Generating Station Applicant	June 1, 2006
4	Letter from Andy Heyl to Timothy Rausch, Site Vice Resident Oyster Creek Nuclear Generating Station, AmerGen Energy Company, LLC re: Checklist of Information Proposed to be Submitted Pursuant to 15 C.F.R. 930.58 and 930.60 in Support of Operating License for AmerGen's Oyster Creek Nuclear Generating Station Lacey Township, Ocean County (cover letter, as faxed from Heyl to B. Maher, without attachment)	September 15, 2006
5	Letter from Thomas Micai, Director, Division of Land Use Regulation New Jersey Dept of Environmental Protection to Timothy Rausch, Site Vice President, AmerGen Energy Company, LLC re: Federal Consistency Request for License renewal, Oyster Creek Nuclear Generating Station, Program File No. 1500-02-0004.4 CDT060001 (objecting to AmerGen's certification of Federal Consistency for the OCNGS with the State's federally-approved Coastal Zone Management Program)	May 31, 2007
6	Letter from Michael Gallagher, Vice President License Renewal Projects AmerGen Energy Company, LLC to Peter C. Colosi, Jr., Assistant Regional Administrator for Habitat Conservation, National Marine Fisheries Service and Frank Gillespie, Director of Division of License Renewal, NRC regarding "Oyster Creek Nuclear Generating Station, Essential Fish Habitat Consultation Regarding License Renewal"	November 2, 2006

August 21, 2007

SUBMITTED IN HARD COPY (continued)

7	Final Report, AmerGen: Determination Of Cooling Tower Availability For Oyster Creek Generating Station Forked River, New Jersey, prepared by URS Corporation	March 2, 2006
8	Letter from Keith Jury, Director - Licensing and Regulatory Affairs AmerGen Energy Company, LLC, to Andy Heyl, New Jersey Dept of Environmental Protection re: Federal Consistency Certification For Federal Permit And License Applicants Oyster Creek Generating Station License Renewal Application	January 20, 2005
9	General Guidance for Federal Consistency	July 2004
10	Comments Of PJM Interconnection, L.L.C. On Draft National Interest Electric Transmission Corridor Designations filed at the DOE, DOCKET NO. 2007-OE-01	July 6, 2007
11	Jersey Central Power & Light Company. Oyster Creek Nuclear Generating Station Groundwater Assessment/Remediation Activities, Semi-Annual Report, January – June 2002	May 2003
12	Letter from PJM Board of Managers to PJM Members Committee and Stakeholders, regarding “Reliability Pricing Model (RPM)” and including Attachment B, “Immediate Reliability Issues in the Absence of RPM”	March 22, 2005
13	Letter from Andrew Heyl of the New Jersey Dept of Environmental Protection to Fred Polaski, regarding “Federal Consistency [sic] Request for NRC Renewal Application of AmerGen for the Oyster Creek Nuclear Generating Station” (forwarding submittals received by the NJDEP during the public comment period for the CZMA Federal Consistency Determination filed in the OCNGS licensing renewal proceeding)	April 11, 2007
14	Report – “Economic Benefits of the Oyster Creek Generating Station,” by Collin Cain, et al., Bates White, LLC	June 2007

**INDEX OF AMERGEN CZMA-RELATED DOCUMENTS
ALREADY IN NRC'S ADAMS**

ADAMS Accession Number	Description	Date
ML052770239	Cover Letter from Patricia Kurkul, U.S. Department of Commerce, NOAA to Pao-Tsin Kuo, NRC, and attached Biological Opinion re: Reinitiation of Consultation for the Continued Operation of the Oyster Creek Nuclear Generating Station on the Forked River and Oyster Creek, Barnegat Bay, New Jersey; Conducted by: NOAA's National Marine Fisheries Service, Northeast Regional Office	September 22, 2005
ML070080320	Letter from Michael Gallagher, Vice President License Renewal Projects AmerGen Energy Company, LLC to Peter C. Colosi, Jr., Assistant Regional Administrator for Habitat Conservation, National Marine Fisheries Service P. T. Kuo, Acting Director and Division of License Renewal, NRC re: Oyster Creek Nuclear Generating Station, Essential Fish Habitat Consultation Regarding License Renewal	December 15, 2006
ML052240045	Letter from Pamela B. Cowan, Director, Licensing & Regulatory Affairs, AmerGen Energy Company, LLC to Andy Heyl, New Jersey Dept of Environmental Protection re: Limited Extension Of Time For NJDEP To Complete Its Review Of Data Submissions Documenting Consistency Certification For Federal Permit and License Applicants, File No. 1500-02-0004.4 CDT050001, Project: Oyster Creek Generating Station (Letter No. 2130-05-20156)	July 20, 2005
ML051160155	Letter from Andy Heyl, New Jersey Dept of Environmental Protection to Keith Jury, Director - Licensing and Regulatory Affairs AmerGen Energy Company, LLC re: Request for Necessary Data and Information for a Federal Consistency Determination	March 31, 2005
ML051920150	Letter from Pamela B. Cowan, Director, Licensing & Regulatory Affairs, AmerGen Energy Company, LLC to Andy Heyl, New Jersey Dept of Environmental Protection re: Subject: Response to Request for Necessary Data and Information for a Federal Consistency Determination File No. 1500-02-0004.4 CDT050001 Project: Oyster Creek Generating Station (Letter No. 2130-05-20112)	June 15, 2005

August 21, 2007

ALREADY IN ADAMS (continued)

ML060400050	Memorandum of Understanding Between the New Jersey Department of Environmental Protection and AmerGen Energy Company LLC Regarding the Coastal Zone Management Act Review for Renewing the Operating License for the Oyster Creek Nuclear Generating Station	September 19, 2005
ML052620014	Letter from Mark Mauriello, New Jersey Department of Environmental Protection to Keith R. Jury, Director, Licensing and Regulatory Affairs AmerGen Energy Company LLC re: Inconsistent Determination for a Federal Consistency Request for License renewal of Oyster Creek Nuclear Generating Station, Program File No. 1500-02-0004.4 CDTOS0001	August 19, 2005
ML072060384	The Barnegat Bay Estuary Program Characterization Report prepared by Barnegat Bay Estuary Program (Scientific and Technical Advisory Committee)	January 2001

2130-07-20505

Enclosure 1

- 1 Letter from Mary A. Colligan, Assistant Regional Administrator for Protected Resources, U.S. Department of Commerce, NOAA, to Rani L. Franovich, Branch Chief, NRC re: Oyster Creek Nuclear Generating Station TAC No. MC7625 (updated concurrence with Biological Opinion regarding threatened and endangered turtle species)

February 8, 2007



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

FEB -8 2007

Rani L. Franovich, Branch Chief
Environmental Branch B
Division of License Renewal
Office of Nuclear Reactor Regulation
US Nuclear Regulatory Commission
Washington, DC 20555-0001

Attn: Dr. Micahel Masnik, Environmental Project Manager

Re: Oyster Creek Nuclear Generating Station TAC No. MC7625

Dear Ms. Franovich,

This is in response to your letter dated January 17, 2007 transmitting the Final National Environmental Policy Act (NEPA) documentation for the license renewal of the Oyster Creek Nuclear Generating Station (OCNGS) (TAC No. MC7625). As you know, consultation pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended, regarding the proposed renewal of the OCNGS license was recently completed between the US Nuclear Regulatory Commission (NRC) and NOAA's National Marine Fisheries Service (NMFS). In a Biological Opinion (Opinion) dated November 21, 2006, NMFS concluded that the continued operation of the OCNGS under a renewed Operating License may adversely affect but is not likely to jeopardize the continued existence of endangered Kemp's ridley, green, or threatened loggerhead sea turtles. In the Opinion NMFS also concluded that the action will not affect leatherback or hawksbill sea turtles as these species are not known to occur in the action area for this consultation.

As Section 7 consultation has been completed, NMFS' Protected Resources Division (PRD) does not anticipate providing further comments on the NEPA documentation for this action. As discussed with Ms. Harriet Nash of your staff, the Opinion dated September 22, 2005 will remain in effect until a renewed license is issued by the NRC. Once the renewed license is issued, the 2005 Opinion will be withdrawn and the November 21, 2006 Opinion will become effective. It



is anticipated that a renewed license will be issued on or around April 2009. NMFS looks forward to continuing to work cooperatively with NRC staff regarding the re-licensing of this facility. Should you have any questions regarding this correspondence, please contact Julie Crocker of my staff at (978)281-9300 x6530.

Sincerely,

A handwritten signature in cursive script, appearing to read "Mary Colligan".

Mary A. Colligan
Assistant Regional Administrator for
Protected Resources

cc: H. Nash, NRC
M. Browne, AmerGen
Williams, GCNE

File code: Section 7 NRC – Oyster Creek 2006
PCTS: F/NER/2006/05114

- 2 Letter from Timothy Rausch, AmerGen, to Andy Heyl, New Jersey Dept of Environmental Protection Checklist of Information to Be Submitted Pursuant to 15 C.F.R. §§ 930.58 and 930.60 in Support of the Forthcoming Federal Consistency Certification for Renewal of Operating License for AmerGen's Oyster Creek Generating Station

August 15, 2006

AmerGen Energy Company, LLC
Route 9 South
Forked River, NJ 08731

An Exelon Company

2130-06-20379
August 15, 2006

Mr. Andy Heyl
Land Use Regulation Program
PO Box 439
Bureau of Coastal Management
NJ Department of Environmental Protection
501 East Street
Trenton, NJ 08625-0439

Subject: CHECKLIST of Information to Be Submitted Pursuant to 15 C.F.R. §§ 930.58 and 930.60 in Support of the Forthcoming Federal Consistency Certification for Renewal of Operating License for AmerGen's Oyster Creek Generating Station (OCGS)

Thank you for your letter of June 1, 2006 providing guidance pursuant to 15 C.F.R. § 930.56 of the federal regulations promulgated to implement the consistency review provisions of the Federal Coastal Zone Management Act (CZMA). On January 5, 2006, the National Oceanic and Atmospheric Administration (NOAA) published in the Federal Register several revisions to its regulations governing the process for submission and evaluation of information in support of a statement by an applicant for a federal license that its activity is consistent with the enforceable laws and regulations of the portions of a state's coastal zone management plan that have been approved by NOAA. For your convenience, we have attached a copy of the January 5, 2006 Federal Register notice, along with your June 1, 2006 letter to us.

In brief, the NOAA rules, as revised, now make clear that the applicant is to submit the basic information for each item identified in the "CHECKLIST" of required elements to be reviewed by the state. The purpose of this letter is to set forth what we believe are the CHECKLIST items. We intend to provide information responsive to the CHECKLIST items in our forthcoming consistency certification. It is our intent to file a complete and thorough response and we are confident that you will find our submission responds to the NOAA regulations, as well as the relevant policies and enforceable rules of the New Jersey Coastal Zone Management Program.

We do ask you to let us know by September 15, 2006, if you believe we have omitted in this CHECKLIST any category of information the state needs for its evaluation of the OCGS consistency certification. If you determine that our submittal fails to provide any information for a CHECKLIST item, then please let us know within 30 days after our submittal, so that we may provide that to you as quickly as possible.

Under the new NOAA rules, should you find that it would be helpful to have additional information in further support of some subject on the CHECKLIST for which we have already provided some information in our initial certification submittal, it is our understanding that you may request additional information during your substantive review.

With this as background, the following constitutes what we believe to be the CHECKLIST of information to be submitted pursuant to 15 C.F.R. §§ 930.58 and 930.60:

1. A complete description of the proposed activity, including its associated activities, maps, and diagrams.
2. The application for license renewal AmerGen submitted to the NRC for the Oyster Creek Generating Station.
3. A copy of the current NJPDES permit and its conditions.
4. The NRC's Draft Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 28, Regarding Oyster Creek Nuclear Generating Station, June 2006.

The remaining items on the CHECKLIST are set forth in the same sequence they are presented in your June 1, 2006 letter to us:

5. Impacts on Water Quality, including:

- Shellfish habitat (7:7E-3.2);
- Prime fishing areas (7:7E-3.4);
- Finfish migratory pathways, in particular, the following species identified in your June 1 letter: alewife or river herring; blueback herring; American shad; striped bass; Atlantic sturgeon; Shortnose sturgeon; and American eel (7:7E-3.5);
- Submerged vegetation habitat (7:7E-3.6);
- Navigation channels (7:7E-3.7);
- Marina moorings (7:7E-3.10);
- Submerged infrastructure routes (7:7E-3.12);
- Intertidal and subtidal shallows (7:7E-3.15);
- Beaches (7:7E-3.22);
- Filled water's edge (7:7E-3.23);
- Flood hazard areas (7:7E-3.25);
- Wetlands (7:7E-3.27);
- Wetlands buffers (7:7E-3.28);
- Farmland conservation areas (7:7E-3.33);
- Steep slopes (7:7E-3.34);
- Historic and archeological resources (7:7E-3.36);
- Endangered or threatened wildlife or plant species habitats (7:7E-3.38), including a list and mapping of all properties owned or under the control of Exelon, AmerGen and related subsidiaries as requested in your letter;
- Critical wildlife habitats (7:7E-3.39);
- Public open space (7:7E-3.40);
- Special hazards area, including participation in radiological emergency response plan, and cooperation with the New Jersey State Police and the NJDEP Bureau of Nuclear engineering (7:7E-3.41);
- Response to the three issues identified by BNE:
 - Testing of Security and Emergency Plans;

- Plans to provide NJDEP with split samples of onsite ground water samples;
- Commitment by Exelon to financial responsibility and reimbursement for cleanup costs when decommissioning occurs;
- Pinelands National Reserve and Pinelands Protection Area (7:7E-3.44);
- Purpose and Scope – Endangered or Threatened Wildlife or Plant Species Habitat Impact Assessment (7:7E-3C.1);
- Standards for conducting Endangered or Threatened Wildlife or Plant Species Habitat Impact Assessments (7:7E-3C.2);
- Purpose and Scope – General Water Areas (7:7E-4.1);
- Boat Ramps (7:7E-4.3)
- New dredging (7:7E-4.7);
- Dredged material disposal (7:7E-4.8);
- Filling (7:7E-4.10);
- Mooring (7:7E-4.11);
- Dams and impoundments (7:7E-4.16);
- Outfalls and intakes (7:7E-4.17);
- Realignment of water areas (7:7E-4.18);
- Breakwaters (7:7E-4.19);
- Rule on location of linear development (7:7E-6.1);
- Basic Location Rule (7:7E-6.2);
- Energy facility use rule, criteria (c) and (r) regarding impacts on employment and conformance with NRC standards, respectively (7:7E-7.4);
- Industry use rule (7:7E-7.7);
- Coastal engineering (7:7E-7.11);
- Dredged material placement on land (7:7E-7.12);
- Marine fish and fisheries, including a commitment to conduct studies associated with a future habitat enhancement scenario as required by a future NJPDES permit (7:7E-8.2);
- Water quality, including a commitment to submit a copy of the final NJPDES permit, along with a copy of our acceptance form/statement (7:7E-8.4);
- Surface water use, including the present day impacts of the heated discharge and methods OCGS intends to use to ameliorate those impacts (7:7E-8.5);
- Groundwater use, and demonstration that OCGS will comply with the applicable rule (7:7E-8.6);
- Stormwater management (7:7E-8.7);
- Vegetation (7:7E-8.8);
- Air quality (7:7E-8.10);
- Plans to enhance public access to the waterfront, including Nature Trails at Finninger Farm and Clune Park (7:7E-8.11);
- Buffers and compatibility of uses (7:7E-8.13);
- Traffic (7:7E-8.14); and
- Solid and hazardous waste (7:7E-8.22).

In addition to the CHECKLIST items identified in your June 1 letter, we also will address the following:

6. Oyster Creek Field Studies and Fish Data - current report on impacts of impingement, and status of ongoing studies on impacts of entrainments, as required by NPDES permit rules, and information to be supplied under the CWA.
7. NMFS Biological and the Incidental Take Statement (BO/ITS) for loggerhead, Kemp's ridley and green sea turtles.
8. Properties within NJ in which Exelon, AmerGen, or OCGS have a controlling interest.
9. Information on the OCGS program for wetlands restoration and enhancement within the Barnegat Bay estuary to offset any residual impingement and entrainment losses from OCGS operations.
10. A statement explaining why renewal of the OCGS operating license is consistent with NJ Coastal policies (7.7E-1.5) including, in particular those, which your office has previously advised us, are specifically applicable:
 - Coastal Policy 1 - Protect and enhance the coastal ecosystem;
 - Coastal Policy 2 - Concentrate the pattern of coastal residential, commercial, industrial, and resort development, encourage the preservation of open spaces, and ensure the availability of suitable waterfront areas for water dependent activities;
 - Coastal Policy 3 - Employ a method for decision making which allows each coastal location to be evaluated in terms of both the advantages and the disadvantages it offers for development.
 - Coastal Policy 4 - Protect the health, safety and welfare of the people who reside, work and visit the coastal zone;
 - Coastal Policy 5 - Promote public access to the waterfront through protection and creation of meaningful access points and linear walkways and at least one waterfront park in each waterfront municipality;
 - Coastal Policy 6 - Maintain active port and industrial facilities, and provide for necessary expansion in adjacent sites;
 - Coastal Policy 7 - Maintain and upgrade existing energy facilities; and
 - Coastal Policy 8 - Encourage residential, commercial, and recreational mixed-use redevelopment of the developed waterfront.

If you should have any questions concerning this checklist, please feel free to contact Bill Maher at 610.765.5939.

Sincerely,



Timothy Rausch
Site Vice President
Oyster Creek Generating Station
AmerGen Energy Company, LLC

Enclosures: 1. 71 Fed. Reg. 788 (January 5, 2006)
 2. Letter from A. Heyl (NJDEP) to T. Rausch (AmerGen), "State
 Guidance for Forthcoming Federal Consistency Request for License
 Renewal of AmerGen's Oyster Creek Nuclear Generating Station,"
 dated June 1, 2006.

cc: Ms. Ruth Ehinger
 Oyster Creek File 05040
 Mr. Michael Masnik, USNRC, Environmental Project Manager
 Christopher Nolan, USNRC, Chief of Environmental Section
 Ms. Karen Tuccillo, NJDEP, Bureau of Nuclear Engineering



Federal Register

Thursday,
January 5, 2006

Part III

Department of Commerce

National Oceanic and Atmospheric
Administration

15 CFR Part 930

Coastal Zone Management Act Federal
Consistency Regulations; Final Rule

DEPARTMENT OF COMMERCE**National Oceanic and Atmospheric Administration****15 CFR Part 930**

[Docket No. 030604145-4038-02]

RIN 0648-AR16

Coastal Zone Management Act Federal Consistency Regulations

AGENCY: Office of Ocean and Coastal Resource Management (OCRM), National Ocean Service (NOS), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce (DOC).

ACTION: Final rule.

SUMMARY: The National Oceanic and Atmospheric Administration (NOAA) revises the federal consistency regulations under the Coastal Zone Management Act of 1972 (CZMA). This final rule addresses the CZMA-related recommendations of the Report of the National Energy Policy Development Group, dated May 2001 (Energy Report) as described in NOAA's June 11, 2003, Notice of Proposed Rulemaking (68 FR 34851-34874) (proposed rule), and comments submitted to NOAA on the proposed rule. In addition, this final rule includes provisions complying with statutory amendments made in the Energy Policy Act of 2005 (Pub. L. 109-58) (Energy Policy Act) that concerned matters addressed in the proposed rule. This final rule continues to provide the balance between State-Federal-private interests embodied in the CZMA, while making improvements to the federal consistency regulations by clarifying some sections and providing greater transparency and predictability to the implementation of federal consistency. This final rule fully maintains the authority and ability of coastal States to review proposed federal actions that would have a reasonably foreseeable effect on any land or water use or natural resource of a State's coastal zone, as provided for in the CZMA and NOAA's regulations, as revised in 2000.

DATES: *Effective date:* These rules shall become effective on February 6, 2006. *Applicability date:* All appeals to the Secretary under 15 CFR part 930, subpart H, filed on or after February 6, 2006, shall be processed in accordance with the procedures and time frames adopted in subpart H of this final rule. For appeals to the Secretary under 15 CFR part 930, subpart H, any procedural or threshold issues which occurred prior to February 6, 2006, shall be governed by the regulations in 15 CFR

part 930, subpart D, E, and/or F, in effect at the time the procedural or threshold issue occurred.

FOR FURTHER INFORMATION CONTACT:

David W. Kaiser, Federal Consistency Coordinator, Office of Ocean and Coastal Resource Management (N/ORM3), NOAA, 1305 East-West Highway, 11th Floor, Silver Spring, Maryland 20910. Telephone: 301-713-3155, extension 144.

Additional information on federal consistency can be located at OCRM's federal consistency Web page: http://coastalmanagement.noaa.gov/czm/federal_consistency.html.

SUPPLEMENTARY INFORMATION:**I. Background**

For nearly 30 years, the CZMA has met the needs of coastal States, Great Lake States and United States Trust Territories and Commonwealths (collectively referred to as "coastal States" or "States"). Federal agencies, industry and the public to balance the protection of coastal resources with coastal development, including energy development. The CZMA requires the States to consider the national interest as stated in the CZMA objectives and give priority consideration to coastal dependant uses and processes for facilities related to national defense, energy, fisheries, recreation, ports and transportation, when adopting and amending their Coastal Management Programs (CMPs), and when making coastal management decisions. CZMA sections 303(2)(D) and 306(d)(8).

Coastal States have collaborated with industry on a variety of energy facilities, including oil and gas pipelines, nuclear power plants, hydroelectric facilities, and alternative energy development. States have reviewed and approved thousands of offshore oil and gas facilities and related onshore support facilities.

On December 8, 2000, NOAA issued a comprehensive revision to the federal consistency regulations, which reflected substantial effort over a five year period and participation by Federal agencies, States, industry, and the public. Given this recent broad-based review, NOAA did not propose a comprehensive rewrite of the 2000 final rule; rather, it has made improvements to address the issues raised in the Energy Report, the proposed rule and comments submitted on the proposed rule.

In February 2001, the Vice President established the National Energy Policy Development Group to bring together business, government, local communities and citizens to promote a dependable, affordable, and

environmentally sound National Energy Policy. Vice President Cheney submitted the Energy Report to President Bush on May 16, 2001.

The Energy Report contains numerous recommendations for a long-term, comprehensive energy strategy. The Energy Report found that the effectiveness of Commerce and Interior programs are "sometimes lost through a lack of clearly defined requirements and information needs from Federal and State entities, as well as uncertain deadlines during the process." The CZMA and the Outer Continental Shelf Lands Act (OCSLA), a statute administered by the Minerals Management Service (MMS), within the Department of the Interior (Interior), are specifically mentioned in the Energy Report. The Energy Report recommended that Commerce and Interior "re-examine the current federal legal and policy regime (statutes, regulations, and Executive Orders) to determine if changes are needed regarding energy-related activities and the siting of energy facilities in the coastal zone and on the Outer Continental Shelf (OCS)." Energy Report at 5-7. There is no explicit reference to other energy programs in this recommendation, but its purpose is reinforced by related Energy Report recommendations which encourage and direct the streamlining of significant energy actions within the jurisdiction of other Federal agencies, including the Federal Energy Regulatory Commission (FERC).

In July 2002, NOAA published an Advanced Notice of Proposed Rulemaking, 67 FR 44407-44410 (July 2, 2002) (ANPR), seeking comments on whether improvements should be made to NOAA's federal consistency regulations. In response to public comments on the ANPR NOAA issued its proposed rule. After review of the comments received on the proposed rule and after waiting for the final report of the U.S. Commission on Ocean Policy (released in Fall 2004), NOAA has decided to issue this final rule.

NOAA emphasizes that the changes to the federal consistency regulations contained in this final rule fully maintain the authority granted to States to review federal actions, pursuant to the CZMA and NOAA's 2000 rule. This final rule does not, in any way, alter the scope of the federal consistency "effects test" or the obligation of Federal agencies and non-federal applicants for required federal licenses or permits to comply with the federal consistency requirement. The issue of whether a proposed Federal agency activity under CZMA section 307(c)(1) is subject to

State consistency review is still guided by the Federal agency's determination of reasonably foreseeable coastal effects, in accordance with NOAA's long-standing implementation and as articulated in the 2000 rule. Likewise, the application of State consistency review to federal license or permit activities, OCS plans and Federal financial assistance activities under CZMA sections 307(c)(3)(A) and (B) and 307(d) remains unchanged, i.e., the application of the "listing" and "unlisted" requirements in 15 CFR 930.53 and 930.54 remains unchanged. The time periods for the States' substantive consistency reviews and decisions remain unchanged (75 days for Federal agency activities, six months for federal license or permit activities and OCS plans, and the time periods established by the States for federal assistance activities). States may continue to amend their CMP's to describe State specific information necessary to start the CZMA review period for federal license or permit activities and OCS plans. States may continue to request additional information during the 75-day and six-month review periods and may still object for lack of information. The final rule does not change these and other important regulatory provisions. At the same time this final rule improves the clarity, transparency and predictability of the regulations within the discretion granted to NOAA by the CZMA.

Although this final rule does not change the fundamental federal consistency process, coastal states are strongly encouraged to coordinate and participate with applicants for energy projects and responsible Federal agencies early in project development. This effort will ensure that the States' ability to require NEPA documentation as necessary data and information does not delay the start of the six-month consistency review period or unnecessarily delay a Federal agency's decision for a proposed project it finds to be in the public interest.

While this rulemaking was pending the House and Senate passed the Energy Policy Act of 2005 (H.R. 6 and S. 10), signed by President Bush on August 8, 2005 (Pub. L. 109-58). Some provisions of the Energy Policy Act directly address matters raised in the proposed rule and comments on the proposed rule related to appeals under subpart H of these regulations. Specifically, the Energy Policy Act established new appeal deadlines: 30 days to publish a notice of appeal, then 160 days to develop a decision record, with provisions to stay the 160-day period for 60 days, and a 60-75 day period to issue a decision after the record is closed.

These deadlines are shorter than NOAA proposed, but longer than the deadlines some commenters recommended in comments on the proposed rule. In addition, the Energy Policy Act proscribed the method of developing the Secretary's decision record for appeals of energy projects. These provisions were also similar to comments made on the proposed rule. The changes to subpart H in this final rule are necessary to ensure NOAA's regulations are in compliance with the Energy Policy Act and are within the scope of the provisions contained in the proposed rule and the public comments received on that proposal. Therefore, there was no need to re-propose subpart H for additional comment.

II. History of the CZMA and NOAA's Federal Consistency Regulations

The CZMA was enacted in 1972 to encourage States to be proactive in managing natural resources for their benefit and the benefit of the Nation. The CZMA recognizes a national interest in the resources of the coastal zone and in the importance of balancing the competing uses of those resources. The CZMA is a voluntary program for States. If a State elects to participate it must develop and implement a CMP pursuant to federal requirements. See CZMA section 306(d); 15 CFR part 923. State CMPs are comprehensive management plans that describe the uses subject to the management program, the authorities and enforceable policies of the management program, the boundaries of the State's coastal zone, the organization of the management program, and related State coastal management concerns. The State CMPs are developed with the participation of Federal agencies, industry, other interested groups and the public. Thirty-five coastal States are eligible to participate in the federal coastal management program. Thirty-four of the eligible States have federally approved CMPs. Illinois is not currently participating.

The CZMA federal consistency provision is a cornerstone of the CZMA program and a primary incentive for States' participation. Federal consistency is a limited waiver of federal supremacy and authority. Federal agency activities that have coastal effects must be consistent to the maximum extent practicable with the federally approved enforceable policies of the State's CMP. In addition, non-federal applicants for federal authorizations and funding must be fully consistent with the enforceable policies of State CMPs. While States have negotiated changes to thousands of

federal actions over the years, States have concurred with approximately 93%-95% of all federal actions reviewed.

NOAA's federal consistency regulations were first promulgated in 1979. In late 1996, OCRM began a process to comprehensively revise the regulations in consultation with Federal agencies, States, industry, Congress, and other interested parties. NOAA published a proposed rule in April 2000 and a final rule on December 8, 2000, which became effective on January 8, 2001. Most of the changes in the revised 2000 regulations were dictated by changes in the CZMA or by specific statements in the accompanying legislative history. For instance, the 2000 regulations added language concerning the scope of the federal consistency "effects test." Prior to the CZMA 1990 amendments, Federal agency activities "directly affecting" the coastal zone were subject to federal consistency. The 1990 CZMA amendments broadened this language by dropping the word "directly" to include actions with "effects" on any land or water use or natural resource of the coastal zone. Other changes to the original 1979 regulations improved and clarified procedures based on long-standing interpretive practice.

There are several basic statutory tenets to federal consistency. These are:

1. A federal action is subject to federal consistency if it has reasonably foreseeable coastal effects: the "effects test," CZMA section 307.
2. Federal actions cannot be categorically exempted from federal consistency—the effects test determines the application of the CZMA. CZMA section 307.
3. There are no geographical boundaries to the application of the effects test. CZMA section 307.
4. Early coordination between Federal agencies, applicants and States is encouraged. CZMA section 307.
5. State federal consistency decisions must be based on enforceable policies that are approved by NOAA as part of the State's federally approved CMP. CZMA section 307.
6. States must provide for public comment on their federal consistency decisions. CZMA sections 307; 306(d)(14).
7. Federal development projects within a State's coastal zone are automatically subject to federal consistency. CZMA section 307(c)(2).
8. The Federal agency determines whether a Federal agency activity has coastal effects, and, if there are coastal effects, must provide a consistency determination to the affected State(s) no

later than 90 days before final approval unless the Federal agency and the State agree to a different schedule. CZMA section 307(c)(1).

9. A Federal agency activity must be carried out in a manner consistent to the maximum extent practicable with the enforceable policies of a State's CMP. However, a Federal agency may proceed over a State's objection if the Federal agency provides the State a written statement showing that its activity is consistent to the maximum extent practicable. CZMA section 307(c)(1), (2).

10. States and Federal agencies may seek mediation by the Secretary to resolve serious federal consistency disputes. CZMA section 307.

11. An activity proposed by a non-Federal entity for a required federal license or permit (including an OCS oil and gas plan) is subject to federal consistency if the activity will have reasonably foreseeable coastal effects. CZMA section 307(c)(3)(A) and (B).

12. An applicant for a required federal license or permit activity resulting in coastal effects, including OCS plans, must provide affected States with a consistency certification and necessary information and data supporting the certification. The State must object to or concur with the certification within six months or its concurrence is presumed. For review of OCS plans States must first provide a three-month notice as to the status of its review and if the three-month notice is not provided, then concurrence is presumed. CZMA section 307(c)(3)(A) and (B).

13. An applicant can appeal the State's objection to the Secretary of Commerce, who can override the State's objection if the Secretary finds that the activity is consistent with CZMA objectives or is otherwise necessary in the interest of national security. The Secretary, in making a decision on an appeal, must provide a reasonable opportunity for detailed comments from the Federal agency involved and from the State. CZMA section 307(c)(3)(A).

14. The authorizing Federal agency cannot approve a federal license or permit for an activity with reasonably foreseeable coastal effects unless the State concurs or the Secretary overrides the State's objection. CZMA section 307(c)(3)(A) and (B).

15. State agencies and local governments applying for Federal funds for activities that have reasonably foreseeable coastal effects must provide the State with a consistency certification and the authorizing Federal agency cannot issue the funds unless the State concurs. Applicant agencies can also appeal State objections to the Secretary. CZMA section 307(d).

16. Federal consistency does not supersede, modify or repeal existing laws applicable to Federal agencies. CZMA section 307(e).

17. Federal consistency does not affect the requirements of the Clean Water Act or the Clean Air Act established by the Federal Government or the States and such requirements are part of the States' federally approved CMPs. CZMA section 307(f).

18. The Secretary shall have 30 days to publish a notice of appeal, then 160 days to develop a decision record, and may stay the 160-day period for 60 days, and has a 60-75 day period to issue a decision after the record is closed. CZMA section 319.

These are the statutory parameters of federal consistency. Since 1979, NOAA's federal consistency regulations have interpreted CZMA requirements and provided reliable procedures and predictability for the implementation of federal consistency. Even though the Secretary has discretion in the establishment of procedures to implement the CZMA's statutory provisions, NOAA, in this final rule, as in the 2000 rule, is not altering its long-standing interpretations of the major regulatory definitions set forth in the 1979 regulations, endorsed by Congress in the 1990 reauthorization of the CZMA, relied on in court decisions and as described in the 2000 rule. Consistent with the statute, the 2000 rule and court decisions, NOAA has retained these fundamental and well-established regulatory interpretations. The improvements contained in this final rule change the language of some regulatory provisions to provide greater clarity, transparency and predictability to federal consistency procedures, while retaining NOAA's long-standing interpretations of the CZMA. NOAA's regulations have operated well for the Federal and State agencies and permit applicants and the changes in this final rule will allow them to continue to do so more efficiently and effectively.

III. The Role of the CZMA in OCS and Other Energy Development

The CZMA and the OCSLA interact both by explicit cross-reference in the statutes and through their regulatory implementation. Both statutes mandate State review of OCS oil and gas Exploration Plans (EP's) and Development and Production Plans (DPP's). Both statutes and their corresponding regulations provide a compatible and interrelated process for States to review EP's and DPP's.

When MMS offers an OCS lease sale, it is a Federal agency activity. If MMS determines that the lease sale will have

reasonably foreseeable coastal effects, then MMS must provide a CZMA consistency determination to the affected State(s) examining whether the lease sale is "consistent to the maximum extent practicable" with the enforceable policies of the State's CMP. If the State objects, MMS may still proceed with the lease sale if MMS' administrative record and the OCSLA show that it is fully consistent or consistent to the maximum extent practicable. The ability of a Federal agency to proceed over a State's objection to a proposed Federal agency activity existed prior to the 2000 rule, was further clarified in the 2000 rule and remains unchanged by this final rule.

The CZMA requires that when a lessee seeks MMS approval for its EP or DPP, the lessee must certify to the affected State(s) that the activities authorized by the licenses or permits described in the plans are fully consistent with the enforceable policies of the State's CMP. If the State objects to the consistency certification, then MMS is prohibited from approving the license or permits described in detail in the EP or DPP. The lessee may appeal to the Secretary of Commerce to override the State objection and allow MMS to issue its approvals described in the plan. When deciding an appeal, the Secretary balances the national interest in energy development, among other elements, against adverse effects on coastal resources and coastal uses.

The CZMA and NOAA's regulations ensure that the national interest in the CZMA objectives are furthered. These safeguards are discussed below using OCS oil and gas activities as illustrations.

The "Effects Test." As discussed above, federal consistency review is triggered only when it is reasonably foreseeable that the federal action will have coastal effects, referred to as the "effects test." Consistency does NOT apply to every action or authorization of a Federal agency, or of a non-federal applicant for federal authorizations.

For OCS oil and gas lease sales, MMS determines whether coastal effects are reasonably foreseeable and provides affected States with a consistency determination. For example, MMS has established the Eastern Planning, Central Planning and Western Planning Areas for the Gulf of Mexico. MMS may determine that lease sales in the Eastern Planning Area will not have reasonably foreseeable effects on State coastal uses or resources within the Central Planning Area. Therefore, MMS may choose not to provide States adjacent to the Central Planning Area with a consistency

determination. MMS could also determine that a lease sale held far offshore in the Eastern Planning Area would not have foreseeable coastal effects on Florida or Alabama coastal uses or resources.

For OCS EP's and DPP's the CZMA mandates State consistency review. However, as with Federal agency activities, a coastal State's ability to review the Plans stops at the point where coastal effects are not reasonably foreseeable. Whether coastal effects are reasonably foreseeable is a factual matter to be determined by the State, the applicant and MMS on a case-by-case basis.

If a State wanted to ensure that OCS EP's and DPP's located in a particular offshore area would be subject to State CZMA review automatically, a State could, if NOAA approved, amend its CMP to specifically describe a geographic location outside the State's coastal zone where such plans would be presumed to affect State coastal uses or resources. See 15 CFR 930.53. Or, if a State wanted to review an EP or DPP where the applicant and/or MMS have asserted that coastal effects are not reasonably foreseeable, the State could request approval from NOAA to review such plans on a case-by-case basis. See 15 CFR 930.54 (unlisted activities). In both situations, NOAA would approve only if the State made a factual demonstration that effects on its coastal uses or resources are reasonably foreseeable as a result of activities authorized by a particular EP or DPP. Similarly, where the applicant or FERC has asserted that a proposed project located outside the coastal zone or outside a geographic location described in a state's management program pursuant to 15 CFR 930.53, will not have reasonably foreseeable coastal effects, NOAA would not approve a State request to review the project unless the State made a factual demonstration that the project has reasonably foreseeable coastal effects. This final rule does not change that process.

NOAA Approval of State CMPs. NOAA, with substantial input from Federal agencies, local governments, industry, non-governmental organizations and the public, must approve State CMPs and their enforceable policies, including subsequent changes to a State's CMP. NOAA's required approval ensures consideration of Federal agency activities and federal license or permit activities, including OCS plans. For example, NOAA has denied State requests to include policies in its federally approved CMP that would

prohibit all oil and gas activities off its coast because such policies conflict with the CZMA requirements to consider the national interest in energy development, see CZMA sections 303(2)(D) and 306(d)(8), and to balance resource protection with coastal uses of national significance.

Consistent to the Maximum Extent Practicable and Fully Consistent. For Federal agency activities under CZMA section 307(c)(1), such as OCS Lease Sales, a Federal agency may proceed with the activity over a State's objection if the Federal agency determines its activity is consistent to the maximum extent practicable with the enforceable policies of the State's CMP. This means that even if a State objects, MMS may proceed with an OCS lease sale when MMS provides the State with the reasons why the OCSLA and MMS's administrative record supporting the lease sale decisions prohibit MMS from fully complying with the State's enforceable policies. MMS could also proceed if it determined that its activity was fully consistent with the State's enforceable policies. Under NOAA's regulations, the consistent to the maximum extent practicable standard also allows Federal agencies to deviate from State enforceable policies and CZMA procedures due to unforeseen circumstances and emergencies. This final rule does not change the application of the consistent to the maximum extent practicable standard.

Appeal to the Secretary of Commerce. For non-federal applicants for federal authorizations, such as OCS EP and DPP approvals and FERC certificates under the Natural Gas Act or licenses under the Federal Power Act, the applicant may appeal a State's objection to the Secretary of Commerce pursuant to CZMA sections 307(c)(3) and (d). The Secretary overrides the State's objection if the Secretary finds that the activity is consistent with the objectives or purposes of the CZMA or is necessary in the interest of national security. If the Secretary overrides the State's objection, then the Federal agency may issue its authorization.

Since 1978, MMS has approved over 10,600 EP's and over 6,000 DPP's. States have concurred with nearly all of these plans. In the 30-year history of the CZMA, there have been only 18 instances where the offshore oil and gas industry appealed a State's federal consistency objection to the Secretary of Commerce. The Secretary issued a decision in 14 of those cases. The Secretary did not issue a decision for the other 4 OCS appeals because the appeals were withdrawn due to settlement negotiations between the

State and applicant or a settlement agreement between the Federal Government and the oil companies involved in the projects. Of the 14 decisions (1 DPP and 13 EP's), there were 7 decisions to override the State's objection and 7 decisions not to override the State.

Since the 1990 amendments to the CZMA, there have been several OCS oil and gas lease sales by MMS and only one State objection. In that one objection OCRM determined that the State's objection was not based on enforceable policies, MMS determined that it was consistent to the maximum extent practicable with the State's CMP, and the lease sale proceeded. Thus, all lease sales offered by MMS since the 1990 amendments have proceeded after State federal consistency review. In addition, since 1990, there have been six State objections to OCS plans. In three of those cases, the Secretary did not override the State's objection. In two of the cases the Secretary did override the State allowing MMS approval of the permits described in the plans, and in one case the State objection was withdrawn as a result of a settlement agreement between the Federal Government and the oil companies involved in the project.

With respect to FERC jurisdictional matters, there have been two State objections in the past three years to applications for certificates of public convenience and necessity to construct and operate natural gas pipelines. In one of these cases, the Secretary ruled the project did not meet the requirements for overriding State objections. In the other, the Secretary overrode State objections and ruled the project could proceed.

Presidential Exemption. After any appealable final judgement, decree, or order of any Federal court, the President may exempt from compliance the elements of a Federal agency activity that are found by a Federal court to be inconsistent with a State's CMP, if the President determines that the activity is in the paramount interest of the United States. CZMA § 307(c)(1)(B). This exemption was added to the statute in 1990 and has not yet been used.

Mediation. Mediation has been used to resolve federal consistency disputes and allowed federal actions to proceed. In the event of a serious disagreement between a Federal agency and a State, either party may request that the Secretary of Commerce mediate the dispute. NOAA's regulations also provide for OCRM mediation to resolve disputes between States, Federal agencies, and other parties.

IV. Explanation of Proposed Changes to the Federal Consistency Regulations

Rule Change 1: § 930.1(b) and (c) Overall Objectives. This change moves the parenthetical with the description of "federal action" from § 930.11(g) to the first instance of the term in § 930.1(b). Federal action is used throughout the regulations to refer, when appropriate, to subparts C, D, E, F and I. The final rule adds a statement to § 930.1(c) to encourage states to participate in the administrative processes of federal agencies. This would strengthen the early coordination objectives of the CZMA and enhance the ability of federal agencies to address the enforceable policies of a state's management program.

Rule Change 2: § 930.10 Definitions Table of Contents—Definition of Failure Substantially to Comply with an OCS Plan. The reference to section 930.86(d) is incorrect. There was no 930.86(d). The reference is now to 930.85(c). There is no change from the proposed rule.

Rule Change 3: § 930.11(g) Definitions—Effect on any coastal use or resource (coastal effects). This change moves the parenthetical for "federal actions" to the first instance of federal action in § 930.1(b) and inserts more specific language for Federal agency activity and federal license or permit activity. There is no change from the proposed rule.

Rule Change 4: § 930.31(a) Federal agency activity. This change does not alter the current application of the definition of Federal agency activity, but clarifies that a "function" by a Federal agency refers to a *proposal for action*. The examples included are also rewritten to emphasize that a proposed action is an essential element of the definition. In response to commenters' concerns that Federal agencies may view this change as a basis to exempt some activities from the effects test, NOAA reiterates that this change does not affect the application of the effects test. Congress amended the CZMA in 1990 to make it clear that no federal actions are categorically exempt from federal consistency and that the determination of whether consistency applies is a case-by-case analysis of whether a Federal agency activity will have reasonably foreseeable effects on any coastal use or resource. See H.R. Conf. Rep. No. 964, 101st Cong., 2d Sess. 968–975, 971; 136 Cong. Rec. H 8076 (Sep. 26, 1990); and 65 FR 77125 (December 8, 2000). The change to this section is consistent with Congressional directives.

It has always been NOAA's view that federal consistency applies to proposals

to take an action or initiate a series of actions that have reasonably foreseeable coastal effects, and not to agency deliberations or internal tasks related to a proposed agency action. See e.g., sections in NOAA's 2000 regulations that refer to "proposed" activities: 15 CFR 930.36(a), 930.35, 930.39(a), 930.46(a), 930.1(c), 930.11(d). See also discussion in the preamble to the 2000 final rule: 65 FR 77130, Col. 2–3 (December 8, 2000). Thus, a planning document that explores possible projects or priorities for an agency is not a Federal agency activity, as there is no action proposed. However, a Federal agency plan or rulemaking proposing a new action is a Federal agency activity subject to the effects test.

Not all "planning" or "rulemaking" activities are subject to federal consistency since such planning or rulemaking may merely be part of the agency's deliberative process. Likewise, the plan or rulemaking may not propose an action with reasonably foreseeable coastal effects and would therefore not be subject to federal consistency. If, however, an agency's administrative deliberations result in a plan to take an action, or a rulemaking proposing an action or a directive, then that plan or rulemaking could be subject to federal consistency if coastal effects are reasonably foreseeable. For example, MMS produces a 5-year Leasing Program "Plan," pursuant to the OCSLA. MMS has informed NOAA that the 5-Year Program Plan is a preliminary activity that does not set forth a proposal for action and thus, coastal effects cannot be determined at this early stage. Accordingly, MMS' proposal for action would occur when MMS conducts a particular OCS oil and gas lease sale.

Once a Federal agency proposes an action, it is the proposal for action which is the subject of the consistency review. The State only reviews the proposed action and does not review all tasks, ministerial activities, meetings, discussions, and exchanges of views incidental or related to a proposed action, and does not review other aspects of a Federal agency's deliberative process. In addition, Federal agency activities do not include interim or preliminary activities incidental or related to a proposed action for which a consistency determination has been or will be submitted and which do not make new commitments for actions with coastal effects. Such interim or preliminary activities are not independent actions subject to federal consistency review.

For example, where a Federal agency has not yet submitted a consistency

determination to a State or where a State has already concurred with a Federal agency's consistency determination for a proposed action, planning activities related to the agency's deliberative process may occur before or after the State's federal consistency review that are incidental to the proposed action. In these cases the interim or preliminary activity would not be subject to federal consistency review.

In the OCS oil and gas context, examples of interim or preliminary activities which are not Federal agency activities include the publication of OCS 5-Year programs, as discussed above; or rulemakings establishing administrative procedures for OCS-related activities that do not affect coastal uses or resources (e.g., rulemaking prescribing the completion and submission of forms). Consistent with the Ninth Circuit's decision in *California ex rel. Cal. Coastal Comm'n v. Norton*, 150 F. Supp.2d 1046 (N.D. Cal. 2001), *aff'd*, 311 F.3d 1162 (9th Cir. 2002), MMS action to grant or direct suspensions of OCS operations or production is an interim or preliminary activity and not a Federal agency activity subject to federal consistency when the lease suspension would not have reasonably foreseeable coastal effects. If the State had previously reviewed any reasonably foreseeable coastal effects of a lease suspension during the State's review of the lease sale, EP or DPP for federal consistency, then the lease suspension would not be the subject of a new consistency review. In this sense, the lease suspension is an interim or preliminary activity. See NOAA's response to comments 25 and 26 for further discussion on lease suspensions and *California v. Norton* and NOAA's conclusion that in all foreseeable instances, lease suspensions would not be subject to federal consistency review since (1) in general, they do not authorize activities with coastal effects, and (2) if they did contain activities with coastal effects, the activities and coastal effects would be covered in a State's review of a previous lease sale, an EP or a DPP. If a State believes that a particular lease suspension should be subject to federal consistency, the State should notify MMS. MMS could (1) agree with the State that coastal effects are reasonably foreseeable and provide the State with a consistency determination; (2) provide the State with a negative determination pursuant to 15 CFR 930.35; and/or (3) determine that the lease suspension is an interim activity that does not propose a new action with coastal effects.

In another example of what is subject to State consistency review, consider

the situation when the Navy proposes to construct a pier. The project involves compliance with numerous federal laws, e.g., National Environmental Policy Act (NEPA) documents, Endangered Species Act (ESA) section 7 consultation, a Rivers and Harbors Act section 10 permit from the Army Corps of Engineers (Corps), contracts with a construction company to build the pier, etc. These various authorizations and activities related to the Navy's proposal to build the pier are not separate Federal agency activities subject to federal consistency. The Federal agency activity for purposes of 15 CFR 930.31 is the proposal to build the pier. Under 15 CFR 930.36(b), the Federal agency determines when it has sufficient information to provide the State with a consistency determination. For instance, in this example of the Navy pier, the Navy could conclude that under Navy procedures the pier is not a proposed action until the proposed activity requires analysis under NEPA. The State reviews only the pier proposal. The State uses the information provided by the Navy, pursuant to 15 CFR 930.39(a), to evaluate coastal effects and determine consistency with the State's enforceable policies. The State may request, or the Navy may provide, the Corps section 10 permit application, or the Biological Opinion under the ESA or the NEPA document, in addition to the Navy's consistency determination. Information in these documents may be used as part of the necessary information required by 15 CFR 930.39, but they are not required to be part of the information required in § 930.39(a) and are not reviewed as the proposed Federal agency activity for consistency.

NOAA has changed "event(s)" to "activity(ies)" since the term "activities" more closely follows the statute and NOAA's regulations.

The final rule makes minor changes from proposed rule. There is no change in meaning from the proposed rule. The first sentence in this section in the proposed rule language was grammatically awkward. The final rule merely breaks the first sentence into two sentences and makes minor grammatical corrections to the second sentence.

Rule Change 5: § 930.31(d) Federal agency activity—General Permits. In the 2000 rule, NOAA acknowledged the hybrid nature of general permits and gave Federal agencies the option of issuing a general permit under either CZMA § 307(c)(1) (Federal agency activity) or CZMA § 307(c)(3)(A) (federal license or permit activity), even though NOAA has opined that, for CZMA purposes, a general permit was more appropriately treated as a Federal

agency activity. In this final rule, NOAA has removed the option to allow Federal agencies to treat their general permits as a federal license or permit activity for purposes of complying with CZMA § 307 and 15 CFR part 930. If a general permit is proposed by a Federal agency and coastal effects are reasonably foreseeable, then the general permit is a Federal agency activity under CZMA § 307(c)(1) and 15 CFR part 930, subpart C. NOAA's determination that general permits are Federal agency activities and not federal license or permit activities under CZMA § 307 is for CZMA purposes only and is based on the reasons described below, which are specific to the requirements of the CZMA. Therefore, this determination does not affect the status of general permits under the Administrative Procedure Act or under any other federal statute. For example, while general permits issued under the Clean Water Act are Federal agency activities under these revised regulations, NOAA recognizes that EPA continues to consider those same permits to be licenses or permits for purposes of the APA and for purposes of State certification under Clean Water Act section 401.

There are several reasons why a general permit should not be a federal license or permit activity under CZMA § 307. Under NOAA's regulations, Federal agencies are not "applicants" within the meaning of 15 CFR 930.52. See 65 FR 77145 (col 1&2) (Dec. 8, 2000). Even if NOAA were to change its regulations to allow a Federal agency to be an "applicant," it is not clear how the Federal agency could appeal the State's objection to the Secretary of Commerce.

Further, even if a general permit were treated as a federal license or permit activity for CZMA § 307 purposes and a State objected, it would be problematic for the potential users of a general permit to appeal the State's objection since there would be no case specific factual inquiry on which the Secretary could base an appeal decision.

Other changes clarify that if a State objects to a consistency determination for a general permit, the general permit would, pursuant to the consistent to the maximum extent practicable standard as described in 15 CFR 930.32, still be in legal effect for that State, but that 15 CFR part 930, subpart C of the consistency regulations would no longer apply. Thus, a State objection to a consistency determination for the issuance of a general permit would alter the form of CZMA compliance required, transforming the general permit into a series of case-by-case CZMA decisions

and requiring an individual who wants to use the general permit to submit an individual consistency certification to the State agency in compliance with 15 CFR part 930, subpart D. However, all provisions of the license or permit sections would apply, including the "listing," "unlisted," and "geographic location description" requirements in §§ 930.53 and 930.54. Once the State concurs with the certification, then an individual user may undertake the activity(ies) authorized by the general permit in accordance with the State's concurrence. If the State objects to the individual user's (now an applicant under subpart D) consistency certification, then the individual cannot undertake the activity(ies) authorized by the general permit, unless the individual user (now the applicant) appeals the State's objection to the Secretary of Commerce, pursuant to subpart H, and the Secretary overrides the State's objection.

NOAA reiterates that if a State concurs with a consistency determination for a general permit, then the State has no authority under the CZMA to review individual uses of the general permit under subpart C or D. For example, in the OCS oil and gas context, if a State has concurred with the Environmental Protection Agency's consistency determination for an OCS National Pollutant Discharge Elimination System (NPDES) general permit under the Clean Water Act, then the State may not review the use of the NPDES general permit for consistency at the OCS EP or DPP stage of reviews or when a facility files a notice of intent to be covered by a general permit under the NPDES regulations. If, however, a State objects to the OCS NPDES general permit, then each user, or "applicant" in CZMA parlance, must file a consistency certification with the State pursuant to subpart D, and obtain the State's concurrence before it may undertake the activities authorized by the NPDES general permit.

Minor editorial changes were made from the proposed rule with no change in meaning. The term "approval" was replaced with "issuance" since issuance more accurately describes the distinction between a general permit and case-by-case permits. The last sentence was not clear regarding when someone had to provide the State with a certification after a State objected to a general permit. The change provides a clearer statement that only applicants and persons who want to use a general permit would have to provide the certification, and not all potential users in the State. The general permit section

would only apply to subpart D and E applicants.

Rule Change 6: § 930.35(d) General negative determination. Section 930.35(d) is changed to (e) and a new section 930.35(d) is added. The general negative determination (General ND) has been developed as an administrative convenience when Federal agencies undertake repetitive activities that, either on an individual, case-by-case basis or cumulatively, do not have coastal effects. The General ND does not alter the factual basis required for federal consistency reviews.

A General ND does not alter the requirement for Federal agencies to provide consistency determinations to coastal States when there are reasonably foreseeable coastal effects, the "effects test." The Federal agency must still make an analysis of coastal effects for the repetitive activities, individually and cumulatively. The General ND is an analogue to the existing General consistency determinations (15 CFR 930.36(c)) (which is for repetitive activities which do have cumulative effects). For example, a General ND may apply to activities far away from the coastal zone because coastal effects are not foreseeable, but might not apply to the same set of activities if proposed in or near the coastal zone where the proximity of the activities to coastal uses or resources may have coastal effects and require a General consistency determination or individual consistency determination.

A Federal agency is not required to use a General ND. If any one of the conditions for a negative determination are met, then a Federal agency could choose to provide the State with either an individual Negative Determination, or if applicable, a General ND. The conditions for a Negative Determination are when a Federal agency determines that its proposed action will not have coastal effects and the activity is (1) listed in the State's program or the State has notified the Federal agency that it believes coastal effects are reasonably foreseeable, (2) the activity is the same as or is similar to activities for which consistency determinations have been prepared in the past, or (3) the Federal agency undertook a thorough consistency assessment and developed initial findings on the coastal effects of the activity. See 15 CFR 930.35(a)(1)–(3).

If a State subsequently finds that a General ND may no longer be applicable, the State agency may request that the Federal agency reassess the General ND. In the case of a disagreement between the State and the

Federal agency, the conflict resolution provisions of subpart G are available.

A minor editorial change was made from the proposed rule. NOAA replaced the word "specified" with "specific."

Rule Change 7: § 930.37 Consistency determinations and National Environmental Policy Act (NEPA) requirements. The change clarifies information needs related to NEPA documents by providing more specific direction of the long-standing understanding of the distinction between NEPA and CZMA. Federal agencies are required to submit information to support a consistency determination, pursuant to the requirements in § 930.39, and may do so in any manner it chooses. Thus, even though a Federal agency may provide a NEPA document to support its consistency determination, States cannot require Federal agencies to do so.

Rule Change 8: § 930.41(a) State agency response. This change clarifies when the State's consistency review period begins for Federal agency activities. The changes provide additional clarification that the State's determination of whether the information provided by the Federal agency pursuant to 15 CFR 930.39(a) is complete, is not a substantive review. Instead, it is a "checklist" review to see if the description of the activity, the coastal effects, and the evaluation of the State's enforceable policies are included in the submission to the State agency. If the items required by § 930.39(a) are included, then the 60-day review starts. This review does not determine or evaluate the *substantive adequacy* of the information. The adequacy of the information is a component of the State's substantive consistency review which occurs during the 60-day review period.

To help resolve disputes as to when the 60-day review period started when a State later claims that required information was not provided, NOAA replaced the requirement to "immediately" notify the Federal agency that information required by § 930.39(a) is missing with a 14-day notification period. If the State agency has not notified the Federal agency of missing information within this 14-day period, then the State waives the ability to make that claim and the 60-day review period is deemed to have started when the State received the initial determination and information. This means that State agencies should pay close attention to the date they receive consistency determinations. States retain the ability to conduct a full 60-day review (or 75-day review with

extension), request additional information during the State's 60-day review, or object for lack of information at the end of the 60-day review period.

A minor editorial change was made from the proposed rule. The last sentence was grammatically awkward so it was broken into two sentences, with no change in meaning.

Rule Change 9: § 930.51(a) Federal license or permit. The language changes emphasize and clarify NOAA's long-standing view of the elements needed to determine that an authorization from a Federal agency is a "federal license or permit" within the meaning of the CZMA and therefore subject to State federal consistency review. First, Federal law must require that the applicant obtain the federal authorization. Second, the purpose of the federal authorization is to allow a non-federal applicant to conduct a proposed activity. Third, the activity proposed must have reasonably foreseeable effects on a State's coastal uses or resources, and fourth, the proposed activity was not previously reviewed for federal consistency by the State agency (unless the authorization is a renewal or major amendment pursuant to § 930.51(b)). All four of these elements are required to trigger federal consistency review.

For CZMA federal consistency purposes, "federal license or permit" does not include federal authorizations for activities that do not have coastal effects. Federal consistency does not apply to a required federal certification of an applicant's ministerial paperwork which is merely incidental or related to an activity that either does not have coastal effects or an activity that is already subject to federal consistency review. Ministerial certifications which are merely incidental to an activity undertaken by the applicant and which has already or will soon be the subject of a full federal consistency review are not federal license or permit activities for subpart D purposes. The following examples are authorizations which are not a "federal license or permit" under the CZMA:

Example 1. MMS makes certain determinations such as the qualification of bidders for OCS lease sales, bonding certifications, certifications of financial responsibility, approvals of departures from regulations in order to enhance safety.

Example 2. A Federal agency certifies equipment to be used for an activity where the activity has already been the subject of a consistency review.

Example 3. MMS issuance of "Notification requirements" which merely require the operator to notify MMS of an activity and where MMS' approval is not required are not subject to federal consistency.

Example 4. When the Coast Guard merely reviews the transportation plan of an energy company transporting spent nuclear waste by ship, there is no "license or permit" under CZMA section 307(c)(3)(A) because Coast Guard authorization is not required by Federal law. See *New Jersey v. Long Island Power Authority*, 30 F.3d 403 (3d Cir. 1994) (Coast Guard review of vessel transportation plans was not a Federal agency activity or federal license or permit activity).

However, a lease issued by a Federal agency to a non-Federal entity which is the only federal authorization for the use of the federal property for a non-Federal activity is a "federal license or permit," pursuant to section 307(c)(3)(A), if the applicant is required to obtain a lease from the Federal agency for use of the Federal property, the proposed activity will have coastal effects, and the State did not previously review a required federal authorization for the same activity.

Thus, the language changes to the rule ensure that the definition of "federal license or permits" is not overly-inclusive or beyond the commonly understood meaning of license or permit, while at the same time retaining the phrase "any required authorization" to capture any form of federal license or permit that is: (1) Required by Federal law, (2) authorizes an activity, (3) the activity to be authorized has reasonably foreseeable coastal effects, and (4) the authorization is not incidental to a federal license or permit previously reviewed by the State. Thus, the removal of the forms of approvals listed in the current language does not exclude any category of federal authorizations from federal consistency, but instead emphasizes that any form of federal authorization must have the required elements to be considered a "federal license or permit" for CZMA purposes.

Factual disputes concerning whether a federal authorization is subject to federal consistency can be addressed through NOAA's procedures for the review of listed or unlisted federal license or permit activities. 15 CFR 930.53 and 930.54.

The effects test language previously at the end of the definition is deleted as superfluous since subpart C contains the effects analysis for Federal agency activities.

A minor editorial change was made from the proposed rule with no change in meaning. The proposed language was somewhat redundant and awkward. NOAA moved the end of the first sentence to the beginning, providing a clearer flow for the sentence. In addition, a minor correction was made to add the phrase "federal license or permit" to the second sentence.

Rule Change 10: § 930.51(e) Substantially different coastal effects. Section (e) was added in the 2000 rule to emphasize that determining whether the effects from a renewal or major amendment are substantially different is a case-by-case factual determination requiring the input of all parties. NOAA used the phrase "the opinion of the State agency shall be accorded deference," (emphasis added) to help ensure that the State agency has the opportunity to review coastal effects which may be substantially different than previously reviewed. NOAA expected that the parties would discuss the matter and agree whether effects are substantially different. NOAA did not intend to use the phrase to have the State agency make the decision on whether coastal effects are substantially different. Thus, to provide clarification, NOAA has amended the section so that the Federal permitting agency makes this determination after consulting with the State and applicant. If a State disagrees with a Federal agency's determination concerning substantially different coastal effects, then the State could either request NOAA mediation or seek judicial review to resolve the factual dispute.

A minor editorial change was made from the proposed rule breaking the second sentence into two sentences, with no change in meaning.

Rule Change 11: § 930.58(a)(1) Necessary data and information. This change provides more specific information requirements for federal license or permit activities. The purpose of § 930.58 is to identify the information needed to start the six-month consistency review period and to the extent possible, identify the information needed by the State agency to make its concurrence or objection. Thus, the more specific the information requirements are, the more predictable and transparent the process.

Section 930.58(a)(1) is reorganized to clarify that "necessary data and information" means (1) a copy of the federal application, (2) all supporting material provided to the Federal agency in support of the application, (3) information that is required and specifically described in the State's management program, and (4) if not included in 1 or 2, a detailed description of the activity, its associated facilities and the coastal effects of the activity. The evaluation of the State's enforceable policies is retained under § 930.58(a)(3).

NOAA removed the clause in § 930.58(a)(1) that said "and comprehensive data and information sufficient to support the applicant's

consistency certification." The language removed is viewed as ambiguous because it could refer to the other paragraphs in this section or to other undefined information, and could create uncertainty in the determination of when the six-month review period starts. Section 930.58(a)(2) allows the State to describe in its CMP the necessary specific information in addition to that required by NOAA regulations.

These changes do not affect a State's ability to specifically describe "necessary data and information" in the State's federally approved management program (§ 930.58(a)(2)), or to request additional information during the six-month review period (§ 930.60(c)), or to object for lack of information (§ 930.63(c)).

There is no change from the proposed rule.

Rule Change 12: § 930.58(a)(2) Necessary data and information (State permits). In the 2000 rule, NOAA allowed States to describe State permits as necessary data and information. Unfortunately, implementation of this provision revealed the potential for States to require applicants to obtain State permit approval before the six-month consistency review period could begin. This could result in a State consistency decision before the six-month review period even begins, thus potentially defeating the statutory time frames in the CZMA. In addition, the public comment on federal consistency could be rendered moot because necessary State approvals would already have been obtained. NOAA did not intend the 2000 rule to create a potential conflict between the statutorily defined six-month consistency review process and State permit requirements. While it may be appropriate or necessary for a State to require completed State permit applications as necessary data and information, it is not appropriate to require a State approved or issued permit. Therefore, NOAA has removed "State permits" as eligible necessary data and information requirements, but has retained State permit applications. This change, as described in the proposed rule, contemplated "complete" State permit applications, and NOAA has included "complete" in the final rule. When appropriate, the applicant and the State could agree, pursuant to § 930.60, to stay the six-month period until a specific date to allow for issuance of the State permit. A State, at the end of the six-month review period may, of course, object if the applicant has not yet received the State permit.

In addition, NOAA added language to clarify that when a Federal statute requires a Federal agency to initiate the CZMA review prior to its completion of NEPA compliance, NEPA documents will not be considered necessary data and information pursuant to § 930.58(a)(2). For example, when the operation of a Federal statute precludes a Federal agency from delaying the start of the CZMA process because the NEPA document is not complete, NEPA documents listed in a State's management program cannot be considered necessary data and information. This issue has come to light in the case of the Outer Continental Shelf Lands Act (OCSLA). See explanation of rule change 15: § 930.76(a) and (b) Submission of an OCS plan, necessary data and information and consistency certification. In addition, neither the CZMA nor NEPA require the Federal agency to include CZMA consistency determination information in NEPA documents. Therefore, States cannot delay the start of the CZMA review period because CZMA consistency information is not included in a NEPA document.

Two minor changes were made from the proposed rule. As discussed in the preamble to the proposed rule and in this final rule NOAA intended the rule to refer to "completed" State permit applications. Thus, "completed" is added to the third sentence. The second change is the language regarding NEPA documents discussed above.

Rule Change 13: § 930.60

Commencement of State agency review. These changes clarify when the State's six-month review period begins for federal license or permit activities. The changes clarify that the State's determination of whether the information provided by the applicant pursuant to 15 CFR 930.58 is complete is not a substantive review. Instead it is a "checklist" review to see if the application, description of the activity, the coastal effects, the evaluation of the State's enforceable policies, and specific information described in the State's federally approved program are included in the submission to the State agency. If the items required by § 930.58 are included, then the six-month review starts. This review does not determine or evaluate the *substantive adequacy* of the information. The adequacy of the information is a component of the State's substantive review which occurs during the six-month review period. The change also further clarifies that a State may not stop, stay or otherwise alter the consistency review period once it begins, unless the applicant agrees in

writing to stay the review period until a specific end date. NOAA deleted the word "extend" to avoid potential conflicts with the six-month period set by statute. Thus, the State agency and applicant can stay or "toll" the running of the six-month review period for an agreed upon time ending on a specific date, after which the remainder of the six-month review period would continue. Such agreements must be set forth in writing so that it is clear there is a meeting-of-the-minds between the State and the applicant. Ideally, the written agreement should be one document that both parties sign. The written agreement for a stay must refer to a specific end date and should not be written to require a later event or condition to be satisfied to end the stay.

If a State wants to require information in addition to that required by NOAA in § 930.58(a) prior to starting the six-month review period, the only way the State can do so is to amend its management program to identify specific "necessary data and information" pursuant to § 930.58(a)(2). This is not a new requirement, but was required in the 1979 rule and clarified in the 2000 rule.

NOAA also has removed a State's option of starting the six-month review period when a consistency certification has not been submitted. See below under *Collier Decision* for further information. The rest of the re-write of the section more clearly sets forth the existing provisions for starting the six-month review period when (1) the applicant has not provided a consistency certification, but has provided the necessary data and information described in § 930.58(a), (2) the applicant has provided the consistency certification, but not all necessary data and information described in § 930.58(a), or (3) the applicant has not provided either the consistency certification or all necessary data and information. The paragraphs have been renumbered accordingly.

The Collier Decision. Under the 2000 rule, § 930.60(a)(1)(ii) allowed a State to start the six-month consistency review period even if the applicant had not provided a consistency certification or the necessary data and information. However, now, as described in *Collier*, NOAA has determined that a State could not start the six-month review without the applicant's consistency certification. See NOAA's Dismissal Letter in the Consistency Appeal of Collier Resources Company (April 17, 2002). In *Collier*, NOAA determined that:

An applicant's failure to provide a state with a consistency certification cannot divest

a state of its authority pursuant to CZMA section 307(c)(3)(A). However, filing a state objection without an underlying consistency certification provided by the applicant is neither a remedy for the applicant's failure to comply with the CZMA, nor a valid exercise of [the State's] own CZMA authorities.

The statutory language and scheme of the CZMA presumes that the applicant has the first opportunity to demonstrate that its activity is consistent with the enforceable policies of the state CMP. Section 307(c)(3)(A) provides in pertinent part: "[a]t the earliest practicable time, the state or its designated agency shall notify the Federal agency concerned that the state concurs with or objects to the applicant's certification." The NOAA regulations also require a state objection be made in response to the applicant's consistency certification. 15 CFR 930.64. Likewise, consistency cannot be presumed without the receipt of a consistency certification. 16 U.S.C. 1456(c)(3)(A) and 15 CFR 930.63. Finally, NOAA's regulations anticipate that the applicant will have the first opportunity to provide the state with the necessary information and data to demonstrate consistency with the state CMP and that only after the receipt of that information can the state consistency review process begin. See 15 CFR 930.58.

Given the language and structure of the statute and NOAA's implementing regulations, it is clear that an applicant's consistency certification is essential to a state's Federal consistency review. Therefore, I conclude that a State may not "object" within the meaning of the CZMA, to an application for a federal license or permit when no consistency certification has been submitted. Florida's objection in this case has no effect or is not valid.

A coastal state is not without remedy, however, when a recalcitrant applicant declines to provide the necessary consistency certification. First, both the statute and the regulations make it clear that a Federal agency cannot issue a license or permit until "the state or its designated agency has concurred with the applicant's consistency certification or until by the state's failure to act, the concurrence is conclusively presumed." 16 U.S.C. 1456(c)(3)(A). In addition, a state may seek enforcement of the CZMA in federal court. Unlike the Secretary of Commerce, the federal courts have the authority to require compliance with federal law through the issuance of mandamus, injunction and other relief.

Optimally, in matters such as this, where an applicant disagrees that its permit or license activity is subject to the provisions of a state CMP can be resolved through the availability of mediation services of NOAA's Office of Ocean and Coastal Resource Management (OCRM). 15 CFR 930.55, or an advisory letter issued by OCRM pursuant to 15 CFR 930.142 (15 CFR 930.3(2001)). While these informal procedures do not carry the weight of a federal court order, they represent the views of the expert agency charged with the implementation of the CZMA. These informal remedies are also more expedient and less costly than the Secretarial appeals process or federal litigation.

While not central to the decision made in *Collier*, NOAA opined in *Collier* that the six-month review period could also only start after receipt of the necessary data and information. *Id.* However, NOAA has determined that a State could, if it wished to, waive the requirement that all necessary data and information be received and start the six-month review upon receipt of a consistency certification, but without the necessary data and information (but could not then later stop the six-month time period without agreement from the applicant). NOAA makes this distinction because, as discussed in *Collier*, a consistency certification is central to the State's jurisdiction and authority under the statute to conduct a consistency review. Allowing necessary data and information to be submitted after the six-month period has begun provides flexibility to the State and applicant.

Various edits to § 930.60 were made from the proposed rule. These edits do not change the meaning of the proposed rule and do not add or remove requirements that were not described in the proposed rule. Some of the changes to this section in the proposed rule were difficult to follow. Therefore, the final rule somewhat reorganizes and restates the requirements described in the proposed rule. The final rule replaces "information" in this section with "necessary data and information" to be clear that the section refers to the necessary data and information described in § 930.58(a), and not to other information the State may want during the six-month review. Also, the final rule uses "review period" as a more accurate description than "timeclock."

In paragraph (a), the reference to 930.54(e) is removed because there is no exception in § 930.54(e), as changed in the 2000 rule. Paragraph (a)(1) is rewritten to be clear that this paragraph describes the requirement that a certification must be submitted to start the review period. Paragraph (a)(2) more clearly describes the cases where either the necessary data and information was not received or both the consistency certification and the necessary data and information are missing. The last clause in paragraph (a)(2) addresses the scenario where both the certification and the necessary data and information are missing by clarifying that a certification must be submitted, even if the State elects to start the review period without all necessary data and information. The requirements that were in paragraphs (a)(1)(i) and (ii) in the proposed rule are now more clearly described in paragraphs (a)(1) and (2).

The waiver and last statement in paragraph (a)(2) more clearly describes the requirements that were in (a)(1)(ii), allowing the State to choose to start the review period before receiving all necessary data and information. The last sentence in paragraph (a)(3) is needed when the State starts the six-month review period before receiving all necessary data and information (i.e., the "waiver" described in (a)(2)) to make clear that the review period does not start anew when the State receives the missing necessary data and information.

Minor edits were made to paragraph (a)(3), which was (a)(2) in the proposed rule; paragraph (b), which was (a)(3) in the proposed rule; and paragraph (c), which was (b) in the proposed rule.

Rule Change 14: § 930.63(d). The cross reference to 930.121(d) is incorrect. There is no 930.121(d). The reference is to 930.121(c). There is no change from the proposed rule.

Rule Change 15: § 930.76(a) and (b). Submission of an OCS plan, necessary data and information and consistency certification. These changes address information requirements for OCS plans. The changes provide a more specific list of the information required. Clean Air Act and Clean Water Act permits are not included in NOAA's regulations as these permits are already required to be "described in detail" in OCS plans and are covered under the State's review of the OCS plan. See 30 CFR 250.203(b)(4), 203(b)(19), 204(b)(8)(ii) and 204(b)(14). Thus, States should review CWA and CAA permit applications concurrently with the OCS plan review. If the CWA and CAA information is not described in detail in an OCS plan, then subpart D applies.

While the status of the completion of NEPA documents is an issue raised by coastal States when performing consistency reviews, NOAA is not adding language requiring that NEPA documents be included as information necessary to start the six-month review period. A requirement that NEPA documents (draft or final) be completed prior to the start of the six-month review period is incompatible with statutory requirements in the OCSLA. 43 U.S.C. 1340(c)(1) and 1351(h). MMS must make its decision whether to approve an EP within 30 days of receipt of the EP. Within that 30-day period, MMS completes its Environmental Assessment (EA). Interior has informed NOAA that, MMS submits the EP and accompanying information to the State within days of receipt of the EP to meet OCSLA requirements and to avoid delay in the CZMA process. The six-month review period starts when the State receives that information. MMS sends

the EA to the State when the EA is completed. Since the State receives the EA within a very short period (20–30 days) after the start of the six-month review period, the CZMA process is not delayed unnecessarily.

For DPP's, States can amend their programs, pursuant to 15 CFR 930.58(a)(2), to include draft NEPA documents as data and information necessary to start the six-month review, because there is additional time in the OCSLA process. See 43 U.S.C. 1351(h) and 30 CFR 250.204(1). States can not amend their programs to require final NEPA documents for OCSLA purposes as part of the necessary data and information because the OCSLA requires MMS to approve or deny a DPP within 60 days after completion of the final EIS. *Id.* This 60-day OCSLA period does not provide sufficient time for the six-month CZMA consistency review period.

Paragraph (a) is deleted and combined with (b) as (a) is redundant with (b), particularly (1) and (3).

There is a minor correction from the proposed rule. The term "confidential" is added at the of § 930.76(b), because the phrase used throughout the regulations is "confidential and proprietary information."

Rule Change 16: § 930.77(a). Commencement of State agency review and public notice. This change clarifies the time when the State's consistency review period begins for OCS plans. The changes provide additional direction that the State's determination of whether the information provided by the person pursuant to 15 CFR 930.76 is complete, is not a substantive review. Instead, it is a "checklist" review to see if the OCS plan, description of the activity, the coastal effects, the evaluation of the State's enforceable policies, specific information described in the State's federally approved program, and information required by Interior's regulations are included in the submission to the State agency. If the items required by § 930.76 are included, then the six-month review starts. This review does not determine the *substantive adequacy* of the information. The adequacy of the information is a component of the State's substantive review which occurs during the six-month review period.

The changes also clarify that if the State wants to require additional information in addition to that required by § 930.76 for its review of OCS plans, it would have to describe such information in an amendment to its management program, pursuant to § 930.58(a)(2). This is not a new

provision, but was provided in the 1979 rule and restated in the 2000 rule.

This section is changed to address the circumstances where a State believes the information submitted, as required by NOAA's regulations, is insufficient (e.g., either the analysis is substantively inadequate, or that the OCS plan addresses new activities or effects not foreseen and for which information was not provided). In such a case a State may request additional information. The rule change requires that such a request be made within the first three months of the six-month review period. A change is made from the proposed rule such that, if after the three-month period, new activities or coastal effects not previously described and for which information was not provided become part of the OCS plan, then the State may request additional information on the new activities or effects. A request for additional information does not stop, stay or otherwise alter the six-month review period. As discussed in rule change 26, a consistency concurrence is limited to the scope of the activities and effects reviewed by the State.

In addition to the minor substantive change from the proposed rule discussed above, two minor editorial changes were made, with no change in meaning. The first was to add the term "certification" to the first sentence of § 930.77(a)(1) since the proposed language could be incorrectly interpreted to mean that the six-month review period could start with the necessary data and information, but not a certification. The second editorial change is to rewrite the second sentence of § 930.77(a)(2). The original sentence, while referring to the necessary data and information section for OCS plans, 930.76, it is not clear that this is a reference to the need to amend the State's program if the State wants to require additional necessary data and information to start the six-month review period as opposed to a State's request for additional information after the six-month review period has started.

Rule Change 17: § 930.82 Amended OCS plans. To be consistent with § 930.76(c), this change clarifies that it is Interior, not the person, that submits the consistency certification and information to the State for amended OCS plans.

There is a minor correction from the proposed rule. The term "confidential" is added at the end of § 930.82, because the phrase used throughout the regulations is "confidential and proprietary information."

Rule Change 18: § 930.85 Failure to substantially comply with an approved OCS plan. While this section existed

prior to the 2000 rule revisions, NOAA makes this change to more closely coordinate CZMA and OCSLA requirements. Under NOAA's regulations and the OCSLA program, it is MMS that determines whether a change to an OCS plan is "significant" and thus, whether the change requires CZMA federal consistency review. This determination should be the same for failure to substantially comply with an approved OCS plan. This change would be consistent with CZMA section 307(c)(3)(B), and in fact the language is taken directly from the statute. The previous language was developed in the 1979 regulations as a means of determining when a person has failed to substantially comply. However, CZMA does not provide authorization to NOAA to make such determinations, which should be made by MMS, pursuant to the OCSLA and MMS regulations. Also, to be consistent with § 930.76(c), this change clarifies that it is Interior, not the person, that submits the consistency certification and information to the State for OCS plans.

Three minor changes were made to paragraph (c) from the proposed rule with no change in meaning. Grammar was corrected in the first sentence by reversing "substantially to" to "to substantially" and "comply" was changed to "come into compliance." A third change was made to the second sentence to acknowledge the applicable process under Interior's regulations.

Rule Change 19: § 930.121(c) Alternatives on appeal. This provision was amended in the 2000 rule to address "confusion as to when alternatives may be raised, the consequences of a State agency not providing alternatives or [sic] when it issues its objection, and the level of specificity that the State agency needs to provide to satisfy the element on appeal." 65 FR 77151 (December 8, 2000). Implementation of this change has prompted NOAA to make several refinements in the language. The word "new" is struck to clarify that all information submitted to the Secretary during the appeal may be considered in determining whether an alternative is reasonable and available. The word "submitted" is substituted for the word "described" to reflect more accurately the manner in which information becomes part of the decision record of an appeal.

The last sentence is added to make clear that the Secretary does not substitute his judgement for that of the State in determining whether an alternative is consistent with the enforceable policies of the State management program. This is not a

change in standards or practice, only a clarification. As described in the 2000 rule, both the State and appellant and commenters on the appeal will be able to provide the Secretary with information concerning an alternative. The addition of this sentence, however, makes clear that no alternative, whether submitted to the Secretary by the appellant, the State, a third party, or identified by the Secretary will be considered by the Secretary unless the State submits a written statement that the alternative will allow the activity to be conducted in a manner consistent with the enforceable policies of the management program. Otherwise, the Secretary would be required to make a finding that the alternative is consistent with the management program and effectively substitute the Secretary's judgement for that of the State. The Secretarial appeals process does not review whether the proposed activity is consistent with the State's enforceable policies, but is a *de novo* consideration of whether a proposed activity is consistent with the objectives of the CZMA or otherwise necessary in the interest of national security. Therefore, the Secretary relies on the State to determine whether an alternative would allow the project to proceed in a manner consistent with the enforceable policies of the management program. If a State determines an alternative is consistent with its CMP and the Secretary does not override the State's objection to the proposed activity, then the applicant may pursue the identified alternative approved by the State without further CZMA review by the State.

A minor editorial change with no change in meaning was made from the proposed rule in the beginning of the third sentence.

Rule Change 20: § 930.123 Definitions. Section 930.123 previously defined only "appellant" and "Federal agency" for appeal purposes. The Energy Policy Act described three other terms related to CZMA appeals that NOAA will use in subpart H and need to be defined as well. These three terms are "energy project," "consolidated record," and "lead Federal permitting agency." The definition of "energy project" is broad to cover foreseeable energy facilities related to delivery of energy, e.g., electricity transmission, and development of energy resources, e.g., crude oil and natural gas. For example, energy project would include: nuclear power plants; offshore oil and gas exploration, development, and production facilities; natural gas pipelines; Liquefied Natural Gas (LNG) terminals; hydroelectric facilities; wind power facilities; wave and tidal energy

projects; ocean thermal energy conversion projects; where these projects would require a federal authorization under numerous federal statutes such as the Nuclear Energy Act, OCSLA, Natural Gas Act, Federal Power Act, etc.

The Energy Policy Act defined "consolidated record," and NOAA has adopted that definition in the regulations as the record of all decisions made or actions taken by the lead Federal permitting agency or by another Federal or State administrative agency or officer, maintained by the lead Federal permitting agency, with the cooperation of Federal and State administrative agencies, related to any federal authorization for the permitting, approval or other authorization of an energy project.

The term "lead Federal permitting agency" as used in the Energy Policy Act, is meant to apply to the Federal agency required to issue authorizations under the various energy-related statutes and which would be subject to a federal license or permit under subparts D or I, approval of an OCS plan under subpart E, or federal financial assistance under subparts F or I. of this part for an energy project.

Rule Change 21: § 930.125 Notice of appeal and application fee to the Secretary. In order to process an appeal within the time frames required by the Energy Policy Act, as described in § 930.130, changes are made to various sections (§§ 125, 127, 128 129 and 130) to ensure that briefs, information, and public and Federal agency comment periods accommodate a restricted time period for developing the decision record and issuing a decision. These procedures will provide due process and fair opportunity for comment to all parties and the public.

Changes were made from the proposed rule. The changes are meant to further highlight that, given the 160-day deadline to close the decision record, a 60-day limit on a stay of the 160-day period, and a 60–75 day period to issue a decision after the decision record closes, the appellant's notice of appeal must, at least, raise all issues to be addressed. These issues can be further explored in the appellant's brief, but they must at least be raised in the notice of appeal in order to be considered by the Secretary.

NOAA also changed the deadline in paragraph (f) that an appellant must submit the appeal fee if the Secretary denies a fee waiver request from 20 days to 10 days. This change is necessary to meet the new appeal deadlines established by the Energy Policy Act. Otherwise, NOAA would likely have to

publish its 30-day notice of the appeal in the **Federal Register** before knowing whether appellant wanted to continue with the appeal.

Rule Change 22: § 930.127 Briefs and Supporting Materials. The changes in § 930.127 reflect changes in practice necessary to accommodate the time frames for the closure of the decision record in § 930.130 and to make the administration of the appeals process more efficient and transparent to the public. States and potential appellants. These changes will likely mean that States, appellants, Federal agencies and the public will have to be more diligent in providing thorough and complete information to the Secretary in a shorter amount of time. The changes allow each party and the public, in most cases, only one opportunity to provide their information and arguments to the Secretary. The changes reflect the fact that the Secretary needs only sufficient time and information to make a rational and well-reasoned determination of each of the elements in 15 CFR 930.121 or 930.122.

NOAA has retained the requirement from the proposed rule that the appellant's brief is due within 30 days of the filing of the notice of appeal and the State's brief will be due 60 days after appellant's filing of the notice of appeal. It was necessary to retain these time periods in order to meet the 160-day period established by the Energy Policy Act. In addition, NOAA provided a 20-day period for the appellant to file a reply brief to the State agency's brief. NOAA is including the appellant's reply brief, but not a reply brief from the State agency for the following reasons. It is standard appellate procedure and is predicated on the fact that the State agency's principal brief is a reply to the appellant's principal brief. Since the State agency may raise issues not addressed by appellant, appellant should be able to reply since appellant bears the burden of persuasion on the appeals. Further, NOAA's regulations do provide the Secretary with flexibility to require supplemental briefs if deemed necessary. Therefore, if a State agency wanted to reply to a particular matter raised in appellant's reply brief, it could request that the Secretary authorize such a brief.

NOAA has added new §§ 930.127(b) and (c). In paragraph (b) NOAA establishes page limits for briefs and in (c) a slightly different way for the appellant and State agency to organize the supporting documentation and material. By establishing an "appendix," as is done for judicial proceedings, the parties and the Secretary would have a common record

to cite to. These changes are provided to encourage the appellant and State agency to help the Secretary meet the deadlines established in the Energy Policy Act.

The change to § 930.127(f) would move language from § 930.130(d) regarding the appellant's burden to support its appeal. NOAA has removed language that was in the proposed rule regarding the State's burden of persuasion for alternatives. This is a minor change, since the proposed rule appeared to misstate the Secretary's long-standing practice in accordance with the Secretary's decision in *Korea Drilling Inc.* at 23 (1989) ("If a State describes one or more consistent alternatives in its objection, the burden shifts to the appellant. In order to prevail on Element (three), the appellant must then demonstrate that the alternative(s) is unreasonable or unavailable"). Thus, the State's burden regarding alternatives is described in sections 930.63(d) (describing alternatives with sufficient specificity), and 930.121(c) (determining if the alternative is consistent with the State's enforceable policies).

NOAA also amended paragraph (c)(1) to more clearly describe the content of the decision record and that the Secretary takes notice of the administrative decisions and records of the authorizing Federal agency, when the information is submitted to the Secretary's appeal decision record.

Paragraph (g) is amended to allow the Secretary to extend the time for submission, and length, of briefs and supporting materials for good cause.

NOAA has added paragraph (i) to comply with provisions in the Energy Policy Act specifying the content of the Secretary's decision record for energy projects, including projects requiring an authorization under section 3 or a certificate of public convenience and necessity under section 7 of the Natural Gas Act (15 U.S.C. 717b and 717f). The Energy Policy Act requires that the lead Federal permitting agency, with the cooperation of Federal and State administrative agencies, maintain a consolidated record of all decisions made or actions taken by the lead agency or by another Federal or State administrative agency or officer. The Secretary must use this consolidated record for CZMA appeals. The Secretary may supplement the consolidated record pursuant to CZMA section 319, as amended by the Energy Policy Act and as described in § 930.130(a)(2) of this final rule. The Secretary may require any supplemental information specifically requested by the Secretary to complete a consistency review under

the CZMA, or any clarifying information submitted by a party to the proceeding related to information in the consolidated record compiled by the lead Federal permitting agency.

The intent of the Energy Policy Act and paragraph (i) is to provide a more efficient and less time consuming process to develop a decision record for CZMA appeals. Relying principally on the lead Federal permitting agency's consolidated record should help. NOAA has determined that in order to effectively and efficiently frame and evaluate CZMA arguments needed to decide the grounds for appeal described in § 930.121 for an appeal of an energy project, briefs required in § 930.127(a), (b) and (c) are required. This is consistent with Energy Policy Act requirements for the consolidated record. NOAA recognizes that the Energy Policy Act is a limitation on the Secretary's evidentiary record. NOAA does not believe such limitation includes appeal briefs. The consolidated record is the background materials and comments compiled as part of the lead Federal permitting agency, other Federal and State agency processes, and maintained by the lead Federal permitting agency. The CZMA appeal briefs are needed so appellants and State agencies can use the consolidated record and argue their case before the Secretary; otherwise, parties would not be able to argue their CZMA case. Moreover, the Energy Policy Act clearly expects CZMA appeals to be processed since it describes decision record deadlines. If no briefs were allowed there would be no reason to have any decision record deadlines for energy projects.

Further, in order for the Secretary to have sufficient time within the 160-day decision record period to evaluate the decision record, the appellant must submit the lead Federal permitting agency's consolidated record along with appellant's notice of appeal. NOAA has provided that, notwithstanding § 930.125(e), the Secretary, for good cause shown, may extend the time required for filing a notice of appeal for an energy project to allow appellant time to prepare the consolidated record for filing.

Finally, in keeping with the timeframes mandated by the Energy Policy Act, NOAA will not provide a public or Federal agency comment period for appeals of energy projects. The appellant, State agency, Federal agencies or the public may only submit supplemental materials when the Secretary requests such information after a determination that the information is needed pursuant to

§ 930.130(a)(2). Therefore, to have their views included in the consolidated record, interested parties should submit comments on energy projects when the lead Federal permitting agency provides such comment periods according to applicable Federal law, and through the State agency's CZMA review, including comments related to the CZMA and potential appeals to the Secretary.

Rule Change 23: § 930.128 Public notice, comment period, and public hearing. The changes to § 930.128 would accommodate the 160-day period to develop the decision record in § 930.130. Other changes promote clarity and efficiency in obtaining comments from the public and interested Federal agencies, and in processing the appeal. In addition, NOAA makes explicit the Secretary's practice of giving additional weight to a Federal agency's comments when the comments concern topics within the area(s) of the agency's technical expertise.

Other changes were made from the proposed rule. In paragraph (b), NOAA established a definitive 30-day comment period for both the public and Federal agencies. Pursuant to the requirements of the Energy Policy Act, NOAA will not provide a public or Federal agency comment period for appeals of energy projects. Supplemental public or Federal agency comment during the Secretary's review of an appeal for an energy project may only be provided if the Secretary determines such opportunity for comment is needed pursuant to § 930.130(a)(2). The 30-day comment period will be noticed in the Secretary's Notice of Appeal. This is needed to accommodate the 160-day period to develop the decision record. The Secretary will be able to provide a longer comment period, if necessary, pursuant to § 930.127. Minor edits were made to the last sentence of paragraph (c)(1) to be more precise about comments from Federal agencies. A minor change was made to paragraph (d) changing the time period from 45 days to 30 days for submitting a request for a public hearing. In addition, NOAA clarified that if a public hearing is held, the comment period shall be reopened and public and Federal agency comments must be submitted 10 days after the hearing. These changes will help the Secretary process appeals in a timely manner.

Rule Change 24: § 930.129 Dismissal, remand, stay, and procedural override. The additions to § 930.129 accommodate the 160-day period to develop the decision record in § 930.130. Two changes were made from the proposed rule. In paragraph (c), NOAA deleted

the proposed language regarding "extending" the appeal process. By establishing the new 160-day period for closing the decision record, the Secretary would not "extend" the processing of the appeal beyond the 160 days, but would stay (or "toll" the running of) the 160-day period, pursuant to the stay provisions in § 930.130. In paragraph (d) NOAA removed the "20-day" period giving the Secretary more flexibility to determine the time period for remand back to the State during the 160-day period to develop the decision record.

Rule Change 25: § 930.130 Closure of the decision record and issuance of decision. NOAA's proposed 270-day period to develop the decision record, and the stays for NEPA and ESA purposes, were superceded by the Energy Policy Act. The provisions in § 930.130 now follow the wording of the Energy Policy Act. The section now provides 160 days as a definitive date by which the Secretary shall close the decision record in appeals filed from State objections under 15 CFR part 930, subparts D, E and F. The Secretary may stay the 160-day period for a period not to exceed 60 days: (1) If the parties mutually agree to stay the 160-day period or, (2) to ensure that the Secretary has any supplemental information specifically requested by the Secretary to complete a consistency review under the CZMA, or any clarifying information submitted by a party to the proceeding related to information in the consolidated record compiled by the lead Federal permitting agency. This could include relevant NEPA and ESA documents, if the Secretary determines that such information is needed to decide the appeal. NOAA continues to emphasize that if NEPA or ESA documents are needed, this does not mean that the Secretary would create NEPA or ESA documents for the appeal. The Secretary would only be seeking NEPA and/or ESA documents required for the Federal agency authorization or funding which is the subject of the appeal. The Secretary's action in deciding a consistency appeal does not require the preparation of environmental analyses pursuant to NEPA and ESA.

Other changes are made to more accurately track the existing statutory language. Minor grammatical edits were made from the proposed rule, with no change in meaning.

Rule Change 26: §§ 930.46(a)(3), 930.66(a)(3), 930.101(a)(3) Supplemental coordination for proposed activities. The changes to these sections were not in the proposed rule. However, these changes address

the objectives and proposed changes in the proposed rule to improve the clarity of the consistency process related to commencement of the States' review periods and changes to information needs. This change recognizes the fact that if a State concurs or concurrence is presumed, the concurrence is valid only for the activities and effects described by the Federal agency, applicant or applicant agency submitted to the State during the State's review. This change addresses the problem posed by a State concurrence for a project which was substantially changed during the State's review period, but the State was not privy to the change, the change would have coastal effects and the State has enforceable policies applicable to the change or its effects. The rule also reflects the importance of ensuring that the State is provided with timely notice of project changes and related information during the States review periods. This rule change does not apply to subpart E because amended OCS plans are already covered under § 930.82.

V. Comments Received by NOAA on the Proposed Rule

NOAA received 3066 comments on the proposed rule from the House of Representatives, the Senate, States, the Energy Industry, Environmental Groups, Federal agencies, and the public. Most comments strongly oppose any changes to NOAA's rules. NOAA appreciates these comments and understands, and agrees with, the concern that NOAA not "weaken" the federal consistency authority as provided in the CZMA and the 2000 rule. However, NOAA believes that neither the proposed rule nor this final rule affect a State's ability to review federal actions that have coastal effects. In addition, it is NOAA's view that the clarifications and improvements in this final rule do not change the agency's long-standing interpretation of the CZMA. NOAA carefully reviewed each comment in developing this final rule. Below are NOAA's responses to comments on the proposed rule. Comments 1–19 are general comments on the proposed rule. Comments 20–113 are comments on specific sections of NOAA's consistency regulations. A list of commenters by comment will be posted on OCRM's Federal Consistency Web site: http://coastalmanagement.noaa.gov/czm/federal_consistency.html.

General Comments

Comment 1. Overall, we feel that the proposed changes will go far to clarify the confusion which exists in the current regulations.

Comment 2. We find many of the changes to be worthwhile both in terms of clarity and streamlining the consistency process. In particular we note that many of the proposed changes are intended to speed the appeals process; we recognize the need, for all parties involved, for an efficient and predictable process. We support NOAA's rule modification and guidance to develop an expedited appeals process that is fair and equitable both to States and to applicants.

NOAA Response to Comments 1 and 2. NOAA notes these comments.

Comment 3. The proposed changes are inconsistent with, and fail to implement, the CZMA and would substantially weaken the States' abilities to safeguard their coastal resources. For example, the proposed changes would: —Make it more difficult for a State to obtain the information it needs to evaluate a proposed plan, and impose unrealistic deadlines for State review; —Reduce the weight given to a State's opinion on the application of consistency to a federal action; —Potentially exempt major proposals from State review, such as offshore oil and gas development, even though the projects may impact the coastal zone of the affected State; —Virtually eliminate States from the process of considering appeals from States' objections to CZMA approvals; and —Overturn recent Federal court decisions upholding States' authority to review certain Federal offshore oil drilling decisions.

Taken together, these changes would essentially strip the coastal States of any meaningful authority to control the ways in which their coastal areas are used. The proposed changes would turn the CZMA into a partnership between the Federal Government and oil and gas interests, to the detriment of coastal States. The proposed rule is a clear attempt to short-circuit procedures designed to ensure State participation in decision-making. The rule changes will strip States of an equal voice in decisions that could have significant adverse effects on local coastal communities and coastal resources. The proposed rules will, if enacted, do irreparable harm to this Federal-State partnership so effectively implemented during the past three decades. Therefore, we strongly urge you to withdraw the proposed rule changes.

Comment 4. There is no demonstrated need for these rule changes particularly when comprehensive consistency rule changes were approved just over two years ago. To the extent that changes are made, they must be targeted only to

address "limited and specific procedural changes or guidance" as called for in the ANPR and as needed to clarify offshore energy activity and siting information needs and deadlines. There is a danger, if not likelihood, that resorting to regulatory changes to "solve" perceived problems or to "clarify" well established language from current regulations will result in creating unforeseen conflicts, confusion, and possibly increase litigation. Ad hoc regulatory changes should be avoided and more resources should be dedicated to developing memoranda of understanding with the States, working with States and assisting agencies and applicants with understanding their consistency responsibilities.

Comment 5. For many years, this legislative delegation has fought off numerous attempts by government and private industry groups whose planned actions would have caused detrimental effects to the water quality of the Atlantic Ocean, the ocean floor, the air above and our shoreline. New Jersey's tourism industry, as well as our overall environment, would suffer greatly if the Federal Government would allow the oil and gas industries to explore our ocean waters. We share the Federal Government's desire for this great nation to be less dependent on foreign oil, but not at the high price of ocean and coastal water quality. We strongly urge NOAA to withdraw the proposed changes that would expedite the issuance of permits to those who would ravage our ocean waters and shorelines. Reducing the review time which States and local governments have to properly and thoroughly investigate ocean drilling applications would certainly send the wrong signal to citizens of the United States of America, as well as the entire world, that the USA is a rubber-stamp for energy interests, not for its citizens nor its natural beauty.

NOAA Response to Comments 3, 4 and 5. NOAA concludes that the changes in the final rule do not, in any way, change the authority granted to States to review Federal actions affecting the coastal zone. Neither do the changes short-circuit procedures, reduce the State review period or otherwise diminish the ability of States, or other interested parties, from participating in the Federal consistency process as provided for in NOAA's 2000 rule and the Energy Policy Act. The CZMA State-Federal partnership is strengthened by bringing greater clarity, transparency and predictability to NOAA's CZMA regulations.

In drafting the proposed rule and in issuing this final rule NOAA has carefully sought to avoid upsetting the

long-standing, basic tenets of Federal consistency. State CZMA review authority is, and has always been, centered on a Federal agency activity or Federal license or permit activity having coastal effects. The rule changes steadfastly retain this "effects test"; continues to emphasize early coordination between Federal agencies, applicants and States; maintains the time frames for State review; further emphasizes the ability of States to define information needs specific to their State; does not exempt any Federal action from the "effects test"; does not significantly alter the States' ability to participate in appeals to State objections; and is fully consistent with recent Federal court decisions.

While NOAA completed a comprehensive rulemaking in 2000, NOAA determined that some targeted improvements could be made based on the Energy Report and comments received on the ANPR questions. Some of the improvements addressing these issues, while initiated to respond to energy matters, will improve the consistency process in general, while other changes affect only the OCS subpart of the regulations.

Comment 6. CZMA section 307(c) has evolved into a program that, in many States, is used to "regulate" Federal activities through the consistency review process.

NOAA Response to Comment 6. The CZMA does not authorize States to regulate Federal agency activities. States may review Federal agency activities with reasonably foreseeable coastal effects and concur with or object to an activity, but the CZMA does not give the States any regulatory or enforcement authority over Federal agencies.

Comment 7. NOAA has made some progress in clarifying the ambiguities of the 2000 final rule. However, because of the great degree of latitude given States in interpreting what are reasonable and practicable information needs, Corps project managers are having difficulty meeting navigation project maintenance schedules established by the Congress through the budget process, while complying with coastal zone management programs. The fundamental question for Corps operations and maintenance activities becomes one of how, rather than whether, the project can be accomplished. Often, Federal agencies have little discretion to modify projects re-authorized by the Congress through the annual budget process.

NOAA Response to Comment 7. The comment demonstrates the need for Federal agencies and States to coordinate as early as possible in the

planning of a Federal agency activity. Early coordination and identification of applicable State CMP enforceable policies should help determine what measures, if any, need to be taken so that the activity is consistent with the State policies. If a Federal law provides little discretion to modify a Federal agency activity, then the Federal agency should be better able to demonstrate that it is consistent to the maximum extent practicable.

Comment 8. We concur with NOAA's changes and explanations for § 930.31(a) (Federal agency activity); § 930.35(d) general negative determination); § 930.51(a) (Federal license or permit); § 930.58(a)(1) (Necessary data and information); and subpart H (Appeals to the Secretary).

NOAA Response to Comment 8. NOAA notes this comment.

Comment 9. NOAA should clarify its response to General Comment 3 in the proposed rule regarding Virginia's statement describing information needs related to Virginia's Chesapeake Bay Preservation Act Program.

NOAA Response to Comment 9. In the proposed rule NOAA informed the State that for Federal license or permit activities under 15 CFR part 930, subpart D, the State could amend its program to require that the detailed maps and delineation of Chesapeake Bay Preservation Areas on non-Federal lands be included as "necessary data and information," pursuant to 15 CFR 930.58(a)(2). NOAA emphasizes that this is only for Federal license or permit activities and does not apply to required information for Federal agency activities. Thus, a Federal agency could not be required to provide this information to Virginia for a Federal agency activity. For Federal agency activities, a Federal agency is only required to provide the information described in 15 CFR 930.39, necessary to support its consistency determination. Since the CZMA does not grant States authority to regulate activities on Federal lands, there would be no Chesapeake Bay Preservation Areas to delineate on Federal lands located within Virginia.

Comment 10—Geographical Considerations. The rule does not make any revisions regarding the identification of offshore projects having reasonably foreseeable coastal effects. Considering NOAA's repeated observations that State reviews of OCS projects at distances far from a State's coastline would entail "case-by-case" consideration, API believes it would be inappropriate for NOAA to ever allow a State to amend its program to automatically include such a general

geographic area of review. The right of such review, if ever justified by actual "effects," should be confined instead to a case-by-case consideration under the procedures provided in 15 CFR 930.54 (review of unlisted activities). We urge NOAA and MMS to implement an MOA process whereby objective criteria can be employed to determine what are "reasonably foreseeable effects."

NOAA Response to Comment 10. NOAA continues to believe that a regulatory change is not needed to address State review of OCS plans located far offshore. As discussed in the proposed rule, such conflicts are isolated examples and can be dealt with on a case-by-case basis should an issue arise. A new regulatory process to determine when an OCS plan will have reasonably foreseeable coastal effects on a particular State would likely increase administrative and fact-finding burdens on industry, the States and Federal agencies. Finally, the case-by-case nature of Federal consistency review precludes rigid definitions of effects and what is reasonably foreseeable. 65 FR 77130, 2d col. (Dec. 8, 2000).

The determination of coastal effects for Federal license or permit activities is made by NOAA through the listing and geographical location description requirements in NOAA's regulations at 15 CFR 930.53. Each State must list the Federal license or permit activities it believes will affect its coastal uses or resources. The list becomes part of the State's management program development and may be revised through NOAA's program change procedures. See 15 CFR 930.53(c), and 15 CFR part 923, subpart H. When listing Federal license or permit activities, States must demonstrate whether the activity to be listed would have reasonably foreseeable coastal effects, when conducted inside the coastal zone. Once listed in the State's federally approved program, all applications for the listed Federal authorizations in the coastal zone are automatically subject to the consistency process.

States interested in reviewing activities located outside the coastal zone must provide to NOAA for approval a description of the geographic location outside its coastal zone where activities will be presumed to have coastal effects. Federal agencies and other interested parties may comment to NOAA during the approval process. NOAA's approval is based on whether effects on the coastal zone from the described geographic area are reasonably foreseeable.

A State may also review a listed activity located outside the coastal zone

that is not in a described geographic location as an "unlisted" activity on a case-by-case basis, pursuant to 15 CFR 930.54. NOAA's approval is required and is based on whether coastal effects of the proposed activity are reasonably foreseeable.

The purpose of these listing requirements is to provide predictable procedures to determine when a Federal license or permit activity is subject to CZMA Federal consistency review. These procedures have been in place since 1979 and provide reasonable notice to Federal agencies and applicants for Federal authorizations as to when and how Federal consistency applies.

The geographic location description requirement for Federal license or permit activities has not been used for Federal authorizations described in detail in OCS plans when coastal effects are reasonably foreseeable because these activities are specifically described in the CZMA. 16 U.S.C. 1456(c)(3)(B). In the past, most OCS oil and gas plans were for projects located near shore and coastal effects were readily identifiable. Now, however, technology allows oil and gas projects to be located far offshore and the connection between a project and its effects on a State's coastal uses or resources is less certain. In cases where a person demonstrates that its project will not have coastal effects and the State disagrees, then the question of whether the "effects test" is met can be resolved through the mediation provisions of the CZMA, OCSLA provisions and/or litigation. Of course, this does not preclude the ability of a State to seek NOAA approval to describe an offshore area for OCS plans under § 930.53, or request to review a project as an unlisted activity under § 930.54.

Comment 11—Geographical Considerations. The rule overlooks the distinction made in the legislative history of the 1990 amendments between Congress's focus on the reversal of the *California v. Watt* decision and the expansion of State review of Federal agency activity to include lease sales, and the corresponding recognition by Congress that there would be no change in the status quo for State review of private permitting activity. We continue to take issue with NOAA's reading of the Congressional history of the 1990 amendments and Congress's various "endorsements" of NOAA's consistency policies at that time.

NOAA Response to Comment 11. NOAA disagrees. The 1990 CZMA amendments apply to all the consistency requirements. The

"technical amendments" were to conform all of CZMA section 307 with the changes made to CZMA § 307(c)(1). Moreover, "direct" effects were not a limiting factor to the pre-1990 CZMA application of Federal consistency for Federal license or permit activities—the "effects test" was always the controlling factor. The Conference Report contains authority for NOAA's position, which is also supported by the discussion in the September 26, 1990, Congressional Record, incorporated by reference into the Conference Report.

Comment 12—Geographical Considerations. Earlier comments to the ANPR also questioned NOAA's revisions to the definition of a "coastal use or resource" within 15 CFR 930.11. NOAA has taken no specific action to remedy this overbroad definition and in the proposal does not acknowledge that adding terms such as "scenic and aesthetic enjoyment" broadens this definition, and thereby inappropriately expands the reach of the effects test.

NOAA Response to Comment 12. The definition of coastal use or resource did not create new thresholds, but is based on the effects test as described in the CZMA and the Conference Report for the CZMA 1990 amendments. See 65 FR 77123–77133 (Dec. 8, 2000).

Comment 13—Secretarial Appeal Criteria and Past Secretarial Appeal Decisions. In the June 11th notice, NOAA comments that the term "development" was used as a "general descriptor for OCS oil and gas activities", and further, that: "[a]t this time, NOAA cannot foresee a case where OCS oil and gas activities do not further the national interest in a significant or substantial manner, inclusive of the exploration, development and production phases." While NOAA's comment is a positive statement, its position is still modified by the critical words "[a]t this time," and remains in marked conflict with the precedential finding in the *Manteo* Secretarial override decisions that an OCS exploration plan targeting a potential natural gas reserve of 5 trillion cubic feet—which would constitute the largest find of domestic hydrocarbons since Prudhoe Bay—would make only a "minimal" contribution to the national interest. Because this inconsistency cannot be reconciled, the particular *Manteo* findings should be formally rescinded by the Secretary of Commerce in order to conform to NOAA's current articulation of CZMA national policy. Although Interior officials were quoted as describing the *Manteo* EP as the most comprehensive exploration plan prepared in the history of the U.S. offshore program, the Secretary refused

to override based on the State's "lack of information" contentions. This experience seems to belie NOAA's insistence found elsewhere in its June 11th notice that the Secretary has given, and will continue to give, particular deference to comments from agencies with expertise over the activities which are the subject of the override appeals.

NOAA Response to Comment 13.

NOAA maintains that, at this time, it cannot foresee a case where OCS oil and gas activities do not further the national interest in a significant or substantial manner. NOAA cannot, however, say that this will always be the case or will be the case in any particular situation. NOAA can only speak, as a general matter and to the foreseeable future. As for the *Manteo* decision, all Secretarial appeal decisions are made on a case-by-case basis and rely on the record developed for that case. NOAA does not anticipate that the Secretary will reexamine the *Manteo* decision. Further, as discussed in response to comment 100, the Secretary gives the expert Federal agency's view more weight in the areas of its technical expertise than the views of other commenting Federal agencies. NOAA reiterates that each Secretarial decision is based on its individual decision record and evidence in that record may controvert an agency opinion.

