

APPENDIX E
COASTAL ZONE CONSISTENCY CERTIFICATION

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Acronyms and Abbreviations

CGS = Connecticut General Statutes

DEP = Connecticut Department of Environmental Protection

DNC = Dominion Nuclear Connecticut

MPS = Millstone Power Station

NPDES = National Pollutant Discharge Elimination System

**FEDERAL CONSISTENCY CERTIFICATION FOR
FEDERAL PERMIT AND LICENSE APPLICANTS¹**

This is the Dominion Nuclear Connecticut (DNC) certification to the U. S. Nuclear Regulatory Commission (NRC) that renewal of the Millstone Power Station Units 2 and 3 (MPS) operating licenses 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, Connecticut enforceable coastal resource protection policies and MPS compliance status, and summary findings.

CONSISTENCY CERTIFICATION

DNC certifies to the NRC that NRC renewal of the MPS operating licenses complies with the enforceable policies of Connecticut's approved management program and will be conducted in a manner consistent with such program. DNC expects MPS operations during the license renewal term to be a continuation of current operations as described below, with no station changes that would change effects on Connecticut's coastal zone.

NECESSARY DATA AND INFORMATION

Statutory Background

The Federal Coastal Zone Management Act (16 USC 1451 et seq.) imposes requirements on an 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. See 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)]. The Administration approved the Connecticut coastal management program September 1980 (Ref. E-2). NRC licensing of MPS Unit 2, in 1975, pre-dated state program approval. In 1984, however, the Connecticut Department of Environmental Protection (CTDEP) concurred with the consistency certification for Unit 3 operation (Ref. E-3).

1. This certification is patterned after the example certification included as Appendix E of Ref. E-1.

Proposed Action

NRC licenses for MPS will expire in 2015 for Unit 2 and 2025 for Unit 3. NRC regulations provide for license renewal, and DNC is applying for renewal of the Unit 2 license to 2035 and the Unit 3 license to 2045. Unit 1 shares the site but was shut down in 1995 and is not the subject of the license renewal application or this certification.

MPS is an electric generating plant located within the Connecticut coastal zone, at Waterford. The plant withdraws water from Niantic Bay for noncontact cooling, returning the heated discharge to an old quarry and then to Long Island Sound. Figures E-1 and Figure E-2 are MPS 50- and 6-mile vicinity maps, respectively. Figure E-3 shows the Connecticut coastal boundary superimposed on the MPS site boundary.

MPS Units 2 and 3 are pressurized water reactors with a total output of 6,111 MW thermal and an estimated electric output of 2,024 MW electric. Four pumps in the Unit 2 intake structure and six pumps in the Unit 3 intake structure provide a continuous supply (approximately 1.5 million gallons per minute [gpm]) of condenser cooling water. The service water systems for both units also withdraw water from the intake structures. After moving through the condensers (and service water systems) water is discharged into the old quarry, and from there flows back into Long Island Sound.

DNC holds a National Pollutant Discharge Elimination System (NPDES) permit for cooling system discharges and for several other plant/stormwater discharges (see Table E-1). MPS sends sewage wastewater to the New London wastewater treatment facility. Stormwater is discharged both directly and indirectly to Long Island Sound.

The NPDES permit to withdraw condenser cooling water from Long Island Sound for Units 1, 2, and 3 was issued in 1992. Only Units 2 and 3 will operate during the license renewal term. In June 1997, MPS filed a timely application for renewal of its NPDES permit. CTDEP and DNC are engaged in the process of renewal of the NPDES permit.

MPS has a Title V permit for its air emissions sources. In addition to the Title V permit, emissions are regulated under a series of individual permits (see Table E-3). Most of the permitted air emission sources are emergency equipment (i.e., diesel generators) for the safe operation of the plant in case of loss of power from other sources. As such, the sources generally operate for minimal time periods, for testing purposes.

DNC employs a permanent work force of 1,550-1,650 people. Most (approximately 85 percent) reside in New London or Middlesex Counties. The MPS reactors are on an 18-month refueling cycle. During refueling outages, site employment increases above the 1,550-1,650 -person workforce by as many as 700-800 workers for temporary (28-30 days) duty. DNC has determined that no more than five additional permanent employees would be necessary during the license renewal term.

NRC and DNC have identified no refurbishment activities necessary to continue operations 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 authorizations for current MPS operations and Table E-2 identifies compliance activities associated specifically with NRC license renewal.

DNC purchased MPS from Northeast Utilities in 2001. As a result of that purchase, CTDEP transferred 40 permits from Northeast Nuclear Energy Company to DNC and identified permits that could not be transferred but had to be issued new to DNC (letter Stahl to McMullin [NNEC] and Jacobson, dated 3/29/01).

Four transmission lines were built to connect MPS to the electric grid. These lines leave MPS and travel north approximately 9 miles in a common corridor 415 to 500 feet wide. At Hunts Brook Junction the lines diverge to travel east, west and north in corridors shared by other transmission lines. Figure E-4 locates the transmission lines. However, as illustrated on Figure E-3, the MPS lines exit the coastal boundary before exiting the site boundary. The area of interest for the certification, therefore, does not include MPS transmission line corridors.

Environmental Impacts

NRC has prepared a generic environmental impact statement (GEIS; Ref. E-4) on impacts that nuclear power plant license renewal could have on the environment and has codified its findings (10 CFR 51, Subpart A, Appendix B, Table B-1). The codification 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)

NRC based its assessment of license renewal impacts on its evaluation of impacts from plant current operations. The NRC codification and the Generic Environmental Impact Statement discuss the following types of Category 1 environmental issues:

- Surface water quality, hydrology, and use
- Aquatic ecology
- Groundwater use and quality
- Terrestrial resources

Appendix E

- 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 51.95(c)(4)]. For plants such as MPS that are in the coastal zone, many of these issues have the potential to impact the coastal zone. DNC has adopted by reference the NRC findings and GEIS analyses for all 49¹ applicable Category 1 issues.

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 MPS³, and like the Category 1 issues, have the potential to impact the coastal zone. The applicable issues and DNC’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. Millstone has conducted studies of the impacts of entrainment both independently and under direction of the CTDEP. In re-issuing the plant’s current NPDES discharge permit in 1992, Connecticut approved the plant’s intake structure as best available technology to minimize impact. DNC concludes that these impacts are small during current operations. Entrainment reduction strategies are being reviewed as part of the permit renewal process. Any entrainment reduction strategies implemented by DNC would not change its conclusion that entrainment during the license renewal term would result in small impacts.