Comment 14. API supports NOAA's acknowledgment of its responsibility under the President's National Energy Policy (NEP) to promote coordination between NOAA and MMS in OCS energy development. We believe, however, that the agency should more fully implement the requirement that the Departments of the Interior and Commerce work together to solve interagency conflicts and develop mechanisms to address differences in the OCSLA and the CZMA. API reiterates that any revisions to the Federal consistency process should incorporate a permanent mechanism for close consultation and coordination between NOAA and MMS such as a formal Memorandum of Agreement (MOA). The MOA could outline the respective responsibilities of the two agencies, institute procedures for ensuring decisions consistent with national energy policy and explain how each agency would meet the objectives of the NEP and Executive Order 13211, on streamlining energy project permitting, (Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use, May 18, 2001), and Executive Order 13212 stressing the importance of assessing impacts of government decisions on energy supplies (Actions to

Expedite Energy-Related Projects, May 18, 2001).

NOAA Response to Comment 14. As described earlier, this rulemaking is designed to address the CZMA recommendations in the Energy Report. Specifically, that report directed the Secretaries of Commerce and Interior to "re-examine the current Federal legal and policy regime (statutes, regulations, and Executive Orders) to determine if changes are needed regarding energy-related activities and the siting of energy facilities in the coastal zone and on the Outer Continental Shelf (OCS)." Energy Report at 5-7. This rulemaking similarly implements Executive Order 13212, which mandates that "agencies shall expedite their review of permits or take other actions as necessary to accelerate the completion of such projects, while maintaining safety, public health, and environmental protections." NOAA is also coordinating with the President's Council on Environmental Quality on implementation of this Executive Order. Executive Order 13211 requires that agencies prepare and submit a Statement of Energy Effects to the President's Office of Management and Budget for certain actions, and NOAA continues to comply with this requirement when applicable. (Please see the Classification section, below.)

Neither executive order has created a need for a separate MOU with Interior or with other Federal agencies. An MOU is not necessary between MMS and NOAA on CZMA-OCSLA interaction, as the agencies have already established an interagency working group and policy decision group to facilitate interagency coordination concerning the CZMA and OCSLA. NOAA will maintain this effective arrangement.

Comment 15. We question NOAA's characterizations in its June 11th notice of the widespread success of the CZMA consistency process in the review of OCS activity. NOAA's statements do not make clear that the scope of offshore activity since 1990—and for that matter since the mid-1980s—has been severely curtailed. Indeed, the "offshore statistics" promoted by NOAA have been overwhelmingly generated by activities mainly occurring offshore Texas, Louisiana, Mississippi, and Alabama—four States with combined coastlines barely exceeding seven per cent of the length of the entire coastal shoreline of the continental United States. It cannot be accurately represented that the CZMA consistency review process for OCS activity serves the national interest unless and until that process is realistically employed and tested against offshore activities proposed to be conducted off of the East

and West coasts—where, indeed, quite heated consistency battles have occurred in the past. Certainly, there are no "flourishing" OCS operations along coastal North Carolina, Florida, California, or New England.

NOAA Response to Comment 15. The CZMA requires States to consider the national interest when developing their management programs. When approving State programs and when evaluating proposed changes to State programs NOAA carefully considers elements of management program that may affect the national interest, particularly in energy facility siting. There is a large offshore oil and gas presence in the Gulf, and thus, statistics from MMS are undoubtedly representative of the OCS activities in the Gulf. However, OCS EPs and DPPs have been regularly approved off Alaska and California as well. Even after the Supreme Court's decision in 1984 that OCS lease sales were not subject to Federal consistency review, California found that most of the 150 or so wells associated with the Court's decision were consistent with the State's CMP. In addition, in the limited instances where a State has raised a CZMA objection, the Secretarial appeals process provided an appropriate remedy. Thus, the CZMA *does* support the national energy policy. Moratoria that currently preclude OCS oil and gas exploration in offshore areas are the result of Executive Orders or congressional enactments, and do not result from the CZMA.

Comment 16. Rule changes should not be based on unseen information. The preamble states that the proposed rule will implement recommendations of the Energy Report prepared by the National Energy Policy Development Group that was established by Vice President Cheney. The process that led to the preparation of the Energy Report often was not a public process and, indeed, the United States Department of Energy still refuses to release many of the documents that were created for and considered by the Task Force. If the recommendations of the Energy Report are to be the basis for the rule amendments, then all documents and records relevant to the Energy Report's preparation and recommendations must be made available to the public as part of the public docket for this rulemaking action and the comment period must be extended to afford members of the public an opportunity to review and comment on this information and evidence. The County is particularly interested in any documents that detail the need for the changes to the NOAA regulations that are now being proposed. For NOAA to proceed

without disclosing such documents will be in violation of the Federal Administrative Procedure Act (5 U.S.C. 551 *et seq.*).

NOAA Response to Comment 16. NOAA's rulemaking implements the recommendations stated in the publicly available Energy Report (<http://www.whitehouse.gov/energy/index.html>). The rulemaking is not based on any particular information underlying the Energy Report. NOAA has developed its own administrative record to support this rulemaking. That record includes the ANPR, which asked what changes, if any, should be made in response to the Energy Report recommendations. In addition, the proposed rule sought public comment on NOAA's proposed changes. This final rule is based on public comments to the proposed rule and NOAA's analysis of its administrative record.

Comment 17. The preamble to the proposed rule says that in certain instances, OCS oil and gas lease sales may not affect the coastal zone, thereby suggesting that there will be a case-by-case review of whether lease sales require a consistency analysis. The County's position is that, given the impacts eventually caused by the development that follows lease sales, it will always be reasonably foreseeable that such lease sales will adversely affect the coastal zone in a manner that will require a consistency review. The development implications of lease sales are far too great to ever support a finding that they would have no adverse impact on the coastal zone.

NOAA Response to Comment 17. All Federal agency activities are subject to the effects test. The CZMA does not obligate MMS to automatically provide States with a consistency determination for all OCS lease sales, but, rather, requires that MMS determine whether a particular lease sale will have reasonably foreseeable coastal effects. If MMS determines coastal effects are reasonably foreseeable, it must provide the affected State(s) with a consistency determination.

Comment 18. In *Skokomish Indian Tribe v. Fitzsimmons*, 97 Wn. App. 84, 982 P.2d 1179 (1999), the Washington Court of Appeals invalidated the Department of Ecology's "waiver" of its right to object to the City of Tacoma's consistency certification, while simultaneously objecting to the adverse coastal effects of Tacoma's proposed hydroelectric license for the Cushman Dam project. The court held that a State CZMA agency illegally "renders meaningless" the federal and State CZMA regulatory schemes, when it "choose[s] not to follow procedures

prescribed by law to ensure" that federally licensed projects comply with State CZMA laws. *Id.* at 95. The Washington Supreme Court unanimously denied Ecology's petition for review. 143 Wn.2d 1018 (2000). NOAA's proposed rule must incorporate this principle, which (1) is fully consistent with the CZMA, and (2) carries out NOAA's desired effect in its rule change of providing greater "transparency and predictability" to the federal consistency regulations. First, NOAA should amend its rules to clarify that State agencies must either *clearly* concur (through express statement or by complete silence) or object to consistency certifications. Second, the rules must clarify that State CZMA agencies cannot expressly waive their CZMA rights if they have previously raised objections regarding coastal impacts that the proposed license does not address. Third, the rules must expressly acknowledge NOAA's and the federal licensing agency's respective duties to actively inquire into the legality of a State CZMA concurrence or objection that circumvents or contradicts the CZMA's goals and procedures, before the six month window closes. Fourth, the rules must provide an appeal and/or mediation mechanism for the licensing agency, NOAA, and the participating public to challenge illegal State maneuvers.

Comment 19. NOAA should adopt regulations to provide a mechanism for applicants to invoke NOAA's intervention and effective oversight during consistency review if a State attempts to request information beyond what is specified in NOAA and MMS requirements.

NOAA Response to Comments 18 and 19. A rule change is not needed to address this issue as the current rules provide sufficient guidance. NOAA agrees that States cannot expressly waive their consistency responsibilities. The State has an obligation to enforce its federally-approved CMP and to provide public input into those decisions. The preamble to the 2000 final rule discussed at length the requirement that States implement their programs and to conduct federal consistency reviews. See 65 FR 77126-77127 (Dec. 8, 2000). Likewise the 2000 rule discussed the need for States to either concur with or object to a proposed activity for which a State received a consistency certification (or concur with conditions pursuant to § 930.4).

NOAA and the authorizing Federal agency do not, however, have the authority to dictate to a State its interpretation of its own State law. Thus, a new CZMA appeal process

cannot be developed to challenge "illegal State maneuvers." If there is a CZMA procedural issue, any party can raise the issue to NOAA and NOAA may offer its views on the CZMA and its implementing regulations. See 15 CFR 930.3. The CZMA does not grant NOAA enforcement authority to override a State's decision during the six-month review period. NOAA can require the State to take corrective actions as part of the CZMA section 312 evaluation process and/or the Secretary can override a State's objection on procedural grounds if a State's objection is appealed to the Secretary.

Section Specific Comments

Section 930.3—Review of the Implementation of the Federal Consistency Requirement

Comment 20. We continue to propose that NOAA should undertake a more active review of State programs than the current three-year rotation undertaken pursuant to 15 CFR 930.3, and specifically suggest that such review should be conducted on a semi-annual basis. NOAA asserts that it does not review the validity of the State's underlying objection in a consistency appeal, but rather in a State program review. NOAA's "de novo" approach to appeals does not include a review of the underlying State's objection should be reevaluated in light of NOAA's statements regarding resource constraints NOAA says it faces in conducting section 312 program reviews. An important oversight function of the statutory scheme is not being effectuated, if the State's manner of carrying out their consistency responsibilities is not undergoing thorough review under section 312, as well as not reviewed as part of the consistency appeal process.

NOAA Response to Comment 20. As discussed in the proposed rule, the CZMA section 312 evaluation process is the primary means for NOAA to review State programs. When conducting these reviews, NOAA, among other things, evaluates the State's use of federal consistency. As for the Secretarial appeals, the CZMA specifically sets out the criteria for override. In addition, the Secretary reviews State procedural compliance as an aspect of the appeal process, e.g., did the State meet the statutory and regulatory time frames. Additional oversight can be, and often is, provided on a day-to-day basis when a Federal agency, State or applicant bring a specific consistency issue to the attention of NOAA. NOAA may then investigate the matter and either provide

its view or seek to mediate an agreement.

Section 930.4—Conditional Concurrences

Comment 21. The proposed rules do not address the States' use of conditional concurrences. We would like OCRM to clarify in the regulations that conditional concurrences are simply not contemplated under the CZMA.

NOAA Response to Comment 21. NOAA determined in the 2000 rule that conditional concurrences were allowable under the CZMA within certain parameters. NOAA's regulation, § 930.4, contains adequate standards to ensure State conditions are based on specific enforceable policies. If the requirements for a conditional concurrence are not met within the six-month review period, then the State decision is automatically treated as an objection. For instance, if an applicant does not agree with a condition and does not amend its application to the Federal agency, then the State decision is automatically an objection. Likewise, if a Federal agency finds a condition is contrary to its statutory mandate and refuses to accept the condition, then the State decision is automatically an objection. The benefit is that it allows a State to concur when it might otherwise object. If the conditions are acceptable to the applicant and the Federal agency, then the Federal agency can approve the project. All elements of the conditional concurrence process must be completed prior to the expiration of the State agency's review period. If each element in the conditional concurrence process is not complete prior to the expiration of the State's review period, the conditional concurrence becomes an objection automatically. NOAA's regulations, section 930.4(a)(1-3), set forth each element necessary to make the conditional concurrence effective. First, the State agency must state in its concurrence letter each of the conditions to be met and identify and explain how and why each condition is necessary to satisfy the enforceable policies of the State's CMP. Second, the Federal agency (subpart C) or applicant (subpart D, E, F or I) must change or modify its proposed activity, application or plan to incorporate and satisfy the conditions set forth in the concurrence letter. Third, the Federal agency (subparts D, E, F or I) must approve the *amended* application or amend its approval to include the conditions set forth in the concurrence letter. If these three elements are not satisfied within the State agency's review period, the State's conditional

concurrence letter automatically becomes an objection and the State's concurrence is not presumed pursuant to CZMA section 307(c). Thus there is no delay in the six month review period and there is clear direction regarding time frames, the substance of the conditions and whether the State has objected or concurred.

If a State agency issues a conditional concurrence under subpart D, but there is no response from the applicant and/or the authorizing Federal agency within the six-month review period, then the State's conditional concurrence automatically becomes an objection. If a State agency issues an objection within the six-month review period, then subsequently issues a conditional concurrence, the State's original objection remains in effect and the Federal agency cannot issue its authorization unless the objection is withdrawn by the State agency (or the Secretary, on appeal by the applicant, overrides the State's objection). A conditional concurrence letter issued subsequent to an objection letter after the six-month review period has expired has no effect upon the objection.

For purposes of an appeal to the Secretary pursuant to CZMA section 307(c)(3), an applicant's time to file a notice of appeal (or person's under subpart E or applicant agency's under subpart F) begins under one of the following three scenarios: (1) 30 days after receipt of the State agency's conditional concurrence if the applicant does not agree with the conditions; (2) 30 days after receiving notice from the Federal agency that the application for the approval as amended to meet the State agency's conditions is not approved; or (3) 30 days after the end of the State's six-month review period if neither the applicant nor the Federal agency respond to the conditional concurrence within the six-month review period.

Section 930.11(g)—Definitions—Effect on Any Coastal Use or Resource

Comment 22. We believe that the proposed change is unusually complicated and therefore oppose it. We suggest that because OCRM proposes to move the definition of "federal action" to § 930.1(b), the use in § 930.11(g) of the previously defined term "federal action" would be sufficient. As drafted, the language is confusing because it appears to use two distinct phrases, i.e. "federal action" and "Federal agency activity or federal license or permit activity" to refer to the same thing.

NOAA Response to Comment 22. Federal agency activity and federal license or permit activity are well-

defined terms in the regulations and should pose no confusion. NOAA believes that in this particular section using the more specific terms as opposed to the general "federal action" term is more appropriate.

Section 930.31(a)—Federal Agency Activity

Comment 23. This section is all-inclusive and could mean "any" Federal agency activity. We do not believe the Congress intended for routine maintenance or other non-consequential activities to be subject to State consistency review. The language as proposed could give States authority to determine colors of paint for Government buildings or where Government employees might park on government property, for example. At subsection 930.51 of the proposed rule OCRM defined certain categories of federal license and permit activities that do not meet the test for requiring consistency determinations. Similar language should be included in this proposed subsection as well.

NOAA Response to Comment 23. This final rule does not identify categories of federal license or permit activities that are exempt from consistency. NOAA emphasizes, again, that the effects test is the determinative factor. Congress clearly intended for "Federal agency activities" to be interpreted broadly. NOAA did clarify in the proposed rule and in this final rule that a Federal agency activity is a proposal for action that has coastal effects. This is discussed in detail above. This clarification is not a new standard, but emphasizes long-standing agency interpretation.

Comment 24. The proposed section's recitation of a "plan" as an example of an action requiring a consistency analysis would introduce considerable ambiguity into the interpretation of the regulations. A "plan" can be many things to many people, as can something that "direct[s] Federal agency action." As a practical matter, any proposal would have to have a certain degree of specificity in order for a meaningful coastal consistency analysis to be undertaken at all. The revised rule's proposed language of "proposal for action which initiates an activity or series of activities * * *" adequately captures those plans that would be ripe for analysis. Accordingly, the planning example should be stricken from the rule as revised. If NOAA believes it is necessary to retain the current language in the rule, the following statement should be added to the preamble discussion of the Navy pier project on page 34855 of the **Federal Register**,

following "The Federal agency activity for purposes of 15 CFR 930.31 is the proposal to build the pier." (add): "Until this activity is sufficiently concrete to require analysis under the National Environmental Policy Act, it is not subject to a consistency determination."

NOAA Response to Comment 24. Plans have always been included in the definition of Federal agency activity. The retention of plans as a Federal agency activity does not add ambiguity and the revisions to this section make the application of consistency to plans more clear. As described above in the explanation for the changes to this section, some federal plans will be used to initiate a proposal for action and some federal plans will be part of the Federal agency's pre-decisional deliberations and not be subject to federal consistency. NOAA cannot add the suggested sentence to the preamble since the application of NEPA is not necessarily a trigger for federal consistency. However, NOAA has added the following two sentences to the Navy example in the explanation for rule change 4: "Under 15 CFR 930.36(b), the Federal agency determines when it has sufficient information to provide the State with a consistency determination. For instance, in this example of the Navy pier, the Navy could conclude that under Navy procedures the pier is not a proposed action until the proposed activity requires analysis under NEPA."

Comment 25. The proposed changes would narrow the definition of federal activities. The addition of the phrase "makes a proposal for action" is troublesome since it could reduce the type of federal activity which may be subject to review for consistency. In the preamble, NOAA explains that the change is intended to eliminate review of pre-decisional activities such as planning documents. However, the explanation goes on to mischaracterize the recent Ninth Circuit Court of Appeals decision, *State of California v. Norton*, 311 F.3d 1162 (9th Cir. 2002), in which the Court embraced a broad definition of federal activities subject to federal consistency review. The change appears to be a thinly veiled attempt to eliminate review of certain activities, such as lease suspensions, in direct contravention of the Ninth Circuit's decision. NOAA characterizes such federal activities as interim or preliminary and thus not rising to the level of a federal activity for purposes of consistency review. The Ninth Circuit expressly rejected the argument that lease suspensions do not grant new rights or authority and are merely ministerial. The Court held that the

lease suspensions are discretionary and their approval involves the exercise of judgment and implicates policy choices. Because the decision to extend leases through the suspension process is discretionary, it does grant new rights to the lessees when, absent the suspensions, all rights would have terminated. (*State of California v. Norton*, *supra*, at p. 1173, fn. 6.) The proposed change is also contrary to Congress's express statement in the 1990 amendments in which Congress unequivocally stated its intent to adopt a broad interpretation of federal activity subject to consistency review. NOAA should not undermine Congressional intent by adopting a crabbed interpretation of Federal agency activity.

Comment 26. NOAA is not required to adopt a decision of the Ninth Circuit (*California v. Norton*) and extend such decision nationwide.

NOAA Response to Comments 25 and 26. On June 20, 2001, the U.S. District Court for Northern California ordered Interior to provide California with a consistency determination pursuant to CZMA section 307(c)(1) for the lease suspensions it issued for 36 leases located offshore California. *California ex rel. Cal. Coastal Comm'n v. Norton*, 150 F. Supp.2d 1046 (N.D. Cal. 2001), *aff'd*, 311 F.3d 1162 (9th Cir. 2002). The Court also ordered Interior to provide, pursuant to NEPA, a reasoned explanation for its reliance on a categorical exemption for the lease suspensions. On appeal by the United States, the Ninth Circuit affirmed the District Court's finding that the lease suspensions, in the case of these 36 leases, whether granted or directed by Interior, were Federal agency activities under CZMA section 307(c)(1), and not "federal license or permit activities" under CZMA section 307(c)(3)(A). The Ninth Circuit found that the suspensions allowed the leases to continue for lengthy additional terms and, more importantly, these leases had not been previously reviewed by California under the CZMA. The Court viewed the suspensions as an extension of the leases and thus any suspension of the lease was, in the Court's view, a Federal agency activity under CZMA section 307(c)(1). The Ninth Circuit further found that the lease suspensions at issue would have coastal effects since, among other things, the suspensions required lessees to engage in certain milestone activities which could affect coastal resources. The Ninth Circuit also determined that the effect of the 1990 amendments to the CZMA in overturning the decision of the Supreme Court in *Secretary of the Interior v. California*, 464 U.S. 312

(1984), is that lease suspensions are not subsidiary to exploration plans and development and production plans (and thus are not barred from consistency review by CZMA section 307(c)(3)(B)), and that activities with coastal effects preceding exploration plans and development and production plans are subject to consistency review. In making this finding, the Ninth Circuit stated:

In subjecting lease sales to consistency review, Congress has made it clear that the statute [CZMA] does not prohibit consistency review of federal agency activities that are not subsidiary to exploration and development and production plans. The exploration and development and production plan stages are not the only opportunities for review afforded to States under the statutory scheme.

Referring to the fact-specific inquiry necessary to determine whether a federal action has coastal effects and, thus, is subject to federal consistency review, the Ninth Circuit, quoting from the preamble to NOAA's 2000 rule, agreed "with the reasoning of the National Oceanic and Atmospheric Administration that a lease suspension or set of lease suspensions might 'affect the uses or resources of the State's coastal zone, and thus CZMA bars * * * categorically exempting suspensions from consistency [review].'"

As described above in the explanation of the changes to § 930.31(a), and elsewhere in this preamble, NOAA has not altered the consistency effects test nor has it altered the long-standing application of federal consistency to Federal agency activities. The revisions to the definition in no way narrow or limit the types of Federal agency activities subject to review. The changes more clearly state the long-standing NOAA interpretation of this section: that consistency applies to proposed activities and not to what a Federal agency might be thinking about doing. Likewise, the change does not eliminate planning activities from the "effects test." Indeed, the preamble to the proposed rule and this final rule clearly state that some planning activities will be used by Federal agencies to propose an action with coastal effects and at other times the planning activities will not, but will be part of an agency's deliberative process to determine whether it will propose an activity. The definition of Federal agency activity articulated by the Ninth Circuit is not affected by these changes.

NOAA's view and the changes in this final rule are consistent with the Ninth Circuit's decision. NOAA is not exempting lease suspensions from consistency review and is not determining whether the lease

suspensions at issue in *California v. Norton* are subject to consistency review.

The heart of the Ninth Circuit's decision is that lease suspensions cannot be categorically exempt from CZMA review. Applying the CZMA "effects test," the Ninth Circuit found that the 36 lease suspensions at issue had coastal effects. It is NOAA's view that the Ninth Circuit's coastal effects determination is limited to the 36 leases in that case. NOAA believes that in all other foreseeable instances, lease suspensions would not be subject to federal consistency review since (1) they do not generally authorize activities with coastal effects, and (2) if lease suspensions did result in activities with coastal effects, they should be addressed in a State's consistency review of the lease sale, EP or DPP.

Comment 27. In its earlier ANPR comments, API pointed out that NOAA's previous remarks treating MMS activities such as five-year leasing plans as potential "Federal agency actions subject to consistency review" were not only inconsistent with CZMA legislative history, but also an incorrect application of the definition of "Federal agency activity." API notes that NOAA has receded from this position and acknowledges that MMS pre-leasing activity is typically more in the nature of preliminary or interim agency action not considered to have reasonably foreseeable coastal effects. API also notes NOAA's recognition in its June 11th notice that application of the "effects test" for purposes of Federal agency consistency determinations is to be conducted by that particular Federal agency. API supports NOAA's articulation of consistency review policy on this issue. API also supports NOAA's deference to an MMS determination that lease suspensions should be considered "interim activities" having no coastal effects.

NOAA Response to Comment 27. NOAA has not "receded" from previous and long-standing interpretations of Federal agency activity. NOAA's preamble to the proposed rule reported that Interior informed NOAA that the 5-year leasing plan did not propose an action which would have reasonably foreseeable coastal effects. This is consistent with the long-standing definition of Federal agency activity that the Federal agency determines whether coastal effects are reasonably foreseeable. Regarding lease suspensions see response to Comments 25 and 26.

Comment 28. Without explanation, the proposed revision deletes "exclusion of uses" among listed

examples. We request that you reinstate this example to reflect the full purpose and intent of the CZMA. Conflicts between coastal uses can and do result from some Federal agency activities.

NOAA Response to Comment 28. If a Federal agency activity proposed an action that would exclude uses of the coastal zone, then that activity would have coastal effects and the Federal agency would be required to provide the affected State with a consistency determination. NOAA did not delete this example, but more broadly captured the concept (exclusion of uses) and other aspects of coastal uses in the revised example that says "a proposed rulemaking that alters uses of the coastal zone."

Comment 29. The 5-Year Leasing Program is a poor example and its use in this context unreasonably prejudices California's right to seek a determination of consistency. Five-Year Leasing Programs culminate in a formal decision pursuant to the OCSLA, as to the location, concentration and timing of OCS leasing nationwide that is believed necessary to meet the nation's energy needs. By law, this decision is based upon several factors, explicitly including a determination of coastal effects. Each 5-Year Leasing Program is accompanied by an Environmental Impact Statement, which assesses impacts of different leasing alternatives that affect the distribution and concentration of proposed lease sales around the nation. Additionally, each program is subject to a formal public review and comment process that does not meet the narrow exceptions of "agency deliberations or internal tasks." Subsequent lease sales provide an opportunity to address the effects on coastal resources from developing only those leases involved in the lease sale. However, the lease sale is not the earliest time where consultation should commence and it occurs too late to consider alternative distributions and concentrations of leasing to best balance the nation's energy needs with protection of coastal resources. Those alternatives were finalized in the 5-Year Leasing Program. Accordingly, Santa Barbara County believes much earlier consultation on issues, which the federal consistency review process is intended to address and resolve through better alternatives, can and should occur during the 5-Year Leasing Program. The 5-Year Leasing Program does initiate a series of actions with reasonably foreseeable coastal effects. If it did not, it would not comply with the requirements of the OCSLA.

NOAA Response to Comment 29. NOAA agrees that an important

objective of federal consistency is to facilitate early State-Federal coordination. Many of the modifications in this final rule are, however, made to clarify when consistency must attach. As pointed out in the comment, MMS' 5-year planning process is mandated by statute and is an initial exploration into whether and where OCS leasing might occur. As such, the 5-year plan looks at numerous issues, but, according to MMS, does not determine which leases may actually be offered for bid. MMS is the agency conducting the activity and NOAA must continue to rely on MMS's determination that the 5-year program does not propose an action with coastal effects. This is consistent with NOAA's statements regarding the 5-year planning process in the preamble to NOAA's 2000 rule.

Section 930.31(d)—Federal Agency Activity

Comment 30. The primary change proposed in this section is to eliminate the Federal option to treat a proposed general permit as a federal license or permit, rather than as a Federal agency activity. It is not clear whether a Federal agency has ever availed itself of this option or what advantages it might have. The final rule should further explain the significance of this change. In addition, the final rule should clearly affirm that when a State issues a consistency objection to the general permits, or other conditions are imposed on general permits that require case-by-case review, then the applicant must obtain the State's concurrence before relying on the general permit.

NOAA Response to Comment 30. NOAA's explanation of this change is provided in its explanation for rule change 5. Summarizing that explanation, NOAA removed the option to allow Federal agencies to treat their general permits as a federal license or permit activity for purposes of complying with CZMA § 307 and 15 CFR part 930. A State objection to a consistency determination for the issuance of a general permit alters the form of CZMA compliance required, transforming the general permit into a series of case-by-case CZMA decisions and requiring an individual who wants to use the general permit to submit an individual consistency certification as an "applicant" in compliance with 15 CFR part 930, subpart D.

Comment 31. We suggest that the phrase "[i]f the State's conditions are not incorporated into the general permit" should be clarified. If the language used by the Federal agency to incorporate the State-proposed condition varies in any way from the

State-proposed condition or if other conditions of the federal permit conflict with or override the State-proposed condition, this should cause the general federal permit to be a federal licensing or permitting action and not a Federal agency activity. With such clarification, we do not oppose the proposal.

NOAA Response to Comment 31. Section 930.4 is clear that State conditions of concurrence for a general permit must be based on enforceable policies and if the conditions are not, to the maximum extent practicable, included in the general permit, then the State has objected and the general permit will not be available to an individual who wants to use the general permit until the individual user has satisfied the requirements of subpart D.

Comment 32. We have concerns about NOAA's proposed amendments to section 930.31(d) to clarify that if a State objects to a Federal agency's consistency determination for a general permit, all potential users of that general permit would thereafter have to furnish individual consistency certifications for State review. This procedure counters the fundamental purpose of the general permit process. Indeed, NOAA's position conflicts with its own recognition of the nature of the federal approval involved in an MMS lease sale, whereby MMS can with justification proceed to conduct the lease sale even in the face of State consistency objections. NOAA has consistently recognized that individual lessees, in taking their leases from the MMS after such a sale is conducted, would not have to furnish individual consistency certifications.

Comment 33. A general permit may have adverse impacts on the coastal zone that are only revealed on a case-by-case review. Therefore, while a State may not find a basis to object to a general permit, such as an NPDES permit, the actual application to a particular situation involving sensitive coastal resources may make a consistency review appropriate and necessary. The rule amendments should reflect this possibility.

Comment 34. Some general permit conditions necessitate case-by-case reviews to verify that the project meets the requirements for coverage.

NOAA Response to Comments 32, 33 and 34. The purpose of a general permit is to develop conditions of use so as to eliminate individual case-by-case reviews. Thus, if a State concurs with the general permit (including those conditions of use), then the State is not allowed to review case-by-case uses of the general permit. As noted in the explanation to rule change 5, the general

permits are a hybrid between a Federal agency activity and a federal license or permit activity. Thus, NOAA added this section in the 2000 rule requiring that when a State objects to a general permit, even though the general permit is still issued, it is not available for use in that State until an individual who wants to use the general permit provides the State with a consistency certification pursuant to subpart D, and the State concurs or the Secretary overrides a State's objection to the individual consistency certification. There is no conflict with NOAA's regulations. A Federal agency could, pursuant to the consistent to the maximum extent practicable standard, still proceed with issuing a general permit, but individual users could not avail themselves of the general permit if the State objected, until after the requirements of 15 CFR part 930, subpart D are met.

NOAA has modified the proposed language to clarify that it is an individual intending to conduct an activity pursuant to a general permit who would become an "applicant" pursuant to subpart D and must provide the consistency certification to the objecting State.

Section 930.32—Consistent to the Maximum Extent Practicable

Comment 35. The proposed rule does not address use of the terms "consistent to the maximum extent practicable" and "fully" consistent. We interpret the latter term to be absolute. The plain definition of "fully" means "completely." We have not found anywhere in the CZMA or subsequent amendments of 1990 and 1996 where the Congress explicitly mandates that Federal agencies comply with every State coastal zone requirement regardless of cost or national implication. We ask that the OCRM revise the proposed rule to clarify that budget authority may limit a Federal agency's ability to be fully consistent.

NOAA Response to Comment 35. The definition of "consistent to the maximum extent practicable" clearly reflects the language and intent of the CZMA and was not changed in 2000 from its 1979 definition. NOAA's language was specifically endorsed by Congress in the conference report to the 1990 CZMA reauthorization and has been upheld by Courts since then. In addition, NOAA discussed the relationship between statutory requirements regarding the consistent to the maximum extent practicable standard and appropriations law at length in the preamble to the 2000 rule. See 65 FR 77133-77135 (December 8, 2000). The suggested changes would

provide Federal agencies with complete discretion as to whether their activities would be consistent with a State's enforceable policies. Such a change would violate the statute and cause ambiguity in the application of the section.

A recent Federal court decision has addressed NOAA's definition of "consistent to the maximum extent practicable." In *California Coastal Commission v. Dept. of the Navy*, 5 F. Supp. 2d 1106 (S.D. Cal. 1998), the Navy argued that it complied to the "maximum extent practicable" with California's dredging and disposal policies because it was obligated to follow a modified § 404 permit issued by the Corps. The court noted that the federal permit was "not existing Federal law" that would excuse compliance with the State policies and consistency requirements of the CZMA. *Id.* at 1111. Congress partially waived the Federal Government's supremacy over State law when it created the CZMA. As such, the only objective means to determine "consistent to the maximum extent practicable" is based on the legal requirements of Federal agencies and their administrative records. The 2000 rule, in response to requests by Federal agencies, provided clear guidance as to when a Federal agency can proceed over a State's objection: Due to an unforeseen circumstance or emergency, or when a Federal agency asserts, based on its own administrative decision record, it is fully consistent, or because of the requirements of other Federal law. NOAA has provided, and will continue to provide, advice to Federal agencies on how to effectively use the consistent to the maximum extent practicable standard in connection with their statutes and individual case-by-case decision records.

Section 930.35(d)—General Negative Determination

Comment 36. NOAA should consider written notification response requirements for States under Section 930.35(c) similar to that under § 930.41(a), thereby requiring States to provide written notification to a Federal agency if a State objects to a negative determination. Any such State response should also be required to provide supporting information regarding the State's assertion that coastal effects are reasonably foreseeable.

NOAA Response to Comment 36. The 14-day response in § 930.41(a) is merely a completeness notification to the Federal agency. It is not a substantive response. The substantive response for a consistency determination is the 60-day period in § 930.41(a). This same 60-day

period is already included in § 930.35(c).

Comment 37. This provision would shift the emphasis away from a case-by-case consideration of consistency and reasonably foreseeable coastal effects to deciding what are "repetitive activities." The proposed change effectively creates a consistency exemption for an undefined category of "repetitive activities." The proposed rule does not provide adequate parameters to determine what are "repetitive activities," and how similar in nature the activity must be for agencies to avail themselves of this option. There is a concern that issuing a general negative determination may have the practical effect of minimizing full consideration of "cumulative impacts" that may be increasingly significant for ongoing activities. Several States also raised a concern that a general negative determination would effectively limit public notice and review of these repetitive activities. There is strong opposition to the lack of adequate procedural safeguards in this proposed change. Any final rule providing for a general negative determination must be amended to provide: (1) A clear definition of what constitutes "repetitive activities" and a requirement that Federal agencies closely monitor activities to assure that there are no cumulative or unforeseen impacts; (2) In describing in detail the activity it is not adequate to set out "expected number of occurrences over a specified period of time." Additional safeguards must be added to the final rule requiring agencies to provide sufficient details about when and where the activity would occur, and requiring that the States and public should be advised in advance of the actual occurrence and location of such activity to assure that it is being carried out as originally represented; and (3) Agencies should not have the option ("may") of periodically reviewing the general negative determination. The final rule must provide that Federal agencies are required ("shall") to reassess at least every three years or sooner if deemed necessary by the State or Federal agency.

Comment 38. New Jersey's Coastal Management Program does not object to the concept, provided that the Federal agency be required to reassess whether the general negative determination remains applicable every five years.

Comment 39. We do not oppose the concept of a general negative determination, and we generally support the proposed rule text. We do, however, support the concept of a mandatory periodic review of the

general negative determination, but suggest that prior to undertaking each review the Federal agency should be permitted to request an affirmative waiver of the review from each affected State. This should relieve the Federal agency from unnecessary paperwork where there is no disagreement regarding the effects of the activity.

Comment 40. We recommend that this paragraph include consideration of situations in which an activity conducted under a general negative determination actually does have or may have coastal impacts. Specifically, we suggest that the Federal agency should be required to immediately discontinue the use of the general negative determination and conduct a new review of the activities to see whether a general negative determination or an individual consistency determination is more appropriate.

NOAA Response to Comments 37, 38, 39, 40. The general negative determination category does not create an exemption. It can only be used when a series of Federal agency activities do not have coastal effects, either direct, indirect or cumulative. The general negative determination is consistent with the case-by-case analysis embodied in federal consistency reviews because the general negative determination covers a single activity which occurs frequently or repetitive activities related to a single action or project. Likewise, a definition of "repetitive" is not needed; this can be determined on a case-by-case basis. The new section, along with the rest of the negative determination section, provides sufficient guidance to Federal agencies for adequately describing the activity at issue.

Federal agencies should not be required to reassess their negative determinations within a specific time frame. Currently, Federal agencies are not required to reassess their consistency determinations, general consistency determinations or negative determinations. Therefore, a reassessment every few years should not be required for general negative determinations. The CZMA does require, of course, that Federal agencies provide States with a consistency determination if its activity, subject to a previous negative determination or general negative determination, later has coastal effects. Such matters would be covered by the pre-existing sections for previously reviewed Federal agency activities under §§ 930.45 and 930.46. If a Federal agency finds that activities covered under a general negative determination are having coastal effects,

the Federal agency would be obligated to provide the affected State(s) with a consistency determination under § 930.34(a)(1). A State could also notify the Federal agency if the State later maintains that an activity subject to a previous negative determination is having coastal effects. If the Federal agency agreed, the Federal agency would have to conduct the activity consistent to the maximum extent practicable with the State's enforceable policies.

Comment 41. We endorse and appreciate NOAA's proposed rulemaking establishing a general negative determination option for Federal agencies.

NOAA Response to Comment 41. NOAA notes this comment.

Section 930.41(a)—State Agency Response

Comment 42. We support the requirement for States to provide a written response within 14 days if more information is required pursuant to 930.39(a). Written responses will alleviate the scheduling ambiguity that can occur based on informal discussions.

NOAA Response to Comment 42. NOAA agrees that the 14-day notification will alleviate discrepancies in determining when the 90-day review period has begun.

Comment 43. We understand the intent of OCRM, but this subsection, as written, is likely to cause more confusion than clarity. We recommend that the last full sentence be broken into two separate but modifying sentences to read as follows: "Thus, if a Federal agency has submitted a consistency determination and information required by 930.39(a), then the State agency shall not assert that the 60-day review period has not begun because the information contained in the items required by 930.39(a) is substantively deficient. Additionally, the failure to submit information that is in addition to that required by 930.39(a) shall not be a basis for asserting that the 60-day review period has not begun."

NOAA Response to Comment 43. NOAA agrees that breaking the sentence into these two sentences is clearer and has done so in the final rule.

Comment 44. Replacing the word "immediately" with a 14-day period is a positive change. This time period is more realistic considering the workloads of State consistency review staff.

NOAA Response to Comment 44. NOAA notes this comment.

Comment 45. The proposed modifications to the regulation purport

to clarify the provision in the existing regulations that provides that the time period for a State to review a consistency submittal does not start until the State receives the necessary data and information. However, the proposed change eliminates any meaning of this provision and will allow the time period to begin upon receipt of the submittal in almost all situations, effectively eliminating the States' ability to evaluate the content of a consistency submittal before acting on it. The purpose of this "clarification" appears to be removing discretion from States to seek the information requirements they need to analyze Federal agency activities. This clarification would render the information requirements virtually meaningless and contravene their intent. For example, in many cases, a consistency submittal will include an analysis of some of the relevant policies, but fail to consider other relevant provisions of the State's coastal program. The changes will require the State to initiate the time period for consistency review despite the fact that the submittal is missing analysis of important coastal program policies. To date, we have never received any objections or concerns raised by Federal agencies when we have asked for additional information necessary to support the agency's conclusion. Like many of the proposed changes, this change is a solution in search of a problem. The proposal is unnecessary, erodes the State authorities, and renders the information requirements meaningless.

Comment 46. The 14-day period should be 21 or 30 days to assure that States have adequate time to review more complex proposals. It is in both the agency and the State's interest that the consistency determination and supporting information be as complete as possible to assure expeditious and qualitative review. The final rule should also clarify that failure of a State to notify the agency of missing information within 21 or 30 days shall not bar the State from subsequently seeking necessary information and/or objecting to a consistency determination for lack of adequate information.

Comment 47. It is anticipated that, with minor clarification, the proposed 14-day notification to the Federal agency that the 60-day review has not begun due to insufficient information will not impede Texas' review process. It is in both the agency and the State's interest that the consistency determination and supporting information be as complete as possible to assure expeditious and qualitative

review. However, the final rule should clarify that failure of a State to notify the agency of missing information within 14 days shall not prevent the State from subsequently seeking necessary information and/or objecting to a consistency determination for lack of adequate information.

NOAA Response to Comments 45, 46, and 47. The State has 60 days (plus applicable extensions) to issue its consistency concurrence or objection. The State would not have to issue its concurrence or objection during the 14-day "completeness/checklist" review. The completeness/checklist review is not the State's substantive review of the activity, and does not preclude the State from requesting additional information during the 60-day review period or objecting for lack of information. Requesting additional information and objecting based on lack of information are covered by § 930.43(b), which is not being changed. The completeness/checklist review is merely to clarify when the 60-day review period begins by determining if the information required by § 930.39(a) is submitted to the State. This would not always result in the time period starting on receipt of whatever the Federal agency provides to the State. Using the commenter's example, if the Federal agency failed to address applicable enforceable policies in the State's federally approved CMP in its consistency determination, then the Federal agency's submission would not be complete. The State could so notify the Federal agency within the 14-day completeness/checklist notification period, and the 60-day review period would not begin until the Federal agency addressed the enforceable policy. If, on the other hand, the Federal agency submitted all information required by § 930.39, including an evaluation of all applicable enforceable policies, then the 60-day review period began when the State received that information, even if the State believed that the Federal agency's analysis was not an adequate evaluation of the policies. Otherwise, a State could delay the start of the consistency review period indefinitely by claiming the Federal agency's information was not good enough. Such a result would directly conflict with Congressional intent to balance State needs with federal interests in efficient and timely decision-making. In addition, to further clarify, while the State may request additional information during its 60-day review and may object for lack of information, States have never had the ability to describe information for Federal agency activities needed to start

the 60-day review period. For Federal agency activities under CZMA section 307(c)(1), the Federal agency has always made the initial determination of coastal effects and it is the Federal agency's decision that it has sufficient information to provide the State with a consistency determination. See 15 CFR 930.36 and 930.39.

Comment 48. NOAA should ensure that the requirements of § 930.39(a) are clear enough to provide a complete project description adequate for State review purposes, as well as the information requirements of the applicants, agencies, and States. NOAA should clarify the relationship between this section and other sections of the regulations that provide information requirements (i.e., § 930.58—necessary data and information, and § 930.60—commencement of State agency review).

NOAA Response to Comment 48. Section 930.39(a) contains a clear statement to Federal agencies of the information they must submit with a consistency determination. There is no relationship between subpart C and subpart D regarding information needs. Subpart C is for Federal agency activities and subpart D for federal license or permit activities. The requirements are distinct because of the different standards in the statute for determining consistency, i.e., consistent to the maximum extent practicable for Federal agency activities and fully consistent for federal license or permit activities. This distinction allows States flexibility to describe "necessary data and information" for subpart D and E, whereas it does not for subpart C.

Section 930.51(a)—Federal License or Permit

Comment 49. The revisions do not appear to significantly alter the original intent of the rule. The State does not object to the proposed rule changes.

Comment 50. We support this change because it will ensure that the definition of the term "federal license or permit" is clearly and narrowly defined, and will not include activities that have no coastal effects.

NOAA Response to Comments 49 and 50. NOAA notes these comments. NOAA also notes, however, that the change in definition did not "narrow" the definition, but clarified NOAA's long-standing interpretation. See also response to comment 51.

Comment 51. We do not understand the decision to delete "certification, approval, lease, or other form of permission" and the definition of "lease" from the existing definition of Federal License or Permit. The proposed deletions do not clarify the definition;

therefore, existing language should be retained. Alternatively, the definition of "lease" could be transferred to 930.11.

NOAA Response to Comment 51. As described in the explanation for this revision, the change to the rule ensures that the definition of "federal license or permit" is not overly-inclusive or beyond the commonly understood meaning of license or permit, while at the same time retaining the phrase "any required authorization" to capture any form of federal license or permit that is: (1) Required by Federal law, (2) authorizes an activity, (3) the activity authorized has reasonably foreseeable coastal effects, and (4) the authorization is not incidental to a federal license or permit previously reviewed by the State. Thus, the removal of the forms of approvals listed in the current language does not exclude a category of federal authorizations from federal consistency, but emphasizes that any form of federal authorization must have the required elements to be considered a "federal license or permit" for CZMA purposes. Thus, "leases" are also removed from the rule, but are still a federal authorization if the four-part test is met.

Section 930.51(e)—Substantially Different Coastal Effects

Comment 52. The proposed change would limit the State's review of federally licensed or permitted activities where substantially different effects than those contemplated during consistency review occur and a new or amended submittal is warranted. Where an activity was previously approved, the Federal agency (not the State) would determine whether the effects are substantially different and warrant State review. Although the State's opinion would be given considerable weight, it would not be given any deference. NOAA proposes this change because it considers the Federal agency, rather than the State, to be the expert on whether a permitted activity is having effects different than those effects anticipated during review. However, this change substantially erodes the State's authority and its ability to review federal license or permit or permit activities which are not proceeding as originally represented or which are having unexpected effects. It will likely encourage disagreement and lead to litigation. It is also contrary to Congress's expressed intent that the federal consistency process be a joint and equal partnership between the State and Federal agencies. NOAA states in the preamble that the "expert permitting Federal agency" will make the determination about whether the effects are substantially different on the State's

coastal zone. The State, rather than the Federal agency, should be considered the expert on the effects on the State's coastal zone and whether the effects are substantially different than previously reviewed.

NOAA Response to Comment 52. The change to this section does not limit a State's ability to review federal license or permit activities. This change provides a more clear process. This section, added in the 2000 rule, was designed to provide some guidance in determining when a "renewal" or "major amendment" of a previously reviewed federal authorization would have substantially different coastal effects, and thus the renewal or major amendment would be subject to consistency review. The 2000 language did not establish a decision maker, but encouraged a joint consultation process to make this determination. NOAA, as stated in the proposed rule, meant for the State's view to be accorded considerable weight in making this decision. However, NOAA now believes that there needs to be finality to this determination, requiring a decision-maker, and believes that the authorizing Federal agency is in the best position to make this determination. As provided for in the new section, the Federal agency must consult with the State agency and the applicant, give considerable weight to the State agency's view, and shall broadly construe the effects test to ensure that States have the opportunity to review activities with coastal effects not previously reviewed under the CZMA.

Comment 53. Under the proposed regulations, the Minerals Management Service (MMS) would determine whether a change is significant and would submit the amended plan to the State. The proposed revisions confuse the determination that the MMS makes under section 25(i) of the OCSLA (43 U.S.C. 1351(i)) as to whether or not a proposed modification of a DPP or other OCS plan is or is not "significant" for purposes of the OCSLA (see 30 CFR 250.204(q)(2)) with the entirely different standard under sections 930.51(b)(3) and (c) of the CZMA regulations of whether or not a proposed OCS plan modification will have effects "substantially different than those originally reviewed by the State agency." Thus, whether or not a proposed modification of a DPP is or is not "significant" for purposes of the OCSLA has little or nothing to do with the completely separate and distinct determination of whether or not the modification satisfies the standard of 15 CFR 930.51(b)(3) and (c).

NOAA Response to Comment 53. This comment raises a connection between determining substantially different coastal effects under § 930.51(e) and amended OCS plans. These sections are not "entirely different standards," but are complementary. The change to § 930.51(e) creates a more consistent standard with changes to OCS plans since, pursuant to the OCSLA, MMS determines whether an amended OCS plan rises to the level where another consistency review is warranted.

Comment 54. We support this improvement because it leaves the decision making relative to a federally issued license or permit with the expert Federal agency that initially issued such permit or license.

NOAA Response to Comment 54. NOAA notes this comment.

Section 930.58—Necessary Data and Information

Comment 55. It is important that the current language in subsection (a)(1)(ii) requiring the applicant to submit information "sufficient to support the applicant's consistency certification" be retained. It is not necessarily sufficient, as provided in the proposed revisions, that the applicant "relied on the information" or that it was included in permit application material prepared to determine compliance with Federal permit requirements. What if the applicant "relied on" information that is unrelated to the applicable enforceable policies or is provided in error to support its consistency determination? It is important to retain the link between information provided by the applicant and the standard that it support an applicant's consistency determination. This reflects an important objective of the CZMA, which is to assure that agency and applicants substantively incorporate applicable State policies into their planning process.

NOAA Response to Comment 55. The necessary data and information described in the revised rule contains specific and clear requirements for information needed to start the six-month review process. These requirements are sufficient to provide for a thorough State review. Applicants must submit any information relied on in making their consistency certification to the State. This requirement is intended to capture all information relevant to the certification, but exclude information an applicant is not able to obtain or is not relevant to the applicant's certification for consistency. The requirement for applicants to consider the State's enforceable policies is not changed by this rulemaking and can be found at § 930.58(a)(3). Likewise,

the effects analysis that an applicant must submit is still included. If the State needs information that is in addition to the necessary data and information required by § 930.58(a) prior to the start of consistency reviews, then the State must amend its management program pursuant to § 930.58(a)(2). Once the State's six-month review begins, the State may make a written request for additional information pursuant to § 930.63(c), if the State needs the information to determine consistency with its enforceable policies.

Comment 56. We support the proposed revisions to § 930.58 as adding specificity to what an applicant is required to provide to obtain a State's consistency decision in a timely, responsible fashion. However, we urge NOAA to further amend § 930.58 to clarify that a Federal agency's NEPA process is separate and distinct from the State's CZMA process unless the Federal agency, State, and applicant agree to address consistency requirements in NEPA documentation, and that a State may not delay processing an applicant's consistency certification pending completion of the Federal agency's NEPA or other environmental processes. This change is needed because applicants for FERC certificates have recently experienced problems and delay in trying to obtain consistency decisions for proposed projects. In one particular case, prior to beginning its consistency review, the State required the applicant to submit: (1) A federal consistency Assessment Form; (2) a copy of the application(s) along with any supporting documentation filed with FERC; and (3) a copy of FERC's Draft Environmental Impact Statement (DEIS). Subsequently, the State informed the applicant that FERC's DEIS should include a narrative assessment of the effects of the entire project on, and its consistency with, all of the applicable State Coastal Policies related to land and water uses, natural resources, energy development and cultural resources. The State further stated that its review of the consistency certification would not begin until after this information was received and it determined whether it and all other necessary data and information were adequate to address the effects of the proposal on the coastal zone. At a later date, the State informed the applicant and FERC that it would not begin its consistency review of the project until the FEIS had been issued. In fact, the State did not commence its consistency review until after FERC issued its FEIS.

Tying a State's commencement of its consistency review to a Federal agency's

completion of its NEPA review subverts the six-month time frame provided in the CZMA and harms applicants and Federal agencies in their efforts to review and approve proposed projects in a timely fashion.

Comment 57. API supports NOAA's general recognition that it would be impractical to require any NEPA documents in draft or final form to be included as information necessary to start the six month review period with regard to OCS plans, considering the OCSLA's explicit requirements for MMS to make decisions regarding an EP, as well as a DPP, within shortened time periods. However, the proposal appears inconsistent to then indicate that a State could nevertheless seek to amend its CZM program to require its receipt of any draft EIS prepared in connection with a DPP, in order for its consistency review period to begin.

NOAA Response to Comments 56 and 57. NOAA agrees that the CZMA and NEPA processes are separate and that the effects analyses for CZMA and NEPA are different. NOAA also agrees that, while addressing the requirements of other Federal statutes in NEPA documents is usually administratively efficient and encouraged by NEPA, the CZMA does not authorize States to require that CZMA-related information be included in the NEPA document. However, while States cannot describe necessary data and information for Federal agency activities under CZMA section 307(c)(1), States may do so for federal license or permit activities under CZMA section 307(c)(3). The ability of States to include DEIS's or FEIS's that are required for a federal license or permit activity as necessary data and information under § 930.58(a)(2), does not subvert the two statutes or confuse the separate CZMA and NEPA processes. The NEPA documents are only being included since they contain environmental information that the State believes is important to make its consistency decision. Since the Federal agency cannot make its decision until the NEPA process is complete, there is little or no time lost to the applicant.

However, NOAA added language to clarify that when a Federal statute requires a Federal agency to initiate the CZMA review prior to its completion of NEPA compliance, NEPA documents will not be considered necessary data and information pursuant to § 930.58(a)(2). For example, when the operation of a Federal statute precludes a Federal agency from delaying the start of the CZMA process because the NEPA document is not complete, NEPA documents listed in a State's management program cannot be

considered necessary data and information. This issue has come to light in the case of the Outer Continental Shelf Lands Act (OCSLA). See explanation of rule change 15: § 930.76(a) and (b) Submission of an OCS plan, necessary data and information and consistency certification. In addition, neither the CZMA nor NEPA require the Federal agency to include CZMA consistency determination information in NEPA documents. Therefore, States cannot delay the start of the CZMA review period because CZMA consistency information is not included in a NEPA document. See also explanation to rule change 12.

Comment 58. A State delay in commencing, or completing, consistency review of a project pending an applicant obtaining permits from a county or other local government agency has the potential to unduly delay the approval of projects involving coastal issues.

NOAA Response to Comment 58. NOAA's change to § 930.58(a)(2) removing State permits from necessary data and information addresses this concern.

Comment 59. It is the States' understanding that the elimination of "permits" from the list of necessary data and information will not limit the State's right subsequently to object to the consistency determination if an applicant fails to secure necessary permits. The final rule should expressly affirm this understanding.

Comment 60. We disagree with the proposed deletion of the words "permit or" in § 930.58(a)(2). As one of many existing networked CZM programs, we base our consistency decisions in part, on the receipt of local or State permits. If a local or State permit exists we need to know. Asking for this information in a subsequent letter will cause time delays. Therefore, providing proof of issued local and State permits is necessary data and information needed to make a timely consistency decision.

Comment 61. Concurrent submissions with no change in the time frames of the respective administrative processes will lead to a State making a decision on the federal consistency application prior to making a decision on the related State permit, and will result in the perception, if not the reality, that the State permit has been pre-judged. This is not likely to be acceptable to the regulated community. Accordingly, we have identified three alternatives, any of which would resolve this issue: 1. Federal consistency review should commence only after the State permit process is complete; 2. Concurrent

submissions would only be acceptable if the timeline for federal consistency review is significantly extended to be consistent with the time it actually takes to process State and local permits (anything less than 12–18 months would be unreasonable.); or 3. The rules could be changed to provide States the ability to issue phased federal consistency concurrences with the preliminary or conceptual concurrence.

NOAA Response to Comments 59, 60 and 61. As described in the explanation for rule change 12, elimination of State permits from necessary data and information is needed to address an untenable situation where the six-month review process could only begin at the same time the State determines the activity is consistent by issuing a State permit. Such a procedure has the potential to defeat the statutory six-month review requirement. It would also prejudice both the applicant and the public since it would preclude public comment during the six-month review if the State has already issued a permit representing the State process for determining consistency.

Removing State permits from necessary data and information only affects starting the six-month review period. This change does not affect the States' ability to require that a State permit (which contains State enforceable policies) be issued in order to find a project consistent or object to an activity because the applicant did not obtain the State permit within the six-month period. This does not result in "pre-judging" the State permit if the permit is not acted upon within the six-month CZMA review. States may object to the consistency certification while providing that the objection will become a concurrence if the State permit is issued.

NOAA cannot extend the federal consistency review period beyond the statutorily mandated six-month period to accommodate State permit processes. As suggested by the comment, a State could issue a "preliminary" decision within the six-month time frame so long as its final decision is issued within the same six-month period. A State and applicant could also agree to stay the six-month period to a date certain, to allow the State's permit process to be completed. See discussion of rule change 13, § 930.60, for staying the six-month review period.

Comment 62. If a proposed federal activity has already received State or local government permits, applicants should be required to provide the State with those permits along with the data and information developed during the review and approval of the State or local

government permit. Therefore, additional language is required to clarify that the States can request permitting information for projects that may already be permitted.

NOAA Response to Comment 62. If an applicant received a State permit prior to the six-month consistency review and the State has described "permit applications" in its program as necessary data and information pursuant to § 930.58(a)(2), then the applicant would merely have to provide the State with the previously issued permit to show it met the information requirement. No change to the rule is necessary.

Comment 63. API endorses NOAA's attempted clarification of the definition of a "federal license or permit" requiring consistency review, as well as the deletion of the confusing phrase "comprehensive data and information sufficient to support the applicant's consistency certification" presently appearing in 15 CFR 930.58(a)(1). API requests clarification that the protections now afforded in § 930.58(c) to an applicant's confidential and proprietary information still remain in place if this substituted language is adopted. API would also suggest that NOAA consider restating the protection found in subpart (c) of § 930.58 by rephrasing the substituted language in subpart (a) to read "any other non-confidential and non-proprietary language relied upon."

NOAA Response to Comment 63. Section 930.58(c) was not proposed to be modified and the protections afforded by paragraph (c) remain in effect. No re-wording is necessary.

Comment 64. We support the new specific information requirements because they will make the process predictable and more transparent.

NOAA Response to Comment 64. NOAA notes this comment.

Section 930.60—Commencement of State Agency Review

Comment 65. The States reject the characterization that State review is merely a "checklist." The information should be adequate to address applicable State coastal policies, and to "support the applicant's consistency determination." The final rule should also be amended to clarify the relation between the timelines established in subsections (a)(1)(i) and (a)(2). The provisions in (a)(2) provide that the State agency's consistency review commences on the date that any missing information was received by the State agency. The language in (a)(1) should be amended to include a specific cross-reference to the timeline provided in

(a)(2). In addition, the applicant should bear the responsibility of promptly responding to a State request for missing information in order to assure that States have adequate time to review all information. It is not sufficient for the applicant to provide the information "during the review period." There is also a concern about the deletion of language requiring that missing information or other deficiencies be "corrected" or "cured" by the applicant. There is some concern that eliminating these requirements could result in turning the applicant's review from a substantive consideration of State policies into a ministerial action.

NOAA Response to Comment 65. The completeness/checklist review is not the State's substantive review of the activity, and does not preclude the State from requesting additional information during the six-month review period or objecting for lack of information. Requesting additional information and objecting based on lack of information are covered by § 930.63(c), which is not being changed. The checklist review serves only to clarify the date when the six-month CZMA federal consistency review period begins by determining whether the certification and necessary data and information required by § 930.58 has been submitted to the State. Further cross-references are not needed given the clarifying edits made in the final rule. See explanation of rule change 13 for a detailed description of the changes made from the proposed rule. Under (a)(1)(ii) of the proposed rule, a time period for the applicant to provide missing information is not needed for two reasons: First, such a time frame would unnecessarily restrict State flexibility and second, starting the review period before receipt of all necessary data and information is an option for the State. It would not then make sense to give the State this option and then remove that flexibility by specifying by rule a date by which the missing information must be submitted. If a State is concerned with getting missing information early in the review period, then it should only start the review period when the State receives both certification and all necessary data and information described in § 930.58. It is not clear why the applicant's review of State enforceable policies would become a "ministerial" review. The deletion of "deficiencies must be cured" in paragraph (a)(1)(ii) is replaced with the requirement that missing necessary data and information must be received in paragraphs (a)(2) and (3). This change provides direction that the missing

information must be submitted and received by the State.

Comment 66. Proposed paragraph (a)(2) specifies the State's responsibility of notifying the applicant of the receipt of the necessary data and information. According to the new language, the date the information previously deemed missing is received by the State is the date the State's review begins. Thus, the proposed language at (a)(2) contradicts that of (a)(1)(ii).

Comment 67. The term "information" in subsection (a)(1)(i) must be read as something different than "necessary information and data" in subsection (ii). After all, subsection (i) specifically says that the clock does not start if the State does not receive the "certification or information * * *." However, this interpretation is incongruous with subsection (ii) which appears to use the term "information" as a short form for "necessary information and data." Further, subsection (2) specifically contemplates that the clock will not start if the State has not received the "necessary data and information." The only harmonious reading of this rule is that subsection (ii) is completely optional. That is, if the State has received the certification but not all of the necessary data and information, the State may elect to start the clock anyway and await the information. We believe that having this option removes certainty from the process and would be exercised extraordinarily infrequently if at all. The passage should be redrafted to indicate plainly that the clock does not start until the State receives all necessary data and information required pursuant to § 930.58.

NOAA Response to Comments 66 and 67. Paragraph (a)(2) does not contradict (a)(1)(ii) in the proposed rule. However, this has been clarified in the re-edited final rule to recognize that the State has chosen to start the six-month review period without all of the necessary data and information. See explanation for rule change 13 for a detailed description of the requirements.

Comment 68. It is unclear why "or extend the six-month review period" in the first line is proposed for deletion. It seems that "staying the consistency time clock" is not the same as extending the review period. The former means "stopping the time clock" which presumably re-starts at the agreed upon time or action while the latter is not keyed to the time clock and, thus, it provides additional flexibility and could be beneficial to either the Federal agency or the State agency or, in many instances, both. Provided any alteration of the time frame is agreed to in writing by State agencies and applicants, the

regulations should continue to provide for this flexibility.

NOAA Response to Comment 68. The statute is explicit that there is a six-month period for the State to conduct its review. The statute does not provide the flexibility to extend the six-month review period for federal license or permit activities. Rather, the statute provides that if the State has not objected prior to the expiration of the six-month review period, the State's concurrence with the consistency certification is presumed. As such, staying or "tolling" the time clock is allowable as it does not extend the six-month review period. The six-month review period is tolled until a specific date after which the remainder of the six-month review period continues.

Comment 69. The proposed language for this section references "documents required by section 930.58." However, that section does not specify documents that must be submitted, but rather identifies the information that must be provided. The proposed language should be corrected.

NOAA Response to Comment 69. NOAA agrees that the language should be consistent and has made this change.

Comment 70. In order for a State to require additional information for its review process, NOAA suggests a State must amend its State management program and have the amendment approved by NOAA. The County believes the proposal is far too structured and formal a requirement for the States to fulfill for the simple purpose of obtaining the information necessary to review proposed projects. In particular, the County notes that NOAA has not processed many amendments to State approved management programs, nor is NOAA committing to provide the resources necessary to process such amendments. Further, the information needs of the States to review proposed Federal licenses and permits is often driven by developing environmental studies about the character and nature of the coastal environment. Requiring the States to request and NOAA to approve formal amendments to the approved State management plan every time additional informational needs are identified will undercut the effectiveness of the review process by the States. It will actually lengthen the review process as States seek time extensions to obtain needed information to review activities for consistency with coastal management programs. Further, the requirement is unnecessary and, therefore, should not be imposed.

Comment 71. We support these changes because under the current

regulations, there is significant uncertainty in determining when the six-month federal consistency review process commences because the States are free to deem an application incomplete as they seek additional data after the application is filed. This delays the running of the time clock. Under the proposed rule, the States would continue to have the ability to request the information they need, so long as they specifically describe such information in their management plans, making all potential applicants aware of the requirements prior to application. Thus, the States would be precluded from delaying federal consistency review either before or after the six-month period begins simply because they want more information.

NOAA Response to Comments 70 and 71. This section does not require States to amend their programs when they need additional information during the six-month review. This section does refer to § 930.58(a)(2), which requires States to amend their programs if they want to require information in addition to the "necessary data and information" described in §§ 930.58(a)(1) and (3) to start the six-month review period. NOAA strongly encourages States to amend their programs to be more specific regarding information needs, and some States have done so. Once the six-month consistency review period begins, States can request additional information needed to determine consistency with their enforceable policies, but such requests cannot stay or otherwise alter the running of the six-month review period unless the applicant and the State agree in writing to a stay until a specific date, as required in § 930.60.

Comment 72. Current regulations require applicants to provide information deemed necessary for the review to begin, while the proposed revisions provide only that the requested information be received by the State. It is important that States have the opportunity to review and analyze the adequacy of the information provided, and assist the applicant in providing additional information for the review.

NOAA Response to Comment 72. This section is concerned with determining when the six-month review period begins based on when the State has received the consistency certification and necessary data and information described in § 930.58. Thirty days is sufficient time for a State to determine whether the necessary data and information has been submitted. The State has the remainder of the six-month review period to assist the applicant in

providing any additional information other than that required by § 930.58(a).

Section 930.71—Federal License or Permit Activity Described in Detail

Comment 73. We appreciate NOAA's general endorsement of API's suggestion that CZMA consistency review of OCS activities described in detail in OCS plans should include federal approvals for individual permits under the Clean Water Act and Clean Air Act, and therefore States should not and need not conduct a separate consistency review for those additional federal permits. While NOAA's preamble comments will provide helpful guidance to the States, API suggests that the MMS, States, and industry would be better served by NOAA building that particular requirement into its consistency regulations, and by the agency preparing special regulatory guidance to prevent any further confusion in this regard. API also points out what inadvertently could be misleading language in the preamble's discussion of the effects of a State's objection to an OCS plan certification. At one point, NOAA remarks that "[i]f the State objects to the consistency certification, then MMS is prohibited from approving the license or permits described in the EP or DPP." Of course, in the case of an expanded "single consistency certification" including individual air and water permits, the EPA, and not the MMS, could be the subject of the statute's restrictions on approval of the license or permit.

NOAA Response to Comment 73. NOAA continues to emphasize the administrative efficiency gained by including CWA and CAA reviews in the State's review of the OCS plan, and not conducting separate reviews. However, NOAA cannot mandate such a requirement in its regulations. Such a requirement would have to be included by Interior in OCSLA regulations in its description of what federal approvals are "described in detail" in OCS plans. As for the federal authorizations described in detail in OCS plans, a State objection to a particular federal authorization precludes the authorizing Federal agency from issuing its approval, not MMS (unless MMS is the authorizing Federal agency).

Section 930.76(a) and (b)—Submission of an OCS Plan, Necessary Data and Information and Consistency Certification

Comment 74. Because the proposed changes would rely on submission of necessary data and information "required pursuant to § 930.58," it is important that the changes

recommended in rule change 10 and the clarification requested in rule change 11 or comparable language be included in the final rule. Without these changes, we would object to the removal of the language in the current subsection (a) for the reasons stated above.

Comment 75. This Change would drop an essential requirement of § 930.76(a), which is to "identify * * * activities described in detail in the [OCS] plan which require a federal license or permit and which will have reasonably foreseeable coastal effects."

NOAA Response to Comments 74 and 75. The required assessment of enforceable policies is contained in § 930.58(a)(3). Likewise, the effects analysis that the applicant must submit is also contained under § 930.58(a)(3). These requirements are not changed by this rulemaking.

Comment 76. The changes do not ultimately affect a State's ability, under current CZMA regulations, to make continuing requests for new data and information that increase the uncertainty of the consistency process. As the proposed rule states, these changes "would not affect a State's ability to specifically describe 'necessary data and information' in the State's federally approved management program * * * or to request additional information during the six-month review period * * * or to object for lack of information." API believes that this open-ended authority in NOAA's regulations is not needed, given that MMS has promulgated extremely thorough environmental review regulations and agency guidance for OCS Plans, and information generated by this process should be honored by the States. MMS developed its requirements in consultation with the Gulf coastal States. API suggests that information now being provided to MMS should be sufficient for the State's purposes. In addition, States should be able to identify in their CZM programs the information that will be required if different from MMS requirements, so that applicants have this information at the beginning of the process. States have enough experience with implementation of their CZM programs over the last 15 years, and the types of projects they evaluate for consistency and do not need to evaluate, on a project-by-project basis, what information is needed.

NOAA Response to Comment 76. Information obtained for Interior's OCSLA purposes may not be sufficient for State CZMA purposes. Thus, States need flexibility to amend their programs to describe necessary data and information for OCS plans. NOAA agrees with the comment that States

should be able to describe such information needs in their programs based on years of experience and continues to encourage States to do so.

Comment 77. API urges NOAA to require the States to identify information needs in their CZM programs, not just encourage them to do so. NOAA should also ensure State compliance by recognizing that a failure to timely seek NOAA's ongoing approval of a specific and current list of information needs will prevent a State from requesting supplemental information beyond what is currently described in the State's approved CZM plan, or in the permitting Federal agency's regulations and guidance. Moreover, API asks NOAA to ensure that this process is open to public review. API again urges NOAA to adopt regulations to provide a mechanism for applicants to invoke NOAA's intervention and effective oversight during consistency review if a State attempts to request information beyond what is specified in NOAA and MMS requirements or State CZM plans. To further promote other federal agencies' use of information guidelines such as those now used by MMS, API also suggests that NOAA regulations should be changed to specifically recognize that in cases where the federal permitting agency has promulgated specific consistency review guidance, in consultation with the States, a State will carry the distinct burden of demonstrating a particular need for any supplemental information in conducting its review and that such State coordination with the authorizing Federal agency is not advisory but a required feature for State management programs.

Comment 78. API endorses NOAA's clarification of the State's completeness checklist review. API submits that the "checklist" nature of the completeness review be confirmed in specific regulatory language, so that the States will be required to prepare such a checklist—that is, a checklist submitted to NOAA for approval with input by the appropriate Federal agencies and affected industry—for inclusion in their coastal zone management programs.

NOAA Response to Comments 77 and 78. NOAA does not have the authority to require States to amend their programs. *California Coastal Com'n v. Mack*, 693 F. Supp. 821 (N.D. Cal. 1988). NOAA can only require a State to submit a change that the State has made to its Federally approved program. 16 U.S.C. 1455(e). Submission of the necessary data and information, along with the consistency certification, is what triggers the start of six-month

review period. States do have to amend their CMPs pursuant to § 930.58(a)(2) if they want to describe necessary data and information in addition to that required by NOAA's regulations. States need the ability to ask for additional information during the review period to address relevant matters not covered in the necessary data and information. See also response to comment 79, regarding State requests for information beyond the three-month period when applicants make substantial modifications to projects late in the six-month review period. As for MOU's with Federal agencies or Federal agency "guidance," if States want to bind themselves with MOU's or guidance regarding consistency reviews they can do so. NOAA, of course, throughout the consistency regulations strongly encourages States and Federal agencies to closely coordinate consistency reviews and to develop agreements that will increase the efficiency of the reviews for a particular State or Federal agency. NOAA is not requiring States to submit completeness checklists for NOAA approval, because the information requirements in §§ 930.39, 930.58, and 930.76 contain sufficient guidance as to what information must be submitted to the State in order to start the consistency review periods.

Comment 79. We disagree with NOAA's proposal to require each State to list the NEPA EIS in their State management plan as an informational requirement in order for the State to be able to receive the EIS as part of a complete informational submittal to the State. Where possible, rulemaking should standardize the informational requirements needed for State consistency review. Any EIS prepared for the project will obviously be useful and even essential information for the State's consistency determination. Therefore, the County requests that, for a project that requires an EIS, the draft EIS be submitted as part of the information submitted to the State under this section.

NOAA Response to Comment 79. NOAA has only mandated CZMA-specific information as "necessary data and information." NEPA documents that may be required for a Federal permit action may or may not be included as necessary data and information and some States may want flexibility to develop their own information needs. See also explanations to rule change 12 and rule change 15 regarding limitations on listing NEPA documents as necessary data and information. Therefore, NOAA has not mandated that NEPA documents

be included as necessary data and information.

Comment 80. The OCSLA, CZMA and NEPA provide opportunities for a State to review proposed OCS activities. These three acts and implementing regulations contain different requirements and timelines. Before proceeding with any changes to Subpart F of the federal consistency regulations, a complete analysis of the interaction among these three acts should be undertaken. In addition, a meeting of State and federal representatives should be convened to discuss the ramifications of the proposed changes to the federal consistency regulations and how these regulations interrelate with the other two acts and implementing regulations.

NOAA Response to Comment 80. The CZMA regulations, including the regulations as revised by this final rule, in addition to MMS regulations, contain the coordination needed to address the interaction of the CZMA and OCSLA. The NEPA connection was thoroughly discussed in the preamble to the 2000 rule, and further discussed in this final rule. Further analysis of the CZMA–OCSLA–NEPA interactions is not needed. See explanation of rule change 15 for further details on the NEPA limitations for OCS plans and CZMA review.

Comment 81. This section requires the applicant to send the State a copy of the OCS Plan when the OCS Plan is submitted to Interior. Receipt of a copy of the initial plan by the State will encourage early cooperation among the State, Interior and the applicant. Early cooperation will help the State respond to concerns and ensure that the consistency review proceeds in a timely manner.

NOAA Response to Comment 81. NOAA cannot require the applicant to send its initial OCS plan to the State. The submission to the State is by Interior once Interior determines the submission to be complete for OCSLA purposes. As it could be changed to comply with OCSLA standards, the initial OCS plan may not be the version that the State will eventually review for consistency. NOAA does, however, encourage the applicants to consult early with the State about its proposed OCS activities.

Section 930.77(a)—Commencement of State Agency Review and Public Notice

Comment 82. For OCS activities, which by their very nature are complex and controversial, the proposed rule would limit requests for information by the State to the first three months of the six-month review period, and thus prohibit a State from asking for any

information after three months. This change implies that unless a State requests information within the first three months of the review period, it may be prohibited thereafter from objecting based on lack of information. Given the emphasis in the previous regulatory changes on maximizing public participation in the federal consistency process, this proposal represents a policy reversal and would have the effect of stifling public input into the process. It would also clearly diminish State authorities by removing the ability of the State to object based on lack of information (or at a minimum, invite litigation over the question of whether the State retains this authority). It may require states to hold an additional hearing within three months, solely for identifying information needs. Alternatively, it may simply compel a State to act within three months, just to preserve its options, thus halving the effective review period from six months to three. The idea that no new information need could or should arise after three months is not realistic, from a practical perspective gained from reviewing highly complex projects. In addition, interested members of the public may alert the State to impacts or information about which it was not initially aware. We strongly oppose this change as unworkable, impractical, and unrealistic, and one that will lead to increased litigation, rather than a streamlined process.

NOAA Response to Comment 82. The completeness/checklist review is not the State's substantive review of the activity, and does not preclude the State from requesting additional information during the review period or objecting for lack of information. Requesting additional information and objecting based on lack of information are covered by § 930.77(a)(3). The completeness/checklist review merely clarifies when the six-month review period begins by determining whether the information required by § 930.76 has been submitted to the State. As stated in the proposed rule and in this final rule, a primary purpose of this rulemaking is to provide greater clarity, transparency and predictability to the federal consistency process. The final rule meets those objectives by providing clear expectations regarding the start of review periods and information needs. NOAA found these changes were needed because there were increasing instances of State attempts to prolong the six-month review period by continual requests for additional information.

The CZMA is intended to provide States with an opportunity to review

federal actions with coastal effects within specific time frames. While the time frames should not limit information necessary for a State to make a reasonable decision, States should not, and by statute, cannot, have unlimited time to review a project. The issue is what is *necessary* for the State's review. NOAA's regulations, since 1979 and as amended in 2000 and now in this final rule, provide reasonable parameters for what is necessary data and information to start the consistency review periods for Federal agency activities, federal license or permit activities and OCS plans. These "necessary" information requirements are not significantly changed by this rulemaking. If the information required by NOAA in § 930.58(a)(1) and (3), and information required by the State pursuant to 15 CFR 930.58(a)(2), is not sufficient for the State to complete its review the State can request additional information during the six-month period. In most cases the information submitted pursuant to §§ 930.39, 930.58 and 930.76, should be all the information needed for a State to complete its review. To avoid situations where information requests are made late in the six-month review of OCS plans, States must determine whether additional information is needed in the first three months. However, NOAA has added a caveat to the rule allowing the State to request additional information after the three-month period if the person or Interior changes the OCS plan such that the plan addresses activities or coastal effects not previously described or for which information was not previously provided. This should address the main point of the comment and also foreclose attempts to withhold project changes until after the three-month period. NOAA's consistency regulations have always required that if a State wants to object for lack of information, it must first have provided the applicant/person with a written request for the information and describe why the information is needed to determine consistency with its enforceable policies. 15 CFR 930.63(c). However, a State concurrence is effective for the plan as reviewed by the State and not to changes in the plan not available for review by the State. Therefore, the person should ensure that the State has all information relevant to a consistency certification before the end of the three-month period.

Comment 83. We believe that requiring a program change to get additional information would be unduly burdensome to State agencies, especially in light of the other changes

proposed in the Notice. The proposed new sub-section (a)(3) would require the State coastal agency to provide minute detail, in writing, of the reasons why additional information is requested—shifting the burden of proof to the State agency from the applicant.

NOAA Response to Comment 83. The rules, since 1979, have required States to amend their programs to describe necessary data and information if the State wants information in addition to that described in § 930.58(a) required to start the six-month review period. This procedure was further emphasized in the 2000 rule and is not being changed by this final rule. It has also always been required that if the State wants additional information during the State's six-month review, the State must describe the reasons why it needs the information to determine consistency with specific enforceable policies. See 15 CFR 930.63(c).

Comment 84. In § 930.58(a)(2), the State "may" amend its program to include information needs. In § 930.77(a)(2), the impact of the new requirement providing that if a State needs information in addition to the information required by section 930.76, it "shall" amend its management program" is not clear. Why is this new requirement added to the regulations when the States already have the option to amend their programs under section 930.58(a)(2)? While it may be a good practice and one that should be encouraged where the information needs are clearly identifiable, a State agency should not be required to amend its program to request additional information that is needed to determine consistency. A State should not be required to amend its program to anticipate potentially unknowable information needs. An effort by the California Coastal Commission, MMS and industry in the early 1990's was abandoned by mutual agreement as potentially not productive because information needs change over time due to changed circumstances. A list could be overly burdensome and wasteful for applicants, if States tried to anticipate every possible concern. A list would be out of date relatively soon after it was compiled. The more comprehensive and relatively simple requirements of the CZMA benefit applicants by enabling them to focus on the relevant issues rather than satisfy an exhaustive and inflexible list of information requirements that would need to be satisfied. Furthermore, a list that is not adequate for all States may lead to more State objections based on lack of information, which would not improve the efficiency of the consistency review

process. It is very important that, if this new requirement or some variation thereof is maintained to encourage States to amend their programs, it not be open to interpretation as a bar or limit to the applicant providing or State requesting all necessary information supporting the consistency determination, when it has not been included in an amended program.

NOAA Response to Comment 84. A State is not required to amend its program to describe State specific necessary data and information, thus the term "may" was used in § 930.58(a)(2). If, however, a State wants to require "necessary data and information" in addition to that described in § 930.58(a) to start the six-month review period, the State must first amend its CMP. That is why "shall" was used in § 930.77(a)(2). NOAA has changed the language in § 930.77(a)(2) to better reflect this long-standing interpretation. Obtaining information that is in addition to the necessary data and information required by § 930.76 is described in § 930.77(a)(3).

Section 930.82—Amended OCS Plans

Comment 85. The proposed revision does not appear to substantially change the process for review of amended OCS plans and the State does not object.

NOAA Response to Comment 85. NOAA notes this comment.

Comment 86. This section removes a requirement that the applicant send a copy of the amended OCS plan to the State. This provision should remain because it encourages early cooperation among the State, Interior and the applicant. The second change is an addition that Interior will furnish the State with a copy of an amended OCS plan when it is satisfied that OCSLA and CZMA requirements have been met. While Interior is best suited to determine if the requirements of OCSLA are met, Interior personnel may not have the expertise to decide if requirements of the CZMA regulations are met. There should be a consultation with the State built into this process.

NOAA Response to Comment 86. NOAA's change to this section is not a substantive change. NOAA cannot require the applicant to send its initial plan to the State. The submission to the State is by Interior after Interior determines the submission to be complete for OCSLA purposes. Because an OCS plan could be changed to comply with OCSLA standards, the initial OCS plan may not be the version the State will eventually review for consistency. NOAA does, however, encourage the applicants to consult early with the State about its proposed

OCS activities. The amended plan referred to under this section is a plan to which the State objected and the Secretary did not override the State's objection. The provision for Interior to provide the amended plan to the State is merely a determination that the amended plan has met OCSLA requirements and is then ready to be sent to the State.

Section 930.85(b)—Failure To Comply Substantially With an Approved OCS Plan

Comment 87. Although no changes are proposed to this section, this section could be clearer as to who should be responsible for recommended remedial action. We recommend this subsection be clarified through the addition of language at the end of the next to last sentence to read, "Such claim shall include a description of the specific activity involved and the alleged lack of compliance with the OCS plan, and request for appropriate remedial action by the licensee or permittee."

NOAA Response to Comment 87. NOAA has not made this change as the remedial action could be taken by either MMS or the person.

Section 930.85(c)—Failure To Comply Substantially With an Approved OCS Plan

Comment 88. The proposed change would shift the authority from the Director of OCRM to MMS to determine whether an OCS plan has not been substantially complied with and whether an amended plan must be reviewed by the State for consistency. NOAA states in the preamble that this is needed to clarify that MMS must make the determination whether a plan has been substantially complied with or not. In the 2000 rule changes to these regulations, NOAA stated in the preamble that one "federal agency had commented that the CZMA does not authorize NOAA to require OCS plan amendments. NOAA disagrees. This is an existing regulatory requirement and is mandated by the CZMA, CZMA § 307(c)(3)(B)." Also in the 2000 rule changes, NOAA added § 930.65 which authorizes the State to monitor federally licensed and permitted activities to determine whether they are not being conducted as originally proposed and will cause substantially different effects. NOAA's rationale for adding the remedial § 930.65 now supports retaining § 930.85, the remedial section upon which § 930.65 was modeled. Changing this remedial provision is a huge step backward; it would greatly reduce the State's ability to insure that OCS plans are carried out as proposed

and approved. NOAA should retain the provisions of § 930.86 which provide the State "with a more meaningful opportunity" to address instances where the State claims an OCS plan is not being substantially complied with and additional consistency review is mandated. Again, this change is inconsistent with both the letter and the spirit of the CZMA. Rather than fostering cooperation and giving the State a truly meaningful way to insure OCS plans continued compliance with the State's management program, this change would reduce the State's role and abdicate the Director's responsibility in favor of MMS.

Comment 89. The proposed revision to this paragraph eliminates all recourse by the State or by NOAA to seek compliance with the CZMA, in cases where an OCS operator may be acting in a manner that is not in accord with an approved operating plan. MMS certainly should have primary responsibility for ensuring that OCS Plans are followed, however, compliance with the approved State program and the CZMA is also in question should an operator deviate from the approved plan. We recommend that the regulations give MMS a reasonable opportunity to review and act on a report that a person is failing to comply substantially with their OCS plan, but the regulations should retain some mechanism by which the State can seek review and intercession via NOAA authorities.

NOAA Response to Comments 88 and 89. As stated in the proposed rule and this final rule, unlike other Federal statutes, the CZMA specifically addresses the OCSLA oil and gas program and this establishes a unique coordination between the CZMA and the OCSLA. Where the CZMA mandates certain requirements for OCS plans, these are addressed in NOAA's regulations. Where the OCSLA program provides Interior with certain roles not covered by CZMA mandates, NOAA will rely on Interior to implement those roles, consistent with CZMA requirements. This statutory-specific relationship is distinct from other Federal statutes and, thus, the remedial action section, 930.65, is appropriate for other federal authorizations, but not OCS Plans. As such, and as explained in the proposed rule and the explanation in this final rule for § 930.85(c), NOAA's rationale for retaining this section in the 2000 rule did not fully account for CZMA section 307(c)(3)(B) and the CZMA-OCSLA interaction. This rule change is needed to more closely coordinate CZMA and OCSLA requirements. Thus, NOAA cannot "abdicate" an authority which

never expressly existed and the change is, in fact, consistent with both the CZMA and the CZMA-OCSLA relationship.

Comment 90. To clarify this section, we recommend the following modifications: (1) Insert "or to the State's request for appropriate remedial action" between "and applicable regulations" and "the person shall comply with" in the third line of subsection (c); and (2) insert "if such has been prepared" between "amended OCS plan (excluding proprietary data and information)" and "necessary data and information" in the last sentence.

NOAA Response to Comment 90.

These changes are not needed. Paragraph (c) now applies to instances where MMS determines a person has failed to substantially comply with an approved OCS plan, regardless of whether the State requested remedial action or not. Remedial action is covered in paragraph (b).

Section 930.121(a)—Consistent With CZMA Objectives on Appeal

Comment 91. FERC's issuance of a certificate of public convenience and necessity for an interstate pipeline should by definition be deemed to meet the criteria that an activity significantly and substantially furthers the national interest. A FERC certificate confers on its holder the ability to exercise a federal right of eminent domain. The fact that the Congress in the Natural Gas Act (NGA) saw fit to confer this right on a private applicant acting pursuant to a federal authorization speaks volumes about the national interest furthered by interstate pipeline projects with FERC certificates.

NOAA Response to Comment 91. FERC findings for an interstate pipeline will undoubtedly be an important factor considered by the Secretary to determine whether a project furthers, in a significant or substantial manner, the national interest as articulated in the CZMA. However, an order issued by FERC pursuant to the NGA to authorize the construction and operation of an interstate pipeline remains subject to other federal statutes as FERC itself has recognized. The statutory responsibility for determining whether a project is consistent with the objectives of the CZMA rests solely with the Secretary of Commerce. The question of whether a project furthers the national interest as articulated in the CZMA is one aspect of this determination. Findings by FERC under the NGA would be given appropriate consideration by the Secretary and major energy projects, such as an interstate pipeline, may likely be found to significantly or

substantially further the national interest for CZMA appeal purposes. However, this conclusion is made by the Secretary and relies on the factual record developed for an individual appeal.

Section 930.121(c)—Alternatives on Appeal

Comment 92. New Jersey's Coastal Management Program supports the proposed rule changes to this section. In particular, we strongly support the language clarifying that an alternative shall not be considered unless the State submits a statement to the Secretary that the alternative would permit the activity to be conducted in a manner consistent with the enforceable policies of the management program.

NOAA Response to Comment 92. NOAA notes this comment. The section's revisions reflect the criterion relied on by the Secretary for determining whether an alternative will allow a proposed activity to be conducted in a manner consistent with a state's coastal management program—as established by numerous CZMA appeal decisions.

Comment 93. The second portion of this section will prohibit the Secretary from considering any alternative that the State had not determined to be consistent with the applicable enforceable policies. It is unreasonable to expect a State to conduct a comprehensive analysis of alternatives to ensure complete consistency especially in complex projects which are not within the expertise of a coastal management agency. Further, it is unfair to require the State to commit to a finding of consistency on an alternative that necessarily will not have been fully developed or analyzed. However, it is often possible to identify alternatives with fewer impacts that, upon further study, may prove to be acceptable. Additionally, the consideration of alternatives should include those identified by the Secretary or any party to the appeal and not be limited to those the State identifies. If the language is adopted as proposed, it seems entirely likely that an applicant for Federal activity could do a cursory "bare-bones" evaluation and propose an alternative that is clearly unacceptable to the State so that the alternatives analysis burden would fall to the State. The responsibility to conduct a reasonable alternatives analysis rightly belongs to the applicant, who has the original burden of proof and persuasion respecting its chosen proposal.

NOAA Response to Comment 93. This is an adoption of current practice, as noted in the explanation to this rule

change. Anyone can offer an alternative on appeal. However, this change clarifies that for an alternative to be considered available, the State would have to declare whether it is consistent. The point of the Secretary's decision is to determine whether to allow a Federal agency to authorize the proposed project, which has already undergone substantial State review. Thus, if an alternative meets the purpose of the project and the State finds the alternative consistent, then the applicant could adopt the alternative and proceed with that alternative without further State CZMA review. The purpose of the appeal decisions is not to begin a new round of State reviews for the same project, but to bring finality to the CZMA process for that project. If a State cannot make a finding of consistency for an alternative on appeal, then the State would not prevail on that element of ground I.

Section 930.127—Briefs and Supporting Materials

Comment 94. Thirty days is not an adequate time period for the State to respond to the new issues raised at the appeals level. As NOAA points out, the Secretary is not imposing his or her judgment on the consistency of an activity with a State's program, but rather is reviewing new questions of balancing competing national interests and looking at national security needs. By their very nature, these issues do not involve questions of consistency with the State's coastal program. Rather, these are new issues that the State does not (nor is required to) consider in its consistency review. The consideration of these issues will require additional data gathering and, possibly, public input, and thus 30 days is insufficient time for the States to consider these issues.

Comment 95. As a general matter, it would be preferable for both States and the appellants to permit the Secretary to establish a briefing schedule in consultation with the parties as provided in the current regulation. This would enable a schedule to be established to meet the case-by-case needs of both parties. To the extent the final rule sets out a specific briefing schedule, it is in the best interest of both parties to have an adequate opportunity to submit information to assure a complete record. Allowing for a less rigid briefing schedule would not extend the time set for completion of the record and issuance of a final decision. CSO supports the following specific technical changes: Subsection (a)—Provide at least 45 and preferably 60 days for States to submit a reply brief;

Subsections (a), (b) & (c)—Clarify the relation between the initial brief and reply and additional procedural or other briefs required by the Secretary. For example, would separate time periods be set out for those briefs? Would the need for these additional briefs extend the briefing schedule? Subsection (c)(3)—There seems to be an error in subsection (c)(3) that refers to sections 930.127(a) and (c)(1). The significance of these cross-references is not clear. Subsection (e) provides for extensions of briefing schedules "only in the event of exigent or unforeseen circumstances." This provision is overly restrictive.

Comment 96. The State generally supports these changes, but we have particular concerns. First, we suggest that allowing the appellant 30 days to file the notice of appeal, and an additional 30 days to file its brief, whereas the State is permitted only 30 days in which to respond is unfair to the State. We recommend that the State be given 60 days, which equals the total time afforded the appellant. Second, we ask that subsection (b)(1) of the final rule clarify whether supporting materials must be submitted in electronic format or whether just the briefs must be so submitted. Third, we suggest that the Secretary's authority to determine the scope of the record is not unbridled and is limited by settled principles of administrative and procedural law. Subsection (c)(1) should state that, at a minimum, the record shall be comprised of all properly filed and served briefs and supporting materials and all timely submitted public and agency comments. Fourth, as the rule allows for the Secretary to order additional briefs, subsection (e) should clarify that the Secretary may establish the filing periods for such briefs beyond the limits specified in subsection (a).

Comment 97. It would be both practical and helpful to allow the parties to submit additional response briefs within 20 days after the filing of the State's opening brief. This would allow the parties the opportunity not only for important rebuttal arguments, but also for the parties' responses to any public, or Federal agency comments that had been received into the decision record.

NOAA Response to Comments 94, 95, 96 and 97. To meet the more restricted time period for closing the decision record, limitations are needed to the briefing schedules and time spent developing the decision record. These limitations to the briefing schedules are even more imperative now that the Energy Policy Act has imposed a shorter, 160-day, period to develop the decision record and a shorter period to

issue a decision, from 135 days to 75 days. The appeal decision record only needs to provide the Secretary with a reasonable basis to issue a decision. The record is "complete" when the Secretary determines there is sufficient information to make a reasonable decision. Public input is provided for in the public comment period in § 930.128. Likewise, to issue a more timely decision and as described in the description of this rule change, there will be only one reply brief by the appellant. Additional briefs will occur only as needed by the Secretary. Time periods to submit any additional briefs required by the Secretary would be established by the Secretary based on the complexity of the information requested and the amount of time left in the period to complete the decision record under § 930.130. Thus, States should ensure that (1) they fully participate in the application process during the authorizing Federal agency's proceedings and raise all State concerns and requirements, to the extent possible, to the authorizing Federal agency; and (2) the States should address issues in their objection letters to the fullest extent possible, and then, again, in their brief on appeal. The cross-references to paragraphs (a) and (e) in paragraph (e)(3) are correct, as those sections describe the briefs to be filed. In order to meet the 160-day period in § 930.130, the Secretary will need to adhere to a strict briefing schedule and, thus, extensions are only for good cause shown. All materials should be provided in electronic format, as required by the existing rule. When some materials, e.g., large maps, do not lend themselves to electronic format, NOAA does not require that these materials be provided electronically. Paragraph (e), formerly (c), already allows the Secretary to extend the time for submission of briefs.

NOAA is maintaining the deadlines described in the proposed rule for when the appellant's and State's briefs are due. These deadlines are needed to address the deadlines established by the Energy Policy Act. The appellant's brief is due 30 days after submitting the notice of appeal and the State's brief will be due 60 days after appellant submits its notice of appeal.

Comment 98. While API sees potential utility in the provisions in proposed section 930.127(c)(2) for the Secretary to have the option of requesting an initial round of briefs to address only procedural or jurisdictional issues, followed by briefs on the merits as appropriate, the proposed rule needs to be changed to clarify that exercise of this option by the

Secretary would constitute an exception to the otherwise uniform provision in proposed section 930.127(a) that requires the appellant's opening brief to be filed within 30 days of the appeal notice, and the State's brief to be filed 30 days thereafter.

NOAA Response to Comment 98. No change is needed to note the "exception" since the uniform provision in § 127(a) is not that only one brief is allowed, but that the parties' one brief is due at a certain time. The provisions in paragraph (e) provide for other briefs that may be required and paragraph (e)(4) clearly provides the "exception" language requested by the comment.

Comment 99. Section § 930.127(b)(2) states that "[a]t the same time that materials are submitted to the Secretary, the appellant and the State agency shall serve at least one copy of their briefs, supporting materials and all requests and communications to the Secretary and on each other." (Emphasis added.) API believes that the highlighted language could be misread as requiring an additional obligation of service on the Secretary beyond the procedures already outlined in § 930.127(a) and (b)(2). Thus, API requests that NOAA consider changing the language of proposed § 930.127(b)(2) to read as follows: "At the same time that materials are submitted to the Secretary, the appellant and State agency shall serve on each other at least one copy of their briefs, supporting materials, and all requests and communications submitted to the Secretary."

NOAA Response to Comment 99. NOAA agrees with this comment and has made this change.

Section 930.128—Public Notice, Comment Period, and Public Hearing

Comment 100. The proposed change would require the Secretary of Commerce to give greater weight to Federal agencies in administrative appeals where they provide comments within their area of expertise. NOAA's proposal ignores the expertise of the State in coastal planning and permitting issues. This change, along with the other changes noted above, reduce the deference accorded to the State under the current regulations and elevate the input of Federal agencies. Congress intended the States to play an equal role in determining the fate of their coastal zones except in the most unusual circumstance: when either, after a judicial decision finding a federal activity to be inconsistent with a State's management program, the President determines that inconsistent activity is in the paramount interests of the United States or, with regard to OCS plans, the

Secretary of Commerce determines that the plan's activity is necessary in the interest of national security. (16 U.S.C. 1456(c)(1)(B) and (c)(3)(B)(iii).) NOAA should not thwart Congress's intent by adopting narrow interpretations of laws intended to have a broad reach.

NOAA Response to Comment 100. This section deals only with Federal agency comments on appeals to the Secretary in 15 CFR part 930, subpart H. This section has no impact on the implementation of other subparts and has no impact on the weight given to State agency views on appeal. This change only means that NOAA shall give greater weight to the views of Federal agencies commenting in their areas of technical expertise over the views of other Federal agencies who are not commenting in their area of technical expertise. This section does not pit Federal agency views against State views. For example, an authorizing Federal agency has developed an EIS under NEPA for its proposed action to issue a federal authorization. The authorizing Federal agency certainly has some knowledge of environmental impacts, but suppose there is possible harm to an endangered species or a marine mammal. In those cases, the expert Federal agencies would not be the authorizing Federal agency, but would be the Endangered Species Act agencies (the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (NMFS)). The views of the Fish and Wildlife Service and NMFS would be accorded greater weight than the authorizing Federal agency, or another Federal agency who might also happen to comment on the ESA or MMPA issues.

Comment 101. The proposed change would allow the Secretary to reopen the period for Federal agency comments. All interested or affected parties, not just Federal agencies, should be able to submit comments if the Secretary reopens the period for comments. The change appears to accommodate the time extension request of a Federal agency while excluding other parties from submitting comments.

NOAA Response to Comment 101. In order to meet the more restricted time period for closing the decision record, the public comment period will not be re-opened, except as described in the regulation if the Secretary holds a public hearing. Parties submit their views according to the briefing schedule. In most cases this will also apply to Federal agencies. However, there may be instances when the Secretary will need further input from the authorizing Federal agency or an expert Federal agency. In these cases,

the Secretary may reopen the period for Federal agency comments, when there is good cause shown, but before the record closes.

Comment 102. Section 930.128(b) suggests that the public could be required to comment prior to the availability of NEPA documents and other important information that clarify the nature of the proposed action and the potential for impacts on the State's coastal zone.

NOAA Response to Comment 102. As explained above in response to comments on § 930.127, the Secretary needs sufficient information to make a decision. The Secretary does not necessarily need to obtain all conceivable views on every item submitted for the record. Further, the shorter deadlines imposed by the proposed rule and the Energy Policy Act dictate a more streamlined appeals process that requires NOAA to establish a revised process for input by the parties, the public and Federal agencies.

Section 930.129—Dismissal, Remand, Stay, and Procedural Override

Comment 103. If the Secretary remands the case back to the State, because new information relevant to the State's objection arises, NOAA proposes to reduce the period for State comments from three months to 20 days. It would be virtually impossible for States to comply with this change and it is likely that information on the alternative would not be complete. As a new alternative, there would not be a complete design or adequate environmental evaluation. Rather, the States will be considering a conceptual plan. In addition, the change would eliminate public participation in the process, which is one of the cornerstones of federal consistency. In California's case, the CCC and the BCDC meet only once every 30 days. Under this proposal, insufficient time would be available for us to conduct a public hearing and determine consistency with our program.

NOAA Response to Comment 103. This change is needed to address the new time frame for closing the decision record. The remand to the State is not a new review of the entire project and does not require public comment at the State level. The remand is for the State to reconsider its previous objection in light of the new information. Public comment on appeals is provided by the Secretary under § 930.128. However, in response to the comment, NOAA believes that a maximum time for remand is not needed and that the Secretary can choose a period longer than 20 days or might choose a period

less than 20 days, depending on the time remaining in the 160-day period to develop the record. Therefore, the "exceed 20 days" language has been removed.

Comment 104. The change to paragraph (c) would remove the Secretary's ability to remand the appeal for reasons other than those allowed under section 930.130 governing the stay of closing of the decision record. This would have the effect of discouraging applicant-State agency resolution of issues through negotiation, since it would no longer allow settlement or negotiation as a basis for remanding an appeal. Issues would remain unresolved, until the Secretary decides them in favor of one side or the other.

NOAA Response to Comment 104. Open-ended remands are no longer possible under a definitive date in which to close the decision record.

Comment 105. Section 930.129(b) should be modified by inserting the words "including the enforceable policies of the State," after the word Act.

NOAA Response to Comment 105. This change would be, in part, redundant with the remainder of this paragraph. While the Secretary may decide whether the State has complied with CZMA requirements by basing its objection on enforceable policies and objecting in a timely manner, the Secretary does not review the substantive basis for the State's decision. The Secretary will not substitute his decision for that of the States. Such an action would be contrary to a basic principle of the CZMA that, CZMA coastal management decisions are made by the States pursuant to State law incorporated into federally approved CMPs. Hence, the Secretary's balancing of the coastal effects with the national interest and applying the CZMA objectives is a *de novo* review.

Section 930.130—Closure of the Decision Record and Issuance of Decision

Comment 106. We have serious concerns that the consistency appeals process has caused undue delays in energy projects. Furthermore, NOAA's proposed rule, while providing clarity to some definitions, fails to ensure that consistency appeal decisions are made in a timely fashion. NOAA's proposal establishes an unnecessarily long 270-day window for record closure. Since the federal permit agency's decision must have fully considered the expertise of all relevant federal and State agencies, as well as project need,

alternatives, and coastal impact mitigation to satisfy court review, NOAA should close its record immediately upon receiving final party briefs (API asks for a 120–180 day period to develop the decision record). At that point the Secretary has all record evidence necessary to decide any appeal. Further, NOAA's proposed deadline exceptions for *additional* environmental or biological opinions are not needed for any appellate review and would simply delay the appeal. We request that NOAA change its proposal to comply with congressional intent that the Secretary decide these appeals expeditiously.

Comment 107. While appeals to the Secretary are relatively rare, they do have the potential to significantly impact proposed projects in which the mere fact of delay can sometimes be fatal to the ability to continue with the project. In such cases, we feel that it would be beneficial to process appeals to the Secretary of Commerce on a fast-track basis. We suggest a process in which the record on appeal consists of documentation compiled by the State and the relevant Federal agencies from which approvals for the projects must be obtained and that NOAA shall give conclusive weight to and be bound by any prior determination by a Federal agency having authority to authorize the activity determining the national or public interest or the reasonableness of alternatives. After a short briefing period and opportunity for public comment, it is important that a decision be issued as soon as possible and preferably within 90 days.

NOAA Response to Comments 106 and 107. NOAA proposed a 270-day period as a reasonable time in which to close the decision record. NOAA felt that the 270-day time period was needed because the authorizing Federal agency's decision record often lacks information needed to address CZMA issues. The Secretary's review is not a review of the State objection, rather it is a *de novo* determination of whether the project is consistent with the objectives of the CZMA or in the interest of national security. The Secretary's judgement is not substituted for that of the authorizing Federal agency regarding the merits of the project, nor does the Secretary determine whether a proposed project complies with other Federal law. However, because of the multiple national interest requirements of the CZMA, the Secretary must evaluate the project in light of the competing CZMA objectives. Varying levels of information and detail are required to make these determinations which are dictated by many factors such

as the nature of the project, scale and scope of effects on coastal uses and resources, alternatives to the proposal, etc. NOAA has amended § 930.127(c)(3) to note the importance of the authorizing Federal agency's administrative decision and record in the Secretary's decision, when that information is submitted to the appeal decision record.

The appeal process is an important component of the CZMA formula to balance State-Federal-private interests. The Secretary's consideration of the national interest in the CZMA objectives is a "check" on the State's authority to block projects affecting State coastal uses or resources. If a State objects to the issuance of a federal authorization, then the project cannot go forward unless the Secretary overrides the State's objection.

An unreasonably short period for developing the decision record and relying solely on the authorizing Federal agency's record could substantially weaken the Secretary's decision to override the State's objection, thus, significantly diminishing this important CZMA safeguard. Moreover, the burden of establishing that the Secretary should override a State's objection generally rests with the permit applicant. NOAA is concerned that the time period proposed by the comment could limit the ability of the applicant/appellant to develop national interest information related to CZMA objectives, by (1) not allowing sufficient time, and (2) forcing all parties to use the authorizing Federal agency's record which is developed for purposes very different than those of the CZMA. To meet the deadlines established by the Energy Policy Act, NOAA has had to further alter some of the appeals procedures to accommodate the new deadlines, provide the parties with a reasonable opportunity to argue their positions, and allow the Secretary sufficient time to evaluate the decision record, draft a decision document and issue a decision.

As described above for rule change 25, § 930.130, the Energy Policy Act replaces NOAA's proposed stay provision with a new stay provision. The Secretary may still use the new stay provisions to obtain NEPA and ESA documents. Again, NOAA emphasizes that doing so allows the Secretary to obtain environmental documents from the authorizing Federal agency and are not *additional* environmental documents developed by the Secretary, but are the environmental NEPA and/or ESA documents required by operation of other Federal law without which the authorizing agency cannot complete its permitting action. The Secretary's

request for these documents does *not* delay issuance of the federal authorization. If the NEPA and/or ESA documents are completed prior to the appeal or during the 160-day decision record period, then the exception need not be used. The use of the exception is most likely to be used in the OCS oil and gas context where timelines of the OCSLA require the CZMA six-month consistency review period to start before MMS completes NEPA or ESA compliance. Nevertheless, OCS oil and gas projects are *not* delayed by use of this exception, because MMS cannot issue any license or permit until NEPA or ESA compliance is complete.

Comment 108. The Natural Gas Act (NGA), which predates the CZMA by decades, confers on FERC plenary authority to issue certificates of public convenience and necessity to authorize the siting, construction and operation of interstate natural gas pipelines. Numerous Supreme Court decisions validate the preemptive effect of FERC's authority under the NGA. The Congress in 1972 made clear that enactment of the CZMA did not diminish, modify or supercede this preexisting federal authority. CZMA section 307(e). Now, however, the pending appeals from State objections to consistency certifications for proposed interstate pipelines that have received FERC certificates calls into question whether this clear statement by the Congress will be followed. NOAA's final rule should state clearly that it will give due weight to FERC's findings in view of the statutory scheme in the NGA that confers on FERC sole responsibility for determining whether, and under what conditions, a proposed interstate pipeline is required by the public convenience and necessity. The NGA and NEPA require FERC to assess all reasonable alternatives to a pipeline's construction proposal as a key factor in its evaluation and determination. Yet NOAA asserts that it must review alternatives that the protesting coastal State, in that State's judgment, deems consistent with its State coastal management plan. This subverts the comprehensive federal scheme Congress intended for interstate pipeline analysis. State consideration of issues not already covered in the FERC's Environmental Impact Statement (EIS) should, at the very least, be done within the FERC-imposed deadline for State agency comments. This would continue to allow for full State participation, while protecting federal authority to authorize interstate natural gas pipeline construction pursuant to the NGA. Thus, the federal consistency

regulations should be revised to require, as a condition for approval of a State's CZMA program, that the State participate in the FERC's certificate/NEPA environmental review process to ensure that FERC has the opportunity to address the State's concerns. To the extent that the CZMA or regulations thereunder require NOAA to make a determination in its own name (as distinguished from resolving CZMA matters within the FERC certificate process) NOAA should accept the record developed at FERC as being dispositive of the issues reviewed and resolved by the FERC certificate process.

NOAA asserts that it has *de novo* review authority pursuant to the CZMA, without citation to the statute. Absent an express statutory grant of authority for *de novo* review, however, NOAA's authority under CZMA is appellate only. It is black letter law that an "appeal" is an examination by the appropriate review body of a decision record to determine if there are material errors of fact or application of law contained in that record. Therefore, NOAA lacks the authority to engage in a *de novo* review of the interstate pipeline routing alternatives considered by the FERC in the NGA certificate process. NOAA's review fails to address the fact that in considering alternative routes for an interstate pipeline that has been certificated by the FERC, NOAA is engaging in what amounts to the very form of *de novo* review of the Federal agency's decision that NOAA disclaims.

NOAA also asserts that "through the CZMA Congress gave the States the ability to review federal actions, independent of the Federal agencies' reviews." This statement, however, is inconsistent with the fact that the CZMA limits NOAA's consistency review of a federal permit activity to an examination of whether the proposed activity is *consistent to the maximum extent practicable with the enforceable policies* of a State's coastal zone management plan. A State policy in its coastal zone management plan that has the effect of blocking the siting of an interstate pipeline could not be enforceable against a federally preemptive NGA. For instance, in the case of an interstate pipeline project that is to be situated within the coastal zone of a State and has been or is to be issued a certificate of public convenience and necessity under NGA section 7(c), 15 U.S.C. 717f(c), conditioned on compliance with 16 U.S.C. 1456(c)(3)(A), a State may validly object to a pipeline company's consistency certification only if that objection is based on State policies that satisfy pre-existing substantive federal

constitutional standards and statutory limitations, including those arising under the commerce clause and the supremacy clause.

NOAA Response to Comment 108. The NGA may preempt State regulation of interstate natural gas pipeline permitting. However, it does not preempt CZMA requirements. The CZMA is part of a Federal scheme allowing State review of federal authorizations for private activities that have effects on State coastal uses or resources. Thus, both the NGA and CZMA can and must be given the full effect of Federal law.