1. The remaining Category 1 issues do not apply to MPS either because they are associated with design or operational features the MPS does not have (e.g., cooling towers) or to an activity, refurbishment, that MPS will not undertake.
2. 10 CFR 51, Subpart A, Appendix B, Table B-1 also identifies 2 issues as “NA” because NRC could not come to a conclusion regarding categorization. DNC believes that these issues, chronic effects of electromagnetic fields and environmental justice, do not affect “coastal zone” as that phrase is defined by the Coastal Zone Management Act [16 USC 1453(1)].
3. The remaining Category 2 issues do not apply to MPS either because they are associated with design or operational features the MPS does not have (e.g., cooling towers) or to an activity, refurbishment, that MPS will not undertake.

- 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. The studies and permit discussed above also address impingement. Both intake structures include a fish return system that returns impinged fish to Niantic Bay. DNC concludes that these impacts are small during current operations and has no plans that would change this conclusion for the license renewal term.
- Heat shock – This issue addresses mortality of aquatic organisms by exposure to heated plant effluent. In issuing the current NPDES permit (CT0003263) to Northeast Nuclear Energy Company for Millstone Nuclear Power Station Units 1, 2, and 3 on December 14, 1992, the CTDEP determined that thermal discharges from MPS were sufficiently protective of fish and wildlife communities of Niantic Bay and eastern Long Island Sound to allow alternative thermal effluent limitations under Section 316(a) of the CWA.

The permit states (p. 1) that:

“The Commissioner of Environmental Protection has determined that the effluent limitations which would require the use of cooling systems at the Millstone Nuclear Power Station Units 1, 2, and 3 other than the existing once-through system utilized by the applicant for the control of the thermal component of the applicant’s discharge are more stringent than necessary to assure the protection of shellfish, fish, and wildlife in and on the receiving waters. In view of this finding, the Commissioner has herein established alternative and less stringent effluent limitations in accordance with Section 316(a) of the Clean Water Act.”

The current NPDES permit and its Section 316(a) variance remain in effect. For this reason, and because of the confirmatory information in studies conducted since 1992, DNC concludes that impacts to fish and shellfish from heat shock are small and warrant no additional mitigation. DNC concludes that these impacts are small during current operations and has no plans that would change this conclusion for the license renewal term.

- Threatened or endangered species – This issue addresses effects that MPS operations could have on species that are listed under federal law as threatened or endangered. In analyzing this issue, DNC has also considered species that are protected under Connecticut law. Although several species of whales and sea turtles are occasionally sighted in Long Island Sound, none have been observed in the immediate vicinity of the plant. Roseate terns (*Sterna dougallii dougallii*) use Fox Island (actually a peninsula in the southeast portion of the MPS site) as a stopover during fall migrations. Fox Island is treated as a tern sanctuary in the fall, with access strictly controlled. Other federal and state protected species have been observed occasionally at Millstone Point during fall and spring migrations (see Table E-3).

Yellow-breasted chats (*Ictera virens*) were observed from 1986 through 1988 approximately two miles north of MPS along the common corridor of the four transmission lines that originate at MPS and diverge at Hunts Brook Junction.

DNC and Northeast Utilities (the company responsible for the transmission lines) environmental protection programs have identified no adverse impacts to such species and DNC consultation with cognizant Federal and state agencies has identified no impacts of concern. DNC concludes that MPS impacts to these 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 strictly 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]), DNC concludes that the issue is not subject to the certification requirement.
- Housing – This issue addresses impacts that additional DNC employees required to support license renewal and the additional concomitant indirect jobs could have on local housing availability. NRC concluded, and DNC concurs, that impacts would be small for plants located in high population areas with no growth control measures. Using the NRC definitions and categorization methodology, DNC is located in a high population area and locations where additional employees would probably live do not have restrictive growth control measures. DNC concludes that impacts during the MPS license renewal term would be small.
- Public services; public utilities – This issue addresses impacts that adding license renewal workers could have on public water supply systems. DNC has analyzed the availability of public water supplies in candidate locales and has found no limitations that would suggest that additional MPS workers would cause impacts. Therefore, DNC has concluded that impacts during the MPS 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. MPS property taxes comprised 36 percent of the Waterford revenues in 2000. DNC cannot accurately predict what MPS taxes will be during the license renewal term; however, changes to MPS tax rates due to deregulation would be independent of license renewal. DNC concludes that impacts during the MPS 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. DNC concludes that increasing the permanent workforce by less than 1 percent would result in small impacts.

- Historic and archaeological resources – This issue addresses impacts that license renewal activities could have on resources of historic or archaeological significance. Although a number of archaeological or historic sites have been identified within 6 miles of MPS, DNC is not aware of any adverse or detrimental impacts to these sites from current operations and DNC has no plans for license renewal activities that would disturb these resources. DNC correspondence with the State Historic Preservation Officer identified no issues of concern.
- Severe accidents – NRC determined that the license renewal impacts from severe accidents would be small, but determined that applicants should perform site-specific analyses of ways to further mitigate impacts. DNC used NRC methodology to conduct a severe accident mitigation alternatives analysis and found one beneficial mitigation measure involving a potential change to a procedure. This issue is being addressed as part of an industry-wide effort.

State Program

The Connecticut DEP Office of Long Island Sound administers the state coastal management program. The Office maintains a website that describes the program in general terms (Ref. E-5). The Connecticut Coastal Management Act (Ref. E-6) contains details about the state's enforceable policies. Attachment E-1 lists these policies and discusses for each the applicability to MPS and, where applicable, the status of MPS compliance.

Findings

1. Connecticut has concurred that MPS Unit 3 operation would be consistent with the federally approved Connecticut coastal management program (Unit 2 operation pre-dated federal approval of the state program).
2. NRC has found that the impacts of certain license renewal environmental issues (i.e., Category 1 issues) are small. DNC has adopted by reference NRC findings for these issues as they are applicable to MPS.
3. For other license renewal issues (i.e., Category 2) that are applicable to MPS, DNC has determined that the environmental impacts are small.
4. To the best of DNC's knowledge, MPS is in compliance with Connecticut's licensing and permitting requirements and is in compliance with its State-issued licenses and permits.
5. DNC's license renewal and continued operation of MPS would be consistent with the enforceable policies of the Connecticut coastal zone management program.

STATE NOTIFICATION

A copy of this certification is hereby provided to the State of Connecticut for its concurrence. A complete copy of DNC's license renewal application as submitted to the NRC, in CD-ROM format, is included with the copy of the certification provided to the State. If the State deems that any additional data or information is necessary for its concurrence, it should notify DNC and the NRC (at the addresses below) within 30 days of receipt of this certification, in accordance with 15 CFR 930.60(a)(1).

By this certification that MPS license renewal is consistent with Connecticut's coastal zone management program, Connecticut is notified that it has six months from receipt of this letter and accompanying information in which to concur with or object to DNC's certification. However, pursuant to 301 CMR 21.08(3)(b), if Connecticut has not issued a decision within six months following the commencement of state agency review, it shall notify the contacts listed below of the status of the matter and the basis for further delay. Connecticut's concurrence, objection, or notification of review status shall be sent to:

Mr. Richard Emch, Environmental Project Manager
USNRC OWFN
11555 Rockville Pike
Rockville, MD 20852

Ms. P. F. Faggert, Vice President and Chief
Environmental Officer
Dominion
5000 Dominion Blvd.
Glen Allen, VA 23060

REFERENCES

- Ref. E-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.
- Ref. E-2 State and Territory Coastal Management Program Summaries, National Oceanic and Atmospheric Administration, available on line at <http://www.ocrm.nos.noaa.gov/czm/czmsitelist.html> (accessed February 4, 2003).
- Ref. E-3 Final Environmental Statement related to the operation of Millstone Nuclear Power Station, Unit No. 3, U.S. Nuclear Regulatory Commission, NUREG-1064, December 1984, Appendix A, page 4.
- Ref. E-4 Generic Environmental Impact Statement for License Renewal of Nuclear Plants, U.S. Nuclear Regulatory Commission, NUREG-1437, May 1996.
- Ref. E-5 Office of Long Island Sound - Programs and Activities, Connecticut Department of Environmental Protection, available online at <http://www.dep.state.ct.us/olisp/prgactiv.htm> (accessed February 5, 2003).
- Ref. E-6 Connecticut General Statutes, Volume 8, Title 22a, Environmental Protection, Chapter 44, Coastal Management, available online at <http://www.cga.state.ct.us/2001/pub/Chap444.htm> (accessed February 5, 2003).
- Ref. E-7 Connecticut Department of Environmental Protection. 2000. Letter from Nancy Murry, Biologist/Environmental Analyst, Environmental and Geographic Information Center, to Anthony Johnson III, Northeast Utilities System.
- Ref. E-8 Coastal Research and Education Society of Long Island. 2002. Cetaceans, Humpback Whale. Southampton College of Long Island University, Southampton, NY. Available at <http://www.cresli.org/cresli/cetaceans/humpback.html>. Accessed July 10, 2002.
- Ref. E-9 Northeast Utilities. 1999. Millstone 1 Decommissioning Environmental Review. June.

- Ref. E-10 U.S. Fish and Wildlife Service. 2002. Threatened and Endangered Species System, Listings by State and Territory, Connecticut. Available at http://ecos.fws.gov/webpage/webpage_usa_lists.html?state=CT. Accessed June 10, 2002.

**Table E-1.
Environmental Authorizations for Current Millstone Units 2 and 3 Operations.**

Agency	Authority	Requirement	Number	Pertinent Dates	Activity Covered
Federal					
1. U.S. Nuclear Regulatory Commission	Atomic Energy Act (42 USC 2011, et seq.), 10 CFR 50.10	License to Operate	DPR – 65	Issued 09/26/75 Expires 07/31/15	Operation of Unit 2
2.			NPF – 49	Issued 01/31/86 Expires 11/25/25	Operation of Unit 3
3. U.S. Department of Transportation	49 USC 5108	Registration	061202550034KL	Issued 06/13/02 Expires 06/30/04	Shipment of hazardous materials
4. U.S. Fish and Wildlife Service	Migratory Bird Treaty Act 16 USC 703-712	Depredation Permit	MB728673-0	Issued 11/07/03 Expires 10/31/04	Removal of birds, eggs and nests from utility structures, property
5. U.S. Department of Army, Corps of Engineers	Section 10, River and Harbor Act (33 USC 403)	Permit	CT-NIAN-78-507	Issued 10/11/78 No expiration date	Install and maintain sandbag dike for ecology laboratory mariculture work
6. U.S. Department of Army, Corps of Engineers	Section 10, River and Harbor Act (33 USC 403)	Permit	CT-NIAN-77-377 (LOP)	Issue 09/19/77 No expiration date	Install and maintain ecology laboratory seawater intake pipes
State					
7. Connecticut Department of Environmental Protection (CDEP)	CGS 4-182, 22a-430, 22a-430-1 et seq.	NPDES permit	CT0003263	Issued 12/14/92 Renewal application submitted 6/13/97	Discharges to Long Island Sound
8. CDEP	CGS 22a-430b	General Permit for stormwater discharges associated with industrial activities	GS1001430	Issued 09/25/03 Expires 10/01/07	Stormwater discharges; industrial activities

**Table E-1.
Environmental Authorizations for Current Millstone Units 2 and 3 Operations. (Cont.)**

Agency	Authority	Requirement	Number	Pertinent Dates	Activity Covered
9. CDEP	CGS 22a-6k	Emergency Authorization	EAO100176	Issued 10/13/00 Transferred 3/31/01	Discharges to Long Island Sound
10. CDEP	CGS 22a-430	General Permit for Discharge of Minor Photographic Processing Wastewater	GPH000354	Issued 10/20/95 Expires 10/20/05	Discharge of minor photographic process wastewater to municipal sewer
11. CDEP	CGS 22a-430	General Permit for the Discharge of Water Treatment Wastewater	GWT 000175	Issued 03/26/01 Expires 05/01/05	Water treatment wastewater
12. CDEP	CGS 22a-430	General Permit for Miscellaneous Discharges of Sewer Compatible Wastewater	GMI000012	Issued 03/13/02 Expires 04/30/11	Wastewater discharges from Fire Training Facility
13. CDEP	Ct. P.A. 82-402, Section 4	Registration	2000-018-PWR-SU (Unit 2)	Issued 07/12/83 Transferred on 03/31/01 No expiration date	Divert large volume of water from Long Island Sound for steam condenser cooling water
14. CDEP	Ct. P.A. 82-402, Section 4	Registration	2000-019-PWR-SU (Unit 3)	Issued 07/12/83 Transferred on 03/31/01 No expiration date	Divert large volume of water from Long Island Sound for steam condenser cooling water
15. CDEP	CGS 22a-174	Permit	199-0003-0043	Issued 08/10/00 No expiration date	Emissions from fire training mock-up facility and two propane-fired water pumps