Consistency with State enforceable policies does not violate any preemptive effect of the NGA because the State review, pursuant to federally approved State enforceable policies, is part of the federal CZMA scheme and is not an intrusion upon FERC's authority under the NGA. No federal license or permit activities are exempt from federal consistency: consistency applies if the activity will have reasonably foreseeable coastal effects. 16 U.S.C. 1456(c)(3)(A), Conference Report at 970-972. The NGA does not explicitly repeal any part of the CZMA. Congress affirmed the no exemption component of the CZMA federal consistency requirement when it reauthorized the CZMA in 1996, with no mention of the NGA. See Pub. L. 104-150. There is also no "affirmative showing of an intention to repeal" the CZMA federal consistency provision in whole or in part. See *Southern Pacific Transportation Co., v. California Coastal Commission*, 520 F. Supp. 800, 805 (N.D. CA 1981). As repeal by implication is not favored, the CZMA must be given effect so long as the CZMA and NGA are not irreconcilable and the CZMA does not stand as an obstacle to the objectives of the NGA. *Id.* Moreover, the Energy Policy Act clearly states that State CZMA review is not affected even though FERC has been given preemptive authority over State regulation under the Natural Gas Act.

As for the State policies, NOAA must approve State enforceable policies. NOAA will not approve State policies that on their face contain requirements that are preempted by Federal law. For example, the State of North Carolina sought to regulate low level aircraft in flight by adopting policies that described specific standards preempted by Federal law administered by the Federal Aviation Administration. The State sought to impose minimum altitude and decibel levels, and other overflight restrictions. NOAA denied the State's request to incorporate the policies into the North Carolina CMP because the policies were, on their face,

preempted. Thus, North Carolina could not use the policies for CZMA federal consistency purposes.

So long as a State's enforceable policies do not specifically describe preempted restrictions the State may apply them through the federal consistency process to interstate pipeline projects. For example, a State may implement enforceable wetland protection policies, but not impermissible regulations for interstate pipeline safety. If a pipeline were to impact State wetlands, then the applicant must be consistent with the State wetland policies. Thus, mitigation may be required or, if mitigation is not available, then the siting of a pipeline may need to be altered, not because the State is attempting to regulate the pipeline, but to address coastal effects through the federal CZMA scheme.

In another case before the Surface Transportation Board (STB) for the abandonment of a railroad line in Massachusetts, NOAA found, and the STB concurred, that the CZMA process and the applicant's compliance with the State's enforceable policies was not preempted by the Interstate Commerce Commission Termination Act of 1995 (ICCTA) (49 U.S.C. 701, 10501). Pursuant to the ICCTA, the STB has exclusive, preemptive, jurisdiction over the construction, acquisition, operation, abandonment or discontinuance of spur, industrial, team, switching, or side tracks, or facilities, even if the tracks are located, or intended to be located, entirely in one State. See *City of Auburn v. The Surface Transportation Board*, 154 F.3d 1025, 1030-1032 (9th Cir. 1998). Nevertheless, the STB has consistently determined that the exercise of State and local government traditional police power functions to protect the health and safety of their citizens may not be preempted if there is minimal impact on interstate commerce and the regulatory action is taken in a non-discriminatory manner. Thus, NOAA and the STB determined that Massachusetts could exercise its CZMA consistency authority in a manner compatible with the ICCTA if the application of the State CMP enforceable policies would not impermissibly burden interstate commerce, restrict the railroad from conducting its necessary operations or otherwise discriminate against railroad activities.

Likewise, under the Federal Power Act, FERC has preemptive jurisdiction over the licensing of hydro-electric facilities. However, applicants for FERC hydroelectric licenses must be consistent with the affected coastal State's federally approved enforceable

policies. See e.g., *Mountain Rhythm Resources v. FERC*, 302 F.3d 958 (9th Cir. Aug. 23, 2002); FERC, Standard Branch Procedure SBP-4-16 (March 1992). In *Mountain Rhythm*, the Court found that there are "federal and state law concerns for protecting and managing coastline that Congress has declared to be limitations on FERC's power. Specifically, the [CZMA] provides that if a hydropower project is located in a state's coastal zone, then FERC cannot issue the license unless the state's applicable agency concurs that the proposed project is consistent with the state's Coastal Zone Management Program * * *". *Mountain Rhythm* at 960. The Court also found that implementation of the State's permit program, through the CZMA federal consistency process, does not "strip[] the federal government of its exclusive grant of authority to issue licenses for hydropower projects. But the [State] permit is not a power permit; it is merely part of the consistency evaluation process invoked by the responsible state agency, DOE, in exercising its authority to assess consistency with state coastal zone management that Congress has granted to the states in the CZMA." *Mountain Rhythm* at 967. The Court further elaborated that the State's "permit does not in any way supplant FERC's authority, but is a confirmation that a proposed project complies with state waterway zoning regulations. FERC remains the only authority that can issue power licenses. And with the deliberate concurrence of the Secretary of Commerce about consistency with the CZMA, FERC may do this even over state objection. There has been in this case no improper interference by state or local government with federal authority." *Id.*

The Ninth Circuit's statements are consistent with CZMA section 307(e), which provides that the CZMA does not diminish either Federal or State jurisdiction, responsibility, or rights and does not supersede, modify, or repeal existing Federal law. However, Congress clearly envisioned that Federal agencies and applicants for federal authorizations might have to modify their activities to be consistent with State enforceable policies. For Federal agency activities, Congress requires Federal agencies to be consistent to the maximum extent practicable. For federal license or permit activities, applicants must be fully consistent with the State's federally approved enforceable policies. Congress initially intended and has subsequently affirmed that State consistency reviews based on State laws approved by NOAA

would be applied to license or permit activities to be authorized by other Federal agencies with objectives different from those in the CZMA. It would be incongruous for Congress to provide a mechanism for State review of Federal agency activities and federally authorized activities in one section and then remove that requirement in another section. Section 307(e) is merely a standard savings clause ensuring that laws administered by Federal and State agencies are not altered by the CZMA. S. Rep. No. 753, 92nd Cong., 2d Sess. 20 (1972). Moreover, Congress, in discussing sections 307(f) and 307(e), stated that these sections are provided so that Federal agencies are not shielded from compliance with more stringent environmental requirements of other Federal or State laws by a finding that it is consistent to the maximum extent practicable with the CZMA. 136 Cong. Rec. 8077 (Sep. 26, 1990).

So long as State policies do not include specific preempted restrictions and a State's policies are implemented in a manner contemplated by the CZMA, then the State is acting properly. See *Norfolk Southern Corp. v. Oberly*, 822 F.2d 388, 394-395 (1987) ("While the CZMA states a national policy in favor of coastal zone management, it does not on its face expand state authority to regulate in ways that would otherwise be invalid under the Commerce Clause").

The CZMA mandates that the Secretary conduct an "appeal," to establish "that the activity is consistent with the objectives of this chapter or is otherwise necessary in the interest of national security," but says nothing about reviewing the substantive basis of the State's decision. This statutory standard for the Secretary's review demands a *de novo* review, a new review, of the activity, even though the State found it objectionable. If, for purposes of interstate pipelines, an alternative route considered by FERC, or not considered by FERC (e.g., an alternative route is explored after the FERC process, but before completion of the CZMA process), is found to meet CZMA objectives and is reasonable and available (including a State determination that the alternative is consistent with the State's program), and the Secretary then overrides the State's objection, then the Secretary is fulfilling the duties prescribed by Congress in the CZMA to balance the State-Federal-private interests within the objectives of the CZMA.

Comment 109. The regulations should maintain the Secretary's discretion as to the length of time needed for issuing a judicious decision. Any effort to force

that period into a shorter time period may encourage additional litigation (thereby lengthening the process), if an appellant or a State believes its interests were not adequately considered.

NOAA Response to Comment 109. As described in the explanation, NOAA believes that the appeals can be processed in a more efficient manner and now has 160 days in which to develop the decision record.

Comment 110. The State respects the need for certainty in the override process and believes that these proposals reasonably accommodate the needs of the parties. The State does not oppose these changes.

NOAA Response to Comment 110. NOAA notes this comment.

Comment 111. Section 930.130(a)(2)(ii), purporting to expedite other environmental analyses conducted pursuant to NEPA or the Endangered Species Act, in connection with any extension of the proposed 270-day period for the decision record in a coastal consistency appeal is unnecessary, may infringe upon other coordinated agency processes, and worse, gives the impression that review pursuant to these two environmental statutes can and should be hurried along as interfering with the consistency review process. NOAA should delete the phrase "on an expedited basis."

NOAA Response to Comment 111. One of the oft-stated goals of CZMA review is "coordination and simplification of procedures to ensure expedited governmental decisionmaking for the management of coastal resources." CZMA section 303(2)(G). This applies to State CZMA decisions and the Secretary's appeal decisions. To that end, to the extent a NEPA or ESA document being prepared by the authorizing Federal agency for its permit decision is not complete and the Secretary determines the document is needed, then the Federal agencies should endeavor to complete the document in as timely a manner as possible.

Comment 112. Section 930.130(a)(2)(iii) limits the Secretary's ability to consider important information that may not be included in NEPA documents or Biological Opinions. The Secretary's ability to make a fully informed decision could be compromised by limiting the Secretary's options in this way. The Secretary should be allowed to extend closure of the record to include any and all relevant information.

NOAA Response to Comment 112. The Secretary needs only that information he determines is relevant to the CZMA appeal standard. That

information will be obtained during the period to develop the decision record. The changes to § 930.130 and the rest of subpart H provide sufficient time to develop a decision record and to issue timely decisions.

Subpart I—Interstate Consistency

Comment 113. We question the legal authority for NOAA to establish interstate consistency review requirements. The proposal response to comments that States that the procedure finds support in the "effects tests" is not consistent with the legislative history as we view it, and does not address the fundamental constitutional infirmities concerning a State's ability to review activities taking place wholly within the boundaries of another State.

NOAA Response to Comment 113. NOAA continues to rely on the statute and its legislative history for the addition of the Interstate consistency regulations in 2000. NOAA's view is summarized in the preamble to the 2000 rule at 65 FR 77125, 77129–77133, 77152–77153 (Dec. 8, 2000).

VI. Miscellaneous Rulemaking Requirements

Executive Order 12372: Intergovernmental Review

This program is subject to Executive Order 12372.

Executive Order 13132: Federalism Assessment

NOAA concluded that this regulatory action is consistent with federalism principles, criteria, and requirements stated in Executive Order 13132. The changes in the federal consistency regulations will facilitate Federal agency coordination with coastal States, and ensure that federal actions affecting any coastal use or resource are consistent with the enforceable policies of approved State coastal management programs. The CZMA and these revised implementing regulations promote the principles of federalism articulated in Executive Order 13132 by granting the States a qualified right to review certain federal actions that affect the land and water uses or natural resources of State coastal zones. Congress partially waived the Federal Government's supremacy over State law when it created the CZMA. Section 307 of the CZMA and NOAA's implementing regulations effectively balance responsibilities between Federal agencies and State agencies whenever Federal agencies propose activities or applicants for a required federal license or permit propose to undertake activities affecting State coastal uses or resources. Through

the CZMA, Federal agencies are required to carry out their activities in a manner that is consistent to the maximum extent practicable with federally approved State management programs, and licensees and permittees are required to be fully consistent with the State programs. The CZMA and these implementing regulations, rather than preempting a State, provide a mechanism for it to object to federal actions that are not consistent with the State's management program. A State objection prevents the issuance of the federal permit or license, unless the Secretary of Commerce overrides the objection. Because the CZMA and these regulations promote the principles of federalism and enhance State authorities, no federalism assessment need be prepared.

Executive Order 12866: Regulatory Planning and Review

This regulatory action is significant for purposes of Executive Order 12866.

Executive Order 13211

Executive Order 13211 requires that agencies prepare and submit a "Statement of Energy Effects" to the Office of Management and Budget for certain actions. These actions include regulations which have been designated as "significant" under Executive Order 12866 and are likely to have a "significant adverse effect" on the supply, distribution, or use of energy. This action will not result in any adverse effect upon the supply, distribution, or use of energy. Rather, this regulation implements recommendations contained in the Energy Report, and serves to improve Federal-State coordination of actions affecting the coastal zone. The rule makes only minor, clarifying changes to existing regulations. To the extent these changes impact energy supply, distribution, or use, they should result in positive effects, by improving the clarity, transparency and predictability of NOAA's CZMA regulations.

Administrative Procedure Act

Pursuant to authority at 5 U.S.C. 553(b)(B), NOAA waives for good cause the requirement to provide prior notice and an opportunity for public comment on the provisions of this final rule that implement, verbatim, specific provisions of the Energy Policy Act of 2005. Such procedures are unnecessary as NOAA must comply with the law as enacted. Additional provisions of this final rule not explicitly contained in the Energy Policy Act, though necessary for NOAA's compliance with that Act, concern matters addressed in the

proposed rule and by public comment in response to that rule. As such, these provisions are within the scope of the notice previously provided and additional notice and comment are not required.

Regulatory Flexibility Act

The Chief Counsel for Regulation for the Department of Commerce certified to the Chief Counsel for Advocacy of the Small Business Administration, when this rule was proposed, that the rule, if adopted, would not have a significant economic impact on a substantial number of small entities. This rule only makes minor changes to existing regulations. The existing regulations do not have a significant economic impact on a substantial number of small entities and, thus, these clarifying changes will not result in any additional economic impact on affected entities. No comments were received regarding the certification. Accordingly, the basis for the certification has not changed and neither an initial nor final Regulatory Flexibility Analysis was not prepared.

Paperwork Reduction Act

This rule contains no additional collection-of-information requirements subject to review and approval by OMB under the Paperwork Reduction Act (PRA).

National Environmental Policy Act

NOAA has concluded that this regulatory action does not have the potential to pose significant impacts on the quality of the human environment. Further, NOAA has concluded that this rule will not result in any changes to the human environment. As defined in sections 5.05 and 6.03c3(i) of NAO 216-6, this action is of limited scope, of a technical and procedural nature and any environmental effects are too speculative or conjectural to lend themselves to meaningful analysis. Thus, this rule is categorically excluded from further review pursuant to NEPA.

List of Subjects in 15 CFR Part 930

Administrative practice and procedure, Coastal zone, Reporting and recordkeeping requirements.

Dated: December 21, 2005.

Craig McLean,

Acting Deputy Assistant Administrator for Ocean Services and Coastal Zone Management.

■ For the reasons stated in the preamble, NOAA amends 15 CFR part 930 as follows:

PART 930—FEDERAL CONSISTENCY WITH APPROVED COASTAL MANAGEMENT PROGRAMS

■ 1. The authority citation continues to read as follows:

Authority: 16 U.S.C. 1451 *et. seq.*

■ 2. Section 930.1 is amended by revising paragraphs (b) and (c) to read as follows:

§ 930.1 Overall objectives.

(b) To implement the federal consistency requirement in a manner which strikes a balance between the need to ensure consistency for federal actions affecting any coastal use or resource with the enforceable policies of approved management programs and the importance of federal activities (the term "federal action" includes all types of activities subject to the federal consistency requirement under subparts C, D, E, F and I of this part.);

(c) To provide flexible procedures which foster intergovernmental cooperation and minimize duplicative effort and unnecessary delay, while making certain that the objectives of the federal consistency requirement of the Act are satisfied. Federal agencies, State agencies, and applicants should coordinate as early as possible in developing a proposed federal action, and may mutually agree to intergovernmental coordination efforts to meet the requirements of these regulations, provided that public participation requirements are met and applicable State management program enforceable policies are considered. State agencies should participate in the administrative processes of federal agencies concerning federal actions that may be subject to state review under subparts C, D, E, F and I of this part.

■ 3. Section 930.10 is amended by revising the following entry in the table to read as follows:

§ 930.10 Index to definitions for terms defined in part 930.

Term	Section
Failure substantially to comply with an OCS plan	930.85(c).

■ 4. Section 930.11 is amended by revising the first sentence of paragraph (g) to read as follows:

§ 930.11 Definitions.

(g) *Effect on any coastal use or resource (coastal effect).* The term "effect on any coastal use or resource" means any reasonably foreseeable effect on any coastal use or resource resulting from a Federal agency activity or federal license or permit activity (including all types of activities subject to the federal consistency requirement under subparts C, D, E, F and I of this part.) * * *

■ 5. Section 930.31 is amended by revising paragraphs (a) and (d) to read as follows:

§ 930.31 Federal agency activity.

(a) The term "Federal agency activity" means any functions performed by or on behalf of a Federal agency in the exercise of its statutory responsibilities. The term "Federal agency activity" includes a range of activities where a Federal agency makes a proposal for action initiating an activity or series of activities when coastal effects are reasonably foreseeable, e.g., a Federal agency's proposal to physically alter coastal resources, a plan that is used to direct future agency actions, a proposed rulemaking that alters uses of the coastal zone. "Federal agency activity" does not include the issuance of a federal license or permit to an applicant or person (see subparts D and E of this part) or the granting of federal assistance to an applicant agency (see subpart F of this part).

(d) A general permit proposed by a Federal agency is subject to this subpart if the general permit does not involve case-by-case or individual issuance of a license or permit by a Federal agency. When proposing a general permit, a Federal agency shall provide a consistency determination to the relevant management programs and request that the State agency(ies) provide the Federal agency with review, and if necessary, conditions, based on specific enforceable policies, that would permit the State agency to concur with the Federal agency's consistency determination. State agency concurrence shall remove the need for the State agency to review individual uses of the general permit for consistency with the enforceable policies of management programs. Federal agencies shall, pursuant to the consistent to the maximum extent practicable standard in § 930.32, incorporate State conditions into the general permit. If the State agency's conditions are not incorporated into the general permit or a State agency objects to the general permit, then the Federal agency shall notify potential users of the

general permit that the general permit is not available for use in that State unless an applicant under subpart D of this part or a person under subpart E of this part, who wants to use the general permit in that State provides the State agency with a consistency certification under subpart D of this part and the State agency concurs. When subpart D or E of this part applies, all provisions of the relevant subpart apply.

* * *

■ 6. Section 930.35 is amended by redesignating paragraph (d) as paragraph (e) and by adding a new paragraph (d) to read as follows:

§ 930.35 Negative determinations for proposed activities.

* * *

(d) *General Negative Determinations.* In cases where Federal agencies will be performing a repetitive activity that a Federal agency determines will not have reasonably foreseeable coastal effects, whether performed separately or cumulatively, a Federal agency may provide a State agency(ies) with a general negative determination, thereby avoiding the necessity of issuing separate negative determinations for each occurrence of the activity. A general negative determination must adhere to all requirements for negative determinations under § 930.35. In addition, a general negative determination must describe in detail the activity covered by the general negative determination and the expected number of occurrences of the activity over a specific time period. If a Federal agency issues a general negative determination, it may periodically assess whether the general negative determination is still applicable.

* * *

■ 7. Section 930.37 is amended by adding a new third sentence to read as follows:

§ 930.37 Consistency determinations and National Environmental Policy Act (NEPA) requirements.

* * * State agencies shall not require Federal agencies to submit NEPA documents as information required pursuant to § 930.39. * * *

■ 8. Section 930.41 is amended by revising paragraph (a) to read as follows:

§ 930.41 State agency response.

(a) A State agency shall inform the Federal agency of its concurrence with or objection to the Federal agency's consistency determination at the earliest practicable time, after providing for public participation in the State agency's review of the consistency determination. The Federal agency may

presume State agency concurrence if the State agency's response is not received within 60 days from receipt of the Federal agency's consistency determination and supporting information required by § 930.39(a). The 60-day review period begins when the State agency receives the consistency determination and supporting information required by § 930.39(a). If the information required by § 930.39(a) is not included with the determination, the State agency shall notify the Federal agency in writing within 14 days of receiving the determination and supporting information that the 60-day review period has not begun, identify missing information required by § 930.39(a), and that the 60-day review period will begin when the missing information is received by the State agency. If the State agency has not notified the Federal agency that information required by § 930.39(a) is missing within the 14 day notification period, then the 60-day review period shall begin on the date the State agency received the consistency determination and accompanying information. The State agency's determination of whether the information required by § 930.39(a) is complete is not a substantive review of the adequacy of the information provided. Thus, if a Federal agency has submitted a consistency determination and information required by § 930.39(a), then the State agency shall not assert that the 60-day review period has not begun because the information contained in the items required by § 930.39(a) is substantively deficient. The failure to submit information not required by 930.39(a) shall not be a basis for asserting that the 60-day review period has not begun.

* * *

■ 9. Section 930.51 is amended by revising paragraph (a) and paragraph (c) to read as follows:

§ 930.51 Federal license or permit.

(a) The term "federal license or permit" means any authorization that an applicant is required by law to obtain in order to conduct activities affecting any land or water use or natural resource of the coastal zone and that any Federal agency is empowered to issue to an applicant. The term "federal license or permit" does not include OCS plans, and federal license or permit activities described in detail in OCS plans, which are subject to subpart E of this part, or leases issued pursuant to lease sales conducted by a Federal agency (e.g., outer continental shelf (OCS) oil and gas lease sales conducted by the Minerals Management Service or oil and gas lease

sales conducted by the Bureau of Land Management). Lease sales conducted by a Federal agency are Federal agency activities under subpart C of this part.

* * *

(e) The determination of substantially different coastal effects under paragraphs (b)(3), and (c) of this section is made on a case-by-case basis by the Federal agency after consulting with the State agency, and applicant. The Federal agency shall give considerable weight to the opinion of the State agency. The terms "major amendment," "renewals" and "substantially different" shall be construed broadly to ensure that the State agency has the opportunity to review activities and coastal effects not previously reviewed.

* * *

■ 10. Section 930.58 is amended by revising paragraph (a)(1) and the third sentence of paragraph (a)(2) and adding a new fourth sentence and a new fifth sentence in paragraph (a)(2) to read as follows:

§ 930.58 Necessary data and information.

(a) * * *

(1) A copy of the application for the federal license or permit and

(i) All material relevant to a State's management program provided to the Federal agency in support of the application; and

(ii) To the extent not included in paragraphs (a)(1) or (a)(1)(i) of this section, a detailed description of the proposed activity, its associated facilities, the coastal effects, and any other information relied upon by the applicant to make its certification. Maps, diagrams, and technical data shall be submitted when a written description alone will not adequately describe the proposal;

(2) * * * Necessary data and information may include completed State or local government permit applications which are required for the proposed activity, but shall not include the issued State or local permits. NEPA documents shall not be considered necessary data and information when a Federal statute requires a Federal agency to initiate the CZMA federal consistency review prior to its completion of NEPA compliance. States shall not require that the consistency certification and/or the necessary data and information be included in NEPA documents. * * *

* * *

■ 11. Section 930.60 is revised to read as follows:

§ 930.60 Commencement of State agency review.

(a) The State agency's six-month review period (see § 930.62(a)) of an applicant's consistency certification begins on the date the State agency receives the consistency certification required by § 930.57 and all the necessary data and information required by § 930.58(a).

(1) If an applicant fails to submit a consistency certification, the State agency shall notify the applicant and the Federal agency, within 30 days of receipt of the incomplete submission, that a consistency certification satisfying § 930.57 was not received and that the State agency's six-month review period will commence on the date of receipt of the missing certification, subject to paragraph (a)(2) of this section.

(2) If an applicant fails to submit all necessary data and information required by § 930.58(a), the State agency shall notify the applicant and the Federal agency, within 30 days of receipt of the incomplete submission, that necessary data and information described in § 930.58(a) was not received and that the State agency's six-month review period will commence on the date of receipt of the missing necessary data and information, subject to the requirement in paragraph (a) of this section that the applicant has also submitted a consistency certification. The State agency may waive the requirement in paragraph (a) of this section that all necessary data and information described in § 930.58(a) be submitted before commencement of the State agency's six-month consistency review. In the event of such a waiver, the requirements of § 930.58(a) must be satisfied prior to the end of the six-month consistency review period or the State agency may object to the consistency certification for insufficient information.

(3) Within 30 days of receipt of the consistency certification and/or necessary data and information that was deemed missing, pursuant to paragraphs (a)(1) or (2) of this section, the State agency shall notify the applicant and Federal agency that the certification and necessary data and information required pursuant to § 930.58 is complete, the date the certification and/or necessary data and information deemed missing was received, and, that the State agency's consistency review commenced on the date of receipt. In the event of a State waiver under paragraph (a)(2) of this section, receipt of the necessary data and information deemed missing shall not alter the date

the consistency review period commenced.

(b) State agencies and applicants (and persons under subpart E of this part) may mutually agree in writing to stay the six-month consistency review period. Such an agreement shall be in writing and state a specific date on when the stay will end. The State agency shall provide a copy of the written agreement to the Federal agency and the Federal agency shall not presume State agency concurrence with an applicant's consistency certification when such a written agreement to stay the six-month consistency review period is in effect. The State agency shall not stop, stay, or otherwise alter the consistency review period without such a written agreement with the applicant.

(c) The State agency's determination that a certification and necessary data and information under paragraph (a) of this section is complete is not a substantive review of the adequacy of the information received. If an applicant has submitted all necessary data and information required by § 930.58, then a State agency's or Federal agency's assertion that the submitted information is substantively deficient, or a State agency's or Federal agency's request for clarification of the information provided, or information or data requested that is in addition to that required by § 930.58 shall not extend the date of commencement of State agency review.

■ 11a. Section 930.46 is amended by adding a new paragraph (a)(3) to read as follows:

§ 930.46 Supplemental coordination for proposed activities.

(a) * * *

(3) Substantial changes were made to the activity during the period of the State agency's initial review and the State agency did not receive notice of the substantial changes during its review period, and these changes are relevant to management program enforceable policies and/or affect coastal uses or resources.

* * * * *

■ 12. Section 930.63 is amended by revising the fourth sentence in paragraph (d) to read as follows:

§ 930.63 State agency objection to a consistency certification.

* * * * *

(d) * * * See § 930.121(c) for further details regarding alternatives for appeals under subpart H of this part.

* * * * *

■ 12a. Section 930.66 is amended by adding a new paragraph (a)(3) to read as follows:

§ 930.66 Supplemental coordination for proposed activities.

(a) * * *

(3) Substantial changes were made to the activity during the period of the State agency's initial review and the State agency did not receive notice of the substantial changes during its review period, and these changes are relevant to management program enforceable policies and/or affect coastal uses or resources.

* * * * *

■ 13. Section 930.76 is amended by removing paragraph (c), redesignating paragraph (d) as paragraph (c), and revising paragraphs (a) and (b) as follows:

§ 930.76 Submission of an OCS plan, necessary data and information and consistency certification.

(a) Any person submitting any OCS plan to the Secretary of the Interior or designee shall submit to the Secretary of the Interior or designee:

- (1) A copy of the OCS plan;
- (2) The consistency certification;
- (3) The necessary data and

information required pursuant to § 930.58; and

(4) The information submitted pursuant to the Department of the Interior's OCS operating regulations (see 30 CFR 250.203 and 250.204) and OCS information program regulations (see 30 CFR part 252).

(b) The Secretary of the Interior or designee shall furnish the State agency with a copy of the information submitted under paragraph (a) of this section (excluding confidential and proprietary information).

* * * * *

■ 14. Section 930.77 is amended by revising paragraph (a) to read as follows:

§ 930.77 Commencement of State agency review and public notice.

(a)(1) Except as provided in § 930.60(a), State agency review of the person's consistency certification begins at the time the State agency receives the certification and information required pursuant to § 930.76(a) and (b). If a person has submitted the documents required by § 930.76(a) and (b), then a State agency's assertion that the information contained in the submitted documents is substantively deficient, or a State agency's request for clarification of the information provided, or information and data in addition to that required by § 930.76 shall not delay or otherwise change the date on which State agency review begins.

(2) To assess consistency, the State agency shall use the information submitted pursuant to § 930.76. If a State agency wants to augment the necessary data and information required by § 930.76 to start the six-month review period for OCS plans, then the State can only do so if it amends its management program to include the information under § 930.58(a)(2).

(3) After the State agency's review begins, if the State agency requests additional information, it shall describe in writing to the person and to the Secretary of the Interior or its designee the reasons why the information provided under § 930.76 is not adequate to complete its review, and the nature of the information requested and the necessity of having such information to determine consistency with the enforceable policies of the management program. The State agency shall make its request for additional information no later than three months after commencement of the State agency's review period. The State agency shall not request additional information after the three-month notification period described in § 930.78(a). However, the State agency may request additional information after the three-month notification period if the person or the Secretary of the Interior or its designee changes the OCS plan after the three-month notification period such that the plan describes activities or coastal effects not previously described and for which information was not previously provided pursuant to § 930.76.

* * * * *

■ 15. Section 930.82 is revised to read as follows:

§ 930.82 Amended OCS plans.

If the State agency objects to the person's OCS plan consistency certification, and/or if, pursuant to subpart H of this part, the Secretary does not determine that each of the objected to federal license or permit activities described in detail in such plan is consistent with the objectives or purposes of the Act, or is necessary in the interest of national security, and if the person still intends to conduct the activities described in the OCS plan, the person shall submit an amended plan to the Secretary of the Interior or designee along with a consistency certification and data and information necessary to support the amended consistency certification. The data and information shall specifically describe modifications made to the original OCS plan, and the manner in which such modifications will ensure that all of the proposed federal license or permit activities

described in detail in the amended plan will be conducted in a manner consistent with the management program. When satisfied that the person has met the requirements of the OCSLA and this subpart, the Secretary of the Interior or designee shall furnish the State agency with a copy of the amended OCS plan (excluding confidential and proprietary information), necessary data and information and consistency certification.

■ 16. Section 930.85 is amended by revising the section heading and removing paragraph (d) and revising paragraph (b) and paragraph (c) to read as follows:

§ 930.85 Failure to substantially comply with an approved OCS plan.

* * * * *

(b) If a State agency claims that a person is failing to substantially comply with an approved OCS plan subject to the requirements of this subpart, and such failure allegedly involves the conduct of activities affecting any coastal use or resource in a manner that is not consistent with the approved management program, the State agency shall transmit its claim to the Minerals Management Service region involved. Such claim shall include a description of the specific activity involved and the alleged lack of compliance with the OCS plan, and a request for appropriate remedial action. A copy of the claim shall be sent to the person.

(c) If a person fails to substantially comply with an approved OCS plan, as determined by Minerals Management Service, pursuant to the Outer Continental Shelf Lands Act and applicable regulations, the person shall come into compliance with the approved plan or shall submit an amendment to such plan or a new plan to Minerals Management Service. When satisfied that the person has met the requirements of the OCSLA and this subpart, and the Secretary of the Interior or designee has made the determination required under 30 CFR 250.203(n)(2) or § 250.204(q)(2), as applicable, the Secretary of the Interior or designee shall furnish the State agency with a copy of the amended OCS plan (excluding proprietary information), necessary data and information and consistency certification. Sections 930.82 through 930.84 shall apply to further State agency review of the consistency certification for the amended or new plan.

■ 16a. Section 930.101 is amended by adding a new paragraph (a)(3) to read as follows:

§ 930.101 Supplemental coordination for proposed activities.

(a) * * *

(3) Substantial changes were made to the activity during the period of the State agency's initial review and the State agency did not receive notice of the substantial changes during its review period, and these changes are relevant to management program enforceable policies and/or affect coastal uses or resources.

* * * * *

■ 17. Section 930.121 is amended by revising paragraph (c) to read as follows:

§ 930.121 Consistent with the objectives or purposes of the Act.

* * * * *

(c) There is no reasonable alternative available which would permit the activity to be conducted in a manner consistent with the enforceable policies of the management program. The Secretary may consider but is not limited to considering previous appeal decisions, alternatives described in state objection letters and alternatives and other information submitted during the appeal. The Secretary shall not consider an alternative unless the State agency submits a statement, in a brief or other supporting material, to the Secretary that the alternative would permit the activity to be conducted in a manner consistent with the enforceable policies of the management program.

■ 18. Section 930.123 is amended by revising the section heading and adding new paragraphs (c), (d) and (e) as follows:

§ 930.123 Definitions.

* * * * *

(c) The term "energy project" means projects related to the siting, construction, expansion, or operation of any facility designed to explore, develop, produce, transmit or transport energy or energy resources that are subject to review by a coastal State under subparts D, E, F or I of this part.

(d) The term "consolidated record" means the record of all decisions made or actions taken by the lead Federal permitting agency or by another Federal or State administrative agency or officer, maintained by the lead Federal permitting agency, with the cooperation of Federal and State administrative agencies, related to any federal authorization for the permitting, approval or other authorization of an energy project.

(e) The term "lead Federal permitting agency" means the Federal agency required to: issue a federal license or permit under subparts D or I of this part; approve an OCS plan under subpart E

of this part; or provide federal financial assistance under subparts F or I of this part for an energy project.

■ 19. Section 930.125 is amended by redesignating paragraphs (b) through (e) as paragraphs (c) through (f), by adding a new paragraph (b) and by revising the third and fourth sentences in redesignated paragraph (f) as follows:

§ 930.125 Notice of appeal and application fee to the Secretary.

(b) The appellant's notice of appeal shall include a statement explaining the appellant's basis for appeal of the State agency's objection under § 923.121 of this title, including any procedural arguments pursuant to § 930.129(b). Bases for appeal (including procedural arguments) not identified in the appellant's notice of appeal shall not be considered by the Secretary.

(f) * * * If the Secretary denies a request for a waiver and the appellant wishes to continue with the appeal, the appellant shall submit the appropriate fees to the Secretary within 10 days of receipt of the Secretary's denial. If the fees are not received by the 10th day, then the Secretary shall dismiss the appeal.

■ 20. Section 930.127 is revised to read as follows:

§ 930.127 Briefs and supporting materials.

(a) Within 30 days of submitting the notice of appeal, as specified in § 930.125, the appellant shall submit to the Secretary its principal brief accompanied by the appendix described in paragraph (c) of this section. Within 60 days of the appellant's filing of the notice of appeal, the State agency shall submit to the Secretary its principal brief accompanied by a supplemental appendix, if any, described in paragraph (c) of this section. Not later than 20 days after appellant's receipt of the State agency's brief, appellant may submit to the Secretary a reply brief accompanied by a supplemental appendix, if any, described in paragraph (c) of this section.

(b) A principal brief shall not exceed 30 double-spaced pages; appellant's reply brief shall not exceed 15 double-spaced pages. Any table of contents, table of citations, or certifications of mailing and/or service do not count toward the page limitations.

(c) The appellant must prepare and file an appendix with its brief containing:

- (1) Its consistency certification;
- (2) The State agency's objection; and
- (3) All such supporting documentation and material as the

appellant deems necessary for consideration by the Secretary. The State agency (or appellant on reply) shall cite to appellant's appendix or may file a supplemental appendix to include additional documentation and material as the State agency (or appellant on reply) deems necessary for consideration by the Secretary that was not included in appellant's appendix (or the State agency's supplemental appendix). The parties are encouraged to discuss the contents of appellant's appendix in order to include in the appendix as much of the supporting documentation and material as any party deems necessary for consideration by the Secretary. In an appeal for an energy project, supporting documentation and material shall be limited to the parts of the consolidated record described in paragraph (i)(1) of this section to which the appellant or the State agency wishes to direct the Secretary's attention.

(d)(1) Both the appellant and State agency shall send four copies of their briefs and supporting materials to the Office of General Counsel for Ocean Services (GCOS), NOAA, 1305 East West Highway, Room 6111 SSMC4, Silver Spring, Maryland 20910. One copy must be in an electronic format compatible (to the extent practicable) with the website maintained by the Secretary to provide public information concerning appeals under the CZMA.

(2) The appellant and State agency shall serve on each other at least one copy of their briefs, supporting materials, and all requests and communications submitted to the Secretary, at the same time that materials are submitted to the Secretary.

(3) Each submission to the Secretary shall be accompanied by a certification of mailing and/or service on the other party. Service may be done by mail or hand delivery. Materials or briefs submitted to the Secretary not in compliance with this subpart may be disregarded and not entered into the Secretary's decision record of the appeal.

(e)(1) The Secretary has broad authority to implement procedures governing the consistency appeal process to ensure efficiency and fairness to all parties. The appeal decision record is composed of the briefs and supporting materials submitted by the State agency and appellant, public comments and the comments, if any, submitted by interested Federal agencies. As noted in § 930.128(c)(1), the Secretary gives deference to the views of interested Federal agencies when commenting in their areas of expertise and takes notice of relevant

administrative decisions, including licenses or permits, related to an appellant's proposed activity when submitted to the appeal decision record. The Secretary determines the content of the appeal decision record. The Secretary may determine, on the Secretary's own initiative, that additional information is necessary to the Secretary's decision, including documents prepared by Federal agencies pursuant to the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*) and the Endangered Species Act (16 U.S.C. 1531 *et seq.*), and may request such information.

(2) To promote efficient use of time and resources, the Secretary may, upon the Secretary's own initiative, require the appellant and the State agency to submit briefs and supporting materials relevant only to procedural or jurisdictional issues presented in the Notice of Appeal or identified by the Secretary. Following a decision of the procedural or jurisdictional issues, the Secretary may require briefs on substantive issues raised by the appeal if necessary.

(3) The Secretary may require the appellant and the State agency to submit briefs in addition to those described in paragraphs (a) and (e) of this section as necessary.

(4) Any briefs not requested or required by the Secretary may be disregarded and not entered into the Secretary's decision record of the appeal.

(f) The appellant bears the burden of submitting evidence in support of its appeal and the burden of persuasion.

(g) The Secretary may extend the time for submission, and length, of briefs and supporting materials for good cause.

(h) Where a State agency objection is based in whole or in part on a lack of information, the Secretary shall limit the record on appeal to information previously submitted to the State agency and relevant comments thereon, except as provided for in § 930.129(b) and (c).

(i) Appeal Decision Record for Energy Projects. The provisions of this paragraph apply only to appeals for energy projects.

(1) The Secretary shall use the consolidated record maintained by the lead Federal permitting agency as the initial record for an appeal under this subpart for energy projects.

(2) The appellant's notice of appeal required by § 930.125(a) and (b) must be accompanied by four copies of the consolidated record maintained by the lead Federal permitting agency. One copy of the consolidated record must be in an electronic format compatible (to the extent practicable) with the website

maintained by the Secretary to provide public information concerning appeals under the CZMA. Notwithstanding § 930.125(e), the Secretary may extend the time for filing a notice of appeal in connection with an energy project for good cause shown to allow appellant additional time to prepare the consolidated record for filing.

(3) The appellant and the State agency shall submit briefs as required by paragraphs (a), (b) and (c) of this section.

(4) Supplemental information may be accepted and included in the decision record by the Secretary only as allowed by § 930.130(a)(2).

■ 21. Section 930.128 is revised to read as follows:

§ 930.128 Public notice, comment period, and public hearing.

(a) The Secretary shall provide public notice of the appeal within 30 days after the receipt of the Notice of Appeal by publishing a Notice in the **Federal Register** and in a publication of general circulation in the immediate area of the coastal zone likely to be affected by the proposed activity.

(b) Except in the case of appeals involving energy projects, the Secretary shall provide a 30-day period for the public and interested Federal agencies to comment on the appeal. Notice of the public and Federal agency comment period shall be provided in the Notice required in paragraph (a) of this section.

(c)(1) The Secretary shall accord greater weight to those Federal agencies whose comments are within the subject areas of their technical expertise.

(2) The Secretary may, on the Secretary's own initiative or upon written request, for good cause shown, reopen the period for Federal agency comments before the closure of the decision record.

(d) Except in the case of appeals involving energy projects, the Secretary may hold a public hearing in response to a request or on the Secretary's own initiative. A request for a public hearing must be filed with the Secretary within 30 days of the publication of the Notice in the **Federal Register** required in paragraph (a) of this section. If a hearing is held by the Secretary, it shall be

noticed in the **Federal Register** and guided by the procedures described within § 930.113. If a hearing is held by the Secretary, the **Federal Register** notice for the hearing shall reopen the public and Federal agency comment period and shall close such comment period 10 days after the hearing.

■ 22. Section 930.129 is amended by revising paragraph (c) and paragraph (d) to read as follows:

§ 930.129 Dismissal, remand, stay, and procedural override.

* * * * *

(c) The Secretary may stay the processing of an appeal in accordance with § 930.130.

(d) The Secretary may remand an appeal to the State agency for reconsideration of the project's consistency with the enforceable policies of the State's management program if significant new information relevant to the State agency's objection, not previously provided to the State agency during its consistency review, is submitted to the Secretary. The Secretary shall determine a time period for the remand to the State agency. The time period for remand must be completed within the period described in § 930.130 for the development of the Secretary's decision record. If the State agency responds that it still objects to the activity, then the Secretary shall continue to process the appeal. If the State agency concurs that the activity is consistent with the enforceable policies of the State's management program, then the Secretary shall declare the appeal moot and notify the Federal agency that the activity may be federally approved.

■ 23. Section 930.130 is amended by revising paragraphs (a), (b), (c) and (d) to read as follows:

§ 930.130 Closure of the decision record and issuance of decision.

(a)(1) With the exception of paragraph (a)(2) of this section, the Secretary shall close the decision record not later than 160 days after the date that the Secretary's Notice of Appeal is published in the **Federal Register** under § 930.128(a). After closing the decision record, the Secretary shall immediately publish a notice in the **Federal Register**

stating that the decision record has been closed. The notice shall also state that the Secretary shall not consider additional information, briefs or comments.

(2) The Secretary may stay the closing of the decision record during the 160-day period described in paragraph (a)(1) of this section:

(i) For a specific period mutually agreed to in writing by the appellant and the State agency; or

(ii) As the Secretary determines necessary to receive, on an expedited basis:

(A) Any supplemental information specifically requested by the Secretary to complete a consistency review under the Act; or

(B) Any clarifying information submitted by a party to the proceeding related to information in the consolidated record compiled by the lead Federal permitting agency.

(3) The Secretary may only stay the 160-day period described in paragraph (a)(1) of this section for a period not to exceed 60 days.

(b) Not later than 60 days after the date of publication of a **Federal Register** notice stating when the decision record for an appeal has been closed, the Secretary shall issue a decision or publish a notice in the **Federal Register** explaining why a decision cannot be issued at that time. The Secretary shall issue a decision not later than 15 days after the date of publication of a **Federal Register** notice explaining why a decision cannot be issued within the 60-day period.

(c) The decision of the Secretary shall constitute final agency action for the purposes of the Administrative Procedure Act.

(d) In reviewing an appeal, the Secretary shall find that a proposed federal license or permit activity, or a federal assistance activity, is consistent with the objectives or purposes of the Act, or is necessary in the interest of national security, when the information in the decision record supports this conclusion.

* * * * *

[FR Doc. 06-11 Filed 1-4-06; 8:45 am]

BILLING CODE 3510-08-P

**State of New Jersey****DEPARTMENT OF ENVIRONMENTAL PROTECTION****Division of Land Use Regulation****P.O. Box 439, Trenton, NJ 08625-0439****Fax # (609) 292-8115****Fax # (609) 777-3656****www.state.nj.us/landuse****JON S. CORZINE**
*Governor***LISA P. JACKSON**
Commissioner

June 1, 2006

Timothy Rausch, Site Vice President
Oyster Creek Nuclear Generating Station
AmerGen Energy Company LLC
P.O. Box 388
Forked River, New Jersey 08731

RE: State Guidance for Forthcoming Federal Consistency Request for License Renewal of
AmerGen's Oyster Creek Nuclear Generating Station
Applicant: AmerGen Energy Company LLC An Exelon Company
Project: Oyster Creek Nuclear Generating Station NRC License Renewal
Location: Lacey Township, Ocean County

Dear Mr. Rausch:

The New Jersey Department of Environmental Protection's Division of Land Use Regulation (Division) acting pursuant to Section 307 of the federal Coastal Zone Management Act of 1972 (P.L. 92-583) as amended, and the Coastal Zone Management Act Federal Consistency Regulations (15 CFR Part 930) as amended to February 6, 2006, hereby provides guidance to the applicant pursuant to 15 CFR 930.56 with regard to New Jersey's federally approved, enforceable, and applicable Coastal Zone Management Rules (Rules, N.J.A.C. 7:7E-1.0 et. seq.) for the above referenced activity.

Application

One activity requiring a federal consistency determination is for a Federal license or permit, which also includes renewals and major amendments which affect any coastal use or resource. (15 CFR 930.51) The applicant, AmerGen Energy Company LLC, a subsidiary of Exelon Corporation has applied to the federal Nuclear Regulatory Commission (NRC) for the relicensing of Oyster Creek Nuclear Generating Station (OCNGS) in Lacey Township, Ocean County for a period of twenty years. Therefore, the applicant needs a federal consistency determination under the federal Coastal Zone Management Act of 1972 and Coastal Zone Management Act Federal Consistency Regulations for the proposed relicensing.

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Site Location

The site is located on both sides of Route 9 in Lacey Township, Ocean County. To the west of Route 9 lies the nuclear electric generating facility; a combustion turbine electric generating facility owned by First Energy; and the Garden State Parkway (GSP). To the east and bounded by Forked River and Oyster Creek, the applicant owns a large undeveloped tract of land known as Finnenger's Farm, which extends from Route 9 to Barnegat Bay. The site contains both uplands and wetlands. In addition, the site contains some air monitoring devices and a disposal area from a prior dredging of Oyster Creek. There is also a residential community and recreation area to the northeast of the farm accessed by Beach Boulevard. Finally, the applicant owns an approximate 12 acre tract of land just south of Oyster Creek along Route 9 known as the "Barge Landing".

The site is bounded on the north by the Forked River, which provides the intake water for the plant's cooling system. Land uses north of Forked River consist of residential, commercial, light industrial.

Oyster Creek lies along the site's southern boundary and is utilized for the discharge of heated water from the plant's cooling system. Land uses include residential and commercial facilities to the south of Oyster Creek.

New Jersey's Coastal Zone Management Rules

The Division utilizes New Jersey's Coastal Zone Management Rules (Rules) in making decisions on applications submitted under New Jersey Coastal Area Facility Review Act (CAFRA), the Wetlands Act of 1970, and the Waterfront Development Law. In addition, these Rules apply to decisions on the consistency or compatibility of proposed actions by Federal, State, and local agencies within or affecting the coastal zone, including, but not limited to, determinations of Federal consistency under Section 307 of the Federal Coastal Zone Management Act, 16 U.S.C. 1451 et seq., determinations of consistency or compatibility under the Coastal Zone Management Act, comments on Draft and Final Environmental Impact Statements prepared under the National Environmental Policy Act, 42 U.S.C. 4321 et seq., and comments on other public and private plans, programs, projects and policies. (N.J.A.C. 7:7E-1.2 c, d, & e)

Based on the available information, the applicant will need to demonstrate compliance with the applicable sections of the following Rules. In some instances, the Division has provided specific questions to be addressed by the applicant.

Although not included in the list below, both the eight (8) Basic Coastal Policies, which summarize the direction of the specific rules and guide the coastal decision-making process (N.J.A.C. 7:7-1.5(a)) and the Basic Location Rule (N.J.A.C. 7:7E-6.2) may be utilized in the decision making process.

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Please note, that for brevity, the Division did not reproduce all the Rules listed below in their entirety. The applicant should review the entire Rule to insure the consistency request will contain a complete and appropriate discussion of the facility's degree of compliance with each Rule's criteria.

Finally, the Division understands the applicant has applied for a NJPDES Permit from the Department. A Draft NJPDES Permit was issued on July 19, 2005. It appears, that some of the Rules or portions of those Rules listed below, may be met or partially met by the applicant's acceptance of and compliance with a Final NJPDES Permit and its conditions. However, the Division reserves the right to condition a federal consistency determination to insure compliance with the Rules under the terms at 15 CFR 930.62(d).

7:7E-3.2 Shellfish habitat

Shellfish habitat is defined as an estuarine bay or river bottom which has a history of production for hard clams (*Mercenaria mercenaria*), soft clams (*Mya arenaria*), eastern oysters (*Crassostrea virginica*), bay scallops (*Argopecten irradians*), or blue mussels (*Mytilus edulis*), or otherwise listed below in this section. A shellfish habitat areas is defined as an area which meets one or more of the four criteria found at 7:7E-3.2(b)1-4. Any area determined by the Department to be contaminated by toxins is excluded from this definition. The Final Short List, prepared by the Department pursuant to the Federal Clean Water Act 33 U.S.C. 1313(c)(1), identifies these known contaminated areas. Also excluded from this definition are those sites for which the Department is presented with clear and convincing evidence that the sites lack the physical features necessary for the support of a shellfish population, excluding those waterways listed at N.J.A.C. 7:7E-7.3(d)10 and (j).

The Division requests the applicant address any impacts of the facility, since it's construction, on the adjacent shellfish beds in Barnegat Bay.

7:7E-3.4 Prime fishing areas

Prime fishing areas include tidal water areas and water's edge areas which have a demonstrable history of supporting a significant local quantity of recreational or commercial fishing activity. The section of this Rule applicable to the facility is: "Disposal of domestic or industrial wastes must meet applicable State and Federal effluent limitations and water quality standards."

The applicant needs to demonstrate compliance with this Rule.

7:7E-3.5 Finfish migratory pathways

Finfish migratory pathways are waterways (rivers, streams, creeks, bays and inlets) which can be determined to serve as passageways for diadromous fish to or from seasonal spawning areas, including juvenile anadromous fish which migrate in autumn and those listed by H.E. Zich

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(1977) "New Jersey Anadromous Fish Inventory" NJDEP Miscellaneous Report No. 41, and including those portions of the Hudson and Delaware Rivers within the coastal zone boundary. Species of concern include: alewife or river herring (Alosa pseudoharengus), blueback herring (Alosa aestivalis), American shad (Alosa sapidissima), striped bass (Monroe saxatilis), Atlantic sturgeon (Acipenser oxyrinchus), Shortnose sturgeon (Acipenser brevirostrum) and American eel (Anguilla rostrata).

Development, such as dams, dikes, spillways, channelization, tide gates and intake pipes, which creates a physical barrier to the movement of fish along finfish migratory pathways is prohibited, unless acceptable mitigating measures such as fish ladders, erosion control, or oxygenation are used. Development which lowers water quality to such an extent as to interfere with the movement of fish along finfish migratory pathways or to violate State and Delaware River Basin Commission water quality standards is prohibited.

It is the Division's understanding that some of the aforementioned species are impinged and/or entrained at the facility. In addition, the heated effluent may act as a barrier along the bay and/or act as trap in Oyster Creek. The applicant should discuss the impact of the facility on applicable species listed above.

7:7E-3.6 Submerged vegetation

Submerged vegetation special area consists of water areas supporting or documented as previously supporting rooted, submerged vascular plants such as widgeon grass (Ruppia maritima), sago pondweed (Potamogeton pectinatus), horned pondweed (Zannichellia palustris) and eelgrass (Zostera marina). Development in upland or water areas adjacent to submerged vegetation habitat or in submerged vegetation habitat which results in erosion or turbidity increases in the waters supporting submerged vegetation or prop or hull scour through use of the development is prohibited unless mitigating measures are provided. Compensation for unavoidable, permanent significant impacts to submerged vegetation habitats, when required, shall consist of the establishment of self-sustaining habitat for the appropriate species in accordance with scientifically-documented transplanting methods.

The 1979 Forked River Submersed Aquatic Vegetation Distribution Map indicates the presence of eelgrass along the bay both north and south of the mouths of Forked River and Oyster Creek. The applicant should address impacts of the facility on this Special Area as per 3.6(c) and (d).

7:7E-3.27 Wetlands

Wetlands or wetland means an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation. Coastal wetlands are wetlands regulated under the Wetlands Act of 1970. The Department has produced promulgated maps delineating the extent of coastal wetlands. Freshwater wetlands are wetlands regulated under the

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Freshwater Wetlands Protection Act. The State's mapping of these wetlands are not promulgated and are used as a planning tool. The Division will review an application to determine the extent of freshwater wetlands on a site and issue a Letter of Interpretation (LOI) to acknowledge the extent of wetlands and its resource classification.

The portion of the site known as Finnenger's Farm contains both mapped coastal wetlands and freshwater wetlands. The Division is not aware of any proposal by the applicant under the forthcoming federal consistency request to conduct regulated activities within either coastal or freshwater wetlands, other than a possible footpath for public access to the waterfront.

The Division is aware of and would support a wetlands mitigation/restoration program under a NJPDES-DSW Permit. However, this may be a regulated activity. The Division offers General Permits under the Coastal and Freshwater Wetland Programs for habitat restoration, and recommends the applicant review N.J.A.C. 7:7-7.29 and N.J.A.C. 7:7A-5.15 to ascertain the applicability of these permits to the applicant's potential mitigation/restoration program. Should the applicant not be able to utilize these General permits, the applicant would need to apply for Individual Permits under the Coastal and Freshwater Wetland Programs.

Should the wetland mitigation/restoration occur, the Division suggests the applicant work with New Jersey colleges/universities to determine if they are interested in conducting research at the mitigation/restoration site.

7:7E-3.28 Wetlands buffers

Wetlands buffer or transition area means an area of land adjacent to a wetland which minimizes adverse impacts on the wetlands or serves as an integral component of the wetlands ecosystem (see Appendix, Figure 7). Wider buffers than those noted below may be required to establish conformance with other Coastal Rules, including, but not limited to, 7:7E-3.38 and 3.39.

A wetlands buffer or transition area of up to 150 feet in width shall be established adjacent to all wetlands defined and regulated under the Freshwater Wetlands Protection Act. (Refer to the Freshwater Wetland Protection Act Rules, N.J.A.C. 7:7A, for further guidance). For all other wetlands, including wetlands regulated under the Coastal Wetlands Act of 1970, a wetlands buffer of up to 300 feet shall be established.

The Division is not aware of any proposed activities within a wetlands buffer under than the forthcoming federal consistency request other than the creation of public access to the waterfront and possible restoration/mitigation activity. Regulated activity in a coastal wetlands buffer associated with public access to the waterfront could be approved under a federal consistency request. Regulated activity in a coastal or freshwater wetland for enhancement would be reviewed under their associated general or individual permits referenced above.

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7:7E-3.38 Endangered or threatened wildlife or plant species habitats

Endangered or threatened wildlife or plant species habitats are areas known to be inhabited on a seasonal or permanent basis by or to be critical at any stage in the life cycle of any wildlife or plant identified as "endangered" or "threatened" species on official Federal or State lists of endangered or threatened species, or under active consideration for State or Federal listing. The definition of endangered or threatened wildlife or plant species habitats include a sufficient buffer area to ensure continued survival of the population of the species. Absence of such a buffer area does not preclude an area from being endangered or threatened wildlife or plant species habitat.

The facility periodically impinges a sea turtle on the federal endangered and threatened species list. Under this Rule, the applicant needs to demonstrate compliance with federal requirements for the taking of these sea turtles.

In addition, there are federal and State endangered and threatened species on or in close proximity to the facility. The Division requests the applicant submit a list and mapping of all properties owned or under the control of Exelon, AmerGen or other subsidiaries in order to provide additional guidance with regard to this Rule.

7:7E-3.39 Critical wildlife habitats

Critical wildlife habitats are specific areas known to serve an essential role in maintaining wildlife, particularly in wintering, breeding, and migrating.

There appears to be Critical wildlife habitats on or within close proximity of the facility. The Division requests the applicant submit a list and mapping of all properties owned or under the control of Exelon, AmerGen or other subsidiaries in order to provide additional guidance with regard to this Rule.

7:7E-3.41 Special hazard areas

Special hazard areas include areas with a known actual or potential hazard to public health, safety, and welfare, or to public or private property, such as the navigable air space around airports and seaplane landing areas, potential evacuation zones and areas where hazardous substances as defined at N.J.S.A. 58:10-23.11b-k are used or disposed, including adjacent areas and areas of hazardous material contamination. Coastal development, especially residential and labor-intensive economic development, within special hazard areas is discouraged. All development within special hazard areas must include appropriate mitigating measures to protect the public health and safety.

Please provide details on the applicant's participation in the radiological emergency response plan, including its degree of cooperation with the New Jersey State Police and the Department's Bureau of Nuclear Engineering.

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The Department's Bureau of Nuclear Engineering (BNE) has provided the following items as issues that need to be resolved. Please provide a response of the applicant's willingness to comply with the BNE's requests.

Issue 1: Testing of Security and Emergency Plans

Nuclear emergency preparedness and response is a critically important issue, especially in light of September 11, 2001. It is essential that nuclear power plant owners' procedures for security response are integrated into the plans of state and local officials for response to security events involving a potential release of radioactivity from the site. Additionally, this interface should be exercised. For public assurance, the Department requires that a security exercise be conducted prior to the decision on the federal consistency determination.

Issue 2: Ground Water Surveillance and Reporting

The identification and subsequent remediation of radioactive liquids in groundwater has been initiated by Exelon in response to leaks at other operating nuclear power plants in their fleet. The NRC has assembled a group of experts to examine the issue of inadvertent, unmonitored releases of radioactive liquids from commercial nuclear power plants. These are positive initiatives. In support of these initiatives, the Department requires Exelon to split all on-site ground water samples with the DEP as part of a routine monitoring program. The DEP will perform analyses for radioactive constituents in a subset of these ground water samples. Additionally, Exelon must report all on-site measurements as part of the site's radiological environmental monitoring program (REMP).

Issue 3: Financial Responsibility for Cleanup from Decommissioning

The Department is concerned about adequate funding for the eventual decontamination and decommissioning of the Oyster Creek facility. While a decommissioning trust fund has been set up, this covers only radioactivity generated by the operation of Oyster Creek to clean the site to NRC's acceptable levels. It would not cover any chemical contamination or radioactive contamination that was below NRC standards. The Department requires Exelon to commit to full financial responsibility and reimbursement for cleanup costs at and beyond the plant site, to New Jersey clean up standards (both radiological and chemical), when decommissioning occurs.

7:7E-5.0 Subchapter 5. Requirements For Impervious Cover And Vegetative Cover For General Land Areas And Certain Special Areas

This subchapter sets forth requirements for impervious cover and vegetative cover on sites in the CAFRA area, as defined at N.J.A.C. 7:7E-5.2. The applicant does not need to demonstrate compliance with this subchapter at this time, as the applicant is not proposing any new impervious structure. There have been informal discussions with regard for a CAFRA Permit for a new onsite parking area, and the need to demonstrate compliance with this subchapter, when the CAFRA Permit Application is submitted.

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7:7E-7.4 Energy facility use rule

Energy facilities include facilities, plants or operations for the production, conversion, exploration, development, distribution, extraction, processing, or storage of energy or fossil fuels. Energy facilities also include onshore support bases and marine terminals. Energy facilities do not include operations conducted by a retail dealer, such as a gas station, which is considered a commercial development.

Criterion (b) of this rule restricts the siting of new energy facilities, including all associated development activities in some Special Areas. As such, this criterion is not applicable.

Criterion (c) requires that coastal energy facilities construction and operation shall not directly or indirectly result in net loss of employment in the State for any single year. Further, Coastal energy facility construction and operation which results in loss of 200 or more person-years of employment in jobs in New Jersey directly or indirectly related to the State's coastal tourism industry in any single year is prohibited. The applicant needs to address this criterion.

Criteria (d) through (q) and (s) are not applicable.

Criterion (r) discusses standards relevant to electric generating stations including the siting of the various types of electric generating facilities. The one criterion applicable states: "The construction and operation of a nuclear generating station shall not be approved unless the proposed method for disposal of the spent fuel to be produced by the facility will be safe, conforms to standards established by the United States Nuclear Regulatory Commission, and will effectively remove danger to life and the environment from the radioactive waste material. This finding is required under present State law (N.J.S.A. 13:19-11) and will be made consistent with judicial decisions (see *Public Interest Research Group v. State of New Jersey*, 152 N.J. Super. 191 (App.Div., cert. den., 75 N.J. 538 (1977))) and Federal law. The applicant needs to address this criterion."

7:7E-7.7 Industry Use rule

This Rule includes electric power production. However, the Division has determined this rule is not applicable as it mainly concerns the siting of facilities.

7:7E-8.2 Marine Fish and Fisheries

Under this Rule, the key section is 7:7E-8.2(b), which states: "Any activity that would adversely impact on the natural functioning of marine fish, including the reproductive, spawning and migratory patterns or species abundance or diversity of marine fish, is discouraged." Marine fish are marine and estuarine animals other than marine mammals and birds.

The applicant is presently undertaking impingement and entrainment studies for the Section 316(b) regulations for Phase II facilities where Section 316(b) is incorporated into a NJPDES Permit. The applicant will likely utilize the data collected from these studies to attempt

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to demonstrate compliance with this Rule. If the applicant does utilize the data, then the data should represent a minimum of one year of data taken during an average weather year.

Under an agreement with the Department's Division of Water Quality for the NJPDES Permit, the applicant is assessing impingement and/or entrainment effects to 11 species of fish and invertebrates. Those species are: Atlantic menhaden (Brevoortia tyrannus), Atlantic silversides (Menidia menidia), Bay anchovy (Anchoa mitchilli), Blue crab (Callinectes sp.), Blueback herring (Alosa aestivalis), grass shrimp (Palaemonetes sp.), northern pipefish (Syngnathus fuscus), sand shrimp (Crangon sp.), and winter flounder (Pseudopleuronectes americana). The Division accepts this list, as these species are probably the most valuable in terms of forage species and recreational/commercial value and deserve this recognition.

The applicant has requested guidance as to whether it is necessary to conduct fisheries studies in Barnegat Bay similar to the ones previously conducted by Ichthyological Associates (IA) and Ecological Associates (EA) to aid in demonstrating compliance with this Rule and the Finfish Migratory Pathways Rule. As stated above, the applicant is currently conducting impingement and entrainment studies for compliance with the Section 316(b) regulations for Phase II facilities. In the event that the applicant chooses to offset losses to the marine and estuarine species through a mitigation/habitat enhancement program, such a program will likely include restoration of some of historic estuarine and freshwater wetlands on Finnenger's Farm and other locations. Should this habitat enhancement occur, the extent of the heated plume emanating from OCNGS may change given the likelihood of tidal inundation to a portion of Finnenger's Farm.

Since it is likely the heated effluent plume will change, either through cooling towers, a habitat enhancement program, or cessation of electric generation, this Division prefers the applicant commit to conducting studies associated with either the cooling tower or habitat enhancement scenario it would be operating under in the future. Any such study requirements would be a requirement of the NJPDES permit and a federal Consistency determination.

7:7E-8.4 Water Quality

The applicant's successful attainment, acceptance, and compliance with a Final NJPDES Permit will allow the applicant to meet this Rule. The applicant should submit a copy of the permit and a copy of an acceptance form/statement with regard to the Final NJPDES Permit and its conditions.

7:7E-8.5 Surface water use

Surface water is water in lakes, ponds, streams, rivers, bogs, wetlands, bays, and ocean that is visible on land. Coastal development shall demonstrate that the anticipated surface water demand of the facility will not exceed the capacity, including phased planned increases, of the local potable water supply system or reserve capacity, and that construction of the facility will not cause unacceptable surface water disturbances, such as drawdown, bottom scour, or alteration of

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flow patterns.

The Division understands the facility was sited and constructed prior to the effective date of these Rules, and there has been an alteration of the flow patterns in Forked River, Oyster Creek, and adjacent Barnegat Bay. However, one alteration of flow pattern, the heated effluent discharge from the facility, needs to be discussed by the applicant to ascertain if it is acceptable. The applicant should address present day impacts of the heated discharge on the biota of the adjacent waterways and include methods the applicant intends to utilize to eliminate or ameliorate those impacts.

7:7E-8.6 Groundwater Use

Groundwater is all water within the soil and subsurface strata that is not at the surface of the land. It includes water that is within the earth that supplies wells and springs. Coastal development shall demonstrate, to the maximum extent practicable, that the anticipated groundwater withdrawal demand of the development, alone and in conjunction with other groundwater diversions proposed or existing in the region, will not cause salinity intrusions into the groundwaters of the zone, will not degrade groundwater quality, will not significantly lower the water table or piezometric surface, or significantly decrease the base flow of adjacent water sources. Groundwater withdrawals shall not exceed the aquifer's safe yield.

The applicant needs to demonstrate compliance with this Rule.

7:7E-8.10 Air quality

The protection of air resources refers to the protection from air contaminants that injure human health, welfare or property, and the attainment and maintenance of State and Federal air quality goals and the prevention of degradation of current levels of air quality. Coastal development shall conform to all applicable State and Federal regulations, standards and guidelines and be consistent with the strategies of New Jersey's State Implementation Plan (SIP). See N.J.A.C. 7:27 and New Jersey SIP for ozone, particulate matter, sulfur dioxide, nitrogen dioxide, carbon monoxide, lead, and visibility. Coastal development shall be located and designed to take full advantage of existing or planned mass transportation infrastructures and shall be managed to promote mass transportation services, in accordance with the Traffic rule, N.J.A.C. 7:7E-8.14.

The applicant should demonstrate its degree of compliance utilizing the data collected from the applicant's and the BNE's nearby monitoring stations.

7:7E-8.11 Public Access to the Waterfront

This Rule calls for coastal development adjacent to all coastal waters, including both natural and developed waterfront areas, shall provide permanent perpendicular and linear access

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to the waterfront to the maximum extent practicable, including both visual and physical access. Development that limits public access and the diversity of the waterfront experiences is discouraged.

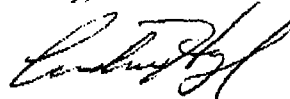
The Division has had informal discussions with the applicant on this Rule. While the Division recognizes the need to prohibit access to the waterfront from Route 9 to the west for security reasons, the Division recognizes a unique opportunity to provide public access to the east of Route 9 on the Finnenger's Farm portion of the site. Indeed, public access to both Forked River, Oyster Creek, and Barnegat Bay could provide areas for fishing, crabbing, birding, and nature walks. In addition, these public access areas could provide an outdoor classroom for elementary and high school students. The Division expects to continue the dialogue with AmerGen to develop a public access plan prior to the submittal of the forthcoming request for federal consistency determination.

Summary

The above list and discussion is provided as guidance, based on existing information, and is not to be construed as a final list of Rules or issues that may need to be discussed by the applicant. The reason for this is simple. The Division can not predict what issues might be raised by the public or other DEP and/or State agencies during the review of the forthcoming consistency request.

Should you have any questions or wish to discuss this matter further, please do not hesitate to contact me at the above address or at 609-984-0288.

Sincerely,



Andrew Heyl, Supervisor
Bureau of Coastal Regulation

- c. William Mayer, AmerGen Energy Company, LLC 200 Exelon Way, Kennet Square, PA 19348
- Michael Gallagher, AmerGen Energy Company, LLC 200 Exelon Way, Kennet Square, PA 19348
- Brian Weeks, DAG
- Kevin Broderick, DLUR
- Susan Rosenwinkle, NJPDES
- Karen Tucillo, BNE
- Kent Tosch, BNE
- Paul Schwartz, BNE
- Thomas McCloy, DFW
- James Joseph, DFW

- 3 Letter from Andrew Heyl (NJDEP) to Timothy Rausch (OCNGS Site Vice President) re: State Guidance for Forthcoming Federal Consistance Request for License Renewal of AmerGen's Oyster Creek Nuclear Generating Station Applicant

June 1, 2006



JON S. CORZINE
Governor

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Land Use Regulation
P.O. Box 439, Trenton, NJ 08625-0439
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LISA P. JACKSON
Commissioner

MIPA
6.12.06

June 1, 2006

Timothy Rausch, Site Vice President
Oyster Creek Nuclear Generating Station
AmerGen Energy Company LLC
P.O. Box 388
Forked River, New Jersey 08731

RE: State Guidance for Forthcoming Federal Consistency Request for License Renewal of
AmerGen's Oyster Creek Nuclear Generating Station
Applicant: AmerGen Energy Company LLC An Exelon Company
Project: Oyster Creek Nuclear Generating Station NRC License Renewal
Location: Lacey Township, Ocean County

Dear Mr. Rausch:

The New Jersey Department of Environmental Protection's Division of Land Use Regulation (Division) acting pursuant to Section 307 of the federal Coastal Zone Management Act of 1972 (P.L. 92-583) as amended, and the Coastal Zone Management Act Federal Consistency Regulations (15 CFR Part 930) as amended to February 6, 2006, hereby provides guidance to the applicant pursuant to 15 CFR 930.56 with regard to New Jersey's federally approved, enforceable, and applicable Coastal Zone Management Rules (Rules, N.J.A.C. 7:7E-1.0 et. seq.) for the above referenced activity.

Application

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Site Location

The site is located on both sides of Route 9 in Lacey Township, Ocean County. To the west of Route 9 lies the nuclear electric generating facility; a combustion turbine electric generating facility owned by First Energy; and the Garden State Parkway (GSP). To the east and bounded by Forked River and Oyster Creek, the applicant owns a large undeveloped tract of land known as Finnenger's Farm, which extends from Route 9 to Barnegat Bay. The site contains both uplands and wetlands. In addition, the site contains some air monitoring devices and a disposal area from a prior dredging of Oyster Creek. There is also a residential community and recreation area to the northeast of the farm accessed by Beach Boulevard. Finally, the applicant owns an approximate 12 acre tract of land just south of Oyster Creek along Route 9 known as the "Barge Landing".

The site is bounded on the north by the Forked River, which provides the intake water for the plant's cooling system. Land uses north of Forked River consist of residential, commercial, light industrial.

Oyster Creek lies along the site's southern boundary and is utilized for the discharge of heated water from the plant's cooling system. Land uses include residential and commercial facilities to the south of Oyster Creek.

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The Division utilizes New Jersey's Coastal Zone Management Rules (Rules) in making decisions on applications submitted under New Jersey Coastal Area Facility Review Act (CAFRA), the Wetlands Act of 1970, and the Waterfront Development Law. In addition, these Rules apply to decisions on the consistency or compatibility of proposed actions by Federal, State, and local agencies within or affecting the coastal zone, including, but not limited to, determinations of Federal consistency under Section 307 of the Federal Coastal Zone Management Act, 16 U.S.C. 1451 et seq., determinations of consistency or compatibility under the Coastal Zone Management Act, comments on Draft and Final Environmental Impact Statements prepared under the National Environmental Policy Act, 42 U.S.C. 4321 et. seq., and comments on other public and private plans, programs, projects and policies. (N.J.A.C. 7:7E-1.2 c, d, & e)

Based on the available information, the applicant will need to demonstrate compliance with the applicable sections of the following Rules. In some instances, the Division has provided specific questions to be addressed by the applicant.

Although not included in the list below, both the eight (8) Basic Coastal Policies, which summarize the direction of the specific rules and guide the coastal decision-making process (N.J.A.C. 7:7-1.5(a)) and the Basic Location Rule (N.J.A.C. 7:7E-6.2) may be utilized in the decision making process.

Please note, that for brevity, the Division did not reproduce all the Rules listed below in their entirety. The applicant should review the entire Rule to insure the consistency request will contain a complete and appropriate discussion of the facility's degree of compliance with each Rule's criteria.

Finally, the Division understands the applicant has applied for a NJPDES Permit from the Department. A Draft NJPDES Permit was issued on July 19, 2005. It appears, that some of the Rules or portions of those Rules listed below, may be met or partially met by the applicant's acceptance of and compliance with a Final NJPDES Permit and its conditions. However, the Division reserves the right to condition a federal consistency determination to insure compliance with the Rules under the terms at 15 CFR 930.62(d).

7:7E-3.2 Shellfish habitat

Shellfish habitat is defined as an estuarine bay or river bottom which has a history of production for hard clams (*Mercenaria mercenaria*), soft clams (*Mya arenaria*), eastern oysters (*Crassostrea virginica*), bay scallops (*Argopecten irradians*), or blue mussels (*Mytilus edulis*), or otherwise listed below in this section. A shellfish habitat areas is defined as an area which meets one or more of the four criteria found at 7:7E-3.2(b)1-4. Any area determined by the Department to be contaminated by toxins is excluded from this definition. The Final Short List, prepared by the Department pursuant to the Federal Clean Water Act 33 U.S.C. 1313(c)(1), identifies these known contaminated areas. Also excluded from this definition are those sites for which the Department is presented with clear and convincing evidence that the sites lack the physical features necessary for the support of a shellfish population, excluding those waterways listed at N.J.A.C. 7:7E-7.3(d)10 and (j).

The Division requests the applicant address any impacts of the facility, since it's construction, on the adjacent shellfish beds in Barnegat Bay.

7:7E-3.4 Prime fishing areas

Prime fishing areas include tidal water areas and water's edge areas which have a demonstrable history of supporting a significant local quantity of recreational or commercial fishing activity. The section of this Rule applicable to the facility is: "Disposal of domestic or industrial wastes must meet applicable State and Federal effluent limitations and water quality standards."

The applicant needs to demonstrate compliance with this Rule.

7:7E-3.5 Finfish migratory pathways

Finfish migratory pathways are waterways (rivers, streams, creeks, bays and inlets) which can be determined to serve as passageways for diadromous fish to or from seasonal spawning areas, including juvenile anadromous fish which migrate in autumn and those listed by H.E. Zich

(1977) "New Jersey Anadromous Fish Inventory" NJDEP Miscellaneous Report No. 41, and including those portions of the Hudson and Delaware Rivers within the coastal zone boundary. Species of concern include: alewife or river herring (Alosa pseudoharengus), blueback herring (Alosa aestivalis), American shad (Alosa sapidissima), striped bass (Monroe saxatilis), Atlantic sturgeon (Acipenser oxyrhynchus), Shortnose sturgeon (Acipenser brevirostrum) and American eel (Anguilla rostrata).

Development, such as dams, dikes, spillways, channelization, tide gates and intake pipes, which creates a physical barrier to the movement of fish along finfish migratory pathways is prohibited, unless acceptable mitigating measures such as fish ladders, erosion control, or oxygenation are used. Development which lowers water quality to such an extent as to interfere with the movement of fish along finfish migratory pathways or to violate State and Delaware River Basin Commission water quality standards is prohibited.

It is the Division's understanding that some of the aforementioned species are impinged and/or entrained at the facility. In addition, the heated effluent may act as a barrier along the bay and/or act as trap in Oyster Creek. The applicant should discuss the impact of the facility on applicable species listed above.

7:7E-3.6 Submerged vegetation

Submerged vegetation special area consists of water areas supporting or documented as previously supporting rooted, submerged vascular plants such as widgeon grass (Ruppia maritima), sago pondweed (Potamogeton pectinatus), horned pondweed (Zannichellia palustris) and eelgrass (Zostera marina). Development in upland or water areas adjacent to submerged vegetation habitat or in submerged vegetation habitat which results in erosion or turbidity increases in the waters supporting submerged vegetation or prop or hull scour through use of the development is prohibited unless mitigating measures are provided. Compensation for unavoidable, permanent significant impacts to submerged vegetation habitats, when required, shall consist of the establishment of self-sustaining habitat for the appropriate species in accordance with scientifically-documented transplanting methods.

The 1979 Forked River Submersed Aquatic Vegetation Distribution Map indicates the presence of eelgrass along the bay both north and south of the mouths of Forked River and Oyster Creek. The applicant should address impacts of the facility on this Special Area as per 3.6(c) and (d).

7:7E-3.27 Wetlands

Wetlands or wetland means an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation. Coastal wetlands are wetlands regulated under the Wetlands Act of 1970. The Department has produced promulgated maps delineating the extent of coastal wetlands. Freshwater wetlands are wetlands regulated under the

Freshwater Wetlands Protection Act. The State's mapping of these wetlands are not promulgated and are used as a planning tool. The Division will review an application to determine the extent of freshwater wetlands on a site and issue a Letter of Interpretation (LOI) to acknowledge the extent of wetlands and its resource classification.

The portion of the site known as Finnenger's Farm contains both mapped coastal wetlands and freshwater wetlands. The Division is not aware of any proposal by the applicant under the forthcoming federal consistency request to conduct regulated activities within either coastal or freshwater wetlands, other than a possible footpath for public access to the waterfront.

The Division is aware of and would support a wetlands mitigation/restoration program under a NJPDES-DSW Permit. However, this may be a regulated activity. The Division offers General Permits under the Coastal and Freshwater Wetland Programs for habitat restoration, and recommends the applicant review N.J.A.C. 7:7-7.29 and N.J.A.C. 7:7A-5.15 to ascertain the applicability of these permits to the applicant's potential mitigation/restoration program. Should the applicant not be able to utilize these General permits, the applicant would need to apply for Individual Permits under the Coastal and Freshwater Wetland Programs.

Should the wetland mitigation/restoration occur, the Division suggests the applicant work with New Jersey colleges/universities to determine if they are interested in conducting research at the mitigation/restoration site.

7:7E-3.28 Wetlands buffers

Wetlands buffer or transition area means an area of land adjacent to a wetland which minimizes adverse impacts on the wetlands or serves as an integral component of the wetlands ecosystem (see Appendix, Figure 7). Wider buffers than those noted below may be required to establish conformance with other Coastal Rules, including, but not limited to, 7:7E-3.38 and 3.39.

A wetlands buffer or transition area of up to 150 feet in width shall be established adjacent to all wetlands defined and regulated under the Freshwater Wetlands Protection Act. (Refer to the Freshwater Wetland Protection Act Rules, N.J.A.C. 7:7A, for further guidance). For all other wetlands, including wetlands regulated under the Coastal Wetlands Act of 1970, a wetlands buffer of up to 300 feet shall be established.

The Division is not aware of any proposed activities within a wetlands buffer under than the forthcoming federal consistency request other than the creation of public access to the waterfront and possible restoration/mitigation activity. Regulated activity in a coastal wetlands buffer associated with public access to the waterfront could be approved under a federal consistency request. Regulated activity in a coastal or freshwater wetland for enhancement would be reviewed under their associated general or individual permits referenced above.

7:7E-3.38 Endangered or threatened wildlife or plant species habitats

Endangered or threatened wildlife or plant species habitats are areas known to be inhabited on a seasonal or permanent basis by or to be critical at any stage in the life cycle of any wildlife or plant identified as "endangered" or "threatened" species on official Federal or State lists of endangered or threatened species, or under active consideration for State or Federal listing. The definition of endangered or threatened wildlife or plant species habitats include a sufficient buffer area to ensure continued survival of the population of the species. Absence of such a buffer area does not preclude an area from being endangered or threatened wildlife or plant species habitat.

The facility periodically impinges a sea turtle on the federal endangered and threatened species list. Under this Rule, the applicant needs to demonstrate compliance with federal requirements for the taking of these sea turtles.

In addition, there are federal and State endangered and threatened species on or in close proximity to the facility. The Division requests the applicant submit a list and mapping of all properties owned or under the control of Exelon, AmerGen or other subsidiaries in order to provide additional guidance with regard to this Rule.

7:7E-3.39 Critical wildlife habitats

Critical wildlife habitats are specific areas known to serve an essential role in maintaining wildlife, particularly in wintering, breeding, and migrating.

There appears to be Critical wildlife habitats on or within close proximity of the facility. The Division requests the applicant submit a list and mapping of all properties owned or under the control of Exelon, AmerGen or other subsidiaries in order to provide additional guidance with regard to this Rule.

7:7E-3.41 Special hazard areas

Special hazard areas include areas with a known actual or potential hazard to public health, safety, and welfare, or to public or private property, such as the navigable air space around airports and seaplane landing areas, potential evacuation zones and areas where hazardous substances as defined at N.J.S.A. 58:10-23.11b-k are used or disposed, including adjacent areas and areas of hazardous material contamination. Coastal development, especially residential and labor-intensive economic development, within special hazard areas is discouraged. All development within special hazard areas must include appropriate mitigating measures to protect the public health and safety.

Please provide details on the applicant's participation in the radiological emergency response plan, including its degree of cooperation with the New Jersey State Police and the Department's Bureau of Nuclear Engineering.

DRAFT

The Department's Bureau of Nuclear Engineering (BNE) has provided the following items as issues that need to be resolved. Please provide a response of the applicant's willingness to comply with the BNE's requests.

Issue 1: Testing of Security and Emergency Plans

Nuclear emergency preparedness and response is a critically important issue, especially in light of September 11, 2001. It is essential that nuclear power plant owners' procedures for security response are integrated into the plans of state and local officials for response to security events involving a potential release of radioactivity from the site. Additionally, this interface should be exercised. For public assurance, the Department requires that a security exercise be conducted prior to the decision on the federal consistency determination.

Issue 2: Ground Water Surveillance and Reporting

The identification and subsequent remediation of radioactive liquids in groundwater has been initiated by Exelon in response to leaks at other operating nuclear power plants in their fleet. The NRC has assembled a group of experts to examine the issue of inadvertent, unmonitored releases of radioactive liquids from commercial nuclear power plants. These are positive initiatives. In support of these initiatives, the Department requires Exelon to split all on-site ground water samples with the DEP as part of a routine monitoring program. The DEP will perform analyses for radioactive constituents in a subset of these ground water samples. Additionally, Exelon must report all on-site measurements as part of the site's radiological environmental monitoring program (REMP).

Issue 3: Financial Responsibility for Cleanup from Decommissioning

The Department is concerned about adequate funding for the eventual decontamination and decommissioning of the Oyster Creek facility. While a decommissioning trust fund has been set up, this covers only radioactivity generated by the operation of Oyster Creek to clean the site to NRC's acceptable levels. It would not cover any chemical contamination or radioactive contamination that was below NRC standards. The Department requires Exelon to commit to full financial responsibility and reimbursement for cleanup costs at and beyond the plant site, to New Jersey clean up standards (both radiological and chemical), when decommissioning occurs.

7:7E-5.0 Subchapter 5. Requirements For Impervious Cover And Vegetative Cover For
General Land Areas And Certain Special Areas

This subchapter sets forth requirements for impervious cover and vegetative cover on sites in the CAFRA area, as defined at N.J.A.C. 7:7E-5.2. The applicant does not need to demonstrate compliance with this subchapter at this time, as the applicant is not proposing any new impervious structure. There have been informal discussions with regard for a CAFRA Permit for a new onsite parking area, and the need to demonstrate compliance with this subchapter, when the CAFRA Permit Application is submitted.

7:7E-7.4 Energy facility use rule

Energy facilities include facilities, plants or operations for the production, conversion, exploration, development, distribution, extraction, processing, or storage of energy or fossil fuels. Energy facilities also include onshore support bases and marine terminals. Energy facilities do not include operations conducted by a retail dealer, such as a gas station, which is considered a commercial development.

Criterion (b) of this rule restricts the siting of new energy facilities, including all associated development activities in some Special Areas. As such, this criterion is not applicable.

Criterion (c) requires that coastal energy facilities construction and operation shall not directly or indirectly result in net loss of employment in the State for any single year. Further, Coastal energy facility construction and operation which results in loss of 200 or more person-years of employment in jobs in New Jersey directly or indirectly related to the State's coastal tourism industry in any single year is prohibited. The applicant needs to address this criterion.

Criteria (d) through (q) and (s) are not applicable.

Criterion (r) discusses standards relevant to electric generating stations including the siting of the various types of electric generating facilities. The one criterion applicable states: "The construction and operation of a nuclear generating station shall not be approved unless the proposed method for disposal of the spent fuel to be produced by the facility will be safe, conforms to standards established by the United States Nuclear Regulatory Commission, and will effectively remove danger to life and the environment from the radioactive waste material. This finding is required under present State law (N.J.S.A. 13:19-11) and will be made consistent with judicial decisions (see *Public Interest Research Group v. State of New Jersey*, 152 N.J. Super. 191 (App.Div., certif. Den., 75 N.J. 538 (1977))) and Federal law. The applicant needs to address this criterion."

7:7E-7.7 Industry Use rule

This Rule includes electric power production. However, the Division has determined this rule is not applicable as it mainly concerns the siting of facilities.

7:7E-8.2 Marine Fish and Fisheries

Under this Rule, the key section is 7:7E-8.2(b), which states: "Any activity that would adversely impact on the natural functioning of marine fish, including the reproductive, spawning and migratory patterns or species abundance or diversity of marine fish, is discouraged." Marine fish are marine and estuarine animals other than marine mammals and birds.

The applicant is presently undertaking impingement and entrainment studies for the Section 316(b) regulations for Phase II facilities where Section 316(b) is incorporated into a NJPDES Permit. The applicant will likely utilize the data collected from these studies to attempt

to demonstrate compliance with this Rule. If the applicant does utilize the data, then the data should represent a minimum of one year of data taken during an average weather year.

Under an agreement with the Department's Division of Water Quality for the NJPDES Permit, the applicant is assessing impingement and/or entrainment effects to 11 species of fish and invertebrates. Those species are: Atlantic menhaden (Brevoortia tyrannus), Atlantic silversides (Menidia menidia), Bay anchovy (Anchoa mitchilli), Blue crab (Callinectes sp.), Blueback herring (Alosa aestivalis), grass shrimp (Palaemonetes sp.), northern pipefish (Syngnathus fuscus), sand shrimp (Crangon sp.), and winter flounder (Psuedopleuronectes americana). The Division accepts this list, as these species are probably the most valuable in terms of forage species and recreational/commercial value and deserve this recognition.

The applicant has requested guidance as to whether it is necessary to conduct fisheries studies in Barnegat Bay similar to the ones previously conducted by Ichthyological Associates (IA) and Ecological Associates (EA) to aid in demonstrating compliance with this Rule and the Finfish Migratory Pathways Rule. As stated above, the applicant is currently conducting impingement and entrainment studies for compliance with the Section 316(b) regulations for Phase II facilities. In the event that the applicant chooses to offset losses to the marine and estuarine species through a mitigation/habitat enhancement program, such a program will likely include restoration of some of historic estuarine and freshwater wetlands on Finnenger's Farm and other locations. Should this habitat enhancement occur, the extent of the heated plume emanating from OCNCS may change given the likelihood of tidal inundation to a portion of Finnenger's Farm.

Since it is likely the heated effluent plume will change, either through cooling towers, a habitat enhancement program, or cessation of electric generation, this Division prefers the applicant commit to conducting studies associated with either the cooling tower or habitat enhancement scenario it would be operating under in the future. Any such study requirements would be a requirement of the NJPDES permit and a federal Consistency determination.

7:7E-8.4 Water Quality

The applicant's successful attainment, acceptance, and compliance with a Final NJPDES Permit will allow the applicant to meet this Rule. The applicant should submit a copy of the permit and a copy of an acceptance form/statement with regard to the Final NJPDES Permit and its conditions.

7:7E-8.5 Surface water use

Surface water is water in lakes, ponds, streams, rivers, bogs, wetlands, bays, and ocean that is visible on land. Coastal development shall demonstrate that the anticipated surface water demand of the facility will not exceed the capacity, including phased planned increases, of the local potable water supply system or reserve capacity, and that construction of the facility will not cause unacceptable surface water disturbances, such as drawdown, bottom scour, or alteration of

flow patterns.

The Division understands the facility was sited and constructed prior to the effective date of these Rules, and there has been an alteration of the flow patterns in Forked River, Oyster Creek, and adjacent Barnegat Bay. However, one alteration of flow pattern, the heated effluent discharge from the facility, needs to be discussed by the applicant to ascertain if it is acceptable. The applicant should address present day impacts of the heated discharge on the biota of the adjacent waterways and include methods the applicant intends to utilize to eliminate or ameliorate those impacts.

7:7E-8.6 Groundwater Use

Groundwater is all water within the soil and subsurface strata that is not at the surface of the land. It includes water that is within the earth that supplies wells and springs. Coastal development shall demonstrate, to the maximum extent practicable, that the anticipated groundwater withdrawal demand of the development, alone and in conjunction with other groundwater diversions proposed or existing in the region, will not cause salinity intrusions into the groundwaters of the zone, will not degrade groundwater quality, will not significantly lower the water table or piezometric surface, or significantly decrease the base flow of adjacent water sources. Groundwater withdrawals shall not exceed the aquifer's safe yield.

The applicant needs to demonstrate compliance with this Rule.

7:7E-8.10 Air quality

The protection of air resources refers to the protection from air contaminants that injure human health, welfare or property, and the attainment and maintenance of State and Federal air quality goals and the prevention of degradation of current levels of air quality. Coastal development shall conform to all applicable State and Federal regulations, standards and guidelines and be consistent with the strategies of New Jersey's State Implementation Plan (SIP). See N.J.A.C. 7:27 and New Jersey SIP for ozone, particulate matter, sulfur dioxide, nitrogen dioxide, carbon monoxide, lead, and visibility. Coastal development shall be located and designed to take full advantage of existing or planned mass transportation infrastructures and shall be managed to promote mass transportation services, in accordance with the Traffic rule, N.J.A.C. 7:7E-8.14.

The applicant should demonstrate its degree of compliance utilizing the data collected from the applicant's and the BNE's nearby monitoring stations.

7:7E-8.11 Public Access to the Waterfront

This Rule calls for coastal development adjacent to all coastal waters, including both natural and developed waterfront areas, shall provide permanent perpendicular and linear access

to the waterfront to the maximum extent practicable, including both visual and physical access. Development that limits public access and the diversity of the waterfront experiences is discouraged.


The Division has had informal discussions with the applicant on this Rule. While the Division recognizes the need to prohibit access to the waterfront from Route 9 to the west for security reasons, the Division recognizes a unique opportunity to provide public access to the east of Route 9 on the Finnenger's Farm portion of the site. Indeed, public access to both Forked River, Oyster Creek, and Barnegat Bay could provide areas for fishing, crabbing, birding, and nature walks. In addition, these public access areas could provide an outdoor classroom for elementary and high school students. The Division expects to continue the dialogue with AmerGen to develop a public access plan prior to the submittal of the forthcoming request for federal consistency determination.

Summary

The above list and discussion is provided as guidance, based on existing information, and is not to be construed as a final list of Rules or issues that may need to be discussed by the applicant. The reason for this is simple. The Division can not predict what issues might be raised by the public or other DEP and/or State agencies during the review of the forthcoming consistency request.

Should you have any questions or wish to discuss this matter further, please do not hesitate to contact me at the above address or at 609-984-0288.

Sincerely,



Andrew Heyl, Supervisor
Bureau of Coastal Regulation

- c. William Mayer, AmerGen Energy Company, LLC 200 Exelon Way, Kennet Square, PA 19348
Michael Gallagher, AmerGen Energy Company, LLC 200 Exelon Way, Kennet Square, PA 19348
Brian Weeks, DAG
Kevin Broderick, DLUR
Susan Rosenwinkle, NJPDES
Karen Tucillo, BNE
Kent Tosch, BNE
Paul Schwartz, BNE
Thomas McCloy, DFW
James Joseph, DFW

- 4 Letter from Andy Heyl to Timothy Rausch, Site Vice Resident Oyster Creek Nuclear Generating Station, AmerGen Energy Company, LLC re: Checklist of Information Proposed to be Submitted Pursuant to 15 C.F.R. 930.58 and 930.60 in Support of Operating License for AmerGen's Oyster Creek Nuclear Generating Station Lacey Township, Ocean County (cover letter, as faxed from Heyl to B. Maher, without attachment)

September 15, 2006



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Land Use Regulation Program
501 East State Street, P.O. Box 439
Trenton, New Jersey 08625-0439
Telephone # (609) 292-0060
Fax # (609) 292-8115 or (609) 777-3656

JON S. CORZINE
Governor

LISA P. JACKSON
Commissioner

September 15, 2006

Timothy Rausch, Site Vice President
Oyster Creek Nuclear Generating Station
AmerGen Energy Company, LLC
Route 9 South
Forked river, New Jersey 08731

RE: Checklist of Information Proposed to be Submitted Pursuant to 15 C.F.R. 930.58 and 930.60 in
Support of Operating License for AmerGen's Oyster Creek Nuclear Generating Station
Lacey Township, Ocean County

Dear Vice President Rausch:

Please except this as a response to your submittal received on August 17, 2006 with regard to above. Based on available information, the submitted Checklist of Information to be Submitted and the Division's June 1, 2006 Guidance Letter appears to cover the applicable and enforceable Coastal Zone Management Rules under New Jersey Coastal Zone Management Program. Should the Division become aware of any additional issues that may require additional information, it will advise you of the same immediately. The Division reserves the right under 15 C.F.R. 930.60(c) to request clarification of the information provided or to request information or data that is in addition to that required by 15 C.F.R. 930.58.

Should you wish to discuss this matter further, please do not hesitate to contact me at the above address or at 609-984-0288.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrew Heyl".

Andrew Heyl, Supervisor
Bureau of Coastal Regulation

- c. William Mayer, AmerGen Energy Company, LLC 200 Exelon Way, Kennet Square, PA 19348
Brian Weeks, DAG
Kevin Broderick, DLUR



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FAX

DATE: 9/15/06Number of pgs. including cover: 2

To:

Bill Mager

Phone:

610-765-5939

Fax:

360-230-4026

From:

Andy Hyl

Phone:

609-984-0288

Fax:

609-292-8115REMARKS: ☐ Urgent ☐ For your Review ☐ Reply ASAP ☐ Please Comment

- 5 Letter from Thomas Micai, Director, Division of Land Use Regulation New Jersey Dept of Envir Protection to Timothy Rausch, Site Vice President, AmerGen Energy Company, LLC re: Federal Consistency Request for License renewal, Oyster Creek Nuclear Generating Station, Program File No. 1500-02-0004.4 CDT060001 (objecting to AmerGen's certification of Federal Consistency for the OCNGS with the State's federally-approved Coastal Zone Management Program)
May 31, 2007



State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION

ION S. CORZINE
Governor

LISA P. JACKSON
Commissioner

May 31, 2007

Timothy Rausch, Site Vice President
Oyster Creek Generating Station
AmerGen Energy Company, LLC
Route 9 South
Forked River, NJ 08731

RE: Federal Consistency Request for License renewal of AmerGen's Oyster Creek
Nuclear Generating Station
Program File No. 1500-02-0004.4 CDT060001
Applicant: AmerGen Energy Company LLC
Project: Oyster Creek Nuclear Generating Station License Renewal
Location: Lacey Township, Ocean County

Dear Mr. Rausch:

The Division completed the review of your request for a Federal Consistency Determination and found that it cannot make a positive consistency determination pursuant to Section 307 of the federal Coastal Zone Management Act of 1972 (P.L. 92-583) as amended, with New Jersey's Coastal Management Program for the reasons that follow.

FEDERAL CONSISTENCY REVIEW

The New Jersey Department of Environmental Protection's Division of Land Use Regulation is reviewing a request by AmerGen Energy Company LLC (AmerGen) for a federal consistency (FC) statement for relicensing of the Oyster Creek Nuclear Generating Station in Lacey Township, Ocean County, New Jersey. This consistency determination is required pursuant to the federal Coastal Zone Management Act for applicants applying to a federal agency for a license for a new facility or to relicense an existing facility within New Jersey's Coastal Zone. In this case, AmerGen is requesting that the Nuclear Regulatory Commission (NRC) relicense the facility for a period of 20 years, or until 2029. The Department's Coastal Zone Management (CZM) rules at N.J.A.C. 7:7E include the standards for reviewing the FC request.

ADMINISTRATIVE HISTORY

On January 21, 2005, the applicant, AmerGen Energy Company LLC, submitted an application for a Federal Consistency Determination Request for License renewal of AmerGen's Oyster Creek Nuclear Generating Station by the federal Nuclear Regulatory

Commission (NRC). By letter of March 31, 2005, the Division advised the applicant the State agency's review had begun and a decision was due on or before July 21, 2005. In addition, the March 31, 2005 Division letter requested information to cure application deficiencies. The Division requested the applicant to submit the information and an analysis of that information to support the following assertions made by Amergen:

- the impacts of entrainment and impingement during current operations are small;
- the Ristroph traveling screens currently being used reduces the number of fish impinged and impingement mortality;
- the water quality of Barnegat Bay, which had been in decline, is recovering and now supports a healthy fish population;
- the impacts of heat shock during current operations are small.

In response to the Division's March 31 deficiency letter, the applicant submitted information from various studies conducted from 1965 through 1984, and studies from 1994 to 2005, in an effort to demonstrate a trend indicating an improvement to the Bay's environmental and fish populations. This trend was intended to serve as a basis to make an assertion that the Oyster Creek plant operations have had little to no impact on the aquatic environment. Included in this analysis is the use of the term "small", which was defined to be "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". However, this information was not adequately quantified.

The Division also requested that the applicant identify any public access to the waterfront provided on property owned by AmerGen. The response indicated that Amergen does not believe that every approved use of the coastal zone requires multipurpose public uses and widespread access.

On or about June 15, 2005, the applicant and the Division verbally agreed that a large volume of data was needed to satisfy a deficiency, and the applicant responded with a submittal received on June 21, 2005. By letter of July 20, 2005, the applicant submitted a letter, which accurately stated there was mutual agreement to extend the response date to on or before August 22, 2005.

On August 19, 2005, the Division objected to AmerGen's Coastal Zone Management Act consistency certification based upon a lack of information.

On September 19, 2005, AmerGen entered into a Memorandum of Understanding with the Division. AmerGen withdrew its consistency certification from Division consideration. The Division also withdrew its consistency objection, dated August 19, 2005. The Division indicated that it will need the information described in its August 19, 2005 objection letter in order to respond to any consistency certification resubmitted by AmerGen. AmerGen agreed to resubmit to the Division its consistency certification and necessary data and information.

On June 1, 2006, the Division sent a "State Guidance for Forthcoming Federal Consistency Request for License Renewal of AmerGen's Oyster Creek Nuclear Generating Station" letter. The applicant was advised to address numerous Rules on Coastal Zone Management, including but not limited to Shellfish habitat, Prime fishing areas, Finfish migratory pathways, Wetlands, and Public Access to the Waterfront.

On December 1, 2006, AmerGen Energy Company LLC, submitted a new application for a Federal Consistency Determination Request for License renewal of AmerGen's Oyster Creek Nuclear Generating Station by the federal Nuclear Regulatory Commission (NRC). A decision is due on or before May 31, 2007.

COMPLIANCE WITH FEDERAL COASTAL ZONE MANAGEMENT REGULATIONS AND ENFORCEABLE RULES UNDER NEW JERSEY'S COASTAL ZONE MANAGEMENT PROGRAM

The applicable federal regulations provide that federal activities affecting a State's coastal zone must be fully consistent with a State's coastal management program, unless compliance is prohibited under federal law. In addition, the applicant shall furnish the State agency with necessary data and information along with the consistency certification. Such information and data shall include the following:

- A detailed description of the proposed activity, its associated facilities, the coastal effects, and comprehensive data and information sufficient to support the applicant's consistency certification.
- Maps, diagrams, technical data and other relevant material shall be submitted when a written description alone will not adequately describe the proposal (a copy of the federal application and all supporting material provided to the Federal agency should also be submitted to the State agency).
- Information specifically identified in the management program as required necessary data and information for an applicant's consistency certification shall also be submitted.
- The management program as originally approved or amended (pursuant to 15 CFR part 923, subpart H) may describe data and information necessary to assess the consistency of federal license or permit activities.
- Necessary data and information may include State or local government permits or permit applications which are required for the proposed activity. Required data and information may not include confidential and proprietary material. (15 CFR 930.58a (1) and (2))

Your Federal Consistency request sought approval to renew the license for a 20-year period. A Federal Consistency request for a shorter license period would have been reviewed and analyzed differently, and the decision outcome would likely be different as well.

New Jersey's Coastal Zone Management Rules represent the consideration of various conflicting, competing, and contradictory local, State, and national interests in diverse coastal resources and in diverse uses of coastal locations. Numerous balances have been struck among these interests in defining these rules, which reduce but do not presume to eliminate all conflicts among competing interests. One reason for this intentional balancing and conflict reducing approach is that coastal management involves explicit consideration of a broad range of concerns, in contrast to other resource management programs, which have a more limited scope of concern. Decision-making on individual proposed actions using the Coastal Zone Management rules at N.J.A.C. 7:7E must therefore consider all three steps in the process, and weigh, evaluate, and interpret inevitably complex interests, using the framework established by the rules. In this process, interpretations of terms, such as "prudent," "feasible," "minimal," "practicable," and "maximum extent," as used in a specific rule or combinations of the rules may vary, depending upon the context of the proposed use, location, and design. Finally, these principles should not be understood as authorizing arbitrary decision-making or unrestrained administrative discretion. Rather, the limited flexibility intentionally built into the Coastal Zone Management Rules provides a mechanism for incorporating professional judgment by Department officials, as well as recommendations and comments by applicants, public agencies, specific interest groups, corporations, and citizens into the coastal decision-making process.

In the application of administrative discretion, Department officials will be guided by eight basic coastal policies, which summarize the direction of the specific rules.

1. Protect and enhance the coastal ecosystem.
2. Concentrate rather than disperse the pattern of coastal residential, commercial, industrial, and resort development, encourage the preservation of open space, and ensure the availability of suitable waterfront areas for water dependent activities.
3. Employ a method for decision making which allows each coastal location to be evaluated in terms of both the advantages and the disadvantages it offers for development.
4. Protect the health, safety and welfare of people who reside, work and visit the coastal zone.
5. Promote public access to the waterfront through protection and creation of meaningful access points and linear walkways and at least one waterfront park in each waterfront municipality.

6. Maintain active port and industrial facilities, and provide for necessary expansion in adjacent sites.
7. Maintain and upgrade existing energy facilities, and site additional energy facilities in a manner consistent with the rules of this Coastal Management Program.
8. Encourage residential, commercial, and recreational mixed-use redevelopment of the developed waterfront.

In the review of this federal consistency request, the Program deems Basic Coastal Policies 1, 4, 5, and 7 above to be applicable and guiding Policies.

Basic Coastal Policies 1 and 4 require consideration of the need to protect and enhance all of the coastal ecosystem components; maintain employment and financial opportunities for commercial fishermen and charter boat owners employed in New Jersey's fisheries, consideration of the need to maintain employment and commercial opportunities for others employed in the related tourism and service industries, and consideration of the need by the general public, as recreational fishermen, to maintain harvestable marine and estuarine fish and invertebrates populations. The Division also considers the importance of the facility as an employer and in providing electricity to residential, commercial and industrial users in the coastal zone.

Basic Coastal Policy 5 requires the Program to create public access areas to the waterfront through protection and creation of meaningful access points and linear walkways and at least one waterfront park in each waterfront municipality.

Basic Coastal Policy 7 looks to maintain and upgrade existing energy facilities, and site additional energy facilities in a manner consistent with the rules of this Coastal Management Program." The Program recognizes the importance of existing energy producing facilities sited in New Jersey's coastal zone to its inhabitants, visitors, and commercial and light industrial facilities. However, this Rules tempers its importance by requiring compliance with New Jersey's Coastal Zone Management Program, including the upgrading of those facilities to meet those New Jersey's Coastal Zone management Rules (Rules).

Applicable Rules are found under the Special Areas Rules (N.J.A.C. 7:7E-3.0), General Location Rules (N.J.A.C. 7:7E-6.0), Use Rules (N.J.A.C. 7:7E-7.0), and the Resource Rules (N.J.A.C. 7:7E-8.0). The Program notes the applicant does not consider the Resource Rules to be applicable as those Rules are for "proposed development" and the applicant is not seeking to construct any new facilities on the subject property. However, the Program also notes the above Coastal Decision Making Policies compel the Program to review the proposed relicensing in light of applicable Resource Rules, as these Rules analyze a proposed development activity in terms of its effects on various resources of the built and natural environment of the coastal zone, as well as in its surrounding region.

The Prime Fishing Area Rule (N.J.A.C. 7:7E-3.4), Finfish Migratory Pathways Rule (7:7E-3.5), Marine Fish and Fisheries Rule (7:7E-8.2), Basic Coastal Policies 1 and 4 look to maintain the State's fisheries and to cause minimum interference to the natural functioning of marine fish and fisheries, including the reproductive and migratory patterns of estuarine and marine dependent species of fish and shellfish." The rationale for these Rules includes the significant economic contribution that the commercial and recreational fisheries provide to New Jersey's economy. Commercial fisheries provide significant employment and millions of persons participate in estuarine and marine recreational fishing in New Jersey, contributing hundreds of millions of dollars to the State's economy.

In a November 23, 2005 letter from Clifford G. Day, Supervisor with the United States Department of the Interior Fish and Wildlife Service, the Service reports that the applicant's environmental report uses data from 1965 to 1977 to describe aquatic biota found in the project area. The age of the data limits its value for assessing current and reasonable foreseeable future impacts. The belief that entrainment and impingement impacts are "small" appears to be inconsistent with statements that numerous unavoidable adverse impacts to the aquatic environment are occurring. Therefore, the Service recommended "expansion of the current biological sampling study to a minimum of three years. A 3-year study would allow the NRC to more adequately determine what effects, if any, the plant's operation is having on aquatic biota."

In a September 7, 2006 letter from John Filippelli, Chief with the Strategic Planning and Multi-Medial Programs Branch of the United States Environmental Protection Agency, EPA commented on the Draft Generic Environmental Impact Statement for License Renewal of Nuclear Plant, Supplement 28 (draft GEIS). Based upon the review of the draft SEIS, the EPA rated the project and document "Environmental Concerns—insufficient information". The most serious concern was how OCNCS would minimize the impacts due to entrainment and impingement of fish and shellfish. A serious shortcoming of the document is that it relies on nearly 20 to 30 year old aquatic resource data to inform the public and decision-makers regarding the facility's impacts for the next 20 years. The SEIS should have evaluated current biological sampling data over a three-year period, as requested by the US Fish and Wildlife Service. They were also concerned with the impacts to the Oyster Creek and Forked River aquatic systems from heat show, and the lack of a consistency determination with the CZM Rules.

In a September 14, 2006 letter from Kenneth Koschek with the NJDEP's Office of Permit Coordination and Environmental Review, it was again brought to the attention of the NRC that the applicant had been conducting entrainment and impingement studies from October 2005 to the present. Without the information of the new ongoing study, the Division is unclear how the NRC could conclude, without reviewing the results of the study, that "there would be no problems associated with the entrainment of phytoplankton and zooplankton during the renewal term beyond those discussed in the GEIS." In addition, the applicant's own GEIS Final Report indicates that NRC staff

cannot arrive at a definitive conclusion concerning the current impact of impingement associated with OCNGS because recent population data are not available. Again, this information was requested by the USFWS.

Based on the lack of definitive information as discussed above, specifically the lack of information from the recommended 3-year study, the Division is not able to make a positive finding the proposed relicensing meets these Rules or applicable Basic Coastal Policies.

The Rule on Endangered or Threatened Wildlife or Plant Species Habitats (N.J.A.C. 7:7E-3.38) and Basic Coastal Policy 1 look to protect endangered or threatened species and their habitats. In the case of the subject facility, there has been concern expressed with regard to its impacts on sea turtles, including Kemp's ridley, green and loggerhead sea turtles.

During review of the original application, the Division requested a copy of the results of the NRC's requested re-initiation of Endangered Species Act Section 7 consultation with NOAA's National Marine Fisheries Service (NMFS), which was not complete at the time. NMFS did, at the time, recommend 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.