**Table E-1.
Environmental Authorizations for Current Millstone Units 2 and 3 Operations. (Cont.)**

Agency	Authority	Requirement	Number	Pertinent Dates	Activity Covered
16. CDEP	CGS 22a-174	Permit	199-0003-0044	Issued 04/27/99 No expiration date	Emissions from diesel-fired trash water pump
17. CDEP	CGS 22a-174	Permit	199-0003-0045	Issued 04/27/99 No expiration date	Emissions from diesel-fired motorpool air compressor
18. CDEP	CGS 22a-174	Permit	199-0003-0046	Issued 04/27/99 No expiration date	Operate diesel-fired motorpool air compressor
19. CDEP	CGS 22a-174	Permit	199-0004-0056	Issued 11/09/99 No expiration date	Emissions from Unit 2 emergency diesel generator (1 of 2)
20. CDEP	CGS 22a-174	Permit	199-0003-0055	Issued 11/09/99 No expiration date	Emissions from Unit 2 emergency diesel generator (2 of 2)
21. CDEP	CGS 22a-174	Permit	199-0003-0007	Issued 01/24/86 No expiration date	Emissions from Unit 3 auxiliary boiler (1 of 2)
22. CDEP	CGS 22a-174	Permit	199-0003-0008	Issued 01/24/86 No expiration date	Emissions from Unit 3 auxiliary boiler (2 of 2)
23. CDEP	CGS 22a-174	Permit	199-0003-0009	Issued 05/21/85 No expiration date	Emissions from Unit 3 emergency diesel generator (1 of 2)
24. CDEP	CGS 22a-174	Permit	199-0003-0010	Issued 05/21/85 No expiration date	Emissions from Unit 3 emergency diesel generator (2 of 2)
25. CDEP	CGS 22a-174	Permit	199-0003-0017	Issued 08/25/92 No expiration date	Emissions from station blackout emergency diesel generator (3 of 3)
26. CDEP	CGS 22a-174	Permit	199-0003-0051	Issued 05/27/99 No expiration date	Emissions from Unit 3 ESF diesel compressor (1 of 3)

**Table E-1.
Environmental Authorizations for Current Millstone Units 2 and 3 Operations. (Cont.)**

Agency	Authority	Requirement	Number	Pertinent Dates	Activity Covered
27. CDEP	CGS 22a-449	Notification	Site ID 170-8414	Submitted 03/27/01 No expiration date	Unit 3 emergency generator underground storage tank E6, #2 diesel oil
28. CDEP	CGS 22a-449	Notification	Site ID 170-8414	Submitted 03/27/01 No expiration date	Unit 3 emergency generator underground storage tank E7, #2 diesel oil
29. CDEP	CGS 22a-449	Notification	Site ID 170-8414	Submitted 03/27/01 No expiration date	Unit 3 auxiliary boiler underground storage tank F8, #4 heating oil
30. CDEP	CGS 22a-449	Notification	Site ID 170-8414	Submitted 03/27/01 No expiration date	Unit 3 auxiliary boiler underground storage tank F9, #4 heating oil
31. CDEP	CGS 22a-449	Notification	Site ID 170-8425	Submitted 03/27/01 No expiration date	Simulator building underground storage tank, #2 heating oil
32. CDEP	CGS 22a-449	Notification	Site ID 170-8486	Submitted 03/27/01 No expiration date	Unit 2 emergency diesel underground storage tank, #2 fuel oil. This tank has been retired.
33. South Carolina Department of Health and Environmental Control	South Carolina Radioactive Waste Transportation and Disposal Act (Act No. 429 of 1980)	Permit	0013-06-04	Issued 12/10/03 Expires 12/31/04	Transport radioactive wastes

**Table E-1.
Environmental Authorizations for Current Millstone Units 2 and 3 Operations. (Cont.)**

Agency	Authority	Requirement	Number	Pertinent Dates	Activity Covered
34. Tennessee Department of Environment and Conservation	Rule 1200-2-10.32	License	T-CT003-L04	Issued 12/02/03 Expires 12/31/04	Ship radioactive materials
35. CDEP	CGS 26-60	Scientific Collector Permit	219	Issued 01/17/03 Expires 01/16/06	Collect fish and lobsters
36. CDEP	CGS Title 22a, Chapter 445	Permit	not applicable	Part A application submitted 12/22/00	Store radioactive hazardous (i.e., mixed) waste
37. CDEP	CGS 22a-174	Permit	199-0038-TV	Issued 01/29/03 Expires 01/29/08	Emissions (Title V permit)

Note: Federal and state agencies have issued numerous other construction permits at Millstone Power Station, and Dominion Nuclear Connecticut secures additional regulatory agency approvals as needed for short-term activities such as dredging. Table E-1 lists only permits that apply to current operations.

CGS = Connecticut General Statutes

CDEP = Connecticut Department of Environmental Protection

ESF = Engineered Safeguards Features

NPDES = National Pollutant Discharge Elimination System

**Table E-2.
 Environmental Authorizations for Millstone Units 2 and 3
 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
Fish and Wildlife Service and National Marine Fisheries Service	Endangered Species Act Section 7 (16 USC 1536)	Consultation	Requires Federal agency issuing a license to consult with FWS and NMFS
Connecticut Department of Environmental Protection	Clean Water Act Section 401 (33 USC 1341)	Certification	Certification issued 04/19/74. Ongoing compliance through NPDES permit.
Connecticut Historical Commission	National Historic Preservation Act Section 106 (16 USC 470f)	Consultation	Requires Federal agency issuing a license to consider cultural impacts and consult with State Historic Preservation Officer (SHPO).
Connecticut Department of Environmental Protection, Office of Long Island Sound Programs	Federal Coastal Zone Management Act (16 USC 1451 et seq.)	Certification	Requires an applicant to provide certification to the 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.

a. No renewal-related requirements identified for local or other agencies.

**Table E-3.
 Endangered and Threatened Species that Could Occur at or Near MPS or Along Associated
 Transmission Lines.**

Scientific Name	Common Name	Federal Status ^a	State Status ^a
Mammals			
<i>Balaena glacialis</i>	Right whale	E	-
<i>Balaenoptera physalus</i>	Finback whale	E	-
<i>Megaptera novaeangliae</i>	Humpback whale	E	-
Birds			
<i>Ardea albus</i>	Great egret	-	T
<i>Egretta thula</i>	Snowy egret	-	T
<i>Haliaeetus leucocephalus</i>	Bald eagle	T	E
<i>Icteria virens</i>	Yellow-breasted chat	-	E
<i>Sterna antillarum</i>	Least tern	-	T
<i>Sterna dougallii dougallii</i>	Roseate tern	E	E
Reptiles			
<i>Caretta caretta</i>	Loggerhead sea turtle	T	T
<i>Chelonia mydas</i>	Green sea turtle	T	T
<i>Dermochelys coriacea</i>	Leatherback sea turtle	E	E
<i>Eretmochelys imbricata</i>	Hawksbill sea turtle	E	-
<i>Lepidochelys kempii</i>	Kemp's (Atlantic) ridley sea turtle	E	E
Fish			
<i>Acipenser brevirostrum</i>	Shortnose sturgeon	E	E
<i>Acipenser oxyrhynchus</i>	Atlantic sturgeon	-	T
Plants			
<i>Scleria triglomerata</i>	Tall nut sedge (nutrush)	-	E

a. E = Endangered; T = Threatened; - = Not listed.

Source: Refs. E-7, E-8, E-9, E-10.

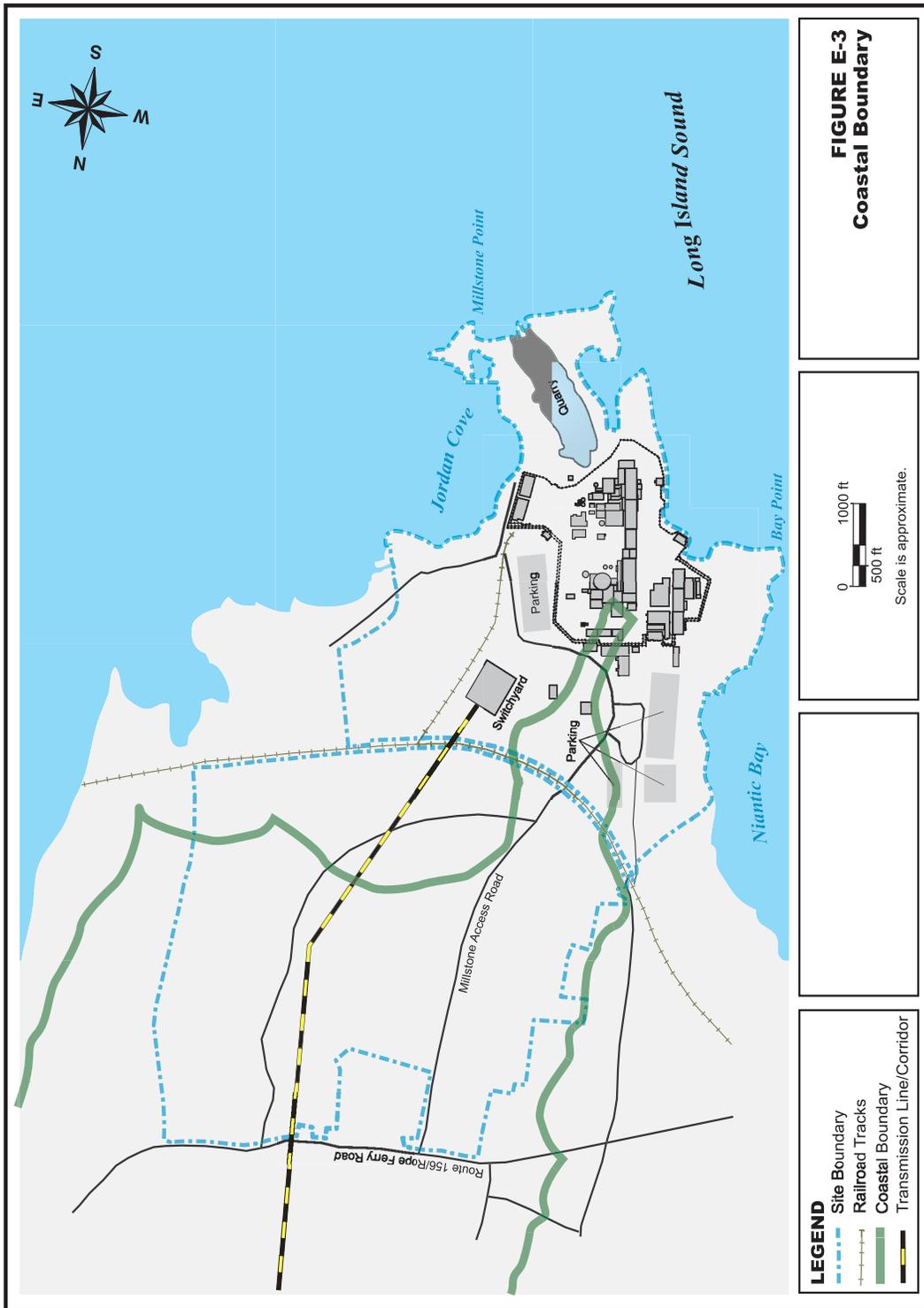
Figure E-1
50-Miles Vicinity Map



**Figure E-2
 6-Mile Vicinity Map**

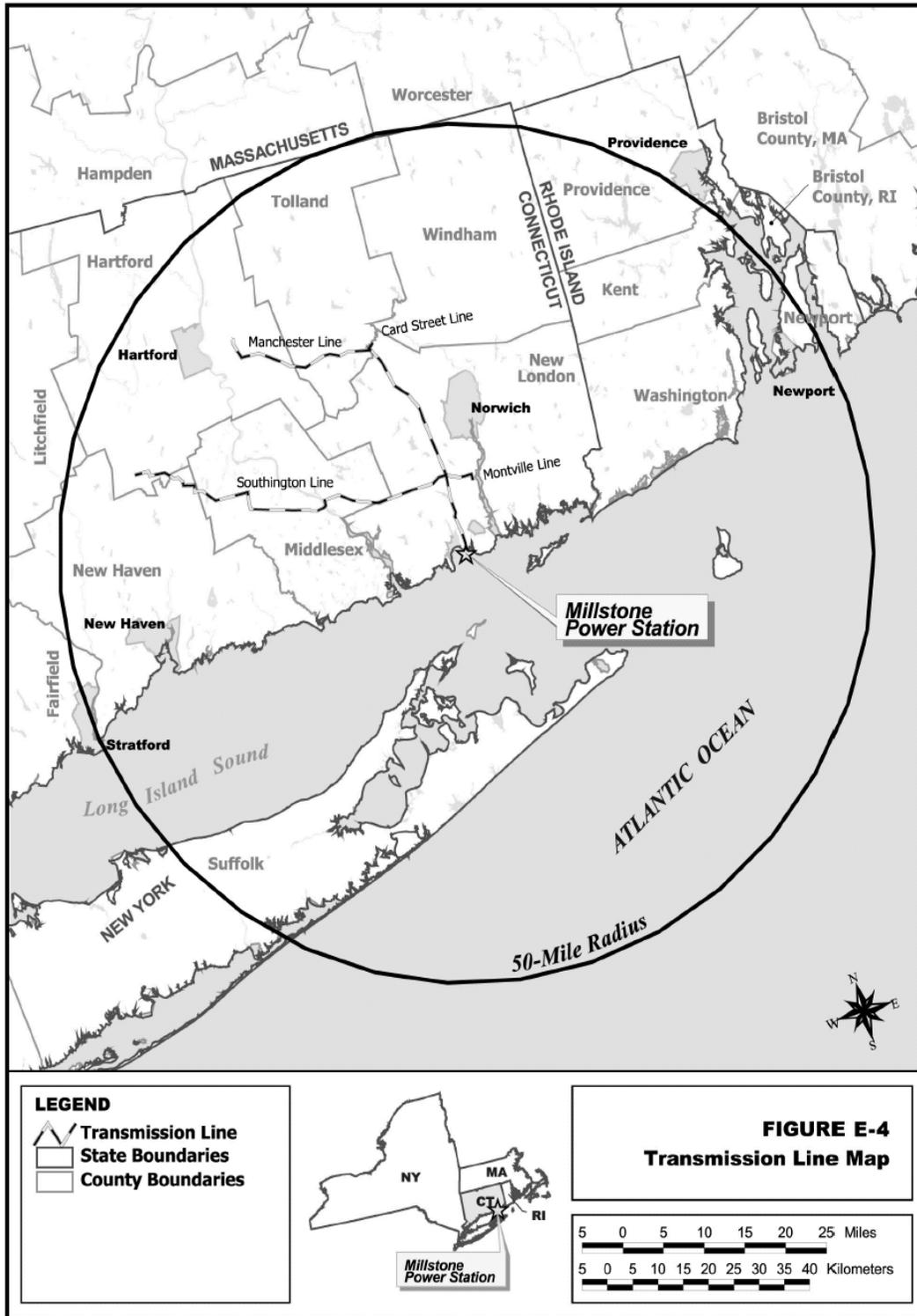


**Figure E-3
 Coastal Boundary**



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**Figure E-4
 Transmission Line Map**



Attachment E-1

Connecticut Coastal Zone Protection Enforceable Policies¹

The Connecticut Coastal Management Act is codified in the General Statutes of Connecticut (CGS)² and requires persons seeking approval for coastal activities to demonstrate that the activity is consistent with all applicable goals and policies in Section 22a-92, Legislative Goals and Policies.³ Dominion Nuclear Connecticut (DNC) is seeking U. S. Nuclear Regulatory Commission (NRC) renewal of operating licenses for Millstone Power Station (MPS) Units 2 and 3. The following paragraphs enumerate provisions of Section 22a-92, together with pertinent definitions, and provide the DNC demonstration that MPS license renewal would be consistent with CGS Section 22a-92.

CGS §22a-92(a)(1) – Insure that the development, preservation or use of the land and water resources of the coastal area proceeds in a manner consistent with the capability of the land and water resources to support development, preservation or use without significantly disrupting either the natural environment or sound economic growth.

DNC Response – Section 22a-94 defines the coastal area⁴ and directs State identification of, within the coastal area, a coastal boundary.⁵ The Section goes on to indicate that property located within the coastal boundary is subject to coastal management requirements.⁶ Based on the State's mapping of the coastal boundary in the MPS area,⁷ approximately one half of the MPS site is located within the coastal boundary.

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1. Connecticut implements a coastal zone management program that the National Oceanic and Atmospheric Administration (NOAA) has approved. As NOAA uses the phrase, "federal activity" does not apply to MPS license renewal. A "federal activity" has direct environmental impacts and does not include issuance of a federal license [15 CFR 930.31(a)]. NOAA has separate requirements that are applicable to activities requiring a Federal license (15 CFR 930 Subpart D). As Connecticut has no separate review form for activities requiring a federal license, such as U. S. Nuclear Regulatory Commission renewal of the MPS licenses to operate, DNC has used the federal activities form to the extent practicable.
 2. Connecticut General Statutes (CGS) Volume 8, Title 22a, Environmental Protection, Chapter 444, Coastal Management, Sections 22a-90 through 22a-113(d).
 3. CGS Section 22a-98.
 4. CGS Section 22a-94(a).
 5. CGS Section 22a-94(b).
 6. CGS Section 22a-94-(g).