Based upon NMFS's Biological Opinion, dated September 22, 2005, NMFS concludes that the continued operation of the OCNGS may adversely affect but is not likely to jeopardize the continued existence of endangered Kemp's ridley, green, or threatened loggerhead sea turtles. NMFS also determined that the proposed action is not likely to adversely affect endangered leatherback or hawksbill sea turtles. Pursuant to N.J.A.C. 7:7E-3.38(b), development of endangered or threatened wildlife or plant species habitat is prohibited unless it can be demonstrated that the habitat would not directly or through secondary impacts be adversely affected. Although no "development" is proposed, the continued operation of OCNGS will result in continued "taking" of endangered and threatened species. Although NMFS's opinion indicated that the continued operation will not likely jeopardize the existence of endangered or threatened turtles, "it may adversely affect" them. Therefore, the Division can not make a positive finding of compliance with the Rule on Endangered or Threatened Wildlife or Plant Species Habitats or the Basic Coastal policy as the applicant is not in compliance with federal requirements.

The Rule on Water Quality (N.J.A.C. 7:7E-8.4) states: "As required by Section 307(f) of the Federal Coastal Zone Management Act (P.L. 92-583), Federal, State and local water quality requirements established under the Clean Water Act (33 U.S.C. 1251) shall be the water resource standards of the coastal management program. These requirements include not only the minimum requirements imposed under the Clean Water Act but also the additional requirements adopted by states, localities, and interstate agencies pursuant to Section 510 of the Clean Water Act and such statutes as the New Jersey Water Pollution Control Act." ... "Department rules related to water pollution

control and applicable throughout the entire coastal zone include, for example, the Surface Water Quality Standards (N.J.A.C. 7:9-4), the rules concerning Wastewater Discharge Requirements (N.J.A.C. 7:9-5), the Ground-Water Quality Standards (N.J.A.C. 7:9-6), and the Regulations Concerning the New Jersey Pollutant Discharge Elimination System (N.J.A.C. 7:14A)." Basic Coastal Policies 1, 4, and 7 also provide the Program with a mandate to ensure water quality requirements are met and improved upon.

While the permittee is in compliance with the existing NJPDES permit issued in 1994 with respect to Section 316(b) measures, EPA issued final regulations for Section 316(b) in 2004 which were recently suspended by EPA. States and permitting authorities have been directed by EPA to issue permits in accordance with Best Professional Judgement. As articulated in the draft NJPDES permit issued on July 19, 2005, the Department determined that closed-cycle cooling is the preferred alternative with respect to minimizing impingement and entrainment effects.

The Division finds the applicant in compliance with this Rule with regard to the 1994 NJPDES permit. Should the applicant submit a future determination request, the applicant will need to demonstrate compliance with any current or reissued NJPDES permit.

Basic Coastal Policy 5 and the Public access to the Waterfront Rule (N.J.A.C. 7:7E-8.11) requires the Program to promote public access to the waterfront through protection and creation of meaningful access points and linear walkways and at least one waterfront park in each waterfront municipality.

Division staff and the applicant have had numerous discussions concerning public access. Although AmerGen has committed to providing public access to the waterfront at the Finninger Farm if the license is renewed, the Division cannot make a positive finding under this Rule, because no final Public Access plans have been submitted. Therefore, the Division cannot make a positive finding under this Rule.

Basic Coastal Policy 7 applicable to this request states: "Maintain and upgrade existing energy facilities, and site additional energy facilities in a manner consistent with the rules of this Coastal Management Program." The Program recognizes the importance of existing energy producing facilities sited in New Jersey's coastal zone to its inhabitants, visitors, and commercial and light industrial facilities. However, this Rule tempers its importance by requiring compliance with New Jersey's Coastal Zone Management Program, including the upgrading of those facilities to meet those Rules. In addition, the Energy Facility Use Rule (N.J.A.C. 7:7E-7.4) discusses siting standard for energy producing facilities.

The applicant failed to discuss upgrades to the plant to ameliorate its impacts since its construction, except for the Ristroph traveling screens. Therefore, the applicant has not provided sufficient information to demonstrate compliance with this Policy with regard to maintaining and upgrading existing energy facilities.

Based on the applicant's submittal, the Program does not object with the applicant's findings that there are no acute effects (electric shock) from "Electromagnetic fields. Therefore, the applicant is in compliance with this Policy with regard to maintaining and upgrading existing energy facilities.

Required Information Under 15 CFR 930.63

This section of the federal regulations requires the State agency, which objects to the applicant's consistency certification to notify the applicant, Federal agency and Director of the objection. In addition, a State agency may assert the objection is based on sufficient information to evaluate the applicant's consistency certification and shall describe how the proposed activity is inconsistent with specific enforceable policies of the management program. The objection may describe alternative measures (if they exist) which, if adopted by the applicant, may permit the proposed activity to be conducted in a manner consistent with the enforceable policies of the management program. The State agency objection may be based upon a determination that the applicant has failed, following a written State agency request, to supply the information required pursuant to Sec. 930.58 or other information necessary for the State agency to determine consistency.

If the State agency objects on the grounds of insufficient information, the objection shall describe the nature of the information requested and the necessity of having such information to determine the consistency of the activity with the management program. The objection may describe alternative measures (if they exist) which, if adopted by the applicant, may permit the proposed activity to be conducted in a manner consistent with the enforceable policies of the management program. If a State agency proposes an alternative(s) in its objection letter, the alternative(s) shall be described with sufficient specificity to allow the applicant to determine whether to, in consultation with the State agency: adopt an alternative; abandon the project; or file an appeal under subpart H.

The Division cannot make a positive consistency determination, as the Division has determined the applicant has failed, following a written State agency request, to supply the information required pursuant to Sec. 930.58 or other information necessary for the State agency to determine consistency. As discussed above,

- The applicant failed to submit an analysis of the data and information to support the applicant's submitted statements that the impacts of operations are small as requested by the Program.
- The applicant was not able to quantify the term "small" using the data and information to be submitted.
- The applicant also did not provide complete information to demonstrate their position on Public Access to the Waterfront. Although they are committed to providing public access, no final public access plan has been submitted.

- The applicant did not provide detailed information discussing the impact of the facility on applicable species that are impinged and/or entrained at the facility, as detailed in the November 23, 2005 letter from the United States Department of the Interior, Fish and Wildlife Service.

MEDIATION PROCESS 15 CFR 930.111 OCRM MEDIATION

The Secretary or other head of a Federal agency, or the Governor or the State agency, may notify the Secretary in writing of the existence of a serious disagreement, and may request that the Secretary seek to mediate the disagreement. A copy of the written request must be sent to the agency with which the requesting agency disagrees, to the Assistant Administrator, and to the Director.

Within 15 days following receipt of a request for mediation the disagreeing agency shall transmit a written response to the Secretary, and to the agency requesting mediation, indicating whether it wishes to participate in the mediation process. If the disagreeing agency declines the offer to enter into mediation efforts, it must indicate the basis for its refusal in its response. Upon receipt of a refusal to participate in mediation efforts, the Secretary shall seek to persuade the disagreeing agency to reconsider its decision and enter into mediation efforts. If the disagreeing agencies do not all agree to participate, the Secretary will cease efforts to provide mediation assistance.

If the parties agree to the mediation process, the Secretary shall appoint a hearing officer who shall schedule a hearing in the local area concerned. The hearing officer shall give the parties at least 30 days notice of the time and place set for the hearing and shall provide timely public notice of the hearing.

At the time public notice is provided, the Federal and State agencies shall provide the public with convenient access to public data and information related to the serious disagreement.

Hearings shall be informal and shall be conducted by the hearing officer with the objective of securing in a timely fashion information related to the disagreement. The Federal and State agencies, as well as other interested parties, may offer information at the hearing subject to the hearing officer's supervision as to the extent and manner of presentation. A party may also provide the hearing officer with written comments. Hearings will be recorded and the hearing officer shall provide transcripts and copies of written information offered at the hearing to the Federal and State agency parties. The public may inspect and copy the transcripts and written information provided to these agencies.

Following the close of the hearing, the hearing officer shall transmit the hearing record to the Secretary. Upon receipt of the hearing record, the Secretary shall schedule a mediation conference to be attended by representatives from the Office of the Secretary,

the disagreeing Federal and State agencies, and any other interested parties whose participation is deemed necessary by the Secretary. The Secretary shall provide the parties at least 10 days notice of the time and place set for the mediation conference.

Secretarial mediation efforts shall last only so long as the Federal and State agencies agree to participate. The Secretary shall confer with the Executive Office of the President, as necessary, during the mediation process.

Mediation shall terminate:

- (a) At any time the Federal and State agencies agree to a resolution of the serious disagreement,
- (b) If one of the agencies withdraws from mediation,
- (c) In the event the agencies fail to reach a resolution of the disagreement within 15 days following Secretarial conference efforts, and the agencies do not agree to extend mediation beyond that period, or
- (d) For other good cause.

The availability of the mediation services provided in this subpart is not intended expressly or implicitly to limit the parties' use of alternate forums to resolve disputes. Specifically, judicial review where otherwise available by law may be sought by any party to a serious disagreement without first having exhausted the mediation process provided for in this subpart.

**APPEAL TO THE SECRETARY FOR REVIEW RELATED TO THE
OBJECTIVES OF THE ACT AND NATIONAL SECURITY INTERESTS §
930.120 Objectives**

This subpart sets forth the procedures by which the Secretary may find that a federal license or permit activity, including those described in detail in an OCS plan, or a federal assistance activity, which a State agency has found to be inconsistent with the enforceable policies of the management program, may be federally approved because the activity is (A) consistent with the objectives or purposes of the Act, or (B) is necessary in the interest of national security.

(A) 930.121 Consistent with the objectives or purposes of the Act.

A federal license or permit activity, or a federal assistance activity, is "consistent with the objectives or purposes of the Act" if it satisfies each of the following three requirements:

- (a) The activity furthers the national interest as articulated in § 302 or § 303 of the Act, in a significant or substantial manner,
- (b) The national interest furthered by the activity outweighs the activity's adverse coastal effects, when those effects are considered separately or cumulatively.

(c) There is no reasonable alternative available which would permit the activity to be conducted in a manner consistent with the enforceable policies of the management program.

The Secretary may consider but is not limited to considering previous appeal decisions, alternatives described in state objection letters and alternatives and other information submitted during the appeal. The Secretary shall not consider an alternative unless the State agency submits a statement, in a brief or other supporting material, to the Secretary that the alternative would permit the activity to be conducted in a manner consistent with the enforceable policies of the management program.

(B) 930.122 Necessary in the interest of national security.

A federal license or permit activity, or a federal assistance activity, is "necessary in the interest of national security" if a national defense or other national security interest would be significantly impaired were the activity not permitted to go forward as proposed. Secretarial review of national security issues shall be aided by information submitted by the Department of Defense or other interested Federal agencies. The views of such agencies, while not binding, shall be given considerable weight by the Secretary. The Secretary will seek information to determine whether the objected-to activity directly supports national defense or other essential national security objectives.

§ 930.125 Notice of appeal and application fee to the Secretary.

§ 930.126 Consistency appeal processing fees.

§ 930.127 Briefs and supporting materials.

§ 930.128 Public notice, comment period, and public hearing.

§ 930.129 Dismissal, remand, stay, and procedural override.

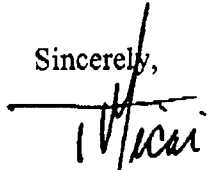
§ 930.130 Closure of the decision record and issuance of decision.

Statement required by 15 CFR 930.63(e)

Pursuant to 15 CFR part 930, subpart H, and within 30 days from receipt of this letter, you may request that the Secretary of Commerce override this objection. In order to grant an override request, the Secretary must find that the activity is consistent with the objectives or purposes of the Coastal Zone Management Act, or is necessary in the interest of national security. A copy of the request and supporting information must be sent to the New Jersey Coastal Zone Management Program and the federal permitting or licensing agency. The Secretary may collect fees from you for administering and processing your request.

Should you have any questions or wish to discuss this matter further, please do not hesitate to contact me at the above address or at 609-984-0288.

Sincerely,



Thomas Micai, Director
Division of Land Use Regulation
Department of Environmental Protection

- c. Andrew Kugler, Chief of Environmental Section, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Agency, One White Flint, 11555 Rockville Pike, Rockville, Maryland 20555
Eldon Hout, Director, OCR-NOAA (N/ORM), 1305 East-West Highway, 11th Floor, Silver Spring, Maryland 20910
David Kennedy, Director, OCRM
Kris Wall, Coastal Management Specialist
David Kaiser, Senior Policy Analyst
Karen Tuccillo, NJDEP, Bureau of Nuclear Engineering
Susan Rosenwinkel, NJDEP, Bureau of Point Source Permitting
Tom McCloy, DEP, Division of Fish and Wildlife
Ruth Ehinger, DEP Coastal Planning

- 6 Letter from Michael Gallagher, Vice President License Renewal Projects AmerGen Energy Company, LLC to Peter C. Colosi, Jr., Assistant Regional Administrator for Habitat Conservation, National Marine Fisheries Service and Frank Gillespie, Director of Division of License Renewal, NRC regarding "Oyster Creek Nuclear Generating Station, Essential Fish Habitat Consultation Regarding License Renewal"

November 2, 2006

Michael F. Gallagher, PE
Vice President
License Renewal Projects

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November 2, 2006

Mr. Peter C. Colosi, Jr.
Assistant Regional Administrator for Habitat Conservation
United States Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Northeast Region
One Blackburn Drive
Gloucester, MA 01930-2298

Mr. Frank Gillespie, Director
Division of License Renewal
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, D.C. 20555-0001

**Subject: Oyster Creek Nuclear Generating Station, Essential Fish Habitat
Consultation Regarding License Renewal**

Dear Messrs. Colosi and Gillespie:

AmerGen Energy Company, LLC (AmerGen) received a copy of the National Marine Fisheries Service (NMFS) letter, dated September 28, 2006, to the U. S. Nuclear Regulatory Commission (NRC) in response to the draft Supplemental Generic Environmental Impact Statement for Oyster Creek Nuclear Generating Station (OCNGS) license renewal. The letter raises some questions about OCNGS, for which we thought it might be helpful to provide our answers to both NMFS and the NRC. Some of the questions relate to the pros and cons of a once-through cooling system – compared to a cooling tower.

Specifically, at one point, the NMFS letter draws from a sentence in the draft NJPDES Fact sheet stating, "closed cycle cooling is the only cooling water intake structure technology available to the facility to reduce entrainment." AmerGen disagrees with that statement and is going to provide additional information explaining why a cooling tower, for this facility, is not a reasonable alternative. In addition, AmerGen will respond to other aspects of the letter including the following statement on page 3: "NMFS is particularly concerned about the OCNGS's cooling system's impact on winter flounder because recruitment of winter flounder has been

below average since 1989; and the 2001 year class appears to be the smallest in 22 years (NEFSC2003)." A cooling tower is not the only way to address this concern.

As noted on the last page of the NMFS letter, Essential Fish Habitat (EFH) consultation could begin again when new information becomes available. Our forthcoming letter will provide information important to the EFH considerations specified by NMFS in its September 28, 2006 letter. We plan on providing our response to the NMFS comments, with a copy to the NRC, by December 15, 2006. We also would welcome an opportunity to meet in person with the NMFS to address the concerns expressed in the letter to the NRC, and propose such a meeting in your Gloucester offices in November.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "M. P. Gallagher".

Michael P. Gallagher

cc: Dr. M. Masnik

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Sincerely yours,



Michael P. Gallagher

cc: Dr. M. Masnik

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November 2, 2006

Mr. Peter C. Colosi, Jr.
Assistant Regional Administrator for Habitat Conservation
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National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Northeast Region
One Blackburn Drive
Gloucester, MA 01930-2298

Mr. Frank Gillespie, Director
Division of License Renewal
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, D.C. 20555-0001

**Subject: Oyster Creek Nuclear Generating Station, Essential Fish Habitat
Consultation Regarding License Renewal**

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7 Final Report, AmerGen: Determination Of Cooling
Tower Availability For Oyster Creek Generating
Station Forked River, New Jersey, prepared by URS
Corporation

March 2, 2006

**DETERMINATION OF COOLING TOWER
AVAILABILITY**

for

**Oyster Creek Generating Station
Forked River, New Jersey**

FINAL REPORT

Prepared by:

URS

**URS Corporation
335 Commerce Drive
Suite 300
Ft. Washington, PA 19034**

March 2, 2006



March 2, 2006

Exelon Nuclear
200 Exelon Way
Kennett Square, PA 19348

Attn: Scott Sklenar

Re: Final Report - Determination of Cooling Tower Availability
Oyster Creek Generating Station
Job No. 19996798

Dear Mr. Sklenar:

URS Corporation is pleased to provide Exelon Nuclear with three (3) bound copies of *Determination of Cooling Tower Availability - Final Report* for the Oyster Creek Generating Station (Oyster Creek). Based on research and data analysis, we have determined that cooling towers at Oyster Creek are unavailable under the United States Environmental Protection Agency's Phase II Rule regulating compliance with Section 316(b) of the Clean Water Act.

If you should have any questions, please do not hesitate to contact this office at 215-367-2500.

Very truly yours:

URS CORPORATION

Richard N. Sands, P.E.
Principal

URS Corporation
335 Commerce Drive, Suite 300
Fort Washington, PA 19034-2623
Tel: 215-367-2500
Fax: 215-367-1000

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Executive Summary

Exelon Corporation, through its company AmerGen, retained URS Corporation (URS) to evaluate and document the availability of cooling tower technologies as an appropriate technology at the Oyster Creek Generating Station (OCGS). Such an analysis is appropriate under Section 316(b) of the Clean Water Act and the United States Environmental Protection Agency's Phase II Rule regulating compliance with Section 316(b). This report was written with the intended audience being the permit writer and is not intended as a detailed design engineering report. URS relied upon previous cooling tower studies, drawings, and design data to develop a conceptual model for the construction and operation of cooling towers at OCGS. The conceptual model was updated to account for new technologies, site conditions, environmental impacts, and regulatory requirements. The conceptual model incorporates the most efficient and cost-effective technologies currently available to meet the requirements of the Rule, minimize environmental effects that are expected to arise from the use of cooling towers, and meet the energy demands of New Jersey and the region.

The conceptual model is a recirculating closed-cycle cooling system that consists of two multi-cell mechanical draft hybrid cooling towers. A hybrid cooling system, which is a combination of wet evaporative cooling and dry cooling, was chosen because of the need for both consumptive water use reduction and plume abatement at this particular site. It is paramount that the newly implemented security systems at OCGS not be hindered by either an elevated plume or ground fog. A hybrid system can effectively eliminate a visible plume and ground fog at a lower cost and using less land area than air-cooled condensers. The reduction or elimination of a visible plume is, by necessity, the driving factor in the design of any cooling system at OCGS.

Other plant design and operational parameters that constrained the conceptual model are: nominal unit output; condenser heat load; cooling water flow; temperature increase across the condenser; ambient wet bulb temperature; cooling tower temperature range; approach temperature; drift; number, size and type of pumps; wind direction; noise; seismic, freeze, corrosion, and lightning protection; method of cleaning the cooling tower basin; and make-up water source.

The conversion of the existing once-through cooling system to a closed-cycle system would include the construction of two multi-cell mechanical hybrid fiberglass cooling towers arranged in two rows, two new cooling tower basins, two new cooling water pump houses, two new 12-foot diameter pipelines to convey circulating water to and from the cooling towers, and interconnections between the existing cooling water supply and discharge tunnels with the new circulating water conduits. OCGS' newly implemented security measures also would need to be modified.

After substantial completion of the new cooling towers and circulating water system, a minimum outage of at least 150 days would be required to interconnect the new system with the existing circulating water distribution system of the once-through cooling system. Once the changeover is completed and the system is fully functional, URS estimates OCGS would have an annual net average reduction of 32.5 MW of electric power.

Regulatory and Environmental Issues

The design basis for the conceptual model sought to minimize environmental impacts. AmerGen would do whatever it can within reason to meet applicable environmental regulatory requirements, however, numerous conflicts were identified. These are:

- New Jersey Department of Environmental Protection (NJDEP) Coastal Area Facility Review Act (CAFRA) Permit - CAFRA imposes an impervious surface cover limit on the site. The construction of the conceptual model may not meet the CAFRA impervious surface limit. AmerGen would do whatever is required to meet applicable regulations, but because of CAFRA, the total site area may be insufficient to accommodate the additional impervious area that would be necessary for the towers to be built.

Executive Summary

- NJDEP/USEPA Prevention of Significant Deterioration (PSD) Preconstruction Permit – Despite the fact that the selected conceptual model incorporates the most efficient drift eliminator technology available, the PSD ambient air quality particulate matter increments, the National Ambient Air Quality Standards (NAAQS), and New Jersey Ambient Air Quality Standards (NJAAQS) may not be met. A screening analysis of the impact of PM₁₀ indicates that PSD increments, NAAQS, and NJAAQS would not be achieved. AmerGen would do whatever it can to meet PSD, NAAQS, and NJAAQS requirements. However, if the air quality requirements are not met, cooling towers cannot be built and operated.
- PSD requirements for Class I Areas – More stringent Class I area PSD requirements would need to be met at the Brigantine National Wildlife Refuge (approximately 25 miles south of OCGS) than in the Class II area that surrounds the plant. OCGS' air emissions would need to be reviewed and approved by the National Park Service.
- Based on average emissions rates at existing fossil-fuel fired electric generating facilities in New Jersey, increases in air emissions to replace the lost generation at OCGS would be:
 - CO₂: 218,308 tons per year
 - SO₂: 501 tons per year
 - NO_x: 356 tons per year
 - CO: 1134 tons per year
 - PM₁₀: 807 tons per year
- Increases in air emissions at fossil-fuel fired plants that would be needed to replace the lost generation at OCGS would range from 478 to 3140 tons per year of sulfur dioxide and from 300 to 1495 tons per year of nitrogen oxides.
- Increases in cooling water usage at fossil-fuel fired plants replacing the lost generation at OCGS would be 32.5 million gallons per day.
- Lacey Township Zoning – The current power station is a nonconforming use and its expansion would require variances for land use and fences. Visual, noise, and traffic impacts may prevent this project from receiving these variances. AmerGen would do whatever it can to acquire township variances. However, if the required variances are not obtained, cooling towers cannot be built and operated.
- 316(b) Performance Standards
 - There would be a very small improvement in reducing the mortality of impingeable-size organisms. The National Performance Standard for impingement mortality (80 to 95 percent reduction) of impingeable-size organisms may not be achieved with the selected conceptual model.
 - Flow reduction with the selected conceptual model would be significantly less than what would be expected from a closed-cycle cooling system that uses fresh water.

Financial Analysis

The United States Environmental Protection Agency's (USEPA) estimated 316(b) compliance costs at OCGS are \$11.2 million per year (\$4 million for the cooling water intake structure and \$7.2 million for the dilution water intake) annualized over a 10-year period, or a net present value (NPV) cost of \$79 million.

The estimated NPV capital and operating costs of the selected conceptual model for cooling towers at OCGS are between \$705 million and \$801 million over the same 10-year period.¹

The factors considered in the cost estimates of this study include construction (materials and labor), lost capacity/energy revenue during construction, environmental permitting, real estate taxes, cost of modifying OCGS' Master Plan, added security and plant operation personnel, added insurance, maintenance, chemicals, and a contingency factor for unforeseen events. These costs do not include allowance for funds used during construction (AFUDC or the estimated debt and equity costs of capital funds necessary to finance construction), allowance for startup, allowance for spare parts, working capital or inventory capital, allowance for client engineering and management, assessment of the costs of replacement power during construction, royalties, Exelon's internal labor costs, outside legal counsel, and additional construction-period security personnel.

Under the final Phase II USEPA regulation, the applicable standard for assessing the costs of compliance is whether the cost is "significantly greater" than USEPA costs. The costs to comply by installing a best technology available cooling tower system at OCGS are significantly greater than USEPA costs as well as wholly disproportionate.

Conclusions

Considering the regulatory issues that must be resolved prior to construction, the complexities of construction, and the potential disruptions in vital safety-related systems at a nuclear plant, the time to implement a cooling tower alternative at OCGS would be lengthy. AmerGen would make every effort to expedite the regulatory process. However, AmerGen has no control over the politic process and the politics that could affect approval. It may not be possible to receive the air quality permits and local variances needed to build the cooling towers.

URS concludes that the option to construct a closed-cycle recirculating cooling water system is not available at OCGS under the Phase II Rule because the system will be lengthy and difficult (or even not possible) to permit, and the estimated cost is significantly greater than those considered by USEPA. OCGS achieves, or nearly achieves, the national performance standards with currently implemented measures. Based on the conclusion that cooling towers are unavailable at OCGS, the facility should optimize the existing system to achieve the greatest efficacy as practicable by implementing operational controls/flow reduction at the dilution pumps and performing habitat restoration.

¹ These figures are a more accurate estimate of the cost to install cooling towers at OCGS than the estimated costs provided in the OCGS Proposal for Information Collection (PIC) (June 2005). The PIC reported (in 2002 dollars) the results of a previous preliminary evaluation. The PIC did not conduct a detailed analysis such as the one conducted for this report.

Section 316(b) of the Clean Water Act directs the United States Environmental Protection Agency (USEPA) to ensure that cooling water intake structures reflect the best technology available (BTA) for minimizing adverse environmental impacts to aquatic organisms caused by entrainment and impingement. The Phase II Rule (the Rule) implementing Section 316(b) at Oyster Creek Generating Station (OCGS), a nuclear-fueled base-load 641-MW boiling water reactor located in Lacey Township, Ocean County, New Jersey, establishes national technology-based performance standards for impingement mortality and entrainment.

The USEPA determined that a closed-cycle, recirculating cooling system (e.g. cooling towers or ponds) *"would always achieve the performance standards and therefore, facilities that reduce their flow commensurate with closed-cycle, recirculating cooling systems are deemed to have met performance standards"* (69FR41601, col. 3). At the same time, USEPA also *"determined that this technology is not economically practicable for many existing Phase II facilities"* (69FR41601, col. 3).

AmerGen retained URS Corporation (URS) to evaluate and document whether closed-cycle, recirculating cooling system technologies are available at OCGS in accordance with the Rule. This report was written with the intended audience being the permit writer and is not intended as a detailed design engineering report. This report is an Appendix to the Comprehensive Demonstration Study (CDS) undertaken in compliance with the Rule. The initial component of the CDS, the Proposal for Information Collection, was previously submitted to the New Jersey Department of Environmental Protection (NJDEP). The information provided in this report will be used in the CDS technology evaluation. It provides the basis of our determination that cooling towers are unavailable at OCGS and, therefore, other technologies and measures need to be addressed in the CDS.

URS determined, at the outset of this investigation, that a cooling pond system could not be constructed at OCGS. A cooling pond with an effective cooling area of 1,500 acres would be needed for OCGS. This land area is not available at the site. Therefore, this report only focuses on cooling tower technologies.

1.1 METHODOLOGY

URS relied upon previous studies to initially develop a conceptual model for the construction and operation of a closed-cycle circulating cooling system at OCGS. These studies included EBASCO's *Update of Alternate Cooling Water System Study for Oyster Creek Nuclear Generating Station (1992)*, an *update of a 1977 EBASCO report*, and Stone & Webster's *Closed-Cycle Cooling (1999)*, a report prepared for the Salem Generating Station on Delaware Bay. Based on these studies, and available drawings and design data for OCGS acquired through site visits to the station and meeting with plant personnel, URS formulated a design basis for a preliminary conceptual model.

The design development progressed through these steps:

- Select cooling tower type and size
- Determine cooling tower location and cooling water system (CWS) configuration
- Determine CWS tie-in logistics and necessary modifications to the circulating water tunnels and structural components, with minimum impact to plant operation
- Select and size the circulating water pumps and piping systems
- Select the route the new water pipelines and relocate existing services in affected areas
- Evaluate electrical loads and establish power requirements
- Assess security issues

- Evaluate environmental impacts and regulatory requirements
- Estimate construction and operating costs

The preliminary conceptual model was modified to account for new technologies, site conditions, environmental impacts, regulatory requirements, and costs. The selected conceptual model incorporates the most efficient and cost-effective technologies currently available to meet the requirements of the Rule, minimize attendant environmental effects not currently present, and meet the energy demands of New Jersey and the region.

1.2 REPORT ORGANIZATION

This report describes the decision factors applied in the process of selecting a final conceptual model for OCGS. Report chapters address these topics:

- Section 2.0 – Describes the existing plant cooling system configuration (once-through open cycle) and discusses cooling tower technologies (recirculating closed-cycle).
- Section 3.0 – Presents the design choices and the rationale for design selections.
- Section 4.0 – Describes the selected conceptual model and impacts to the plant, including costs.
- Section 5.0 – Discusses Federal, state, and local regulatory requirements
- Section 6.0 – Determines cooling tower unavailability
- Section 7.0 – Lists conclusions
- Section 8.0 – Lists references cited in the report

SECTION TWO Existing Cooling Water System at OCGS and Cooling Tower Systems

This chapter briefly describes OCGS' existing once-through cooling water system and then describes various cooling systems that operate with cooling tower technologies.

2.1 EXISTING ONCE-THROUGH OPEN-CYCLE COOLING SYSTEM AT OCGS

OCGS uses a once-through open-cycle cooling system to remove heat and condense the Main Turbine exhaust steam in the station's three main condensers. Once-through open-cycle cooling systems of this type pump a large volume of cooling water directly from a relative large body of water through a steam condenser to remove heat and condense the steam exhausted from the Main Turbine. The warmed cooling water is then discharged back to the waterbody, and the condensed steam is pumped to the reactor vessel to continue the steam cycle. Virtually the entire heat load from condensing the steam is transferred to the source waterbody with very little heat immediately dissipated to the atmosphere.

The system at OCGS consists of a circulating water intake structure with Ristroph screens and a fish handling system, and a separate dilution/bypass water intake structure, which are supplied by an intake canal created by modifying portions of the South Branch of the Forked River. OCGS is located adjacent to U.S. Route 9, about two miles west of Barnegat Bay. The source waterbody for the intake canal is Barnegat Bay and the intake and dilution structures are approximately 0.25-mile west of U.S. Route 9.

The circulating water system is designed to supply a continuous flow of cooling water to remove waste heat. The system also provides an alternate or supplementary supply of cooling water to the turbine building cooling water heat exchangers. The dilution/bypass water is used to temper the thermal discharge from the circulating water system to minimize the resultant increase in water temperature in the discharge canal and ultimately in Barnegat Bay. Cooling water from the condensers is mixed with the outflow of ambient temperature water from the dilution pumps prior to being returned to Barnegat Bay via a discharge canal created by modifying portions of Oyster Creek.

In addition, the circulating water and dilution/bypass systems is used when required to ensure that the minimum required discharge canal flow is maintained during the release of liquid radioactive effluents in accordance with the station's operating license from the United States Nuclear Regulatory Commission (NRC).

The facility uses a General Electric Boiling Water Nuclear Reactor with a General Electric Steam Turbine consisting of one dual-flow high-pressure steam turbine and three dual-flow low-pressure steam turbines. Each of the low-pressure turbines is supplied with a non-contact shell-and-tube condenser that is used as a heat sink for the exhaust steam from the Steam Turbine.

The hot exhaust steam from the low-pressure turbines is condensed as it flows past the outside surfaces of thousands of cold tubes in the condenser. The tubes contain cold circulating water that removes heat and condenses the steam, creating a vacuum in the condenser. The exhaust steam needs to be condensed so it can be returned to the Reactor via pumps, where it is boiled to supply steam to the Main Turbine to repeat the cycle. For steam turbines, the lower the operating exhaust vacuum pressure (back pressure) obtained from the condenser system, the greater the power produced.

Circulation water is provided to the condenser by four large circulating water pumps. Each pump's capacity is 115,000 gallons per minute (gpm), and with all four pumps in operation approximately 460,000 gpm of circulating water passes through the condenser. The temperature of the circulating water exiting the condenser is approximately 20°F warmer than when it entered the condenser, and it is mixed with dilution water as it is directed into the discharge canal. The dilution water, which is at ambient temperature, is directly pumped from the intake canal to the discharge canal by two of three 260,000 gpm capacity pumps for a total flow rate of 520,000 gpm. The total combined intake and discharge flow rate is approximately 980,000 gpm. At times during the coldest months of the year, only three of the four circulating water pumps are required.

2.2 COOLING TOWER SYSTEMS

The heat that is removed from the exhaust of a low-pressure steam turbine is normally transferred to a water heat sink or to an air heat sink using one of these three processes:

1. Wet Evaporative Cooling
 - Wet evaporative cooling system in a closed-cycle configuration
 - Open-cycle cooling system as presently used at OCGS
2. Dry Cooling
3. Hybrid Cooling

The remainder of this section includes a brief description of low-pressure steam turbine condensing systems that use these three processes.

2.2.1 Wet Evaporative Cooling

A wet evaporative cooling system is a circulating water system where cooling water is pumped in a closed-cycle from a cooling tower basin directly to the steam condenser and back to the cooling tower where excess heat is dissipated to the atmosphere (Figure 1). The efficiency of the heat transfer processes is enhanced in the tower by the addition of spray nozzles, splash bars, or film fill. The final outflow water temperature in the basin depends on several factors, including the relative humidity of the ambient air temperature, the station's heat load, the cooling efficiency and the design of the cooling tower.

Wet evaporative cooling towers dissipate heat through evaporation. The evaporated water is replaced by adding makeup water to the cooling water system. Makeup water compensates both evaporation losses and the blowdown from the cooling system. Blowdown is used to manage the chemistry of the circulating water.

There are two generic types of wet evaporative cooling towers: natural draft and mechanical draft.

- Natural draft towers operate on a principal of buoyancy. The heated less dense air will rise through the tower stack and disperse into the cooler denser atmosphere. These towers have a distinctive hyperbolic chimney design.
- Mechanical draft towers use fans to force air through the tower. The fans can be at the base of the tower to force air upward against water cascading down (forced draft, countercurrent flow) or, at the top of the tower to draw air up against water cascading down (induced mechanical draft, countercurrent flow). Cross-flow towers have fans that draw air through the sides of the tower rather than its base.

2.2.2 Dry Cooling

A dry cooling system uses air to transfer heat directly from the condenser outlet to the atmosphere (Figure 2). Dry cooling systems may be direct or indirect. This type of cooling system is used primarily in arid areas where:

- Cooling water is not available;
- Cooling water is extremely limited and conservation is critical; or
- Unacceptable aquatic impacts may occur.

A direct dry cooling system uses an air-cooled steam condenser where the turbine exhaust steam is piped directly through bundles of finned tubes. The tubes are arranged in the form of an A-frame or delta to

SECTION TWO Existing Cooling Water System at OCGS and Cooling Tower Systems

reduce the required land area. Condensed water flows downward in the tubes and is collected at the bottom of the bundles and forwarded to the steam generator as feedwater supply.

In an indirect dry cooling system (Heller system), steam from the steam-turbine generator is first condensed in either a surface or direct contact jet condenser using cooled water supplied from a dry cooling tower. Warmed water from the condenser is pumped in a closed loop circuit back to the dry cooling tower. A percentage of the cooling water is supplied as feedwater supply into the steam turbine steam.

2.2.3 Hybrid Cooling

A hybrid cooling system is a combination of a wet evaporative cooling system and a dry cooling system (Figure 3). This system is commonly used in applications that require plume abatement, or some reduction in consumptive water use. Hybrid systems can be configured in parallel or in series.

In the series configuration, all of the exhaust steam from the turbine is condensed in a conventional water-cooled surface condenser. This system is essentially a wet evaporative cooling system. There is sufficient dry cooling surface area so that the outlet state point from the combined effluents of the wet and dry sections falls below air saturation point. As a consequence, a visible plume does not form.

In the parallel configuration, the exhaust steam is condensed in both a surface condenser and in a direct air-cooled condenser.

Three potential cooling tower systems were described in Chapter 2.0 (wet evaporative cooling, dry cooling, and hybrid cooling). This chapter discusses the rationale for selecting specific features that became components of the conceptual model for hypothetical cooling towers at OCGS. Section 3.1 provides the design basis. The rationale behind the selection of this design basis is discussed in detail in Section 3.2. Finally, Section 3.3 presents specifications for the design parameters incorporated into the conceptual model.

3.1 DESIGN BASIS

The operating scenario considered in this study is a full-capacity closed-cycle cooling tower in full-time (24-hour) operation. The major plant design and operational parameters constraining the conceptual model are:

- Nominal unit output = 641 megawatts of electrical output (Mwe)
- Condenser heat load = 4.47 billion British thermal units per hour (or 4470 MMBTU/hr)
- Circulating water system flow = 460,000 gallons per minute (gpm)
- Ambient wet bulb temperature = 77 degrees Fahrenheit (°F)
- Dry bulb temperature = 87°F
- Cooling tower range = 20°F
- Approach temperature = 9°F
- Drift - 0.0005% of circulating water flow
- Number of cooling towers - two cooling towers with 18 cells each
- Tower type - mechanical, hybrid, fiberglass construction
- Number of pump houses = two
- Number of circulating water pumps = four
 - Four variable speed pumps in one pump house (rated at 115,000 gpm each)
- Number of cooling tower lift pumps = four
 - Four variable speed pumps in one pump house (rated at 115,000 gpm each)
- Number of makeup pumps = two (plus one spare)
- Three constant speed pumps rated at 10,000 gpm each
- One dilution pump
- Cooling tower location – north of station
- Wind direction coincident with high wet bulb temperature = 250° (west southwest) at 11 miles per hour
- Noise requirements – as necessary to comply with township ordinances
- Features for freeze protection –
 - Air-side (freeze protection is by fan shut down)
 - Water-side (freeze protection is by tower bypass)
- Fan speed – single speed fans
- Lightning protection

- Fire protection to meet Nuclear Electric Insurers Limited property loss control standards
- Lighting
- Stairway and hand rails
- Method of cleaning the cooling tower basin
 - Basin sump pit with clean-out drain and overflow or sump pump
- Method of makeup –
 - Makeup will be from the intake canal through the existing intake structure and circulating water pumps
- Seismic requirements - in accordance with Building Officials and Code Administrators building codes

3.2 DESIGN RATIONALE

The 1992 EBASCO report evaluated two cooling tower designs at OCGS: natural draft cooling towers and round mechanical draft cooling towers. URS initially contacted two major cooling tower vendors (GEA and SPX Cooling Technologies [Marley]) and asked about the status of the types of towers recommended in the EBASCO study, as well as a "generic" linear mechanical draft evaporative cooling tower. URS considered other cooling tower alternatives after discussions with plant personnel regarding their profound concern regarding security requirements imposed at the nuclear plant and the need to eliminate a visual plume and maintain clear lines-of-sight. The reduction or elimination of visible plumes are, by necessity, a driving factor in the design of the conceptual model. Thus, in total, six types of cooling towers were investigated. These are:

1. Natural draft
2. Linear mechanical draft
3. Round mechanical draft
4. Dry air-cooled
5. Linear hybrid
6. Round hybrid

Table 1 presents a comparison of the design parameters of five of the six tower types. The remainder of this section provides a summary of the major design issues.

3.2.1 Cooling Tower Options

This subsection contains the rationale behind the selection of cooling tower type.

3.2.1.1 Natural Draft Cooling Tower

Both vendors stated that they could design and provide engineering assistance for a natural draft tower from their European subsidiaries. The vendors explained that this type of tower, although seen at a number of nuclear and large fossil power plants, have not been constructed in the United States for over twenty years. They indicated that the expertise for engineering and construction of these towers exists in Europe but not in the United States. One vendor suggested that the concrete pouring slip forms that used to exist in the United States may no longer be available and expressed doubt regarding the ability of a construction company to provide experienced project managers to undertake the construction of the tower shells.

URS asked the vendors to provide the relative costs of different tower designs with respect to a base cost of a rectilinear forced draft evaporative cooling tower. One of the vendors suggested that the installed cost is approximately 2½ times the base cost of a linear mechanical draft evaporative cooling tower. The second vendor stated they would not even venture to provide a cost or the man-hour effort required to construct a natural draft cooling tower.

The EBASCO report provides a visual assessment of a single 400-foot base diameter by 600-foot tall natural draft cooling tower at the OCGS site. Appendix A reproduces the EBASCO visual analysis. As shown, this type of cooling tower would dominate the local landscape, and would be visible perhaps to distances of up to three miles. While the potential for ground fogging would be eliminated because of the height of the tower, there is the potential for a longer range of salt drift from the plume because the water being evaporated has concentrated saline water.

URS eliminated the natural draft cooling tower from consideration mainly because of the significantly higher price, problems with constructability of this type of tower in the United States, construction issues related to the ability of the soil to support the weight of a structure of this magnitude, permitting problems (local zoning), and public perception from its dramatic visual impact (see Appendix A).

3.2.1.2 Linear Mechanical Draft Evaporative Cooling Tower

Rectangular linear mechanical draft cooling towers are made of individual tower cells arranged in-line or back-to-back. The in-line arrangement is approximately half as wide and twice as long as the back-to-back arrangement and has the advantage that air can be drawn in both sides of the cell. However, the plume from a rectangular linear mechanical draft cooling tower is more vulnerable to ground fogging and potentially ground icing at certain atmospheric conditions.

A rectangular linear mechanical draft cooling system was the primary unit under consideration because it is the most common closed cooling system used for power plant heat rejection and, therefore, has the lowest base price compared to the other types of towers. URS sent design criteria to the vendors to supply budgetary pricing and operating parameters. Their pricing of a rectangular linear mechanical draft cooling tower at OCGS was used to calculate the base design cost that is shown in Table 1.

3.2.1.3 Round Mechanical Draft Evaporative Cooling Tower

A round mechanical draft tower presents a concentrated center plume that provides buoyancy to elevate the plume higher than a linear mechanical draft evaporative tower (although not as high as a natural draft tower). The elevated plume reduces ground fog and icing better than the linear tower, but does not eliminate either the fog or the ice.

Only one of the two vendors that URS contacted is capable of providing a round mechanical draft tower. They estimated that it has an installed pricing of approximately two times the cost of a linear mechanical draft evaporative cooling tower. The second vendor indicated that with the round mechanical draft tower the plume is entrained back into the cooling section reducing the effectiveness of the tower.

URS eliminated the round mechanical draft cooling tower because of ground fogging/icing and cost.

3.2.1.4 Round Mechanical Draft Wet-Dry Hybrid Cooling Tower

The same vendor who stated that they could provide the round mechanical draft evaporative cooling tower was also contacted regarding a round hybrid tower design. Although a round hybrid tower was supplied to a European utility, it was very expensive and is not currently being offered anywhere. Thus, URS also eliminated the round mechanical draft wet-dry hybrid cooling tower.

3.2.1.5 Dry Cooling Tower with Air-Cooled Condenser

While a tower with a dry air-cooled condenser system will eliminate a visible vapor plume (fog) this type of tower covers an extremely large land area and would require a total reconfiguration of OCGS' turbine exhaust system including the complete removal and redesign of the three shell-and-tube Main Condensers. There is no known conversion of a large unit, such as OCGS, from an open- or closed-cycle cooling system to an air-cooled condenser system.

The cost of the air-cooled condenser alone, not including the redesign of the condensers and running extremely large vacuum pipes to each of the three Low-Pressure Turbines, is approximately six times the base tower cost (Table 1). This type of tower also has the largest sound signature (i.e., is the loudest design) of all the options that URS considered.

URS eliminated a dry air-cooled condenser system because of the acreage required, the technical obstacles of the conversion, high noise levels, and the extremely high price.

3.2.1.6 Linear Mechanical Draft Wet-Dry Hybrid Cooling Tower

A hybrid design can control or eliminate ground fog. The wet evaporative section of the hybrid tower is essentially the same design as the "base" mechanical draft evaporative cooling tower. A dry section is added to the top of the main tower. During seasons when fogging is least likely to occur (spring, summer, and fall) the tower operates as a conventional mechanical draft evaporative cooling tower. During time periods when fogging is likely to occur (winter) the tower is operated in a combined mode with the dry section adding heat to the exhaust plume to dissipate the visible fog.

The pricing of the linear hybrid tower ranges from two to three times the cost of a linear mechanical draft evaporative cooling tower. Both vendors provided URS with budgetary costs and performance information.

A hybrid tower became a prime candidate because of its effectiveness in reducing a visible plume.

3.2.2 Selection of Cooling Tower Type

Table 1 summarizes the items that URS considered in selecting the appropriate cooling tower type at OCGS. As previously discussed, it is paramount that the newly implemented security systems at OCGS not be hindered by either an elevated plume or ground fog. The reduction or elimination of a visible plume is, by necessity, the main driving factor in the design of the conceptual model.

Although dry air-cooled towers would not produce a visible plume, this type of cooling system was eliminated because of the large land area required, technical obstacles of the conversion, and the extremely high price (the most expensive of all of the systems reviewed). Natural draft towers were also eliminated because of the great visual impacts of its massive 600-foot high tower (the tallest of all the systems reviewed), public perceptions and zoning, the need for an extensive foundation with associated additional costs, potential delays, overall cost, and the added fact that this type of tower has not been built in the United States in over two decades. Consequently, a mechanical draft system was pursued.

Although mechanical draft towers eliminate some of the problems of natural draft towers, visible fog plumes are inherent in each design. The round mechanical towers also have recirculation problems. Thus, it was realized that the best approach was to combine the best properties of a linear mechanical draft system (e.g., low cost, reduced land area, reduced tower height) with the advantage of a dry air-cooled system (fog abatement). These goals can be achieved with a hybrid system.

A hybrid system can effectively eliminate a visible plume and ground fog at a lower cost and using less land area than air-cooled condensers. A hybrid configuration was not widely available at the time of the

EBASCO report. The hybrid system is a more modern overall cooling tower system technology that can be optimized to meet the special needs of OCGS, that is, to reduce both consumptive water use and limit visible plumes.

For these reasons, URS chose a hybrid system as the optimal cooling tower type for OCGS. The next step was to develop the design specifics. The following sections discuss how these were developed and incorporated into the conceptual model.

3.3 DESIGN PARAMETERS

This section presents the specifications for the design parameters that URS incorporated into the conceptual model.

3.3.1 Size

The parameters that determine cooling tower size consist of range, approach, and circulating water flow rate. The range is the difference between the outlet water temperature and inlet water temperature. The approach is the difference between the outlet water temperature and the design wet bulb temperature. The circulating water flow is the flow through the cooling tower. The existing equipment at OCGS sets the range and circulating water flow rate. These factors are discussed further in Section 3.3.3.

3.3.2 Material

Mechanical draft towers typically are constructed of wood or fiberglass material. A wooden cooling tower is prone to deterioration if it is exposed to dry/wet cycles from part-time operation. Wood towers are also subject to leaching of heavy metal chemicals in the wood preservative. Due to the range of circulating water flow rates caused by the number of cells in operation, fiberglass is the preferred construction material. Fiberglass towers allow cells to be out of service and avoid the problem of wood deterioration.

3.3.3 Thermal Design

The two thermal design conditions for the hybrid system are:

- evaporative only mode (summer)
- combined mode (winter)

URS chose summer design ambient conditions that, according to the PJM summer capability rules, *"reflect the ... median of temperature and humidity conditions at the time of the PJM summer peak load ... for the past 15 years."* ("PJM Manual for Rule and Procedures for Determination of Generating Capability," Manual M-21, Rev 01 Aug 23, 2000; Section 1.2.2] For the winter design conditions, URS used similar criteria, but at a 60 percent humidity that would cause a fog plume to form.

There are two other factors that affect the overall size and plant performance of an evaporative cooling tower system: the circulating water range and the cooling tower approach temperatures.

3.3.3.1 Circulating Water Range

The circulating water range is the temperature difference between the cooler circulating water that enters the condenser and the warmer outlet water. The higher the circulating water flow, the smaller the temperature range that is required for constant heat dissipation from the condenser. The size of the cooling tower varies inversely with the temperature range. However, higher pumping power is required to deliver the flow through the closed circuit.

The velocity of the water that flows through the condenser tubes sets the design flow rate through the condenser. The optimum velocity of water within the condenser tubes is between 5 and 10 feet per second (fps). Upon review of the existing condenser data sheets, URS found that the design conditions included a water velocity of approximately 7 fps with a temperature range of slightly less than 20°F.

Based on this design information and the standard requirements for an evaporative cooling tower, URS determined that the existing condenser design is suitable for evaporative cooling tower duty from a thermodynamic perspective. Because the number and diameter of the tubes would not be changed, and the original design velocity is within the optimal flow speed at (7 fps), URS set the circulating water flow rate to be essentially the same as OCGS' existing open-cycle cooling system (460,000 gpm).

3.3.3.2 Approach Temperature

The approach temperature is the difference between the ambient wet bulb temperature and the temperature of the cooled water that is conveyed from the cooling tower to the condenser. The ambient wet bulb temperature is the dew point of the air, or the temperature at which air is saturated with water vapor that condenses to produce water (dew). Thus, the ambient wet bulb temperature represents the coldest temperature to which water can be cooled by passing it through the air. The design wet bulb temperature of a tower is a function of the climate at the tower location. For OCGS, the design wet bulb temperature at the 0.4 percent coincidental occurrence is 77°F with an 87°F dry bulb temperature.

The physical size of the cooling tower is inversely proportional to the approach temperature. As the approach temperature is reduced, the cooling tower size required increases exponentially, becoming asymptotic to an approach temperature value of 0°F. The cooling water temperature at the inlet to the condenser at the summer design point is the sum of the ambient wet bulb and the approach temperatures.

When the temperature of the inlet water to the condenser increases, power generation is reduced because the exhaust pressure of the steam turbines increases. To generate as much electricity as possible, especially in the summer, the backpressure needs to be as low as possible. A lower backpressure generally can be achieved when the temperature of the inlet water to the condenser is lower.

Based on 15 years of plant history, the existing open-cycle intake water temperature for the days of the PJM summer peak load averages 83.7°F. To obtain a similar inlet circulating water temperature from an evaporative cooling tower, the approach temperature for a design wet bulb temperature of 77°F needs to be less than 7°F. An approach temperature of under 7°F requires an extremely large cooling tower. URS chose a generally accepted, though robust, approach temperature of 9°F in order to maximize power production with a low inlet water temperature while, at the same time, requiring a reasonably sized cooling tower. At the design wet bulb and approach temperatures, the inlet water temperature to the condenser during the PJM peak period is 86.1°F.

The recirculation of the warm moist air from the exhaust of the cooling tower into the air intake reduces the ability of the tower to cool. The potential of air recirculation is reduced with a hybrid tower compared to the base tower. The exit of the exhaust diffuser of the hybrid cooling tower is 18-feet higher than with the mechanical draft evaporative cooling tower.

3.3.4 Water Balance

OCGS' current open-cycle cooling system has virtually no consumptive water use. With the addition of a closed cooling system, the water flow through the intake/discharge system is reduced. However, there is consumptive use of water. As water is evaporated in the cooling tower, the amount of dissolved and suspended solids and minerals in the water become concentrated. If left uncontrolled, these chemicals will inhibit the operation and efficiency of the cooling tower with a buildup of slime and scale.

To control scale and slime build-up, a certain percentage of water is discharged (as "blowdown") from the cooling tower basin into the discharge canal. Makeup water that is pumped to the cooling tower

replenishes the water evaporated and the blowdown water. The ratio of total dissolved solids (TDS) in the recirculating water to the TDS in the makeup water is termed "the cycles of concentration". Cooling towers using makeup water with low dissolved impurities typically operate with a cycle of concentration factor between seven and ten. The industry standard for cooling towers using salt water or brackish water, such as at the OCGS site, is two or less cycles of concentration.

URS sent the detailed water analysis from the 1992 EBASCO study to cooling tower vendors for their comments. Based on their comments and good engineering practice, URS used a maximum cycle of concentration factor (CF) of two. Using the formula $\text{Mass}_b = \text{Mass}_e / (\text{CF} - 1)$, for every pound of water evaporated, an equivalent pound of water is required for blowdown flow.

Two 10,000 gpm pumps would be used to supply the makeup water to the cooling tower. The makeup water would be supplied from the intake canal and sent to a filter skid to remove silt and other foreign substances.

During the summer, when the hybrid cooling tower would be operating in full evaporative cooling mode, the average makeup water supply would be approximately 14,000 gpm. Using a cycle of concentration factor of two means that half the makeup water flow (7000 gpm) is returned to the discharge system as blowdown with the other half evaporated. Thus, the average consumptive use of intake water during the summer is approximately 7000 gpm.

To mitigate the impacts of an inadvertent release of radioactive water, OCGS' procedures mandate that at least one dilution pump or one circulating water pump be available to provide sufficient flow to dilute the radioactive release. Specifically, these procedures are:

- Section 3.1 of Oyster Creek Generating Station Procedure ABN-27 "Inadvertent Overboard Radioactive Liquid Release or Cross-Contamination" states "If a discharge to the intake or discharge canals has occurred or is suspected, then confirm at least one Dilution Pump or Circulating Water Pump is operating."
- Procedure 323 "Main Condenser Circulating Water System" at 5.2.2 states "At all times at least one dilution pump or one circulating water pump must be available to provide dilution flow to mitigate the consequences of an accidental release of contaminated liquid from the RBCCW (Reactor Building Closed Cooling Water System)."
- Section 5.2.2 of Procedure 324 "Thermal Dilution Pumps" states "At all times at least one dilution pump or one circulating water pump should be available to provide dilution flow to mitigate the consequences of an accidental release of contaminated liquid from Service Water System discharge."

In the event that there are no circulating water pumps available, such as during the maintenance of the pump, intake tunnel, or main condenser, at least one of the three dilution pumps must be available to meet these procedural requirements. The available pump will also allow water from the intake canal to be available to supply other emergency needs.

In addition to having operational dilution pumps available, a single dilution pump must remain in operation to:

- prevent the stagnation of water and accumulation of silt in the intake and discharge canals
- provide thermal dilution of warm blowdown water (from the cooling tower circulating water outlet line) at the discharge canal
- provide dilution of concentrated and trace elements in the blowdown water within the discharge canal

There would be no thermal impacts because of the operation of one dilution pump.

One dilution pump (260,000 gpm), with a makeup design requirement of 20,000 gpm, would create a total flow through the intake canal of approximately 280,000 gpm. The flow through the discharge canal would be approximately 270,000 gpm, or about 30 percent of the flow of the current open-cycle system.

3.3.5 Water Treatment

If unchecked, the silt in the makeup water will accumulate, fill basins within the towers, and require the station to shut down sections of the cooling towers for a cleanout. For this reason, the makeup water will be sent to separate inlet filter skids to remove silt and other suspended solids thereby reducing the maintenance requirements.

The filters will also remove a high percentage of the bio-fouling aquatic biota. The removal of bio-fouling organisms will reduce the chemicals required to control their growth in the warm environment of the closed-cooling system. Currently, OCGS uses sodium hypochlorite to control biological growth. Other chemicals, such as acids, dispersants, scale inhibitors, foam suppressants, and de-chlorinators also may be required.

Both cooling towers would have a small (3000 gpm) continuous side-stream filter system. This system would be used to control airborne foreign material (sand, insects, pollen, etc.) that is often captured with the air.

3.3.6 Location

Two potential locations are available for the towers:

- The area adjacent to, and north of, the station (bordered by the intake canal to the north and U.S. Route 9 to the east). The excavated material from the building foundations and from the intake and discharge canals was deposited here during the construction of the station.
- The area east of the station across U.S. Route 9 (Finninger Farm).

The placement of the cooling towers north of the existing station and west of U.S. Route 9 is the preferred location because of shorter pipeline runs and reduced pumping power requirements. This area, however, is congested and would present difficulties in access, construction, and maintenance. Some of the existing equipment would need to be relocated to install the circulating water pipelines.

The placement of the cooling tower on Finninger Farm is an alternate location that was discarded because the pipeline runs are far longer and the pumping requirements are higher. This option is complex because it requires the construction of underground conduits, utilities and access roads beneath U.S. Route 9. Furthermore, since Finninger Farm has sensitive terrestrial and aquatic habitats, the environmental permitting would be difficult.

As shown in Figure 4, the chosen location, west of U.S. Route 9, covers 27.7 acres and is bordered by a security fence, U.S. Route 9, and the intake canal. Currently this area contains grasses, shrubs and several mature trees. There are freshwater wetlands and transition areas that are protected by deed restrictions required by an existing NJDEP permit (see Section 5.3.3). In addition, an aboveground transmission line runs along the boundary between the station and the selected area.

The impervious area, to be occupied by new structures and roadways, would be about 10.5 acres distributed as follows:

- Roadway inside/outside security fence = 2.4 acres
- Cooling tower basins = 3.0 acres
- Pump houses = 0.5 acres
- Impervious area around structures = 2.75 acres
- Filters = 0.2 acres

- Electrical/chemical buildings = 0.15 acres
- Roadway to cooling tower = 0.5 acres
- Permanent parking lot = 1.0 acres

Ground elevations throughout the selected area vary from sea level up to 34 feet above mean sea level (msl). URS selected a final grade (20 feet above msl) where the cut and fill are balanced. URS calculations indicate that the cut and fill volumes would be 145,000 and 125,000 cubic yards, respectively.

The surface soils consist of brown fine-grained sand and brown silty clay. The subsurface soils are fine-grained brown sand with traces of silty clay. Ground water levels throughout the area vary between sea level and approximately 12 feet above msl. Available water quality analyses indicate groundwater pH levels can be as low as 3.5.

3.3.7 Layout

The existing once-through cooling water system would be converted to a closed-cycle system by the addition of a cooling tower and two new circulating water pump houses (Figure 4). The existing circulating water pumps would be decommissioned. Three of the existing sumps for the circulating water pumps would be reconfigured to install three new makeup water pumps.

At OCGS, the proper placement of the towers, with respect to the prevailing wind direction, would be with the longitudinal length of the towers parallel to the prevailing summer wind. URS reviewed the annual wind rose for the OCGS site and aligned the towers in an arrangement that would provide optimum orientation within the site constraints of the area where the towers would be located.

The proposed layout of the cooling tower would avoid direct impacts to the wetlands and transition areas thereby reducing the available land area to 19.9 acres. Since the cooling towers would be constructed and installed within the perimeter of the security fence, the actual area available would be 13.0 acres. As shown in Figure 4, the reduced area would be adequate to accommodate two multi-cell cooling towers arranged in two rows with two pump houses.

The conceptual model is a recirculating closed-cycle hybrid cooling system with two multi-cell mechanical hybrid fiberglass cooling towers arranged in two rows. The towers would be located adjacent to the existing plant, west of U.S. Route 9, and would be 80 feet high operating at two cycles of concentration. There would be two pump houses for the circulating water system and one dilution pump would be operating.

Heated water from the circulating water discharge flume (tunnel) would be diverted to the proposed mechanical draft cooling by means of a 12-foot diameter pre-stressed concrete cylinder pipe (PCCP) to the cooling tower lift pumping station. After passing through the cooling tower and into the circulating water pump house, the cooled water would be pumped back to the condensers via the existing circulating water supply flume (inlet tunnel).

The remainder of this chapter presents a description of the conceptual model and further discusses the impacts to the plant.

4.1 DESCRIPTION OF CIRCULATING WATER SYSTEM

The following modifications and new structures would need to be installed for the conceptual hybrid cooling tower system.

- Interconnections between the plant's existing discharge tunnels and the new circulating water conduits
- Two new 12-foot diameter PCCP conduits to convey circulating water to and from the cooling towers
- Two new pumping stations
- Two new cooling towers
- Two new cooling tower basins
- New cooling tower makeup system
- New cooling tower blowdown system
- Relining existing flumes
- Condenser water box replacement

The remainder of this section describes each of these modifications.

4.1.1 Interconnections Between Existing Cooling Water Supply and Discharge Flumes with the New Circulating Water Conduits

OCGS' existing cooling water supply and discharge flumes cannot be directly connected with the new circulating water conduits due to geometrical differences. The flumes are rectangular in cross-section and the new circulating water pipes would be circular in cross-section. The connection could be made by constructing two transition chambers (intake and outlet transition chambers).

The internal dimension of the chambers would be 17-feet high by 17-feet wide by 20-feet long. The chambers would be constructed using reinforced concrete and foundation on piles to avoid settlement and joint failures.

4.1.2 Two New 12-Foot Diameter PCCP Conduits to Convey Circulating Water To and From the Cooling Towers

Cooling water would be transferred from the cooling water system flumes to and from the cooling towers via two 12-foot diameter PCCP conduits that must be constructed underground. Due to numerous pipe and electrical utility interferences, the initial 500 feet of the pipelines would be installed in a deep trench. The invert of the pipelines would slope upward, raising from elevation 40 feet below msl at the location of the transfer structure to about elevation 6 feet below msl near the existing Torus Water Storage Tank.

The installation of this first 500 feet of 12-foot diameter PCCP segment would require:

- Relocation and support of numerous utilities that interfere with the pipeline routing. Affected utilities include the emergency reactor shutdown pipeline, the water supply to the service and auxiliary heat exchangers, fire protection lines, electric feeders, telephone lines, storm sewers, illumination post and hydrants.
- Extensive sheet-piling to excavate the 20- to 40-foot deep trench required to install the PCCP conduits.
- Driving 100 piles to support the PCCP conduits.
- Extensive and continuous dewatering during construction.

The installation of the subsequent 1,100 feet of 12-foot diameter PCCP segments would require:

- Excavation of a trapezoidal trench to elevation zero (sea level)
- Backfilling the pipelines with flowable fill

The pipeline trenches would also be used to install the 30-inch diameter high-density polyethylene (HDPE) makeup pipeline and some of the electrical conduits.

The installation of the two new 12-foot diameter PCCP conduits would be very difficult to accomplish because of the existing nuclear power plant infrastructure and would require the plant to be shut down during installation of the first 500 feet of PCCP conduits.

4.1.3 Two New Pumping Stations

Two new circulating water pump houses would be required. One of the pump houses would pump the circulating water into the cooling tower. The other would pump the water from the cooling tower basin back to the condensers.

Both new pump houses each would have four circulating water pumps rated at 115,000 gpm each with variable speed motors. Both pumping stations would also need a 72-inch diameter motor-operated butterfly valve to be installed at the discharge of each circulating water pump.

4.1.4 Mechanical Draft Cooling Towers

The mechanical draft cooling tower assembly would consist of two cooling tower units each consisting of 18 back-to-back cooling tower cells installed in two rows. The towers would be constructed of fiberglass and contain polyvinyl chloride fill. The total design flow for the cooling towers would be 460,000 gpm (12,800 gpm per cell).

Thirty-six 36-inch diameter steel pipe risers would distribute the circulating water flow into each of the cooling tower cells. The diameter of the underground manifold would vary between 144 inches (12 feet) and

96 inches (8 feet). A 36-inch diameter valve would be installed at each cooling tower riser, and would be manually operated. A cold weather bypass with six 48-inch diameter spargers would provide freeze protection during the winter.

4.1.5 Cooling Tower Basins

The two rectangular cooling tower basins (120 feet wide, 500 feet long and six feet deep) would be separated by the forebay of the pump house that returns cooling water back to the condensers. The cooling tower basins would be constructed of reinforced concrete and supported by a piling foundation consisting of 600 piles per basin.

4.1.6 Cooling Tower Makeup and Blowdown Systems

The current system consists of two water intake structures (a circulating water intake structure and a separate dilution/bypass water intake structure), both of which withdraw water from the intake canal. The dilution/bypass water is used to temper the thermal discharge from the circulating water system (Figure 5). The circulating water intake structure consists of two sections, each having two circulating water pumps and three intake bays. The dilution/bypass intake structure consists of three sections, each having one dilution/bypass pump and two intake bays.

With the new system, makeup water would be pumped from the intake canal by three 50-percent capacity pumps (rated at 10,000 gpm each with the third pump being an emergency backup) into the cooling tower basins. Makeup water would pass through a filter prior to entering the basins. Water quality within each basin would be maintained by the addition of two side filters (one for each basin).

The blowdown water would be returned to the structure that houses the dilution pumps. The blowdown piping system would discharge water into two of the existing dilution pump discharges by means of discharge sparger that would mix the water from the blowdown flow with the dilution pump flow.

4.1.7 Relining of Existing Cooling Water System Flumes

The existing rectangular flumes that interconnect the circulating water pump house with the condenser and, in turn, the condenser with the circulating water system discharge structure are not designed to sustain the operating and transient pressures imposed by the addition of the cooling towers. Presently, the flumes are designed for 47 feet of hydrostatic pressure (2.3 feet water head per pound per square inch). These operating pressures would be increased up to 50 pounds per square inch (115 feet of water). Consequently, the existing flumes would have to be reinforced by adding structural members. The flumes would be reinforced by installing a 3/4-inch thick plate steel liner along the walls of the flumes. A steel liner was selected to maintain the available flow area close to the existing cross-sectional area.

URS estimates that a 150-day outage would be required to install the steel lining along the existing flumes and interconnect them to the previously installed circulating water pipes. The installation of the liner would be a complex, time consuming and difficult operation, as indicated by these conditions and steps:

- Some of the rectangular conduits are small; the dimensions of the rectangular cross-sections are variable; and hand fitting would be required.
- Extensive and continuous dewatering would be required.
- Existing concrete surfaces would be repaired, sandblasted and coated with an epoxy base.
- Installation of steel plate support system

- Installation of fans to vent the area. Venting should be outwards, from the turbine room to the manholes and existing openings.
- New temporary ductwork would need to be installed in the turbine building for fresh air.
- Operations would occur in confined spaces.
- Installation of venting system would require removal of 12 condenser water boxes, valves and interconnecting piping.
- Insertion of numerous and heavy steel plates
- Supervised welding and testing of each steel plate
- Injection grouting behind steel plates
- Quality assurance program
- Steel surface preparation
- Application of epoxy coatings

4.1.8 Condenser Water Box Replacement

Each of the station's three condensers is divided into two separate sections, each section having its own inlet and outlet water boxes and associated valves, for a total of six condenser sections. Each condenser section is comprised of 14,560 individual condenser tubes. The six 72-inch diameter pipes that convey intake water to each of the condenser sections are embedded in the reinforced concrete foundation of the turbine building. There are also six 72-inch diameter outlet pipes to convey water from the condenser sections to the buried discharge conduit.

The new 12-foot diameter pipe that would be connected to the existing cooling water supply flume would convey water from the cooling tower basin to the intake of the condenser where the pipe would be branched out to distribute flow to the six condenser inlet water boxes. After passing through the condenser tubes, the heated water would enter the outlet water boxes and be piped to the existing discharge flume. The water would then be piped to the other new 12-foot diameter return pipe back to the cooling tower. At the cooling towers, lift pumps would supply water to a distribution header for the two cooling towers.

Based on a hydraulic analysis, URS determined that the pressure of the circulating water at the condenser would exceed the tested pressure of the original water boxes of 25 pounds per square inch gauge (psig). The existing 12 water boxes would need to be replaced with new water boxes with an adequate pressure rating. The URS analysis concluded that the new water boxes would require a design pressure of 50 psig, (and be tested to 75 psig).

Currently, 72-inch butterfly valves, as well as other smaller bypass valves, are attached directly to each of the inlet and outlet water boxes and are integral to the operation of the plant. If, during disassembly or installation of these valves and the water boxes, the valves are damaged or determined not to be in good repair, the lead time to either repair or obtain new valves would greatly extend the overall outage. Therefore, URS determined that new valves should be ordered, supplied and replaced with the new water boxes. URS assumed that the existing tube sheet and titanium tubes are adequate to withstand the added hydraulic pressure of the new design.

Each of the 12 water boxes is approximately 11½ feet high, eight feet wide, and over nine feet deep. URS conducted a study to determine the best way to place the water boxes in the basement. Based on review of arrangement drawings and discussions with plant personnel, URS determined that the wall on the west side of turbine building must be removed to provide access to the basement. The installation

and removal of the water boxes on the east side of the condensers would be troublesome because of restrictive access. Some demolition and removal of stairways would be required, as well as scaffolding and rigging to lift heavy equipment. Replacing the water boxes would be very difficult and could increase the outage time requirement and cost. This operation would need precise planning and execution.

4.2 IMPACTS TO THE PLANT

The installation of the conceptual model would directly affect numerous aspects of plant operation. More specifically, the new design would create:

- Complex operator responsibilities
- Additional maintenance
- Reduced generation
- Increased costs

The remainder of this section examines each of these issues.

4.2.1 Complex Operator Responsibilities

The hybrid cooling towers would create another complex system for the operators of the plant to learn. Although the hybrid cooling tower would be instrumented and automated, there are many issues that would require their close attention. One of the design constraints that led to the decision to choose hybrid cooling towers was the potential of ground fogging, which would compromise the security of the nuclear facility. Operators would need to be diligent to make sure that fog would not form and they must take immediate actions to eliminate it when potential fogging conditions exist.

The hybrid cooling tower would have louvers at the inlet to the dry section of the tower. The purpose of these louvers is to cut off air flow through the dry tower section (see Figure 3) when there is no potential for a visible plume to occur. Closing the louvers optimizes the cooling efficiency of the tower. It is possible to modulate the louvers through the day to obtain optimum cooling of the circulating water (hence steam turbine power output) when ambient temperature and relative humidity are varying. This would require continual operator attention because of the size of the towers and the interaction between the 36 cells. Changing the position of one set of cell louvers can affect the air psychrometric (humidity) conditions of the adjacent cells, thus requiring ongoing adjustment to their louvers.

Operation experience of facilities with hybrid cooling towers has shown that operators will normally, at the beginning of the fall season, open the louvers and run the cooling tower in a combined wet and dry mode. When operating in this mode, the warm air from the dry section mixes with the humid air from the lower evaporator section eliminating the visible plume. At the end of the fogging season, the louvers are closed and the tower is operated as an evaporative cooling tower. By initially setting a design basis to operate in this open-close manner, the initial cost of providing actuators for all 36 cells is eliminated. In addition, the added maintenance that would eventually be required for the actuators is removed. URS assumed that the hybrid tower would be designed and operated in an open-closed mode with the louvers fully opened during the fall, winter, and spring, and fully closed during the summer.

Both of the towers would consist of 18 individual cells. Each of the 36 cells would contain its own forced draft fan with a 250-horsepower motor and attendant speed-reducing gear box. To reduce the operational variations with a large number of cells, single-speed motors would be provided for each cell. If conditions exist such that excessive circulating water cooling is taking place, operators can individually shut down cells in lieu of operating a number of motors at half speed to obtain the desired reduction in cooling.

In contrast to the once-through system, which has one set of circulating water pumps, the conceptual closed-loop system would have two sets of circulating water pump combinations. The first set (circulating water) would take the water from the cooling tower basin and send it through the supply pipe to the three condensers then directing flow back to the cooling tower discharging into a pump basin. A second set of pumps (cooling tower lift pumps) would be required to take the heated water, distribute it to each of the 36 tower cells, and provide sufficient head to lift the water 60 feet to the top of the cooling tower. Because the two pumping systems would be in series, they must operate in unison and balance such that one system would not pump more or less water than the other. The variable frequency drive motors would allow for fine-tuning and flow balance between the circulating water lines so the pump basins do not run dry or overflow.

4.2.2 Additional Maintenance

With the addition of a large piece of sophisticated equipment, additional maintenance would be required to keep the cooling tower operating at optimum form.

Each of the 36 tower cells would have a 250-horsepower motor and gear box to drive the 28-foot diameter forced draft fan. The motors and gear boxes would be on the tower deck in a harsh humid and wet environment. Gear boxes are known to have maintenance problems, thus spares would be required. There also would be the need for frequent maintenance to make sure the motor and gear boxes are lubricated. Routine inspections would be required to make sure the fan foils are kept clean and the internal film fill packs are in proper working order. Over time, environmental factors such as salt deposition in the recirculating water would cause the film to deteriorate. One of the tower vendors estimated that the film needs to be replaced approximately every ten years.

The circulating water would be distributed to the towers along a water distribution header. From the distribution header, there would be a supply riser that supplies water to each of the 36 cells. Each riser would have a motor-operated shutoff control valve to isolate the specific cell so maintenance could be completed while the rest of the towers remain on line. Some of the risers also would have a 48-inch bypass line with motor-operated valves that would be used for cold weather start-up protecting the tower from ice damage during starting procedures when there is little heat in the circulating water. Preventive maintenance would be required for the aforementioned systems, valves, actuators and control instrumentation to maintain the cooling towers in proper working condition.

The makeup water that would be supplied from the intake canal would be pumped to a filter skid. There also would be a side-stream filter system to maintain continual cleaning of the water in the basins beneath each of the towers. The purpose of these filters would be to remove silt, biological material, and airborne debris that could affect the overall performance of the towers. The filters would be automatically backwashed to remove the accumulation of silt and debris. The backwash water would be sent to a settling pond that would require periodic clearing of debris. The periodicity for cleaning and disposal of the accumulated material in the settling pond would vary, depending on the season, tidal conditions, and frequency of coastal storms. Thus, the pond would need to be monitored to prevent it from overflowing. The condition of the filter also would need to be observed to keep it from clogging or failing.

The filters would be the first line of defense to protect the cooling towers, fill, and basins from accumulating dirt and other materials. Over time, however, there would be an accumulation of solid material that would affect the performance of the tower. When this eventually happens, a section of the tower would need to be shut down and manually cleaned to remove the silt and other debris from the basin.

Various chemicals would be used to maintain water quality. Although there would be automatic dispensing of the chemicals, operators would need to keep sampling probes calibrated, and make sure the chemical pumps are operating properly, and that chemical holding tanks contain sufficient and proper chemicals.

4.2.3 Reduced Generation

The conversion of an open-cycle cooling system to a closed system using hybrid cooling towers would change the steam turbine performance and impact power generation. URS undertook a study to determine the change in steam turbine performance as measured in low-pressure power production. URS used Thermal Flow's GTMaster program to compare the once-through cooling output at OCGS with the hybrid cooling output. The remainder of this section describes the findings of URS' study.

4.2.3.1 Steam Turbine Generators

The power generated from a steam turbine is derived from high-pressure steam produced in the boiling water reactor and expanded through a series of blades. Stationary blades channel the steam onto rotating blades, which are attached to a common shaft (rotor) connected to the generator for electric power production. The steam turbine at OCGS consists of a high-pressure section and three low-pressure sections. As the steam passes through the blade stages, the pressure and the temperature of the steam decrease and volume increases dramatically. As a result of the volume increase, three double-flow low-pressure turbine elements are needed to pass the flow. When the steam exits the last stage of each low-pressure turbine, it is directed into each turbine's condenser. A vacuum is created when the cooler circulating water passing through the condenser tubes causes the steam to condense.

The amount of power produced is maximized by creating the lowest possible exhaust pressure. The exhaust pressure is primarily set by the inlet circulating water temperature (see Section 3.3.3). With all things being equal, the lower the temperature of the inlet water circulating to the condenser, the lower the exhaust pressure and the more power that is produced.

4.2.3.2 Performance Model

Thermal Flow's GTMaster simulation program was used to model the low-pressure turbine section of OCGS. The reference library for this program includes the exhaust loss curve of the General Electric 38-inch low-pressure steam turbine that is installed at OCGS. The inlet steam pressure and temperature conditions and exhaust steam flow were matched to those of the original General Electric 640.7 MW full load heat balance diagram. The physical dimensions of the condensers were also input into the program to fully model the existing turbine-condenser system.

Ambient dry bulb and wet bulb temperatures for winter (December, January, February), spring (March, April, May), summer (June, July, August) and fall (September, October, November) were obtained from the National Oceanic and Atmospheric Administration database for Atlantic City. Daily maximum, average, and minimum intake canal water temperatures between August 1987 and February 2000 were available from the plant. These data were used to calculate the average winter, spring, summer, and fall water temperatures at the intake.

Six cases (the four seasons and two PJM peak capacity periods) were run to obtain the average seasonal power generation at OCGS with once-through cooling and hybrid tower cooling. The power generating capability of the low-pressure turbine at OCGS with once-through cooling was compared with the power production predicted by the model when the steam turbine operates with a closed-cycle cooling system.

For the model runs of the once-through system, historical pump operation data were provided by the plant. Normally, two dilution pumps and four circulating water pumps ran throughout the year, but during the coldest part of the winter the plant occasionally operated only three of the four circulating water pumps.

For the model runs of the hybrid tower system, URS used the low-pressure turbine flow, pressure, and inlet temperature conditions used in the once-through model runs. The hybrid tower was assumed to be

operated with louvers closed for summer operation, and fully opened for fall, winter and spring (as discussed in Section 4.2.1). During the summer, an allowance was made for flow leakage through the louvers. To provide adequate cooling water flow through the condenser, all eight circulating water pumps were operated for all six cases. One of the dilution pumps was operated continuously (for reasons stated in Section 3.3.4).

Table 2 summarizes the input data and the results. The net plant output for both systems is the net output from the steam turbine minus the sum of the pump and fan loads. A number of smaller loads, such as the cooling tower basin recirculation filter pump, chemical supply pumps, control system, and tower lighting, are not included in our calculations. The calculated average annual net power loss over the four seasons is 32,502 kilowatts, or 32.5 MW.

In each of the six cases, there would be a reduction in net plant power with the hybrid tower system. Despite the fact that the actual power generated from the steam turbine with a once-through cooling system during the PJM summer peak period is approximately 4 MW greater than the power generated with the hybrid cooling tower system, the net plant output would be lower. As noted above, the lower the temperature of the inlet water circulating to the condenser, the lower the exhaust pressure and more power is produced. During the PJM summer peak period, the average temperature of inlet circulating water to the condenser is 83.7°F for the once-through cooling system compared to 86.1°F for the hybrid tower system. The net plant production still would be reduced, however, because of power losses from the cooling tower fans and additional pump loads.

With fossil-fuel fired plants replacing the lost generation at OCGS, URS has assumed that the increase in cooling water use at these plants would be 32.5 million gallons per day. There would also be increases in the air emissions at the fossil-fuel plants that replace the lost generation at OCGS. URS estimates that the additional emissions from fossil plants within New Jersey would range between 478 and 3,140 tons per year (tpy) of sulfur dioxide and between 300 and 1,495 tpy of nitrogen oxides (see Section 5.3.1 on air quality).

In summary, there would be a net reduction in power generating capability with the hybrid cooling towers.

4.2.4 Increased Capital and Operating Costs

Significant costs would be involved to retrofit OCGS' existing open-cycle cooling system with a rectilinear mechanical draft wet-dry hybrid cooling tower system. Table 3 summarizes the estimated capital and operating costs of the selected conceptual model for a 10-year period in 2006 dollars. URS applied an amortization period of 10 years with a seven percent discount rate to be consistent with the methodology used by the USEPA to estimate the capital and operating costs of compliance with the Rule (see Appendix A of the Rule at 69FR41679 (footnotes 2 and 3) and USEPA (2004)).

The detailed cost analysis is provided in Appendix B. The cost-cost analysis to determine USEPA costs is provided in Appendix C.

The estimated net present value (NPV) of capital and operating costs of the hybrid cooling tower conceptual model are between \$705 million and \$801 million. USEPA estimated compliance costs at OCGS to be \$11.2 million per year (\$4 million for the cooling water intake structure and \$7.2 million for the dilution water intake) annualized over a 10-year period, or a NPV cost of \$79 million. This amounts to an estimated cost 8.9 to 10.1 times the USEPA cost. The costs are both significantly greater than and wholly disproportionate (at least seven times) to USEPA's estimated compliance costs.

The factors considered in the cost estimates include construction (materials and labor), lost capacity/energy revenue during construction, environmental permitting, added real estate taxes, cost of modifying OCGS' Master Plan, added security and plant operation personnel, added insurance, maintenance, and chemicals, and unforeseen events. Starting costs, which could also be substantial, were not included. Startup testing of the new system could increase outage time and cost. The remainder of this section explains the basis and development of these cost estimates.

4.2.4.1 Construction

Total construction costs include material and labor components. The accuracy of these estimates is within +/- 25 percent.

Material: The estimate for the cost of materials is based on vendor quotations on the higher cost equipment (cooling tower, large valves, large diameter pipe, large pumps, water box components, and electrical transformers), an in-house database of previous vendor quotations, previous applications, and the 2006 RS Means Mechanical Cost Data book. The direct cost estimate is supplemented by allowances for engineering, construction management and contingency fees with a base year of 2006.

In addition to new equipment, URS' estimate includes recognition of required retrofits, relocations, removal, and interconnection to existing systems along with additional foundations and structures. The equipment cost of the cooling tower is based on budget pricing received from vendors. Because this project does not qualify for the New Jersey sales tax exemptions awarded to cogeneration projects and qualified businesses in an economic enterprise zone, the material component of the construction cost is subject to the six percent tax. The base material cost, not including builders' mark-ups, contingencies, and New Jersey sales tax, is estimated to be \$102.5 million with an additional \$7.1 million for New Jersey state income tax.

Labor: Labor cost estimates are based on the quantities associated with the conceptual design. These quantities form the basis for corresponding component and material costs determined on a unit material and labor cost basis. Much of the labor cost is estimated from Means data for the New Jersey area. The labor estimate from Means includes a general labor productivity factor for the local region.

To account for labor constraints at a nuclear plant where an estimated two man-hours per person per day are needed to comply with daily security entrance/exit requirements and pre-assignment and safety briefings, an additional construction loss-of-productivity factor of 1.25 was applied. The cost of installing the cooling tower is based on man-hour estimates received from a cooling tower vendor. The total labor portion of construction including the loss-of-productivity factor is \$176.9 million.

Contingencies: A 15 percent contractor's markup on bulk materials is added to the base materials costs. This allocation is due to the scarcity and long-term delays of materials from the world market. During the past two years, there has been a sharp rise in the cost of construction materials and, because of increases in fuel prices, an increase in delivery costs. The world market, especially in the Far East, and domestic requirements due to recent natural disasters has put a strain upon the availability of various commodities, as well as the ability to schedule delivery from overseas suppliers. The contractors' markup at 15 percent amounts to \$15.4 million.

The degree of confidence on the availability of labor and material also affects the potential pricing of a project. Thus, URS added a 25 percent contingency to reflect the possibility of delays in the construction schedule. Labor or material shortages also delay the project and increase costs. The 25 percent confidence factor on labor and material accounts for \$61 million. Including markups, sales tax, and contingencies the total material cost is estimated to be \$150.5 million and the total labor cost is estimated to be 212.2 million.

Other factors that could affect the schedule, and thus cost, are weather uncertainties, delays in obtaining proper environmental and construction permits, and construction uncertainties. The construction uncertainties include setting sheet piles and dewatering the pipe trench. The trench is trapezoidal with a base width of 40 feet (90 feet at the surface), 20 feet deep, and 1000 foot long adjacent to the intake canal. URS included only 150 days in the construction schedule to overcome potential interferences and obstructions when running the initial 500 feet of piping trench across critical emergency components required for safe operation and shutdowns of the plant.

URS did not include these additional items in the total capital costs:

- Allowance for funds used during construction (AFUDC or the estimated debt and equity costs of capital funds necessary to finance construction)
- Allowance for startup
- Allowance for spare parts
- Working capital or inventory capital
- Allowance for client engineering and management
- Assessment of the costs of replacement power during construction
- Royalties (due to patented procedures used by construction contractors)
- Exelon's internal costs
- Outside legal counsel
- Construction-period security personnel.

Lost Capacity/Energy Revenue: The loss of generating capability, which was discussed in Section 4.2.3, affects the income of the unit. Energy calculations (in megawatt-hours [MWH]) include the OCGS capacity factor goal of 92 percent. URS was provided the PJM monthly energy and capacity forward pricing for OCGS from January 2006 through December 2025. The monthly energy values (\$/MWH) were averaged to obtain seasonal energy averages. The capacity price value is constant over the year. Both the energy and capacity prices were levelized to determine the net present value of the pricing over a ten-year period starting in January 2008 using a seven percent discount rate.

The PJM summer capacity reduction in output of 20.8 MW is used to determine the reductions in capacity payments. The load reductions for the four seasons (winter 32.6 MW, spring 40.3 MW, summer 13.7 MW, fall 43.4 MW) are used to calculate the loss in energy revenue at the levelized seasonal energy price. The loss is considered to be a continuous loss over the ten-year period. The lost capacity revenue over the ten-year period is \$7.1 million, while the lost energy revenue over the same time frame is \$108.4 million.

Lost Capacity/Energy Revenue During Construction: During the construction sequencing, the three major activities that require the unit to be off line are to:

- Tie-in the new circulating water lines with the existing condenser flumes while severing the existing circulation water lines;
- Change main condenser water boxes and isolation valves; and
- Relocate plant safety and emergency lines that cross the path of the piping trench.

For costing, these three activities are assumed to coincide with the fall 2010 refueling outage. Given the anticipated difficulties in obtaining the required permits (see Section 5.0), this as an extremely aggressive schedule.

A minimum estimate of the time required to complete these tasks is 150 days. To meet this schedule, extra manpower effort is required, as well as the ability to work on these activities in parallel as much as possible. There are, however, some activities that preclude parallel work, such as strengthening the existing flumes under the condensers, which requires access to the water boxes to provide ventilating air.

A time goal for refueling at OCGS is 21 days or less. URS assumed that the initial portion of the construction activity, which requires the unit to be out of service, is accomplished during the 21-day normal refueling outage. In determining the lost revenue component, the time allowed for the refueling outage is deducted from the total estimated time. Thus, 129 days of generation are lost.

The lost revenue is, therefore, based on the capacity and energy pricing in effect Fall 2008. This cost is considered a one-time loss. If the 2008 fueling cycle is missed, additional costs will be incurred. The capacity portion of lost revenue is \$4.3 million. The energy portion, applying Fall 2008 (70 days) and Winter 2009 (59 days) energy payments, is \$80.4 million.

4.2.4.2 Environmental Permits and Public Relations

A number of Federal, state and local permits and approvals are required to commence and complete this project. The cost for these permits includes significant environmental and engineering analysis, reporting, submittals with appropriate fees, and preparation for public hearings. An estimate for the cost of these activities is based on URS experience. The cost, \$1.5 million, is considered to be an initial one-time occurrence.

4.2.4.3 Real Estate Taxes

With the addition of a capital investment at the power plant, URS anticipates that real estate taxes paid to Lacey Township will increase. We understand that the township is free to impose a real estate tax on the full amount attributed to the costs required to implement the change. The full cost is based on the capital estimate, which includes material and labor, but not state sales tax or the various added contingency costs.

URS determined the taxable portion, for real estate purposes, is approximately \$300 million. URS calculated the annual tax increase based on the 2008 equalization ratio (32.4 percent) and estimated tax rates from 2008 onward. The additional taxes are considered ongoing added costs. The amount is calculated in 2008 dollars and is not escalated. The anticipated 2008 tax rate is estimated at 3.6 percent (\$3.5 million) and increases at an annual rate of seven percent. Over the ten-year evaluation period the total tax burden in 2008 dollars is \$48.0 million.

4.2.4.4 Revision of Current Master Plan

OCGS is in the process of developing and permitting a Master Plan for use of the site. A significant amount of effort has gone into the Master Plan to site new buildings and parking areas. Should the installation of the cooling towers go forward, then planners would need to restart the process, including finding other locations for proposed parking areas and buildings. Finninger Farm is a potential alternate site for the Master Plan. URS estimates the sum of the expended costs and added costs for redevelopment will be \$500,000. This cost is considered to be a one-time charge to the project.

4.2.4.5 Added Security Personnel

Approximately 13 acres of additional land area would be required for the cooling towers and ancillary equipment. The perimeter of the security fence must be expanded to enclose the new equipment within the addition area. This expansion is necessary for plant security, not to safeguard the new equipment.

Security personnel at OCGS reviewed the proposed layout of the towers and recommended the addition of three new security towers and an additional 4000 feet of fence. The addition of the three new security towers and expanded security perimeter would require additional security personnel. We assumed that eight additional security personnel (two people per tower with an additional two people for off-shift purposes) would be required. The added cost for these people would be an ongoing expense. The current full cost of these individuals is \$125,000 per person. Their cost is escalated at 3.5 percent with the net present value determined at the seven percent discount rate for ten years with a total cost of \$8.7 million.

4.2.4.6 Added Plant Operational Personnel

The current OCGS operations staff was consulted and they determined that the proposed cooling tower system would require six additional operators. The added cost for the six operators is considered to be an ongoing expense. The current full cost of these people is \$150,000 per person. Their cost is escalated at 3.5 percent with the net present value determined at the seven percent discount rate for ten years with a total cost of \$7.8 million.

4.2.4.7 Added Insurance

The additional capital equipment at the facility would increase the insurable value. Exelon was consulted regarding the facility's insurance and they estimated that the OCGS insurance premium would increase by \$18,000 the first year. Insurance premiums would continue as an ongoing expense. The increased premium is escalated at 3.5 percent with the net present value determined at the seven percent discount rate for ten years. The total cost to OCGS is \$160,000.

4.2.4.8 Maintenance and Chemicals

This would be an added cost associated with dispersing chemicals and maintenance. For example, over time, the seals of the large butterfly control valves would require refurbishing from the wear of modulating action. The oil in the cooling tower fan gear boxes would also require periodic changes. Though relatively small and minor in cost individually, these items add up to a significant first year cost of \$36,000, or, when escalated at 3.5 percent with the net present value determined at the seven percent discount rate for ten years, the total cost is \$300,000. As discussed in Section 4.2.2, it is anticipated that the cooling tower film would require replacement after ten years of operation in the salt water environment. The cost to replace the internal film is estimated to be 20 percent of the installed cost of the towers. The cost to OCGS for escrowing the funds to replace the film is \$10.6 million.

4.2.4.9 Risk Factor

A range of unforeseen events that could occur, but are outside the ability of the designer to anticipate and account for, is incorporated as a risk factor. These events affect the ability to complete the project within budget and on schedule.

Some examples of these types of events are:

- Dramatic commodity price increases due to catastrophic global events.
- Regulatory oversight changing or requiring new procedures that result in a major redesign.
- Finding a listed rare, threatened, or endangered species on the proposed site.
- Impervious surface requirements (see Section 5.3.2).

The uncertainties and risks associated with regulatory oversight are substantial and are explained in detail in the next chapter.

The design basis for the conceptual model includes the minimization of environmental impacts. Adverse environmental impacts were avoided where possible. Unavoidable impacts are minimized by incorporating the best technologies available into the design. Furthermore, during construction, Exelon would implement best management practices.

URS reviewed Federal, state, local, and regional regulatory requirements to identify potential issues that may preclude regulatory approval. The remainder of this chapter presents the findings of this review.

5.1 TOWNSHIP ORDINANCES AND STANDARDS

OCCG is required to comply with Lacey Township regulations, in the form of ordinances and standards. The station would need two local variances for this project: one for nonconforming land use and one for the expanded fence. These variances would be difficult to obtain because of the nuisance issues associated with the cooling towers (noise, visual impacts, icing, fog, salt deposition, etc.). This would be a public process and while there are procedural requirements for decision-making, the standards for the exercise of a discretionary denial are often not subject to a successful review and reversal. URS has experienced this with other power plants.

5.1.1 Land Use

The site is in M-6 Industrial Zoning in Lacey Township, Ocean County, New Jersey. The facility is bounded by:

- North: Business Park Zone (M-1)
- West: Industrial Zone (M-6)
- East: Marine Commercial (C-100) and Limited Industrial (M-2)
- South: Ocean Township – General Industrial (I-1)

Residential Zone R-1 in Lacey Township is approximately 1700 feet to the northeast and Waterfront Development (WD) in Ocean Township is approximately 3000 feet to the southeast. The WD zoning in Ocean Township allows for residential development.

5.1.1.1 Zoning Ordinance

Prohibited Uses in M-1, M-2 and M-6 Zones - Part B (28) (§335-67) include "*public utility activity constituting the manufacture of electricity is prohibited*". The current facility is considered a nonconforming use.

Article V Nonconforming Uses and Structures, §335-38 Continuance, states that an existing nonconforming use may be continued provided that:

- No nonconforming structure shall be enlarged, extended or increased unless by such action it complies with this chapter,
- No nonconforming use shall be expanded,
- No nonconforming lot shall be further reduced in size.

Since the facility is a nonconforming use, it is likely that the township would require a variance to construct the cooling towers.

5.1.1.2 Performance Standards for M-2 and M-6 Zones

Performance Standards for M-2 and M-6 Zones (§335-68) are:

- Control of dust and dirt, fly ash, fumes, vapors and gases: No emission shall be made which can cause any damage to human health, to animals or vegetation or other forms of property or which can cause any excessive soiling of persons or property at any point beyond the lot line. The township will take a close look at tower emissions.
- Control of Noise: Refer to 5.1.2 Noise
- Control of glare or heat: Any operation that produces intense glare or heat will be performed in a building or behind an enclosure so that it can't be seen beyond the lot lines. A variance may be needed if security lighting is required. Typical control of construction lighting and processes (e.g. welding) will be required during construction.
- Control of vibration: Vibrations beyond the property line cannot be discernible by humans without instrumentation.

5.1.1.3 Fencing

Height limit for rear and side yard fencing is six feet and four feet in front yards (§335-22). According to the township zoning department, a variance would be needed for higher security fences.

5.1.2 Noise

5.1.2.1 Noise Ordinance

The Lacey Township noise ordinance (Chapter 242) is intended to protect the public from excessive sound and vibration. While specific sound levels are not referenced in the noise ordinance, complaints about noise are investigated by a township Noise Control Officer. Noise complaints would be possible during construction and operation of the cooling towers.

The prohibited activities that could cause a noise disturbance across a residential property boundary or within a noise sensitive zone include loading, unloading, opening and closing, crates, containers, building materials, etc. between the hours of 10:00 pm and 6:00 am, and construction-related work between 10:00 pm and 7:00 am the following weekday and 10:00 pm and 9:00 am the following weekend day. The township told URS that OCGS would likely be allowed to construct on a 24-hour per day basis. However, the township is concerned about nighttime complaints and could place restrictions on nighttime construction activities.

5.1.2.2 Noise Performance Standards

Lacey Township and the NJDEP have noise performance standards [Lacey Township (Chapter 335 § 335-68) and NJDEP (Chapter 29 - Noise Control 7:29-1.2)]. Since OCGS operates 24 hours per day, the nighttime noise limits would have to be met.

The NJDEP noise regulations establish limits for continuous airborne sound noise. The continuous airborne sound noise limits, for industrial facilities, are 50 decibels (dBA) between the hours of 10:00 pm to 7:00 am or an octave band sound pressure decibel level that exceeds specific octave band frequencies. Lacey Township performance standards are similar to the state standards with some sound limits being slightly higher and some slightly lower at various octave bands.

The octave band criteria for noise are more difficult to achieve. URS' experience with evaluating noise at proposed power plants is that when octave band criteria are applied, a sound variance or sound easement for specific band widths is required.

The noise study conducted for the 1992 EBASCO report compared the expected noise levels from the operation of two alternate cooling tower systems (mechanical draft and natural draft towers) at the nearest residential properties to the state standards, Lacey Township standards, and existing ambient noise levels.

At the time of the EBASCO report, the nearest residential property in Lacey Township was approximately 2250 feet from the proposed cooling towers and the nearest residential property in Ocean Township was approximately 3500 feet from the proposed cooling towers. At present, the nearest residential property from the proposed cooling towers is approximately 1800 feet in Lacey Township. The distance to the nearest residential property in Ocean Township is still 3500 feet at present.

The results of EBASCO's noise study indicated that the loudest alternative was mechanical draft towers with fans operating at full speed. This scenario resulted with sound levels 51 dBA at the residential properties 2250 feet away in Lacey Township and 46 dBA at the residences 3500 feet away in Ocean Township. The 51 dBA sound level exceeded the state limit by 1 dB.

Since the nearest residence from the currently proposed hybrid towers is at a distance of approximately 1800 feet, it is likely that the state limit would be exceeded without the installation of cooling tower silencing packages. Noise studies and modeling would be necessary to determine what type of silencing packages would be needed to meet both state and local standards. A budget estimate of 12.5 percent of the cooling tower cost was added to cover the cost of the silencing packages. However, even with silencing, the hybrid towers might not meet the noise criteria. Sound barriers are not viable at OCGS because they would block the line-of-sight necessary for security.

5.1.3 Height

There are no height restrictions in Lacey Township M-6 zoning.

5.1.4 Land Development (Chapter 215)

The Township Planning Board or the Board of Adjustment, in conjunction with the Township Environmental Commission, could require an Environmental Impact Statement (EIS) (§215-1). This requirement would be satisfied by the Compliance Statement required under the State of New Jersey's Coastal Area Facility Review Act (CAFRA).

5.1.5 Ocean Township

It appears that the closest residential zoning (WD Waterfront Development) is adjacent to the southern property boundary across from U.S. Route 9 and approximately 3000 feet from the proposed location for the cooling towers. The closest building in the WD zoned area is approximately 3500 feet from the cooling towers.

During the Lacey Township public approval process, property owners within a 200-foot radius of the property line are required to be notified about the project. This includes properties in Ocean Township. It is during this process that Ocean Township would probably get involved by attending public meetings and hearings.

Although Ocean Township would not need to approve the cooling tower project, residents would have the opportunity to express similar concerns over the nuisance issues associated with the towers as will Lacey Township residents. It is possible that they might have an influence on Lacey Township.

5.2 COUNTY AND REGIONAL APPROVALS

5.2.1 Ocean County Soil Conservation District

A New Jersey Pollutant Discharge Elimination System (NJPDES) permit for stormwater discharges from construction activities would be necessary. Since there is no coal pile runoff, a Construction General Permit would be issued by the Ocean County Soil Conservation District rather than NJDEP.

A Soil Erosion and Sediment Control Plan would need to be submitted to the Ocean County Soil Conservation District for certification. A Request for Authorization for issuance of the Construction Activity Stormwater General Permit would be submitted after certification of the plan.

5.2.2 Ocean County Planning Board

The new site plan for OCGS would need to be submitted to the Ocean County Planning Board for their review.

5.2.3 Pinelands Commission

According to the Pinelands Commission Regulatory Programs, in a letter dated January 6, 2006, OCGS is outside the Pinelands Area and is, therefore, not subject to Pinelands Commission regulations or review, or subject to Lacey Township Pinelands Area Procedures (Article XVII).

5.3 STATE REGULATIONS

OCGS would require permits from NJDEP's Air Quality Permitting Program and Land Use Regulation Program (LURP). In addition, the New Jersey Department of Community Affairs (DCA) would need to review and approve the project. This section provides a description of the numerous state permits and approvals needed for this project.

5.3.1 Air Quality

Air quality permits would be required to construct and operate the proposed hybrid tower system. The type of permits required would depend on potential-to-emit (PTE) and the existing facility status.

5.3.1.1 Preconstruction Permits

"Minor" projects require a State minor source permit while "major" projects require a Prevention of Significant Deterioration (PSD) permit. PSD review (40 CFR 52.21) is a Federally-mandated program that applies to new major sources of regulated pollutants and major modifications to existing sources. PSD review is a pollutant-specific review. It applies only to those pollutants for which a project is considered major and the project area is designated as attainment or unclassified. The NJDEP has delegated authority from USEPA to administer the Federal Prevention of Significant Deterioration (PSD) preconstruction review regulations.

OCGS is an existing minor source under NJDEP and USEPA air permitting regulations. As such, OCGS would require a state level minor source preconstruction permit and, if the PTE of a regulated pollutant exceeds 250 tpy, OCGS would also be subject to a PSD preconstruction review as a new major source.

The primary pollutant of concern for the OCGS hybrid cooling tower project would be particulate matter (PM). Total particulate emissions are calculated as follows:

$$QPM = W * 60 * 8.34 * SG * DR / 100 * S / 1,000,000 * 4.38$$

Where,

QPM = total particulate emission rate in tpy

W = water circulation rate (460,000 gpm)

SG = specific gravity multiplier for circulating water at two cycles of concentration (1.036)

DR = drift rate (0.0005 percent)

S = estimated maximum total suspended solids (TSS) and total dissolved solids (TDS) in the circulating water in parts per million (ppm)

And,

8.34 is the density of water in pounds per gallon

4.38 is the conversion factor from pounds per hour to tpy

60 is the conversion from minutes to hours

100 converts percent to a decimal fraction

1,000,000 converts ppm to a decimal fraction

Based on the conceptual model design specifications, water quality data, and expected maximum cycles of concentration, the total particulate emission rate (or Q_{PM}) is estimated to be 261 tpy. This exceeds the PSD applicability threshold. Thus, the project as proposed, would require a PSD preconstruction permit.

Regardless of the PSD applicability, a state level minor source preconstruction permit would be required. The most significant air permitting requirements of PSD are:

Requirement to install Best Available Control Technology (PSD) or State-of-the-Art (State permit)

Requirement to demonstrate compliance with National and State Ambient Air Quality Standards

Requirement to demonstrate compliance with PSD increments

Requirement to assess impacts at Class I Areas (PSD only)

Requirement to assess other impacts such as fogging and icing, plume shadowing, and salt deposition

For the proposed project, permitting differences between PSD and a State minor source permit are minimal. The PSD Best Available Control Technology or State-of-the-Art state permit reviews are identical. Specific differences in the other requirements are discussed below.

5.3.1.2 Ambient Air Quality Standards and PSD Increments

USEPA established National Ambient Air Quality Standards (NAAQS) to protect public health (primary standards) and public welfare (secondary standards). Similarly, the State of New Jersey has established New Jersey Ambient Air Quality Standards (NJAAQS). New sources or modifications subject to the PSD or state preconstruction permitting requirements must demonstrate compliance with both the NAAQS and the NJAAQS.

Pollutants for which ambient air quality standards exist are referred to as criteria pollutants. For the OCGS hybrid cooling tower project, the pollutant of concern would be particulate matter with an aerodynamic diameter less than 10 microns (PM10). The PM10 NAAQS was promulgated July 1, 1987 and, on July 19, 1997, USEPA promulgated a fine particulate (PM2.5) NAAQS for particles less than 2.5 microns in diameter.

In addition to the NAAQS and NJAAQS, the PSD regulations limit the amount that air quality can be degraded above baseline levels. These allowable increases, or PSD increments, have been established for SO₂, NO_x, and PM₁₀. All new major sources and minor sources constructed after the area and pollutant specific baseline date use up or consume available PSD increment. Therefore, regardless of whether the Project is subject to the PSD or state preconstruction permitting requirements, a PSD increment consumption analysis would be required.

The PSD increments vary based on the area PSD classification. The project area and surrounding areas are designated as a PSD Class II Area. The nearest Class I Area is the Brigantine National Wildlife Refuge, which is approximately 25 miles to the south of OCGS. The PSD increments for Class I areas are significantly lower than Class II Areas.

A screening analysis of the impact of PM₁₀ emissions on air quality in the area using USEPA's SCREEN3 model (USEPA, 1995) was performed.² Results of the screening analysis indicate that PSD ambient air quality PM₁₀ increments, NAAQS, and NJAAQS would not be achieved. An air quality dispersion modeling analysis would be required to demonstrate compliance with the NAAQS, NJAAQS, and PSD increments. Despite the fact that the selected conceptual model incorporates the most efficient state-of-the-art drift eliminator technology currently available, the PSD ambient air quality particulate matter increments and National Ambient Air Quality Standards might not be achieved. This position is based on URS experience with the type of analysis performed for other energy projects, and projections based on the conceptual model design, location, and estimated emissions.

The ability to demonstrate compliance with these requirements and, therefore, to obtain the required preconstruction permits, would be a significant source of uncertainty and presents a significant potential for extraordinary delays. Should the ambient air quality dispersion modeling analyses predict impacts that exceed required levels, the only option to further reduce the impacts would be to reduce the particulate emission rate. Since the proposed design would use the most efficient drift eliminator technology currently available, the only way to further reduce particulate emissions would be to reduce the TDS and TSS concentration in the cooling tower circulating water. This could be accomplished by reducing the cycles of concentration or by pretreating the sea water. More pointedly, further reduction would require Exelon to construct a desalinization plant.

Desalinization represents an extremely costly undertaking and has not been reviewed as part of this analysis. Reducing the cycles of concentration further negates the purpose of the hybrid towers to reduce water flow. Therefore, URS believes that particulates emissions alone are potentially a fatal flaw.

5.3.1.3 Class I Area Requirements

The PSD regulations require projects to assess the air quality related impacts in nearby Class I areas. The nearest PSD Class I Area is the Brigantine National Wildlife Refuge, which is approximately 25 miles (40 kilometers) south of OCGS. Projects within 100 to 200 kilometers of a PSD Class I area must assess these three impacts at the Class I Area:

- PSD increment consumption
- Visibility impacts (regional haze)
- Deposition

PSD requirements for Class I Areas are more stringent than for Class II Areas. A projection of future air emissions would also need to be reviewed and approved by the National Park Service.

² The analysis, based on the conceptual model in a draft version of this report, was performed by others in preparation to responding to the Request for Additional Information from the NRC (letter dated December 8, 2005).

5.3.1.4 Fogging

OCGS has recently implemented new security measures. Any occurrence of onsite fogging or a visible elevated vapor plume would significantly limit the effectiveness of these systems. For this reason, as discussed in detail in Section 3.2, URS proposed a hybrid system that effectively eliminates a visible plume and ground fog. The use of this tower technology would eliminate offsite fogging as an issue in the permitting process.

5.3.1.5 Salt Deposition

The high salt content of the makeup water would yield relatively high salt deposition near the cooling towers. Excessive salt deposition could affect the operation of electrical components including switchyard transformers and capacitors.

Salt buildup could cause arcing, corona discharge and reduced efficiency of many components. Salt deposition could also lead to corrosive effects on metal systems, residential home siding, landscaping, boats and automobiles (see Section 5.1 on the effect of nuisance impacts on local variance approvals). Increased rates of salt deposition could also impact local vegetation and aquatic life due to the settling of salt in freshwater wetlands and upland vegetative areas (see Section 5.5 on potential impacts to the nearby Edwin B. Forsythe National Wildlife Refuge). Therefore, URS believes that salt deposition is potentially a fatal flaw and could increase the cost estimate.

5.3.1.6 Other Air Quality Impacts

The replacement of the OCGS once-through cooling system with the hybrid tower system would result in a net average generation loss of 32.5 MW (see Section 4.2.3). This generation would be replaced by fossil-fuel fired generating plants resulting in an increase in fossil-fuel utilization and an increase in emissions at those plants.

Based on an average fossil-fuel plant efficiency of 10.5 MMBtu/MW-hr (EPA AP-42 Appendix A) and an average annual capacity factor of 92 percent for OCGS, 2,750,202 MMBtu of fuel would be required. This equates to 105,777 tons per year of coal; 18,334,680 gallons per year of No. 6 fuel oil; or 2,750,202,000 standard cubic feet per year of natural gas.

The emissions produced as a result of this increased fossil-fuel usage would depend on a variety of factors including fuel type, plant location, and plant efficiency. Emissions were estimated based on emission limitations in New Jersey regulations and past actual emissions for electric generating facilities as reported to the USEPA. Based on emission limitations in New Jersey regulations (N.J.A.C. 7:27-9 Sulfur in Fuels and 7:27-19 Control and Prohibition of Air Pollution by Oxides of Nitrogen) potential increases in sulfur dioxide range from 478 to 3140 tpy and, for nitrogen oxides, range from 300 to 1495 tpy. Based on historical average emission rates as reported to the USEPA by all electric generating facilities in New Jersey, increases in air emissions would be 218,308 tpy of carbon dioxide, 501 tpy of sulfur dioxide, 356 tpy of nitrogen oxides, 1134 tpy of carbon monoxide, and 807 tpy of PM10.

5.3.2 Coastal Zone Management Program

The construction of a cooling tower at OCGS falls under the jurisdiction of New Jersey's Coastal Management Program within LURP. This construction would require a CAFRA permit from LURP and

³ Note: LURP has stated that the impervious cover limit of Finninger Farm would revert to 30 percent if a CAFRA designation is not approved by March 2007, however, we believe this is a misstatement.

may require a Waterfront Development permit. In addition, before approving a coastal permit, NJDEP must find that the project complies with New Jersey's Coastal Zone Management (CZM) rules. And, since OCGS requires a Federal license (U.S. Nuclear Regulatory Commission license), LURP must also conduct a Federal Consistency review to determine if the project is consistent with the CZM rules (Federal Consistency Determination).

5.3.2.1 CAFRA Permit

OCGS is within the portion of New Jersey's coastal zone regulated under CAFRA (the CAFRA area). Construction of the cooling tower and related structures would require a CAFRA permit and must comply with CZM rules.

CZM rules establish impervious surface and vegetation cover limits at sites within the CAFRA area. These limits are based on a site's location within specific boundaries defined in the CZM rules. The OCGS cooling tower site is located within the expired boundaries of a Town Center (expired February 2005). The Town Center designation for Lacey Township was not re-established for an interim period of March 15, 2006 to March 15, 2007 (New Jersey Register, February 6, 2006). The township is presently seeking clarification by the state if its application for re-establishment as a Town Center, including the Finninger Farm property, can be approved by March 15, 2006.

At present, the CAFRA impervious cover limit on the site is the existing lot coverage. The existing impervious cover at the site is approximately 60 acres, or about 45 percent. If the expired Town Center designation is not re-established for the interim period, there would be no available space for additional impervious cover and the cooling towers cannot be built on the site. Both the cooling tower site and the Finninger Farm property will revert to a CAFRA Coastal Fringe Planning Area designation. The impervious cover limit on the cooling tower site would remain the existing lot coverage and the CAFRA impervious cover limit on Finninger Farm would be between 3 percent and 5 percent with associated vegetation preservation and planting requirements.³

If the Town Center designation is re-established by March 15, 2006, the CAFRA impervious cover limit at the site and on Finninger Farm would be 70 percent during the interim period. At a meeting with LURP, on December 13, 2005, NJDEP said that there is no guidance as to what LURP will do if reviews of CAFRA permit applications for future development are not completed before March 2007 and allowable impervious cover limits are reduced. If a CAFRA permit increasing impervious cover to 70 percent is issued during the interim period for activities other than the cooling towers, it might be possible to request a permit modification to change the activities and impervious surface geometry for cooling towers. Alternatively, a new CAFRA permit might be needed. It is not known if a new permit would allow increased impervious cover beyond the existing cover.

The CAFRA impervious cover limit is a fatal flaw if the Town Center designation is not re-established by March 15, 2006. If the Town Center designation is re-established by March 15, 2006, URS believes the impervious cover limit remains a potential fatal flaw and could increase the cost estimate.

5.3.2.2 Waterfront Development Permit

Within the CAFRA area, tidal waters and lands up to and including the mean high waterline are also regulated under the Waterfront Development Law. Any disturbances of the tidally-influenced intake and discharge channels may be exempt because these waterways are artificially constructed. At this time, URS does not expect that this waterway would be disturbed. However, this could change. A determination of the applicability of the rules governing Waterfront Development permits would need to be made for related structures.

5.3.2.3 CZM Rules

Exelon would need to certify that construction related to a cooling tower and related structures, and their operation, are consistent with New Jersey's CZM rules. While the rules themselves do not specifically refer to cooling towers, their construction and operation would fall under rules related to actions and uses affecting the coastal zone. Based on current conceptual plans for the construction and operation of the proposed project, the CZM rules pertaining to these specific topics must be addressed in the CZM Consistency Statement, which must be certified by Exelon and submitted to NJDEP:

- Filled water's edge
- Wetlands
- Wetlands buffers
- Historic and archaeological resources
- Endangered or threatened wildlife or plant species habitats
- Critical wildlife habitats
- Pinelands National Reserve and Pinelands Protection Area
- Impervious Cover Limits and Vegetative Cover Percentages in the CAFRA Area
- Energy facility use rule
- Water quality
- Surface water use
- Groundwater use
- Stormwater management
- Vegetation
- Air quality
- Scenic resources and design
- Traffic

URS believes endangered or threatened wildlife or plant species habitats, and impervious cover limits in the CAFRA area, are issues that are potentially fatal flaws and can increase the cost estimate.

5.3.2.4 Coastal Wetlands

Coastal (or Tidal) Wetlands permits are required for all activities in coastal wetlands delineated and mapped by NJDEP pursuant to the Wetlands Act of 1970. This Act defines coastal wetlands, in part, as a bank subject to tidal action upon which certain plant species are capable of growing (N.J.S.A. 13:9A-2). N.J.A.C. 7:7E-3.28 establishes a buffer of up to 300 feet adjacent to coastal wetlands.

An examination of Tidelands Sheets 357-2124 (Middle Branch West) and 357-2130 (Middle Branch) identify the margins of the intake canal and the Forked River as upland/wetland boundaries. The bank of the intake canal at the project site consists of riprap and concrete and is not a coastal wetland. However, a formal determination by the NJDEP that the canal margins are not coastal wetlands and that a buffer does not apply should be made.

5.3.3 Freshwater Wetlands, Transition Areas, State Open Waters, and Deed Restrictions

Birdsall Engineering, Inc. conducted a wetland delineation on the site, in accordance with the Freshwater Protection Act Rules (N.J.A.C. 7:7A), in late 2003 or early 2004. Although NJDEP issued a CAFRA permit and a Transition Area Waiver to AmerGen (December 1, 2004) based on plans depicting this delineation, NJDEP is currently questioning the validity of the delineated upland/wetland boundaries and transition areas (wetland buffers) because a Letter of Interpretation (LOI) from NJDEP was never issued.

As a condition of the CAFRA permit, AmerGen was required to file deed restrictions for wetlands and transition areas. In October 2005, AmerGen recorded conservation restrictions approved by NJDEP with the Ocean County Clerk. Regulated activities are not permitted in these areas unless there is a compelling public need greater than the need to protect the areas and the activity has no practicable alternative with less adverse environmental impacts.

Any unavoidable, permanent and temporary, disturbances of wetlands and transition areas on the site would require a Freshwater Wetlands Permit and Transition Area Waiver issued through LURP. Since the original wetland delineation did not receive an LOI from NJDEP, a new wetland delineation and transition area determination would need to be undertaken to acquire an LOI prior to applying for a Freshwater Wetlands Permit and Transition Area Waiver.

Estuaries and streams, whether natural or artificial, are waters of the State and all waters of the State are State open waters (N.J.A.C. 7:7A-1.4). Regulated activities in State open waters are under the jurisdiction of the Freshwater Wetlands Protection Act, except for non-delegable State open waters, which are subject to the Waterfront Development Law (N.J.A.C. 7:7A-2.2). The intake canal is a non-delegable waterway (see Section 5.3.1). See Section 5.2.2 for a discussion of the applicability of the Waterfront Development Law.

5.3.4 Noise

See Section 5.1.2 (Noise).

5.3.5 Uniform Construction Code

All construction of structures at electrical generating stations in the state must submit plans to the DCA for review and release. The DCA has the responsibility to enforce the New Jersey Uniform Construction Code (UCC). The UCC includes subcodes for building construction, electrical construction, fire protection, plumbing, fuel gas installations, mechanical installations, accessible construction, and the rehabilitation of existing buildings. Once a DCA release is issued, Lacey Township can issue appropriate permits and conduct inspections prior to construction.

5.4 FEDERAL REGULATIONS

OCGS would be required to satisfy the requirements of Federal regulations promulgated by the United States Army Corps of Engineers (USACE) and USEPA. This section discusses the USACE permits that might be needed and the applicable USEPA Clean Water Act Section 316(b) Phase II requirements OCGS must achieve with the installation of cooling towers.

5.4.1 U.S. Army Corps of Engineers

Under Section 10 of the Rivers and Harbors Act of 1899, USACE regulates activities that affect navigable waters of the US. These include activities outside the limits of navigable waters that affect them. The

lower two miles of Forked River are considered navigable waters by USACE. It is not clear if the intake canal is considered a navigable waterway. A jurisdictional determination would need to be made by USACE whether proposed activities affect navigable waters and require a Section 10 permit.

Under Section 404 of the Clean Water Act, USACE also regulates the discharge of dredged or fill material into waters of the US. These include wetlands. While the State of New Jersey has assumed the Federal Section 404 program, USACE still retains jurisdiction of "non-delegable waters", which include all tidal waters shoreward to the mean high water mark and all wetlands partially or totally within 1000 feet of mean high tide. A jurisdictional determination would need to be made by USACE whether the intake canal are waters of the US and if the activities proposed to encroach wetlands within 1000 feet of the intake canal require a Section 404 permit.

5.4.2 U.S. Environmental Protection Agency

NJDEP is delegated the authority to implement the final Clean Water Act Section 316(b) Phase II USEPA regulations through NJPDES permits. The national performance standards that must be achieved are a reduction in impingement mortality for all life stages of fish and shellfish by 80 to 95 percent and a reduction in entrainment for all life stages of fish and shellfish by 60 to 90 percent.

While a closed-cycle recirculating cooling tower system is a technology USEPA has determined always achieves the national performance standards, USEPA allows facilities to demonstrate compliance with existing and/or future design and construction technologies and operational measures.

In accordance with the Rule, if recirculating cooling towers are installed at OCGS (Compliance Alternative 1i) the station has met the requirements of the Rule. Recirculating systems usually achieve a flow reduction on the order of 90 to 95 percent. However, the flow reduction from 980,000 gpm (the existing once-through system accounting for flow reductions) to 280,000 gpm (new closed-cycle system) is 71.4 percent, which is less of a reduction than what would be expected from a closed-cycle cooling system.

With an efficacy of 71.4 percent, the national performance standard for entrainment (60 to 90 percent reduction) is achieved strictly by flow reduction with cooling towers, but it is questionable if the standard for impingement mortality (80 to 95 percent reduction) would be achieved. For the protection of impingeable organisms at the circulating water system intake structure, the traveling screens at the intake were previously upgraded with modified Ristroph screens and an improved marine life handling system. This system is the best technology available (BTA). Although the total reduction in impingement mortality at the circulating water intake after the installation of cooling towers (that is, the reductions from the existing system plus cooling towers) may approach zero, the reductions attributable to the cooling towers alone would be very small and change existing conditions little. There are no screens at the dilution/bypass water intake structure and, therefore, no impingement controls. Flow reductions from cooling towers would decrease flow 50 percent at the dilution pumps with a concurrent reduction in the pass-through of impingeable-size organisms.

In summary, the existing circulating water system already achieves BTA for the reduction of impingement mortality and there would be a very small improvement in reducing the mortality of impingeable-size organisms. The national performance standard for impingement mortality (80 to 95 percent reduction) of impingeable-size organisms might not be achieved with the selected conceptual model.

USEPA views entrainment reduction as directly related to flow reduction, and, while rates of impingement are not as directly attributable to water withdrawal rates as entrainment, the Rule preamble (69 FR 41612, col. 2) states: *"EPA agrees that reducing intake by installing flow reduction technologies will result in a similarly high reduction of impinged and entrained organisms..."*

With the existing plant configuration, OCGS achieves, or nearly achieves, the national performance standards for entrainment through Compliance Alternative 5. Cooling towers would not enable OCGS

to comply with the Rule any more effectively and efficiently than it does at present. Consequently, there would be very little to be gained by installing cooling towers. In spite of new technologies that have evolved since 1994, the analysis conducted in this report confirms the conclusions of studies conducted in support of the 1994 NJPDES permit that cooling towers are not an effective option at OCGS.

OCGS will comply with the USEPA Phase II Rule by optimizing the existing system to achieve the greatest efficacy as practicable with Compliance Alternative 5. The major means of reducing entrainment at OCGS is from the operation of the dilution pumps that have a great efficacy for entrainment survival. Entrainment, and impingement mortality, will be reduced by implementing operational controls/flow reduction at the dilution pumps. Performing habitat restoration actions will provide an additional margin for meeting the objectives of the Phase II Rule.

5.5 ADDITIONAL UNKNOWN ENVIRONMENTAL CONCERNS

There are other environmental issues not covered in the preceding discussions. These issues bring with them uncertainties regarding scope, cost, impact, and hindrance to obtaining permits and approvals. Some of these issues are:

- The zoning ordinance of Lacey Township identifies a "historic district" about one mile north of the intake canal. This district is not listed on the National or New Jersey Registers of Historic Places. However, it may be eligible for listing. If so, the visual impacts of the cooling towers to this district might need to be assessed and the public response to finding an adverse impact is unknown.
- Previous rare, threatened and endangered species (RTE) surveys suggest that habitat suitable for state threatened animal species (Pine Barrens tree frog, northern pine snake, wood turtle, barred owl, and Cooper's hawk) and rare wetland plant species (New Jersey rush, Pine Barrens boneset, curly grass fern) may occur on-site (Wildlife Habitat Council, 2005). RTE species and habitat assessments would need to be conducted and the constraints imposed by the identification of on-site RTE species or critical habitats are unknown.
- The U.S. Fish and Wildlife Service manages the Edwin B. Forsythe National Wildlife Refuge. The open land east of and immediately adjacent to Eno's Pond County Park in Lacey Township, about two miles northeast of the proposed cooling towers, is part of the Barnegat Division of the Refuge. The potential impact of cooling tower emissions to the vegetation and wildlife of the nearby Refuge is unknown.

5.6 REGULATORY REVIEW TIME AND SCHEDULE

Jurisdictional and permit review times vary with each type of application. Time frames in the cooling tower project schedule include application preparation (including technical support studies), administrative review for application completeness, and technical agency review of administratively complete applications. Temporal limitations would be placed on the field work related to wetlands and RTE surveys. At the minimum, these permits or activities would be necessary:

- CAFRA permit
- Waterfront Development jurisdictional determination
- CZM Consistency Statement
- Coastal Wetlands jurisdictional determination
- Letter of Interpretation (freshwater wetlands and transition areas)
- Section 10 and Section 404 jurisdictional determination from USACE

- Nonconforming land use variance
- Fence variance
- Public hearings
- Air quality PSD preconstruction permit
- Air quality minor source preconstruction permit
- Sediment Erosion and Sediment Control Plan approval
- NJPDES permit for stormwater discharges from construction activities
- DCA release

The regulatory process will involve coordination and agreement amongst various divisions and bureaus of these entities:

- Lacey Township
- Ocean Township
- New Jersey Department of Environmental Protection
- New Jersey Department of Community Affairs
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- National Marine Fisheries Service
- National Park Service
- Nuclear Regulatory Commission
- Ocean County Planning Board
- Ocean County Soil Conservation District

Permits and approvals must be issued before construction can begin. Some permits require prior approval by other regulatory entities. For example, USACE permits require an NJDEP determination that the project is consistent with New Jersey's CZM rules. The first regulatory action that must be obtained is USNRC relicensing of OCGS. Considering the environmental regulatory issues that surround the towers, URS expects that at least two years must be allowed for regulatory approvals. Construction would be a minimum of three years. A closed-cycle cooling system at OCGS would not be likely to be operational until 2012 to 2014 (at the earliest).

This study evaluated the applicability of cooling towers as a Clean Water Act Section 316(b) Phase II Rule compliance technology for OCGS. A thorough examination of the best technologies available, and applicable within constraints unique to OCGS, indicates that there is no measurable gain in installing cooling towers (see Section 5.4.2). OCGS currently achieves, or nearly achieves, the national performance standards for entrainment reduction and cooling towers do little to improve upon that. Though OCGS would comply with the Rule if it installs cooling towers, it would not achieve a biological efficacy of reductions in impingement mortality that is the intent of the Rule. Any benefit of cooling towers would be offset by numerous disadvantages.

In addition, cooling towers at OCGS might not be able to be permitted and the cost would be greater than USEPA costs by a factor of 8.9 to 10.1. The applicable standard for assessing the costs of compliance with the Phase II Rule is whether the costs are "significantly greater" than USEPA costs (not whether such costs are "wholly disproportionate"). In this case, the costs are both significantly greater and wholly disproportionate.

The factors that lead us to conclude that cooling towers are unlikely to be available at OCGS are:

- CAFRA impervious surface cover limits might not be met.
- PSD ambient air quality particulate matter increments, NAAQS, and NJAAQS might not be met.
- More stringent Class I area PSD requirements would need to be met at the Brigantine National Wildlife Refuge.
- Increased air emissions at fossil-fuel fired plants replacing the lost generation at OCGS.
- Increased once-through cooling water usage at fossil-fuel fired plants replacing the lost generation at OCGS.
- The current facility is a nonconforming use. Visual, noise, and traffic impacts might prevent this project from receiving Lacey Township variances.
- There would be a very small improvement in reducing the mortality of impingeable-size organisms. The national performance standard for impingement mortality (80 to 95 percent reduction) of impingeable-size organisms might not be achieved.
- Additional flow reduction and entrainment reduction would be less (71.4 percent) with cooling towers than what would be expected from a closed-cycle cooling system (90 to 95 percent). Compared to the current plant configuration, cooling towers would not enable OCGS to comply with the Rule any more effectively and efficiently than it does at present.
- Costs are both significantly greater than and wholly disproportionate to USEPA costs.

Furthermore, the installation of cooling towers at OCGS is an instance where a technology may be possible, but its actual implementation is not practicable. In addition to the major factors of unavailability listed above, there are other matters of construction logistics and practicality that should be considered. Since OCGS was not originally designed to accommodate cooling towers, their construction would require extensive modifications to existing systems and structures to retrofit the current plant design to adopt the cooling tower technology. For example, the relining of the existing cooling water system flumes would be a very difficult procedure that would involve welding in very confined spaces; the placement of the massive 12-foot diameter underground conduits would entail maneuvering in and around complex systems of existing underground electrical wiring and pipelines while providing extensive dewatering; and the removal and replacement of massive water boxes would involve demolition, scaffolding, additional radiation controls, and heavy lift equipment within the existing turbine building.

URS has concluded that the best cooling tower technology available at OCGS to reduce consumptive water use, and effectively eliminate a visible plume and ground fog, is a recirculating closed-cycle cooling system with two multi-cell mechanical hybrid fiberglass cooling towers arranged in two rows.

Considering the regulatory issues that must be resolved prior to construction (if environmental permitting of such a structure is even possible), and the complexity of construction, the time to implement a cooling tower alternative at OCGS would be extremely lengthy. The construction of this system is not warranted and, because it might not be able to be permitted, is effectively unavailable under the Phase II 316(b) Rule. Moreover, the costs associated with retrofitting the plant to construct and operate a cooling tower system is wholly disproportionate to and significantly greater than USEPA's presumed costs.

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TABLES

Table 1

**Comparison of Potential Cooling Towers Systems
for Oyster Creek Generating Station**

Item	Linear Mechanical Draft	Round Mechanical Draft	Natural Draft	Dry Air-Cooled Condenser	Linear ¹ Hybrid
Cost	base	2 x base	minimum of 2.5 x base	6 x base	2 to 3 x base
Constructability	base	longer	much longer	much longer	longer
Water Use	base	base	slightly less	none	less
Land Area	base	slightly more	slightly more	much more	base
Ground Fog	yes	yes	less	none	controlled to none
Noise Without Added Silencing	base	slightly less	slightly less	more	slightly more
Summer Season Steam Turbine Power	base	base	base	much lower	base
Average Season Steam Turbine Output	base	base	slightly higher	slightly lower	close to base
Tower Power Consumption	base	slightly less	none	slightly more	slightly more
Circulation Water Power Use	base	base	base	none	slightly more
Elevation to Top of Tower	62 feet	62 feet	600 feet	130 feet	80 feet
Water Treatment	base	base	base	none	base
Consumptive Water Use	base	base	slightly lower	none	lower
Cycles of Concentration	base	base	base	not applicable	base

¹ Round hybrid design not offered by vendors.

Table 2

**Summary of Net Power Reduction
for Oyster Creek Generating Station**

Item	Units	Notes	Winter	Spring	Summer	Fall	Winter Capacity	Summer Capacity
Ambient conditions								
Ambient Dry Bulb	°F	1	36.0	50.0	72.1	57.7	20.0	87.0
Ambient Wet bulb	°F	1	31.4	44.2	62.0	49.8	17.1	77.0
LP STG output with once-through cooling								
Inlet cooling water temperature	°F	2,9	39.9	55.0	79.0	62.0	34.9	83.7
Exhaust Back Pressure	In Hg A	9	0.928	1.163	2.295	1.421	0.805	2.615
Net LP Steam Turbine Output	kW	3	404,837	404,954	387,683	403,321	404,710	380,065
Circulating Water Pump Load	kW	4	2,663	3,551	3,551	3,551	2,663	3,551
Dilution Pump Load	kW	4	2,676	2,676	2,676	2,676	2,676	2,676
Net Plant output	kW		399,498	398,727	381,456	397,094	399,371	373,838
LP STG output with hybrid cooling towers								
Mode of Operation			Wet -Dry	Wet -Dry	Wet	Wet -Dry	Wet -Dry	Wet
Inlet cooling water temperature	°F	9	77.2	82.8	76.9	85.5	70.7	86.1
Exhaust Back Pressure	In Hg A	9	2.185	2.555	2.162	2.747	1.819	2.793
Net LP Steam Turbine Output	kW	3	390,161	381,722	390,708	377,137	397,733	376,061
Cooling Tower Fan Load	kW		6,823	6,840	6,398	6,837	6,785	6,391
Circulating Water Lift Pump	kW	5	8,955	8,955	8,955	8,955	8,955	8,955
Circulating Water Pump Load	kW	6	5,970	5,970	5,970	5,970	5,970	5,970
Dilution Pump Load	kW	8	1,338	1,338	1,338	1,338	1,338	1,338
Make-up Water Pump		7	204	234	252	322	169	346
Net Plant output	kW		366,872	358,385	367,795	353,715	374,516	353,061
Net loss in output	kW		32,626	40,342	13,661	43,379	24,854	20,777

Notes**Rev 00 January 16, 2006**

- 1 Ambient temp from NOAA data for Atlantic City
- 2 Intake temp Oyster Creek daily recordings from July, 1984 through Jan 2000
- 3 LP turbine output calculated from Thermoflow's GTMaster simulation program set to for a GE six flow 38 inch LRB exhaust end.
- 4 Pump operating characteristics from Pump Flow History Rev 5, 1994 to 2003
- 5 Cooling Tower Lift Head **75** feet
- 6 Circulation Pump head **50** feet
- 7 Make-up Water Pump head **100** feet
- 8 One dilution pump operating with hybrid cooling tower

Rev 01 February 20, 2006

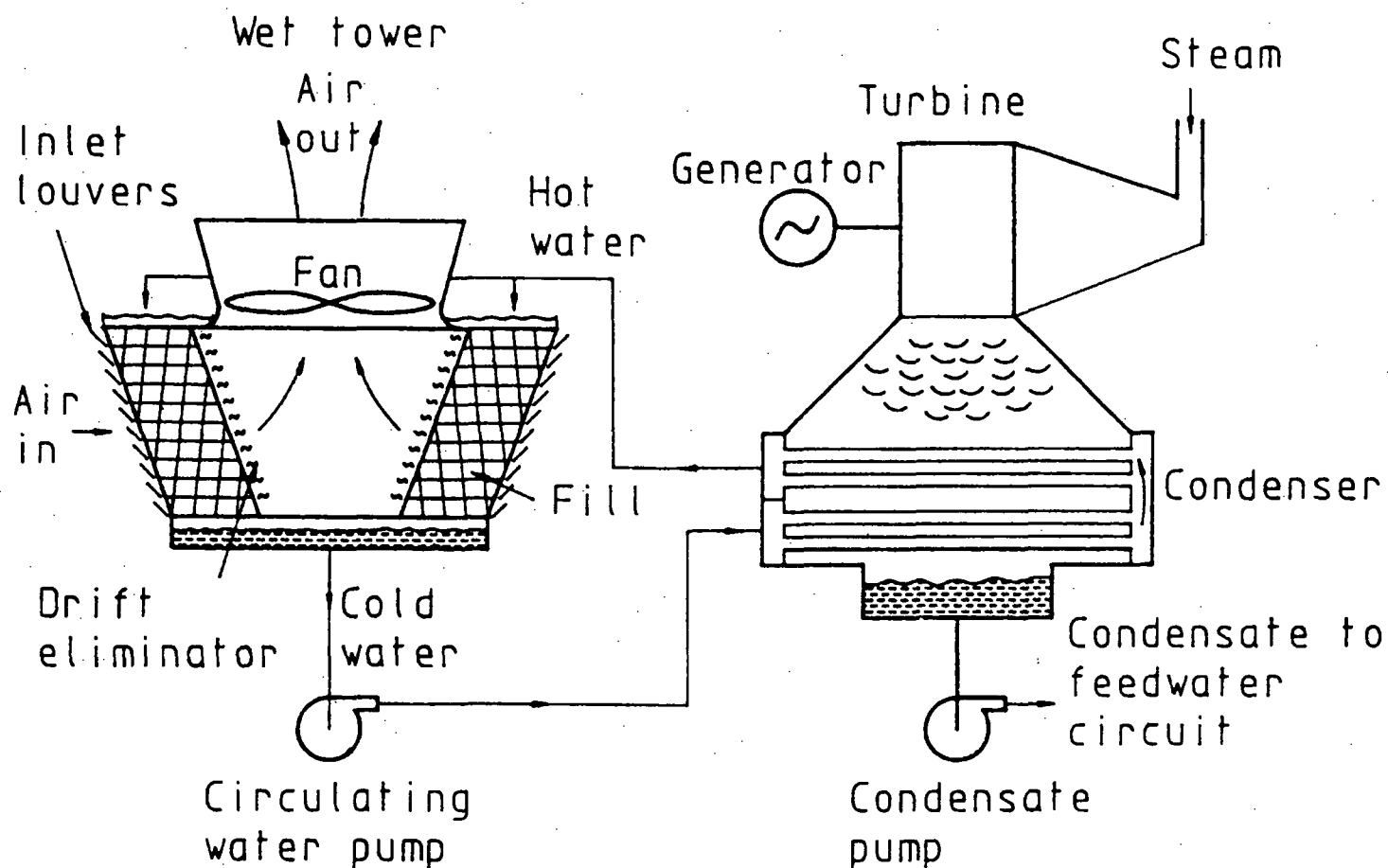
- 9 Added back pressure and inlet cooling water references

Table 3

**Summary of Estimated Capital and Operating Costs
for Oyster Creek Generating Station**

Item	Effective Period	First Year Cost	Labor	Material	Lost Revenue	Added Cost	Total Cost Range	
							Low Risk	High Risk
Construction	initial		\$212,195,165	\$150,537,481			\$362,732,645	\$362,732,645
Lost Capacity Revenue	Life time				\$7,086,997		\$7,086,997	\$7,086,997
Lost Energy Revenue	Life time				\$108,431,185		\$108,431,185	\$108,431,185
Lost Capacity during Outage	initial				\$4,311,954		\$4,311,954	\$4,311,954
Lost Energy during Outage	initial				\$80,411,211		\$80,411,211	\$80,411,211
Environmental/Public Relations	initial	\$1,500,000				\$1,500,000	\$1,500,000	\$1,500,000
Added Real Estate Taxes	Life time					\$47,990,738	\$47,990,738	\$47,990,738
Dislocation of Master Plan	initial	\$500,000				\$500,000	\$500,000	\$500,000
Added Security Personnel	Life time	\$1,000,000	\$8,659,266				\$8,659,266	\$8,659,266
Added Operators	Life time	\$900,000	\$7,793,340				\$7,793,340	\$7,793,340
Added Insurance Cost	Life time	\$18,000				\$155,867	\$155,867	\$155,867
Maintenance/Chemicals	Life time	\$36,000		\$311,734		\$10,628,580	\$10,940,313	\$10,940,313
Subtotal							\$640,513,516	\$640,513,516
Risk Factor							\$64,051,352	\$160,128,379
Total							\$704,564,868	\$800,641,895

FIGURES

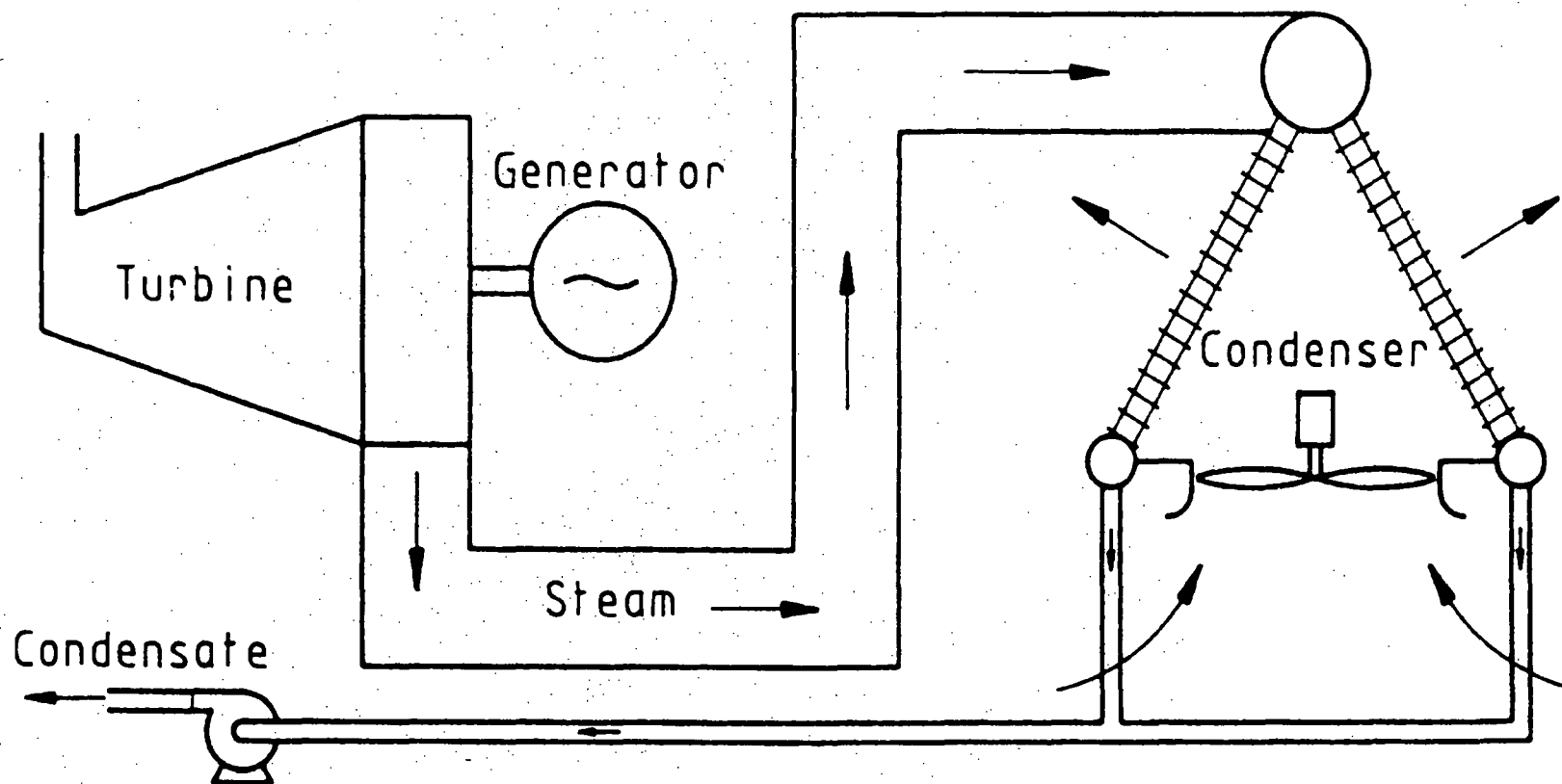


Job No. 19996798

Prepared by: CYC

Date: Feb. 28, 2006

Figure 1
Wet Evaporative Cooling
Determination of Cooling Tower Availability
at Oyster Creek Generating Station

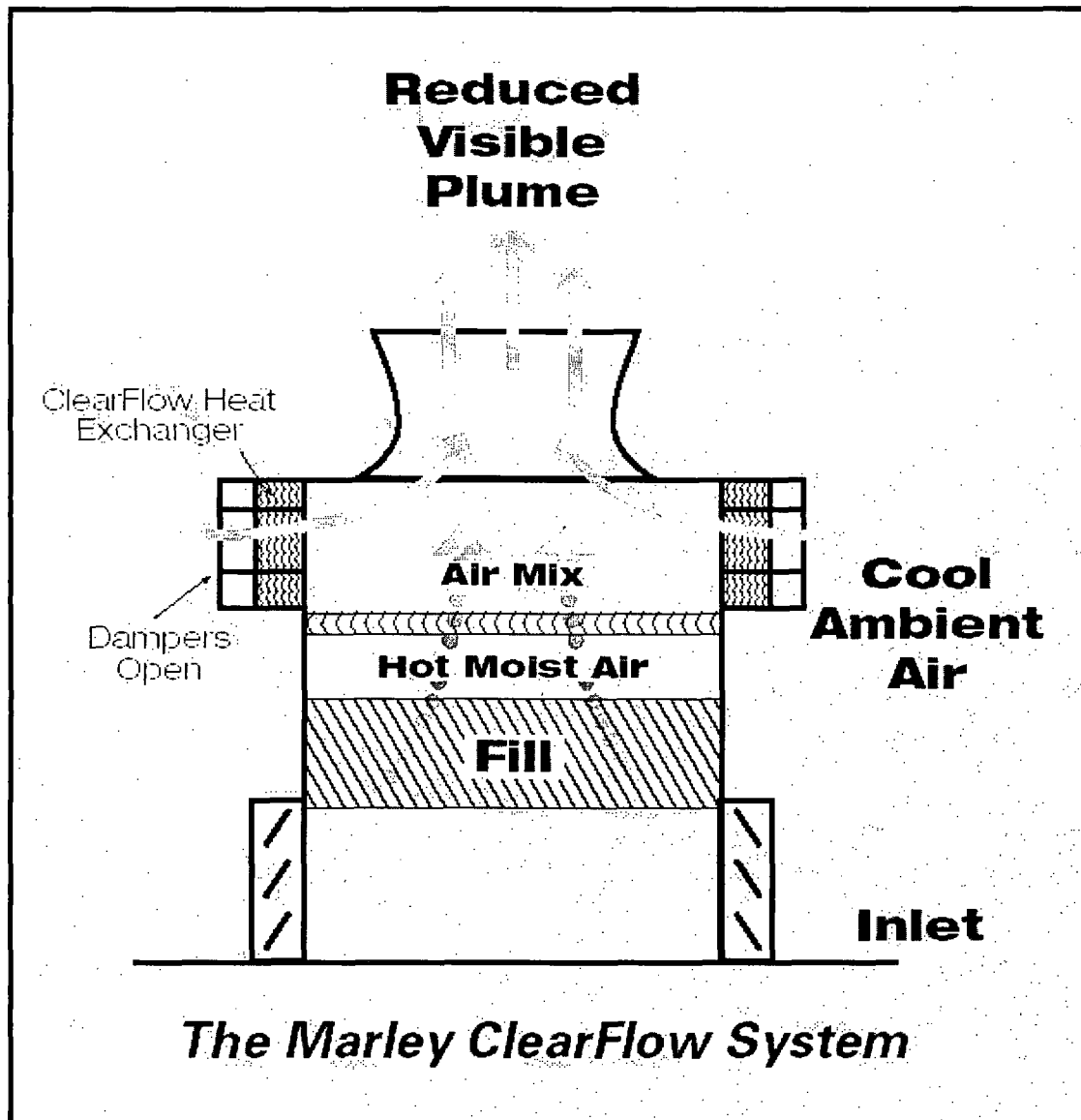


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Date: Feb. 28, 2006

Figure 2
Direct Dry Cooling
Determination of Cooling Tower Availability
at Oyster Creek Generating Station



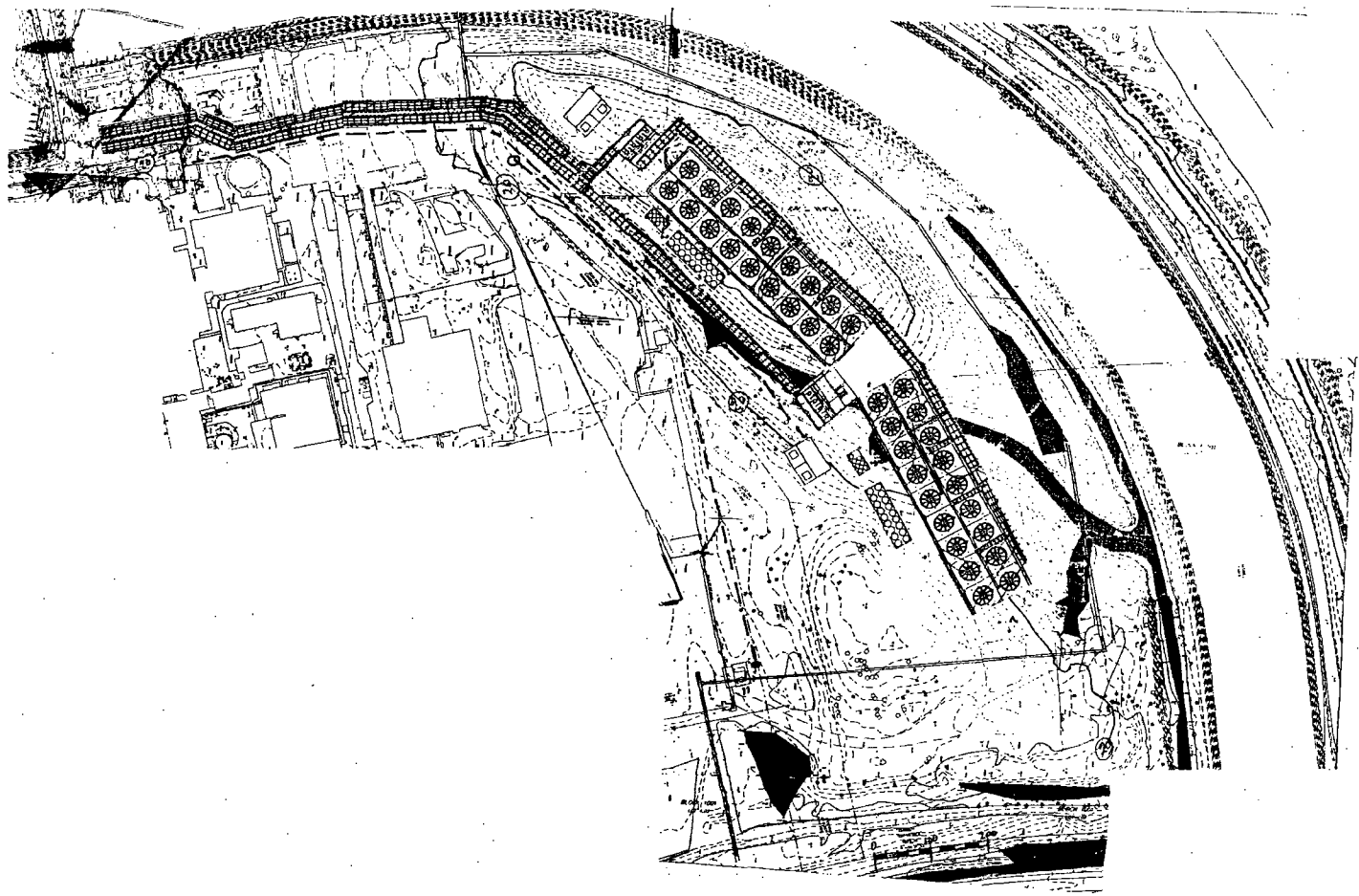
Job No. 19996798

Prepared by: CYC

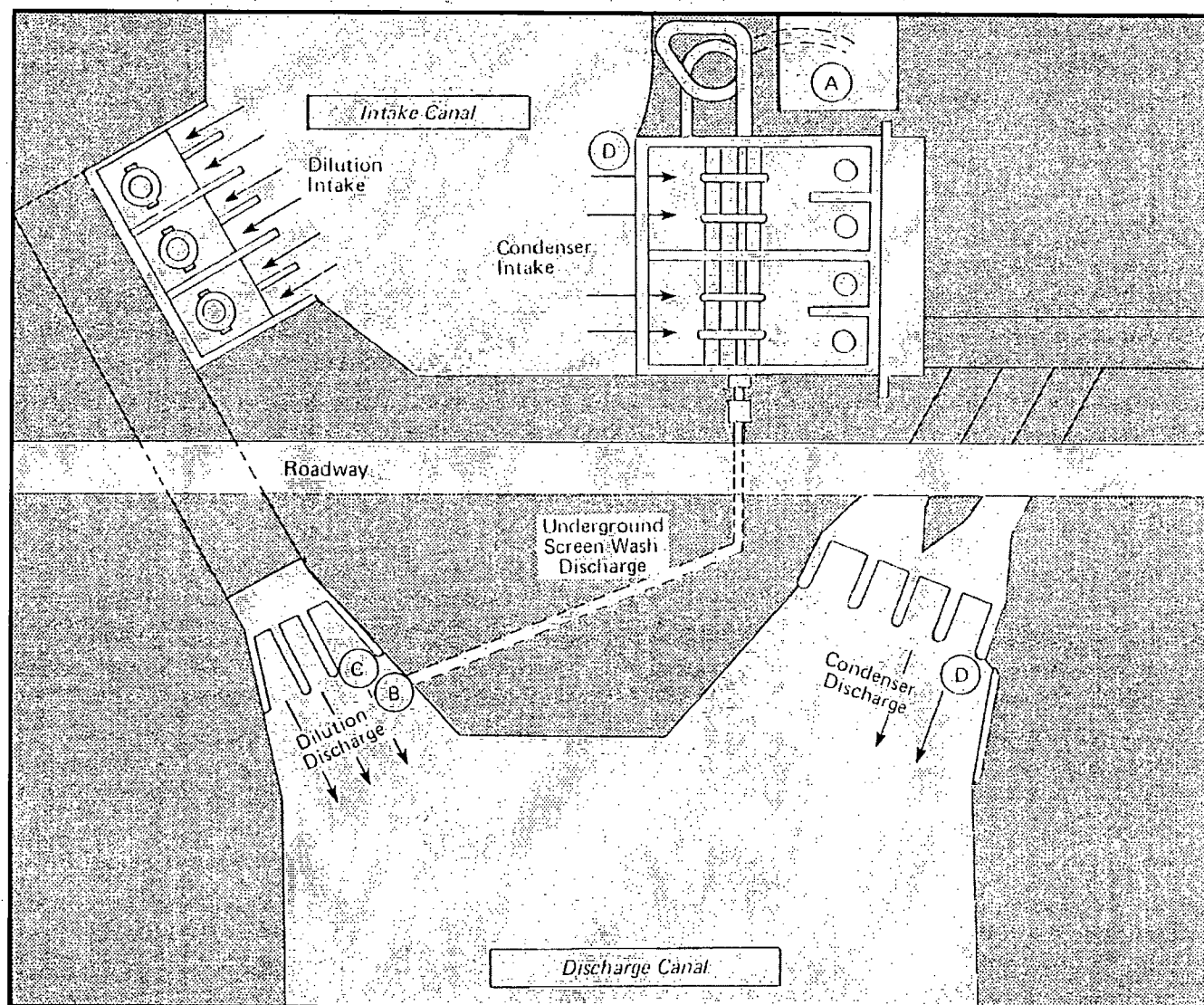
Date: Feb. 28, 2006

Source: Marley (1998)

Figure 3
Hybrid Cooling
Determination of Cooling Tower Availability
at Oyster Creek Generating Station



Job No. 19996798	<p>Figure 4 Conceptual Layout Determination of Cooling Tower Availability at Oyster Creek Generating Station</p>
Prepared by: CYC	
Date: Feb. 28, 2006	



Job No: 19996798

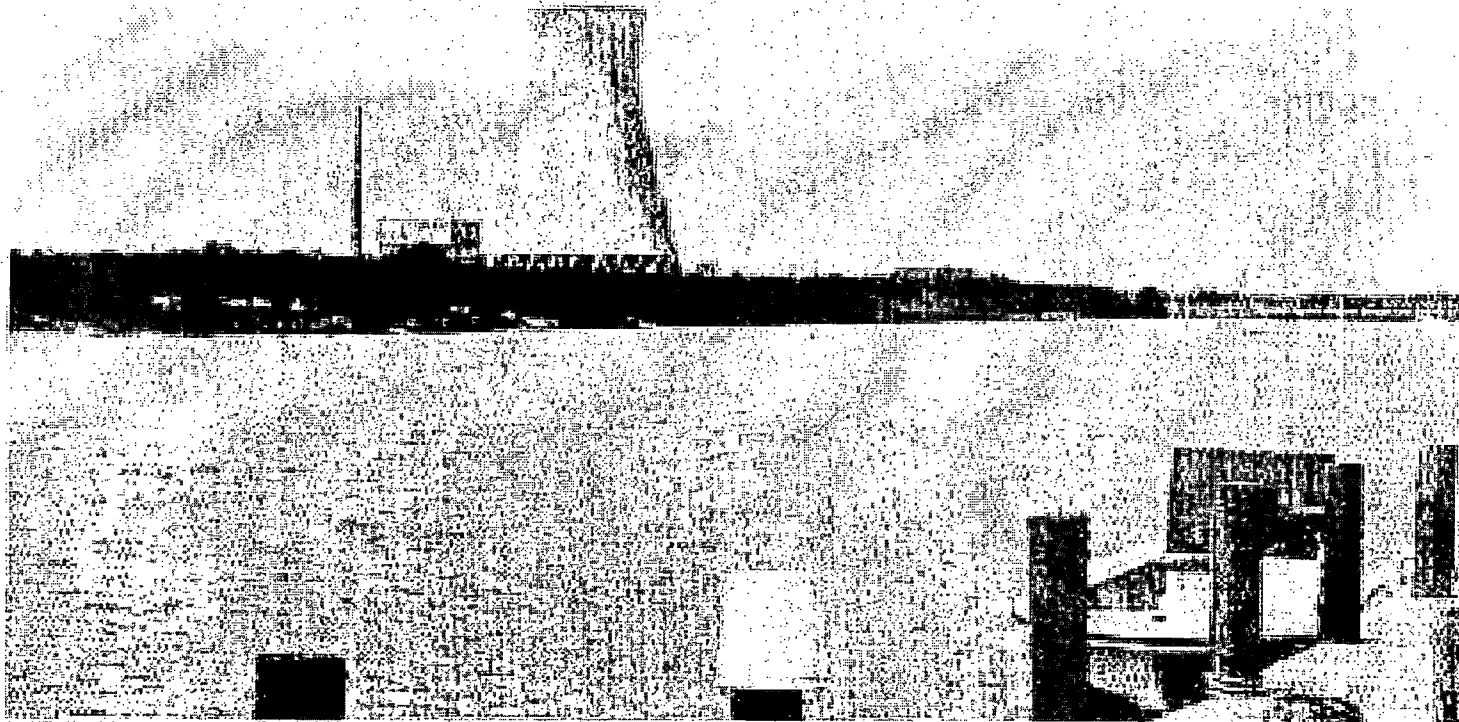
Prepared by: CYC

Date: Feb. 28, 2006

Figure 5
Intake and Discharge of the Circulating Water
System and Dilution/Bypass Water System
Determination of Cooling Tower Availability
at Oyster Creek Generating Station

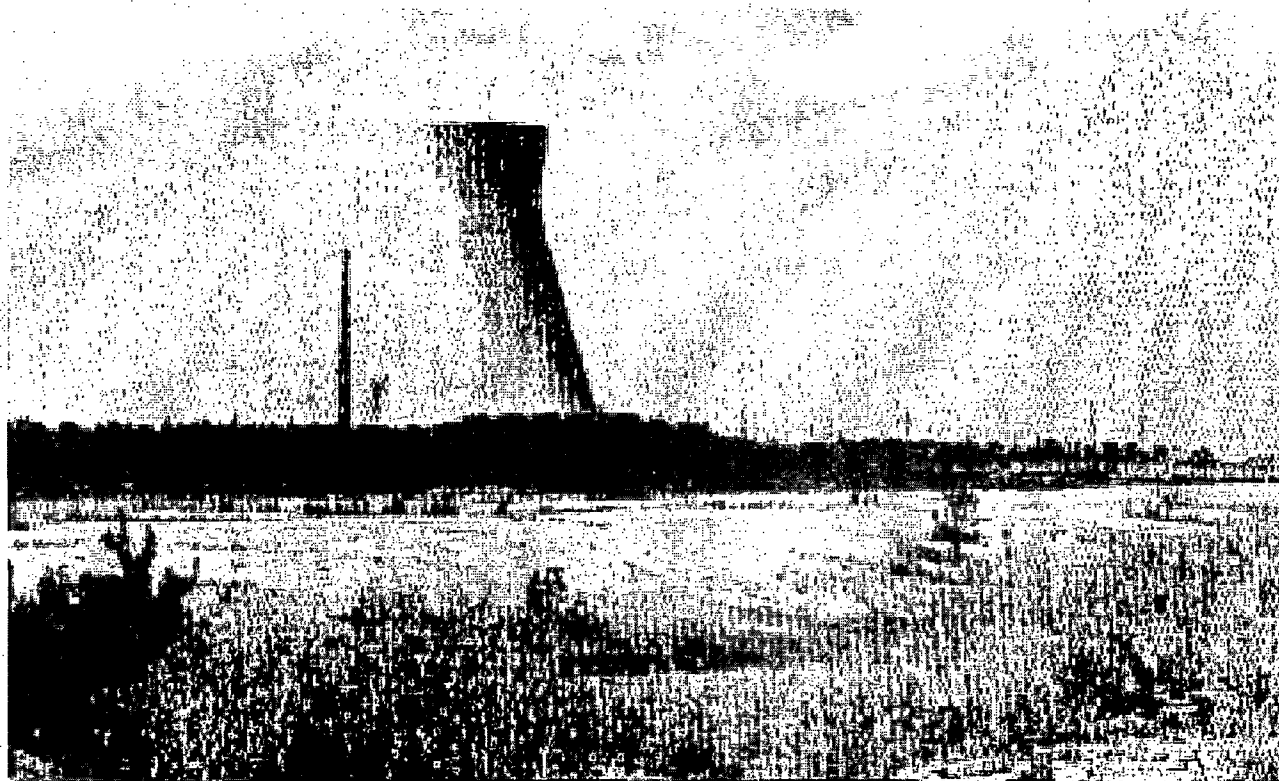
APPENDIX A
EBASCO (1992b) VISUAL ANALYSIS

Appendix A EBASCO (1992b) Visual Analysis



LOCATION No. 6 - VIEW FROM BERMUDA DR. SOUTH OF
NANTUCKET RD.

Appendix A EBASCO (1992b) Visual Analysis



LOCATION No. 7 - VIEW FROM CAPE COD DR. SOUTH OF
NANTUCKET RD.

APPENDIX B
CAPITAL AND OPERATING COST ANALYSIS

Oyster Creek Generating Station Cooling Tower Study Construction Cost Estimate Summary									
Item No.	DESCRIPTION	QUANTITY	Unit of Measure	Labor Unit Cost (\$)	Material / Equipment Unit Cost (\$)	Material / Equipment Cost (\$)	Total Labor Cost (\$)	Total Material Equipment and Labor (\$)	Item Total Cost (\$)
1	<u>SITE PREPARATION</u>								
	Mobilization	1	LM			\$100,000		\$100,000	
	Grub stumps and remove	15	Acres	2975			\$44,625	\$44,625	
	Cut and chip trees up to 24-inch dia.	6	Acres	11100			\$66,600	\$66,600	
	Excavation above elevation 20 ft.	195750	CY	2.92			\$571,590	\$571,590	
	Backfill below elevation 20 feet	168750	CY	1.19			\$200,813	\$200,813	
	Load and haul spoils	25000	CY	15			\$375,000	\$375,000	
	Grading Large Area	72600	SY	0.64			\$46,464	\$46,464	
	ITEM TOTALS					\$100,000	\$1,305,092	\$1,405,092	\$1,405,092
2	<u>EROSION & SEDIMENTATION CONTROL</u>								
	Silt fences	20000	LF	1.09			\$21,800	\$21,800	
	Excavation Retention Ponds	6667	CY	2.92			\$19,467	\$19,467	
	Cut Drainage trenches	2000	CY	2.83			\$5,660	\$5,660	
	Embankment for dams	889	CY	5.9			\$5,244	\$5,244	
	Riprap	419	SF	79.5			\$33,301	\$33,301	
	36-inch Dia CMP Pipe	419	CL	384			\$160,850	\$160,850	
	12-inch Dia CMP Pipe underground	3000	LF	384			\$1,152,000	\$1,152,000	
	Geosyntheics	2000000	SF	3.75			\$7,500,000	\$7,500,000	
	Storm Runoff Culverts	4000	LF	180			\$720,000	\$720,000	
	ITEM TOTALS					\$0	\$9,618,322	\$9,618,322	\$9,618,322
3	<u>RELOCATION EXISTING UTILITIES</u>								
	Security conduits								
	Yard Lightning								
	Telephone								
	Storm Drainage Lines								
	Power supply feeders								
	Computer Cables								
	Fire Protection Lines								
	Hydrants								
	Sewage								
	concrete retention walls								
	sheet pile Shoring temporary / structures								
	Safety Related piping system								
	Service water piping system								
	ESTIMATED ITEM TOTALS					\$3,200,000	\$4,800,000	\$8,000,000	\$8,000,000
4	<u>NEW ELECTRICAL TRANSMISSION LINES</u>								
	Interconnection with Plant Switch yard		U			\$600,000	\$400,000	\$1,000,000	
	480 VOLT Switchgear/MCC Enclosure Makeup Supply					\$1,001,189	\$544,414	\$1,545,603	
	480 VOLT Switchgear/MCC Enclosure Makeup Supply					\$282,338	\$46,666	\$329,004	
	34.5 KV Substation					\$1,238,168	\$326,530	\$1,564,698	
	5 KV Switchgear/MCC Enclosure					\$1,089,502	\$445,303	\$1,534,805	
	Relocation of Overhead 34.5 KV Lines					\$141,402	\$799,674	\$941,076	
	ITEM TOTALS					\$4,352,599	\$2,582,587	\$6,935,186	\$6,935,186
5	<u>RELOCATION OF EXISTING BUILDINGS AND SERVICES IN CT AREA</u>								
	ESTIMATED ITEM TOTALS					\$400,000	\$600,000	\$1,000,000	\$1,000,000
6	<u>CONDENSER WATER BOX UPGRADE</u>								
	Water Box	12	U	Total for 12		\$690,000	\$862,500	\$1,552,500	
	72 Inch Butter fly valves	6	U	72	\$80,974	\$485,844	\$15,000	\$500,844	
	60 Inch Butter fly valves	6	U	60	\$42,354	\$254,124	\$15,000	\$269,124	
	42 Inch Butter fly valves	3	U	42	\$16,820	\$50,460	\$7,500	\$57,960	
	Installation of Water Boxes	12	U			\$0	\$900,000	\$900,000	
	Refurbish CW pipe at Condenser		L	120	.525	\$63,000	\$126,000	\$189,000	
	Removal of knockout wall					\$225,000		\$225,000	
	Removal / Disposal of existing Water Boxes						\$345,000	\$345,000	
	ITEM TOTALS					\$1,768,428	\$2,271,000	\$4,039,428	\$4,039,428
7	<u>TRANSITION FROM FLUMES TO PCCP</u>								
	Concrete Outside Walls	123	CY	180			\$22,080	\$22,080	
	Concrete Front walls	61	CY	500			\$30,667	\$30,667	
	concrete Intermediate walls	92	CY	500			\$45,833	\$45,833	
	Concrete back wall	61	CY	500			\$30,667	\$30,667	
	Concrete top / bottom slab	64	CY	500			\$31,944	\$31,944	
	Concrete Mud Mat	128	CY	500			\$63,889	\$63,889	
	interconnecting Steel pipe and manifold	276	SF	200			\$55,200	\$55,200	
	Man ways	2	U	10000			\$20,000	\$20,000	
	Excavation	1704	CY	25			\$42,593	\$42,593	
	Backfill	639	CY	25			\$15,972	\$15,972	
	Load and haul spoils	1065	CY	20			\$21,296	\$21,296	
	sheet pile temporary	6000	SF	25			\$150,000	\$150,000	
	Dewatering Allowance	100	DAY	2000			\$200,000	\$200,000	
	solution grouting	5556	CY	75			\$416,667	\$416,667	
	Pile foundations	900	LS	315			\$283,500	\$283,500	
	Concrete Pile caps	36	CY	500			\$17,778	\$17,778	
	ITEM TOTALS					\$0	\$1,448,086	\$1,448,086	\$1,448,086

Oyster Creek Generating Station Cooling Tower Study Construction Cost Estimate Summary									
Item No.	DESCRIPTION	QUANTITY	Unit of Measure	Labor Unit Cost (\$)	Material / Equipment Unit Cost (\$)	Material / Equipment Cost (\$)	Total Labor Cost (\$)	Total Material Equipment and Labor (\$)	Item Total Cost (\$)
8	RELINING OF EXISTING CWS FLUMES								
	Cold water supply flume liners	625000	pounds	4.25			\$2,656,250	\$2,656,250	
	Warm Water Return liners	1250000	Pounds	4.25			\$5,312,500	\$5,312,500	
	Wall Inserts & supports	625000	Pounds	4.25			\$2,656,250	\$2,656,250	
	Surface Preparation (sandblasting)	80000	SF	84.25			\$6,740,000	\$6,740,000	
	Reinforced Concrete Plugs	74	CY	500			\$37,037	\$37,037	
	Dewatering Allowance	30	DAYS	2000			\$60,000	\$60,000	
	Ventilation / Illumination	100000	LS \$	1			\$100,000	\$100,000	
	Grouting	42000	SF	8.55			\$359,100	\$359,100	
	Welding	25000	LF	84			\$2,100,000	\$2,100,000	
	ITEM TOTALS					\$0	\$20,021,137	\$20,021,137	\$20,021,137
9	CWS PIPELINES Sta 0 to sta 500								
	Excavation, Trench STA 0 to STA 100	2963	CY	50		\$0	\$148,148	\$148,148	
	Backfill, Trench bedding, Granular	30	CY	50		\$0	\$1,481	\$1,481	
	Backfill, Trench initial, floatable fill	741	CY	150		\$0	\$111,111	\$111,111	
	Backfill, Trench final, on site material	474	CY	50		\$0	\$23,704	\$23,704	
	Excavation, Trench STA 100 to STA 200	1667	CY	40		\$0	\$66,667	\$66,667	
	Backfill, Trench bedding, Granular	30	CY	40		\$0	\$1,185	\$1,185	
	Backfill, Trench initial, floatable fill	741	CY	150		\$0	\$111,111	\$111,111	
	Backfill, Trench final, on site material	67	CY	40		\$0	\$2,667	\$2,667	
	Excavation, Trench STA 200 to STA 500	896	CY	30		\$0	\$26,889	\$26,889	
	Backfill, Trench bedding, Granular	30	CY	30		\$0	\$889	\$889	
	Backfill, Trench initial, floatable fill	474	CY	150		\$0	\$71,111	\$71,111	
	Backfill, Trench final, on site material	7	CY	30		\$0	\$222	\$222	
	Load and haul spoils	133	CY	20		\$0	\$2,667	\$2,667	
	144-inch Dia CW Pipe - Underground PCCP	1000	LF		2149	\$2,149,000	\$0	\$2,149,000	
	Pipeline Epoxy Coatings (10 % x 2)	1000	LF		429.8	\$429,800	\$0	\$429,800	
	Pipeline Installation (25 %)	1000	LF	537.25		\$0	\$537,250	\$537,250	
	Dewatering Allowance	15	DAY		2000	\$30,000	\$0	\$30,000	
	sheet pile Shoring temp Sta 0 to sta 100	9000	SF	15		\$180,000	\$135,000	\$315,000	
	sheet pile Shoring temp Sta 100 to sta 200	7000	SF	15		\$140,000	\$105,000	\$245,000	
	sheet pile Shoring temp Sta 200 to sta 500	15000	SF	15		\$300,000	\$225,000	\$525,000	
	Pile foundations for transition	6000	LS	315			\$1,890,000	\$1,890,000	
	Concrete Pile caps	237	CY	500			\$118,519	\$118,519	
	ITEM TOTALS					\$3,228,800	\$3,578,620	\$6,807,420	\$6,807,420
10	CWS PIPELINES Sta 500 to sta 1000								
	Excavation, trapezoidal Trench	67222	CY	25		\$0	\$1,680,556	\$1,680,556	
	Backfill, Trench bedding, Granular	51	CY	25		\$0	\$1,274	\$1,274	
	Backfill, Trench initial, floatable fill	1289	CY	120		\$0	\$154,738	\$154,738	
	Backfill, Trench final, on site material	522	CY	25		\$0	\$13,056	\$13,056	
	Load and haul spoils	65	CY	25		\$0	\$1,630	\$1,630	
	144-inch Dia CW Pipe - Underground PCCP	1000	LF		1574	\$1,574,000	\$0	\$1,574,000	
	Pipeline Epoxy Coatings (10 % x 2)	1000	LF		314.8	\$314,800	\$0	\$314,800	
	Pipeline Installation (25 %)	1000	LF	393.5		\$0	\$393,500	\$393,500	
	Dewatering Allowance	15	DAY		2000	\$30,000	\$0	\$30,000	
	Anchor Blocks concrete	1157	CY	500			\$578,704	\$578,704	
	ITEM TOTALS					\$1,918,800	\$2,823,456	\$4,742,256	\$4,742,256
11	CWS PIPELINES Sta 1000 to sta 1600								
	Excavation, Trench	39600	CY	25		\$0	\$990,000	\$990,000	
	Backfill, Trench bedding, Granular	27	CY	25		\$0	\$681	\$681	
	Backfill, Trench initial, floatable fill	910	CY	120		\$0	\$109,227	\$109,227	
	Backfill, Trench final, on site material	12	CY	25		\$0	\$300	\$300	
	Load and haul spoils	16	CY	25		\$0	\$389	\$389	
	144-inch Dia CW Pipe - Underground PCCP	600	LF		1574	\$944,400	\$0	\$944,400	
	Pipeline Epoxy Coatings (10 % x 2)	600	LF		314.8	\$188,880	\$0	\$188,880	
	Pipeline Installation (25 %)	600	LF	393.5		\$0	\$236,100	\$236,100	
	Dewatering Allowance	15	DAY		2000	\$30,000	\$0	\$30,000	
	Anchor Blocks concrete	250	CY	500			\$125,000	\$125,000	
	ITEM TOTALS					\$1,163,280	\$1,461,697	\$2,624,977	\$2,624,977
12	CT HEADER PIPE Sta 1000 to sta 1600								
	Excavation, Trench	33778	CY	25		\$0	\$844,444	\$844,444	
	Backfill, Trench bedding, Granular	5	CY	25		\$0	\$130	\$130	
	Backfill, Trench initial, floatable fill	853	CY	120		\$0	\$102,400	\$102,400	
	Backfill, Trench final, on site material	11	CY	25		\$0	\$278	\$278	
	Load and haul spoils	13	CY	25		\$0	\$315	\$315	
	144-inch Dia CW Pipe - Underground PCCP	600	LF		1574	\$944,400	\$0	\$944,400	
	Pipeline Epoxy Coatings (10 % x 2)	600	LF		314.8	\$188,880	\$0	\$188,880	
	Pipeline Installation (25 %)	600	LF	393.5		\$0	\$236,100	\$236,100	
	Dewatering Allowance	15	DAY		2000	\$30,000	\$0	\$30,000	
	Anchor Blocks concrete	250	CY	500			\$125,000	\$125,000	
	ITEM TOTALS					\$1,163,280	\$1,308,867	\$2,471,947	\$2,471,947
13	COOLING TOWER RISERS								
	cooling tower risers (steel pipe)	280800	Pounds	1.75	2.75	\$772,200	\$491,400	\$1,263,600	
	Flow control Valves	36	U	10000		\$360,000		\$360,000	
	Combining Tees allowance	36	U	5000		\$180,000		\$180,000	
	ITEM TOTALS					\$1,312,200	\$491,400	\$1,803,600	\$1,803,600

Oyster Creek Generating Station										
Cooling Tower Study										
Construction Cost Estimate Summary										
Item No.	DESCRIPTION	QUANTITY	Unit of Measure	Labor Unit Cost (\$)	Material / Equipment Unit Cost (\$)	Material / Equipment Cost (\$)	Total Labor Cost (\$)	Total Material Equipment and Labor (\$)	Item Total Cost (\$)	
14	NEW COOLING TOWER PUMP HOUSE									
	Concrete Outside Wall	633	CY	500		\$0	\$316,667	\$316,667		
	Concrete Outside wall	633	CY	500		\$0	\$316,667	\$316,667		
	concrete Intermediate walls	700	CY	500		\$0	\$350,000	\$350,000		
	Concrete back wall	267	CY	500		\$0	\$133,333	\$133,333		
	Concrete bottom slab	2111	CY	500		\$0	\$1,055,556	\$1,055,556		
	Concrete Mud Mat	1689	CY	250		\$0	\$422,222	\$422,222		
	Excavation	19704	CY	25		\$0	\$492,593	\$492,593		
	Backfill	1778	CY	25		\$0	\$44,444	\$44,444		
	Load and haul spoils	17926	CY	25		\$0	\$448,148	\$448,148		
	Dewatering Allowance	30	DAY	2000		\$0	\$60,000	\$60,000		
	CRANE	1	U		100000	\$100,000	\$0	\$100,000		
	Stop Logs	4	U		20000	\$80,000	\$0	\$80,000		
	Handrail	250	LF		50	\$12,500	\$0	\$12,500		
	Grating	4200	SF		45	\$189,000	\$0	\$189,000		
	Pile foundations	6000	LF	315		\$0	\$1,890,000	\$1,890,000		
	Concrete Pile caps	237	CY	500		\$0	\$118,519	\$118,519		
ITEM TOTALS						\$381,500	\$5,648,148	\$6,029,648	\$6,029,648	
15	NEW CT CIRC PUMPS & MOTORS									
	4 CW Pumps 115,000 gpm at 50 ft at 1500 HP each									
	Total CW PUMP Flow is 460000 gpm									
	Calculated using \$ 25 per gpm	4	U	100000	2875000	\$11,500,000	\$400,000	\$11,900,000		
	Pump disch Steel pipe and manifold	233200	pounds	3.25	5.75	\$1,340,900	\$757,900	\$2,098,800		
	Flow control valves 72-inch dia	4	U	60000	\$80,974	\$323,896	\$240,000	\$563,896		
	Decommissioning existing CW pumps									
	115,000 gpm pump/motors	4	U	400,000	\$412,000	\$360,000	\$1,600,000	\$1,960,000		
Electrical switch yard	1	U	650,000	\$167,375	\$146,250	\$650,000	\$796,250			
ITEM TOTALS						\$13,671,046	\$3,647,900	\$17,318,946	\$17,318,946	
16	COOLING TOWER EARTH WORK									
	Excavation Cooling tower basin	42667	CY	25		\$0	\$1,066,667	\$1,066,667		
	Backfill CT basin	1778	CY	25		\$0	\$44,444	\$44,444		
	Load and haul spoils	40889	CY	20		\$0	\$817,778	\$817,778		
ITEM TOTALS						\$0	\$1,928,889	\$1,928,889	\$1,928,889	
17	CT REINFORCED CONCRETE									
	CT basin lateral walls	1280	CY	500		\$0	\$640,000	\$640,000		
	CT basin END walls	107	CY	500		\$0	\$53,333	\$53,333		
	CT basin bottom slab	9600	CY	500		\$0	\$4,800,000	\$4,800,000		
	Pile foundations	72000	LF	315		\$0	\$22,680,000	\$22,680,000		
	Concrete Pile caps	2844	CY	500		\$0	\$1,422,222	\$1,422,222		
ITEM TOTALS						\$0	\$29,595,556	\$29,595,556	\$29,595,556	
18	HYBRID COOLING TOWER									
	Basic Hybrid Tower	1	U		\$21,700,000	\$21,700,000	\$14,700,000	\$36,400,000		
	Lightening protection	1	U		\$1,000,000	\$596,154	\$403,846	\$1,000,000		
	Minimal Sound Suppression	12.5%	%	12.5%	\$2,712,500	\$1,617,067	\$1,095,433	\$2,712,500		
	Fire Suppression	6.0%	%	6.0%	\$1,302,000	\$778,192	\$525,808	\$1,302,000		
ITEM TOTALS						\$24,689,413	\$16,725,087	\$41,414,500	\$41,414,500	
19	MAKEUP & SIDE FILTERS									
	MAKEUP Filter Skids	2	U	750	\$7,800,000	\$7,800,000	\$4,200,000	\$12,000,000		
	Excavation	1852	CY	25		\$0	\$46,296	\$46,296		
	Backfill	30	CY	25		\$0	\$741	\$741		
	Bottom Slab	1067	CY	500		\$0	\$533,333	\$533,333		
	Pile foundations	4800	LF	315		\$0	\$1,512,000	\$1,512,000		
	Concrete Pile caps	24	CY	500		\$0	\$11,852	\$11,852		
	ITEM SUBTOTAL						\$7,800,000	\$6,304,222	\$14,104,222	
	SIDE Filter Skids	2	U	750	\$2,925,000	\$2,925,000	\$1,575,000	\$4,500,000		
	Excavation	533	CY	25		\$0	\$13,333	\$13,333		
	Backfill	15	CY	25		\$0	\$370	\$370		
	Bottom Slab	278	CY	500		\$0	\$138,889	\$138,889		
	Pile foundations	1000	LF	315		\$0	\$315,000	\$315,000		
	Concrete Pile caps	8	CY	500		\$0	\$2,963	\$2,963		
	ITEM SUBTOTAL						\$2,925,000	\$2,045,556	\$4,970,556	
	ITEM TOTALS						\$10,725,000	\$8,349,778	\$19,074,778	\$19,074,778
	20	NEW CWS PUMP HOUSE								
Concrete Outside Wall		844	CY	500		\$0	\$422,222	\$422,222		
Concrete Outside wall		844	CY	500		\$0	\$422,222	\$422,222		
concrete Intermediate walls		700	CY	500		\$0	\$350,000	\$350,000		
Concrete back wall		267	CY	500		\$0	\$133,333	\$133,333		
Concrete bottom slab		2111	CY	500		\$0	\$1,055,556	\$1,055,556		
Concrete Mud Mat		1689	CY	250		\$0	\$422,222	\$422,222		
Excavation		19704	CY	25		\$0	\$492,593	\$492,593		
Backfill		1778	CY	25		\$0	\$44,444	\$44,444		
Load and haul spoils		17926	CY	25		\$0	\$448,148	\$448,148		
Dewatering Allowance		30	DAY	2000		\$0	\$60,000	\$60,000		
CRANE		1	U		100000	\$100,000	\$0	\$100,000		
Stop Logs		4	U		20000	\$80,000	\$0	\$80,000		
Handrail		250	LF		50	\$12,500	\$0	\$12,500		
Grating		4200	SF		45	\$189,000	\$0	\$189,000		
Pile foundations		6000	LF	315		\$0	\$1,890,000	\$1,890,000		
Concrete Pile caps		237	CY	500		\$0	\$118,519	\$118,519		
ITEM TOTALS						\$381,500	\$5,859,259	\$6,240,759	\$6,240,759	

Oyster Creek Generating Station Cooling Tower Study Construction Cost Estimate Summary									
Item No.	DESCRIPTION	QUANTITY	Unit of Measure	Labor Unit Cost (\$)	Material / Equipment Unit Cost (\$)	Material / Equipment Cost (\$)	Total Labor Cost (\$)	Total Material Equipment and Labor (\$)	Item Total Cost (\$)
21	NEW CT LIFT PUMPS & MOTORS								
	4 CTwr Pumps: 115,000 gpm at 75 ft at 2500 HP each								
	Total CTwr Lift Pump Flow is 460000 gpm								
	Calculated using \$ 25 per gpm	4		100000	2875000	\$11,500,000	\$400,000	\$11,900,000	
	Pump disch Steel pipe and manifold	233200	U	3.25	5.75	\$1,340,900	\$757,900	\$2,098,800	
	Flow control valves 72-inch dia	4	U	10000	\$80.974	\$323,896	\$40,000	\$363,896	
	ITEM TOTALS					\$13,164,796	\$1,197,900	\$14,362,696	\$14,362,696
22	CW MAKEUP SYSTEM								
	Dismantle Existing CW pumps	2	U		300000	\$600,000	\$0	\$600,000	
	Dismantle CW Valves and Piping	2	U		150000	\$300,000	\$0	\$300,000	
	Concrete Addition to install MU pump	53	CY	500		\$0	\$26,667	\$26,667	
	30-inch HDPE pipeline	1500	LF	15	85	\$127,500	\$22,500	\$150,000	
	Concrete Supports & anchors	593	CY	500		\$0	\$296,296	\$296,296	
	Excavation, trapezoidal Trench	2047	CY	25		\$0	\$51,181	\$51,181	
	Backfill, Trench bedding, Granular	2	CY	25		\$0	\$44	\$44	
	Backfill, Trench initial, floable fill	20	CY	150		\$0	\$2,986	\$2,986	
	Backfill, Trench final, on site material	13	CY	25		\$0	\$326	\$326	
	Load and haul spoils	2	CY	20		\$0	\$44	\$44	
	ITEM TOTALS					\$1,027,500	\$400,044	\$1,427,544	\$1,427,544
22	NEW CW MAKEUP PUMPS & MOTORS								
	2 Makeup Pumps: 10,000 gpm at 100 ft at 300 HP Each								
	Total CW PUMP Flow is 20,000 gpm								
	Calculated using \$ 30 per gpm	2	LS \$	10200	600000	\$1,200,000	\$20,400	\$1,220,400	
	CW Pump discharge header	32600	pounds	3.25	5.75	\$187,450	\$105,950	\$293,400	
	Pump Discharge Butterfly Valves	2	U	12500	\$16.820	\$33,640	\$25,000	\$58,640	
	Power supply & Controls	2	U		75000	\$150,000	\$0	\$150,000	
	ITEM TOTALS					\$1,571,090	\$151,350	\$1,722,440	\$1,722,440
23	CWS BLOWDOWN SYSTEMS								
	BD Interconnection to CWS PCCP pipeline	114100	pounds	3.25	5.75	\$658,075	\$370,825	\$1,026,900	
	BD Discharge Manifolds	58680	pounds	3.25	5.75	\$337,410	\$190,710	\$528,120	
	Concrete Addition to install BD PIPELINE	356	CY	500		\$0	\$177,778	\$177,778	
	30-inch HDPE pipeline	300	LF	15	85	\$25,500	\$4,500	\$30,000	
	BD control Butterfly Valves	4	U		25000	\$100,000	\$0	\$100,000	
	Excavation, trapezoidal Trench	3412	CY	25		\$0	\$85,301	\$85,301	
	Backfill, Trench bedding, Granular	2	CY	25		\$0	\$44	\$44	
	Backfill, Trench initial, floable fill	20	CY	150		\$0	\$2,986	\$2,986	
	Backfill, Trench final, on site material	13	CY	25		\$0	\$326	\$326	
	Load and haul spoils	2	CY	20		\$0	\$44	\$44	
	ITEM TOTALS					\$1,118,985	\$832,515	\$1,951,500	\$1,951,500
25	ACCESS ROADS, PARKING & LAYDOWN AREAS								
	CT Access Roads								
	Subgrade preparation	2000	SY	1.47		\$0	\$2,940	\$2,940	
	Compact Subgrade	2000	SY	0.78		\$0	\$1,560	\$1,560	
	Geotextile Amoco 2016	2000	SY	0.13	0.82	\$1,640	\$260	\$1,900	
	10" aggregate course - crushed stone	1333	SY	5.71	7.54	\$10,053	\$7,613	\$17,667	
	Binder Course Asphalt 5" thick	1333	SY	7.13	8.9	\$11,867	\$9,507	\$21,373	
	Guide Rail	1200	LF	25.57	5.39	\$6,468	\$30,684	\$37,152	
	ITEM SUBTOTAL					\$30,028	\$52,564	\$82,592	
	Security Fence peripheral Roads								
	Subgrade preparation	15556	SY	1.47		\$0	\$22,867	\$22,867	
	Compact Subgrade	15556	SY	0.78		\$0	\$12,133	\$12,133	
	Geotextile Amoco 2016	12444	SY	0.13	0.82	\$10,204	\$1,618	\$11,822	
	10" aggregate course - crushed stone	12444	SY	5.71	7.54	\$93,831	\$71,058	\$164,889	
	Binder Course Asphalt 5" thick	12444	SY	7.13	8.9	\$110,756	\$88,729	\$199,484	
	Guide Rail	5600	LF	25.57	5.39	\$30,184	\$143,192	\$173,376	
	ITEM SUBTOTAL					\$244,975	\$339,596	\$584,572	
	Parking								
	Subgrade preparation	2500	SY	1.47		\$0	\$3,675	\$3,675	
	Compact Subgrade	2500	SY	0.78		\$0	\$1,950	\$1,950	
	Geotextile Amoco 2016	2167	SY	0.13	0.82	\$1,777	\$262	\$2,039	
	10" aggregate course - crushed stone	2167	SY	5.71	7.54	\$16,337	\$12,372	\$28,708	
	Binder Course Asphalt 2" thick	2167	SY	3.03	3.55	\$7,692	\$6,585	\$14,257	
	ITEM SUBTOTAL					\$25,805	\$24,843	\$50,648	
	Impervious area around CT basin								
	Subgrade preparation	13333	SY	1.47		\$0	\$19,600	\$19,600	
	Compact Subgrade	13333	SY	0.78		\$0	\$10,400	\$10,400	
	10" aggregate course - crushed stone	10667	SY	5.71	7.54	\$80,427	\$60,907	\$141,333	
	Binder Course Asphalt 2" thick	10667	SY	3.03	3.55	\$37,867	\$32,320	\$70,187	
	ITEM SUBTOTAL					\$118,293	\$123,227	\$241,520	
	Lay down Area								
	Subgrade preparation	10000	SY	1.47		\$0	\$14,700	\$14,700	
	Compact Subgrade	10000	SY	0.78		\$0	\$7,800	\$7,800	
	ITEM SUBTOTAL					\$0	\$22,500	\$22,500	
	ITEM TOTALS					\$419,101	\$562,730	\$981,832	\$981,832

Oyster Creek Generating Station Cooling Tower Study Construction Cost Estimate Summary									
Item No.	DESCRIPTION	QUANTITY	Unit of Measure	Labor Unit Cost (\$)	Material / Equipment Unit Cost (\$)	Material / Equipment Cost (\$)	Total Labor Cost (\$)	Total Material Equipment and Labor (\$)	Item Total Cost (\$)
26	CONSTRUCTION TRAILERS								
	ITEM TOTALS	300000				\$300,000		\$300,000	\$300,000
27	SECURITY FENCE								
	ITEM TOTALS	4000	LF		\$2,325,298	\$2,325,298	\$4,518,105	\$6,843,403	\$6,843,403
28	GUARD TOWERS								
	ITEM TOTALS	3	U		\$543,545	\$543,545	\$1,056,119	\$1,599,664	\$1,599,664
27	CATHODIC PROTECTION & ILLUM ALLOWANCE								
	ITEM TOTALS	\$1,000,000	LS			\$400,000	\$600,000	\$1,000,000	\$1,000,000
30	ANCILLARY BUILDINGS								
	ITEM TOTALS	\$1,000,000	LS \$			\$400,000	\$600,000	\$1,000,000	\$1,000,000
31	CHLORINATION SYSTEM								
	ITEM TOTALS	\$500,000	LS \$			\$200,000	\$300,000	\$500,000	\$500,000
32	FIRE PROTECTION SYSTEM								
	ITEM TOTALS	\$3,000,000	LS \$			\$1,200,000	\$1,800,000	\$3,000,000	\$3,000,000
33	ENGINEERING								
	ITEM TOTALS	\$7,500,000	LS \$			\$3,000,000	\$4,500,000	\$7,500,000	\$7,500,000
34	GEOTECHNICAL								
	ITEM TOTALS	\$1,500,000	LS \$			\$600,000	\$900,000	\$1,500,000	\$1,500,000
35	MOBILIZATION								
	ITEM TOTALS	\$2,000,000	LS \$			\$2,000,000		\$2,000,000	\$2,000,000
36	DEMOBILIZATION								
	ITEM TOTALS	\$1,500,000	LS \$			\$1,500,000		\$1,500,000	\$1,500,000
37	QUALITY ASSURANCE								
	ITEM TOTALS	\$1,000,000				\$1,000,000		\$1,000,000	\$1,000,000
38	CONSTRUCTION MANAGEMENT FEE								
	ITEM TOTALS	\$3,250,000				\$3,250,000		\$3,250,000	\$3,250,000
						Material / Equipment Cost (\$)	Total Labor Cost (\$)	Total Material Equipment and Labor (\$)	Item Total Cost (\$)
	DIRECT COST HYBRID COOLING TOWER				\$16,718,843	\$102,476,161	\$141,463,443	\$243,939,604	\$243,939,604
	Contractors Markup on Bulk Materials	15.0%	Due to scarcity and long term delays of materials from world market.			\$15,371,424		\$15,371,424	\$15,371,424
	Construction labor loss of productivity	25.0%	Assumed 2 hours per day for security entrance and prejob/safety briefings				\$35,365,861	\$35,365,861	\$35,365,861
	New Jersey State Sales Tax	6.0%	On Material, including Contractor Mark-up			\$7,070,855		\$7,070,855	\$7,070,855
	Contingency @ 25 %	25.0%	Degree of confidence on estimate of labor and material			\$25,619,040	\$35,365,861	\$60,984,901	\$60,984,901
	TOTAL ESTIMATED COST					\$150,537,481	\$212,195,165	\$362,732,645	\$362,732,645

**Oyster Creek Nuclear Generating Station
Cooling Tower Unavailability Study
10 Year Cost Summary in 2006 Dollars**

	Item	Notes	Effective Period	First Year Cost	Labor	Material	Lost Revenue	Added Cost	Total Cost Range	
									Low Risk	High Risk
1	Construction	1,8	initial		\$212,195,165	\$150,537,481			\$362,732,645	\$362,732,645
2	Lost Capacity Revenue	3	Life time				\$7,086,997		\$7,086,997	\$7,086,997
3	Lost Energy Revenue	3	Life time				\$108,431,185		\$108,431,185	\$108,431,185
4	Lost Capacity during Outage	9	initial				\$4,311,954		\$4,311,954	\$4,311,954
5	Lost Energy during Outage	9	initial				\$80,411,211		\$80,411,211	\$80,411,211
6	Environmental/Public Relations	4	initial	\$1,500,000				\$1,500,000	\$1,500,000	\$1,500,000
7	Added Real Estate Taxes	3	Life time					\$47,990,738	\$47,990,738	\$47,990,738
8	Dislocation of Master Plan	4,8	initial	\$500,000				\$500,000	\$500,000	\$500,000
9	Added Security Personnel	3,7	Life time	\$1,000,000	\$8,659,266				\$8,659,266	\$8,659,266
10	Added Operators	3,7,10	Life time	\$900,000	\$7,793,340				\$7,793,340	\$7,793,340
11	Added Insurance Cost	3,7	Life time	\$18,000				\$155,867	\$155,867	\$155,867
12	Maintenance/Chemicals	3,7,8	Life time	\$36,000		\$311,734		\$10,628,580	\$10,940,313	\$10,940,313
	Subtotal								\$640,513,516	\$640,513,516
	Risk Factor	5							\$64,051,352	\$160,128,379
	Total								\$704,564,868	\$800,641,895

Risk Factor for NRC, EPA, etc. variances, Natural and Labor risks

Low 10.0%

High 25.0%

NPV of ongoing expenses for 10 years and 7% discount factor with inflation of

3.5%

OYSTER CREEK NUCLEAR GENERATING STATION
Forked River, NJ
OYSTER CREEK COOLING TOWER ELECTRICAL COST ESTIMATE

6	DESCRIPTION	QUANTITY	UNIT	EQUIPMENT		PRIMARY MATERIAL		SUBCONTRACTOR		MATERIAL	LABOR HOURS		LABOR COST Note 2			TOTAL COST
				UNIT	TOTAL	UNIT	TOTAL	UNIT	TOTAL		UNIT	TOTAL	RATE	UNIT	TOTAL	
7	480 VOLT Switchgear/MCC Enclosure Makeup Supply															
8	ENCLOSURE - 12 feet by 40 feet	1	EA	\$3,600	\$3,600	\$62,400	\$62,400		\$0	\$66,000	400	400	\$125.00	\$50,000.00	\$50,000	\$116,000
9	HIGH VOLTAGE SWITCH	2	EA	\$0.00	\$0	\$14,100	\$28,200		\$0	\$28,200	0	0	\$125.00	\$0.00	\$0	\$28,200
10	5000 KVA TRANSFORMERS	2	EA	\$0.00	\$0	\$150,000	\$300,000		\$0	\$300,000	0	0	\$125.00	\$0.00	\$0	\$300,000
11	6000 AMPERE MAIN BREAKERS	2	EA	\$0.00	\$0	\$45,000	\$90,000		\$0	\$90,000	0	0	\$125.00	\$0.00	\$0	\$90,000
12	4000 AMPERE TIE BREAKER	1	EA	\$0.00	\$0	\$45,000	\$45,000		\$0	\$45,000	0	0	\$125.00	\$0.00	\$0	\$45,000
13	6000 A SWITCHGEAR	1	EA	\$0.00	\$0	\$8,000	\$8,000		\$0	\$8,000	0	0	\$125.00	\$0.00	\$0	\$8,000
14	SIZE 5 COMBINATION STARTER	36	EA	\$0.00	\$0	\$5,300	\$190,800		\$0	\$190,800	16.00	576	\$125.00	\$2,000.00	\$72,000	\$262,800
15	MCC STRUCTURE	5	EA	\$0.00	\$0	\$2,885	\$14,425		\$0	\$14,425	13.33	67	\$125.00	\$1,666.25	\$8,331	\$22,756
16	100 A CIRCUIT BREAKER	4	EA	\$0.00	\$0	\$738	\$2,952		\$0	\$2,952	4.00	16	\$125.00	\$500.00	\$2,000	\$4,952
17	DISTRIBUTION PANEL, 100 A, 277/480 V	2	EA	\$0.00	\$0	\$760	\$1,520		\$0	\$1,520	15.00	30	\$125.00	\$1,875.00	\$3,750	\$5,270
18	DISTRIBUTION PANEL, 100 A, 120/208 V	2	EA	\$0.00	\$0	\$1,275	\$7,660		\$0	\$7,660	13.33	27	\$125.00	\$1,666.25	\$3,333	\$10,993
19	75 KVA 480V-120/208 TRANSFORMER	2	EA	\$0.00	\$0	\$4,250	\$8,500		\$0	\$8,500	8.00	0	\$125.00	\$1,000.00	\$0	\$8,500
20	CABLE - 500 KCMIL, 3 PH, 600V COPPER, EPR	10800	LF	\$0.00	\$0	\$7.68	\$82,944		\$0	\$82,944	0.120	1296	\$125.00	\$15.00	\$162,000	\$244,944
21	EXCAVATION & BACKFILL	10800	LF	\$0.11	\$1,188	\$0	\$0		\$0	\$1,188	0.180	1944	\$125.00	\$22.50	\$243,000	\$244,188
22	SITE LIGHTING - 700X1100 FT, 3 FC	1	LOT	\$0	\$0	\$0	\$0	\$154,000	\$154,000	\$154,000	0.00	0	\$125.00	\$0.00	\$0	\$154,000
23	Sub total Labor and Material									\$1,001,189					\$544,414	\$1,545,603
24	480 VOLT Switchgear/MCC Enclosure Makeup Supply															
25	ENCLOSURE - 8 feet by 10 feet	1	EA	\$3,600	\$3,600	\$10,400	\$10,400		\$0	\$14,000	200.0	200	\$125.00	\$25,000.00	\$25,000	\$39,000
26	HIGH VOLTAGE SWITCH	2	EA	\$0.00	\$0	\$14,100	\$28,200		\$0	\$28,200	0.0	0	\$125.00	\$0.00	\$0	\$28,200
27	1000 KVA TRANSFORMERS	2	EA	\$0.00	\$0	\$58,588	\$117,176		\$0	\$117,176	0.0	0	\$125.00	\$0.00	\$0	\$117,176
28	1600 AMPERE MAIN BREAKERS	2	EA	\$0.00	\$0	\$14,205	\$28,410		\$0	\$28,410	0.0	0	\$125.00	\$0.00	\$0	\$28,410
29	1600 AMPERE TIE BREAKER	1	EA	\$0.00	\$0	\$14,205	\$14,205		\$0	\$14,205	0.0	0	\$125.00	\$0.00	\$0	\$14,205
30	2000 A SWITCHGEAR	1	EA	\$0.00	\$0	\$3,325	\$3,325		\$0	\$3,325	0.0	0	\$125.00	\$0.00	\$0	\$3,325
31	SIZE 6 COMBINATION STARTER	2	EA	\$0.00	\$0	\$10,900	\$21,800		\$0	\$21,800	20.0	40	\$125.00	\$2,500.00	\$5,000	\$26,800
32	SIZE 8 COMBINATION STARTER	1	EA	\$0.00	\$0	\$50,000	\$50,000		\$0	\$50,000	30.0	30	\$125.00	\$3,750.00	\$3,750	\$53,750
33	MCC STRUCTURE	1	EA	\$0.00	\$0	\$2,885	\$2,885		\$0	\$2,885	13.33	13	\$125.00	\$1,666.25	\$1,666	\$4,551
34	CABLE - 500 KCMIL, 3 PH, 600V COPPER, EPR	300	LF	\$0.00	\$0	\$7.68	\$2,304		\$0	\$2,304	0.120	36	\$125.00	\$15.00	\$4,500	\$6,804
35	EXCAVATION & BACKFILL	300	LF	\$0.11	\$33	\$0.00	\$0		\$0	\$33	0.180	54	\$125.00	\$22.50	\$6,750	\$6,783
36	Sub total Labor and Material									\$282,338					\$46,666	\$329,004
37	34.5 KV Substation															
38	TRANSFORMER 20 MVA 34.5 KV-4.16 KV	2	EA	\$3,616	\$7,232	\$300,000	\$600,000		\$0	\$607,232	272.32	545	\$125.00	\$34,040.00	\$68,080	\$675,312
39	FOUNDATION & AUX EQUIPMENT	50	CY	\$127.05	\$6,353	\$91	\$4,525		\$0	\$10,878	7.498	375	\$125.00	\$937.25	\$46,863	\$57,740
40	PROTECTIVE RELAYING EQUIPMENT	1	LOT	\$0	\$0	\$30,000	\$30,000		\$0	\$30,000	160	160	\$125.00	\$20,000.00	\$20,000	\$50,000
41	RTU	1	EA	\$0	\$0	\$15,000	\$15,000		\$0	\$15,000	80	80	\$125.00	\$10,000	\$10,000	\$25,000
42	GRADING, SITEWORK, GROUNDING, FENCING	1	LOT	\$0	\$0	\$0	\$0	\$30,000	\$30,000	\$30,000	0.00	0	\$125.00	\$0.00	\$0	\$30,000
43	38 KV SWITCHGEAR, IN SWITCHGEAR ENCLOSURE - 2 TRANSFORMER BREAKERS, ONE TIE BREAKER, 2 FEEDER BREAKERS	1	EA	\$3,600	\$3,600	\$450,000	\$450,000		\$0	\$453,600	400.0	400	\$125.00	\$50,000.00	\$50,000	\$503,600
44	34.5 KV CABLE FROM TRANSFORMER TO SWGR, 1-500 kcmil	80	LF	\$0.00	\$0	\$30	\$2,400		\$0	\$2,400	0.2	19	\$125.00	\$30.00	\$2,400	\$4,800
45	TERMINATION, 1 PHASE	12	EA	\$0.00	\$0	\$222	\$2,664		\$0	\$2,664	1.333	78	\$125.00	\$166.63	\$9,688	\$12,352
46	CONDUIT, 4 IN	80	LM	\$0.00	\$0	\$28	\$2,240		\$0	\$2,240	0.400	32	\$125.00	\$50.00	\$4,000	\$6,240
47	34.5 KV CABLE FROM MAIN SUBSTATION TO SWGR, 1-500 kcmil	2800	LF	\$0.00	\$0	\$30	\$84,000		\$0	\$84,000	0.240	672	\$125.00	\$30.00	\$84,000	\$168,000
48	EXCAVATION & BACKFILL	1400	LF	\$0.11	\$154	\$0	\$0		\$0	\$154	0.180	252	\$125.00	\$22.50	\$31,500	\$31,654
49										\$1,238,168					\$326,530	\$1,564,698

OYSTER CREEK NUCLEAR GENERATING STATION
Forked River, NJ
OYSTER CREEK COOLING TOWER ELECTRICAL COST ESTIMATE

DESCRIPTION	QUANTITY	UNIT	EQUIPMENT		PRIMARY MATERIAL		SUBCONTRACTOR		MATERIAL	LABOR HOURS		LABOR COST Note 2			
			UNIT	TOTAL	UNIT	TOTAL	UNIT	TOTAL		UNIT	TOTAL	RATE	UNIT	TOTAL	TOTAL COST
50 5 KV Switchgear/MCC Enclosure															
51 ENCLOSURE - 12 feet by 40 feet	1	EA	\$3,600	\$3,600	\$62,400	\$62,400		\$0	\$66,000	400	400	\$125.00	\$50,000.00	\$50,000	\$116,000
52 HIGH VOLTAGE SWITCH	2	EA	\$0.00	\$0	\$11,200	\$22,400		\$0	\$22,400	0.0	0	\$125.00	\$0.00	\$0	\$22,400
53 1200 AMPERE MAIN BREAKERS	2	EA	\$0.00	\$0	\$30,000	\$60,000		\$0	\$60,000	0.0	0	\$125.00	\$0.00	\$0	\$60,000
54 1200 AMPERE TIE BREAKER	1	EA	\$0.00	\$0	\$30,000	\$30,000		\$0	\$30,000	0.0	0	\$125.00	\$0.00	\$0	\$30,000
55 2000 A SWITCHGEAR	1	EA	\$0.00	\$0	\$6,650	\$6,650		\$0	\$6,650	0.0	0	\$125.00	\$0.00	\$0	\$6,650
56 600 A BREAKERS	12	EA	\$0.00	\$0	\$30,000	\$360,000		\$0	\$360,000	0.0	0	\$125.00	\$0.00	\$0	\$360,000
57 MOTOR STARTER FOR 1500 HP MOTOR	4	EA	\$0.00	\$0	\$40,855	\$163,420		\$0	\$163,420	0.0	0	\$125.00	\$0.00	\$0	\$163,420
58 MOTOR STARTER FOR 2500 HP MOTOR	4	EA	\$0.00	\$0	\$49,418	\$197,672		\$0	\$197,672	0.0	0	\$125.00	\$0.00	\$0	\$197,672
59															
60 CABLE - 500 KCMIL, 3 PH, 5KV COPPER, EPR	7200	LF	\$0.00	\$0	\$20.25	\$145,800		\$0	\$145,800	0.200	1441	\$125.00	\$25.01	\$180,090	\$325,890
61 SPLICE, 1 PHASE - 500 KCMIL	84	EA	\$0.00	\$0	\$295	\$24,780		\$0	\$24,780	4.211	354	\$125.00	\$526.38	\$44,216	\$68,996
62 TERMINATION, 1 PHASE - 500 KCMIL	54	EA	\$0.00	\$0	\$222	\$11,988		\$0	\$11,988	1.333	72	\$125.00	\$166.63	\$8,998	\$20,986
63 EXCAVATION & BACKFILL	7200	LF	\$0.11	\$792	\$0.00	\$0		\$0	\$792	0.180	1296	\$125.00	\$22.50	\$162,000	\$162,792
64									\$1,089,502					\$445,303	\$1,534,805
65 Relocation of Overhead 34.5 KV Lines	1600 feet														
66 CABLE - 500 KCMIL, 3 PH, 35KV COPPER, EPR	3200	LF	\$0.00	\$0	\$30.00	\$96,000		\$0	\$96,000	0.240	768	\$125.00	\$30.00	\$96,000	\$192,000
67 SPLICE, 1 PHASE - 500 KCMIL	12	EA	\$0.00	\$0	\$295	\$3,540		\$0	\$3,540	4.211	51	\$125.00	\$526.38	\$6,317	\$9,857
68 TERMINATION, 1 PHASE - 500 KCMIL	12	EA	\$0.00	\$0	\$222	\$2,664		\$0	\$2,664	1.3330	16	\$125.00	\$166.63	\$2,000	\$4,664
69 EXCAVATION & BACKFILL	3200	LF	\$0.11	\$352	\$0.00	\$0		\$0	\$352	0.018	58	\$125.00	\$2.25	\$7,200	\$7,552
70															
71 CABLE - 500 KCMIL, 3 PH, 15KV COPPER, EPR	1600	LF	\$0.00	\$0	\$21.90	\$35,040		\$0	\$35,040	0.2400	384	\$125.00	\$30.00	\$48,000	\$83,040
72 SPLICE, 1 PHASE - 500 KCMIL	6	EA	\$0.00	\$0	\$295	\$1,770		\$0	\$1,770	4.2110	25	\$125.00	\$526.38	\$3,158	\$4,928
73 TERMINATION, 1 PHASE - 500 KCMIL	6	EA	\$0.00	\$0	\$222	\$1,332		\$0	\$1,332	1.3330	8	\$125.00	\$166.63	\$1,000	\$2,332
74 EXCAVATION & BACKFILL	1600	LF	\$0.11	\$176	\$0.00	\$0		\$0	\$176	0.180	288	\$125.00	\$22.50	\$36,000	\$36,176
75															
76 REMOVAL OF OVERHEAD WIRE & POLES	4800	LF	\$0.11	\$528	\$0.00	\$0		\$0	\$528	1.00	4800	\$125.00	\$125.00	\$600,000	\$600,528
77									\$141,402					\$799,674	\$941,076
78 TOTALS (Material and Labor)	1	EA		\$31,208		\$3,537,391		\$184,000	\$3,752,599		17301			\$2,162,587	\$5,915,186

COST SUMMARY:

Material		\$3,752,599
Labor		\$2,162,587
Sub total Labor and Material		\$5,915,186
Expenses	2%	\$118,304
Tools/Materials Handling	1%	\$59,152
Overhead	6%	\$354,911
Sub Total		\$6,447,552
Profit	3%	\$193,427
Bonding	2%	\$128,951
Risk	2%	\$128,951
Sub Contractor Total		\$6,898,881
Design Contingency	35%	\$2,414,608
Construction Contingency	10%	\$689,888
Design and Construction Management	12%	\$827,866
Total		\$10,831,200

\$6,898,881

\$827,866
\$7,726,747 OH

**Oyster Creek Nuclear Generating Station
Forked River, NJ
Summary of Reduction of Net Power**

	Item	Units	Notes	Winter	Spring	Summer	Fall	Winter Capacity	Summer Capacity
5	Ambient conditions								
6	Ambient Dry Bulb	°F	1	36.0	50.0	72.1	57.7	20.0	87.0
7	Ambient Wet bulb	°F	1	31.4	44.2	62.0	49.8	17.1	77.0
8									
9	LP STG output with once through cooling								
10	Inlet cooling water temperature	°F	2,9	39.9	55.0	79.0	62.0	34.9	83.7
11	Exhaust Back Pressure	In Hg A	9	0.928	1.163	2.295	1.421	0.805	2.615
12	Net LP Steam Turbine Output	kW	3	404,837	404,954	387,683	403,321	404,710	380,065
13	Circulating Water Pump Load	kW	4	2,663	3,551	3,551	3,551	2,663	3,551
14	Dilution Pump Load	kW	4	2,676	2,676	2,676	2,676	2,676	2,676
15	Net Plant output	kW		399,498	398,727	381,456	397,094	399,371	373,838
16									
17	LP STG output with hybrid cooling towers								
18	Mode of Operation			Wet -Dry	Wet -Dry	Wet	Wet -Dry	Wet -Dry	Wet
19	Inlet cooling water temperature	°F	9	77.2	82.8	76.9	85.5	70.7	86.1
20	Exhaust Back Pressure	In Hg A	9	2.185	2.555	2.162	2.747	1.819	2.793
21	Net LP Steam Turbine Output	kW	3	390,161	381,722	390,708	377,137	397,733	376,061
22	Cooling Tower Fan Load	kW		6,823	6,840	6,398	6,837	6,785	6,391
23	Circulating Water Lift Pump	kW	5	8,955	8,955	8,955	8,955	8,955	8,955
24	Circulating Water Pump Load	kW	6	5,970	5,970	5,970	5,970	5,970	5,970
25	Dilution Pump Load	kW	8	1,338	1,338	1,338	1,338	1,338	1,338
26	Make-up Water Pump		7	204	234	252	322	169	346
27	Net Plant output	kW		366,872	358,385	367,795	353,715	374,516	353,061
28	Net loss in output	kW		32,626	40,342	13,661	43,379	24,854	20,777

1 Cooling Tower Lift Head **75** feet
2 Circulation Pump head **50** feet
3 Make-up Water Pump head **100** feet

Oyster Creek Nuclear Generating Station														
Forked River, NJ														
Oyster Creek Price Assumptions Used in LRP II Pass for Levelized Present Worth														
ATC Energy Price	Winter (D, J, F)		Spring (M, A, M)		Summer (J, J, A)		Fall (S, O, N)		Average Energy Pricing	ICAP \$/mw day	Year	Present Worth Factor	Energy Present Value	Capacity Present Value
	\$/MWh		\$/MWh		\$/MWh		\$/MWh		\$/MWh		N =	I =	\$/MWh	\$/MWDay
Year	Days 90		Days 92		Days 92		Days 91		365			7.00%		
2006	\$57.609	57.609	\$43.413	43.413	\$46.283	46.283	\$57.609	57.609	\$51.176	\$11.271	0	1.0000	51.176	11.271
2007	\$54.225	50.677	\$40.080	37.458	\$42.961	40.150	\$31.012	28.983	\$42.033	\$24.896	1	0.9346	39.283	23.267
2008	\$51.994	45.413	\$39.242	34.275	\$40.293	35.193	\$29.969	26.176	\$40.339	\$54.000	2	0.8734	35.234	47.166
2009	\$53.175	43.406	\$39.751	32.449	\$39.184	31.986	\$31.722	25.894	\$40.916	\$79.000	3	0.8163	33.400	64.488
2010	\$52.071	39.725	\$38.388	29.286	\$37.384	28.520	\$30.686	23.410	\$39.589	\$91.815	4	0.7629	30.202	70.045
2011	\$51.494	36.714	\$38.702	27.594	\$37.953	27.060	\$32.125	22.905	\$40.028	\$91.337	5	0.7130	28.539	65.122
2012	\$51.966	34.627	\$40.066	26.697	\$38.131	25.408	\$34.302	22.857	\$41.075	\$104.403	6	0.6663	27.370	69.568
2013	\$52.944	32.971	\$41.675	25.953	\$39.787	24.777	\$35.565	22.148	\$42.454	\$122.388	7	0.6227	26.438	76.217
2014	\$54.939	31.975	\$43.501	25.318	\$41.991	24.439	\$38.355	22.323	\$44.658	\$135.280	8	0.5820	25.991	78.734
2015	\$55.323	30.092	\$44.676	24.301	\$44.680	24.303	\$40.680	22.127	\$46.306	\$154.051	9	0.5439	25.187	83.793
2016	\$54.590	27.751	\$44.761	22.754	\$41.891	21.295	\$39.545	20.103	\$45.161	\$153.372	10	0.5083	22.958	77.967
Sum		373.352		286.085		283.133		236.926			Sum	7.0236	\$294.60	\$656.367
Seasonal Levelized	\$53.157		\$40.732		\$40.312		\$33.733		\$41.945		Levelized		\$41.945	\$93.452
Lost Generation with Hybrid Cooling towers														
	kW	32,626	kW	40,342	kW	13,661	kW	43,379	PJM Summer Capacity reduction				20,777	kW
	MWH	70,472	MWH	89,075	MWH	30,162	MWH	94,739	10 yr levelized capacity revenue loss				\$7,086,997	
Annually	\$3,746,088		\$3,628,192		\$1,215,901		\$3,195,817		Levelized energy revenue loss				\$10,843,118	
10 Years	\$37,460,879		\$36,281,920		\$12,159,013		\$31,958,172		10 yr levelized energy revenue loss				\$108,431,185	
Lost revenue during construction														
Construction timing						150								
Coincidental refueling						21								
Net Loss due to Cooling tower construction						129	Fall 08-Wint'09							
	Power	Days	Hours		\$/unit									
Lost energy - Fall	640,000	70	1680	\$29.969	\$32,222,237									
Lost energy - Winter	640,000	59	1416	\$53.175	\$48,188,974									
					\$80,411,211									
Lost Capacity	619,000	129		\$54.000	\$4,311,954									

Oyster Creek Annual Capacity Factor Goal 92.0%

OYSTER CREEK NUCLEAR GENERATING STATION

Forked River, NJ

Added Real Estate Taxes due to Cooling Tower

Year	Estimated Cost Ratio	Estimated Tax Rate	Taxes	
2001	90.19%	2.27%	\$1,303,978	This Projection is based on an estimated projected 2008 ratio of 32.37% .
2002	83.77%	2.48%	\$1,421,530	
2003	75.11%	2.72%	\$1,557,433	
2004	64.82%	2.87%	\$1,644,594	
2005	55.82%	2.98%	\$1,706,524	
2006	41.79%	3.18%	\$1,825,713	Cooling Tower contribution
2007	36.78%	3.41%	\$1,953,228	
2008	32.37%	3.64%	\$5,565,667	\$3,476,019
2009	28.49%	3.90%	\$5,954,392	\$3,718,797
2010	25.07%	4.17%	\$6,370,268	\$3,978,530
2011	22.07%	4.46%	\$6,815,189	\$4,256,404
2012	19.42%	4.77%	\$7,291,185	\$4,553,686
2013	17.09%	5.11%	\$7,800,426	\$4,871,731
2014	15.04%	5.46%	\$8,345,235	\$5,211,989
2015	13.24%	5.85%	\$8,928,095	\$5,576,013
2016	11.65%	6.25%	\$9,551,663	\$5,965,460
2017	10.25%	6.69%	\$10,218,784	\$6,382,109
2018	9.02%	7.16%	\$10,932,499	\$6,827,857
2019	7.94%	7.66%	\$11,696,062	\$7,304,738
2020	6.99%	8.19%	\$12,512,955	\$7,814,926
			Total Tax Dollars	\$47,990,738
Project Cost		\$294,676,889		
2008 Projected ratio		32.37%		

**Oyster Creek Nuclear Generating Station
Forked River, NJ
Calculation for Added Security Fence & Towers**

4	Basis of "All Inclusive 2004 Security Improvements"				
5	Description	Cost	# of Units	Unit Rate	
6	Delay Fence	\$ 7,087,567.88	6655	\$ 1,065.00	linear foot
7	Inner Vehicle Barrier	\$ 1,106,033.60	3504	\$ 315.65	linear foot
8	BRE	\$ 3,012,148.60	7	\$ 430,306.94	BRE
9	Engineering	\$ 2,698,539.57		\$ 0.13	% of DBT Cost
10	Stated Assumptions for added security improvements				
11	1400 pipe run to CT along intake embankment				
12	500 length of 1st CT				
13	500 length of 2nd CT				
14	100 distance between CT				
15	100 Set backs				
16	1400 completing SPA loop				
17	4000 feet				
18					
19	1) Installation of Cooling Towers results in ~4000' expansion of SPA				
20	2) SPA expansion requires 3 BRE Towers				
21	Pricing for Added Security for Cooling Tower additions				
22	Fence	4000	\$ 1,380.65	\$5,522,591	
23	Towers	3	\$ 430,306.94	\$1,290,921	
24			Sub Total	\$6,813,512	
25			Engineering	\$862,003	
26			2004 dollars	\$7,675,515	
27	Assumed inflation and cost increases from 2004 to 2006			10.0%	
28			Total	\$8,443,067	
29	Prorated 2006 Cost				
30			Prorated Fence	Prorated Tower	
31	Admin costs	4.2%	\$288,149.3	\$67,355.7	
32	Material	29.8%	\$2,037,148.7	\$476,189.1	
33	Labor	66.0%	\$4,518,104.7	\$1,056,119.4	
34		Total Cost	\$6,843,403	\$1,599,664	\$8,443,067
35		Units	4,000	3	
36		Unit Cost	\$1,711	\$533,221	

APPENDIX C
COST-COST ANALYSIS

Appendix C

Cost-Cost Analysis for the Conceptual Hybrid Cooling Tower System at the Oyster Creek Generating Station

The cost of compliance with the Phase II Section 316(b) Rule should not be significantly greater than the costs considered by USEPA in adopting the Rule. A cost-cost test is used to make this determination following the steps presented in the Rule at §125.94(a)(5)(i). The Rule cost-cost methodology is:

- “(A) Determine which technology the Administrator modeled as the most appropriate compliance technology for your facility;
- (B) Using the Administrator’s costing equations, calculate the annualized capital and net operation and maintenance (O&M) costs for a facility with your design intake flow using this technology;
- (C) Determine the annualized net revenue loss associated with net construction downtime that the Administrator modeled for your facility to install this technology;
- (D) Determine the annualized pilot study costs that the Administrator modeled for your facility to test and optimize this technology;
- (E) Sum the cost items in paragraphs (a)(5)(i)(B), (C), and (D) of this section; and
- (F) Determine if the performance standards that form the basis of these estimates (*i.e.*, impingement mortality reduction only or impingement mortality and entrainment reduction) are applicable to your facility, and if necessary, adjust the estimates to correspond to the applicable performance standards.”