 7. *Coastal Resources, Niantic Quadrangle*, Coastal Area Management Program, Connecticut Department of Environmental Protection. 1979.

MPS Unit 2 operation, begun in 1975, pre-dated enactment of the State Coastal Management Act in 1978. Prior to Unit 3 operation in 1984, the State concurred that its operation would be consistent with the state coastal management program.¹ The State has issued more than 100 licenses, permits, and other authorizations for construction and operations at MPS. The State also reviews required reports on MPS operations and routinely inspects the MPS site and facilities.

At the time of DNC's acquisition of MPS, the State transferred state-issued permits for the plant (Letter, Stahl, Deputy Commissioner, to Jacobson, March 29, 2001). The State's rigorous review of MPS activities as part of its continuous oversight of MPS ensures that its operation is consistent with the State's environmental goals and sound economic growth. Through review of permit applications and required monitoring, together with routine inspections, the state assures itself and DNC that MPS is in compliance with state environmental protection policies, including those for coastal zone management.

CGS §22a-92(a)(2) – Preserve and enhance coastal resources in accordance with the policies established by chapters 439, 440, 446i, 446k, 447, 474 and 477.²

CGS §22a-93(7)³ – "Coastal resources" means the coastal waters of the state, their natural resources, related marine and wildlife habitat and adjacent shorelands, both developed and undeveloped, that together form an integrated terrestrial and estuarine ecosystem; coastal resources include coastal bluffs and escarpments, rocky shorefronts, beaches and dunes, intertidal flats, tidal wetlands, freshwater wetlands and watercourses, estuarine embayments, coastal hazard areas, developed shorefront, islands, nearshore waters, offshore waters, shorelands, and shellfish concentration areas.

Chapter 439 – *Environmental Protection Department and State Policy*

Chapter 440 – *Wetlands and Watercourses*

Chapter 446i – *Water Resources*

Chapter 446k -- *Water Pollution Control*

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1. Letter, Pac (Connecticut Department of Environmental Protection) to Counsel (Northeast Nuclear Energy Company), November 29, 1984.
 2. Title 22a, Chapter 439, *Environmental Protection Department and State Policy*, Chapter 440, *Wetlands and Watercourses*, Chapter 446i, *Water Resources*; Title 23, Parks, Forests and Public Shade Trees, Chapter 447, *State Parks and Forests*; Title 25, Water Resources, Flood and Erosion Control, Chapter 474, *Pollution*, Chapter 477, *Flood Control and Beach Erosion*.
 3. Connecticut General Statutes (CGS) Volume 8, Title 22a, Environmental Protection, Chapter 444, *Coastal Management*, Section 22a-93(7).