To perform a cost-cost analysis of installing the hybrid cooling conceptual model at OCGS, this methodology was applied as follows:

- Step 1: Determine which technology USEPA modeled as the most appropriate compliance technology for OCGS (EPA Facility ID DUT1023).
- Step 2: Using USEPA’s costing equations, calculate the annualized capital and net O&M costs for OCGS adjusted for the actual facility design intake flow and their technology.
- Step 3: Determine the annualized net revenue loss associated with net construction downtime that USEPA modeled for OCGS to install the technology and the annualized pilot study costs that USEPA modeled for OCGS to test and optimize the technology.
- Step 4: Add the flow adjusted annualized capital and O&M costs, and the annualized facility downtime and pilot study costs, to get the preliminary costs considered by USEPA for OCGS.
- Step 5: Determine which performance standards in §125.94(b)(1) and (2) (*i.e.*, impingement mortality only, or impingement mortality and entrainment) are applicable to OCGS, and compare these to the performance standards on which USEPA’s cost estimates are based.

USEPA modeled a new, larger intake with fine-mesh and fish handling and return system in front of the existing intake system as the most appropriate compliance technology for OCGS. Calculations following Steps 2, 3, and 4 were completed to determine the preliminary costs considered by the USEPA applicable for OCGS.

USEPA assumed a design intake flow rate of 998,444 gpm, total for both the cooling water intake structure and the dilution water intake structure. The calculation flow rate was adjusted for design maximum water withdrawal rate at the OCGS (1,240,000 gpm or 1785.6 MGD). Since the performance requirements for impingement mortality and entrainment for OCGS are the same as those assumed by USEPA, the preliminary costs calculated in Step 4 did not have to be adjusted further.

Based on the cost-cost test, the costs considered by USEPA for OCGS are approximately \$11.2 million per year for ten years (see the calculation sheets that follow). This equates to a Net Present Value (NPV) cost of approximately \$78.7 million for the addition of a new, larger intake with fine-mesh and fish handling and return system (assuming a 7% discount rate over the 10-year period).

In summary, the adjusted NPV cost of 316(b) compliance estimated by USEPA is \$78.7 million. The estimated costs for cooling towers at OCGS, \$704.6 million to \$800.6 million (see Appendix B), are significantly greater than the USEPA costs.

Oyster Creek Cost-Cost Study Cooling Water Intake Structure

The information for Oyster Creek is included in Appendix A of the final rule. Note that the EPA lists the Cooling Water and Dilution Water intake structures separately. Each intake structure must stand on its own merit for the Cost-Cost Study. The EPA considers both to be I&E sites.

Step 1: Determine appropriate EPA modeled technology:

This information is given in column 12 of Appendix A of the regulations.

First, identify the EPA Facility ID as listed in Appendix B of the regulations

EPA Facility ID: DUT1023

The appropriate EPA modeled technology code is:

3 - Addition of a new, larger intake with fine-mesh and fish handling and return system in front of an existing intake system.

Step 2: EPA's Costing Equations:

$$Y_f = Y_{epa} + m * (x_f - x_{epa})$$

Y_f = Annualized capital and net O&M costs using the actual facility design intake flow

x_f = Actual facility design intake flow (gallons per minute)

x_{epa} = EPA assumed facility design intake flow (gallons per minute, from column 3)

y_{epa} = Annualized capital and net O&M costs using EPA design intake flows (from column 7)

m = Design flow adjustment slope (from column 13)

x_f =	460,000 gpm (design capacity)	662.4 MGD
x_{epa} =	478,444 gpm	689.0 MGD
y_{epa} =	\$ 4,037,344	
m =	3.4562	

Y_f = \$ 3,973,598

Step 3: Annualized Net Revenue Loss Associated with Construction & Pilot Studies.

This data is given in column 10 of Appendix A.

Net revenue loss & pilot study costs: \$

Step 4: Preliminary Costs Considered by EPA (Sum of Steps 2 & 3)

Preliminary Costs = \$ 3,973,598

Step 5: Determination of performance standards:

Oyster Creek CWS #535 is subject to meeting Impingement & Entrainment standards. The EPA's estimates are based meeting Impingement & Entrainment standards.

Multiply Preliminary costs by: 1 (No adjustment is required)

Preliminary Costs = \$ 3,973,598

Conclusion:

The costs that are considered by the EPA are: \$ 3,973,598 per year for a 10 year period.

If a facility can demonstrate that the actual compliance costs are 'significantly greater' than those considered by EPA, the director must make a site-specific determination of the best technology available for minimizing adverse environmental impacts.

Oyster Creek Cost-Cost Study Dilution Water Intake Structure

The information for Oyster Creek is included in Appendix A of the final rule. Note that the EPA lists the Cooling Water and Dilution Water intake structures separately. Each intake structure must stand on its own merit for the Cost-Cost Study. The EPA considers both to be I&E sites.

Step 1: Determine appropriate EPA modeled technology:

This information is given in column 12 of Appendix A of the regulations.

First, identify the EPA Facility ID as listed in Appendix B of the regulations

EPA Facility ID:

DUT1023

The appropriate EPA modeled technology code is:

3 - Addition of a new, larger intake with fine-mesh and fish handling and return system in front of an existing intake system.

Step 2: EPA's Costing Equations:

$$Y_f = y_{epa} + m * (x_f - x_{epa})$$

Y_f = Annualized capital and net O&M costs using the actual facility design intake flow

x_f = Actual facility design intake flow (gallons per minute)

x_{epa} = EPA assumed facility design intake flow (gallons per minute, from column 3)

y_{epa} = Annualized capital and net O&M costs using EPA design intake flows (from column 7)

m = Design flow adjustment slope (from column 13)

x_f =	780,000 gpm (design capacity)	1,123 MGD
x_{epa} =	520,000 gpm	748.8 MGD
y_{epa} =	\$ 5,917,486	
m =	3.4562	

Y_f = \$ 6,816,098

Step 3: Annualized Net Revenue Loss Associated with Construction & Pilot Studies.

This data is given in column 10 of Appendix A.

Net revenue loss & pilot study costs: \$ 389,267

Step 4: Preliminary Costs Considered by EPA (Sum of Steps 2 & 3)

Preliminary Costs = \$ 7,205,365

Step 5: Determination of performance standards:

Oyster Creek DWS #536 is subject to meeting Impingement & Entrainment standards. The EPA's estimates are based on meeting Impingement & Entrainment standards.

Multiply Preliminary costs by:

1 (No adjustment is required)

Preliminary Costs = \$ 7,205,365

Conclusion:

The costs that are considered by the EPA are: \$ 7,205,365 per year for a 10 year period.

If a facility can demonstrate that the actual compliance costs are 'significantly greater' than those considered by EPA, the director must make a site-specific determination of the best technology available for minimizing adverse environmental impacts.

8 Letter from Keith Jury, Director - Licensing and
Regulatory AffairsAmerGen Energy Company,
LLC, to Andy Heyl, New Jersey Dept of
Environmental Protection re: Federal Consistency
Certification For Federal Permit And License
Applicants Oyster Creek Generating Station License
Renewal Application

January 20, 2005



AmerGen Energy Company, LLC
200 Exelon Way
Kennett Square, PA 19348

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An Exelon Company

January 20, 2005

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: Federal Consistency Certification For Federal Permit And License Applicants
Oyster Creek Generating Station
License Renewal Application

Mr. Heyl:

AmerGen Energy Company, LLC (AmerGen) is requesting concurrence with the enclosed Federal Consistency Certification for Federal Permit and License Applicants. The certification presents AmerGen's position that continued operation of the Oyster Creek Generating Station (OCGS) in Lacey Township, NJ would be in compliance with the current New Jersey Coastal Management Program.

As part of the application process to the U. S. Nuclear Regulatory Commission (NRC) requesting renewal of the OCGS operating license, AmerGen performed a review for consistency with the New Jersey Coastal Management Program. In conjunction with the application submittal, AmerGen must certify to the NRC and the State of New Jersey that OCGS operations and activities are in compliance with the Coastal Zone Management Act.

Per NRC regulations for license renewal (10 CFR 54), AmerGen is in the process of preparing an environmental report as Appendix E of the license renewal application. The Environmental Report will include a description of the proposed action and the affected environment, and an analysis of environmental consequences of the proposed action and mitigating actions. Also to be included in the Environmental Report is a complete list of licenses, permits, and other approvals from Federal, State, and local authorities for current OCGS operations, and approvals and consultations that are required for the extended period of operations. A summary of this information is provided in the enclosed consistency certification.

After your office reviews the Consistency Certification, AmerGen requests a letter concurring with the enclosed 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 NRC.

Please call Bill Maher at (610) 765-5939 if you have any questions or require any additional information to review the attached certification.

Sincerely,



Keith R. Jury
Director – Licensing and Regulatory Affairs
AmerGen Energy Company, LLC

Enclosure 1: Federal Consistency Certification for Federal Permit and License Applicants

cc: Karen Tuccillo, NJ BNE
Peter Tam, Senior Project Manager, NRR
File No. XXXX

FEDERAL CONSISTENCY CERTIFICATION FOR FEDERAL PERMIT AND LICENSE APPLICANTS¹

This is the AmerGen Energy Company, LLC (AmerGen) certification to the U. S. Nuclear Regulatory Commission (NRC) and the State of New Jersey that renewal of the Oyster Creek Generating Station (OCGS) operating license would be consistent with enforceable policies of the federally approved state coastal zone management program. The certification describes background requirements, the proposed action (i.e., license renewal), anticipated environmental impacts, New Jersey enforceable coastal resource protection policies and OCGS's compliance status, and summary findings.

CONSISTENCY CERTIFICATION

AmerGen will certify to the NRC that renewal of the OCGS operating license will be consistent with the federally approved New Jersey coastal management program. AmerGen expects OCGS operations during the license renewal term to be a continuation of current operations as described below, with no station structural or operational modifications related to license renewal that would change effects on New Jersey's coastal zone.

NECESSARY DATA AND INFORMATION

Statutory Background

The federal Coastal Zone Management Act (16 USC 1451 et seq.) imposes requirements on the applicant for a federal license to conduct an activity that could affect a state's coastal zone. The Act requires an applicant to certify to the licensing agency that the proposed action would be consistent with the state's federally approved coastal zone management program. The Act also requires the applicant to provide to the state a copy of the certification statement and requires the state, at the earliest practicable time, to notify the federal agency and the applicant whether the state concurs with, or objects to, the consistency certification [16 USC 1456(c)(3)(A)].

The National Oceanic and Atmospheric Administration (NOAA) has promulgated implementing regulations that indicate that the certification requirement is applicable to renewal of federal licenses for activities not previously reviewed by the state [15 CFR 930.51(b)(1)]. NOAA approved the New Jersey coastal management program in 1980 (Ref. 2).

In New Jersey, the approved program is the Coastal Management Program. The Coastal Management Program comprises a network of offices within the New Jersey Department of Environmental Protection that serve distinct functions yet share responsibility for the coast of New Jersey. The Coastal Management program implements three major state laws: the Waterfront Development Law, the Wetlands Act of 1970, and the Coastal Area Facility Review Act (CAFRA). The Hackensack Meadowlands Reclamation and Development Act, and the Freshwater Wetlands Protection Act are additional authorities for Federal Consistency Review. Enforceable policies are contained in the Coastal Zone Management rules (New Jersey Administrative Code [NJAC] 7:7E), the Coastal Permit Program rules (NJAC 7:7) and the

¹ This certification is patterned after the example certification included as Appendix E of the NRC Office of Nuclear Reactor Regulation's "Procedural Guidance for Preparing Environmental Assessments and Considering Environmental Issues" (LIC-203, 6-21-01).

Freshwater Wetlands Protection rules (NJAC 7:7A) (Ref. 3). The licensing of OCGS in 1969 by the NRC, pre-dated the state program approval.

Proposed Action

The NRC operating license for OCGS will expire in 2009. NRC regulations provide for license renewal, and AmerGen is applying for renewal of the license to 2029.

OCGS is an electric generating station located within the New Jersey coastal zone, in Lacey Township, Ocean County, between the South Branch of the Forked River and Oyster Creek, two miles inland of Barnegat Bay. The plant withdraws water from Barnegat Bay via the South Branch of the Forked River, and a manmade intake canal for non-contact cooling, and returns the heated discharge to Barnegat Bay via a discharge canal and Oyster Creek. Approximately 60 percent of the area within a 50-mile radius of OCGS is the water of the Atlantic Ocean. Attachments 2 and 3 of this enclosure are OCGS 50- and 6-mile vicinity maps, respectively.

OCGS is a boiling water reactor with an expected total output of 1,930 MW thermal and an expected electric output of 640 MW. The intake structure has four circulating water pumps within two bays. The four pumps provide a continuous supply (maximum of 460,000 gallons per minute [gpm]) of condenser cooling water. After moving through the condensers (and service water systems) water is discharged into a discharge canal and thence to Oyster Creek, which flows into Barnegat Bay. In addition to the four circulating water pumps (and four service water pumps with a total maximum pump capacity of 16,000 gpm) in the same intake structure, three dilution pumps pull water from the intake canal directly into the discharge canal to ameliorate the elevated temperatures in the discharge canal during part of the year. Maximum total capacity of the three dilution pumps is 780,000 gpm. Maximum flow with all circulation and dilution pumps working would be 1.25 million gpm; however, the NJPDES permit allows only two dilution pumps to operate simultaneously.

The OCGS workforce consists of approximately 470 AmerGen employees and 150 long-term contract employees. More than 80 percent reside in Ocean County. The OCGS reactor is on a 24-month refueling cycle. During refueling outages, site employment increases by approximately 1,300 workers for temporary (approximately 20 days) duty. AmerGen has no plans to add additional employees as a result of license renewal.

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. As such, renewal would result in a continuation of environmental impacts currently regulated by the state. Table E-1 lists State and Federal licenses, permits, and other environmental authorization for current OCGS operations and Table E-2 identifies compliance activities associated specifically with NRC license renewal.

One transmission line was built to connect OCGS to the regional electric grid. The corridor runs approximately 11 miles, from OCGS to the Manitou substation near Toms River, and encompasses about 320 acres (Attachment 1). Conectiv is proposing to construct a new transmission line from the Oyster Creek substation south to Egg Harbor, but that proposal is not within the scope of this certification. The proposed action, renewing the license of OCGS for an additional 20 years, would not require additional transmission lines, nor is AmerGen anticipating that this action would change any corridor maintenance practices.

Environmental Impacts

NRC has prepared a generic environmental impact statement (GEIS; Ref. 4) on impacts that nuclear power plant operations could have on the environment and has codified its findings (10 CFR 51, Subpart A, Appendix B, Table B-1). The regulation identified 92 potential environmental issues, 69 of which the NRC identified as having small impacts and termed "Category 1 issues." NRC defines "small" as:

Small – For the issue, environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource. For the purpose of assessing radiological impacts, the Commission has concluded that those impacts that do not exceed permissible levels in the Commission's regulations are considered small as the term is used in this table (10 CFR 51, Subpart A, Appendix B, Table B-1)

The NRC regulation and the GEIS discuss the following types of Category 1 environmental issues:

- Surface water quality, hydrology, and use
- Aquatic ecology
- Groundwater use and quality
- Terrestrial resources
- Air quality
- Land use
- Human health
- Postulated accidents
- Socioeconomics
- Uranium fuel cycle and waste management
- Decommissioning

In its decision-making for plant-specific license renewal applications, absent new and significant information to the contrary, NRC relies on its codified findings, as amplified by supporting information in the GEIS, for assessment of environmental impacts from Category 1 issues [10 CFR 51.9(c)(4)]. For plants such as OCGS that are located in coastal areas, many of these issues involve impacts to the coastal zone. AmerGen will adopt by reference the NRC findings and GEIS analyses for all 58 applicable Category 1 issues. The remaining Category 1 issues do not apply to OCGS because either they are associated with design or operational features the OCGS does not have (e.g., cooling ponds), or to an activity (i.e., refurbishment) that OCGS does not intend to undertake.

The NRC regulation identified 21 issues as "Category 2," for which license renewal applicants must submit additional site-specific information.² Of these, 11 apply to OCGS, and, like the Category 1 issues, could involve impacts to the coastal zone. The applicable issues and AmerGen's impact conclusions are listed below.

- Entrainment of fish and shellfish in early life stages – This issue addresses mortality of organisms small enough to pass through the plant's circulating cooling water system. AmerGen monitored the fishery in Barnegat Bay from the early 1970s through the mid 1980s to identify impacts of OCGS on the fishery. Species collected included resident species, warm water migrants and cold water migrants. The patterns of species composition and relative abundance appeared stable. More recently, in response to the Barnegat Bay Study Act, other groups have studied the Bay, including its fish community. Results indicate that the water quality of the Bay, which had been in decline, is recovering and now supports a healthy fish population. One measure of the significance of environmental impacts is the degree to which they meet environmental protection legal standards. The New Jersey Department of Environmental Protection regulates OCGS entrainment and impingement, under its authority to issue the OGCS NJPDES discharge permit. To the best of AmerGen's knowledge, OCGS is in compliance with its NJPDES permit. AmerGen concludes that the impacts of entrainment during current operations are small and it has no plans that would change this conclusion for the period of extended operation.

Pursuant to Section 316(b) of the Clean Water Act, the U.S. Environmental Protection Agency has recently revised cooling water intake structure requirements for facilities such as OCGS. New Jersey will have to incorporate these revisions into its discharge permit program and the State and AmerGen will have to evaluate whether OCGS modifications would be necessary to comply with the new requirements. This evaluation could effectively re-define what would be an acceptable OCGS entrainment or impingement impact. If this happens, however, AmerGen observes that any modifications made to meet the new 316(b) requirements would only reduce, not increase, current OCGS impacts and that the post-modification result would still be small impacts.

- Impingement of fish and shellfish – This issue addresses mortality of organisms large enough to be caught by intake screens before passing through the plant's circulating cooling water system. OCGS has a fish return system consisting of Ristroph traveling screens at the intake pumps and a flume that delivers fish to the head of the discharge canal. This system reduces the number of fish impinged and impingement mortality. AmerGen concludes that impacts of impingement during current operations are small and it has no plans that would change this conclusion for the period of extended operation. See the paragraph above for discussion of 316(b).
- Heat shock – This issue addresses mortality of aquatic organisms by exposure to heated plant effluent. Cooling water flow rates and heat rejection rates are limited by provisions of NJPDES permit number NJ0005550. OCGS employs three dilution pumps to move water from the intake canal to the head of the discharge canal under certain temperature

² 10 CFR 51, Subpart A, Appendix B, Table B-1 also identifies 2 issues as "NA" for which NRC could not come to a conclusion regarding categorization: AmerGen believes that these issues, chronic effects of electromagnetic fields and environmental justice, do not affect the "coastal zone" as that phrase is defined by the Coastal Zone Management Act [16 USC 1453(1)].

conditions, as part of the NJPDES permit. AmerGen concludes that the impacts of heat shock during current operations are small and it has no plans that would change this conclusion for the license renewal term.

- Threatened or endangered species -- This issue addresses effects that OCGS operations could have on species that are listed under federal law as threatened or endangered. In analyzing this issue, AmerGen has also considered species that are protected under New Jersey law (Table E-3).

Based on a review of the Natural Heritage Database and Landscape Project records, the following state-listed animal species occur in the vicinity of the OCGS site: barred owl (*Strix varia*), Cooper's hawk (*Accipiter cooperii*), Northern pine snake (*Pituophis m. melanoleucus*), pine barrens treefrog (*Hyla andersoni*), and wood turtle (*Clemmys insculpta*). The Natural Heritage Database and Landscape Project also indicated that foraging habitat for the black skimmer (*Rhynchops niger*) and the black-crowned night heron (*Nycticorax nycticorax*) were within ¼ mile of the site. A survey of the undeveloped part of the site west of Rt. 9 done in support of security upgrades determined that none of the state-protected species were on site.

Although prior to 1992, no special-status marine species were observed or captured in the OCGS cooling canals, between June 1992 and July 1994, 9 sea turtles were impinged on the OCGS intake trash rack. An increase in the number of sea turtles observed in Barnegat Bay and in the number of sea turtles impinged at OCGS corresponded to the U.S. Army Corps of Engineers' deepening of Barnegat Inlet. It also followed the implementation in 1987 (full implementation in 1989) of federal regulations requiring U.S. shrimp trawlers to use Turtle Exclusion Devices that substantially reduced fishing-related mortality of sea turtles in south Atlantic and Gulf coastal waters.

In November 1993, the Nuclear Regulatory Commission (NRC) requested a formal consultation with the National Marine Fisheries Service (NMFS) regarding possible impacts of OCGS on listed sea turtles, and followed with a Biological Assessment in January 1995. In 2000 NRC submitted an updated Biological Assessment. In both instances, NMFS determined that OCGS may adversely affect three species of federally-protected sea turtle: endangered Kemp's ridley, endangered green, and threatened loggerhead. Each Biological Opinion further concluded that OCGS would not likely jeopardize the species' existences. Currently OCGS has an Incidental Take annual allowance of 5 loggerhead (no more than 2 lethal), 4 Kemp's Ridley (no more than 3 lethal), and 2 green (no more than one lethal) sea turtles. The Biological Opinion included Reasonable and Prudent Measures that must be implemented at OCGS to minimize impacts to sea turtles as well as a list of Terms and Conditions that implement the Reasonable and Prudent Measures. These non-discretionary Terms and Conditions include requirements for regular inspections of the intake trash racks in summer and fall; requirements for capturing, handling, resuscitating, and treating injured sea turtles; requirements for recording and reporting sightings and strandings; requirements for necropsies of dead turtles; and reporting requirements, including an annual report to NMFS on incidental takes. In 2004 OCGS exceeded its incidental take allowance for Kemp's ridley turtles.

As a result of this, NRC requested re-initiation of Endangered Species Act Section 7 consultation with NMFS. This consultation is on-going.

No other federally- or state-listed threatened or endangered species is known to occur, with the exception of the consultation noted above, at OCGS or along the OCGS-to-Manitou transmission corridor.

AmerGen is corresponding with cognizant federal and state agencies. With the exception of the consultation noted above, no federal or state agencies have identified any area of concern. AmerGen concludes that OCGS impacts to these protected species are small during current operations and has no plans that would change this conclusion for the license renewal term.

- Electromagnetic fields, acute effects (electric shock) – This issue addresses the potential for shock from induced currents, similar to static electricity effects, in the vicinity of transmission lines. Because this human-health issue does not directly or indirectly affect natural resources of concern within the Coastal Zone Management Act definition of "coastal zone" [16 USC 1453(1)], AmerGen concludes that the issue is not subject to the certification requirement.
- Housing – This issue addresses impacts that additional AmerGen employees required to support license renewal and the additional resulting indirect jobs could have on local housing availability. NRC concluded, and AmerGen concurs, that impacts would be small for plants located in high population areas that do not have growth control measures which limit housing development. Using the NRC definitions and categorization methodology, OCGS is located in a high population area without restrictive growth controls. AmerGen expects no additional employees would be required to support license renewal. AmerGen concludes that impacts during the OCGS license renewal term would be small.
- Public services; public utilities – This issue addresses impacts that adding license renewal workers could have on public utilities, particularly public water supply. AmerGen has analyzed the availability of public water supplies in the area and has found no limitations that would suggest that additional OCGS workers would cause impacts. AmerGen expects no additional employees to support license renewal. Therefore, AmerGen has concluded that impacts during the OCGS license renewal term would be small.
- Offsite land use – This issue addresses impacts that local government spending of plant property tax dollars can have on land use patterns. OCGS property taxes comprised 4 percent of Lacey Township's total tax revenues in 2003. AmerGen projects that OCGS taxes will remain relatively constant during the license renewal term. AmerGen concludes that impacts during the OCGS license renewal term would be small and not warrant mitigation.
- Public services; transportation – This issue addresses impacts that adding license renewal workers could have on local traffic patterns. AmerGen expects no additional employees would be required to support license renewal. Therefore, AmerGen has concluded that impacts during the OCGS license renewal term would be small.

- Historic and archaeological resources – This issue addresses impacts that license renewal activities could have on resources of historic or archaeological significance. Several archaeological or historic sites have been identified within 6 miles of OCGS; however, AmerGen is not aware of any adverse or detrimental impacts to these sites from current operations and AmerGen has no plans for license renewal activities that would disturb these resources. AmerGen correspondence with the State Historic Preservation Officer identified no issues of concern.
- Severe Accidents – This issue addresses the impact of severe accidents and the probability-weighted consequences of atmospheric releases, fallout onto open bodies of water, releases to ground water, and societal and economic impacts. The NRC has already determined the impacts from severe accidents to be of small significance for all plants.

State Program

The New Jersey Coastal Management Program is administered by the Land Use Regulation Program within the Department of Environment Protection. The Department maintains a website that describes the program in general terms (Ref. 3). The New Jersey Coastal Management Statutes (Ref. 5) contain guidelines for preservation and management of the coastal area that are set forth in policy statements, standards, and management objectives. Attachment 1 lists these objectives and discusses for each the applicability to OCGS.

Findings:

1. NRC has determined that the impacts of certain license renewal environmental issues (i.e., Category 1 issues) are small. AmerGen will adopt by reference NRC findings for these issues as they are applicable to OCGS.
2. For all other license renewal issues (i.e., Category 2 and "NA" issues), except endangered species, that are applicable to OCGS, AmerGen has determined that the environmental impacts are small.
3. NRC and NMFS are engaged in an Endangered Species Act Section 7 consultation regarding three protected sea turtle species. Outcome of this consultation will include recommendations, which will be reviewed by AmerGen.
4. To the best of AmerGen's knowledge, OCGS and its transmission corridor are in compliance with all New Jersey's licensing and permitting requirements and are in compliance with its state-issued licenses and permits.
5. AmerGen's license renewal and continued operation of OCGS would be consistent with the enforceable policies of the New Jersey coastal zone management program.

STATE NOTIFICATION

By this certification that OCGS license renewal is consistent with New Jersey's coastal zone management program, New Jersey is notified that it has six months from receipt of this letter and accompanying information in which to concur with or object to AmerGen's certification (15 CFR 930.51). However, pursuant to 15 CFR 930.51(b)(1), if New Jersey has not issued a decision within three months following the commencement of state agency review, it shall notify the contact listed below of the status of the matter and the basis for further delay. New Jersey's concurrence, objection, or notification of review status shall be sent to:

Andrew Kugler
Chief of Environmental Section
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
One White Flint
11555 Rockville Pike
Rockville, MD 20555
(301) 415-2828

Keith Jury
Director, Licensing and Regulatory Affairs
Exelon Corporation
200 Exelon Way
Kennett Square, PA 19348
(630) 657-2831

REFERENCES

1. NRR Office Instruction No. LIC-203, "Procedural Guidance for Preparing Environmental Assessments and Considering Environmental Issues." U. S. Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation. June 21, 2001.
2. State and Territory Coastal Management Program Summaries, New Jersey Coastal Management Program. National Oceanic and Atmospheric Administration. Available on line at <http://www.ocrm.nos.noaa.gov/czm/czmsitelist.html>. Accessed July 19, 2004.
3. New Jersey Department of Environmental Protection. 2004. Coastal Management Program. Available at <http://www.nj.gov/dep/cmp>. Accessed July 19, 2004.
4. Generic Environmental Impact statement for License Renewal of Nuclear Plants, U. S. Nuclear Regulatory Commission, NUREG-1437, May 1996. Available on line at <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437>. Accessed 12-23-03.
5. New Jersey Administrative Code, Title 7, Chapter 7E, Coastal Zone Management rules.

Figure E-1, 50-Mile Vicinity Map

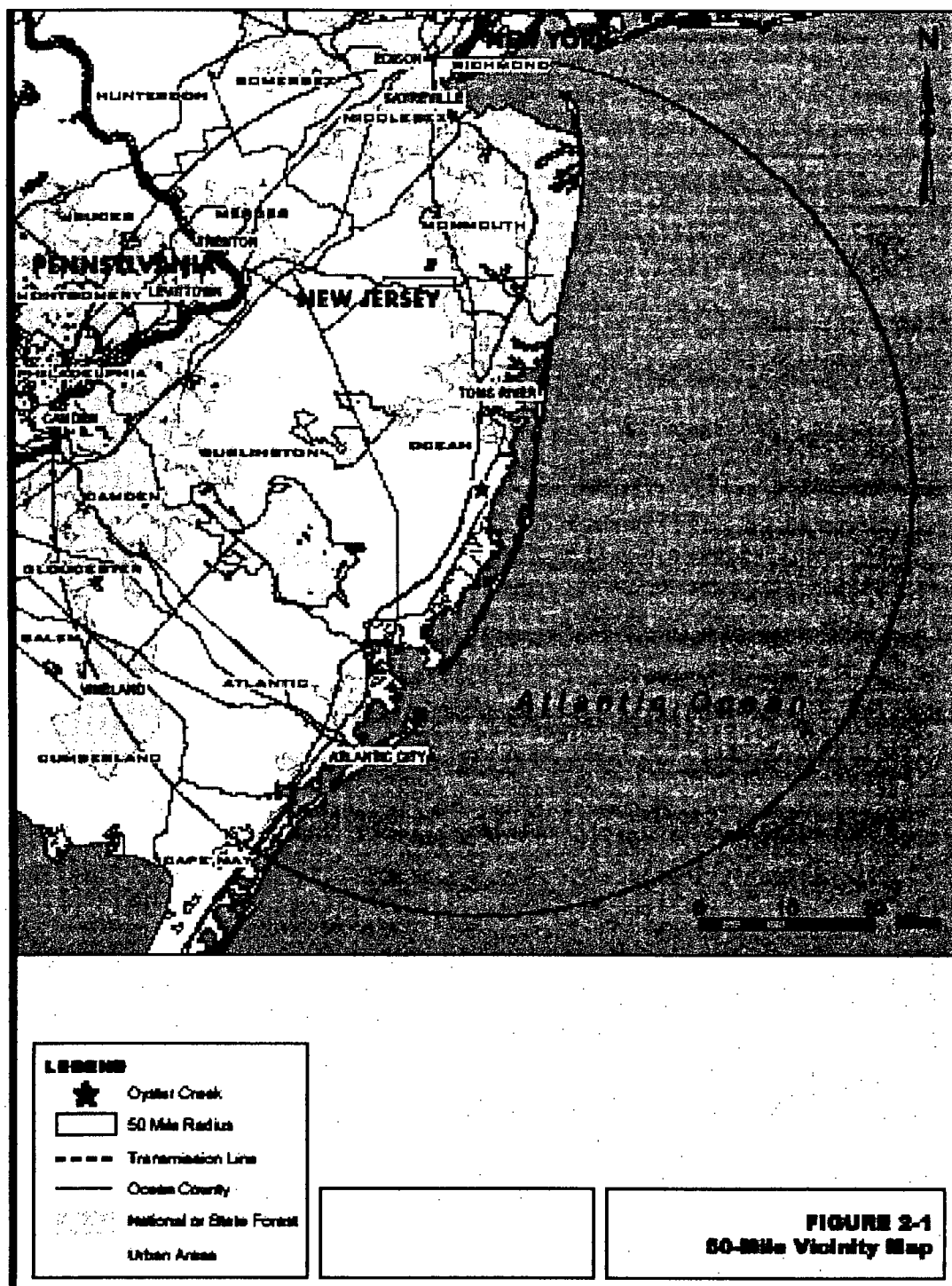


Figure E-2, 6-Mile Vicinity Map

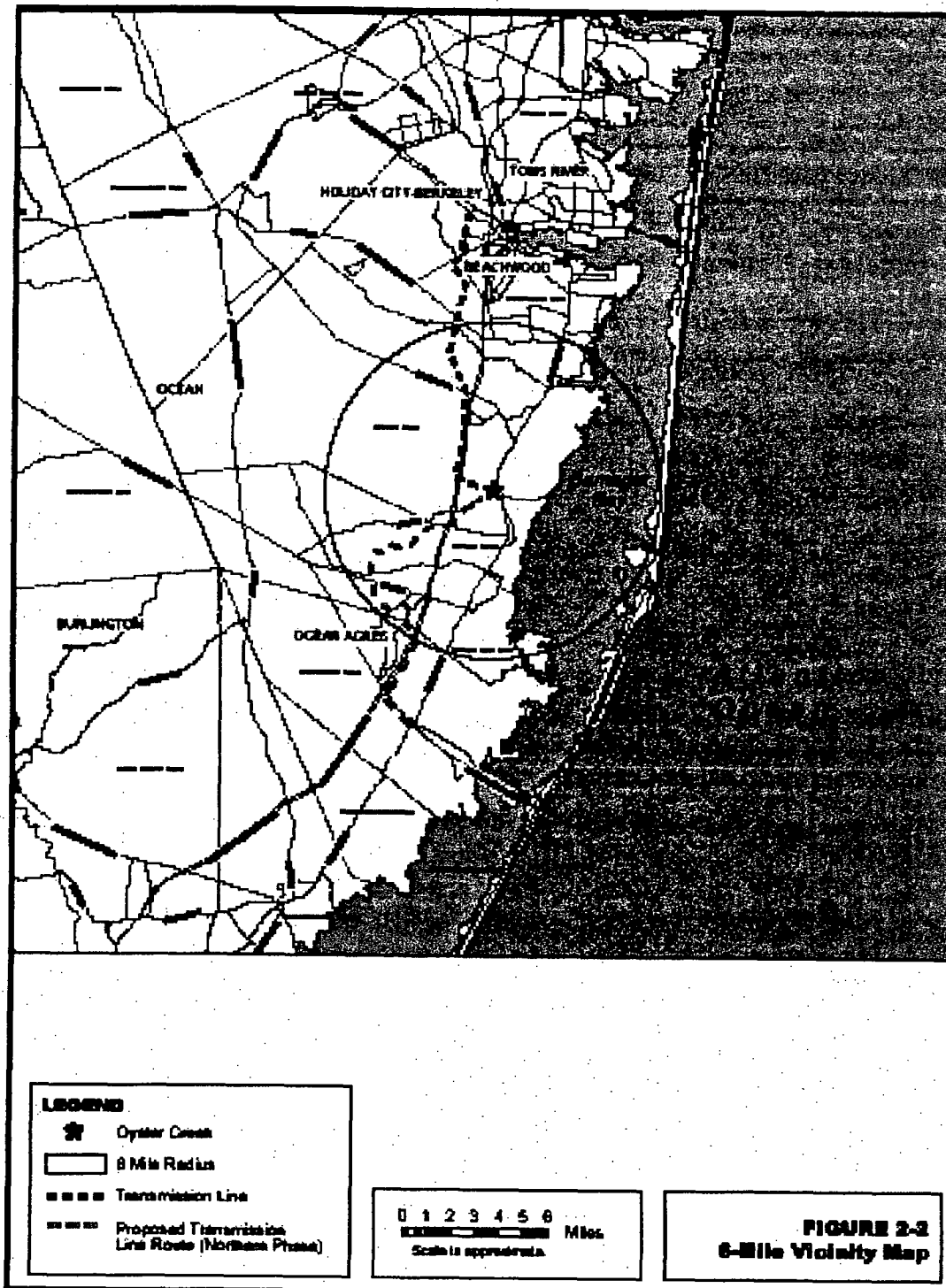


Figure E-3, Site Boundary Map

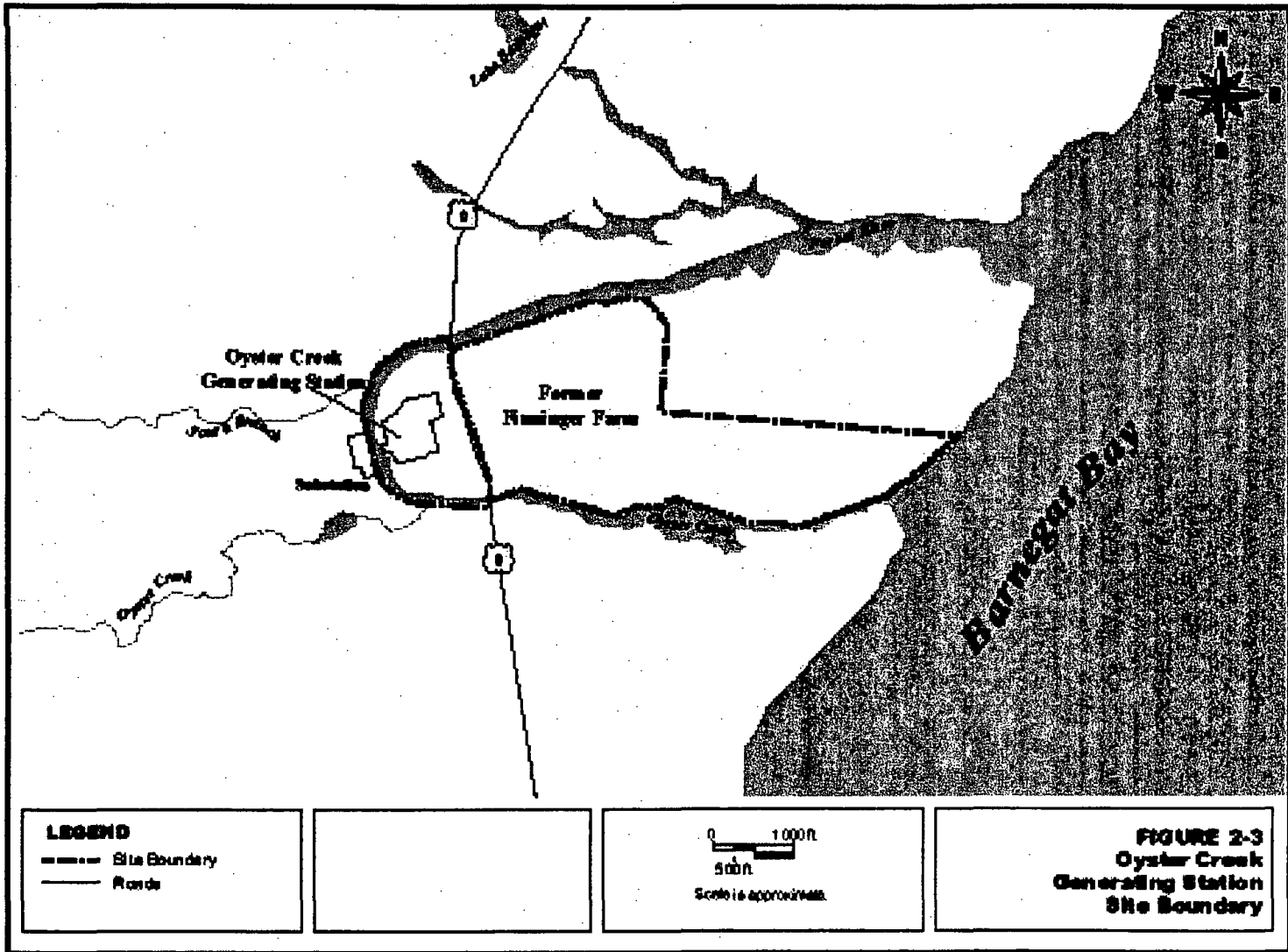


Table E-1. Environmental Authorizations for Current OCGS Operations.

Agency	Authority	Requirement	Number	Issue or Expiration Date	Activity Covered
Federal Requirements to License Renewal					
U. S. Nuclear Regulatory Commission	Atomic Energy Act (42 USC 2011, et seq.), 10 CFR 50.10	License to operate	DPR-16	Issued: 4/9/1969 Expires: 4/9/2009	Operation of OCGS
U.S. Department of Transportation	49 USC 5108	Registration	052804700004MO	Issued: 5/28/04 Expires: 6/30/07	Hazardous materials shipments
National Marine Fisheries Service	Endangered Species Act of 1973 (16 USC 1531-1544)	Incidental Take Permit - Sea Turtles	To be determined		Possession and disposition of impinged or stranded sea turtles
New Jersey Department of Environment Protection	Clean Water Act (33 USC 1251 et seq.), NJ Statutes Annotated (N.J.S.A.) Water Pollution Control Act 58:10A et seq. and N. J. Administrative Code (N.J.A.C.)7:14A et seq.	New Jersey Pollutant Discharge Elimination System Permit – surface water	NJ0005550	Issued: 10/21/94; Expires: 11/30/99	Wastewater (industrial surface water, thermal surface water and stormwater runoff) discharges to Oyster Creek, Forked River, and South Branch of Forked River
New Jersey Department of Environment Protection	Clean Water Act (33 USC 1251 et seq.), N.J.S.A. 58:10A et seq. and N.J.A.C. 7:14A et seq.	New Jersey Pollutant Discharge Elimination System Permit – ground water	NJ0101966	Issued: 2/20/04 Expires: 2/20/09	Wastewater (percolation lagoon, underground injection, dredge spoils) to groundwater

Table E-1. Environmental Authorizations for Current OCGS Operations (Continued).

Agency	Authority	Requirement	Number	Issue or Expiration Date	Activity Covered
New Jersey Department of Environment Protection	Coastal Area Facility Review Act (N.J.S. A. 13:19-1 et seq.), Waterfront Development Act (N.J.S.A. 12:5-3), and Wetlands Act of 1970 (N.J.S.A. 13:9A-1 et seq.)	Certification			Compliance with Coastal Zone management rules, Freshwater Wetlands protection rules, and Coastal Permit Program rules
New Jersey Department of Environment Protection	Water Supply Management Act, N.J.S.A. 58: 1A et seq.	Water Use Registration	11108W	Issued: 7/25/01 Expires: not applicable	Registers two wells with collective diversions of less than 100,000 gallons per day
New Jersey Department of Environmental Protection	N.J.A.C. 7:7A	Freshwater Wetlands Statewide General Permit	1500-02-0004.1	Issued: 6/4/02 Expires: 6/4/07	Remove vegetation from fire pond
New Jersey Department of Environmental Protection	Chapter 251, Soil Erosion and Sediment Control Act, P.L. 195	Certificate	SCD 1302	Issued: 10/31/01 Expires: 4/3/05	Soil Erosion Control and Sediment Control plan for upland dredge disposal site
New Jersey Department of Environmental Protection	Clean Air Act (42 USC 7401 et seq); Air Pollution Control Act (1954), N.J.S.A. 26:2C- 9.2	Certificate to operate	PCP970001	Issued: 9/8/97 Expires: 9/8/07	Air emission for DL-42 boiler and DL-68 boiler

Table E-1. Environmental Authorizations for Current OCGS Operations (Continued).

Agency	Authority	Requirement	Number	Issue or Expiration Date	Activity Covered
New Jersey Department of Environmental Protection	Clean Air Act (42 USC 7401 et seq); Air Pollution Control Act (1954), N.J.S.A. 26:2C- 9.2	Certificate to operate	PCP970002	Issued: 10/9/02 Expires: 10/9/07	Emergency Fire Diesel 1-2
New Jersey Department of Environmental Protection	Clean Air Act (42 USC 7401 et seq); Air Pollution Control Act (1954), N.J.S.A. 26:2C- 9.2	Certificate to operate	PCP970003	Issued: 11/14/97 Expires: 11/14/07	#1 boiler
New Jersey Department of Environmental Protection	Clean Air Act (42 USC 7401 et seq); Air Pollution Control Act (1954), N.J.S.A. 26:2C- 9.2	Certificate to operate	PCP970005	Issued: 1/8/03 Expires: 1/8/08	Forked River Emergency Fire Diesel
New Jersey Department of Environmental Protection	Clean Air Act (42 USC 7401 et seq); Air Pollution Control Act (1954), N.J.S.A. 26:2C- 9.2	Certificate to operate	PCP970006	Issued: 10/31/02 Expires: 10/29/07	Dirty Oil Lube Tank
New Jersey Department of Environmental Protection	Clean Air Act (42 USC 7401 et seq); Air Pollution Control Act (1954), N.J.S.A. 26:2C- 9.2	Certificate to operate	PCP960005	Issued: 3/23/04 Expires: 3/23/09	Main Fuel Tank
New Jersey Department of Environmental Protection	Clean Air Act (42 USC 7401 et seq); Air Pollution Control Act (1954), N.J.S.A. 26:2C- 9.2	Certificate to operate	PCP960006	Issued: 7/10/04 Expires: 7/10/09	Emergency Generator 1

Table E-1. Environmental Authorizations for Current OCGS Operations (Continued).

Agency	Authority	Requirement	Number	Issue or Expiration Date	Activity Covered
New Jersey Department of Environmental Protection	Clean Air Act (42 USC 7401 et seq); Air Pollution Control Act (1954), N.J.S.A. 26:2C- 9.2	Certificate to operate	PCP960007	Issued: 7/10/04 Expires: 7/10/09	Emergency Diesel Generator 2
New Jersey Department of Environmental Protection	Clean Air Act (42 USC 7401 et seq); Air Pollution Control Act (1954), N.J.S.A. 26:2C- 9.2	Certificate to operate	PCP960008	Issued: 6/26/96 Expires: 6/26/06	Grit Blaster
New Jersey Department of Environmental Protection	Clean Air Act (42 USC 7401 et seq); Air Pollution Control Act (1954), N.J.S.A. 26:2C- 9.2	Certificate to operate	PCP020001	Issued: 7/29/02 Expires: 7/28/07	Emergency Fire Diesel 1-1
New Jersey Department of Environmental Protection	N.J.A.C. 7:14B	Certificate to operate	GEN000001	Issued: 7/19/00 Expires: 7/18/05	Emergency Generator C2
New Jersey Department of Environmental Protection	Clean Water Act (33 USC 1251 et seq.); Clean Air Act (42 USC 7401 et seq.); Resource Conservation and Recovery Act (42 USC 6901 et seq.); Water Pollution Control Act, N.J.S.A. 48:10A et seq.; Industrial Site Recovery Act, N.J.S.A. 26:2C-1 et seq. and N.J.A.C. 7:14B	Registration	UST 000002	Issued: 8/24/04 Expires: 8/24/09	Underground storage tank – emergency spill tank

Table E-1. Environmental Authorizations for Current OCGS Operations (Continued).

Agency	Authority	Requirement	Number	Issue or Expiration Date	Activity Covered
New Jersey Department of Environmental Protection	Industrial Site Recovery Act, N.J.S.A. 26:2C-1 et seq. and N.J.A.C. 7:27-8	Operating Certificate	CN 099746	Issued: 10/16/00 Expires: 10/16/05	Above-ground Gasoline Storage Tank
New Jersey Department of Environmental Protection	N.J.A.C. 7:18 et seq.	Laboratory Certification	15304	Issued: 6/30/04 Expires: 6/30/05	State certified laboratory to perform listed analyses
New Jersey Department of Transportation	Fish and Game, Wild Birds and Animals	License	H-205	Issued: 2/2004 Expires: 1/2005	Oyster Creek Helistop
New Jersey Department of Environmental Protection	Clean Air Act (42 USC 7401 et seq); Air Pollution Control Act (1954), N.J.S.A. 26:2C- 9.2	Certificate to Operate	PCP960004	Issued: 2/13/01 Expires: 2/13/06	EDG Fuel Oil Storage Tank
South Carolina Department of Health and Environmental Control – Division of Waste Management	South Carolina Radioactive Waste Transportation and Disposal Act (Act No. 429)	South Carolina Radioactive Waste Transport Permit	0043-29-05-X	12/31/05	Transportation of radioactive waste into the State of South Carolina
Commonwealth of Virginia Department of Environmental Protection	Virginia Department of Emergency Management Title 44, Code of Virginia, Chapter 3.3, Section 44-146.3	Virginia Registration to Transport Hazardous Radioactive Materials	AO-S-063006	Issued: 5/27/2004 Expires: 6/30/2006	Transport of hazardous radioactive materials

Table E-1. Environmental Authorizations for Current OCGS Operations (Continued).

Agency	Authority	Requirement	Number	Issue or Expiration Date	Activity Covered
State of Tennessee Department of Environment and Conservation Division of Radiological Health	Tennessee Department of Environment and Conservation Rule 1200-2-10.32	Tennessee Radioactive Waste License-for-Delivery	T-NJ001-L05	12/31/05	Transportation of radioactive waste into the State of Tennessee
New Jersey Department of Environmental Protection	40 CFR 266 Subpart N N.J.A.C. 7:26G	Conditional Exemption			Storage and treatment of low- level mixed waste
Ocean County Utilities Authority		Agreement	Not applicable	Not applicable	OCGS provides continuous radiation monitoring of discharges of OCGS wastewater to publicly-owned treatment facility

Table E-2. Environmental Authorizations for OCGS License Renewal^a

Agency	Authority	Requirement	Remarks
U.S. Nuclear Regulatory Commission	Atomic Energy Act (42 USC 2011 et seq.)	License renewal	Environmental Report submitted in support of license renewal application
U.S. Fish and Wildlife Service	Endangered Species Act Section 7 (16 USC 1536)	Consultation	Requires federal agency issuing a license to consult with the U.S. Fish and Wildlife Service
New Jersey Department of Environmental Protection	Clean Water Act Section 401 (33 USC 1341)	Certification	State issuance of NJPDES permit (Section 9.1.5) constitutes 401 certification
New Jersey Coastal Management Program	Coastal Zone Management Act (16 USC 1452 et seq.)	Certification	Requires applicant to prove certification to federal agency issuing the license that license renewal would be consistent with the federally approved State Coastal Zone Management program. Based on its review of the proposed activity, the State must concur with or object to the applicant's certification
New Jersey Office of Historic Preservation	National Historic Preservation Act Section 106 (16 USC 470f)	Certification	Requires federal agency issuing a license to consider cultural impacts and consult with State Historic Preservation Officer (SHPO). SHPO must concur that license renewal will not affect any sites listed or eligible for listing

a. No renewal-related requirements identified for local or other agencies.

Table E-3. Endangered and Threatened Species that Could Occur at or Near OCGS or Along Associated OCGS-Manitou Transmission Line.

Scientific Name	Common Name	Federal Status ^a	State Status ^a
Mammals			
<i>Lynx rufus</i>	Bobcat	-	E
Birds			
<i>Accipiter cooperii</i>	Cooper's hawk	-	T
<i>Ammodramus savannarum</i>	Grasshopper sparrow	-	T
<i>Bartramia longicauda</i>	Upland sandpiper	-	E
<i>Botaurus lentiginosus</i>	American bittern	-	E
<i>Calidris canutus</i>	Red knot	-	T
<i>Charadrius melodus</i>	Piping plover	T	E
<i>Circus cyaneus</i>	Northern harrier	-	E
<i>Cistothorus platensis</i>	Sedge wren	-	E
<i>Falco peregrinus</i>	Peregrine falcon	-	E
<i>Haliaeetus leucocephalus</i>	Bald eagle	T	E
<i>Laterallus jamaicensis</i>	Black rail	-	T
<i>Melanerpes erythrocephalus</i>	Red-headed woodpecker	-	T
<i>Nyctanassa violacea</i>	Yellow-crowned night-heron	-	T
<i>Nycticorax nycticorax</i>	Black-crowned night-heron	-	T
<i>Pandion haliaetus</i>	Osprey	-	T
<i>Podilymbus podiceps</i>	Pied-billed grebe	-	E
<i>Pooecetes gramineus</i>	Vesper sparrow	-	E
<i>Rynchops niger</i>	Black skimmer	-	E
<i>Sterna antillarum</i>	Least tern	-	E
<i>Sterna dougallii dougallii</i>	Roseate tern	E	E
<i>Strix varia</i>	Barred owl	-	T
Reptiles			
<i>Ambystoma tigrinum tigrinum</i>	Eastern tiger salamander	-	E
<i>Clemmys insculpta</i>	Wood turtle	-	T
<i>Clemmys muhlenbergii</i>	Bog turtle	T	T
<i>Crotalus horridus horridus</i>	Timber rattlesnake	-	E
<i>Elaphe guttata guttata</i>	Corn snake	-	E
<i>Hyla andersoni</i>	Pine barrens treefrog	-	E
<i>Hyla chrysoscelis</i>	Cope's gray treefrog	-	E
<i>Pituophis melanoleucus</i>	Northern pine snake	-	T
Invertebrates			
<i>Cicindela dorsalis dorsalis</i>	Northeastern beach tiger beetle	T	E
<i>Nicrophorus americanus</i>	American burying beetle	E	E

Table E-3. Endangered and Threatened Species that Could Occur at or Near OCGS or Along Associated OCGS-Manitou Transmission Line (Continued).

Scientific Name	Common Name	Federal Status ^a	State Status ^a
Plants			
<i>Amaranthus pumilus</i>	Seabeach amaranth	T	E
<i>Aster radula</i>	Low rough aster	-	E
<i>Cacalia atriplicifolia</i>	Pale Indian plantain	-	E
<i>Cardamine longii</i>	Long's bittercress	-	E
<i>Cirsium virginianum</i>	Virginia thistle	-	E
<i>Clitoria mariana</i>	Butterfly-pea	-	E
<i>Corema conradii</i>	Broom crowberry	-	E
<i>Desmodium pauciflorum</i>	Few-flower tick-trefoil	-	E
<i>Eleocharis tortilis</i>	Twisted spike-rush	-	E
<i>Eriophorum tenellum</i>	Rough cotton-grass	-	E
<i>Eupatorium resinosum</i>	Pine Barren boneset	-	E
<i>Fraxinus profunda</i>	Pumpkin ash	-	E
<i>Galactia volubilis</i>	Downy milk-pea	-	E
<i>Glaux maritima</i>	Sea-milkwort	-	E
<i>Gnaphalium helleri</i>	Small everlasting	-	E
<i>Helonias bullata</i>	Swamp-pink	T	E
<i>Hottonia inflata</i>	Featherfoil	-	E
<i>Jeffersonia diphylla</i>	Twinleaf	-	E
<i>Juncus caesariensis</i>	New Jersey rush	-	E
<i>Juncus torreyi</i>	Torrey's rush	-	E
<i>Limosella subulata</i>	Awl-leaf mudwort	-	E
<i>Linum intercursum</i>	Sandplain flax	-	E
<i>Luzula acuminata</i>	Hairy wood-rush	-	E
<i>Melanthium virginicum</i>	Virginia bunchflower	-	E
<i>Myriophyllum tenellum</i>	Slender water-milfoil	-	E
<i>Myriophyllum verticillatum</i>	Whorled water-milfoil	-	E
<i>Narthecium americanum</i>	Bog asphodel	C	E
<i>Oenothera humifusa</i>	Sea-beach evening-primrose	-	E
<i>Onosmodium virginianum</i>	Virginia false-gromwell	-	E
<i>Plantago pusilla</i>	Dwarf plantain	-	E
<i>Polygonum glaucum</i>	Sea-beach knotweed	-	E
<i>Prunus angustifolia</i>	Chickasaw plum	-	E
<i>Ranunculus cymbalaria</i>	Seaside buttercup	-	E
<i>Rhododendron atlanticum</i>	Dwarf azalea	-	E
<i>Rhynchospora globularis</i>	Coarse grass-like beaked-rush	-	E
<i>Rhynchospora knieskernii</i>	Knieskern's beaked-rush	T	E

Table E-3. Endangered and Threatened Species that Could Occur at or Near OCGS or Along Associated OCGS-Manitou Transmission Line (Continued).

Scientific Name	Common Name	Federal Status ^a	State Status ^a
<i>Rhynchospora microcephala</i>	Small-head beaked-rush	-	E
<i>Schwalbea americana</i>	Chaffseed	E	E
<i>Scirpus longii</i>	Long's woolgrass	-	E
<i>Scirpus maritimus</i>	Saltmarsh bulrush	-	E
<i>Spiranthes laciniata</i>	Lace-lip ladies'-tresses	-	E
<i>Stylisma pickeringii</i> var	Pickering's morning glory	-	E
<i>Tridens flavus</i> var <i>chapmanii</i>	Chapman's redtop	-	E
<i>Triglochin maritima</i>	Seaside arrow-grass	-	E
<i>Utricularia biflora</i>	Two-flower bladderwort	-	E
<i>Utricularia minor</i>	Lesser bladderwort	-	E
<i>Uvularia puberula</i> var <i>nitida</i>	Pine Barren bellwort	-	E
<i>Verbena simplex</i>	Narrow-leaf vervain	-	E
<i>Xyris fimbriata</i>	Fringed yellow-eyed-grass	-	E
<i>Zigadenus leimanthides</i>	Death-camus	-	E

a. E = Endangered; T = Threatened; C = Candidate; - = Not listed.

Source: NJDEP NHP 2001.

ATTACHMENT 1

NEW JERSEY COASTAL ZONE MANAGEMENT RULES

APPLICABILITY

The New Jersey Department of Environmental Protection (NJDEP) maintains a website that describes the state coastal management program (Ref. E-1) and provides a discussion of Federal consistency certification and links to the New Jersey's Federal Consistency Guidance Document and New Jersey's Approved Federal Consistency Listing (Ref. E-2). The consistency discussion and the guidance document indicate that the enforceable policies of the New Jersey coastal management program are contained in the following state rules:

- Coastal Zone Management Rules (NJAC³ 7:7E)
- Coastal Permit Program Rules (NJAC 7:7)
- Freshwater Wetlands Protection Act Rules (NJAC 7:7A)

The Federal Consistency listing includes "[p]ermits and licenses required for the construction and operation of nuclear facilities under the Atomic Energy Act of 1954, Sections 6, 7, 8, and 10." While the listing does not expressly include license renewal, AmerGen has prepared this certification as if it did. The following paragraphs present AmerGen's conclusions with regard to the applicability of the New Jersey enforceable coastal management policies to U. S. Nuclear Regulatory Commission renewal of the Oyster Creek Generating Station (OCGS) operating license.

Coastal Zone Management Rules (NJAC 7:7E, as amended 2/13/03) – The New Jersey Land Use Regulation Program administers these rules under the authority of the state Coastal Area Facility Review Act (CAFRA) and other laws. The Program website (Ref. E-3) provides additional detail about its coastal programs and includes a link to a CAFRA zone map for a preliminary assessment of geographic coverage of the Act (Ref. E-4). The map indicates that the eastern one half of Ocean County is with the coastal area. OCGS is located within that portion of Ocean County, in Lacey Township. The rules at section 7:7E-1.2(a)1 indicates that the chapter (i.e., 7E) is applicable to consistency determinations. AmerGen has concluded that the location of the OCGS is within the CAFRA geographic coverage and that these rules, as they implement CAFRA, apply to the OCGS certification.

Coastal Permit Program Rules (NJAC 7:7, as amended 2/13/03) – These are the rules by which NJDEP implements its requirements for permits for construction within the coastal area; draining, 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 waterways. Because AmerGen is not performing these activities 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, AmerGen has concluded that these rules are not applicable to its federal consistency certification.

3 NJAC = New Jersey Administrative Code

Freshwater Wetlands Protection Act Rules (NJAC 7:7A, effective 10/20/03) – These are the rules by which DEP regulates construction in, or other disturbance of, freshwater wetlands. AmerGen has concluded that these rules do not apply to the OCGS certification because AmerGen is not performing such a regulated activity and has no plans to perform such a regulated activity as a result of license renewal.

The following sections address specific provisions of the New Jersey Coastal Zone Management Rules and AmerGen's basis for its conclusions regarding applicability and consistency. Subchapter 1 of the rules deals with general information (e.g., purpose, jurisdiction, definitions) and Subchapter 2 is reserved, so the discussion begins with Subchapter 3.

POLICY ANALYSIS

Subchapter 3 – Special Areas

Rule Section 7:7E-3.1 groups Subchapter 3 requirements by the following categories of Special Areas:

- Special Water Areas, NJAC 7:7E-3.2 through 3.15
- Special Water's Edge Areas, NJAC 7:7E-3.16 through 3.32
- Special Land Areas, NJAC 7:7E-3.33 through 3.35
- Coastwide Special Areas, NJAC 7:7E-3.36 through 3.49

The following paragraphs address each category.

Special Water Areas, NJAC 7:7E-3.2 through 3.15

OCGS is located on approximately 800 acres in Lacey Township, Ocean County, New Jersey. The OCGS property lies between the South Branch of Forked River to the north, and Oyster Creek to the south. The plant withdraws and discharges water from Barnegat Bay via the South Branch of Forked River and Oyster Creek, respectively. OCGS operations have the potential to affect Special Water Areas of Barnegat Bay, the South Branch of Forked River, and Oyster Creek. The state regulates these effects through the OCGS New Jersey Environmental Pollutant Discharge Elimination System (NJPDES) permit. AmerGen is in compliance with its NJPDES permit and has no plans that would change these effects as a result of license renewal.

7:7E-3.2 Shellfish habitat

Hardshell clam (*Mercenaria mercenaria*) populations in Barnegat Bay declined in the 1960s and 1970s and do not appear to be recovering. However, because Barnegat Bay has a history of natural shellfish production, it is considered a shellfish habitat for the purposes of this document.

AmerGen will construct no docks, piers or mooring in Barnegat Bay. AmerGen will not dredge in Barnegat Bay, and if dredging the existing intake and discharge canals is necessary, the spoils will be disposed at a properly-permitted upland site. OCGS is in compliance with the rules protecting shellfish habitat.

7:7E-3.3 Surf clam areas

OCGS operations and license renewal involve no development in coastal waters; therefore, these requirements are not relevant.

7:7E-3.4 Prime fishing areas

Oyster Creek, from Route 9 to Barnegat Bay, is a popular recreational fishing area as is the Bay itself. AmerGen will not mine sand or gravel from the creek and is not proposing additional development; therefore, OCGS is in compliance with the rules protecting prime fishing areas.

7:7E-3.5 Finfish migratory pathways

Finfish seasonally migrate up and down Barnegat Bay. OCGS has no physical barriers that impede fish migrations in Barnegat Bay. 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. These conditions will remain throughout the license renewal term. No development that would decrease water quality in the creeks or Barnegat Bay will occur as a result of license renewal. OCGS is in compliance with the rules protecting finfish migrations.

7:7E-3.6 Submerged vegetation habitat

Barnegat Bay supports submerged vegetation. Prohibited activities are all related to development. As stated previously, AmerGen will not develop any part of the OCGS property as a result of license renewal. OCGS is in compliance with the rules protecting submerged vegetation habitat.

7:7E-3.7 Navigation channels

No OCGS operations affect any navigation channels; therefore, these requirements are not relevant.

7:7E-3.8 Canals

Canals are navigation channels for boat traffic through land areas. No navigation channels occur on AmerGen property, and the transmission line does not cross any canals; therefore, these requirements are not relevant.

7:7E-3.9 Inlets

AmerGen property is not contiguous to and does not include an inlet; therefore, these requirements are not relevant.

7:7E-3.10 Marina Moorings

AmerGen has no marina moorings; therefore, these requirements are not relevant.

7:7E-3.11 Ports

AmerGen has no ports; therefore, these requirements are not relevant.

7:7E-3.12 Submerged infrastructure routes

AmerGen has no submerged infrastructure, nor any property adjacent to submerged infrastructure routes; therefore, these requirements are not relevant.

7:7E-3.13 Shipwreck and artificial reef habitats

AmerGen has no shipwrecks or artificial reef habitats; therefore, these requirements are not relevant.

7:7E-3.14 Wet borrow pits

AmerGen has no wet borrow pits; therefore, these requirements are not relevant.

7:7E-3.15 Intertidal and subtidal shallows

AmerGen has no property with intertidal or subtidal shallows; therefore, these requirements are not relevant.

Special Water's Edge Areas, NJAC 7:7E-3.16 through 3.32

Rule Section 7:7E-3.1 divides Special Water's Edge Areas requirements into the following subcategories:

Oceanfront and Raritan and Delaware Bayfronts, NJAC 7:7E-3.16 through 3.19 - These requirements are not applicable to OCGS certification because OCGS is not located on, and does not affect, the oceanfront or Raritan and Delaware Bayfronts.

Barrier and Bay Islands, NJAC 7:7E-3.20 and 3.21 - These requirements are not applicable to OCGS certification because OCGS is not located on, and does not affect, barrier or bay islands.

Coastwide Special Water's Edge Areas, NJAC 7:7E-3.22 through 3.32 - OCGS operations have the potential to affect Coastwide Special Water's Edge Areas of Barnegat Bay, the South Branch of Forked River, and Oyster Creek. AmerGen has no plans that would change these effects as a result of license renewal.

7:7E-3.22 Beaches

Beaches are located at the eastern edge of Finninger Farms property. AmerGen has no plans that would affect these beaches as a result of license renewal.

7:7E-3.23 Filled water's edge

AmerGen has no filled water's edges; therefore, these requirements are not relevant.

7:7E-3.24 Existing lagoon edges

AmerGen has no existing lagoon edges; therefore, these requirements are not relevant.

7:7E-3.25 Flood hazard areas

Neither Oyster Creek nor the South Branch of the Forked River is identified as a flood hazard area in NJAC 7:13 Rules Governing Flood Hazard Areas; therefore, these requirements are not relevant.

7:7E-3.26 Reserved

7:7E-3.27 Wetlands

Vernal habitat mapping by Rutgers' Center for Remote Sensing and Spatial Analysis indicates a small vernal pool between the Administration area's parking lot and Route 9. The pool has not been surveyed to determine if it meets NJDEP criteria for exceptional resource wetlands; however, AmerGen evaluated the rules for protection of wetlands.

As stated previously, AmerGen will not develop additional facilities at OCGS as a result of license renewal. AmerGen properly disposes of all solid and liquid wastes generated at the facility. OCGS is in compliance with wetland protection rules. The transmission line crosses several creeks and associated wetlands. FirstEnergy, which owns the transmission line, follows accepted procedures for the control of vegetation in wetlands.

7:7E-3.28 Wetlands buffers

The small vernal pool on AmerGen property has been surveyed for the presence / absence of protected species and a buffer was established. AmerGen will not develop any undeveloped land as a result of license renewal.

7:7E-3.29 and 7:7E-3.30 Reserved

7:7E-3.31 Coastal bluffs

AmerGen property has no coastal bluffs; therefore, these requirements are not relevant.

7:7E-3.32 Intermittent stream corridors

AmerGen property has no intermittent streams; therefore, these requirements are not relevant.

Special Land Areas, NJAC 7:7E-3.33 through 3.35

OCGS operations have the potential to affect Special Land Areas within the OCGS site boundary and within OCGS transmission line corridors. AmerGen has no plans that would change these effects as a result of license renewal.

7:7E-3.33 Farmland conservation areas

AmerGen property includes the 650-acre old Finninger Farm site, once an active beef cattle farm, east of Route 9. AmerGen maintains the undeveloped property as a buffer and has no plans to develop it as a result of license renewal. AmerGen is in compliance with the rules governing farmland conservation areas.

7:7E-3.34 Steep slopes

AmerGen property has no steep slopes; therefore, these requirements are not relevant.

7:7E-3.35 Dry borrow pits

AmerGen has no dry borrow pits; therefore, these requirements are not relevant.

Coastwide Special Areas, NJAC 7:7E-3.36 through 3.49

OCGS operations have the potential to affect Coastwide Special Areas within the OCGS site boundary and within OCGS transmission line corridors. AmerGen has no plans, as a result of license renewal activities, that would change any of these current effects.

7:7E-3.36 Historic and archaeological resources

Neither historic or pre-historic archaeological sites, nor any historic or archaeological resources have ever been identified on AmerGen property or the transmission line corridor; therefore, these requirements are not relevant.

7:7E-3.37 Specimen trees

AmerGen property has no specimen trees; therefore, these requirements are not relevant.

7:7E-3.38 Endangered or threatened wildlife or plant species habitats

AmerGen property has no endangered or threatened wildlife or plant species habitats; therefore, these requirements are not relevant.

7:7E-3.39 Critical wildlife habitats

AmerGen property has no critical wildlife habitats; therefore, these requirements are not relevant.

7:7E-3.40 Public open space

AmerGen property includes no public open space; therefore, these requirements are not relevant.

7:7E-3.41 Special hazards area

OCGS uses hazardous substances as defined by NJSA 58:10-23.11b-k, including substances that are corrosive, ignitable, flammable or radioactive. As such OCGS has an evacuation zone out to 10 miles from the OCGS. Therefore these rules are relevant.

Development within the special hazards area must include appropriate mitigating measures to protect public health and safety. OCGS maintains warning sirens, publishes and provides to the community information on what to do in the event of an emergency at the facility, trains first responders, and provides input to an evacuation plan updated with the most recent census and traffic data. For these reasons OCGS is in compliance with these rules.

7:7E-3.42 Excluded Federal lands

No excluded Federal lands are adjacent to the AmerGen property. These requirements are not relevant.

7:7E-3.43 Special urban areas

These requirements apply to development in special urban areas and hence, do not apply to OCGS.

7:7E-3.44 Pinelands National Reserve and Pinelands Protection Area

Lacey Township is partially in the Pinelands National Reserve Area. Rules in this subsection apply to development and the discharge of dredged materials into freshwater wetlands, neither of which OCGS will pursue during the license renewal term. The requirements are not relevant.

7:7E-3.45 Hackensack Meadowlands District

Ocean County is not part of the Hackensack Meadowlands district and therefore these rules are not relevant.

7:7E-3.46 Wild and Scenic Rivers corridors

OCGS is not part of the Great Egg Harbor River or the Maurice River watersheds (the only wild and scenic rivers in New Jersey) and thus, the requirements are not relevant.

7:7E-3.47 Geodetic control reference marks

No geodetic control reference mark is located on AmerGen property. Therefore, the requirements are not relevant.

7:7E-3.48 Hudson River Waterfront Area

Ocean County is not part of the Hudson River waterfront area; therefore, the requirements are not relevant.

7:7E-3.49 Atlantic City

OCGS is not located in Atlantic City; therefore, these requirements are not relevant.

Subchapter 3A – Standards for Beach and Dune Activities

Beaches are located at the eastern edge of Finninger Farms. AmerGen has no plans that would affect this resource as a result of license renewal.

Subchapter 3B – Information required in tidal wetland and intertidal and subtidal shallows proposals

Tidal wetlands are located in the eastern part of Finninger Farms property. AmerGen has no plans that would affect this resource as a result of license renewal.

Subchapter 3C – Standards for conducting and reporting the results of an endangered or threatened wildlife or plant species habitat impact assessment and/or an endangered or threatened wildlife species habitat evaluation

No endangered or threatened plant or animal species is known from the AmerGen property. The property does not abut habitats mapped as endangered or threatened wildlife habitats. Therefore, the requirements of this subsection are not relevant.

Subchapter 4 – General Water Areas

OCGS withdraws cooling water from Barnegat Bay via the South Branch of Forked River and discharges water to Barnegat Bay via Oyster Creek. Section 7:7E-4.1(b)iii 5 describes medium rivers, creeks and streams as having watersheds of less than 1,000 square miles. Section 7:7E-4.1(b)iii 7 describes semi-enclosed and back bays. Forked River and Oyster Creek are medium rivers, and Barnegat Bay is a back bay. Requirements for General Water Areas apply.

7.7E-4.2 Aquaculture

AmerGen does not practice aquaculture at OCGS. These requirements are not relevant.

7.7E-4.3 Boat Ramps

AmerGen maintains a private boat ramp on the north shore of Oyster Creek. It is constructed of metal plates and is used to launch boats for periodic biological and water quality sampling by AmerGen environmental staff. A garbage can is provided at the ramp. OCGS is in compliance with the rules governing boat ramps.

7.7E-4.4 Docks and piers for cargo and commercial fisheries

AmerGen does not maintain any docks or piers. These requirements are not applicable. AmerGen does maintain a metal bulkhead on the south shore of Oyster Creek, immediately downstream of the Rt. 9 bridge. This was used during construction to deliver large and heavy equipment from barges. Currently Ocean County uses the bulkhead to load artificial reef structures onto barges for transport offshore.

7.7E-4.5 Recreational docks and piers

AmerGen does not maintain any docks or piers. These requirements are not applicable.

7.7E-4.6 Maintenance Dredging

Three times since the plant began operations, the intake or discharge canals east of Rt. 9 have been dredged to remove accumulated sediments. It is likely that dredging will be required during the license renewal term. Before initiating any dredging, AmerGen would obtain the appropriate permits from the U.S. Army Corps of Engineers and the NJDEP. OCGS is in compliance with the rules governing maintenance dredging.

7.7E-4.7 New Dredging

AmerGen will not dredge a new channel/canal as a result of license renewal. These requirements are not relevant.

7.7E-4.8 Dredged material disposal

AmerGen has disposed of dredge spoils in a permitted dredge spoils basin on AmerGen property. AmerGen holds an NJPDES storm water discharge permit for the dredge spoils basin and an NJPDES permit to discharge groundwater from the dredge spoils. In addition the Ocean County Soil Conservation District has certified the AmerGen soil erosion and sediment control plan for the upland dredge site. OCGS is in compliance with the rules governing disposal of dredged material.

7.7E-4.9 Solid waste or sludge dumping

This activity is prohibited. AmerGen does not dispose of solid wastes or sludge in a water area.

7.7E-4.10 Filling

AmerGen will not fill any water area as a result of license renewal. These requirements are not relevant.

7.7E-4.11 Mooring

AmerGen will not construct any mooring for the purpose of anchoring a boat as a result of license renewal. These requirements are not relevant.

7.7E-4.12 Sand and gravel mining

AmerGen will not mine sand nor gravel as a result of license renewal. These requirements are not relevant.

7.7E-4.13 Bridges

AmerGen will not construct any bridges as a result of license renewal. These requirements are not relevant.

7.7E-4.14 Submerged pipelines

AmerGen will not construct any submerged pipelines as a result of license renewal. These requirements are not relevant.

7.7E-4.15 Overhead transmission lines

AmerGen will not construct any overhead transmission lines for the purpose of distributing power from the OCGS switchyard as a result of license renewal. These requirements are not relevant.

7.7E-4.16 Dams and impoundments

AmerGen dammed Oyster Creek to create an emergency fire pond at the time of plant construction, and continues to maintain the fire pond and dam. Oyster Creek naturally is navigable above the pond only to canoes and kayaks, so the dam does not impede navigation. OCGS is in compliance with this requirement.

7.7E-4.17 Outfalls and intakes

AmerGen has an intake and several outfalls. The uses associated with the intakes and outfalls meet applicable Coastal Zone management rules. OCGS is in compliance with this requirement.

7.7E-4.18 Realignment of water areas

The volume the circulating water pumps draw into the plant at the OCGS intake reversed the flow of the South Branch of Forked River. This environmental impact was identified in the conceptual design phase of the project and was approved by the regulatory agencies prior to construction. The operating parameters of OCGS will not change as a result of license renewal.

7.7E-4.19 Breakwaters

AmerGen has no breakwaters at the OCGS site and will not construct any as a result of license renewal. These requirements are not relevant.

7.7E-4.20 Submerged cables

AmerGen does not have and will not lay any submerged cables to support OCGS operations as a result of license renewal. These requirements are not relevant.

7.7E-4.21 Artificial reefs

AmerGen does not have and will not construct any artificial reefs as a result of license renewal. These requirements are not relevant.

Subchapter 5 – Requirements for impervious cover and vegetative cover for general land areas and certain special areas

This subchapter applies to development, which AmerGen will not undertake during the license renewal term. Therefore, the requirements are not relevant.

Subchapter 6 – General location rules

This subchapter applies to development, which AmerGen will not undertake during the license renewal term. Therefore, the requirements are not relevant.

Subchapter 7 – Use rules

This subchapter applies to development, which AmerGen will not undertake during the license renewal term. Therefore, the requirements are not relevant.

Subchapter 8 – Resource rules

This subchapter applies to development, which AmerGen will not undertake during the license renewal term. Therefore, the requirements are not relevant.

References

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- E.4 New Jersey Department of Environmental Protection. 2004. CAFRA Boundary Line. Available at <http://www.state.nj.us/dep/landuse/coast/coast.html>.

9 General Guidance for Federal Consistency

July 2004

GENERAL GUIDANCE FOR FEDERAL CONSISTENCY

July 2004

A. INTRODUCTION

The Coastal Zone Management Act (CZMA) was enacted on October 27, 1972, to encourage coastal States, Great Lake States, and United States Territories and Commonwealths (collectively referred to as coastal States) to develop management programs to manage and balance competing uses of and impacts to coastal resources. The CZMA is an important law implementing the concept of federalism and emphasizes the primacy of State decision making regarding the coastal zone. Section 307 of the CZMA (16 USC 1456), called the Federal Consistency provision, is a major incentive for States to join the national coastal management program and is a powerful tool that States use to manage coastal uses and resources and to facilitate cooperation and coordination with Federal agencies.

Federal Consistency reviews are the responsibility of the lead State agency that implements or coordinates the State's federally approved Coastal Management Program (State CMP or CMP). At the federal level, the Office of Ocean and Coastal Resource Management (OCRM), within the National Oceanic and Atmospheric Administration's (NOAA's) National Ocean Service, among other duties and services, interprets the CZMA and oversees the application of Federal Consistency; provides management and legal assistance to coastal States, Federal agencies, Tribes and others; and mediates CZMA related disputes. NOAA's Office of General Counsel for Ocean Services assists OCRM and processes appeals to the Secretary of Commerce.

The Federal Consistency regulations and manual prepared by OCRM, and the CZMA are posted on NOAA's web site at http://coastalmanagement.noaa.gov/czm/federal_consistency.html. The information contained in this document is general guidance and does not supercede the Federal regulations. New Jersey's Coastal Management Office is in the process of updating its Federal Consistency list.

B. DEFINITIONS

Federal Consistency is the CZMA requirement that *federal actions* that have reasonably foreseeable *effects* on any *land or water use* or *natural resource* of the coastal zone (also referred to as coastal uses or resources, or coastal effects) must be consistent with the *enforceable policies* of a coastal State's federally approved CMP. The following are the three categories of Federal actions:

Federal actions:

1. *Federal agency activities* -- activities and development projects performed by a Federal agency, or a contractor for the benefit of a Federal agency.

For example, Fisheries Plans by the National Marine Fisheries Service, Naval exercises, the disposal of federal land by the General Services Administration, a U.S. Army Corps of Engineers (Corps) breakwater or beach renourishment project, an outer continental shelf (OCS) oil and gas lease sale by the Minerals Management Service (MMS), improvements to a military base, Naval disposal of radioactive or hazardous waste performed by a private contractor, activities in National Parks such as installation of mooring buoys or road construction;

2. ***Federal license or permit activities*** -- Activities not performed by a Federal agency, but requiring federal permits, licenses or other forms of federal approval. For example, activities requiring Corps 404 permits, MMS approvals for OCS oil and gas plans, Corps permits for use of ocean dump-sites, Nuclear Regulatory Commission licenses for nuclear power plants, licenses from the Federal Energy Regulatory Commission (FERC) for hydroelectric facilities;

3. ***Federal financial assistance to State and local governments.***

For example, Federal Highway Administration funds to coastal state and local governments, construction grants for wastewater treatment works, hazardous waste management trust fund, Housing and Urban Development grants.

Note: The regulations for the review of Outer Continental shelf (OCS) activities are not included in this document due to the current moratorium offshore of New Jersey.

Effects:

At the heart of Federal Consistency is the “effects test.” The CZMA was amended in 1990 to,

establish a generally applicable rule of law that any federal agency activity (regardless of its location) is subject to [the consistency requirement] if it will ***affect*** any natural resources, land uses, or water uses in the coastal zone. No federal agency activities are categorically exempt from this requirement.

These amendments were intended to leave no doubt that all federal agency activities meeting the “effects” standard are subject to the CZMA consistency requirement; that there are no exceptions or exclusions from the requirement as a matter of law; and that the new “uniform threshold standard” requires a factual determination, based on the effects of such activities on the coastal zone, to be applied on a case-by-case basis.

Enforceable policies: An enforceable policy is a State policy that is legally binding under State law (e.g., through constitutional provisions, laws, regulations, land use plans, ordinances, or judicial or administrative decisions), and by which a State exerts control over private and public coastal uses and resources, and which are incorporated in the State’s federally approved CMP.

In New Jersey, the enforceable policies are contained in the Coastal Zone Management rules

(N.J.A.C. 7:7E), the Coastal Permit Program rules, (N.J.A.C. 7:7), and the Freshwater Wetlands Protection Act rules, (N.J.A.C. 7:7A). Three major state laws are implemented through the Coastal Zone Management rules: the Waterfront Development Law, the Wetlands Act of 1970, and the Coastal Area Facility Review Act (CAFRA). The Hackensack Meadowlands Reclamation and Development Act and the Freshwater Wetlands Protection Act are additional authorities for Federal Consistency review.

Coastal uses: Coastal uses include such activities as: public access, recreation, fishing, historic or cultural preservation, development, hazards management, marinas, floodplain management, scenic and aesthetic enjoyment, and resource creation or restoration projects, etc.

Coastal resources: Coastal resources include biological or physical resources that are found within a State's coastal zone on a regular or cyclical basis. Biological and physical resources include, but are not limited to, air, tidal and nontidal wetlands, ocean waters, estuaries, rivers, streams, lakes, aquifers, submerged aquatic vegetation, land, plants, trees, minerals, fish, shellfish, invertebrates, amphibians, birds, mammals, and reptiles, etc.

Coastal zone: The Geographic scope of the New Jersey coastal zone is as follows:

1. The coastal area defined in the Coastal Area Facility Review Act (CAFRA), N.J.S.A. 13:19-1 et seq.;
2. Coastal waters, which are any tidal waters of the State and all lands lying thereunder. Coastal waters of the State of New Jersey extend from the mean high water line out to the three geographical mile limit of the New Jersey territorial sea, and elsewhere to the interstate boundaries of the States of New York, and Delaware and the Commonwealth of Pennsylvania;
3. All lands outside of the coastal area as defined by CAFRA extending from the mean high water line of a tidal water body to the first paved public road, railroad or surveyable property line existing on September 26, 1980 generally parallel to the waterway, provided that the landward boundary of the upland area shall be no less than 100 feet and no more than 500 feet from the mean high water line; (that is, upland waterfront development jurisdictional area)
4. All areas containing tidal wetlands; and
5. The Hackensack Meadowlands District as defined by N.J.S.A. 13:17-4.

C. NATIONAL INTEREST SAFEGUARDS

Federal Consistency gives States substantial input into federal actions affecting the coastal zone. There are, however, safeguards which balance the need to ensure consistency for federal actions affecting the coastal zone and the importance of federal activities.

Consistency must be based on coastal effects. While the Federal Consistency effects test covers a wide range of federal actions, States only review federal actions that have reasonably foreseeable coastal effects. For Federal agency activities, Federal agencies make this determination of effects. For federal license or permit activities and federal financial assistance activities, OCRM makes the determination of effects by approving the *lists* of federal approvals and financial assistance programs that a State wishes to include in its CMP. In order to be on the list, the federal approval or funding program must have coastal effects in most cases. Federal agencies and other interested parties have input into OCRM's approval of such lists and additions to the lists. If a State wishes to review an *unlisted* federal license or permit activity, it must notify the applicant and the Federal agency and seek OCRM approval to review the activity. OCRM's decision is based on whether the unlisted activity will have reasonably foreseeable coastal effects and, again, OCRM seeks input from the Federal agency and the applicant.

Consistent to the maximum extent practicable (Federal agency activities). The CZMA at 307(c)(1) requires Federal agency activities to be fully consistent unless federal legal requirements prohibit full consistency. This ensures that Federal agencies are able to meet their legally authorized mandates, even though the activity may not be consistent with a State's enforceable policy. If a Federal agency has the discretion to meet a State's enforceable policy, then it needs to be consistent with that policy. However, federal law may limit a Federal agency's discretion and, thus, a Federal agency's administrative record may dictate an action that is not fully consistent with a State's policy. A Federal agency may also deviate from full consistency due to "exigent circumstances." An exigent circumstance is an emergency or emergency-like or unexpected situation requiring the Federal agency to take quick or immediate action.

Consistent to the maximum extent practicable and exigent circumstances refers to consistency with a State CMP's substantive requirements as well as the procedural requirements of NOAA's regulations. There may be times that a federal legal requirement or an emergency situation requires a Federal agency to act sooner than the end of the 90-day consistency period. In such cases, the Federal agency needs to consult with the State CMP as early as possible.

A Federal agency cannot use a lack of funds as a basis for being consistent to the maximum extent practicable. Thus, Federal agencies are encouraged to consult early with State CMPs to ensure that the Federal agency has budgeted for meeting State CMP enforceable policies.

A Federal agency may also proceed over a State's objection when the Federal agency determines that it is *fully* consistent with the State's enforceable policies. 15 CFR 930.43(d).

D. BASIC FEDERAL CONSISTENCY PROCEDURES

Federal Agency Activities and Development Projects

Federal agencies proposing an activity need to follow the Federal regulations at 15 CFR part

930, subparts A, B and C, as revised by 65 Fed. Reg. 77123-77175 (December 8, 2000). *(Note: As noted previously, the regulations for the review of OCS which differ than those listed below, are not included in this document due to the current moratorium offshore of New Jersey.)*

1. Federal development projects inside the coastal zone are automatically subject to consistency and require a Consistency Determination.
2. Federal agency determines if federal activity (in or outside coastal zone) and development projects outside the coastal zone will have reasonably foreseeable coastal effects. *(Note: By statute, all Federal **development projects** proposed in a state's coastal zone are deemed to have coastal effects and therefore the Federal agency must submit a consistency determination. A Federal **development project** is a Federal agency activity involving the planning, construction, modification or removal of public works facilities, or other structures and includes the acquisition, use or disposal of any coastal resource. For development projects outside of the coastal zone and all other Federal agency activities that are not development projects regardless of the location of the activity (that is, within or outside of the coastal zone) the Federal agency determines if the activity will have a coastal effect.)* States are encouraged to list activities that are expected to affect coastal uses or resources in their approved CMPs, and to monitor unlisted activities and to notify Federal agencies when an unlisted activity requires consistency review. However, the listing/unlisted provisions in NOAA's regulations are recommended procedures for facilitating State-Federal coordination. Whether or not an activity is listed, it is the Federal agency's responsibility to provide State CMPs with Consistency Determinations for Federal agency activities affecting the coastal zone.
3. The Federal agency should contact the State CMP at the earliest possible moment in the planning of the activity to ensure early State-Federal coordination and consultation.
4. If coastal effects are reasonably foreseeable, then Federal agency submits a Consistency Determination to State CMP at least **90 days before activity starts**. While the form of the Consistency Determination may vary, it must include a detailed description of the proposed activity, its expected coastal effects, and an evaluation of the proposed activity in light of the applicable enforceable policies in the State's CMP.
5. If no effects, Federal agency may have to provide a **Negative Determination** (A negative determination is a determination by a Federal agency that the proposed activity will not have any coastal effects). *(Note: Negative determinations are discussed in detail on page 8 of this document)*
6. State CMP has **60 days (plus appropriate extensions) to concur with or object** to the Federal agency's consistency determination. *(Note: Pursuant to 15 CFR 930.41(b), Federal agencies shall approve one request for a **15-day extension or less**. In considering whether a longer or additional extension period is appropriate, the Federal agency should consider the magnitude and complexity of the information contained in the*

consistency determination)

7. The State CMP must provide for public comment on the State's consistency review. The State cannot rely on the Federal agency notice, unless the Federal agency notice specifically says that comments on the ***State CMP's consistency review*** should be sent to the State CMP agency. *(Note: In New Jersey, the Department publishes notice of the 15-day public comment period in the DEP Bulletin)*
8. **State concurrence presumed if State does not meet time frames.**
9. If the State CMP agrees with the Consistency Determination, then the Federal agency may immediately proceed with the activity. If the State objects, then the State's objection must describe how the proposed activity is inconsistent with enforceable CMP policies *(see page 9 of this document for further detail)*. In the event of an objection, the State CMP and Federal agency should attempt to resolve any differences during the remainder of the **90 day period**. If resolution has not been reached at the end of the **90 day period** the Federal agency should consider postponing final federal action until the problems have been resolved. However, at the end of the **90 day period** the Federal agency may, notwithstanding State CMP objection, proceed with the activity only if the Federal agency clearly describes, in writing, to the State CMP the specific legal authority which limits the Federal agency's discretion to comply with the State CMP's enforceable policies. *(Note: Pursuant to 15 C.F.R. 930.4, a State CMP can issue a conditional concurrence only in cases when the Federal agency agrees to the conditions prior to issuance.)*
10. If dispute between Federal agency and State CMP, either party may seek mediation by OCRM or the Secretary of Commerce (the Secretary's mediation is more formal).

Federal License or Permit Activities

A private individual or business, or a state or local government agency, or any other type of non-federal entity, applying to the federal government for a required permit or license or any other type of an approval or authorization, needs to follow the Federal regulations at 15 CFR part 930, subparts A, B and D, as revised by 65 Fed. Reg. 77123-77175 (December 8, 2000).

1. State CMP, with OCRM approval, determines effects. All federal license or permit activities occurring in the coastal zone are deemed to affect coastal uses or resources, if the State CMP has "listed" the particular federal license, permit, or approval in its federally approved CMP document. New Jersey's list is included as ***Appendix B***.

For a ***listed*** activity occurring ***in the coastal zone***, the applicant must submit a Consistency Certification to the approving Federal agency and the State CMP. In addition to the Certification, the applicant must provide the State with the necessary data and information to allow the State to assess the project's effects. This information will

usually be contained in the applicant's application to the Federal agency, but may include other information required by the State CMP, if the information requirement is specifically included in the State's federally approved CMP document.

For *listed* activities, ***outside the coastal zone***, the applicant must submit a Consistency Certification to the State CMP and the Federal agency if the activity falls within the ***geographic location*** described in the State CMP document for listed activities outside the coastal zone. For listed activities outside the coastal zone where the State has *not* described the geographic location, the State CMP must follow the unlisted activity procedure described above, if it wants to review the activity. *(Note: New Jersey has not listed Federal activities outside of its coastal zone. Therefore, any Federal activity that the State wants to review under the Federal Consistency provision of the CZMA (for example activities located in the Atlantic Ocean greater than three miles) are considered unlisted activities and shall be reviewed accordingly.)*

An applicant may also be required to submit a Consistency Certification to the State CMP for ***unlisted activities***. **For unlisted activities, in or outside the coastal zone, the State CMP must notify the applicant, the relevant Federal agency, and OCRM that it intends to review the activity.** This notification shall also request OCRM's approval to review the unlisted activity and an analysis that supports the State agency's assertion that coastal effects are reasonably foreseeable. Contents of such a letter and a sample letter are available from the Coastal Management Office. **The State CMP must make this notification within 30 days of receiving notice of the activity**, otherwise the State waives its consistency rights. The waiver does not apply where the State CMP does not receive notice (notice may be actual or constructive so long as it is adequate). The applicant and the Federal agency have **15 days from receipt** of the State CMP's request to provide comments to OCRM. OCRM will make a decision usually within **30 days of receipt** of the State's request. The basis for OCRM's decision will be whether the proposed activity can be reasonably expected to affect any land or water use or natural resource of the coastal zone. The Federal agency may not approve the activity until the consistency process is complete.

2. Applicant for any required federal approval must submit a Consistency Certification and necessary data and information to the State CMP.
3. State CMP has **six months to respond**, but **must notify applicant if review will go beyond three months**.
4. The State must provide for public comment (State can require applicant to publish notice or may combine notice with Federal agency, if Federal agency agrees).
5. State concurrence presumed if State does not meet time frames.
6. If State objects, Federal agency cannot issue approval.

7. Applicant may renegotiate with State to remove State's objection or appeal the State's objection to the Secretary of Commerce within **30 days of the objection**. If the Secretary overrides the State's objection, the Federal agency may approve the project.

Federal Financial Assistance Activities

A state agency or local government applying for federal financial assistance needs to follow the Federal regulations at 15 CFR part 930, subparts A, B and F, as revised by 65 Fed. Reg. 77123-77175 (December 8, 2000).

1. States list in their CMPs the federal financial assistance activities subject to review. The State CMP may also notify an applicant agency and Federal agency that it will review an unlisted activity. OCRM approval is not required for the review of unlisted federal financial assistance activities.
2. NOAA regulations allow State CMPs to develop flexible procedures for reviewing and concurring with federal assistance activities. State CMP review of the activities is normally conducted through procedures established by States pursuant to Executive Order 12372 -- intergovernmental review of federal programs, or through State clearinghouse procedures.
3. Federal agency may not issue the funding until State CMP has concurred.
4. State or local government applicant agency may appeal State objection to the Secretary of Commerce who may override the State's objection.

Negative Determinations

A negative determination is a determination by a Federal agency that a proposed activity will not have any coastal effects (see 930.35).

1. Negative determinations shall include a brief description of the activity, the activity's location and basis for the Federal agency's determination that the activity will not affect any coastal resource.
2. A negative determination shall be provided to the State agency at least **90 days before final approval** of the activity unless the State and Federal agencies have agreed to an alternate notification schedule.
3. The State agency is not obligated to respond to a negative determination.
4. If a State agency does not respond to the Federal agency's negative determination within **60 days**, State agency concurrence is presumed.

5. State agency concurrence is not presumed in cases where the State agency, within the **60 day** period requests an extension of time to review the determination. Federal agencies shall approve one request for an extension period of 15 days or less.

6. If a State agency objects to the negative determination asserting that coastal effects are reasonably foreseeable, the Federal agency shall consider submitting a consistency determination or otherwise attempt to resolve any disagreement within the remainder of the **90 day** period as set forth in 2 above.

7. In the event of serious disagreement between the Federal and State agencies regarding a determination related to whether a proposed activity affects any coastal use or resource, either party may seek Secretarial mediation or OCRM mediation services.

Mediation of Disputes

In the event of a serious disagreement between a State CMP and a Federal agency, either party may request that the Secretary of Commerce mediate the dispute. Secretarial mediation is a formal process that includes a public hearing, submission of written briefs, and meetings between the parties. A hearing officer, appointed by the Secretary, will propose a solution. Secretarial mediation is only for States and Federal agencies. For mediation to proceed, all parties must agree to participate, agreement to participate is non-binding, and either party may withdraw from the mediation at any time. Exhaustion of the mediation process is not a prerequisite to judicial review.

The availability of Secretarial mediation or litigation does not preclude the parties from informally mediating the dispute through OCRM or another facilitator. OCRM has successfully mediated disputes and offers its good offices to resolve conflicts. Most disputes are addressed through this informal method. Either party may request OCRM involvement, and participation is non-binding.

Appeals to the Secretary of Commerce

The CZMA provides an administrative appeal to the Secretary of Commerce from a consistency objection by a coastal State. In the case of a federal license or permit, or an application for federal financial assistance, the applicant may request that the Secretary override the State's consistency objection if the activity is consistent with the objectives of the CZMA (Ground I), or is otherwise necessary in the interest of national security (Ground II). 16 USC § 1456(c)(3)(A),(B), and (d). Secretary appeals are not available for Federal agency activities. The requirements for appeals are found at 15 CFR part 930, subpart H, as revised by 65 Fed. Reg. 77123-77175 (December 8, 2000).

If the requirements of either Ground I or Ground II are met, the Secretary overrides the State's objection. The Secretary's inquiry into whether the grounds for an override have been met is

based upon an administrative record developed for the appeal. While the Secretary will review the State objection for CZMA compliance, e.g., whether the objection is based on enforceable policies, the Secretary does not review the objection for compliance with State laws and policies.

If the Secretary overrides the State's objection the authorizing Federal agency may permit or fund the activity. A secretarial override does not obviate the need for an applicant to obtain any State permits or authorizations. Factors influencing the appeal process time include: nature and complexity of the dispute, stays requested by one of the parties, public hearings, and briefing schedules.

The Secretary appeal process is final Federal agency action under the Administrative Procedure Act and is a necessary administrative action prior to litigation.

Information that Should Be in State Objection Letters

State objection letters under the CZMA Federal Consistency regulations should include the following information:

1. The objection (or conditional concurrence) must be based on enforceable policies that are part of the State's federally approved CMP.
2. The objection letter must describe *how* the activity is inconsistent with specific enforceable policies.
3. The objection must be timely. An objection letter should include the date the complete Consistency Certification or Consistency Determination and necessary information was received by the State. The State's objection letter should also include the date that the State provided a three-month notice to the applicant for a federal license or permit activity describing the status of the State's review.
4. For federal license or permit activities, or financial assistance activities, the objection letter must advise the applicant, person or applicant agency, of the right to appeal the State's objection to the U.S. Secretary of Commerce within **30 days of receipt of the letter**.
5. If the objection is based on insufficient information, the objection letter must describe the nature of the information requested and the necessity of having that information to determine consistency.
6. An objection letter should include alternatives that would be consistent with the State's CMP enforceable policies. Consistent alternatives should be described with as much specificity as possible to allow the applicant, or the Secretary of Commerce, to determine if the alternatives are available and reasonable.

7. The objection letter must be sent to the applicant, the appropriate Federal agency, and the Director of OCRM.

Appendix A contains a chart summarizing the consistency requirements.

Appendix A: Summary of Federal Consistency Provisions

	Federal Agency Activities & Development Projects	Federal License or Permit Activities	OCS Plans: Exploration Development & Production	Federal Assistance to State and Local Govts.
CZMA Section 307	(c)(1)&(2)	(c)(3)(A)	(c)(3)(B)	(d)
Activity subject to review, if it ...	Affects any land or water use or natural resource of the coastal zone	Affects any land or water use or natural resource of the coastal zone	Affects any land or water use or natural resource of the coastal zone	Affects any land or water use or natural resource of the coastal zone
Consistency requirement	Consistent to maximum extent practicable with state CMP enforceable policies	Consistent with state CMP enforceable policies	Consistent with state CMP enforceable policies	Consistent with state CMP enforceable policies
Who decides effects?	Federal agency	State CMP and OCRM	State CMP and OCRM	State CMP and OCRM
Time limit	60 days, plus 15 day extension	6 months	3 months - state may extend to 6 months	Clearinghouse schedule
Impact of State Objection	Federal agency may proceed only if cite legal authority as to why it must proceed despite inconsistency	Federal agency may not issue permit, license, or other approval	Federal agency may not approve plan or issue permits	Federal agency may not grant assistance
Administrative conflict resolution	Mediation by the Secretary of Commerce or OCRM (voluntary, non-binding)	Appeal to the Secretary to override State objection	Appeal to the Secretary to override State objection	Appeal to the Secretary to override State objection

10 Comments Of PJM Interconnection, L.L.C. On
Draft National Interest Electric Transmission
Corridor Designations filed at the DOE, DOCKET
NO. 2007-OE-01

July 6, 2007

**UNITED STATES OF AMERICA
DEPARTMENT OF ENERGY**

**DRAFT MID-ATLANTIC AREA
NATIONAL CORRIDOR**

)

ATTN: DOCKET NO. 2007-OE-01

**COMMENTS OF PJM INTERCONNECTION, L.L.C. ON
DRAFT NATIONAL INTEREST ELECTRIC TRANSMISSION CORRIDOR
DESIGNATIONS**

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**UNITED STATES OF AMERICA
DEPARTMENT OF ENERGY**

**Re: Draft Mid-Atlantic Area
National Corridor**

Attn: Docket No. 2007-OE-01

**COMMENTS OF PJM INTERCONNECTION, L.L.C. ON
DRAFT NATIONAL INTEREST ELECTRIC TRANSMISSION CORRIDOR
DESIGNATIONS**

In response to the Department of Energy's ("DOE" or "Department") "Draft National Interest Electric Transmission Corridor Designations"¹ ("Draft Designation"), PJM Interconnection, L.L.C. ("PJM") submits these comments supporting the Department's proposal that the Secretary of Energy ("Secretary"), pursuant to his authority under section 1221 of the Energy Policy Act of 2005,² designate the Mid-Atlantic Critical Congestion Area as a National Interest Electric Transmission Corridor ("National Corridor"). As detailed below, PJM's regional transmission planning studies demonstrate that under the status quo and absent action such as the construction of new transmission, the Mid-Atlantic region will be out of compliance with North American Electric Reliability Council ("NERC") reliability criteria, as well as PJM's own reliability and planning criteria, as early as 2011. Thus, PJM's planning studies, including its most recent updates to those studies, provide independent support for the Department's proposed Mid-Atlantic corridor as one meeting the statutory criteria of

¹ Issued on April 26, 2007, *available at* <http://nietc.anl.gov/documents/index.cfm>.

² Energy Policy Act of 2005, Pub. L. No. 109-58, § 1221, 119 Stat. 946 (2005), *codified at* 16 U.S.C. § 824p (2006) ("EPAAct").

Section 1221 of the EPA Act. The Department's action thus would promote the public interest, as well as continued economic growth, in the load centers served by PJM while still respecting the critical role of the states in analyzing specific projects pursuant to state siting processes.

These comments are intended to supplement PJM's prior submissions of October 10, 2006 and May 14, 2007 with updated information developed through PJM's Regional Transmission Expansion Planning Process and, in particular, PJM's most recent Regional Transmission Expansion Plan approved by the independent PJM Board on June 22, 2007.³ Accordingly, PJM requests that the Department deem PJM's prior submissions to be incorporated into these comments by reference and considered collectively to be part of the administrative record of this matter.

I. Executive Summary

Timely designation of a National Corridor in the PJM region is justified and in the public interest. Accordingly, PJM supports the DOE's draft proposal to designate the Mid-Atlantic Critical Congestion Area as a National Corridor.⁴ PJM's updated regional planning studies further support the near term need for action. PJM believes that it is critically important to remedy existing and growing congestion problems within this area in order to ensure continued reliability of electric service, promote national security and provide the means for long-term economic relief to the tens of millions of consumers, businesses and institutions in this region. Electric service in this area historically has

³ That plan, which is the product of an open, public stakeholder process, can be found at <http://www.pjm.com/planning/reg-trans-exp-plan.html>.

⁴ See Draft Designation at pp. 75-146.

been, and remains, reliable because of the continuing contributions of all those involved in the industry in the region. However, the fact that service in the area remains reliable today, despite the extensive congestion that the Department has documented,⁵ should not deter the Secretary from exercising the authority of section 1221(a) of the EPAct. Persistent and growing transmission congestion such as that experienced in this area is a precursor to threats to reliability of service in the near- and mid-term future. Indeed, PJM's most recent planning studies underscore the imminent nature of the reliability violations, some of which will be realized in as little as four years' time.

PJM is a neutral and independent entity which has operated the electric grid in region since 1927. Because much of the Mid-Atlantic Critical Congestion Area is located within the PJM footprint, PJM is well-positioned to independently confirm the conclusions of the Department's Congestion Study, as well as those of the Draft Designation. Moreover, as PJM already administers an independent FERC-approved, regional transmission planning process, it is positioned (and is already undertaking) to work with all affected stakeholders to develop timely solutions to remedy the congestion and reliability problems identified by the Department. PJM urges the Department to utilize the results of PJM's independent, transparent regional transmission plans and studies as further validation of its own conclusions and support for the Department's efforts to fulfill Congress' mandate in section 1221 of EPAct.