Chapter 447 – *State Parks and Forests* (Note; There are no state parks or forests on or adjacent to the MPS site)

Chapter 474 – *Pollution*

Chapter 477 – *Flood Control and Beach Erosion*

DNC Response – CTDEP has published a coastal resource map that identifies coastal resources at, and in the vicinity of, MPS.¹ MPS coastal resources are the following:

- Beaches and dunes
- Coastal bluffs and escarpments, and modified bluffs and escarpments
- Coastal “flood” hazard area
- Coastal waters, estuarine embayments, nearshore waters, offshore waters
- Freshwater wetlands and undesignated tidal wetlands
- Rocky shorefronts
- Shorelands
- Tidal wetlands

Adjacent coastal resources are the following:

- Beaches and dunes
- Coastal waters, estuarine embayments, nearshore waters, offshore waters)
- Coastal “flood” hazard area
- Shorelands

CTDEP also has mapped shellfish concentration areas in the MPS vicinity.² The map identifies MNPS offshore areas for hard clams and eastern oysters.

Since 1968, Millstone Station has performed extensive studies of the ecology of Long Island Sound in and around the station, to ensure that the State’s coastal resources are adequately protected. Additionally, MPS’ environmental management system is certified to ISO 14001 standards.³ One element of the system, the MPS natural resource management program, addresses the requirements of the Connecticut coastal resources management regulations.⁴ DNC concludes that

1. *Coastal Resources, Niantic Quadrangle*, Coastal Area Management Program, Connecticut Department of Environmental Protection. 1979.
2. *Shellfish Concentration Map, Niantic Quadrangle*, Coastal Area Management Program, Connecticut Department of Environmental Protection. 1979.
3. *Environmental Management Systems – Specification With Guidance for Use*, International Organization for Standards, 1996.

operation of the station is consistent with general coastal resource policy and has no plans due to license renewal that would alter this conclusion.

CGS §22a-92(a)(3) - Give high priority and preference to uses and facilities which are dependent upon proximity to the water or the shorelands immediately adjacent to marine and tidal waters.

Definition: CGS §22a-93(16) - "Water-dependent uses" means those uses and facilities which require direct access to, or location in, marine or tidal waters and which therefore cannot be located inland, including but not limited to: Marinas, recreational and commercial fishing and boating facilities, finfish and shellfish processing plants, waterfront dock and port facilities, shipyards and boat building facilities, water-based recreational uses, navigation aides, basins and channels, industrial uses dependent upon water-borne transportation or requiring large volumes of cooling or process water which cannot reasonably be located or operated at an inland site and uses which provide general public access to marine or tidal waters.

DNC Response – MPS relies on large volumes of cooling and process water from Long Island Sound and, as an existing facility, cannot be reasonably relocated to an inland site. A large steam electric generating station, such as MPS, is a water-dependent use of coastal resources, consistent with the state policy.

CGS §22a-92(a)(4) - Resolve conflicts between competing uses on the shorelands adjacent to marine and tidal waters by giving preference to uses that minimize adverse impacts on natural coastal resources while providing long term and stable economic benefits.

Definition: CGS §22a-93(7)(M) - "Shorelands" means those land areas within the coastal boundary exclusive of coastal hazard areas, which are not subject to dynamic coastal processes and which are comprised of typical upland features such as bedrock hills, till hills and drumlins.

DNC Response – The bulk of the MPS site is considered shoreland by the CDEP, including the developed portions, and adjacent properties to the northwest and northeast. Construction in shorelands is subject to Town of Waterford building permit requirements; however, DNC has no plans due to license renewal that would necessitate additional construction. DNC is aware of no conflicts between competing uses on shorelands at or adjacent to MPS. DNC believes that its use of MPS shorelands, as regulated by local, state, and Federal agencies, minimizes adverse impacts on adjacent coastal systems and resources.

4. *Program Description; Natural Resources Management*, Dominion Nuclear Connecticut, MP-28-RES-PRG, Rev. 001.

Policy: CGS §22a-92(a)(5) - Consider in the planning process the potential impact of coastal flooding and erosion patterns on coastal development so as to minimize damage to and destruction of life and property and reduce the necessity of public expenditure to protect future development from such hazards.

CGS §22a-93(7)(H) - "Coastal hazard areas" means those land areas inundated during coastal storm events or subject to erosion induced by such events, including flood hazard areas as defined and determined by the National Flood Insurance Act, as amended (USC 42 Section 4101, P.L. 93-234) and all erosion hazard areas as determined by the commissioner.

DNC Response – The state has categorized low-lying areas along the MPS waterfront as coastal flood hazard area, including adjacent properties to the northwest and northeast. MPS design and construction has been such that coastal flooding and erosion have been minimal at the site. Construction in MPS coastal flood hazard areas is subject to Town of Waterford building permit requirements; however, DNC has no plans for additional MPS site development due to license renewal and anticipates no change to flooding or erosion due to license renewal.

§22a-92(a)(6) – Encourage public access to the waters of Long Island Sound by expansion, development and effective utilization of state-owned recreational facilities within the coastal area that are consistent with sound resource conservation procedures and constitutionally protected rights of private property owners.

DNC Response – There are no state-owned recreational facilities on or adjacent to the MPS site. DNC was required to close the site to general public access in response to post-9/11 national security measures that NRC has imposed at U. S. nuclear power plants.

CGS §22a-92(a)(7) – Conduct, sponsor and assist research in coastal matters to improve the data base upon which coastal land and water use decisions are made.

DNC Response – Millstone Environmental Laboratory scientists have documented aquatic populations over a relatively broad span of time, having conducted aquatic resources research in area waters continuously since 1968. The Applicant's Environmental Report--Operating License Renewal Stage, Section 2.2, summarizes the findings of these studies. DNC provides to the state annual reports on this work.

CGS §22a-92(a)(8) – Coordinate the activities of public agencies to insure that state expenditures enhance development while affording maximum protection to natural coastal resources and processes in a manner consistent with the state plan for conservation and development adopted pursuant to part I of chapter 297.

DNC Response – DNC believes this policy applies to the state, and not to license applicants. See Attachment E-2 for discussion of state plan for conservation and development.

CGS §22a-92(a)(9) – Coordinate planning and regulatory activities of public agencies at all levels of government to insure maximum protection of coastal resources while minimizing conflicts and disruption of economic development.

DNC Response – DNC believes that this policy applies to the state, and not to license applicants.

CGS §22a-92(a)(10) – Insure that the state and the coastal municipalities provide adequate planning for facilities and resources which are in the national interest as defined in section 22a-93 and to insure that any restrictions or exclusions of such facilities or uses are reasonable. Reasonable grounds for the restriction or exclusion of a facility or use in the national interest shall include a finding that such a facility or use: (A) May reasonably be sited outside the coastal boundary; (B) fails to meet any applicable federal and state environmental, health or safety standard or (C) unreasonably restricts physical or visual access to coastal waters. This policy does not exempt any nonfederal facility in use from any applicable state or local regulatory or permit program nor does it exempt any federal facility or use from the federal consistency requirements of Section 307 of the federal Coastal Zone Management Act.¹

CGS §22a-93(14) – "Facilities and resources which are in the national interest" means: ... (G) energy facilities serving state-wide and interstate markets, including electric generating facilities and facilities for storage, receiving or processing petroleum products and other fuels.