PJM's regional planning studies demonstrate that additional bulk transmission capability is essential in eastern PJM to maintain reliable and economic service to the

⁵ See National Electric Transmission Congestion Study, issued on August 8, 2006, available at <http://nietc.anl.gov/documents/index.cfm>.

many load centers in the states that rely on the PJM transmission system. For example, unless major new, high-voltage transmission circuits are constructed across PJM's western interface within portions of the states of Pennsylvania, West Virginia, Virginia and Maryland, existing 500 kV transmission facilities serving the densely populated Baltimore-Washington-Northern Virginia load center will become overloaded, in violation of NERC and PJM reliability and planning criteria, as soon as 2011. In addition, more transmission capability across PJM's eastern interface will be needed by 2013 to avoid numerous projected violations of NERC and PJM reliability and planning criteria in northern New Jersey, principally the urban areas of Newark and other densely developed areas.⁶ Such violations also could hinder exports of bulk power from PJM to New York City.⁷

The PJM planning process incorporates all demand side response commitments. The projected reliability violations incorporate a load forecast which incorporates various demand side response opportunities which customers can utilize both through local utility and PJM level programs. In addition to potentially stimulating new demand side response activities as the value of congestion relief becomes known in the affected area, the corridor designation will support the development of new renewable resources, particularly wind generation, presently in the PJM queue. Over 23,273 MW of wind generation is presently in the PJM queue, much of it to be located in and around the

⁶ PJM submitted maps illustrating the locations of the projected reliability violations in its submission of May 14, 2007. PJM representatives also testified both at the Arlington and New York City public hearings and provided copies of those maps to the public at those hearings.

Allegheny Mountains. One factor in determining whether these planned resources are actually built is the availability of sufficient transmission capability to ensure that the generation can be dispatched to customers in the population centers within the PJM footprint.

PJM concurs with the Department's determination that section 1221 of the EPAct contemplates only that the Secretary will identify areas of the nation where there is critical congestion that has national interest implications. Congress expressly retained the authority of the states to determine the need for specific transmission projects to address that congestion and site specific projects to meet those needs, subject only to the "backstop" permitting authority that section 1221(b) vests in the Federal Energy Regulatory Commission ("FERC") in certain circumstances.⁸ The Draft Designation conforms to this statutory scheme. Specifically, the Department is not seeking to review or approve any particular new transmission facilities or routes within the proposed National Corridor. The specific routes of any new transmission facilities will be determined, in the first instance and with considerable public input, by the utilities that will construct them, and then will undergo appropriate regulatory review under applicable state laws.

PJM further supports the Department's proposal that its National Corridor designation of the Mid-Atlantic Critical Congestion Area remain initially in place for a period of 12 years.⁹ This will allow market participants sufficient time to plan and develop the kinds of infrastructure projects that the Draft Designation and PJM's

⁸ See Draft Designation at p. 5-7.

⁹ See *id.* at 47.

planning analyses demonstrate are necessary and will provide sufficient time for the applicable siting processes and any related litigation to be resolved and for projects to be built.

Finally, PJM takes no position on the congestion issues raised by the Department associated with service to New York City or Long Island. However, in the event that the Department elects not to designate as part of the National Corridor some or all of the portions of the Mid-Atlantic Critical Congestion Area within the state of New York, PJM requests that the Department nonetheless promptly designate the portions of the Mid-Atlantic Critical Congestion Area that are in the PJM region. The portion of the Critical Congestion Area within the PJM region includes major metropolitan areas such as Newark and northern New Jersey, Philadelphia, Baltimore, Washington, D.C. and Northern Virginia. These areas are home to tens of millions of customers, as well as millions of businesses, commercial buildings, schools, universities, and hospitals. The Washington, D.C. area includes dozens of federal government and military facilities critical to regulatory, law enforcement and national security functions. Because of the size of the population, the magnitude of the economy and the importance to national security of the affected load centers, the consequences of a potential grid failure within the PJM area would be tremendous. Therefore, the Department should promptly designate the portions of the Mid-Atlantic Critical Congestion Area within the PJM region as a National Corridor, regardless of its decision concerning portions of the proposed corridor that are outside PJM.

II. Background

A. PJM's Regional Transmission Planning Process

As noted previously, PJM utilizes a FERC-approved, state-of-the-art Regional Transmission Expansion Planning ("RTEP") process designed to ensure the continued reliability of the electric system under its control and to enhance the efficiency of the wholesale electricity markets under its supervision.¹⁰ Since its inception in 1999 through final approval of its most recent plan in June 2007, the RTEP has provided for more than \$7 billion of transmission upgrades and expansion projects throughout the PJM region. The RTEP process is open and transparent to all interested stakeholders, collaborative in nature, and comprehensive in scope.

In developing the RTEP, PJM annually performs a system-wide load flow analysis, taking into account forecasted firm loads, firm imports from and exports to neighboring systems, existing generation and transmission assets, and anticipated new generation and transmission facilities, of the ability of the PJM grid to meet applicable reliability standards and criteria of the NERC, Reliability First Corporation ("RFC"), the Southeastern Reliability Council ("SERC"), nuclear plant licensee requirements and PJM reliability standards.

PJM then analyzes the effects on the system of numerous other factors, including:

- NERC and regional reliability council reliability assessments;

¹⁰ See "Regional Transmission Expansion Planning Protocol," Schedule 6 of the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C., available at <http://www.pjm.com/documents/downloads/agreements/oa.pdf> (last visited Oct. 9, 2006). As a component of PJM's operating agreement and tariff, the RTEP protocol has been approved by, and is subject to the continuing oversight of, the FERC.

- operational performance of system facilities;
- requests to interconnect new generation and merchant transmission facilities;
- transmission owners' plans to modify or expand their transmission facilities;
- interregional transmission development plans;
- expected generation retirements;
- load-serving entities' demand forecasts and related capacity requirements;
- distributed generation, demand side response and self-generation developments;
- requests for new or increased, long-term firm transmission service; and
- market-based proposals and PJM-developed alternatives to resolve persistent and costly congestion.

PJM's market design specifically treats demand side resources as viable alternatives to generation and transmission. PJM has incorporated demand side resources as a permanent part of its market design and has modified its tariff rules, with the approval of FERC, to allow demand side resources to bid into PJM's energy, capacity and ancillary services markets, so that demand side providers can realize the true, real-time value of their resources. The PJM planning process builds on that market design in its analyses of the need for new transmission and recognizes the roles that generation and demand side resources can play as either alternative or complementary solutions to transmission constraints.

In 2005, PJM expanded its RTEP planning horizon from five to fifteen years. More recently, the FERC conditionally approved a proposal by PJM to modify the RTEP process by expanding evaluation of long-term market efficiency considerations and how such factors integrate with existing long-term assessments of conformance with

applicable reliability criteria.¹¹ Facilities developed to enhance market efficiency will be incorporated into the RTEP, in addition to transmission upgrades needed to accommodate interconnections of generation and merchant transmission facilities and those that resolve projected violations of reliability criteria.

PJM's regional planning process encompasses available alternatives to new transmission, such as new generation or demand side response, by incorporating openly and on a non-discriminatory basis the development of market-based generation and demand response capability to resolve economic and reliability issues that otherwise could be resolved through transmission enhancements. Though PJM may prescribe only transmission solutions through the RTEP, the RTEP process itself allows market forces to provide for the most efficient solutions to transmission constraints, whether such solutions are generation, demand side resources, transmission, or some combination of all three.¹²

¹¹ See *PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,218 (2006); see also *PJM Interconnection, L.L.C.*, 119 FERC ¶ 61,265 (2007) (order on PJM's compliance filing).

¹² PJM's RTEP process is collaborative from start to finish. The PJM Transmission Expansion Advisory Committee and other stakeholder forums and processes provide opportunities for all stakeholders to review PJM's planning analyses and offer input (including proposed projects) to help PJM improve the grid, ensuring reliable service and access to robust, competitive markets for all market participants. Each of these meetings is open and all agenda and presentation materials are posted in advance on PJM's website. PJM's governing committees, such as the Members Committee and the Planning Committee, provide additional opportunities for all stakeholders, including representatives of state regulatory commissions and their staffs, to provide input to the regional planning process.

B. Congestion of PJM Interfaces

In part, the PJM planning process focuses on and is driven by the flow of power across transmission “interfaces.” An interface consists of the sum of power flows on a number of transmission lines. In the PJM region, the most significant power flows occur in a west to east direction. Two significant interfaces, the western interface and the eastern interface, have generally limited these flows.

The eastern interface is a set of five historically constrained, high-voltage transmission lines that serve the densely populated northern New Jersey and Philadelphia areas.¹³ The eastern interface effectively extends from the Pennsylvania-New Jersey border on the north to the Chesapeake Bay in the south. Constraints occur principally on flows from the west (Pennsylvania) and from the southwest (around the Chesapeake Bay from Washington D.C./Baltimore/Northern Virginia) into New Jersey (a portion of which flow on to New York City). *See Appendix 7.*

When the eastern interface is constrained, PJM is limited in its ability to supply demand located east of the constraint with electricity from more economical generating units located west of the constraint. PJM may respond to a constraint on the eastern interface by dispatching additional generating units that are located east of the interface. This results in higher prices because the generation to the east is generally more costly than the generation that otherwise would have flowed to the market across the constrained interface.

¹³ The relevant transmission circuits are the Wescosville-Alburtis 5044 line, Juniata-Alburtis 5009 line, TMI-Hosensack 5026 line, Peach Bottom-Limerick 5010 line and the Rock Springs-Keeney 5025 line. All are 500 kV facilities.

The western interface extends from north to south across western Pennsylvania, Maryland, and West Virginia. *See* Appendix 7. It is comprised of the major, high-voltage transmission lines that run from eastern Ohio, West Virginia, and western Pennsylvania to central Maryland and Pennsylvania and into northern Virginia.¹⁴ Congestion on the western interface thus covers a wide geographic area, across Pennsylvania, Maryland, Virginia and West Virginia. Constraints on the western interface are likely to limit deliveries of energy across northern Pennsylvania to New Jersey and across West Virginia/Maryland/Virginia to Washington/Baltimore/Northern Virginia and from there to the Delmarva Peninsula and New Jersey. When there are constraints on the western interface, PJM must dispatch more generating capacity located east of the interface than the market otherwise would dictate. Again, the units that are so dispatched out of economic merit order are more costly than those that otherwise would deliver power across the constrained interface.

In May 2007, PJM completed its RTEP baseline reliability analysis for the planning horizon extending through 2022. The latest annual study again identified a significant number of violations of NERC and PJM reliability criteria over the planning period. The number and extent of these violations continue to strongly suggest the need for new backbone transmission facilities across both the eastern and western interfaces, rather than a series of lower voltage transmission upgrades. PJM identifies later in these comments the specific violations of reliability criteria that its studies have found.

¹⁴ The western interface includes the Keystone-Juniata 5004 line, the Conemaugh-Juniata 5005 line, the Conemaugh-Hunterstown 5006 line, and the Doubs-Brighton 5055 line. All are 500 kV facilities.

The criteria violations identified in PJM's planning studies are primarily related to load deliverability or generator deliverability criteria. Load and generator deliverability are fundamentally related to the balance between load and generation in an area versus the rest of the system and the transmission capability connecting the two areas. PJM's RTEP analyses include testing the adequacy of the transmission system to deliver energy and capacity resources to loads in all areas of the PJM region, including load deliverability for each relevant electric delivery area within PJM. Load deliverability refers to the system's capability to deliver energy from the aggregate of all capacity resources to an electrical load area ("locational deliverability area"/or "LDA") when it is experiencing a capacity deficiency.

The load deliverability test employs probabilistic techniques to determine the amount of capacity that must be imported into a LDA during an emergency (taking into account planned generation additions, demand response and transmission upgrades in the area) to ensure that the LDA can satisfy a transmission-related loss of load expectation ("LOLE") of only one day in 25 years. This required emergency level of capacity imports is referred to as the capacity emergency transfer objective, or "CETO." After PJM determines the required level of emergency capacity transfers into a LDA (i.e., the CETO), it then determines the capability of the transmission system to transfer capacity into that area under those emergency conditions, referred to as the capacity emergency transfer limit, or "CETL."

For the RTEP, PJM compares each LDA's forecasted CETO with the forecasted CETL for that area. If the CETO exceeds the CETL for a given area, PJM will identify the transmission upgrades necessary to increase the CETL and resolve the problem. The

relevant electric areas tested in this fashion are determined functionally, based on the topology of the electric system and the location of transmission constraints. The areas addressed may include transmission-owner zones, aggregates of such zones, or sub-zones within such zones, i.e., wherever there are constraints that are likely to limit emergency transfers into an area of load.

Several factors affect the system's ability to pass the CETO/CETL load deliverability test: (1) new generation installed in a zone, which reduces the need to import energy using the transmission system; (2) retirement of existing generation in a zone, which increases the need to import energy using the transmission system; and (3) load growth, which, in the absence of new generation, increases the need to import energy using the transmission system.

Load deliverability criteria violations have been identified throughout PJM's 15-year planning horizon in eastern load centers, including New Jersey and the Baltimore/Washington/Northern Virginia area. These violations are due to load growth and the combination of generation retirements and little or no new generation being installed in these areas. As a result, the existing transmission capability becomes insufficient, in future years, to deliver energy to those load centers during the conditions specified for the load deliverability test.

Generator deliverability refers to the capability of the system to deliver excess energy from a cluster of generators when it is experiencing higher than normal availability to the remainder of the system when it is experiencing a shortage of capacity. Typically, generator deliverability is evaluated with respect to the interconnection of new generation to ensure that the transmission system is capable of delivering the existing

generation in a given area as well as the new generator, i.e. that some portion of the generation in the area does not become “bottled” by adding the new generator.

PJM also has found violations of generator deliverability criteria in its baseline RTEP analysis. However, these violations occur not because of the interconnection of new generation, but because of the retirement of existing generation in eastern PJM. Prior to these retirements, generation in the east and the west was sufficiently balanced that the transmission capability across the system satisfied the generator deliverability criteria. But with the retirement of eastern generation and continued load growth, a greater percentage of the energy produced in western generation clusters inevitably flows eastward, and those flows exceed existing transmission capability under the conditions specified for the generator deliverability test.

A number of backbone transmission projects have been proposed for consideration in the RTEP with respect to resolving the reliability criteria violations that PJM has identified through 2022. One project, the proposed 500 kV 502 Junction–Loudoun circuit (“Loudoun Line”), is already included in the RTEP to resolve a violation of reliability criteria in 2011. Nonetheless, PJM’s most recent RTEP analysis indicated several new criteria violations that will occur as early as 2012, even assuming timely completion of the Loudoun Line.¹⁵

¹⁵ PJM presents this information concerning specific projects simply in order to update the Department on recent RTEP planning developments. PJM recognizes that the Department does not (and should not) approve specific projects or even types of solutions. The merits of each of the projects mentioned here will be reviewed in state siting proceedings, which will test both the need for and environmental impact of the proposed facilities.

Another project is the recently approved 765 kV transmission circuit that will run 250 miles from the Amos substation near St. Albans, West Virginia, to the Bedington substation, northeast of West Virginia, with another 40 miles of transmission, consisting of twin-circuit 500-kV transmission, connecting the Bedington substation to a new substation to be built at Kemptown, located southeast of Frederick, Maryland (“Amos-Kemtown Line”). The Amos-Kemtown Line has been added to the RTEP to resolve numerous violations of reliability criteria starting in 2012. The construction of these two projects is critical to maintaining reliability in Northern Virginia and the Baltimore/Washington D.C. area.

A third project included in the most recent RTEP is an approximately 130 mile 500 kV circuit from the Susquehanna 500 kV station in northern Pennsylvania to Lackawana and then eastward to a new Jefferson substation that would be located where the Branchburg – Ramapo 500 kV circuit and multiple 230 kV and 115 kV circuits converge. The circuit would then continue to Roseland, in the PSEG system in northern New Jersey (“Susquehanna-Roseland Line”). The Susquehanna-Roseland Line will resolve numerous violations of reliability criteria in northern New Jersey, starting in 2013.

A number of other proposed circuits are still under evaluation, including one that would connect stations from Possum Point in Virginia across the Chesapeake Bay to Indian River in Delaware and then northward to Salem in New Jersey, as well as two projects that would reinforce the south to north transmission system within New Jersey.

PJM will continue to evaluate all of the other proposed backbone solutions (taking into account potential generation and demand side alternatives) to identify the most

effective combination of transmission elements to meet the longer-term needs of the system. It is reasonable to expect that for those projects further out in the future, portions may be reconfigured with other projects, that terminal points may be relocated, and that some projects could be reconsidered in developing the optimal package of transmission upgrades.

II. Comments on Draft National Interest Electric Transmission Corridor Designation

A. Deciding When a National Corridor Designation is Warranted

1. General Scope of the Secretary's Authority

PJM supports the Department's conclusion that "FPA section 216(a) gives the Secretary the discretion to designate a National Corridor upon a showing of the existence of a constraint, including the total absence of a transmission line, that is hindering the development or delivery of one or more generation resources that is in the public interest, regardless of whether there is congestion and without the need for any additional demonstration of adverse effects on consumers."¹⁶ Such an interpretation is consistent with the text of FPA section 216(a), which allows the Secretary to designate as a National Corridor "any geographic area experiencing electric energy transmission capacity constraints or congestion that adversely affects consumers."¹⁷

The Department correctly concludes that any congestion, by definition, thwarts customer choice, because it prevents users of the transmission grid from completing their

¹⁶ Draft Designation at 20.

¹⁷ 16 U.S.C. § 824p(a)(2) (emphasis added).

preferred power transactions and forces the rationing of available transmission capacity.¹⁸ For example, as noted in the Draft Designation,¹⁹ such rationing in areas with organized electricity markets generally occurs through an economic mechanism, such as a congestion management system based on locational marginal prices (“LMPs”). In the specific case of PJM, LMPs were, on average, approximately \$20.00 per MWh higher in the eastern geographic region of PJM in 2005 than in the western region, a premium of approximately 40%. This premium directly reflects congestion on the major west-to-east transmission interfaces in PJM. The cost of this congestion to consumers in PJM’s eastern regions considerably increases the cost of living and doing business in the area, and hinders the area’s economic growth and competitiveness.

PJM also concurs that the Department’s conclusion is consistent with principles of statutory interpretation. The Supreme Court has established that “[i]nterpretation of a statute must begin with the statute’s language.”²⁰ In addition, “[s]tatutes must be interpreted, if possible, to give each word some operative effect.”²¹ As noted by the Department, the plain language of FPA section 216(a) grants the Secretary designation authority over “any geographic area experiencing electric energy transmission capacity constraints or congestion that adversely affects consumers.”²² The Department thus

¹⁸ See Draft Designation at 17.

¹⁹ See *id.* at 17-18.

²⁰ *Mallard v. United States Dist. Court for Southern Dist.*, 490 U.S. 296, 300-301 (1989).

²¹ *Walters v. Metro. Educ. Enters.*, 519 U.S. 202, 209 (1997) (citing *U.S. v. Menasche*, 348 U.S. 528, 538-539 (1955)).

²² 16 U.S.C. § 824p(a)(2) (emphasis added).

correctly rejected comments claiming that the Secretary's designation authority was restricted to cases where constraints are currently causing congestion. Such an interpretation ignores the plain language of FPA section 216(a). Moreover, the plain meaning of the words in the provision "can best be understood by looking to the statutory scheme as a whole and placing the particular provision within the context of that statute."²³ As noted by the Department,²⁴ its interpretation is consistent with the overall intent of the EPAct, which was to strengthen transmission infrastructure throughout the Nation.

PJM further agrees with the Department's statement "that the total absence of a line connecting two nodes can be just as, if not more, limiting to consumers than the presence of a line that is operating at capacity and, therefore, constraints include the absence of transmission equipment between two or more nodes."²⁵ The FERC has similarly observed that "[t]he absence of needed new transmission facilities has led to more and more congestion, which hinders customers from seeking and depending on more distant and competitive supply choices."²⁶ Moreover, PJM details in these

²³ *Saks v. Franklin Covey Co.*, 316 F.3d 337, 345 (2nd Cir. 2003); *see also Robinson v. Shell Oil Co.*, 519 U.S. 337, 341 (1997) ("The plainness or ambiguity of statutory language is determined by reference to the language itself, the specific context in which that language is used, and the broader context of the statute as a whole."); *K Mart Corp. v. Cartier, Inc.*, 486 U.S. 281, 291 (1998) ("In ascertaining the plain meaning of the statute, the court must look to the particular statutory language at issue, as well as the language and design of the statute as a whole.").

²⁴ See Draft Designation at 21.

²⁵ Draft Designation at 19.

²⁶ *Remedying Undue Discrimination through Open Access Transmission Serv. and Standard Elec. Mkt. Design*, 100 FERC ¶ 61,138, at P 191 (2002).

comments how the absence of a major new, high-voltage transmission circuit in the high-voltage, bulk power transmission pathway within portions of the states of Pennsylvania, West Virginia, Virginia and Maryland, will result in the existing 500 kV transmission facilities serving the densely populated Baltimore-Washington-Northern Virginia load center becoming overloaded by 2011.

2. Analysis of Potential Solutions

PJM agrees with the Department's conclusion that its "role under FPA section 216 is to identify constraint or congestion problems and their geographic locations," not "to analyze or decide upon solutions."²⁷ The Department properly recognizes that nothing in FPA section 216 requires the Secretary to demonstrate that transmission is the best or most cost-effective solution to an identified congestion problem. As noted above, the EAct clearly contemplates only that the Secretary will identify areas of the nation where there is a need for additional transmission capability. The statute otherwise retained intact the authority of the states to define, develop and site specific projects to meet those needs, subject only to the FERC's "backstop" permitting authority. To impose any additional obligation upon the Secretary would improperly add terms and provisions to the EAct that were deliberately omitted by Congress. Moreover, further environmental review and analysis of specific projects would lead to the anomalous result of forcing the Department to effectively preempt state siting reviews before specific applications have been filed with the states.²⁸ This is clearly inconsistent with Congress'

²⁷ Draft Designation at 24.

²⁸ *See Sale v. Haitian Ctrs. Council*, 509 U.S. 155, 168, n.16 (1993) (terms and provisions may not be added to a statute where Congress has omitted them)
(continued)

statutory scheme as embodied in FPA section 216, which leaves these issues, in the first instance, to the states.

3. Cost Allocation

PJM similarly agrees with the Department's conclusion that "the analysis of whether to designate a National Corridor should not include consideration of how the costs for new transmission facilities will be allocated."²⁹ Again, there is nothing in FPA section 216 requiring the Secretary to undertake such an analysis. Furthermore, PJM's principles of cost causation and allocation are outlined in Schedule 12 of the FERC-approved, PJM Open Access Transmission Tariff ("Tariff"). Such cost allocation issues are subject to FERC's regulatory jurisdiction regarding wholesale electricity rates under the FPA and indeed, FERC recently has established how such cost will be allocated in the PJM region.³⁰ Aggrieved parties have sought rehearing of FERC's Order on that issue. Were the Department to address cost allocation issues, parties would effectively have to litigate this issue twice – once before the Department and another time before FERC and risk potentially inconsistent decisions, both of which would likely end up in the courts.³¹

(continued)

(citing *Gregory v. Ashcroft*, 501 U.S. 452, 467 (1991); *West Virginia Univ. Hosps., Inc. v. Casey*, 499 U.S. 83, 101 (1991)).

²⁹ Draft Designation at 26.

³⁰ See *PJM Interconnection, L.L.C.*, 119 FERC ¶ 61,063 (2007).

³¹ Other Regional Transmission Organizations and Independent Transmission System Operators also have approved cost allocation methodologies for new transmission projects. See, e.g., *Midwest Indep. Transmission Sys. Operator, Inc.*, 117 FERC ¶ 61,241 (2006), *reh'g denied*, 118 FERC ¶ 61,208 (2007); *Sw. Power Pool, Inc.*, 111 FERC ¶ 61,118, *order on reh'g*, 112 FERC ¶ 61,319 (2005).

It is thus quite clear that the Department need not and should not address how the costs of new transmission facilities will be allocated.

4. Regional Planning and Local Siting

PJM agrees that the Department should not “defer making a National Corridor designation either until siting problems have already manifested themselves or until a regional planning process proposes a solution to the congestion or constraint problem.”³² Nothing in FPA section 216 conditions the Secretary’s authority to make National Corridor designations on actions by others (e.g., transmission owners, regional planners, or States). The Department correctly discusses that DOE action in parallel with the efforts of other entities is consistent with Congressional intent in enacting the EPAct, which emphasizes the immediate need for new investment in transmission. As previously stated, any delay by the Department would unnecessarily and unwisely exacerbate the ever-growing congestion and attendant reliability problems that warrant designation of the Mid-Atlantic Critical Congestion Area as a National Corridor. In addition, unwarranted delay would create new uncertainty in the marketplace that would stymie recent promising efforts to develop badly needed new transmission infrastructure.

B. Defining National Corridor Boundaries

PJM commends the Department for its adoption of a source-and-sink approach to defining National Corridor boundaries.³³ PJM agrees that using a source-and-sink approach to set the boundaries of National Corridors is consistent with the “problem identification” purpose of National Corridor designations under FPA section 216(a). By

³² Draft Designation at 28.

³³ See Draft Designation at 34-39.

not focusing on particular transmission projects, the Department will provide the greatest amount of latitude and flexibility possible to the project developers and siting authorities that will be making the ultimate determination of how to address transmission congestion and/or constraints in a National Corridor.

The Department is also correct in determining that the source-and-sink approach is consistent with the physical properties of the electrical grid, since a transmission line into a congested or constrained load area will not benefit that load unless the line connects with a source of power that could help to serve the load. Moreover, as noted by the Department, the source-and-sink approach is consistent with all aspects of FPA section 216(a)(4), as it facilitates considering all of the factors the statute requires DOE to consider, i.e., the lack of adequate or reasonably priced electricity, the diversification of supply, energy independence, national energy policy, and national defense and homeland security.

C. Environmental and Cultural Analyses

The Department correctly rejected comments suggesting that any designation of a National Corridor will be a major federal action requiring an environmental assessment ("EA") or environmental impact statement ("EIS").³⁴ As noted throughout the Draft Designation, the EPAAct describes many criteria that the Department may consider in conducting congestion studies and issuing a report designating a National Corridor. None of these mentions an assessment of the environmental impacts of a National Corridor designation.³⁵ Along with the new authority granted to the Secretary in FPA

³⁴ See Draft Designation at 44-45.

³⁵ See EPAAct § 216(a)(4).

section 216(a), Congress could have expressly incorporated the requirements of the National Environmental Policy Act into the statute. It clearly chose not to. Rather, Congress' construct clearly left environmental reviews, in the first instance, to the states and, where appropriate, to federal agencies that authorize specific projects.

The EAct, however, does require environmental review at the transmission facility permitting stage. It authorizes the FERC to issue permits for the construction or modification of transmission facilities within a designated National Corridor after making required findings,³⁶ and directs the Department to act as the lead agency to coordinate all applicable authorizations “and related environmental reviews of the facility.”³⁷ The Secretary is charged with ensuring, once an application has been submitted, that “all permit decisions and related environmental reviews under all applicable Federal laws” are timely completed,³⁸ and that a “single environmental review document” is prepared and used “as the basis for all decisions on the proposed project.”³⁹ The EAct further states that, “[e]xcept as specifically provided, nothing in this section affects any requirement of an environmental law of the United States, including the National Environmental Policy Act [NEPA] of 1969 (42 U.S.C. § 4321 *et seq.*).”⁴⁰

³⁶ See *id.* § 216(b).

³⁷ *Id.* § 216(h)(2). A “Federal authorization” is defined to include “permits, special use authorizations, certifications, opinions, or other approvals as may be required under Federal law in order to site a transmission facility.” *Id.* § 216(h)(1)(B).

³⁸ *Id.* § 216(h)(4)(B).

³⁹ *Id.* § 216(h)(5)(A).

⁴⁰ *Id.* § 216(j).

It is clear that Congress considered the environmental consequences of the actual construction of transmission facilities within designated National Corridors and expected the Department to take the lead in coordinating all necessary NEPA reviews. However, the EAct does not contemplate such review at the preliminary stage of conducting a study and issuing a report that designates National Corridors. Rather, the Department's obligation is to consider the factors set forth in the EAct related to energy reliability, economic growth, energy independence and national security.

This interpretation is reasonable. The issuance of the report and the designation of a National Corridor will neither have nor inevitably lead to any impact on the environment. Rather, as the Department correctly points out, a corridor designation does not, of itself, authorize any entity to take any further action that would affect the environment.

"Long-range aims are quite different from concrete plans and specific undertakings."⁴¹ Accordingly, agency guidelines or policy decisions that neither "propose any site-specific activity nor [] call for specific actions directly impacting the physical environment" do not require NEPA compliance.⁴² The Department, therefore, is correct that it need not prepare either an EA or EIS prior to the issuance of a congestion report or a designation of a National Corridor.

The designation of a National Corridor is, in effect, comparable to the FERC's grant of a preliminary permit prior to the issuance of a hydroelectric project license. The preliminary permit requires no EIS, as the permit does not itself authorize the

⁴¹ *Northcoast Env'tl. Ctr. v. Glickman*, 136 F.3d 660, 668 (9th Cir. 1998).

⁴² *Id.* at 669-70.

construction of any project works and requires further agency permission to conduct feasibility studies that might disturb the environment.⁴³ Rather, the preliminary permit simply maintains the applicant's priority of application for a license.⁴⁴ Further, the Forest Service, not the Commission, is responsible for evaluating the environmental impact of its special use permits for such feasibility studies.⁴⁵ Similarly, here, the Department's designation of a National Corridor merely provides for the possibility of future permit applications which must be made to and decided by the FERC. DOE's action will not result in, or authorize directly, any conduct that could disturb the environment. However, if and when a federal permitting process commences for a particular project, the full panoply of environmental review under NEPA will, as the Act mandates, be invoked and applied.

The Department's proposed designation of a National Corridor can also be viewed as even more preliminary than the sale of certain oil and gas leases by the Forest Service that contained a "no surface occupancy" ("NSO") restriction that prohibited surface-disturbing activity without further governmental approval. Courts upheld the Forest Service's determination that such actions do not require an EIS finding that the

⁴³ See *Public Citizen v. NRC*, 940 F.2d 679, 684 (D.C. Cir. 1991); *Sierra Club v. FERC*, 754 F.2d 1506, 1508 (9th Cir. 1985) (affirming grant of a preliminary permit to a hydroelectric project without an environmental impact statement, as the permit did not allow the applicants to conduct studies on federal lands); see also *Nat'l Wildlife Fed'n v. Espy*, 45 F.3d 1337, 1343 (9th Cir. 1995) (no EIS is necessary where a federal action will not change the status quo; creation of a wetland easement on private property disposed of by a federal agency was mandated by statute, and did not alter the status quo of the use of the land).

⁴⁴ See *Sierra Club*, 754 F.2d at 1509.

⁴⁵ See *id.*

sale of the NSO leases did not create a “go/no go point of commitment” or an “irreversible commitment of resources,” but merely gave the lessee a right of first refusal.⁴⁶ A National Corridor designation under FPA section 216 will not do even that much. Instead, it merely will give a potential applicant an opportunity to apply for a federal permit, but only if it meets other statutory conditions, including state siting authorities’ failure or lack of authority to authorize the project. The National Corridor designation itself will not irreversibly commit any resources and will not commit any federal agency to take any action regarding any particular transmission project.

Each agency must make the threshold decision of when its decision-making has matured into a major federal action that may significantly affect the environment, sufficient to invoke NEPA review processes. The Department’s designation of National Corridors will not rise to that level. It would be entirely speculative and premature to attempt to assess environmental consequences at this preliminary phase. As the EPCA requires, the requisite NEPA safeguards will be applied at the permit application phase, when concrete transmission siting and construction proposals that may impact the environment can be fully assessed. The Department, therefore, appropriately may proceed with the designation of its proposed National Corridor without preparation of an EA or EIS.

⁴⁶ *Connor v. Burford*, 836 F.2d 1521, 1528-29 (9th Cir. 1988); *accord Sierra Club v. Peterson*, 717 F.2d 1409, 1414 (D.C. Cir. 1983).

D. Duration of National Corridor Designation

As previously discussed, PJM supports the Department's proposal that its National Corridor designations will be effective initially for a period of 12 years.⁴⁷ This will allow market participants sufficient time to plan and develop the various infrastructure projects in the Mid-Atlantic Critical Congestion Area that the Draft Designation and PJM's planning analyses demonstrate are necessary, as well as sufficient time for the applicable siting processes and any related litigation to be resolved and for projects to be built. A 12-year term will also provide the investment community with a meaningful degree of certainty regarding the sustainability of the findings of national interest that are inherent in a National Corridor designation. PJM once again pledges, should DOE deem such reports beneficial, to provide written reports to the Department on an annual basis concerning the status of projects underway in the portion of the National Corridor in the PJM region and any changes in conditions that may affect the need to continue the National Corridor designation.

E. Draft Mid-Atlantic Area National Corridor

PJM supports the Department's proposal for designating the Mid-Atlantic Critical Congestion Area as a National Corridor.⁴⁸ The Department thoroughly demonstrates that there currently exist in the Mid-Atlantic Critical Congestion Area transmission constraints and congestion that adversely affects consumers in the region's load areas. PJM herein supports and supplements the Department's analysis. PJM's regional transmission planning program indicates an acute need for additional backbone, high-

⁴⁷ See Draft Designation at 47.

⁴⁸ See Draft Designation at 78.

voltage transmission capability to facilitate, in particular, west-to-east wholesale power transfers within the PJM region to ensure reliable service and to provide lower-cost power to eastern markets.⁴⁹

1. Finding of Constraints or Congestion That Adversely Affects Consumers

PJM supports the Department's conclusion that there are "constraints or congestion that adversely affects consumers" in the Mid-Atlantic Critical Congestion Area.⁵⁰ As detailed in the Draft Designation and herein, PJM's regional planning studies show that additional transmission capability is essential to maintain reliable and economic service to the load centers in PJM's eastern region.

Additional backbone, high-voltage transmission capability is particularly needed for serving the Washington-Baltimore-Northern Virginia metropolitan areas. PJM's planning analyses demonstrate that, in the absence of transmission enhancements, violations of NERC reliability standards and PJM planning criteria will occur in various areas of PJM's region. Such violations include (as illustrated in Appendix 7):

- Overload of the Mt. Storm – Doubs 500 kV circuit in 2011 for four different 500 kV outages. This overload violates NERC reliability standards, PJM load and generator deliverability planning criteria and Dominion planning criteria.
- A voltage collapse condition exists in the Meadowbrook area in 2011 for the outage of the two Meadowbrook 500 kV circuits. This voltage

⁴⁹ States throughout the region maintain the ability to retain the lowest cost supplies to serve their retail native load customers pursuant to the particular directives of each state's legislature. PJM's markets are voluntary, not mandatory, and provide additional options for wholesale customers, as well as needed price transparency, throughout PJM's footprint encompassing 13 states and the District of Columbia.

⁵⁰ Draft Designation at 109, *citing to* 16 U.S.C. § 824p(a)(2).

collapse violates NERC reliability standards, PJM planning criteria and APS planning criteria.

- Overload of the Pruntytown – Mt. Storm 500 kV circuit in 2015 for three different 500 kV outages. This overload violates NERC reliability standards and PJM generator deliverability planning criteria.
- Overload of the Doubs – Dickerson 230 kV for the outage of the Doubs – Aqueduct 230 kV circuit in 2009. This overload violates NERC reliability standards and PJM generator deliverability planning criteria.
- Overload of Keystone – Airydale 500 kV circuit in 2012 for the loss of the Keystone – Conemaugh 500 kV circuit. This overload violates NERC reliability standards and PJM load deliverability planning criteria.
- Overload of Keystone – Conemaugh 500 kV circuit in 2012 for the loss of the Juniata – Keystone 500 kV circuit. This overload violates NERC reliability standards and PJM load deliverability planning criteria.
- Overload of both Airydale – Juniata 500 kV circuits in 2013 for the loss of the Juniata – Conemaugh 500 kV circuit and the Juniata – Keystone 500 kV circuits. This overload violates NERC reliability standards and PJM load deliverability planning criteria.
- Overload of the Loudoun-Pleasant View 500kV circuit in 2017 for the loss of the Mt. Storm – Doubs 500 kV circuit. This overload violates NERC reliability standards and PJM load deliverability planning criteria and Dominion planning criteria.
- Overload of the Lexington – Doods 500kV circuit in 2017 for the loss of the Bath County – Valley 500 kV circuit. This overload violates NERC reliability standards and PJM load deliverability planning criteria.
- Overload of the Mt. Storm – Greenland Gap 500kV circuit in 2020 for the loss of the Mt. Storm – Meadowbrook 500 kV circuit #2. This overload violates NERC reliability standards and PJM load deliverability planning criteria.
- Overload of the Greenland Gap – Meadowbrook 500kV circuit in 2020 for the loss of the Mt. Storm – Meadowbrook 500 kV circuit #2. This overload violates NERC reliability standards and PJM load deliverability planning criteria.
- Overload of the Bath County – Valley 500kV circuit in 2022 for the loss of the Doods – Lexington 500 kV circuit. This overload violates NERC reliability standards and PJM load deliverability planning criteria.

- Overload of the Waugh Chapel 230/115kV transformer and the 500/230kV #1 transformer for the loss of the other two Waugh Chapel 230/115kV and 500/230kV transformers. This overload violates NERC reliability standards and PJM generator deliverability planning criteria.
- Voltage violation at High Ridge 230kV vicinity for several for several N-2 contingencies. This overload violates NERC reliability standards.
- Overload of the Burches Hill – Palmers Corners 230kV line for the loss of the other two Burches Hill – Palmers Corners 230kV lines. This overload violates NERC reliability standards.
- Overload of Pleasant View – Dickerson 230kV line for the loss of the Possum Point-Burches Hill 500kV line. This overload violates NERC reliability standards and PJM load deliverability planning criteria.
- Voltage violation at Fredericksburg area 230kV buses for the loss of the Four Rivers – Fredericksburg 230kV and the Possum Point – Garrisonville 230kV. This overload violates NERC reliability standards.

Overloads on the Mt. Storm-Greenland Gap 500kV circuit, the Greenland Gap-Meadowbrook 500kV circuit, the Loudoun-Pleasant View 500kV circuit, the Lexington-Dooms 500kV circuit, and the Bath County-Valley 500kV circuit were identified in the most recently completed RTEP. Violation of the Bedington-Black Oak 500 kV voltage limit, and overload of the Doubs-Dickerson 230 kV circuit, the Mt. Storm-Doubs 500 kV transmission circuit and the Pruntytown-Mt. Storm 500 kV circuit were identified in previous RTEPs. In addition, the RTEP has identified a need for over 1500 MVAR of capacitors on the PEPCO and BG&E systems, at an estimated cost of \$21.85 million, to maintain reliability of service.

It is because of these and other, projected reliability violations within its region that PJM included in its 2006 RTEP the 500 kV Loudoun Line for completion in 2011. Nonetheless, the results of PJM's most recent RTEP indicate a number of new criteria violations that will occur as early as 2012, even assuming timely completion of the 500

kV Loudoun Line, resulting in the inclusion in the 2007 RTEP of the 765 kV and 500 kV Amos – Bedington – Kemptown transmission project.

PJM's most recent RTEP analysis also indicates that overloads will occur in Northern New Jersey, as shown in Appendix 2. Specifically, the Hosensack – Elroy 500 kV circuit will become overloaded by 2014, as will multiple 230 kV lines feeding into the densely populated northern New Jersey area. The principal proposal to solve the Northern New Jersey overloads is to build a 500 kV transmission line from the Susquehanna station in northeastern Pennsylvania to the Roseland station in northern New Jersey. The in-service date for this project is still under evaluation.

As noted by the Department,⁵¹ total congestion costs in PJM's growing footprint rose from \$65 million in 1999 to more than \$2.09 billion in 2005. In addition, as illustrated by Appendix 3, total congestion costs from January 1, 2006 through May 31, 2007 in PJM's footprint were more than \$2.28 billion. These figures are similar to the results from the Department's modeling for 2008, which show that the top constraints in this region account for \$1.57 billion (20 percent) of the \$8 billion of total congestion rent for the entire Eastern Interconnection. Financial transmission rights generally protect load-serving entities in PJM from paying congestion costs or congestion rents. However, PJM agrees that congestion costs and congestion rents are nonetheless useful indicators of the persistence and pervasiveness of congestion within a transmission system. Moreover, as further noted by the Department,⁵² such data confirm that there are differences in capacity factors between the eastern and western portions of PJM's

⁵¹ See *id.* at 107.

⁵² See *id.* at 95.

footprint, and that the eastern portion consistently relies on a higher-cost mix of generation sources than the western portion. This is a direct result of transmission constraints that prevent lower-priced electricity from the western portion of the PJM region from reaching load centers in the eastern portion during the hours the constraints are binding.

Contributing to the increasing congestion on PJM's transmission facilities are scheduled and possible retirements of significant local generation capacity near many of load centers in PJM's eastern region, combined with a lack of replacement generation and continuing load growth. Such removal of generation capacity increases the need to import energy using the constrained transmission system. For example, the potential shut-down of Mirant's Potomac River generating plant near Washington, D.C., accounts for 482 MW of deactivated capacity and would impose additional contingency loading on the Bedington-Black Oak and Mt. Storm-Doubs 500 kV transmission lines,⁵³ exacerbating the constraints already experienced on those lines.

In addition, on February 28, 2007, PJM received a deactivation notice from PEPCO for the Buzzard Point and Benning Road generating stations.⁵⁴ PEPCO deactivated four units with a total capacity of 64 MW at the Buzzard Point generating station on May 31, 2007, and will retire the remaining 12 units at the Buzzard Point generating station (total capacity of 192 MW) and units 15 and 16 at the Benning Road

⁵³ See PJM/PEPCO Joint Response to FERC Staff Data Request, response no. 1.e., FERC Docket No. EL05-145-000 (Aug. 26, 2005) ("August 26 Responses to FERC") (CEII document (non-internet public)).

⁵⁴ See "Pending Deactivation Requests," *available at* <http://www.pjm.com/planning/project-queues/gen-retire.html> (last visited July 3, 2007).

generating station (total 550 MW) by May 31, 2012. This will have the effect of shifting to already-congested high voltage transmission facilities, the Bedington-Black Oak 500 kV line in particular, the load that the local generating plants (Buzzard Point, Benning Road and Potomac River together have nearly 1290 MW of generating capacity) historically have supplied, particularly at times of peak demand.⁵⁵ As required by its generation deactivation process, PJM is currently evaluating the transmission upgrades that will be needed to maintain compliance with all applicable reliability criteria in light of the proposed retirement of the Buzzard Point and Benning Road generation units.

PJM's RTEP studies have previously identified violations of PJM's generator and load deliverability criteria on the PJM transmission system in New Jersey in each planning year of the period 2005 through 2010. Again, these violations are primarily due to retirements of significant local generation capacity, combined with a lack of replacement generation and continuing load growth. The constraints on the affected facilities that PJM's RTEP modeling studies have found generally are (n-1) contingency voltage constraints and result from large power transfers into eastern PJM load centers. PJM has identified extensive system upgrades needed in New Jersey to maintain compliance with reliability criteria. However, because the planned retirements of generation outpace the ability to construct the needed transmission upgrades, PJM has had to enter into "reliability-must-run" ("RMR") agreements with the owners of the gas-fired Hudson and Sewaren plants in New Jersey to keep approximately 835 MW of

⁵⁵ See "Buzzard Point Generating Station and Benning Road Generating Station Retirement Study," *available at* <http://www.pjm.com/planning/project-queues/gen-retirements/20070531-buzzard-evaluation.pdf> (last visited July 3, 2007).

capacity at those locations in service through at least the summer of 2008.⁵⁶ As noted, the lead time needed to build the increasingly complex and expensive transmission upgrades that are required to maintain reliability after these plants retire may compel PJM to seek extensions of some or all of these contracts, thus extending the costs of the RMR arrangements for New Jersey electric consumers.

The risk of more generation retirements is very real. More than 88,000 MW of the approximately 178,182 MW of existing generating capacity in PJM are from fossil steam generating units. More than 77% of that fossil steam capacity is from units that are at least 30 years old. New limits on mercury emissions from coal-fired power plants that are now under consideration in Pennsylvania, New Jersey and Maryland, among other states, may prove to be an important factor in potential future retirements. PJM has been closely monitoring the states' deliberations on these requirements; its analyses indicate that, should the current proposed requirements be adopted, as much as 6,700 MW of older, coal-fired generation capacity is at risk of being retired because the investment needed at such units to meet the new emission limits would be deemed uneconomic. Proposed legislation establishing limits on carbon dioxide emissions, depending on its effective date and other terms, could have similar effects on older, fossil-fuel generating facilities.

As load in eastern PJM continues to grow and there continues to be insufficient new local generation installed to make up for the retired capacity (much less to keep up with demand growth), the dependence of New Jersey and other eastern PJM load centers

⁵⁶ PJM's RMR agreement with the Hudson plant has been extended until September 1, 2010.

on bulk power transfers from western generation will continually increase. The commencement in July 2007 of exports of up to 685 MW of power from PJM to Long Island via one merchant transmission facility with terminals in New Jersey⁵⁷ will further compound the effects of the large net loss of local generation via retirements and the concomitant need for increased imports from western generation sources – and three more merchant transmission projects in PJM’s interconnection queue could result in additional withdrawals for export of as much as 2,100 MW. Accordingly, PJM’s transfer capability will become even more important than it is today to maintaining reliable service to eastern PJM consumers.

Therefore, prompt designation of the Mid-Atlantic Critical Congestion Area as a National Corridor is needed to enable the construction of the transmission upgrades that are and will be required to enable PJM to maintain reliable service for the metropolitan areas in its eastern region over the next decade and beyond. Even if all local generation continues to operate, continued load growth and the lack of any new generating sources will require that more and more power be imported from western resources. Therefore, new, large-capacity transmission facilities are needed in the immediate future. Because of the long lead time needed to construct such facilities, planning for those facilities must begin now. The Department should facilitate that process by acting immediately to designate the Mid-Atlantic Critical Congestion Area as a National Corridor.

⁵⁷ This facility is a direct current transmission line from Sayreville, New Jersey, to Long Island, owned by Neptune Regional Transmission System, L.L.C., with capacity and associated rights to firm withdrawals from PJM of up to 685 MW. The Neptune project also has non-firm withdrawal rights of up to 105 MW. See Merchant Transmission Interconnection – Queue G *available at* (continued)

2. Economic Development Considerations

PJM supports the Department's determination that economic development considerations warrant designation of a National Corridor for the Mid-Atlantic Critical Congestion Area.⁵⁸ As noted by the Department, one of the considerations identified in FPA section 216(a)(4) is whether "the economic vitality and development of the corridor, or the end markets served by the corridor, may be constrained by lack of adequate or reasonably priced electricity."⁵⁹ Although it does not authorize any particular project or activities, the Department's National Corridor designation should facilitate the expansion of much-needed transmission capability.

As noted by the Department, data from January 2004 through December 2006 confirms that, despite the fact that PJM has been operating as a single market, transmission constraints result in major and persistent disparities in wholesale electricity prices within the market. *See* Appendix 4. As a result of these fundamental price disparities, electricity consumers in the eastern portion of PJM's footprint (such as in Washington, D.C., Baltimore, Philadelphia, and northern New Jersey) consistently end up paying higher electricity bills than consumers in the western portion, during both on-peak and off-peak periods and regardless of the time of day.⁶⁰ Not surprisingly, the price disparity widened considerably when the electricity supply system was working close to

(continued)

<http://www.pjm.com/planning/project-queues/merch-queue-g.jsp> (last visited Mar. 6, 2006).

⁵⁸ *See* Draft Designation at 122.

⁵⁹ *See id.* at 122.

⁶⁰ *See id.* at 109-112.

its physical limits – primarily during hot summer days. As noted by the Department, the differential for hourly day-ahead LMPs for August 8, 2005 reached its maximum (\$270/MWh) for that calendar year.⁶¹

One specific example, as noted by the Department, is the price disparity in monthly average day-ahead LMPs between the PEPCO and Duquesne zones, which averaged as much as \$45/MWh from August 2005 through October 2005 and again in August 2006.⁶² However, the most frequently congested facility in all of PJM over the past several years has been the Bedington-Black Oak 500 kV line across the West Virginia panhandle, with 1,044 constrained hours in 2002, 815 hours in 2003, 1,131 hours in 2004, and 1314 hours in 2005. The PJM Market Monitoring Unit (“MMU”) summarized the economic impact of this congestion on March 8, 2007 in its State of the Market Report for 2006: “The Bedington-Black Oak interface was the largest contributor to congestion costs in both 2005 and 2006 and, with \$492 million in total congestion costs, accounted for 31 percent of the total PJM congestion costs in 2006.”⁶³ The MMU further detailed how congestion on the Bedington-Black Oak line was a major reason congestion costs for two particular control zones, Allegheny Power and American Electric Power (“AEP”), were higher than any other PJM control area.⁶⁴

⁶¹ See Draft Designation at 112.

⁶² See *id.*

⁶³ 2006 State of the Market Report, PJM Market Monitoring Unit, at 37 (2007), available at <http://www.pjm.com/markets/market-monitor/som.html> (last visited June 25, 2007).

⁶⁴ See *id.* at 38.

In addition, the ongoing “migration” of economical generation capacity to the western portions of the PJM region highlights the importance of expanding transmission capacity in order to facilitate their access of PJM’s eastern region to more diverse, primarily coal and wind-powered, generation sources in western PJM. For example, there have been numerous recent and impending retirements of generation capacity in eastern PJM, totaling nearly 3,500 MW, nearly 75% of it in New Jersey. *See Appendix 5.* Concurrently, the amount of new generation capacity proposed for interconnection with the PJM transmission system in New Jersey has decreased substantially. *See Appendix 6* illustrates this trend. In 1999-2000, PJM’s interconnection queues included more than 13,000 MW of generating capability with proposed locations in New Jersey – about 25% of all proposed new generation capacity in PJM at that time. In contrast, in 2003-2006, only about 4,490 MW of new capacity was proposed to be located in New Jersey – only about 7% of all proposed new capacity. While PJM’s most recent interconnection queue data shows an increase in generation projects located in PJM’s eastern regions, only 77 MW of such generation is currently under construction, an amount insufficient to mitigate the considerable growth in load. Until more generation resources are sited near PJM’s major load centers, a more robust transmission system is vital to maintain reliable transmission service to such areas.

Increasing the transfer capability would reduce constrained hours of operation, making more suppliers available to buyers during more hours. Competition among suppliers would be enhanced, reducing or perhaps even eliminating the need for offer-capping on some or all of these facilities. In other words, the market should operate more efficiently and power prices should be lower, particularly during peak demand periods.

In addition, as previously discussed, PJM performs a market efficiency analysis as part of the overall RTEP process in order to determine which reliability upgrades have an economic benefit if accelerated or modified and to identify new transmission upgrades with no specific reliability driver that may result in economic benefits. In its most recent RTEP, PJM conducted a market efficiency analysis to determine the economic impact of its 2011 upgrades, which were approved by PJM in June, 2006. As illustrated in Appendix 1, the 2011 reliability upgrades included in the RTEP have a significant impact. Specifically, PJM's analysis illustrates that the 2011 RTEP upgrades, other than the Loudoun Line, would reduce congestion costs by over \$208 million if modeled in-service in 2007, and by almost \$317 million in 2010. *See* Appendix 1 at 11. If the Loudoun Line is included, the reduction in congestion costs dramatically increases to a savings of over \$1 billion in 2007 and over \$1.1 billion in 2010. *See id.*

Reasonably priced electricity supplies are vital to the economic and social well-being of any metropolitan area. High electricity prices add to the cost of living or doing business in the area, and impede the area's economic growth and competitiveness. By designating the Mid-Atlantic Critical Congestion Area a National Corridor, the Department would promote the expansion of much-needed transmission capability and thereby ease the economic harm currently afflicting the load centers in PJM's eastern region. PJM concurs with the Department's conclusion that designation on this basis is consistent with FPA section 216(a)(4), which provides that the Department may consider whether "the economic vitality and development of the corridor, or the end markets

served by the corridor, may be constrained by lack of adequate or reasonably priced electricity.”⁶⁵

3. Reliability Considerations

PJM supports the Department’s determination that reliability considerations also warrant National Corridor designation for the Mid-Atlantic Critical Congestion Area.⁶⁶ As noted by the Department, the constraints limiting delivery of electricity to the eastern portion of PJM’s footprint pose a threat to reliability, given the steady growth in electricity demand in that area, the area’s aging generation fleet with recent retirements of significant amounts of capacity, the slow pace of development of new local generation capacity in that area, and the uncertainties associated with increasing demand response.⁶⁷

PJM’s projections indicate that it will experience significant load growth within the next decade. The weather-normalized summer peak in the PJM region is forecast to increase at an average rate of 1.6% per year over the next ten years – from 2007 to 2017. The expected growth rates in individual utilities’ geographic zones vary from 0.7% to 2.4%, but many of the highest projected rates of annual growth are in the eastern portions of PJM, including, for example, more than 1,800 MW of load growth in the combined Baltimore-Washington (Baltimore Gas & Electric-Potomac Electric Power) areas.

New generation sited in proximity to the affected load centers could address the identified congestion and associated reliability problems. However, it is highly unlikely that sufficient generation can be constructed in these densely developed, metropolitan

⁶⁵ Draft Designation at 126, *citing* 16 U.S.C. 824p(a)(4)(A).

⁶⁶ See Draft Designation at 126.

⁶⁷ See *id.* at 122.

areas to offset entirely the need for additional backbone transmission capability, and even if it could, such generation facilities would themselves present a host of environmental, aesthetic and social issues in the affected urban and suburban areas. PJM had estimated in 2006 that 2,500 MW net new generation capacity (i.e., newly constructed capacity less any incremental retirements of existing capacity) would have to be installed east of the Loudoun substation to mitigate fully the overload in 2011 that the Loudoun Line is intended to address.⁶⁸ By 2021, approximately 7,500 MW of net new generation capacity would be required to resolve the violations identified in the 2006 RTEP. However, the constraints identified in this same area in the 2007 RTEP require yet further amounts of generating capacity to be installed in order to obviate the need for both the Loudoun Line and the newly approved Amos – Bedington – Kempton line.

Despite the obvious need for generating capacity in PJM's eastern regions, information from PJM's interconnection queue shows that additions of generating capacity in this area will not keep pace with the effects of expected load growth and generation deactivations. For example, only about 200 MW of generating capacity have been added in the Baltimore-Washington-Northern Virginia area since 2000 and only about 20 MW more are currently under construction. New generation projects in the Washington-Baltimore-Northern Virginia area with total proposed generating capacity of nearly 4,000 MW entered PJM's Queues P and Q between August 1, 2005 and July 31, 2006. However, only 14 MW of that capacity is proposed to be in service before 2009,

⁶⁸ PJM estimated the additional generation required to mitigate the need for the Loudoun Line and other backbone transmission additions with power flow simulations, assuming the construction of new generation at various locations east of the relevant transmission constraints.

and nearly 3,234 MW of it is two nuclear units proposed for 2015 and 2016. Even if PJM could rely upon construction of those new units, their capacity cannot assist in maintaining reliable service to the Baltimore-Washington-Northern Virginia area during at least the next decade.

The slow recent pace of net additions of generation capacity in PJM's eastern region, particularly when considered together with increasingly strict environmental controls (such as new mercury emissions limits proposed in Maryland that will make new coal-fired generation more difficult to site in that state) and increasingly contentious local opposition to siting of such facilities, underscores the conclusion that the addition of new, high-voltage transmission capability can not be avoided by construction of incremental generation capacity in PJM's eastern load centers. Without additional generation sited in these areas, further load growth will require more costly, more extensive and more frequent transmission upgrades. However, even when such upgrades are installed, the effects of continuing load growth and generation retirements begin to stress the capability of higher-voltage, backbone transmission facilities feeding into the area. Moreover, any additional retirements of generation in the area almost certainly will cause immediate and not easily resolvable reliability issues, particularly extensive load deliverability violations similar to those now occurring in New Jersey.

The use of demand side resources ("DSR") has yielded new market efficiencies in the PJM region and is clearly critical to the portfolio mix needed to serve future customer needs. Nevertheless, given the magnitude of the impending reliability violations it is unreasonable to conclude that either new generation or DSR alone will be developed in

sufficient magnitude in time to alleviate the need for new backbone transmission capability in PJM's region.

For purposes of long-term planning for total system adequacy, substituting DSR for incremental transmission capability would require significantly more responsive load than the equivalent amount of new generation that would be needed to offset the new transmission capacity. Within PJM, DSR participants may be price responsive, contractually obligated, or directly controlled. Each category of DSR results in a variation of the expected amount, or "output," of DSR that is provided when called upon, thereby further complicating the difficulty of determining, for long-term planning purposes, the transmission or generation MW of capacity that are equivalent to a stated amount of DSR. Other than contractually interruptible load, DSR does not produce a steady stream of MW equivalent output because it is normally cycled over a given time period (i.e., load would be switched off and on to ensure minimal impact to the DSR provider, rather than switched off for the entire duration of the system need). PJM has been a leader in incorporating demand side resources, both as capacity resources and alternatives to generation to meet the region's energy and ancillary service needs. Consideration of DSR is an important component of the planning process. But given the nature of the reliability and congestion, DSR or new infrastructure is not an "either/or" proposition. Both are needed. DSR can and will complement, but cannot substitute for, needed transmission in PJM's region.

4. Supply Diversity and Energy Independence Considerations

PJM supports the Department's conclusion that supply diversity and energy independence considerations warrant designation of a National Corridor for the Mid-

Atlantic Critical Congestion Area.⁶⁹ Additional transmission capability in the Mid-Atlantic Critical Congestion Area will diversify sources of power available to the affected markets and will reduce the relative dependence of those markets on natural gas- and oil-fired generation.

As noted by the Department,⁷⁰ local generation near the major load centers in the eastern portion of PJM's footprint is primarily fueled by oil or natural gas. For example, about 28 percent of the installed generation capacity in Maryland and the District of Columbia is either solely oil-fired or capable of using both oil and natural gas as fuels, as is 35 percent of the installed capacity in Delaware. In addition, approximately 20% of New Jersey's installed generation capacity is oil-fired, while only about 12% of its capacity is coal-fired. Furthermore, more than 75 percent of the generation capacity that has been added in recent years in Delmarva, Maryland, the District of Columbia, and New Jersey has been fueled by natural gas. The new generation installed since 1999 and currently pending in PJM's interconnection queues in these markets likewise has not enhanced and will not improve fuel diversity – it is overwhelmingly fueled by natural gas. Specifically, in Maryland and D.C., with the exception of two large new nuclear units proposed for 2015 and 2016, natural gas is the fuel for more than 82% of the capacity of recently installed and currently proposed generation. In the Delmarva Peninsula, until PJM's most recent interconnection queue, approximately two-thirds of the newly installed and currently proposed generation capacity was to be fueled by natural gas. In New Jersey, natural gas is the fuel for 80.2% of all newly installed and

⁶⁹ See *id.* at 128.

⁷⁰ See *id.* at 126.

currently proposed generation capacity. *Id.* at 124, Fig. 4.7.2-1. As recognized by the Department, oil and natural gas are relatively high in price and must be purchased in markets that are highly volatile and subject to unanticipated international trends and adverse events.⁷¹ Such heavy reliance on oil and gas thus exposes consumers in these areas to significant costs, such as when natural gas commodity prices spiked during 2005, particularly in the wake of Hurricanes Katrina and Rita.

In contrast, the overall generation fuel mix in PJM includes 41% coal and just 9% oil. Of greater significance, coal-fired generation is the source of more than 56% of all energy output by PJM generators. More than 17,880 MW of additional coal-fired generation, some of it utilizing clean-coal technology, is currently under construction or active in PJM's interconnection queue. All of this capacity is or will be located far from eastern PJM load centers.⁷² In addition, approximately 23,273 MW of additional wind-powered generation is either under construction or under active study in PJM's interconnection queue.⁷³ With the exception of one wind plant recently built on the New Jersey coast and three wind plants being developed off the Delaware shore, all of the wind facilities under development are or will be located west of the load centers served

⁷¹ *See id.* at 127.

⁷² This coal-fired capacity consists of plants that are pending in or which have completed studies through PJM's generation interconnection queue and under construction or proposed to be sited in western Maryland, western Pennsylvania, West Virginia, eastern Kentucky, or Ohio.

⁷³ Portions of the February 2006 RTEP (Appendix 2) refer to lesser amounts of wind-powered capacity in PJM's queue. *See id.* at 61. Those amounts reflect only the portion of total wind energy production capacity that qualifies as Capacity Resources in PJM's markets; most wind-powered generating facilities in PJM operate in large measure, and many in whole, as Energy Resources.

through the Mid-Atlantic Corridor.⁷⁴ Moreover, approximately 3,200 MW of new nuclear generation is under development. Two nuclear projects have been proposed in eastern Virginia and the area south of Baltimore. However, the previously detailed lack of transmission capacity restricts the ability of load centers in PJM's eastern region to access such diversified generation resources. Moreover, these nuclear plants even if completed on schedule will not be available until 2015 or later, too late to resolve the violations of reliability and other planning criteria that the RTEP identifies in 2011-2013.

Accordingly, one of the consequences of transmission congestion in the eastern portion of PJM's footprint is that it prolongs and exacerbates the area's existing use of oil and natural gas as generation fuels.⁷⁵ As a result, consumers in the Mid-Atlantic Critical Congestion Area are exposed, perhaps increasingly, to the higher prices and higher price volatility associated with these generation fuels, with a resulting impact on business certainty, especially for industrial consumers. Lack of adequate transmission capacity also limits the Mid-Atlantic Critical Congestion Area's access to generation fueled by domestic sources that could displace generation fueled by foreign sources. Thus, economic growth may be jeopardized and energy independence is compromised.

One of the considerations identified in FPA section 216(a)(4) is whether "(i) economic growth in the corridor, or the end markets served by the corridor, may be

⁷⁴ The intermittent nature of wind generation represents one of its principal limitations as a capacity resource to meet reliability requirements. More robust transmission capability could alleviate that concern by providing sufficient capacity within the transmission system to "absorb" variations in wind generators' energy production and thus enhance wind generation's role in meeting the capacity and energy needs of the region.

⁷⁵ See Draft Designation at 127.

jeopardized by reliance on limited sources of energy; and (ii) a diversification of supply is warranted.”⁷⁶ In addition, the Department may consider whether “the energy independence of the United States would be served by the designation.”⁷⁷ As detailed herein and in the Draft Designation, National Corridor designation for the Mid-Atlantic Critical Congestion Area is consistent with promoting the diversification of sources of power available to the affected markets and with reducing the relative dependence of those markets on natural gas- and oil-fired generation.

5. National Defense and Homeland Security Considerations

PJM concurs with the Department’s belief that national defense and homeland security considerations warrant designation of a National Corridor for the Mid-Atlantic Critical Congestion Area.⁷⁸ As noted by the Department, FPA section 216(a)(4) specifically states that the Department may consider whether a National Corridor designation “would enhance national defense and homeland security.”⁷⁹ The Mid-Atlantic Critical Congestion Area is home to 55 million people (19 percent of the Nation’s 2005 population), and is responsible for \$2.3 trillion of gross state product (18 percent of the 2005 gross national product).⁸⁰ Given the large number of military and other facilities in the Mid-Atlantic Critical Congestion Area that are vital to the national defense and homeland security, as well as the importance of this populous area to the

⁷⁶ Draft Designation at 127-128, *quoting* 16 U.S.C. 824p(a)(4)(B).

⁷⁷ *Id.*, *quoting* 16 U.S.C.824p(a)(4)(C).

⁷⁸ *See id.* at 128.

⁷⁹ *Id.*, citing 16 U.S.C. 824p(a)(4)(E).

⁸⁰ Draft Designation at 128.

Nation as an economic center, it is thus clear that any deterioration of the electric reliability or economic health of this area would constitute a serious risk to the well-being of the Nation.

The presence in the corridor of major urban load centers, as well as military or other facilities that are deemed critical to homeland security/national defense, should be given substantial weight in the Department's consideration of energy security in the National Corridor context. This approach is consistent with the Department's recent finding that load in Washington, D.C., that would be at risk in the event of an unplanned transmission outage while the Potomac River generating plant was shut down constitutes "critically important facilities and operations."⁸¹ A National Corridor designation would encourage the development of a more robust transmission grid, which would enhance the reliability of service to all of this critical load. In addition, an enhanced transmission grid would be better able to withstand damage to key generation or transmission facilities from natural disasters or malicious acts. Designating the Mid-Atlantic Critical Congestion Area as a National Corridor thus will safeguard the national and economic importance of the area by promoting the need for development and construction of greater transmission capacity.

6. Boundaries of the Draft Mid-Atlantic Area National Corridor

PJM suggests the Department's proposal to rely upon the source-and-sink approach in establishing the boundaries of the draft Mid-Atlantic Area National Corridor.⁸² This approach is consistent with the physical properties of the electrical grid

⁸¹ *Mirant Potomac River Order* at 8.

⁸² *See Draft Designation* at 129.

and reflects consideration of all the factors identified in FPA section 216(a). It also will provide the greatest amount of latitude and flexibility possible to the siting authorities that will be making the ultimate determination of how to address transmission congestion and/or constraints in a National Corridor, but will not interfere with transmission projects currently being developed.

PJM also supports the Departments' proposed boundaries of the portion of the National Corridor in PJM's service territory. As noted by the Department, the sink areas in the proposed National Corridor are the locations of the consumers adversely affected by the persistent congestion, i.e., the areas downstream of the constraints identified by the Department. These areas include the major urban load centers in eastern PJM, such as Washington, D.C., Baltimore, Philadelphia, and northern New Jersey.

The Department is also correct in determining that its selection of the source areas complies with the considerations identified in FPA section 216(a)(4), particularly ensuring adequate supplies of reasonably priced power, diversifying supply, and furthering energy independence.⁸³ Using these considerations as guidance, the Department appropriately selected as source areas locations of substantial amounts of existing, under-used economic generation capacity, as well as locations with the potential for substantial development of wind generation capacity. Within PJM's service territory, such areas include western Maryland, western Pennsylvania, West Virginia, eastern Kentucky, and Ohio. Such under-used economic generation capacity could readily ensure adequate supplies of reasonably priced power to eastern load centers, provided additional transmission capacity is made available. In addition, as noted by the

⁸³ See *id.* at 129.

Department, increased access to this under-used economic generation capacity, which is predominantly coal-fired, as well as to the substantial wind generation capacity under development also located there, would help diversify supply and increase energy independence for the Mid-Atlantic Critical Congestion Area.⁸⁴

As detailed in the Draft Designation, the major obstacles to increased west-to-east flows in the PJM footprint are three groups of heavily loaded large high-voltage transmission lines.⁸⁵ One group extends from northern West Virginia and western Maryland into northern Virginia and central Maryland; a second group extends from western Pennsylvania into central Pennsylvania; and the third is a cluster of lines located mostly in eastern Pennsylvania but also extending into northeastern Maryland, northern Delaware, and northern New Jersey.⁸⁶ The net effect of these constraints is to prevent the delivery of increased amounts of electricity in bulk from the source areas in the Midwest to the load centers in the Baltimore–Washington–Northern Virginia area, Philadelphia, Wilmington, the Delmarva Peninsula, and load centers in central and northern New Jersey.⁸⁷

Thus, within PJM's footprint, the draft National Corridor encompasses the existing, constrained west-to-east transmission lines. Moreover, the draft National Corridor is broad enough, north-to-south, to encompass a range of potential projects and a range of potential solutions to facilitate additional west-to-east flows.

⁸⁴ See *id.* at 129-130.

⁸⁵ See *id.* at 134.

⁸⁶ See *id.*

⁸⁷ See *id.* at 134.

F. Department Designation of PJM portion of Mid-Atlantic Critical Congestion Area as National Corridor

PJM herein takes no position on the congestion issues associated with transmission facilities in New York State that support service to New York City or Long Island. PJM seeks National Corridor designation of the Mid-Atlantic Critical Congestion Area in order to address needs within its footprint. Since the transmission grid is interconnected, New York City and Long Island are potential beneficiaries of additional transmission capability in and to eastern PJM. The feasibility and extent of exports, however, generally depends upon corresponding upgrades to facilities in New York or other importing areas. PJM has an agreement with the NYISO under which it has performed, and will continue to perform, coordinated studies to address power flows from PJM into New York City and Long Island.

In the event that the Department elects not to designate the areas of the Mid-Atlantic Critical Congestion Area within the State of New York as part of the National Corridor, PJM requests that the Department nonetheless so designate the portions of the Mid-Atlantic Critical Congestion Area within PJM. Because of the size of the population, the magnitude of the economy and the importance to national security of the affected load centers, it is imperative that all feasible steps be taken to promote completion of the transmission facilities necessary to safeguard PJM's ability to provide adequate and economical electricity to the load centers in its eastern region. Therefore, the Department should designate the portions of the Mid-Atlantic Critical Congestion Area in the PJM region as a National Corridor regardless of its decision concerning the portions of the draft corridor in New York State.

COMMUNICATIONS

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CONCLUSION

These Comments and the material cited herein, particularly PJM's recent RTEP (linked at Appendix 2) analyses, document in detail the basis for designating the Mid-Atlantic Critical Congestion Area as a National Corridor, as well as the immediacy of the need for action by the Department. Violations of reliability criteria and congestion on existing facilities in the PJM region require prompt actions to stimulate development of solutions to persistent, costly congestion and ensure continued, reliable service to all consumers. Designation of the Mid-Atlantic Critical Congestion Area as a National Corridor will focus stakeholders on the critical, immediate need to identify and develop such viable solutions.

Therefore, for the reasons stated in these comments, PJM requests that the Secretary promptly designate the Mid-Atlantic Critical Congestion Area as a National Corridor consistent with the Department's Draft Designation.

Respectfully submitted,



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July 6, 2007

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APPENDICES

- APPENDIX 1:** **PJM 2007 Regional Transmission Expansion Plan**
- APPENDIX 2:** **Regional Transmission Expansion Plan, February 2007**
(not attached; available at <http://www.pjm.com/planning/reg-trans-exp-plan.html>)
- APPENDIX 3:** **PJM Congestion Costs from January 1, 2005 through May 31, 2007**
- APPENDIX 4:** **PJM Locational Marginal Prices for 2000 through May 31, 2007**
- APPENDIX 5:** **PJM Retired Generation & Future Generation Retirements**
- APPENDIX 6:** **Comparison of Queue A/B/C Generation Locations with Queue M/N/O/P/Q Locations**
- APPENDIX 7:** **Overloads in Central PJM and Northern New Jersey**

APPENDIX 1

PJM 2007 Regional Transmission Expansion Plan

APPENDIX 2

Regional Transmission Expansion Plan, February 2007

(not attached; available at <http://www.pjm.com/planning/reg-trans-exp-plan.html>)

APPENDIX 3

PJM Congestion Costs from January 1, 2005 through May 31, 2007

Total Congestion				
	2005	2006	2007	Total
Total	2,091,552,456	1,603,393,462	680,620,429	4,375,566,347

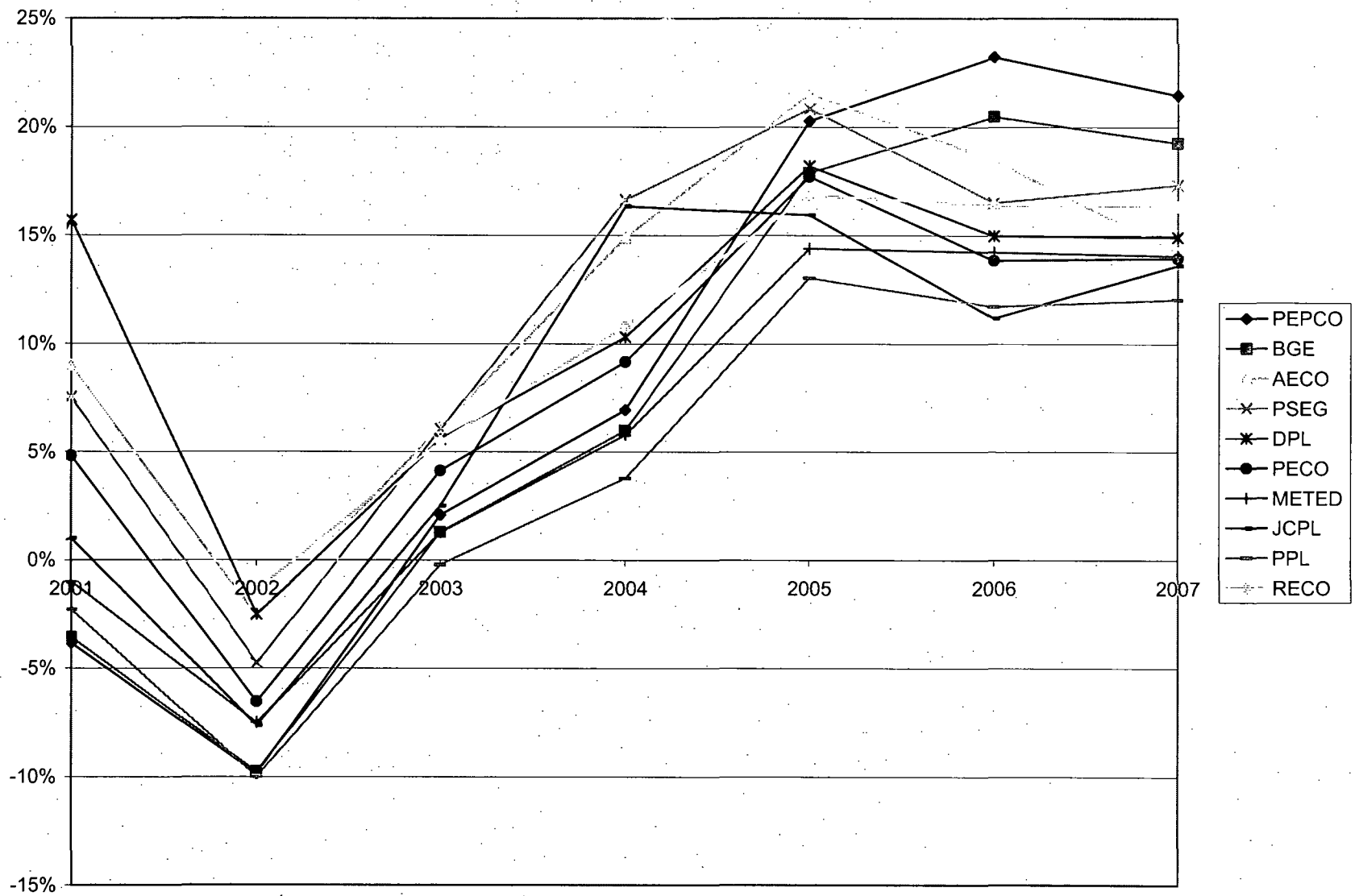
Study Interfaces Congestion					Percent of Annual Congestion			
Facility	2005	2006	2007	Total	2005	2006	2007	Total
5004/5005 Interface	198,660,034	106,060,731	45,278,520	349,999,285	9%	7%	7%	8%
AP South	56,519,150	80,759,995	31,204,049	168,483,194	3%	5%	5%	4%
Bedington - Black Oak	581,924,559	491,515,411	246,428,937	1,319,868,907	28%	31%	36%	30%
Central	43,823,197	15,692,386	16,053,195	75,568,779	2%	1%	2%	2%
Doubs - Mount Storm	125,603,812	38,530,443		164,134,255	6%	2%	0%	4%
East	94,510,904	13,137,648	15,484,708	123,133,259	5%	1%	2%	3%
Fort Martin - Pruntytown	14,572,377	5,912,408		20,484,784	1%	0%	0%	0%
Kammer	139,069,976	47,392,052	27,596,417	214,058,445	7%	3%	4%	5%
Mount Storm - Pruntytown	25,754,055	98,373,442	1,095,491	125,222,987	1%	6%	0%	3%
West	44,415,234	56,363,542	11,730,254	112,509,030	2%	4%	2%	3%
Wylie Ridge	15,648,327	13,117,384	19,131,245	47,896,957	1%	1%	3%	1%
Total	1,340,501,626	966,855,442	414,002,815	2,721,359,883	64%	60%	61%	62%

Allegheny Mountain Corridor Congestion					Percent of Annual Congestion			
Facility	2005	2006	2007	Total	2005	2006	2007	Total
AP South	56,519,150	80,759,995	31,204,049	168,483,194	3%	5%	5%	4%
Bedington - Black Oak	581,924,559	491,515,411	246,428,937	1,319,868,907	28%	31%	36%	30%
Doubs - Mount Storm	125,603,812	38,530,443		164,134,255	6%	2%	0%	4%
Fort Martin - Pruntytown	14,572,377	5,912,408		20,484,784	1%	0%	0%	0%
Kammer	69,534,988	23,696,026	13,798,209	107,029,223	3%	1%	2%	2%
Mount Storm - Pruntytown	25,754,055	98,373,442	1,095,491	125,222,987	1%	6%	0%	3%
Wylie Ridge	7,824,164	6,558,692	9,565,622	23,948,478	0%	0%	1%	1%
Total	881,733,105	745,346,416	302,092,308	1,929,171,829	42%	46%	44%	44%

Delaware River Corridor Congestion					Percent of Annual Congestion			
Facility	2005	2006	2007	Total	2005	2006	2007	Total
5004/5005 Interface	198,660,034	106,060,731	45,278,520	349,999,285	9%	7%	7%	8%
Central	43,823,197	15,692,386	16,053,195	75,568,779	2%	1%	2%	2%
East	94,510,904	13,137,648	15,484,708	123,133,259	5%	1%	2%	3%
Kammer	69,534,988	23,696,026	13,798,209	107,029,223	3%	1%	2%	2%
West	44,415,234	56,363,542	11,730,254	112,509,030	2%	4%	2%	3%
Wylie Ridge	7,824,164	6,558,692	9,565,622	23,948,478	0%	0%	1%	1%
Total	458,768,521	221,509,025	111,910,508	792,188,054	22%	14%	16%	18%

APPENDIX 4

PJM Locational Marginal Prices for 2000 through May 31, 2007



MKT	Year	PEPCO	BGE	AECO	PSEG	RECO	DPL	PECO	METED	JCPL	PPL
DA	2000	-4%	-4%	-2%	1%		1%	-2%	-3%	-2%	-4%
DA	2001	-4%	-4%	9%	8%		16%	5%	-1%	1%	-2%
DA	2002	-10%	-10%	-3%	-5%	-1%	-3%	-7%	-8%	-8%	-10%
DA	2003	2%	1%	6%	6%	5%	6%	4%	1%	3%	0%
DA	2004	7%	6%	15%	17%	11%	10%	9%	6%	16%	4%
DA	2005	20%	18%	22%	21%	17%	18%	18%	14%	16%	13%
DA	2006	23%	20%	18%	16%	16%	15%	14%	14%	11%	12%
DA	2007	21%	19%	14%	17%	16%	15%	14%	14%	14%	12%

2007 includes January 1 through May 31.

APPENDIX 5

PJM Retired Generation & Future Generation Retirements

GENERATOR DEACTIVATIONS¹
(as of May 31, 2007)

Unit	Capacity	Trans Zone	Age (Years)	Official Owner Request	Requested Deactivation Date	Actual Deactivation Date	PJM Reliability Status
Warren 1	41	PN	54		9/27/2002	9/28/2002	No Reliability Issues
Warren 2	41	PN	53		9/27/2002	9/28/2002	No Reliability Issues
Hudson 3 CT	129	PS	36	10/16/2003	10/16/2003	10/17/2003	No Reliability Issues
Seward 4	60	PN	53	11/19/2003	11/19/2003	11/20/2003	No Reliability Issues
Seward 5	136	PN	47	11/19/2003	11/19/2003	11/20/2003	No Reliability Issues
Gould Street	101	BGE	51	11/4/2003	11/1/2003	12/1/2003	No Reliability Issues
Sayreville 4	114	JC	49	11/1/2003	2/14/2004	2/19/2004	Reliability Issues Identified and Resolved
Sayreville 5	115	JC	45	11/1/2003	2/14/2004	2/19/2004	Reliability Issues Identified and Resolved
Delaware 7	126	PE	50	12/12/2003	3/1/2004	3/5/2004	No Reliability Issues
Delaware 8	124	PE	51	12/12/2003	3/1/2004	3/5/2004	No Reliability Issues
Burlington 101-104	208	PS	10	1/8/2004	4/4/2004	4/4/2004	No Reliability Issues
Burlington 105	52	PS	31	1/8/2004	4/4/2004	4/4/2004	No Reliability Issues
Wayne CT	56	PN	31	2/12/2004	As soon as possible	5/5/2004	No Reliability Issues
Sherman VCLP	46.6	AE	9	2/2/2004	3/15/2004	6/25/2004	No Reliability Issues
Calumet 31	56	CE	36	10/12/2004	Currently Mothballed - ASAP	7/1/2004	No Reliability Issues
Calumet 33	42	CE	36	10/12/2004	Currently Mothballed - ASAP	7/1/2004	No Reliability Issues
Calumet 34	51	CE	35	10/12/2004	Currently Mothballed - ASAP	7/1/2004	No Reliability Issues
Joliet 31	59	CE	36	10/12/2004	Currently Mothballed - ASAP	7/1/2004	No Reliability Issues
Joliet 32	57	CE	36	10/12/2004	Currently Mothballed - ASAP	7/1/2004	No Reliability Issues
Warren 3 CT	57	PN	31	2/12/2004	Mothballed on 5/1/2004, relisted from 7/1/04 until 10/1/04	10/1/2004	No Reliability Issues

Bloom 33	24	CE	33	10/12/2004	Currently Mothballed - ASAP	n/a - never a PJM capacity resource	No Reliability Issues
Bloom 34	26	CE	33	10/12/2004	Currently Mothballed - ASAP	n/a - never a PJM capacity resource	No Reliability Issues
Collins 1	554	CE	26	6/2/2004	12/31/2004	1/1/2005	No Reliability Issues
Collins 2	554	CE	27	6/2/2004	3rd/4th Quarter 2004	1/1/2005	No Reliability Issues
Collins 3	530	CE	27	6/2/2004	12/31/2004	1/1/2005	No Reliability Issues
Collins 4	530	CE	26	6/2/2004	Currently Mothballed - ASAP	1/1/2005	No Reliability Issues
Collins 5	530	CE	25	6/2/2004	Currently Mothballed - ASAP	1/1/2005	No Reliability Issues
Riegel Paper NUG (Milford Power LP)	27	JC	33	6/11/2004	Planned to retire 6/30/04, request delayed until 12/31/04	1/1/2005	No Reliability Issues
STI 3 & 4 (Cat Tractor)	20	ME	15	9/29/2004	1/1/2005	1/1/2005	No Reliability Issues
Electric Junction 31	59	CE	34	10/12/2004	12/31/04 - when contract is complete	1/1/2005	No Reliability Issues after 1/1/05
Electric Junction 32	59	CE	34	10/12/2004	12/31/04 - when contract is complete	1/1/2005	No Reliability Issues after 1/1/05
Electric Junction 33	59	CE	34	10/12/2004	12/31/04 - when contract is complete	1/1/2005	No Reliability Issues after 1/1/05
Lombard 32	31	CE	35	10/12/2004	Currently Mothballed - ASAP	1/1/2005	No Reliability Issues
Lombard 33	32	CE	35	10/12/2004	Currently Mothballed - ASAP	1/1/2005	No Reliability Issues
Sabrooke 31	25	CE	35	10/12/2004	12/31/04 - when contract is complete	1/1/2005	No Reliability Issues
Sabrooke 32	25	CE	35	10/12/2004	12/31/04 - when contract is complete	1/1/2005	No Reliability Issues
Sabrooke 33	24	CE	34	10/12/2004	12/31/04 - when contract is complete	1/1/2005	No Reliability Issues after 1/1/05
Sabrooke 34	13	CE	34	10/12/2004	12/31/04 - when contract is complete	1/1/2005	No Reliability Issues after 1/1/05
Madison St. CT	10	DPL	41	10/13/2004	12/31/2004	1/7/2005	No Reliability Issues

Crawford 31	59	CE	36	10/12/2004	ASAP	3/1/2005	Reliability issue identified and resolved
Crawford 32	58	CE	36	10/12/2004	ASAP	3/1/2005	Reliability issue identified and resolved
Crawford 33	59	CE	36	10/12/2004	ASAP	3/1/2005	Reliability issue identified and resolved
Deepwater CT A	19	AE	37	10/13/2004	4/1/2005	5/1/2005	Reliability Issue resolved (Blackstart)
Kearny 7	150	PS	51	9/8/2004	12/7/2004	6/1/2005	Reliability issue identified and resolved
Kearny 8	150	PS	50	9/8/2004	12/7/2004	6/1/2005	Reliability issue identified and resolved
Howard M. Down (Vineland) Unit 7	8	AE	53	2/24/2005	5/31/2005	6/17/2005	No Reliability Issues
DSM (Hoffman LaRoche)	9	JC	7	9/1/2005	10/1/2005	10/6/2005	No Reliability Issues
Newark Boxboard	52	PS	15	7/6/2005	10/5/2005	10/11/2005	Reliability issue identified and expected to be resolved by 6/2007
Conesville 1	115	AEP	46	9/20/2005	12/31/2005	1/1/2006	Reliability issue (black start) identified and resolved
Conesville 2	115	AEP	48	9/20/2005	12/31/2005	1/1/2006	Reliability issue (black start) identified and resolved
Gude Landfill 1&2	2.2	PEP	20	8/12/2004	3/25/2006	3/25/2006	No Reliability Issues
Parlin	114	JC	15	2/28/2006	5/31/2006	4/10/2006	No Reliability Issues
Bayonne CT1	21	PS	35	3/30/2006	As soon as possible	5/20/2006	No Reliability Issues
Bayonne CT2	21	PS	35	3/30/2006	As soon as possible	5/20/2006	No Reliability Issues
Howard M. Down (Vineland) Unit 9	17	AE	45	2/24/2006	5/31/2006	6/1/2006	No Reliability Issues
Delaware Diesel	2.7	PE	39	8/30/2006	As soon as possible	10/24/2006	No Reliability Issues

Total Deactivated: 5775.5

NOTE (1): This list includes retirements addressed as part of the PJM retirement process started in 2003. The list does not include generators retired prior to 2003.

FUTURE DEACTIVATIONS
(as of June 6, 2007)

Unit	Capacity	Trans Zone	Age (Years)	Official Owner Request	Requested Deactivation Date	Projected Deactivation Date	PJM Reliability Status ¹
Will County 1	151	CE	52	6/4/2007	9/2010	TBD	Under Review
Will County 2	148	CE	52	6/4/2007	9/2010	TBD	Under Review
Waukegan 6	100	CE	55	1/3/2007	9/1/2007	9/1/2007	No Reliability Issues
Martins Creek 1	140	PPL	49	3/19/2004	9/15/2007	9/15/2007	No Reliability Issues
Martins Creek 2	140	PPL	47	3/19/2004	9/15/2007	9/15/2007	No Reliability Issues
Martins Creek D1-D2	5	PPL	38	9/1/2005	9/15/2007	9/15/2007	Reliability issue (black start) identified and resolved
Sewaren 1	104	PS	55	9/8/2004	12/7/2004	9/2008	Reliability Issues Identified - Unit retained through summer 2008
Sewaren 2	118	PS	55	9/8/2004	12/7/2004	9/2008	Reliability Issues Identified - Unit retained through summer 2008
Sewaren 3	107	PS	54	9/8/2004	12/7/2004	9/2008	Reliability Issues Identified - Unit retained through summer 2008
Sewaren 4	124	PS	52	9/8/2004	12/7/2004	9/2008	Reliability Issues Identified - Unit retained through summer 2008
Buzzard Point East Banks 3, 4, and 5	48	PEP	39	2/28/2007	5/31/2007	9/2008	Reliability issues identified and expected to be resolved by 5/31/2009
Buzzard Point West Bank 6	16	PEP	39	2/28/2007	5/31/2007	9/2008	Reliability issues identified and expected to be resolved by 5/31/2009
Hudson 1	383	PS	39	9/8/2004	12/7/2004	9/2010	Reliability Issues Identified - Unit retained through summer 2010
Buzzard Point East Banks 1, 2, 6, 7, 8	80	PEP	39	2/28/2007	5/31/2012	5/31/2012	Reliability issues identified and expected to be resolved by 5/31/2012
Buzzard Point West Banks 1-5, 7, and 8	112	PEP	39	2/28/2007	5/31/2012	5/31/2012	Reliability issues identified and expected to be resolved by 5/31/2012
Benning 15	275	PEP	39	2/28/2007	5/31/2012	5/31/2012	Reliability issues identified and expected to be resolved by 5/31/2012
Benning 16	275	PEP	35	2/28/2007	5/31/2012	5/31/2012	Reliability issues identified and expected to be resolved by 5/31/2012

TOTAL: 2027

Note (1): PJM Reliability Status column also contains links to additional information for requests with reliability issues posted to the PJM website.

11 Jersey Central Power & Light Company. Oyster
Creek Nuclear Generating Station Groundwater
Assessment/Remediation Activities, Semi-Annual
Report, January – June 2002

May 2003

**OYSTER CREEK NUCLEAR GENERATING STATION
GROUND WATER ASSESSMENT/REMEDIATION ACTIVITIES
SEMI-ANNUAL REPORT, JANUARY - JUNE 2002**

FOR

ISRA CASE NO. 99575

Prepared by

**Jersey Central Power & Light Company,
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May 2003

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1.0 FACILITY BACKGROUND

The 650 MW Oyster Creek Nuclear Generating Station plant is a single-unit, five-loop General Electric Boiling Water Reactor (BWR). The plant site, about 800 acres, is located within Lacey and Ocean Townships of Ocean County, New Jersey. Located approximately nine miles south of Toms River, New Jersey, the Oyster Creek Nuclear Generating Station plant is about 50 miles east of Philadelphia, Pennsylvania and 60 miles south of Newark, New Jersey.

Oyster Creek is owned and operated by Amergen Inc. Specific environmental obligations pursuant to the June 1995 New Jersey Department of Environmental Protection (NJDEP) Memorandum of Agreement (MOA) between NJDEP and GPU Nuclear Corporation, currently GPU Energy, are continuing to be fulfilled by Jersey Central Power & Light Company, a FirstEnergy Company (JCP&L). This work and NJDEP oversight received NJDEP case number 93-06-28-1317-29. The NJDEP terminated the MOA via letter dated August 8, 2000 due to the site triggering ISRA as a result of the sale of the property. The NJDEP advised in the letter that oversight by the NJDEP will be conducted by the NJDEP's Bureau of Environmental Evaluation, Cleanup and Responsibility Assessment (BEECRA) Section. The NJDEP assigned ISRA Case No. 99575 to this project. Groundwater treatment effluent is discharged under Ocean County Utilities Authority (OCUA) Industrial Discharge Permit #C-13-1991-030.

2.0 SUMMARY OF GROUNDWATER TREATMENT/MONITORING ACTIVITIES

In 1995 a Memorandum of Agreement (MOA) and associated Remedial Action Workplan (RAW) replaced NJPDES permit #NJ0076147 as the documentation specifying the monitoring and reporting requirements for the remediation of the fuel oil and chlorinated solvent contamination of the soil and groundwater at the Oyster Creek Nuclear Generating Station (OCNGS). This document is the 14th semi-annual report, covering the period of January through June 2002. The NJDEP terminated the MOA via letter dated August 8, 2000 due to the site triggering ISRA as a result of the sale of the property. The NJDEP advised in the letter that oversight by the NJDEP will be conducted by the NJDEP's BEECRA Section. ISRA Case No. 99575 was assigned to the project by the NJDEP.

In October 1986 a small hole (1/8" x 1/4") in a No. 2 diesel fuel transfer line was discovered beneath a storage building at the OCNGS. The hole in the pressurized line resulted in the introduction of an estimated 15,000 gallons of diesel fuel into the soil and ground water. Soil and ground water contamination are confined to a relatively small area of the OCNGS site, north and east of the Emergency Diesel Generator (EDG) Building (Figure 1). The contamination appears to be limited to the upper Cape May formation and does not present a threat to the on-site or off-site drinking water wells. A clay layer up to 15 feet thick separates the Cape May formation from the lower Cohansey formation throughout most of the site. Major exceptions include those areas around the Turbine and Reactor Buildings where the clay layer was breached during foundation construction (Figure 2).

Injection of potable water into wells located between the Turbine Building foundation breach and the remediation project area prohibits migration of contaminated ground water to the underlying Cohansey Aquifer. The locations of the injection points are depicted on Figure 1. The injection effort creates a hydraulic barrier to the flow of shallow ground water in the Cape May Aquifer, directing it away from any potential mixing with the Cohansey Aquifer. Ground water contour maps for the Cape May aquifer wells were prepared based on water table elevation data for February and April 2002. These data are summarized in Tables 1 and 2. Figures 3 and 4 depict the orientation and magnitude of hydraulic gradient for the February and April 2002 quarterly ground water elevation monitoring episodes. These maps depict the effectiveness of the ground water injection activities in redirecting ground water flow.

Specifically, the maps illustrate a hydraulic mound at the injection area. This mounding deflects groundwater flow away from the foundation breach and toward the remediation area.

In addition to ground water injection in the area between the Turbine Building foundation breach and the remediation project, injection also occurs along the southern edge of the contaminant plume. In order to prevent southerly migration of the plume, the potable water treatment system sand filter backwash is discharged to the area south of the Machine Shop (Figure 1). Table 3 provides a summary of the potable water and sand filter backwash injection quantities.

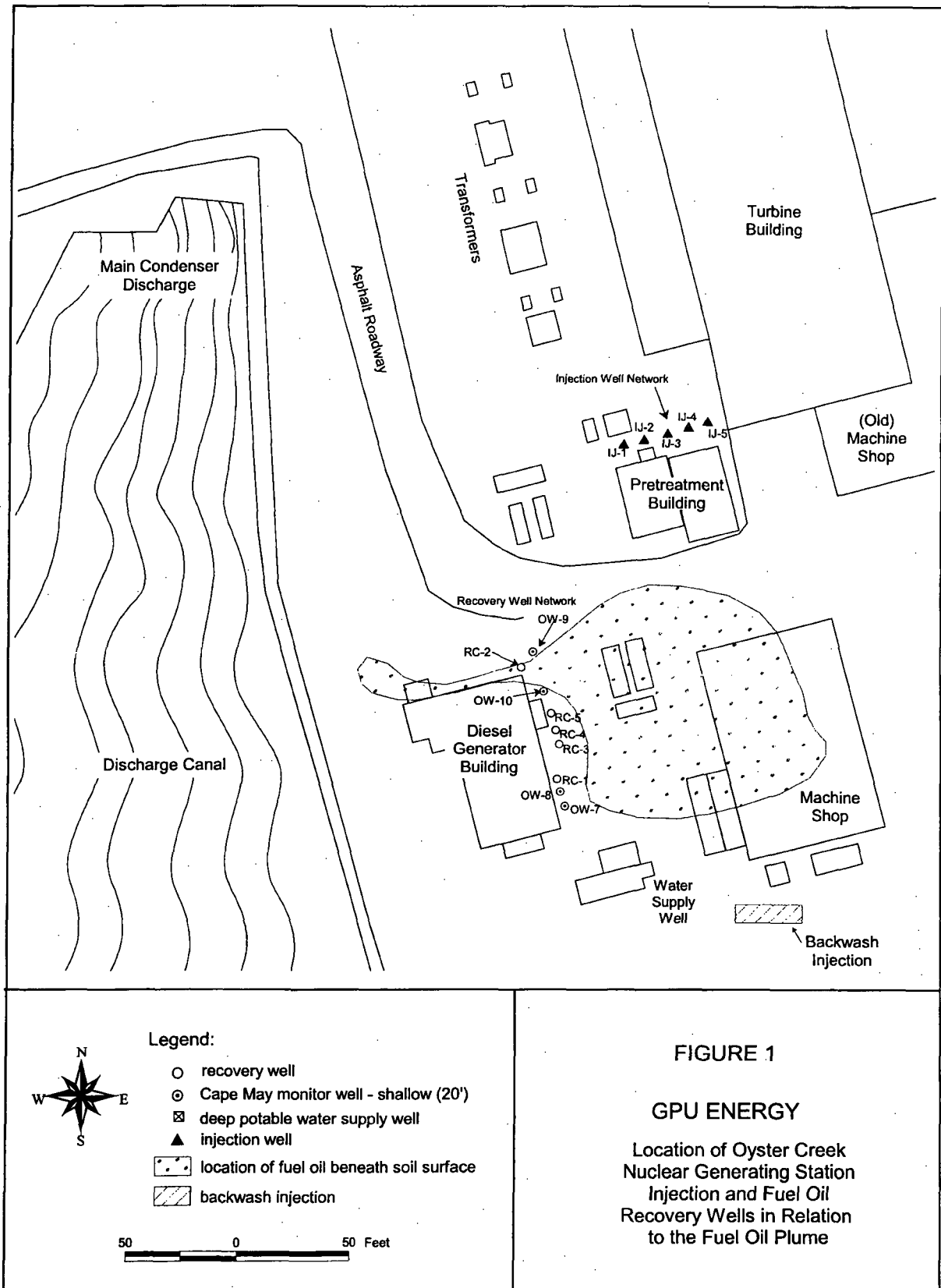
Measurable free-phase product was not detected in any of the onsite wells during the February 22, 2002 quarterly ground water elevation monitoring episode. Measurable free-phase product was detected in ground water monitoring wells OW-1, OW-3, OW-4, W-18, W-26, W-27, and W-31 during the April 9, 2002 water table elevation monitoring event. Figure 5 depicts the floating product isopleth map for the April 9, 2002 water table elevation monitoring event

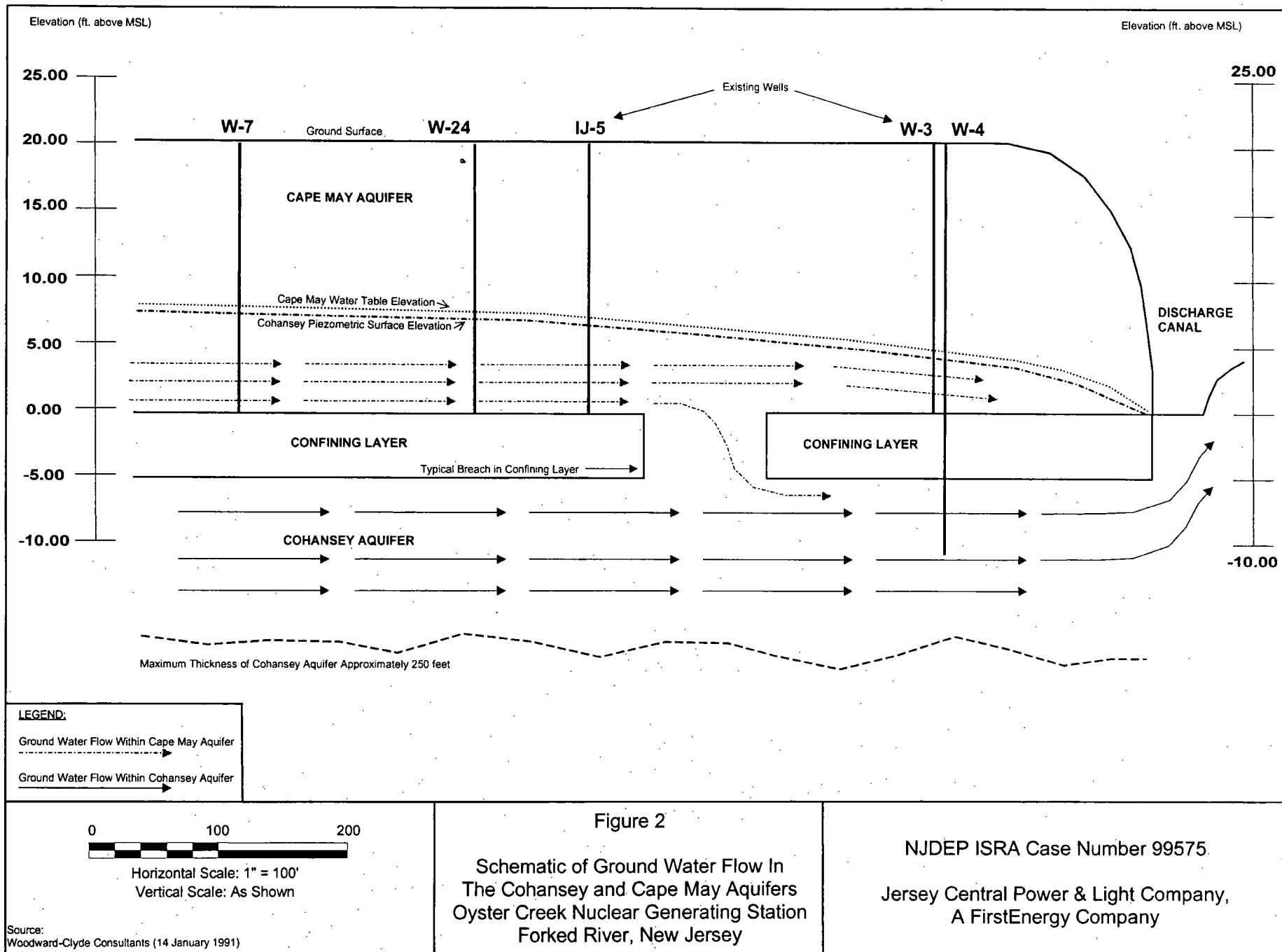
Figure 6 depicts the locations of the ground water monitoring wells included in the semi-annual ground water sampling program. Some modification to the wells included in the sampling program occurred in response to NJDEP's August 21, 2000 correspondence. Specifically, in its letter, NJDEP required sampling from the contaminant plume area. Accordingly, during the May 2002 sampling event, a sample was obtained from well OW-5 and submitted for laboratory analysis. The laboratory analytical results of the May 2002 semi-annual groundwater sampling event are summarized in Table 4; contaminant concentrations exceeding NJDEP Ground Water Quality Standards (GWQS) are plotted on Figure 7. Decreases in Tetrachloroethene concentrations from the levels observed during the December 3, 2001 sampling event were observed in W-21, W-24, W-25, W-30, and W-34. Increases in the Tetrachloroethene concentrations from the levels observed during the December 3, 2001 sampling event were observed in W-3 and W-32, with W-7 remaining the same. Trichloroethene was observed in only W-34 and was a decrease in the concentration that was observed during the December 3, 2001 sampling event. Benzene concentrations decreased in W-30 and W-21 from those that were observed during the December 3, 2001 sampling event. The benzene concentrations in OW-5 and W-24 showed slight increases over those observed during the December 3, 2001 sampling event, but remained below the Ground Water Quality Standards.

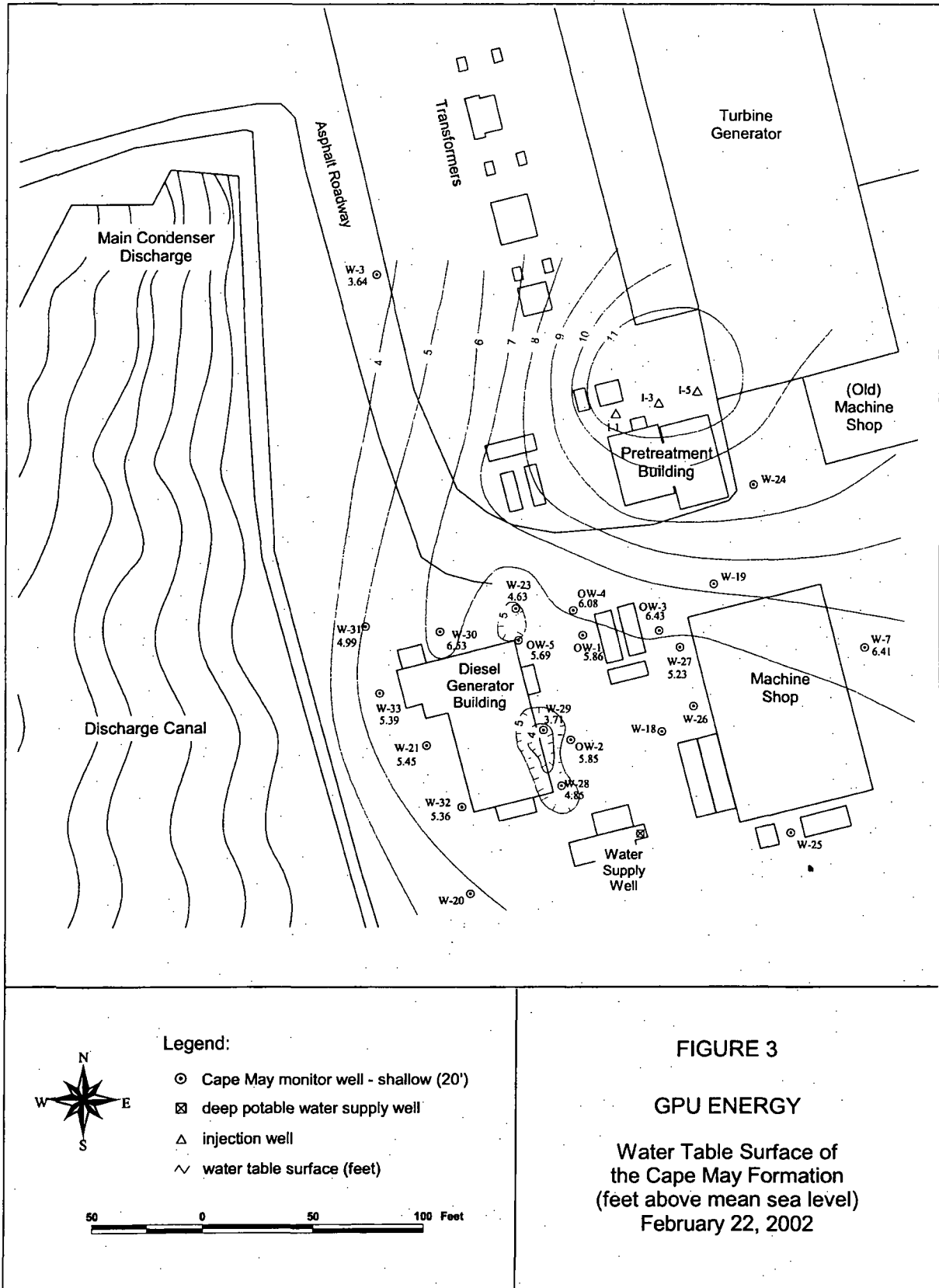
Central to the remediation task was the continuous operation of a dewatering well network and package treatment plant. The 12-well dewatering system pumps ground water/product to the treatment plant which discharges to the local sanitary sewer. Startup of the plant in June 1994 was followed by full time operation in February 1995. Prior to the dewatering system operation, only one of the de-watering wells contained any fuel oil. Subsequent dewatering activities have drawn fuel oil into the dewatering wells, and have recovered 4,871 gallons of fuel oil.

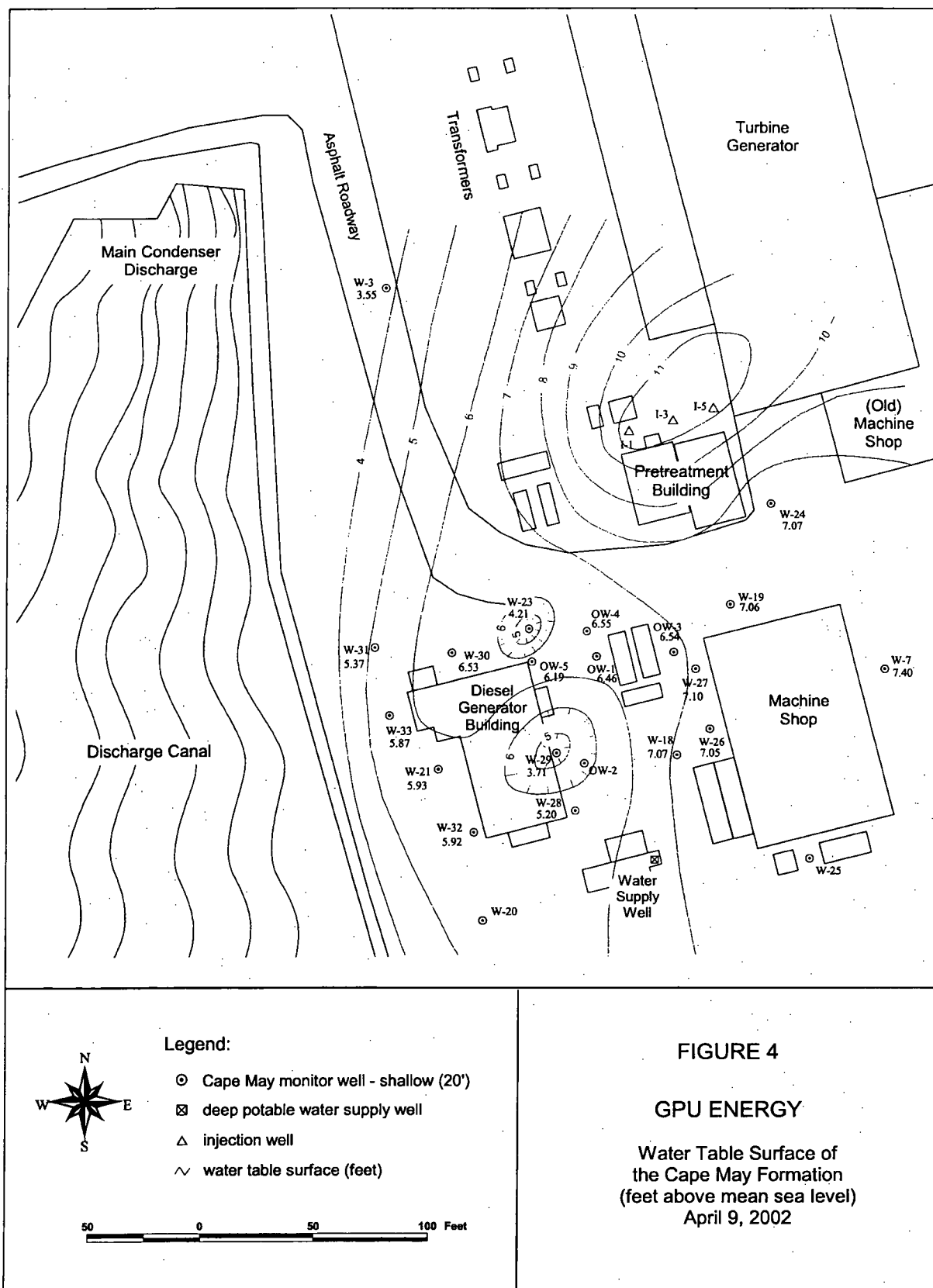
For the period of January through June 2002, remediation activities resulted in the treatment of 46,555 gallons of water. Fuel oil recovery for the period totaled 63.9 gallons. A summary of water volume processed through the treatment system and quantity of fuel oil recovered is indicated in Figure 8.

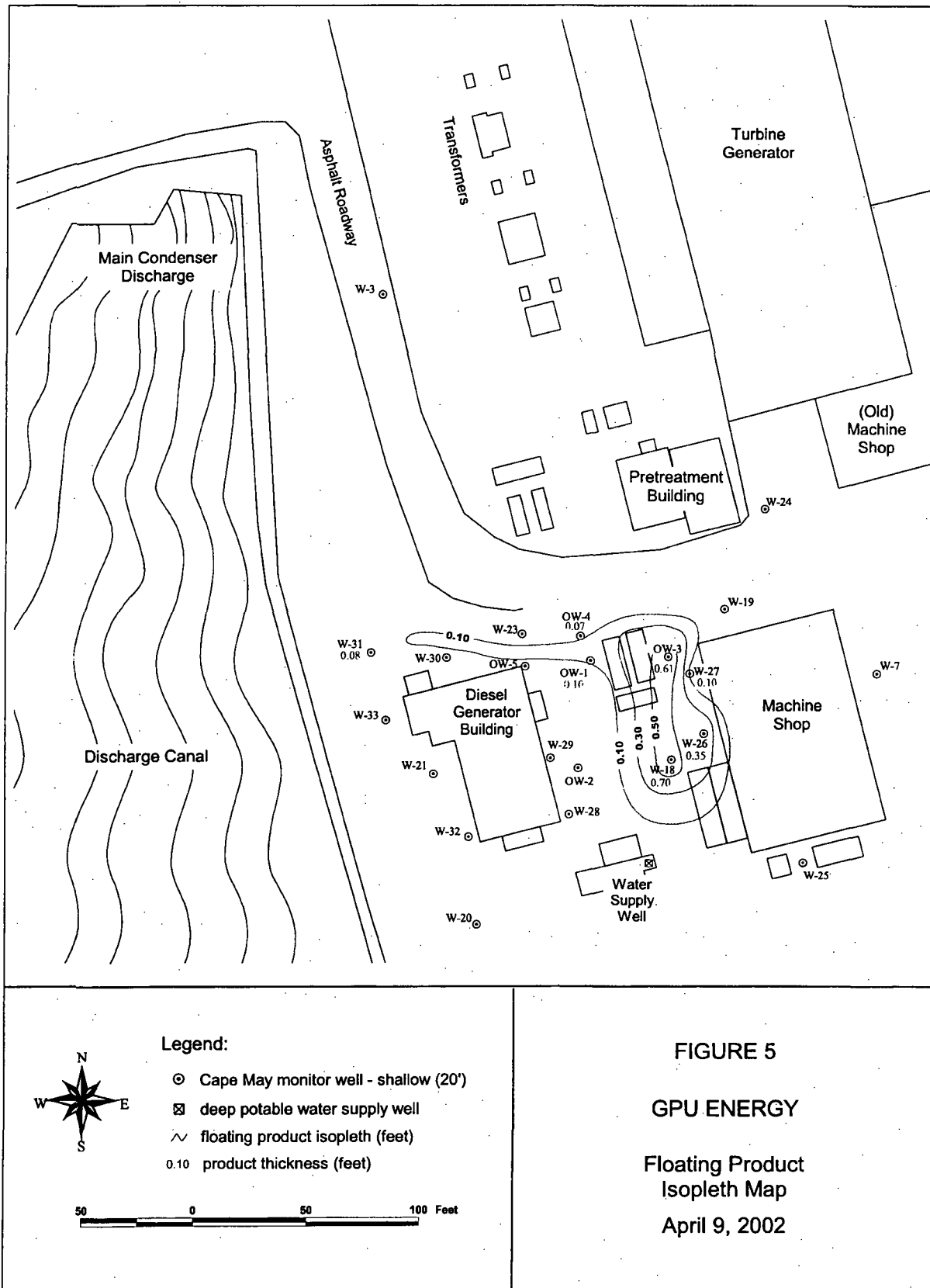
FIGURES

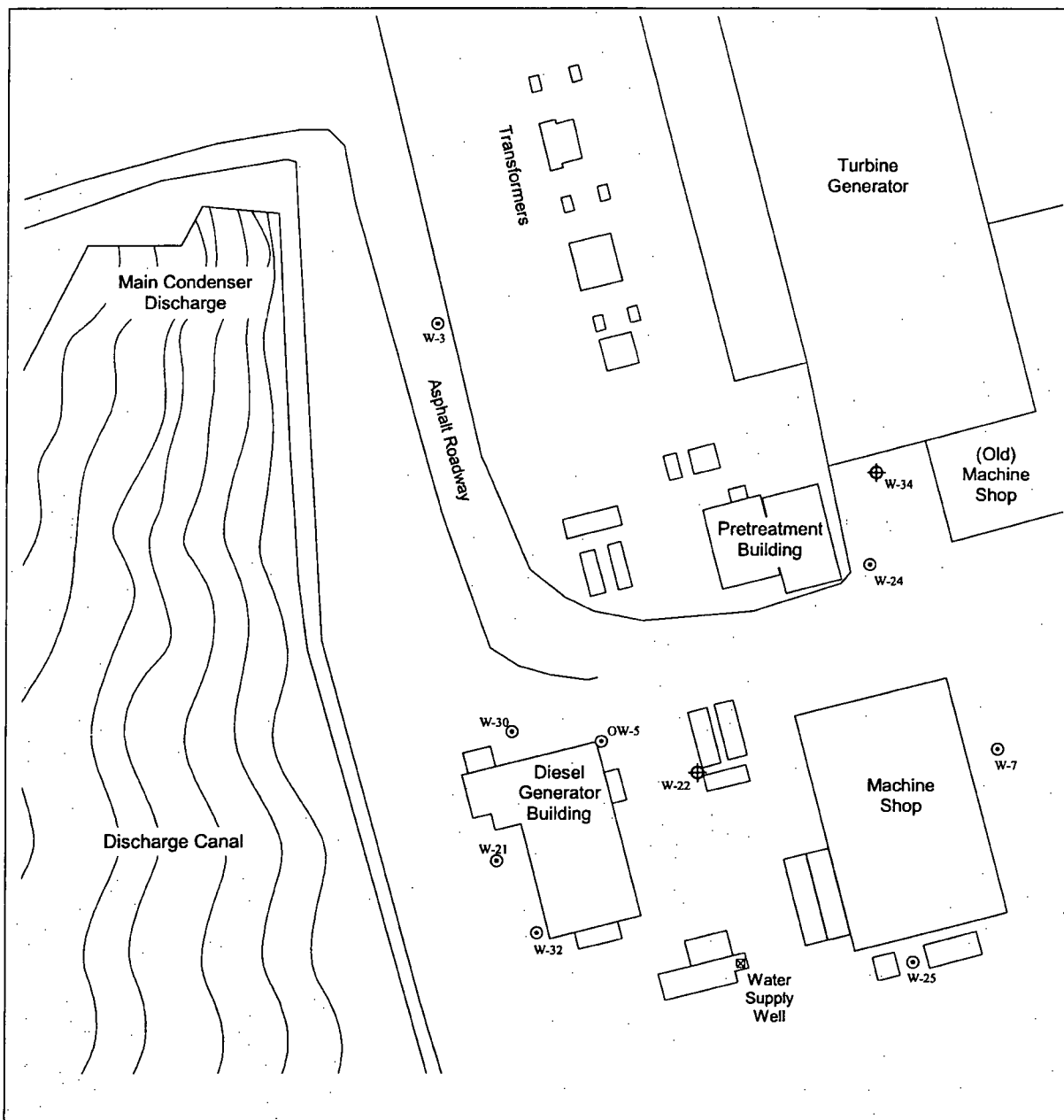












Legend:

- ⊙ Cape May monitor well - shallow (20')
- ⊕ Cohansey monitor well - deep (50')
- ⊠ deep potable water supply well

50 0 50 Feet

FIGURE 6

GPU ENERGY

Location of Monitoring Wells Used for
Semi-Annual Groundwater Sampling
and Chemical Analyses

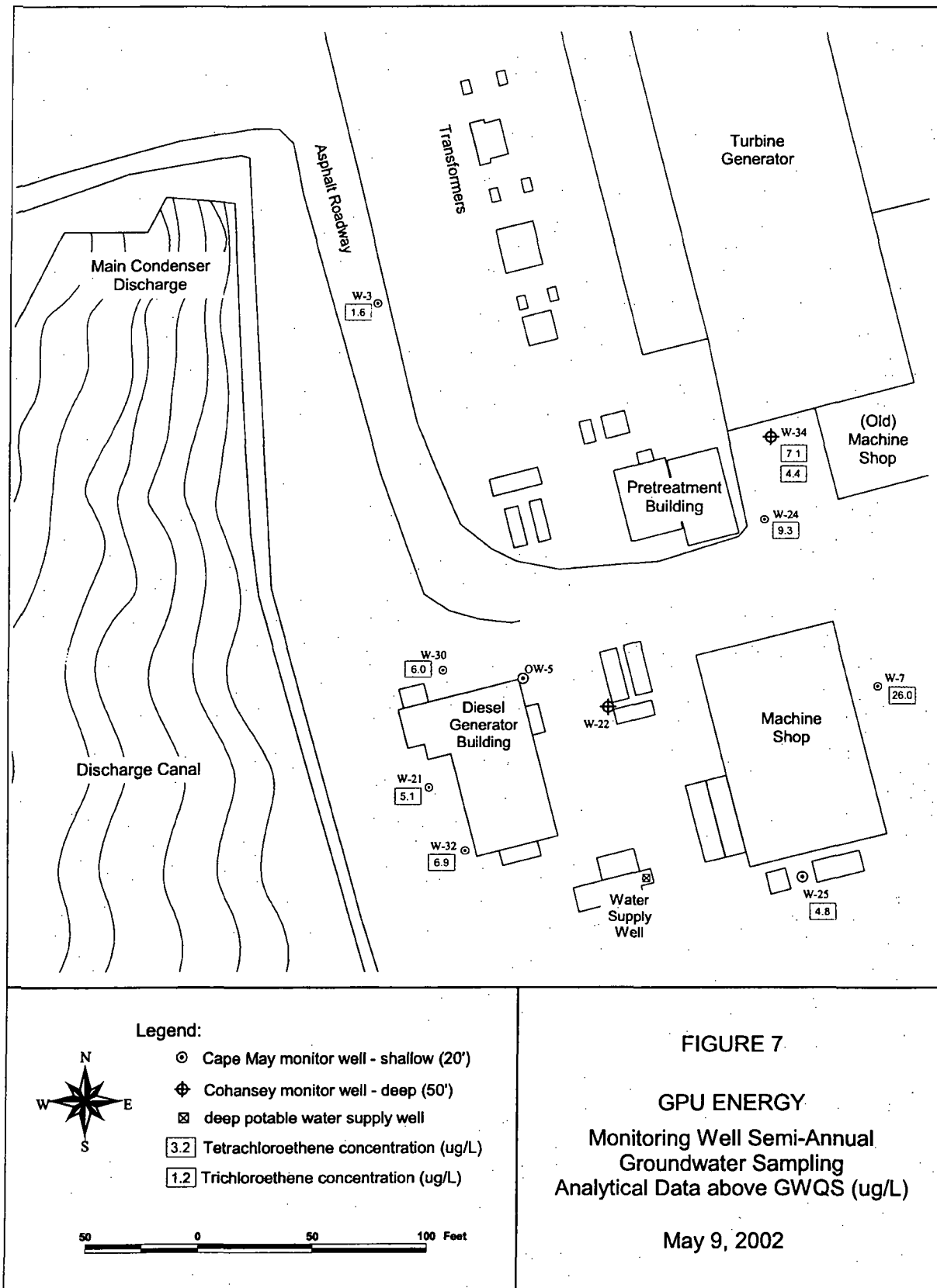
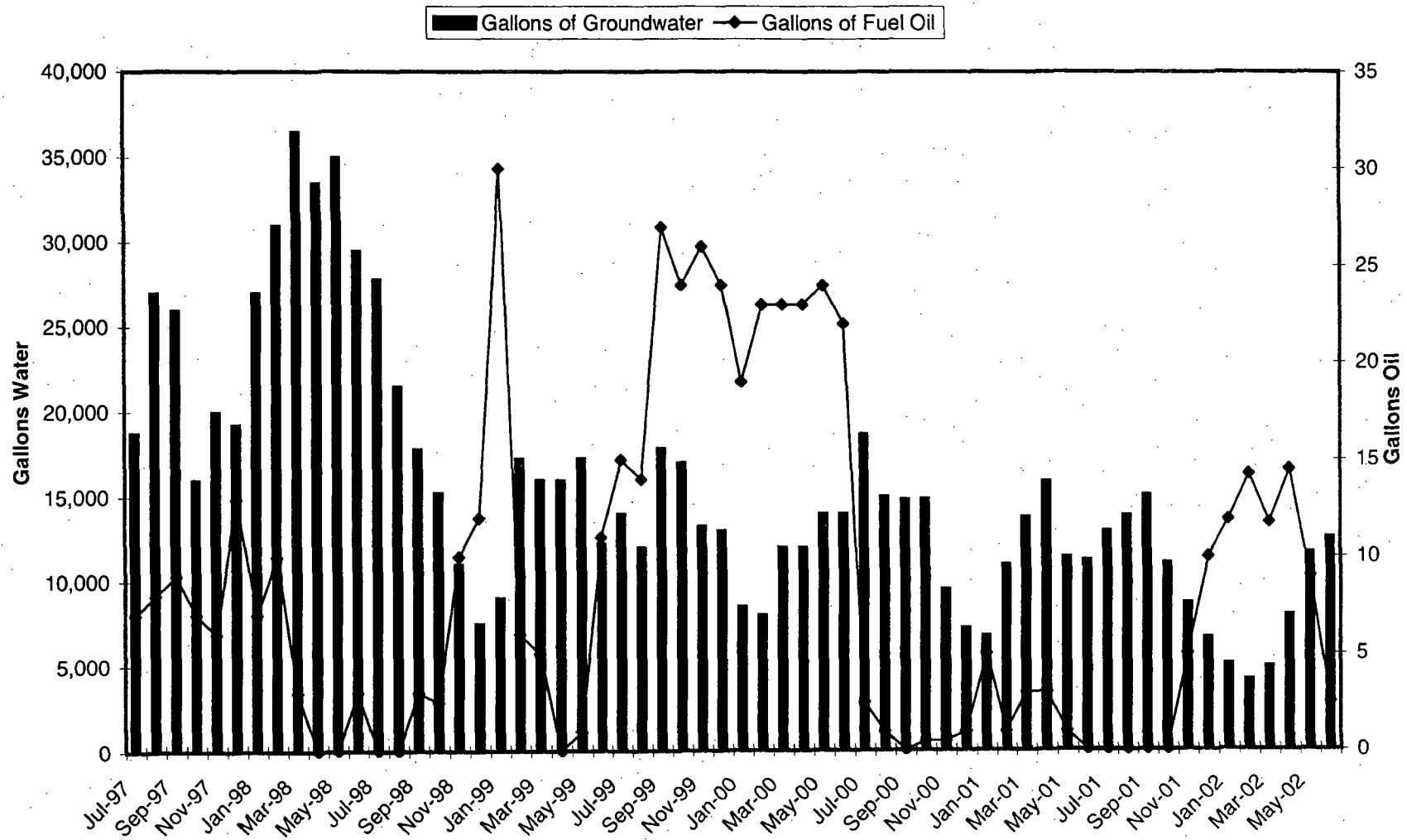


Figure 8
Gallons of Water Treated and Oil Recovered



TABLES

TABLE 1

OYSTER CREEK GENERATING STATION - QUARTERLY MONITOR WELL DATA REPORT AND INSPECTION LOG - FEBRUARY 22, 2002

Well Number	Reference Elevation (feet)	Depth to Water (feet)	Water Elevation (feet)	Depth to Floating Product (feet)	Floating Product Elevation (feet) [a]	Product Thickness (inches)	Remarks
OW-1	23.21	17.35	5.86	---	---	---	---
OW-2	23.15	17.30	5.85	---	---	---	---
OW-3	22.88	16.45	6.43	---	---	---	---
OW-4	23.19	17.11	6.08	---	---	---	---
OW-5	22.90	17.21	5.69	---	---	---	---
W-2	22.72	19.30	3.42	---	---	---	---
W-3	20.55	16.91	3.64	---	---	---	---
W-4	20.55	17.10	3.45	---	---	---	---
W-7	23.36	16.95	6.41	---	---	---	---
W-18	23.43	---	---	---	---	---	Well inaccessible (equipment storage); no data
W-19	23.32	---	---	---	---	---	Well inaccessible (equipment storage); no data
W-20	23.24	---	---	---	---	---	Well inaccessible (buried under crushed stone); no data
W-21	23.76	18.31	5.45	---	---	---	---
W-22	23.39	---	---	---	---	---	Well inaccessible (equipment storage); no data
W-23	22.99	18.36	4.63	---	---	---	---
W-24	22.86	---	---	---	---	---	Well inaccessible (equipment storage); no data
W-25	23.39	18.25	5.14	---	---	---	---
W-26	23.11	---	---	---	---	---	Well inaccessible (equipment storage); no data
W-27	23.17	---	---	---	---	---	No measurable ground water in well; no data
W-28	23.20	18.35	4.85	---	---	---	---
W-29	23.22	19.51	3.71	---	---	---	---
W-30	24.40	18.20	6.20	---	---	---	---
W-31	23.94	18.95	4.99	---	---	---	---
W-32	23.50	18.14	5.36	---	---	---	---
W-33	24.23	18.84	5.39	---	---	---	---
W-34	23.13	19.21	3.92	---	---	---	---

[a] Water table elevation corrected for presence of floating product (diesel fuel) per following formula:

$$h_c = h + [t_{fp} \cdot SG]$$

where:

h_c = corrected ground water elevation (feet)

h = measured ground water elevation (feet)

t_{fp} = free product thickness

SG = specific gravity of free product (0.84 g/cc assumed for diesel fuel)

TABLE 2

OYSTER CREEK GENERATING STATION - QUARTERLY MONITOR WELL DATA REPORT AND INSPECTION LOG - APRIL 9, 2002

Well Number	Reference Elevation (feet)	Depth to Water (feet)	Water Elevation (feet)	Depth to Floating Product (feet)	Floating Product Elevation (feet) [a]	Product Thickness (inches)	Remarks
OW-1	23.21	16.83	6.38	16.73	6.46	0.10	---
OW-2	23.15	---	---	---	---	---	Well inaccessible (buried under crushed stone); no data
OW-3	22.88	16.85	6.03	16.24	6.54	0.61	---
OW-4	23.19	16.70	6.49	16.63	6.55	0.07	---
OW-5	22.90	16.71	6.19	---	---	---	---
W-2	22.72	19.64	3.08	---	---	---	---
W-3	20.55	17.00	3.55	---	---	---	---
W-4	20.55	17.57	2.98	---	---	---	---
W-7	23.36	15.96	7.40	---	---	---	---
W-18	23.43	16.95	6.48	16.25	7.07	0.70	---
W-19	23.32	16.26	7.06	---	---	---	---
W-20	23.24	---	---	---	---	---	Well inaccessible (buried under crushed stone); no data
W-21	23.76	17.83	5.93	---	---	---	---
W-22	23.39	---	---	---	---	---	Well inaccessible (equipment storage); no data
W-23	22.99	18.78	4.21	---	---	---	---
W-24	22.86	15.79	7.07	---	---	---	---
W-25	23.39	15.64	7.75	---	---	---	---
W-26	23.11	16.35	6.76	16.00	7.05	0.35	---
W-27	23.17	16.15	7.02	16.05	7.10	0.10	---
W-28	23.20	18.00	5.20	---	---	---	---
W-29	23.22	---	---	---	---	---	No measurable ground water in well; no data
W-30	24.40	17.87	6.53	---	---	---	---
W-31	23.94	18.62	5.32	18.54	5.39	0.08	---
W-32	23.50	17.58	5.92	---	---	---	---
W-33	24.23	18.36	5.87	---	---	---	---
W-34	23.13	19.01	4.12	---	---	---	---

[a] Water table elevation corrected for presence of floating product (diesel fuel) per following formula:

$$h_c = h + [t_p \cdot SG]$$

where:

h_c = corrected ground water elevation (feet)

h = measured ground water elevation (feet)

t_p = free product thickness

SG = specific gravity of free product (0.84 g/cc assumed for diesel fuel)

Table 3

Gallons of water delivered each month into the Cape May aquifer by backwash along the south edge and by injection along the north edge of the fuel oil plume at OCNGS from January 2002 through June 2002.

Month	Injected	Backwash	Total
January	8,598	6,500	15,098
February	7,766	6,500	14,266
March	16,704	6,500	23,204
April	8,083	6,500	14,583
May	22,209	6,500	28,709
June	24,858	6,500	31,358

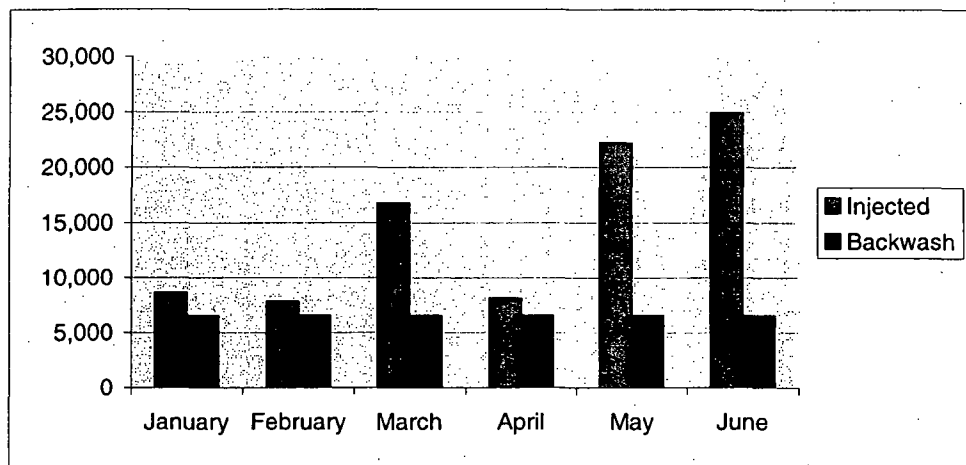


Table 4 Concentration (ppb) of the contaminants detected in monitoring wells at OCNCS during May 2002

Parameter	NJDEP GWQS [a]	OW-5	W-3	W-7 [f]	W-21	W-22	W-24	W-25	W-30	W-32	W-34
Volatile Organic Compounds											
1,1-Dichloroethane	50	< 0.3 [b]	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	0.4
cis-1,2-Dichloroethene	70	< 0.3	< 0.3	< 0.3	5.3	< 0.3	< 0.3	< 0.3	0.7	< 0.3	5.7
1,1,1-Trichloroethane	30	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	0.7	< 0.3	< 0.3	0.5	< 0.3
Trichloroethene	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	4.4
Benzene	1	0.3	< 0.3	< 0.3	< 0.3	< 0.3	0.6	< 0.3	0.5	< 0.3	< 0.3
Tetrachloroethene	1	0.3	1.6	26.0	5.1	< 0.2	9.3	4.8	6.0	6.9	7.1
Toluene	1,000	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Ethylbenzene	700	0.4	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Xylenes	1,000	1.7	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
VOA TIC's [c]		222				8.2			124		
Semi-Volatile Organic Compounds											
Naphthalene	300	< 1.3	< 0.6	< 0.6	< 0.6	< 0.6	0.8	< 0.6	< 1.3	< 0.6	< 0.6
Acenaphthene	400	2.0	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 1.2	< 0.6	< 0.6
Diethylphthalate	5,000	< 0.9	< 0.4	< 0.4	< 0.4	< 0.4	< 0.5	< 0.4	< 0.9	< 0.4	< 0.4
Fluorene	300	1.4	< 0.6	< 0.6	< 0.6	< 0.6	< 0.7	< 0.6	< 1.2	< 0.6	< 0.6
Phenanthrene [e]	100	4.1	< 0.5	< 0.5	< 0.5	< 0.5	0.6	< 0.5	1.9	< 0.5	< 0.5
Anthracene	2,000	3.5	< 0.4	< 0.4	< 0.4	< 0.4	< 0.5	< 0.4	2.4	< 0.4	< 0.4
Di-n-butylphthalate	900	< 0.8	< 0.4	< 0.4	< 0.4	< 0.4	< 0.5	< 0.4	< 0.8	< 0.4	< 0.4
Fluoranthene	300	2.0	< 0.4	< 0.4	< 0.4	< 0.4	1.3	< 0.4	1.0	< 0.4	< 0.4
Pyrene	200	3.1	< 0.4	< 0.4	< 0.4	< 0.4	0.9	< 0.4	2.1	< 0.4	< 0.4
Butylbenzylphthalate	100	< 0.8	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.8	< 0.4	< 0.4
Benzo (a) anthracene [e]	5	< 0.8	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.8	< 0.4	< 0.4
Chrysene [e]	5	< 1.0	< 0.5	< 0.5	< 0.5	< 0.5	0.6	< 0.5	< 1.0	< 0.5	< 0.5
bis (2-Ethylhexyl) phthalate	30	16.0 B [d]	1.4 B	3.6 B	1.2 B	1.1 B	1.9 B	0.9 B	2.3 B	1.5 B	2.6 B
Di-n-octylphthalate	100	0.5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.3	< 0.1	< 0.1
Benzo (b) fluoranthene [e]	5	0.6	< 0.3	< 0.3	< 0.3	< 0.3	1.0	< 0.3	< 0.5	< 0.3	< 0.3
Benzo (k) fluoranthene [e]	5	< 1.6	< 0.8	< 0.8	< 0.8	< 0.8	< 0.9	< 0.8	< 1.6	< 0.8	< 0.8
Benzo (a) pyrene [e]	5	0.3	< 0.2	< 0.2	< 0.2	< 0.2	0.5	< 0.2	< 0.3	< 0.2	< 0.2
Indeno (1,2,3-cd) pyrene [e]	5	< 0.3	< 0.1	< 0.1	< 0.1	< 0.1	0.7	< 0.1	< 0.3	< 0.1	< 0.1
Dibenz (a,h) anthracene [e]	5	< 1.3	< 0.6	< 0.6	< 0.6	< 0.6	< 0.7	< 0.6	< 1.3	< 0.6	< 0.6
Benzo (g,h,i) perylene [e]	5	< 0.7	< 0.4	< 0.4	< 0.4	< 0.4	0.7	< 0.4	< 0.7	< 0.4	< 0.4
Semi VOA TIC's		1,483			8.3				3,862	9.5	

Notes:

[a] New Jersey Department of Environmental Protection Ground Water Quality Standards (GWQS; promulgated February 1993)

[b] Method detection limit listed for compounds listed as not detected (ND) in laboratory analytical data package

[c] Tentatively Identified Compounds

[d] Detected compounds with "B" qualifier indicates analyte was found in the laboratory blank as well as the sample, indicating possible laboratory contamination.

[e] Interim Generic Ground Water Quality Criteria for Synthetic Organic Compounds

[f] Well W-7 identified as MW-7 in analytical laboratory data package

Compounds detected at concentrations exceeding NJDEP GWQS shown in shaded cells

26.0

APPENDIX A

May 9, 2002 Semi-Annual Monitoring Well

Volatile and Semi-Volatile

Organic Analysis, QA/QC Report and

Electronic Deliverable Format

- 12 Letter from PJM Board of Managers to PJM
Members Committee and Stakeholders, regarding
“Reliability Pricing Model (RPM)” and including
Attachment B, “Immediate Reliability Issues in the
Absence of RPM”

March 22, 2005



955 Jefferson Avenue
Valley Forge Corporate Center
Norristown, PA 19403-2497

Phillip G. Harris
President and Chief Executive Officer

March 22, 2005

PJM MEMBERS COMMITTEE and STAKEHOLDERS

Dear Members and Stakeholders:

RE: Reliability Pricing Model (RPM)

The PJM Board of Managers has attended carefully to the reactions of the Members regarding the proposed Reliability Pricing Model (RPM) that was voted upon at the March 17, 2005 Members Committee meeting. The Board has taken the matter under advisement and intends to decide after receiving Member comments at the May 5 Annual Meeting whether to pursue this model further. To inform that decision, the Board is asking for stakeholder input regarding the concerns that they and the Board find compelling, including the impact of capacity market alternatives upon reliability, and the ability of PJM's current energy and capacity markets to assure continued generation adequacy. The Board is also requesting stakeholder input regarding specific aspects of the current RPM structure and alternatives thereto.

1. BACKGROUND

On March 21, 2005, the PJM Board of Managers met to discuss the outcome of the Members Committee March 17, 2005 vote on the proposed RPM. The Board requested that I advise you of the process that they will use to reach a decision on this critical topic.

Section 7.7 (i) of the PJM Operating Agreement states that the primary responsibility of the Board and the President and Officers of PJM include, (a) the safe and reliable operation of the PJM Region; (b) the creation and operation of a robust, competitive, and non-discriminatory electric power market and (c) the prevention of undue influence by any Member or group of Members over the operation of the PJM Region. The Board understands this grave responsibility and places great emphasis upon it.

The PJM Region currently is comprised of an area that serves 54 million electric customers who collectively produce 20 percent of the Gross Domestic Product of the United States. It is the collective responsibility of PJM, its Members, the regulatory bodies, and others to ensure that the needs of these customers for a safe and reliable electric system are met. The Board always hopes that this

common objective will yield consensus among its various stakeholders; however, it also recognizes that difficult and complex issues at times do not produce consensus. In these circumstances it is particularly important that the Board exercises its independent decision-making authority. The development of a sound capacity market design to ensure sufficient reliability within the Region is clearly such a decision.

PJM revisited the Capacity Market as part of the Resource Adequacy Model (RAM) in 2001. While the RAM groups developed many important concepts, there came a point last year when most participants recognized that a consensus was not possible in that process. At the PJM 2004 Annual Meeting four of the five Member sectors identified capacity market design as an issue to be resolved. PJM agreed that it needed to work on this aspect of its market design.

The Board also considered the information included in the 2003 State of the Market report that noted the deficiencies of the existing capacity market design and the significant level of generation retirements prompted by low prices. Following the Annual meeting the Board directed PJM staff to develop a replacement model to the capacity auction, and present it to the Members. The current RPM proposal resulted from this decision.

RPM was first presented to the Members in June 2004. Since that time, RPM was discussed at more than 100 Member attended meetings. Certain Board Members attended each Members Committee meeting at which RPM was discussed. As a result of Member input, the initial RPM proposal was significantly improved (See attachment A). Based upon a two-thirds majority of participants in favor of pursuing RPM in its current or modified form at the January 27, 2005 MC meeting, PJM conducted a special two day facilitated Members meeting on February 17 and 18 on the RPM model which was attended by three Board members. In response to these meetings, PJM made additional changes to the RPM proposal (See attachment A). Nonetheless, as evidenced by last week's vote, Member consensus on replacing the current capacity market with the modified RPM has not been achieved. The Board is mindful of the positions taken by the proponents and opponents of RPM.

The Board respects the considerable diligence the Members have paid to the RPM proposal. The Board recognizes that it is important to reach a timely decision on this issue. Ultimately, closure may only be achievable in a proceeding before the FERC. However, in order to make this decision, the Board concluded that the next necessary step is to share with the Members in this letter the elements that the Board currently finds persuasive. The Board is soliciting direct Member input on whether there is information that is contrary to the premises underlying the Board's concern. The Board also requests specific input on whether Members are recommending total, partial, or phased implementation of RPM, or are suggesting alternative measures that will better resolve the reliability and pricing concerns summarized in this letter.

The Board is requesting responses to the questions articulated below in a written form by April 18, 2005. The Board requests that Members endeavor to keep their written comments to less than fifteen pages. To the degree Members can consolidate common positions it would be helpful. The Board also will coordinate a panel discussion on RPM during the May 4 and 5 Annual Meeting. The Board is interested in hearing from two panels. The first panel will be composed of Members who are opposed to RPM in its current form. The second panel will be composed of Members who are in favor of RPM. The specific logistics will be addressed in a subsequent letter.

2. RELIABILITY CONCERNS

Observation 1: **The Board is of the view that reliability may be compromised in PJM in the absence of a viable capacity model.**

The Board requested PJM to articulate in a Whitepaper the reliability concerns identified through the Regional Transmission Expansion Plan process (Attachment B). The Whitepaper states that the combination of local load growth and announced generation retirements demonstrate that unless specific steps are taken to retain existing generation or add new generation investment and/or regional transmission, reliability may be compromised in the Eastern section of the PJM Region as early as 2008. The Whitepaper further states that it is not reasonable to conclude that the significant transmission required to increase import capability can be sited, constructed, and energized in sufficient time to address the most immediate needs of the region. Rather, generation appears to be the only practical solution to the identified near term needs. The Whitepaper also concludes that similar reliability concerns will arise in several other areas of the PJM Region in the near future. The Board requests that Members respond to the following question concerning reliability:

Is there information to contradict or further support the specific near term generation and/or transmission requirements that the Whitepaper identifies in PJM? If so, what is that information?

3. REVENUE ADEQUACY

Observation 2: **The Board is of the view that the current capacity and energy markets are not adequate to secure continued generation adequacy.**

The 2004 State of the Market Report published on March 8, 2005 concludes that net revenues have been below the level required to cover the full costs of new

generation investment for the last four out of six years. (2004 State of the Market Report pages 71-86; available in its entirety at www.pjm.com).

<http://www.pjm.com/markets/market-monitor/downloads/mmu-reports/pjm-som-2004.pdf>

The Board does not believe that the lack of adequate revenues is the result of the \$1,000 per MWh offer cap, local market power mitigation or incompatibility between resource adequacy and wholesale competition. The current capacity market was developed as a short term market with no locational differentiation in order to support retail choice by providing competitive access to capacity resources for new entrants and a market value for capacity that was fair to those no longer serving retail load. The experience over the last six years has shown that while the capacity market has provided a mechanism for the short-term exchange of capacity resources, the capacity market has not provided a price signal consistent with long term reliability and locational differences in long term reliability. The current capacity market has instead acted as a short term measure of the value of generation in a time of overall excess supply and has resulted in a significant undervaluation of capacity as a component of preserving system reliability over the long-term on a location specific basis.

In short, experience has shown that the daily capacity market simply does not conform to the reality that generation is a long term reliability requirement. It is the Board's conclusion that short term capacity markets by their very structure do not provide the appropriate market value signals for a long term reliability requirement and do not capture the lead time necessary to plan, construct, and install generation plant. The Board also has concluded that reliance on energy market scarcity prices to encourage new investment is not the right solution. Since it is a non-storable and essential commodity, the very nature of electricity requires distinction from other commodities. Societal norms have always placed a high value on the reliable delivery of electricity on demand. The Board concludes that for the present, PJM would be imprudent to rely on energy market scarcity prices as a substitute for a rational capacity market design in the wholesale electricity market.

The Board also believes that an appropriately designed capacity market will encourage bilateral transactions and that the presence of an active bilateral capacity market is part of the solution. Since new generation, transmission, and demand response resources are required to address the identified reliability concerns, the Board feels that the current short term capacity requirement must be replaced with a model that better integrates these components. Based upon these concepts, the Board requests that Members respond to the following question on revenue adequacy:

Is there information that contradicts or further supports the conclusion that inadequate revenues, resulting in significant part from reliance on a short term capacity market, are impeding investment in generation and longer term demand response and/or the development of a robust, long-term bilateral capacity market?

4 **RPM MODEL**

The Board also recognizes that although individual Members may agree with its observations on reliability and revenue adequacy, this concurrence does not necessarily mean that Members agree that the RPM will satisfactorily address these concerns. There are a number of elements of RPM that have engendered considerable debate and input. In addition to comments on the above observations, the Board is requesting the Members to provide their comments on the relative merits or demerits of RPM in total or on the following envisaged components of the RPM:

- a. Four year forward obligation;
- b. Variable resource requirement;
- c. Price differentiation based on location;
- d. Net Revenue offset concept;
- e. Payment of the capacity prices to new and existing generators;
- f. Inclusion of operating characteristics;
- g. Inclusion of a reliability backstop;
- h. Inclusion of long term demand response options;
- i. Inclusion of a transmission participation;
- j. Structure and timing of the first auctions.

Finally, at the March 2, 2005 Electricity Markets Committee meeting, the Members voted to create a working group to explore an incremental approach to solving the current capacity problem. The Board requests input from this group on what is contemplated within the incremental approach and how this approach will address the reliability, pricing and market design concerns expressed in this letter.

In closing, the Board believes that the circumstances noted above warrant the care and time required for this topic. The Board looks forward to a candid and informative Annual Meeting. As noted at the beginning of this letter, despite the differences of opinion, the Board is confident that all of our stakeholders are joined by the basic precepts of ensuring system reliability and promoting robust competitive electric markets as embodied in the PJM Operating Agreement.

Very truly yours,

Phillip G. Harris

Phillip G. Harris

Attachments

311848

Immediate Reliability Issues in the Absence of RPM**Summary**

The past 12 months have seen an unprecedented requirement for levels of baseline transmission upgrades in the PJM Regional Transmission Expansion Planning Process. Of the more than \$1 billion worth of upgrades in the current Plan, almost 60% are baseline reliability upgrades. A significant portion of these baseline reliability upgrades has been identified in eastern PJM as a result of announced generation retirements. Identifying and developing these upgrades has been particularly challenging because of the relatively short timeframes associated with generation retirements, and the comparatively longer lead times associated with building transmission reinforcements. Further transmission upgrades, estimated to cost over \$300 million, are currently being evaluated for inclusion in the RTEP related to known and anticipated generation retirements. It is unrealistic to assume that all these transmission investments could be completed in the time necessary (2008) to meet the estimated reliability requirements in that time period. A combination of transmission and generation investment in eastern PJM is necessary in order to avoid the risk of possible load shedding.

The installation of new generation is not geographically “balanced” with the retirements of existing generation and the increased obligations associated with load growth. Thus, while the total amount of generation in the PJM market remains sufficient to meet Installed Reserve Margin requirements, the retirement of existing generation is concentrated in eastern PJM. Continuing to balance load and generation requires that the transmission system be used to transfer additional energy from west to east to replace the retiring generation. This has resulted in the need to construct significant upgrades to maintain transmission system reliability, primarily in eastern PJM. While this issue is currently concentrated in eastern PJM, the potential exists for similar circumstances to develop in other areas of the PJM system. For instance, little new generation has been added in either the Baltimore/Washington or Delmarva Peninsula areas of PJM. The retirement of key generation in either of these areas could produce a situation similar to that currently existing in eastern PJM.

In addition, some of the highest load growth in the PJM system is occurring in the same areas that are also experiencing generation retirements. It is clear that a mechanism needs to be put in place to incentivize the development of generation in specific areas to help maintain the reliability of the PJM system. Locational constraints in RPM seeks to provide that market signal by linking capacity price to transmission capability associated with load deliverability.

Absent investment in additional generation in eastern PJM or transmission capability to deliver energy to the area, the reliability of that area will be

significantly degraded. The area will not be compliant with PJM and MAAC reliability criteria and will face an increased reliance on emergency operating procedures and an unacceptable level of risk of load interruption. With continued load growth and the potential for additional generation retirements, the situation will become more critical in future years.

Description of Analysis

PJM's Load Deliverability test is designed to ensure that the transmission system can deliver energy to a zone that is experiencing reduced generation availability. It is a severe test of reliability because the test assumes both a high load and a capacity emergency in the zone that is being tested.

The ability of the transmission system to satisfy the requirements of the Load Deliverability test is affected by several factors, including:

- New generation installed in a zone, which reduces the need to import energy using the transmission system
- Retirements of existing generation in a zone, which increases the need to import energy using the transmission system
- Load growth which, in the absence of new generation, increases the need to import energy using the transmission system

Load deliverability in eastern PJM has been significantly impacted by a combination of announced generation retirements, the potential for additional generation retirements, a lack of new generation being sited, and continued load growth. Significant new investments in transmission are required to maintain reliability in eastern PJM, including the potential need to construct a new 500 kV circuit. The Baltimore/Washington area is also being impacted by similar factors and may require significant additional transmission investments to maintain reliability.

Generation Additions/Retirements

Eastern PJM has been particularly impacted by the retirement of existing generation. The announcement by Reliant in late 2003 and early 2004 of their intent to retire approximately 700 MW of generation, primarily in New Jersey, resulted in the need for certain transmission reinforcements to be completed prior to the summer, 2004. PS Power announced in the fall 2004 their intent to retire approximately 1100 MW of generation (Sewaren, Hudson, Kearney), all of which is in New Jersey. Also in the fall of 2004, Conectiv announced the retirement of approximately 400 MW of generation (B. L. England), which is in New Jersey as well. These announced retirements have created both local transmission problems, as well as significant load deliverability issues for eastern PJM. While

PJM has a process that allows for the offer of compensation to retain generators beyond the announced retirement date, FERC has made it clear that PJM can not require generators to remain in service.

Compounding the reliability issues in eastern PJM is the lack of new generation development, due to the current unfavorable investment environment. The most recent generation interconnection queue includes only a minimum amount of potential new generation (4 MW) in New Jersey. Two generation projects, representing almost 2000 MW of capacity, were previously under construction and were withdrawn from the interconnection queue based on the developers' financial situation. A total of about 2000 MW of new generation was installed in 2002-2003. No new generation was added in 2004, and none is scheduled to be added in 2005. Additional generation of approximately 1100 MW is scheduled to be in-service at Linden in 2006. At the same time, the Neptune transmission project could withdraw the functional equivalent of an additional 685 MW from the Sayreville area of New Jersey.

Load Growth

Projected annualized load growth rates for the 2004-2009 period in the PS, JCP&L and AE areas of New Jersey could result in a load increase of over 2,200 MW during this period and a corresponding increase in installed capacity obligation of over 2,500 MW. A net increase in installed generation capacity of 2,500 MW would be required to maintain 2004 reliability levels for this area. Continued load growth, without the addition of new generation, will cause additional reliability concerns.

Transmission Upgrades

Transmission upgrades required to mitigate reliability criteria violations associated with these generation retirements, totaling approximately \$130 million, have been identified for the years 2005-2007. Additional upgrades are currently being identified for the years 2008-2009. The estimated additional amount for these upgrades is about \$200 million. A new 500 kV circuit may be required to help deliver energy from Pennsylvania into New Jersey. If the Oyster Creek nuclear facility is forced to retire, due to failure to renew its operating license, additional upgrades totaling approximately \$100 million will be required.

One significant risk is the ability to construct all of these upgrades by the required dates. The most significant risk will be construction of a 500 kV circuit, which could typically take 7-10 years or longer.

To summarize, load and associated obligations in eastern PJM are increasing. Net generation in the area is decreasing as a result of declining development and

accelerating retirements. Absent additional generation in eastern PJM or transmission capability to deliver energy to the area, the reliability of that area will be significantly degraded. PJM has identified the need for \$130 million of transmission upgrades by 2007 and over \$300 million of additional upgrades for the 2008-2009 timeframe. Without these upgrades, the area will not be compliant with PJM and MAAC reliability criteria and will face an increased reliance on emergency operating procedures and an unacceptable level of risk of load interruption. With continued load growth and the potential for additional generation retirements, the situation will become more critical in future years and could result in the need for rotating blackouts during high load conditions.

311564

- 13 Letter from Andrew Heyl of the New Jersey Dept of Environmental Protection to Fred Polaski, regarding "Federal Constency [sic] Request for NRC Renewal Application of AmerGen for the Oyster Creek Nuclear Generating Station" (forwarding submittals received by the NJDEP during the public comment period for the CZMA Federal Consistency Determination filed in the OCNGS licensing renewal proceeding)

April 11, 2007



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Land Use Regulation Program
501 East State Street, P.O. Box 439
Trenton, New Jersey 08625-0439
Telephone # (609) 292-0060
Fax # (609) 292-8115 or (609) 777-3656

JON S. CORZINE
Governor

LISA P. JACKSON
Commissioner

April 11, 2007

Fred Polaski
Oyster Creek Generating Station
AmerGen Generating Station
Route 9 South
Forked River, New Jersey 08731

RE: Federal Constency Request for NRC Renewal Application of AmerGen for the Oyster Creek
Nuclear Generating Station
Division File No. 1500-02-0005.5
Lacey Township, Ocean County

Dear Mr. Polaski:

Please find enclosed copies of the following submittals received during the public comment period for the above referenced request.

1. Clean Ocean Action, et. al., dated March 23, 2007
2. Rutgers Environmental Law Clinic, dated March 5, 2007
3. Pinelands Preservation Alliance, dated March 22, 2007
4. Natural Resource Education Foundation of New Jersey, dated March 22, 2007
5. New Jersey League of Municipalities, dated March 22, 2007
6. Regina I. Butler, dated January 29, 2007
7. William S. Blazowski, dated March 14, 2007
8. Sixteen (16) form letters from Fish Hawks

Should you have any questions or wish to discuss this matter further, please do not hesitate to contact me at the above address or at 609-984-0288.

Sincerely,

Andrew Heyl, Supervisor
Bureau of Coastal Regulation

14 Report – “Economic Benefits of the Oyster Creek
Generating Station,” by Collin Cain, et al., Bates
White, LLC

June 2007

Economic Benefits of the Oyster Creek Generating Station

**Collin Cain, M.Sc.
Jonathan Lesser, Ph.D.
Spencer Yang, Ph.D.**

**Bates White, LLC
June 2007**

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Economic Benefits of the Oyster Creek Generating Station¹

Collin Cain, M.Sc.

Jonathan A. Lesser, Ph.D.

Spencer Yang, Ph.D.

May 2007

Mr. Cain and Dr. Yang are Managers, and Dr. Lesser is a Partner in the Energy Practice of Bates White, LLC, a national economic and litigation consulting firm based in Washington, DC. In November 2005, Dr. Lesser submitted testimony on behalf of the State of New Jersey regarding the costs and benefits of the proposed merger between PSEG Inc. and Exelon Corporation. The methodology used in this report to estimate the economic benefits from lower wholesale electric prices as a result of generation produced by Oyster Creek is based on the framework presented by Dr. Lesser in that case.²

1. EXECUTIVE SUMMARY

Oyster Creek Generating Station ("Oyster Creek") presently is seeking a 20-year operating extension in license renewal proceedings before the Nuclear Regulatory Commission. Oyster Creek provides 636 MW of round-the-clock reliable energy, enough to power over 600,000 homes. On average, annually, it supplies over 20% of Jersey Central Power and Light's electricity needs, and 6% of New Jersey's total needs. The authors of this report do not express any opinion regarding the merits of Oyster Creek's license renewal application or any opposition to that application. Instead, this report focuses on the economic and system reliability impacts that would occur in the event that Oyster Creek shuts down. We conclude that Oyster Creek's retirement would result in a direct loss to New Jersey of **\$190 million** annually, because of increased electricity prices, and an additional loss of at least **\$126 million** in economic activity. The loss of Oyster Creek would also require

¹ This report was sponsored by Exelon Corporation. Amergen Energy Company, LLC ("Amergen") operates Oyster Creek Generating Station, and is a wholly owned subsidiary of Exelon Corporation.

² For a copy of Dr. Lesser's testimony, please email him at: jonathan.lesser@bateswhite.com.

costly transmission improvements to maintain the reliability of New Jersey's coastal transmission network. We reach the following conclusions regarding the benefits provided by Oyster Creek generation:

- **Benefits from lower wholesale electricity prices** – Oyster Creek provides economic benefits to New Jersey and to the surrounding Mid-Atlantic region by lowering wholesale market prices for electricity.

We estimate conservatively that these benefits average **\$190 million** per year in New Jersey alone, and **\$655 million** per year in the Mid-Atlantic region overall. The New Jersey estimate is based on the average regional impact applied to the State proportional to its share of total load, and thus does not reflect the fact that impacts are likely to be greater than average in New Jersey because of transmission constraints. The estimates also exclude substantial follow-on benefits from the resulting increase in competitiveness of New Jersey businesses, and the increase in disposable income of individual electricity consumers.

- **Benefits from improved system reliability** – Oyster Creek provides critical support for regional electric reliability – i.e. maintenance of uninterrupted electric service and prevention of transmission network overloads. The independent system operator, PJM, has determined that the retirement of Oyster Creek would result in significant transmission overloads, particularly in combination with the scheduled retirement of other New Jersey power plants. PJM estimates at least **\$100 million** in transmission upgrades would be required to address the retirement of Oyster Creek. This estimate does not include the costs of obtaining new rights of way. Nor did the analysis address the substantial challenges involved in making such upgrades, such as the time required to conduct environmental impact assessments, obtain state and local construction permits, and overcome potential local opposition.

Moreover, the reliability impacts and mitigation costs were assessed prior to two Supreme Court decisions in April 2007 affecting emissions control requirements for older plants and the regulation of carbon dioxide as a pollutant. Both decisions increase the likelihood of additional generating plant retirements that would further exacerbate the adverse impacts on system reliability from removing Oyster Creek from service.

- **Independent power flow analysis** – our independent analysis of the reliability impact of shutting down Oyster Creek is consistent with the reported PJM results, and indicates substantial electricity price increases for the PSE&G, JCP&L and ACECO utility zones during peak hours. The results of our analysis indicate a total dollar impact in New Jersey of \$800,000 for the single peak hour modeled.³
- **Additional State and local economic impacts** – Oyster Creek has 475 full-time employees, excluding security staff⁴, and also employs hundreds of temporary contract employees during refueling outages. In addition to the direct benefits the plant provides in terms of lower electric prices and greater electric system reliability, a number of economic impacts accrue from expenditures made by Amergen to operate and maintain the plant. These impacts flow from employee compensation, in-state expenditures on goods and services needed to operate the plant, and local and state property tax payments. Direct economic contributions total \$96 million annually for New Jersey. These economic injections in turn stimulate increased activity elsewhere in New Jersey's economy, creating jobs and increasing disposable income. Total annual dollar impacts, including the \$96 million direct effect, total approximately \$129 million per year in New Jersey. Similarly, Oyster Creek creates an estimated total of 636 full-time equivalent jobs, including the 475 full-time employees at the plant.⁵

The \$129 million of economic activity created by Oyster Creek does not include the \$190 million of direct benefit from lower electricity prices induced by generation from the plant. Lower electricity prices make New Jersey businesses more competitive, promoting increased output and job creation, and also increase disposable income by reducing consumers' electric bills. These indirect impacts from Oyster Creek's operation are likely to be substantial; estimating the magnitude of the effects is beyond the scope of this paper.

- **Environmental benefits** – Oyster Creek provides significant additional benefits by reducing the need to generate electricity from fossil fuels, thus reducing greenhouse gas emissions that cause

³ Power flow analysis based on the 2005 Series, NERC/MMWG Base Case Library, 2006 Summer Final. See Appendix B for further details.

⁴ As Oyster Creek also has a large full time security staff, the specific numbers of which are restricted information under the Patriot Act, the economic impact as stated in this section is underestimated.

⁵ Again, the total jobs impact for New Jersey excludes the security personnel employed at the plant.

global warming. If Oyster Creek were retired from service, the electricity it currently provides could not be replaced by generation from other existing carbon-free nuclear plants, which already operate essentially non-stop except for refueling and maintenance outages. Nor could renewable generation replace a significant amount of Oyster Creek's power. Resources such as wind generators **cannot** produce the round-the-clock baseload output provided by Oyster Creek.

As a result, replacing the energy produced by Oyster Creek would require increased natural gas-fired or coal-fired generation, producing large quantities of carbon dioxide (CO₂), nitrogen oxides (NO_x) and sulfur dioxide (SO₂). We estimate that, if Oyster Creek's output were replaced with increased generation from coal, the annual increase in CO₂ emissions would be the equivalent of the output of 920,000 cars. Replacement with natural gas generation would cause annual CO₂ emissions equivalent to that of 460,000 cars. Furthermore, in a carbon-constrained future, the value of a large greenhouse gas-free baseload generation source such as Oyster Creek will only be enhanced by the recent Supreme Court rulings, which may hasten the retirement of baseload coal plants.

Summary of Impacts

Table 1: Oyster Creek's Annual Economic Impacts on the State of New Jersey

Direct economic benefit of reduced wholesale electricity prices	
State of New Jersey, \$millions	\$190
PJM East region, \$millions	\$655
Direct economic impacts of plant expenditures on State of New Jersey	
Full-time, non-security employment	475
Annual direct injections to the State economy, \$millions	\$96
Expenditure impacts on New Jersey, including multiplier effects	
Total State employment	636
Total State impact, \$millions	\$129

Note: substantial multiplier impacts would also be expected as a result of reduced wholesale electricity prices. Estimation of those impacts was beyond the scope of this report.

Our report and analysis are set forth as follows.

Section 2 presents an evaluation of Oyster Creek's value to New Jersey electricity consumers deriving from reduction of wholesale market electricity prices.

Section 3 presents an assessment of the benefits of Oyster Creek in enhancing the reliability of the electrical system.

Section 4 discusses the broader economic impacts of Oyster Creek, stemming from contributions such as the jobs the plant provides, the purchases of services and equipment made by Amergen to operate the plant, and property taxes paid by Amergen. Together, these impacts ripple through the overall New Jersey economy. Moreover, lower electric prices also cause "ripple" effects, by lowering the costs of providing goods and services, as well as increasing residential consumers' disposal income levels.

2. THE ECONOMIC BENEFITS OF OYSTER CREEK GENERATION

Each year, Oyster Creek generates about 5 million megawatt-hours (MWh) of electricity, or 6% of New Jersey's average annual demand, enough to power over 600,000 homes. The actual total each year depends on whether the plant requires refueling during the year (which takes place approximately every two years), or requires other necessary maintenance that cannot be performed during its periodic refueling outages. Like all nuclear plants, Oyster Creek has extremely low running costs compared with other types of generation. As a result, the plant operates round-the-clock, providing what is called "baseload" service.

Oyster Creek produces highly valuable, low cost electricity to New Jersey and the surrounding region. Like all other markets for products and commodities, the power markets are based upon simple supply and demand principles. If supply is removed in the face of constant or growing demand, and constant or rising fuel costs, then prices will go up. In New Jersey, nuclear energy is the least expensive means of producing baseload electricity, therefore the supply needed to replace Oyster Creek's output would have to come from other more expensive generation, inevitably leading to higher wholesale and retail electric prices for consumers and businesses alike.

Last year we were retained by the State of New Jersey to perform an analysis of the economic value of nuclear output at the Salem Nuclear Generation Station. In estimating the economic benefits of the electricity Oyster Creek provides, we used the same analytical methodology used in our work for the State. The output of Oyster Creek benefits consumers of electricity, because electricity prices are lower than they would be without Oyster Creek.

Quantifying the Economic Benefits of Oyster Creek Generation

The PJM day-ahead and real-time energy markets establish wholesale clearing prices for electricity based upon supply and demand bids from market participants. The system operator uses these bids to determine what generation resources will be used to meet demand at lowest cost, while protecting the transmission system from overload. The price of electricity in any given hour (or fraction of hour) is determined by the price of the generation unit needed to serve the load.⁶ Consumers benefit when the system uses as much low cost power as possible, like nuclear energy, so that more expensive oil and gas units do not need to be turned on.

To estimate the economic benefit of Oyster Creek's generation, we used actual PJM data to develop a statistical model of the relationship between overall demand in PJM East⁷ and prevailing market prices over the period 2004 through 2006.⁸ The model estimates how wholesale energy prices change in response to a given change in load, controlling for changes in natural gas prices.

Nuclear generation never sets the market price of energy in PJM – i.e. additional, higher-cost generation is needed to meet total demand. Hence, increased nuclear output will reduce the need for higher-cost generation and, in some hours, will eliminate the need for the highest-cost resource entirely, causing the market price to be set by a lower-cost unit. In its effect on market prices, an increase in nuclear or other low-cost baseload output is equivalent to a reduction in load – they both

⁶ PJM's markets produce prices on a locational basis. The price-load model uses real-time prices at the Eastern Hub. Details on the modeling are provided in Appendix A.

⁷ PJM operates the electrical system and centralized power markets across a broad region that extends from the Mid-Atlantic States to the Midwest. PJM East is a subregion that consists largely of the original power pool territories in Pennsylvania, New Jersey and Maryland.

⁸ Bates White originally developed the model for testimony filed on behalf of the New Jersey Board of Public Utilities regarding the benefits and costs of the proposed Exelon-PSEG Merger. See, IMO The Joint Petition Of Public Service Electric And Gas Company And Exelon Corporation For Approval Of A Change In Control Of Public Service Electric And Gas Company, And Related Authorizations, BPU DOCKET NO. EM05020106 and OAL DOCKET NO. PUC-1874-05, Direct Testimony of Dr. Jonathan A. Lesser, November 26, 2005.

tend to displace the higher priced marginal generating resource. The load-price model exploits this fact, and determines the value of a change in nuclear output – i.e. from the retirement of Oyster Creek – by estimating the price impact of an equivalent *increase* in demand. The reason we control for the price of natural gas is that PJM energy prices in peak hours are often set by natural gas-fired generation, and it is in these peak hours when the benefit of baseload nuclear generation is greatest. Controlling for natural gas prices allows the model to produce a better estimate of the price impact of displaced baseload generation.

We estimated market prices for the base case using the statistical model without adjustment, and then estimated market prices with the 636 MW of baseload capacity provided by Oyster Creek removed – or rather, equivalently, with 636MW of additional load. The resulting price changes were then translated into an annual dollar value using average PJM East load by seasonal period.⁹ An annual benefit to New Jersey was derived from the ratio of New Jersey utility load to the PJM East total. The calculated annual benefit of Oyster output for PJM East and for New Jersey is shown in **Table 2**.

⁹ The model distinguishes seasonal periods of two months each: Jan-Feb, Mar-Apr, etc. Price impacts are calculated for each of these periods and applied across the corresponding average load.

Table 2: Conservative Estimated Economic Benefit of Oyster Creek Generation

Annual Value to PJM East	Annual Value to New Jersey
\$655,000,000	\$190,000,000

These value estimates are equivalently the economic benefit from the energy output of Oyster Creek, and the economic cost of lost output if Oyster Creek were retired. The New Jersey estimate is based on the average PJM-East impact applied to the State proportional to its share of total load, and thus does not reflect the fact that impacts are likely to be greater than average in New Jersey because of transmission constraints. The estimates also exclude substantial follow-on benefits from the resulting increase in competitiveness of New Jersey businesses, and the increase in disposable income of individual electricity consumers. These estimates are therefore conservative, and likely significantly underestimate the total effect in New Jersey.

Future Benefits

There are a number of important considerations in interpreting the benefit estimates in Table 2 with respect to the potential retirement or license renewal of Oyster Creek. First, there is the question of what would replace the generation from the plant if it were shut down in 2009. Our statistical model effectively assumes that the energy will be replaced from existing sources of generation, perhaps from within New Jersey, perhaps from imported power (we discuss longer-term replacement below). Thus, our model implicitly accounts for short-term adaptive market responses to losing the output of Oyster Creek. It does this because those adaptive responses are reflected in the variation of prices and loads over the historical period. Demand spikes, unexpected plant outages, variations in regional imports and exports, transmission constraints, etc., and the associated responses from market participants and the system operator, are all reflected in the historical

relationship of price and load, which is captured by the statistical model.¹⁰ Thus, the estimates are likely to be a good indicator of the short-term impacts.

In the longer term, the economic costs of shutting down Oyster Creek will be determined by a number of uncertain factors, including:

- **Fossil fuel prices** – higher fossil fuel prices will increase the expected benefits of continued operation of Oyster Creek because the price impact of displacing inefficient fossil generation on the margin would be greater. Conversely, lower fossil fuel prices will reduce the expected benefits from Oyster Creek output.
- **Demand growth** – PJM demand is projected to grow at an annual rate of about 2% over the next ten years. To the extent that there is limited potential for new baseload nuclear or coal generation, the proportion of intermediate and peaking natural gas-fired generation capacity in PJM East is likely to increase. This will tend to increase the number of hours when generation from Oyster Creek would have greater price reduction effects and thus greater economic benefits.
- **Environmental regulation** – the recent Supreme Court decisions affirming EPA's responsibility for regulating CO2 emissions under the Clean Air Act¹¹ and interpreting “new source review” rules under the Clean Air Act¹² create the potential for substantially higher fossil-fuel generation cost and premature retirement of coal-fired plants. Either or both impacts would tend to increase the economic benefit from Oyster Creek output.

¹⁰ In Section 3, we discuss impacts of Oyster Creek retirement on electrical reliability, and make reference to potential transmission upgrades as one mitigation strategy. The price-load model cannot account for such structural responses, yet, since transmission upgrades would be expensive, and could not compensate completely for the loss of Oyster Creek, this fact does not imply any upward bias in the model estimates.

¹¹ *Massachusetts v. Environmental Protection Agency*, Slip Op No. 05-1120, April 2, 2007.

¹² *Environmental Defense Corp. v. Duke Energy*, Slip Op. No. 05-848, April 2, 2007.

- **New baseload construction and Plant Retirements-** presently a number of New Jersey plants are on the verge of retirement. We are unaware of any current plans to build a new baseload plant in New Jersey.

The price-load model estimates price impacts based on historical circumstances, and accounts implicitly for dynamic market responses over the short term. Longer-term dynamic responses to the permanent loss of generation will tend to mitigate the impact of shutting down Oyster Creek, all else being equal.

On balance, considering both longer-term dynamic responses, and the factors listed above, we expect that the price benefits of Oyster Creek's generation looking forward will be even greater than the values shown in Table 2.

Local Price Impacts – Power Flow Model Results

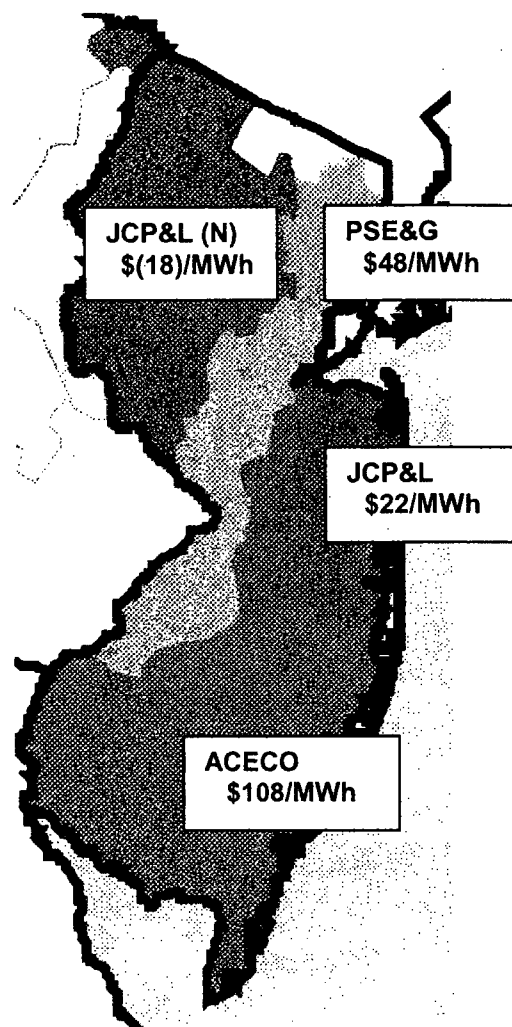
New Jersey has four electric distribution companies (“EDCs”) – PSE&G, JCP&L, ACECO and RECO¹³ – which provide network transmission and distribution services to New Jersey's electricity users. Wholesale power prices vary by EDC zone, according to local demand patterns, generation resources, and the availability of transmission to import and export power.

We used a power system simulator to model the impacts on the transmission system, and the related price effects by EDC zone, of shutting down Oyster Creek. The results of these analyses are consistent with both the statistical load-price analysis presented above, and the PJM transmission impact analysis discussed in Section 3. They also illustrate that EDC zone prices across New Jersey will be affected by the loss of Oyster Creek, and that impacts will be greater in areas where the availability of transmission is more limited, as in the ACECO zone in southern New Jersey.

¹³ Public Service Electric and Gas Company, Jersey Central Power & Light Company, Atlantic City Electric Company, and Rockland Electric Company, respectively.

Figure 1: Price Increase by Distribution Company Zone

The simulation we performed is based on a snapshot of estimated electrical flows in the PJM system at a single peak hour for Summer 2006.¹⁴ We compared a base case, with Oyster Creek operating, to a change case with Oyster Creek removed. **Figure 1** maps the distribution company zones, and shows the associated increase in energy price caused by shutting down Oyster Creek.¹⁵ The price changes correspond to an increase in energy cost of \$816,000 for the State as a whole – just for the single hour. The negative price impact for the northern JCP&L territory reflects the fact that greater imports are required from the northwest, which cause some higher-priced units in that area to shut down. This negative price impact is far outweighed by increased costs elsewhere. The aggregate dollar impact for the 12 modeled PJM zones was \$1.3 million for the single hour.



The analysis of impacts is conservative for two reasons. First, only high voltage transmission lines 230kV and higher were monitored during the model runs. Extending the model to include 115kV lines in addition would drastically increase the model complexity and runtimes, and was beyond the scope of this paper. More important, transmission contingencies – essentially the safety restrictions on key elements of the transmission system – were only modeled within New

¹⁴ The base case power flow data are for the 2006 summer final snapshot from the NERC Multiregional Modeling Working Group (MMWG) model. Further details of the methodology are provided in Appendix B.

¹⁵ Limitations on the scope of the analysis prevented incorporation of the RECO zone in the simulation for technical reasons. The relatively close historical correspondence of energy prices in the RECO and PSE&G zones suggest the impact for RECO would be similar to that indicated for PSE&G.

Jersey. Our investigation of the likely impact of extending the contingency analysis to the 9 other zones indicated that significant transmission overloads would occur, and would require more extensive analysis to determine appropriate mitigation measures. Further information on the modeling methodology is provided in Appendix B.

Longer-term Replacement Generation

As we have discussed above with respect to our statistical model, removing Oyster Creek from service with its round-the-clock power is essentially equivalent to increasing demand in every hour. Hence, the question of replacement corresponds to the challenge of meeting an even greater increase in electric demand in the future. The PJM 2006 Regional Transmission Expansion Plan identifies some of the factors that contribute to the difficulty of ensuring adequate power for New Jersey, even assuming Oyster Creek remains in service, over the next decade. These factors include:

- Continued load growth estimated at 2% yearly;
- Large planned exports of power to New York City and Long Island via merchant transmission projects expected to be on line from 2007 to 2010;
- Deactivation/retirement of existing generation resources;
- Sluggish development of new generating facilities; and,
- Increasing reliance on transmission facilities to import needed electric power.¹⁶

Recently, Environment New Jersey published a report, “Powering New Jersey’s Future”¹⁷ (“ENJ Report”), which advocates the retirement of Oyster Creek at the end of its current operating license in 2009. The Report asserts that New Jersey’s supply challenges over the next 14 years, including the retirement of Oyster Creek, can be met through promotion of “non-traditional” resources, including wind power, solar power, demand response, and energy efficiency. Although

¹⁶ PJM 2006 Regional Transmission Expansion Plan, February 2007, Page 235.

¹⁷ Powering New Jersey’s Future, Environment New Jersey Research and Policy Center, Spring 2007.

these resources may be important elements to consider in meeting New Jersey's future electric needs, they are neither realistic nor cost-effective replacements for Oyster Creek. The basic problem with solar and wind power is that they are dependant on the weather to operate.

Oyster Creek produces a large volume of low-cost, round-the-clock power, enough to power 600,000 homes. Some of the resources identified in the ENJ Report would provide generation and/or demand reduction during peak periods. Yet, as detailed on pages 15-16 of this report, others, such as wind and solar, could not even provide peak power reliably. The ENJ Report also appears to have underestimated New Jersey's future power needs significantly. For example, the ENJ Report does not account for three merchant transmission projects scheduled to come on-line in 2009 and 2010, which will enable exportation of almost 2200MW of firm electric transmission power from New Jersey to New York City and Long Island.¹⁸

As none of the renewable, demand-response, and energy efficiency resources contemplated by the ENJ Report would provide baseload power, most of the generation lost from an Oyster Creek shutdown would be replaced with increased fossil-fuel generation, either from within New Jersey or via imports. In-state replacement energy would likely come from natural gas-fired plants with available capacity. Additional imports of baseload power would come largely from coal-fired plants, as the other nuclear plants in PJM are already generating at or close to their maximum capability. Thus, a shutdown of greenhouse gas-free Oyster Creek would lead to significant increases in air pollution emissions, including increased emissions of sulfur dioxide (SO₂), which are associated with acid rain formation, increased emissions of nitrogen oxides (NO_x), which contribute to smog, and increased emissions of carbon dioxide (CO₂) a greenhouse gas implicated in global

¹⁸ Four merchant transmission projects are accounted for in PJM's transmission plans and analysis, totaling almost 2900 MW of firm transmission capability. See the PJM 2006 Regional Transmission Expansion Plan, February 2007.

warming. The increased emissions of these gases from replacing Oyster Creek output with an equivalent amount of generation from fossil fuels is shown in Table 3.

Table 3: Increased annual emissions from replacing Oyster Creek generation, by fuel type

Short tons of emissions associated with 5 million MWh of generation¹⁹

Fuel	SO ₂	NO _x	CO ₂
Coal	32,500	15,000	5,622,500
Oil	30,000	10,000	4,180,000
Natural Gas	250	4,250	2,837,500

Source: U.S. Environmental Protection Agency, based on data from eGRID 2000

Moreover, as noted previously, because the other greenhouse gas-free nuclear plants are also running at near capacity, they do not represent a potential source of replacement energy for Oyster Creek. To provide some context for the data in Table 3, the yearly increase in CO₂ emissions from replacing Oyster Creek output with coal-fired generation is roughly equivalent to the annual output of 920,000 cars.²⁰

Renewables

New Jersey's energy plan properly recognizes the value of developing renewable energy, particularly wind and solar, as one means of meeting a part of the State's future energy needs.²¹ Renewable energy has many virtues and, like nuclear, offers an alternative that produces no carbon emissions and reduces exposure to volatile fossil fuel prices. These renewable sources have some limitations, however. Solar panels do not produce energy when the sun is not shining and wind

¹⁹ Emissions rates used for calculation are the U.S. national average rates for electric generation for each fuel type.

²⁰ Motor vehicle equivalent of CO₂ output is based on U.S. EPA calculations. See <http://epa.gov/otaq/climate/420f05004.htm>.

²¹ New Jersey's 2007 Energy Master Plan is currently being developed. Stated goals include reduction in projected energy use and increased use of renewable energy resources.

turbines do not turn when the wind is not blowing. As a result, an electric system that relies too heavily on these energy sources risks outages or brown-outs when the weather does not cooperate.

A generation source's ability to consistently produce cost-effective energy is called its "capacity factor". In simple terms, the capacity factor measures the difference between a plant's theoretical ability to produce electricity and the amount that the source produces in actual operation. Nuclear plants have a high capacity factor because they are baseload plants designed to produce energy on a 24/7 basis regardless of the weather. In contrast, renewable sources have low capacity factors because they do not run many hours of the year. As an illustration, suppose that a wind turbine could theoretically produce 5 MW of electricity per hour for every hour in a day, or $5 \times 24 = 120$ MWh, but in actual operation only produced 60 MWh. The wind turbine would have a 50% capacity factor over the course of that day. In practice, capacity factors are calculated over longer periods, such as a year, to capture a resource's average operation over a representative time frame.

Actual PJM data show the enormous differences between nuclear plant capacity factors and wind turbines. During the three-year period from January 2003 through December 2006 Oyster Creek had a capacity factor of 90%, meaning that it actually produced 90% of its theoretical maximum output regardless of weather.

By way of comparison, the two wind farms in the PJM East region for which generation data are available²² (totaling 98MW of capacity) had a combined capacity factor of 29% in 2006. The combined capacity factor of the wind farms in the peak demand months of July and August -- when energy is needed the most -- was only 17%. This is fairly typical for wind generation, and demonstrates that even a large number of wind turbines could not replace the baseload reliable,

²² Waymart Wind and Meyersdale Windpower, both located in Pennsylvania. Data source: EIA Form 906 for 2006.

round-the-clock output of Oyster Creek. Sometimes the wind just doesn't blow, especially on really hot days in July and August.

Solar generation, either photovoltaic or thermal, suffers from a similar problem. Actual operational data are not readily available for solar, but even in areas of the country with the clearest skies, there is no solar generation at night. This lack of dependability means that intermittent generation sources like wind and solar must be backed up by other generators to support system reliability, adding to the net cost per MW of capacity, and potentially offsetting the emissions benefit.

3. RELIABILITY IMPACTS

Although electric system reliability can be defined in numerous ways, all of those definitions essentially measure by the likelihood that the lights will go out. The typical standard for electric service in this country is that the likelihood of a widespread outage should be quite rare – only once in ten years. This “loss of load probability” (“LOLP”) standard is used by transmission system operators such as PJM to determine needed investments in new generation and transmission infrastructure.

Maintaining this 1-in-10-year LOLP requires that the system have excess generation capability, called planning reserves, as well as safety margins and redundancy in the transmission system itself. Additionally, transmission operators rely on plants that are ready to respond on short-notice (called “spinning reserves”), and on direct minute-to-minute control (called automatic generation control, “AGC”) of certain plants already generating power. These tools allow the system operator to match generation to demand and to respond to various contingencies, whether an unexpected plant outage or extreme weather, to ensure the safety and security of the transmission grid. Excess generation capability reduction necessarily erodes system reliability.

Baseload power plants play an important role in maintaining system reliability, because they are stable and predictable resources. Moreover, because baseload plants tend to be large, removing such plants from service can have significant adverse impacts on overall system reliability. If a baseload plant is shut down suddenly, it can be difficult to find sufficient replacement power locally. As a result, replacement generation must be imported, which can further strain the transmission grid, especially if that grid is already constrained, as is the case in the eastern portion of PJM, including New Jersey.

Maintaining system reliability in New Jersey

New Jersey is affected both by transmission constraints that restrict power flows into the state and by intrastate transmission constraints. These constraints reduce reliability because they require transmission elements to operate close to their operational limits, increasing the likelihood of overloads, and because they restrict the menu of possible responses to unexpected events. Because of New Jersey's high population density, particularly in the corridor that includes parts of metropolitan Philadelphia, Trenton, Newark, and New York City, electric system demand is concentrated, and requires large volumes of power to be delivered to a relatively small geographic area. The concentration of population also means it is difficult to build either new power plants or transmission lines, because of local land use planning and siting requirements, and community opposition.

The PJM 2006 Regional Transmission Expansion Plan (RTEP) identifies a number of factors that will continue to reduce system reliability in New Jersey and the rest of eastern PJM. These include load growth, increased power exports to New York, generation retirement, and limited development of new generation capability. The RTEP states that, "[p]resent trends mean reliability criteria violations will continue to be identified in New Jersey and will spread to other areas of eastern PJM where similar conditions exist."²³ Clearly, given these constraints and factors, there is little room to maneuver. As a result, the potential adverse reliability impacts associated with removing Oyster Creek from service will only be magnified.

²³ PJM 2006 Regional Transmission Expansion Plan, February 2007, Page 235.

Reliability Impacts of Shutting Down Oyster Creek

A shutdown of Oyster Creek would significantly reduce the reliability of the electrical system in New Jersey and the surrounding PJM region, increasing the likelihood of transmission overloads and power outages. Transmission upgrades to address this impact would be expensive, and would likely present significant siting and permitting challenges.

In 2004, PJM conducted a high level assessment of retiring Oyster Creek in 2009.²⁴ This analysis addressed only impacts to the bulk power system (voltage levels of 230kV and 500kV), and not local transmission impacts. The PJM study determined that retiring Oyster Creek would cause significant overloads of the bulk transmission system at the 230kV level, and, in conjunction with the planned retirements of several fossil-fuel power plants in New Jersey, would also cause overloads at the 500kV level. PJM determined that transmission upgrades would be required to reduce this overloading and maintain its reliability standard. PJM estimated the cost of these transmission upgrades to be \$100 million, not including the cost of acquiring new rights-of-way, a potentially significant additional expense. The analysis concluded that “[t]his new transmission will likely require new rights-of-way, transmission siting approval, and environmental permits...”, and that new rights-of-way may be required in both New Jersey and Pennsylvania. Moreover, PJM’s analysis did not include the cost to replace the lost output of Oyster Creek, nor the cost associated with the resulting increase in market prices we estimated in Section 2.

Incremental cost is not the only hurdle in upgrading transmission capacity. If, as expected by PJM, the required transmission upgrades require new rights of way, obtaining necessary environmental impact assessments and construction permits in Pennsylvania and New Jersey will be

²⁴ Assessment of Transmission Requirements in New Jersey Including PSE&G Retirements and Potential Retirement 2009 of Oyster Creek, PJM, December 2004. Accessed at: <http://www.pjm.com/planning/project-queues/gen-retirements/final-oyster-creek-analysis-slides-nj-bpu-requested-analysis.pdf>

a lengthy process, and may well involve overcoming local opposition. Interim measures to address reliability problems will necessarily be less than optimal, and reliability will suffer.

Moreover, PJM's assessment of reliability impacts and mitigation costs were made prior to two Supreme Court decisions in April 2007 affecting emissions control requirements for older plants and the regulation of carbon dioxide as a pollutant. Both decisions increase the likelihood of additional accelerated generating plant retirements that would further exacerbate the adverse impacts on system reliability from removing Oyster Creek from service.

4. DIRECT AND INDIRECT ECONOMIC IMPACTS

In addition to the economic benefits Oyster Creek provides in the form of lower wholesale and retail electric prices, lower levels of air pollution and greenhouse gases, the plant creates direct economic injections to the local and state economies through its compensation of employees, expenditures on goods and services, and through state and local tax payments. Moreover, lower electric prices reduce costs for manufacturers and other businesses, and provide retail consumers with more disposable income that can be spent on goods and services, or invested. Thus, both the direct economic injections provided by Oyster Creek and the benefits of lower electric prices reverberate throughout the local, state, and national economies.

Economic Impacts and Economic Benefits

Although it is tempting to equate economic *impacts* with economic benefits, the two are very different concepts. Tools such as cost-benefit analysis can be used to assess whether an action, e.g., a new environmental regulation, creates a net increase in social welfare, taking full consideration of benefits and underlying costs.

Economic impact analysis, however, focuses on the effects themselves and how those effects reverberate throughout the economy. Thus, when a regulated utility builds a new generating plant, doing so provides jobs for construction workers, and so forth. However, the construction costs will then be paid by the utility's ratepayers. The actual construction doesn't "benefit" ratepayers per se, because they must pay for the construction costs. However, if by building the new generating plant more electricity is supplied at a lower price than would otherwise be available, then ratepayers have received an economic benefit, in the form of lower prices.

Economic impact analysis is designed to trace all the effects of given activity throughout the economy. In general, there is a direct impact – for instance, the dollar value of direct expenditures

on labor, construction materials, and so forth. There are also indirect and induced impacts that follow. Indirect impacts include changes in sales, jobs, income and tax payments in other sectors of the economy. Induced impacts include changes in spending by employees on other goods and services. These impacts cascade through the economy and result in a *multiplier* effect, in which the total economic impact is a multiple of the direct impact (i.e. the multiplier is always greater than 1).

Economic Impacts of Oyster Creek

The economic impact estimates presented below are based on data made available by Amergen for 2006, in aggregated form. The scope of this analysis does not allow for a detailed economic impact assessment, which typically involves identification and classification of a large amount of cost accounting data, and the use of specialized economic impact assessment software and associated economic and demographic databases. Instead, we have developed context around the current available data by making reference to a 2004 report that employed an input-output modeling framework to estimate both direct and indirect economic impacts from the operation of Oyster Creek.²⁵ For instance, we assume that New Jersey's share of total plant expenditures has not changed materially since 2003. This is a reasonable assumption because virtually all employment at the plant is local, and goods and services not related to specialized nuclear purposes are likely to be provided most economically from the local economy. Amergen has confirmed that these are reasonable assumptions for 2006 data relative to 2003.

Employment

Oyster Creek is located in Forked River (Lacey Township), within Ocean County, New Jersey (see **Figure 2**). Oyster Creek is a large employer, with 475 full-time

²⁵ Nuclear Energy Institute, "The Economic Benefits of Oyster Creek Generating Station," March 2004 ("NEI Report").

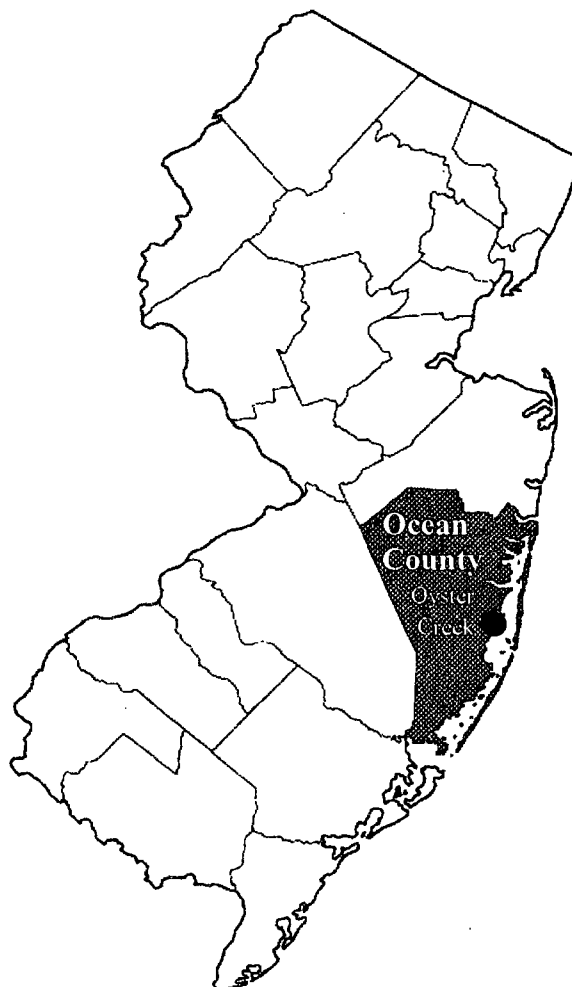
personnel (excluding its large security staff). Of New Jersey's roughly 238,000 business establishments, only about 1,600 employ 250 or more people.²⁶ Within Ocean County, the number of establishments with at least 250 employees is 26, of which 14 are retailers.

Figure 2: Ocean County, NJ

Relative to manufacturing and related industries, Oyster Creek makes up fully 2 percent of county employment.²⁷

Of the 475 full-time, non-security personnel at Oyster Creek, close to 80%, or approximately 380 reside in Ocean County itself, virtually all the remaining employees reside in other New Jersey counties.²⁸

Oyster Creek also employs temporary contract workers during refueling periods, which occur roughly every two years. Contract employment over a typical 61 day refueling and maintenance period averages 373, with peak employment reaching 900.²⁹



²⁶ All state employment figures are from the U.S. Census Bureau, 2002 County Business Patterns.

²⁷ Relative to county level census data for manufacturing, construction and utilities.

²⁸ Based on proportions identified in the NEI report.

²⁹ Data made available by Amergen.

Direct Economic Impacts

Direct economic impacts are those arising from direct payments, including employee compensation, expenditures on goods and services, and tax payments. These direct injections to the New Jersey economy are summarized in Table 4, below.

Table 4: Oyster Creek Direct Economic Injections to the New Jersey Economy

\$millions	2006	Annual Avg	NJ Share
Total FTE compensation: wages, salaries and benefits.	\$81.4	\$81.4	\$78.4
Total non-fuel outage expenditures (every 2 years)	\$32.3	\$16.2	\$1.6
All other expenditures, excluding fuel	\$61.4	\$61.4	\$6.1
Property tax (Lacey and Ocean Townships)	\$2.0	\$2.0	\$2.0
State Taxes	\$7.8	\$7.8	\$7.8
Total direct injections to the New Jersey Economy	\$184.9	\$168.8	\$96.0

Source: Amergen; NJ shares based on ratios reported in the NEI report.

Compensation for full-time employees (FTE) represents the main economic impact for New Jersey, and of course has even greater significance for Ocean County, where most employees live. The New Jersey share of total compensation is 96.4% of the total for Oyster Creek, based on the proportion for 2003 in the NEI report. Expenditures related to refueling outages, which occur every two years, are shown as a total in the 2006 column (2006 was a refueling year), and as an annual average in the next column. Annual plant totals for outage costs and all other expenditures (excluding fuel) are translated into impacts for New Jersey by applying the proportion of expenditures from the NEI report.

Multiplier Impacts

In addition to the direct economic impacts estimated in **Table 4**, the multiplier impacts that flow throughout the New Jersey economy represent significant additional economic activity that results from the operation of Oyster Creek. It is not possible to assess the expected magnitude of the overall multiplier applicable in this case without a full-blown economic impact analysis. The size of the aggregate multiplier will depend on a variety of factors, including state income tax rates, and the extent to which various local industries are affected by the indirect and induced impacts. With respect to jobs and labor income, the NEI report indicates effective multipliers of 1.34 and 1.42, respectively. Applying only these values would increase the total impact from the operation of Oyster Creek to 636 jobs, and \$129 million of annual economic activity created in New Jersey. This does not consider the much greater multiplier effects likely resulting from the generation output of Oyster Creek and the associated reduction in market energy prices.

APPENDIX A – GENERATION BENEFITS ANALYSIS

Round-the-clock baseload power from Oyster Creek lowers wholesale energy prices by reducing the need for higher-cost resources that would set the marginal price for the PJM market in the absence of the plant's output. To assess the magnitude of this economic benefit, which is also an estimate of the economic cost of retiring Oyster Creek from service, a statistical analysis was conducted to estimate the relationship between changes in baseload capacity and changes in real-time energy prices in the PJM-East region. That statistical analysis, the resulting model, and the underlying model logic are described in this appendix.

Fundamental to the analysis is the fact that PJM is a centrally dispatched electrical system in which generation resources are deployed in economic merit order to serve load. Real-time energy prices are determined by the highest cost generation unit dispatched, reflective also of system transmission constraints. Also fundamental to the analysis is the fact that Oyster Creek is a baseload generation unit, meaning that it operates at high output around the clock. Oyster Creek's output displaces the need for higher cost generation resources at the margin, and thus tends to lower market-clearing prices. The fact that the plant operates at stable output levels over most hours makes it possible to model the price impact of a change in Oyster Creek output as an equivalent change in load (i.e., electrical demand).

Using readily available historical market data – hour loads and real-time clearing prices, and daily natural gas prices – we constructed a statistical model of the relationship between load and energy prices in the PJM East region. This relationship was then used to estimate the effect on prices of removing Oyster Creek from service.

For an arbitrary, short period of time, the availability of generation to serve load in a given area, and the variable cost of such resources, can be considered fixed. In a system with merit-order

dispatch and no transmission constraints, this amounts to a fixed supply curve, such that the market-clearing price is determined by the level of total demand. This is illustrated in **Figure A-1**, where a load of 8,500 MW results in a clearing price of about \$50/MWh.

Figure A-1: Illustrative Load-Price Relationship

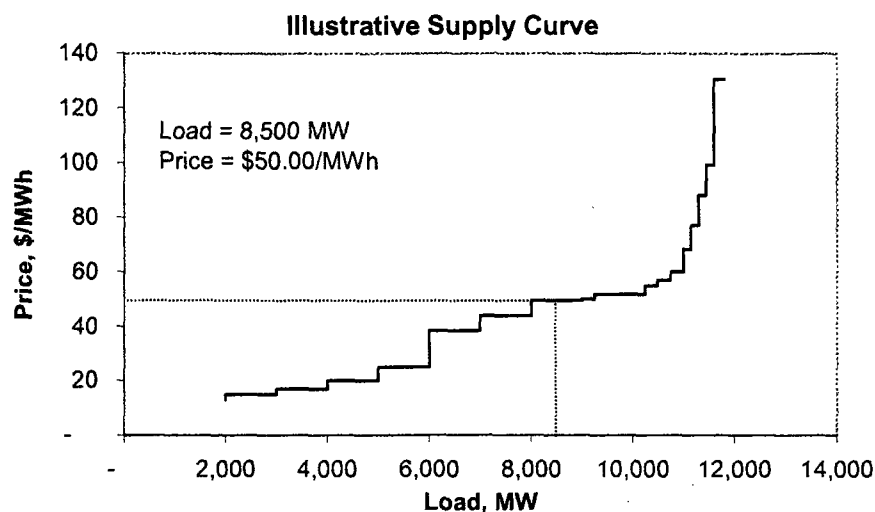
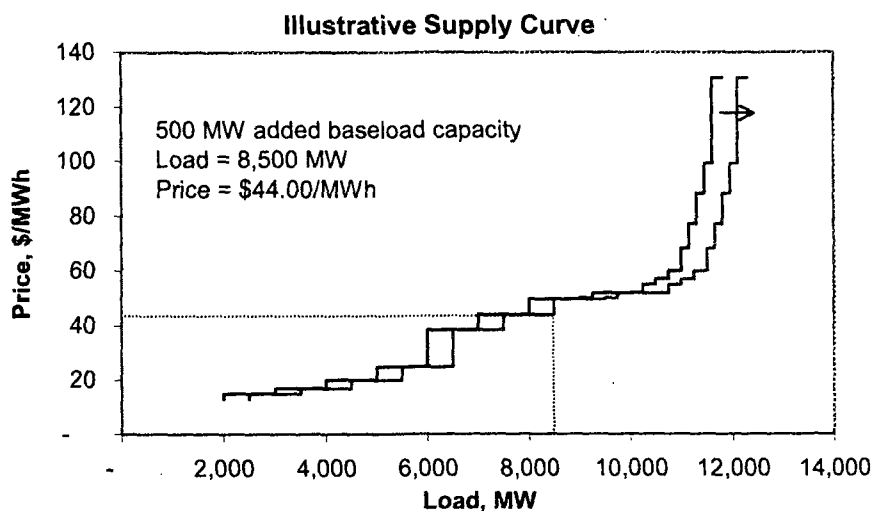
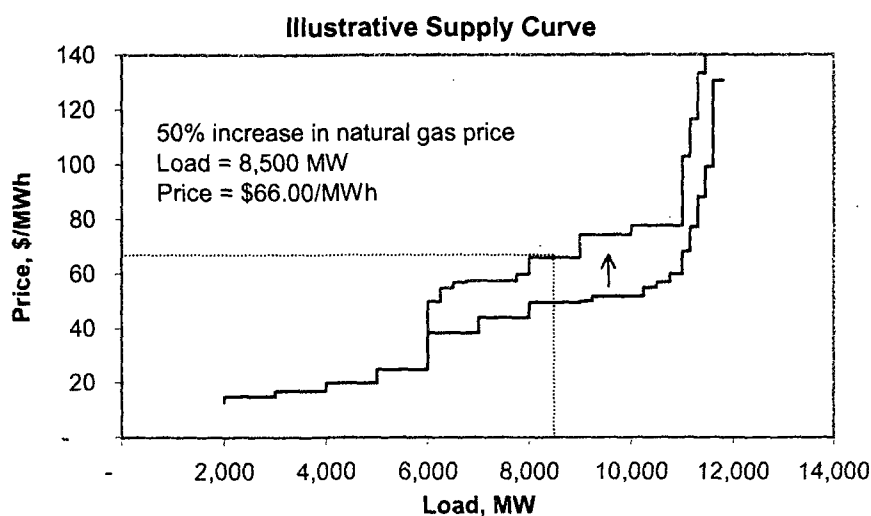


Figure A-2 illustrates what happens when baseload generation increases. The supply curve shifts to the right, eliminating the need for the \$50.00/MWh resource to run in order to meet load, and thereby allowing the market-clearing price to be set by the next lowest cost resource, at \$44.00/MWh.

Figure A-2: Increased Baseload Generation

The shape of the supply curve is also sensitive to changes in fuel prices, with the primary source of price volatility being the natural gas commodity price. **Figure A-3** illustrates the impact on the supply curve of a 50% increase in natural gas prices.

Figure A-3: Natural Gas Price Increase

The statistical analysis of PJM East load and real-time energy prices accounts for the illustrated changes in shape of the supply curve by grouping (stratifying) data into ranges of gas prices and estimating a separate price-load function for each grouping. The reason this is done is to remove gas prices as an explanatory variable, thus isolating changes in load (demand) as the explanatory variable determining price variation. The purpose is not to forecast electricity prices, but to examine the impact of an increase in baseload generation on energy prices.

In any given hour, the market-clearing price may be determined by a number of factors beyond those explicitly accounted for in the analysis, such as unplanned generation and/or transmission outages, and so the estimated market-clearing price may deviate significantly from the actual historical price. On average, however, the methodology has significant explanatory power. In fact, this approach has some advantages over a structural model for that very reason. In a structural model, shocks to the system, such as unforced generation outages, must either be ignored, or must be specified as probabilities. Other factors, such as the ability of some plants to operate beyond nameplate capacity for short periods, or other dynamic responses by market participants, are difficult to incorporate in structural models. However, information about such influences is implicit in the market data, and the statistical approach can account for it as a matter of course.

PJM Price-Load Model Specification

Hourly loads and hourly real-time locational marginal prices (LMPs) for PJM-East were obtained from PJM for the 36-month period January 2004 through December 2006. Daily weighted-average natural gas spot prices at Henry Hub were obtained covering the same period. The 36-month period was selected to be long enough to encompass sufficient variation to produce meaningful statistical results, while not being so long as to invalidate the assumption of a reasonably stable generation supply curve.

The statistical modeling parses the year into bimonthly groups to account for seasonal differences in capacity availability. The load and LMP data were further parsed into subsets of the bimonthly groupings based on ranges of historical natural gas prices.

Table A-1 shows the parsed subgroups. A total of 15 subgroups were identified.

Table A-1: Regression Subgroups

Bimonthly Group	Gas Price Range \$/mmBTU	Hours in Subgroup
January-February	Up to \$5.50	1584
	\$5.50 to \$6.00	1632
	Above \$6.00	1056
March-April	Up to \$6.00	1464
	\$6.00 to \$7.00	1392
	Above \$7.00	1536
May-June	Up to \$6.00	600
	\$6.00 to \$6.50	2232
	Above \$6.50	1560
July-August	Up to \$6.00	1776
	\$6.00 to \$7.50	1272
	Above \$7.50	1416
September-October	Up to \$5.50	1776
	\$5.50 to \$11.00	1248
	Above \$11.00	1368

Regressions were then run for each of the subgroups, using the log-linear functional form shown below, where LMP is taken to be the load-weighted average price³⁰ and *Load* is hourly PJM-East load divided by 1,000.³¹

$$\ln(LMP) = \alpha + \beta_1 Load + \beta_2 Load^2 + \beta_3 Load^3 + \beta_4 Load^4 + \beta_5 Load^5$$

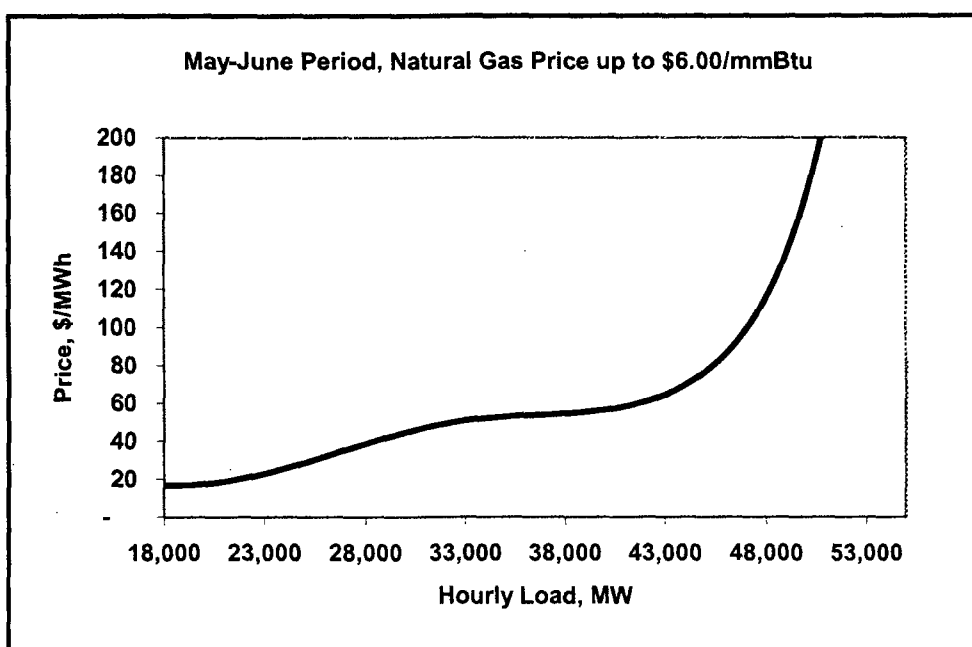
The incorporation of the powers of load is a way to allow the estimated price curve to reflect the shape of the underlying, structural, cost-based supply curve. For PJM East, the supply curve for a

³⁰ Using the log of price in the regressions restricts the estimated prices to positive values. This is a commonly applied technique, although negative hourly LMPs occasionally occur. In these cases, the previous hour's LMP is used. Taking the log of price does not affect the goodness-of-fit results of the regressions.

³¹ The use of the divisor 1,000 prevents the power variables from exploding beyond the significant digit capability of Microsoft Excel®, which was used to estimate the regressions.

given period is generally characterized by a low and rising shape (i.e., low price) for lower levels of demand, corresponding to supply from baseload nuclear and coal generation, a middle plateau, corresponding to intermediate fossil fuel generation, and a sharp rise at high loads, corresponding to expensive, peaking resources. **Figure A-4** graphs the price-load function based on the regression results for the first May-June subgroup itemized in **Table A-1**. The X-axis shows the approximate range of actual load during the relevant periods (May and June of 2004, 2005, and 2006) when the price of natural gas was less than or equal to \$6.00/MMBtu.

Figure A-4: Example Estimated Price Curve



A reference for each bimonthly group was established first, representing the status quo, i.e. Oyster Creek output at actual historical levels. This reference was the base case load-weighted energy price for each sub-period.

The alternative case, with Oyster Creek removed from service, was then examined, with hourly loads for each estimation period *raised* by an amount corresponding to the average historical level of Oyster Creek in the given period. For instance, the load adjustment for the July-August

period was 589 MW each hour, corresponding to the average output of Oyster Creek for that period ($589\text{MW} = 636\text{MW}$ capacity multiplied by the actual 92.6% capacity utilization). Weighted-average energy prices were again calculated for each sub-period, with loads adjusted to reflect the retirement of Oyster Creek.

The annual dollar benefit for PJM-East from operation of Oyster Creek were then calculated as the average price change times load in each sub-period, summed and adjusted to an annualized value. Annual dollar benefits for New Jersey were calculated according to the state's share of PJM-East load. The results of the analysis are summarized in Table A-2, below.

Table A-2: Summary Results of Benefits Estimation

Model Sub-period	Estimated Increase in Average Electricity Cost, \$/MWh	Average PJM-East Load, GWh	Benefit of Oyster Creek Generation, \$000s
Jan-Feb	2.55	48,072	122,754
Mar-Apr	1.94	43,437	84,319
May-Jun	1.74	46,799	81,359
Jul-Aug	3.09	57,027	176,359
Sep-Oct	2.01	44,621	89,905
Nov-Dec	2.17	46,103	100,237
Aggregate	2.29		
Estimated Total Annual Value, PJM-East, \$000s			\$654,934

Average Annual NJ retail load 2004-2006, GWh

83,130

% of total PJM-East load

29%

Proportional benefit assigned to NJ, \$000s

\$190,328

A Note on Congestion

The model considers load across a broad region, and price at a point representing a part of that region. Prices at the Eastern Hub are sometimes higher than prices to the west, indicating that there is insufficient transmission to move any more lower-cost power from west to east. This raises the question whether the model actually underestimates the benefit of Oyster Creek generation in those hours. If the eastern part of PJM (east of the Eastern Interface) is essentially a submarket in those periods of west-to-east transmission congestion, does that mean that Oyster Creek has a proportionately greater impact in those hours? The answer is maybe, but the effect may not be large. First, the model implicitly accounts for this to an extent. The modeled change in capacity is indeed with respect to the whole region *on average*, if you will. But the price effect is measured at the Eastern Hub price, not the average PJM price. Sometimes the model is measuring the price-load effect from changes within the eastern region, sometimes from changes across the larger area. Since a lot of the load fluctuation arises from densely populated areas to the east, the model is probably measuring the effect of Oyster Creek reasonably well, and any potential for underestimating the economic benefit is likely to be small.

APPENDIX B – INDEPENDENT POWER FLOW ANALYSIS

Power Flow Software:

PowerWorld Simulator Security-Constrained Optimal Power Flow (“SCOPF”) software was used to simulate the LMP impact of Oyster Creek nuclear power plant retirement.

Load Flow Case:

- Base Case: 2005 NERC/MMWG Base Case modeling 2006 summer peak condition.
- Change Case: Base Case without Oyster Creek nuclear power plant.
 - To compensate the Oyster Creek retirement, all open units in JCPL control area were turned on and other PJM power plants were redispatched to balance the demand/supply.

Modeled Areas

- PJM500, PENELEC, METED, JCPL, PL, PECO, PSEG, BGE, PEPCO, AE, DP&L, AND UGI (total 12 areas) were modeled as OPF control.
- All the other areas were modeled as Participant AGC control.³²

Monitoring and Contingency Elements:

- All OPF area lines and transformers above 230 kV are monitored.
 - Radial lines and buses are not monitored.
- Contingency elements: JCPL, PSEG, and AE lines and transformers above 230 kV.

Change Case Results, New Jersey Areas:

Area Number	Area Name	LMP Change (\$/MWh)	Load (MW)	LMP Impact (\$/h)
	31PSEG	48	10,519	508,376
	34AE	108	2,711	293,246
	28JCPL (N)	(18)	6,156	14,468
	28JCPL (S)	22		
New Jersey hourly dollar impact				\$816,090

³² AGC stands for Automatic Generation Control – which allows the system operator to adjust the output of a power plant remotely, in real time.

Change Case Results, Other Modeled Areas:

Area Number	Area Name	LMP Change (\$/MWh)	Load (MW)	LMP Impact (\$/h)
26	PENELEC	0	2,738	(301)
27	METED	0	2,665	959
29	PL	13	6,768	89,883
30	PECO	35	8,325	290,453
32	BGE	0	6,894	1,310
33	PEPCO	0	6,523	(196)
35	DP&L	33	4,054	134,214
36	UGI	0	174	23
Other areas hourly dollar impact				\$516,345
Total hourly impact, all modeled areas				\$1,332,435