DNC Response – MPS, as an electric generating facility, serves the national interest by providing an essential service that is one of the keystones of the U.S. economy--electricity. DNC concludes that (1) the plant's status as an existing water dependent use means that it could not reasonably be sited outside the coastal boundary [see CGS §22a-92(a)(3)], (2) that the plant is in compliance with applicable environmental, health, and safety standards, and (3) the plant's restriction of physical access to coastal waters, due to national security measures, is reasonable. DNC is complying with Section 307 by preparing this consistency certification.

CGS §22a-92(b)(1)(A) – Manage uses in the coastal boundary through existing municipal planning, zoning and other local regulatory authorities and through existing state structures, dredging,

1. 16 USC 1456, requires an applicant to provide certification to the 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.

wetlands, and other state siting and regulatory authorities, giving highest priority and preference to water-dependent uses and facilities in shorefront areas.

DNC Response – See response to CGS §22a-92(a)(3).

CGS §22a-92(b)(1)(B) - Locate and phase sewer and water lines so as to encourage concentrated development in areas which are suitable for development; and to disapprove extension of sewer and water services into developed and undeveloped beaches, barrier beaches and tidal wetlands except that, when necessary to abate existing sources of pollution, sewers that will accommodate existing uses with limited excess capacity may be used.

DNC Response – DNC believes that this policy applies to the state, not to license applicants, and developed areas of the MPS site are served by Waterford water and sewer lines. There are no water or sewer lines in site beach areas or tidal wetlands onsite. DNC has no plans that would alter this status due to license renewal.

CGS §22a-92(b)(1)(C) - Promote, through existing state and local planning, development, promotional and regulatory authorities, the development, reuse or redevelopment of existing urban and commercial fishing ports giving highest priority and preference to water dependent uses, including but not limited to commercial and recreational fishing and boating uses; to disallow uses which unreasonably congest navigation channels, or unreasonably preclude boating support facilities elsewhere in a port or harbor; and to minimize the risk of oil and chemical spills at port facilities.

DNC Response – DNC believes that this policy applies to the state, not to license applicants, and MPS is not located within or adjacent to a port or a navigation channel.

CGS §22a-92(b)(1)(D) – Require that structures in tidal wetlands and coastal waters be designed, constructed and maintained to minimize adverse impacts on coastal resources, circulation and sedimentation patterns, water quality, and flooding and erosion, to reduce to the maximum extent practicable the use of fill, and to reduce conflicts with the riparian rights of adjacent landowners.

CGS §22a-93(7)(E) – “Tidal wetlands” means “wetland” as defined by Section 22a-29.

CGS §22a-29 – “Wetland” means those areas which border on or lie beneath tidal waters, such as, but not limited to banks, bogs, salt marsh, swamps, meadows, flats, or other low lands subject to tidal action, including those areas now or formerly connected to tidal waters, and whose surface is at or below an elevation of one foot above local extreme high water; and upon which may grow or be capable of growing some, but not necessarily all, of a variety of listed plants.¹

1. CGS Volume 8, Title 22a, Environmental Protection, Chapter 440, *Wetlands and Watercourses*, Section 22a-29(2).

CGS §22a-93(5) – “Coastal waters” includes waters of Long Island Sound.

DNC Response – The state categorized portions of the eastern edge of the MPS site as tidal wetland. With the exception of an osprey nesting platform, DNC has placed no structures in this area and has no plans to do so for license renewal. MPS withdraws cooling water from Long Island Sound using shoreline intake structures. The state regulates operation of these structures through the MPS discharge permit (Table E-1, Environmental Authorizations, Item 7, NPDES permit). DNC is aware of no conflicts with riparian rights of adjacent landowners and has no plans that would alter this status due to license renewal.

CGS §22a-92(b)(1)(E) – Disallow the siting within the coastal boundary of new tank farms and other new fuel and chemical storage facilities which can reasonably be located inland and to require any new storage tanks which must be located within the coastal boundary to abut existing storage tanks or to be located in urban industrial areas and to be adequately protected against floods and spills.

DNC Response – MPS is not a new tank farm and is not a new fuel and chemical storage facility. MPS has fuel oil storage tanks that are regulated by the state (Table E-1, Environmental Authorizations, Items 28 – 33) and complies with state requirements for spill prevention and reporting hazardous chemical inventories. DNC has no plans due to license renewal that would necessitate construction of a new tank farm or fuel or chemical storage facility.

CGS §22a-92(b)(1)(F) – Make use of rehabilitation, upgrading and improvement of existing transportation facilities as the primary means of meeting transportation needs in the coastal area.

DNC Response – MPS is not a transportation facility and DNC has no plans due to license renewal that would change existing transportation needs in the MPS area.

CGS §22a-92(b)(1)(G) – Encourage increased recreational boating use of coastal waters, where feasible, by (i) providing additional berthing space in existing harbors, (ii) limiting non-water-dependent land uses that preclude boating support facilities, (iii) increasing state-owned launching facilities, and (iv) providing for new boating facilities in natural harbors, new protected water areas and in areas dredged from dry land.

DNC Response – MPS is not located in or adjacent to a harbor, is a water-dependent use of coastal resources [see CGS §22a-92(a)(3)], and has no state-owned launch facility. On-site public use for boat launch purposes is not possible due to security requirements.

CGS §22a-92(b)(1)(H) – Protect coastal resources by requiring, where feasible, that such boating uses and facilities (i) minimize disruption or degradation of natural coastal resources, (ii) utilize existing altered, developed or redevelopment areas, (iii) are located to assure optimal distribution of

state-owned facilities to the state-wide boating public and (iv) utilize ramps and dry storage rather than slips in environmentally sensitive areas.

DNC Response – As noted above, MPS has no public boating uses or facilities.

CGS §22a-92(b)(1)(I) – Protect and where feasible, upgrade facilities serving the commercial fishing and recreational boating industries; to maintain existing authorized commercial fishing and recreational boating harbor space unless the demand for these facilities no longer exists or adequate space has been provided; to design and locate, where feasible, proposed recreational boating facilities in a manner which does not interfere with the needs of the commercial fishing industry.

DNC Response – MPS has no facilities serving commercial fishing and recreational boating industries and does not include, and is not adjacent to, a harbor.

CGS §22a-92(b)(1)(J) – Require reasonable mitigation measures where development would adversely impact historical, archaeological, or paleontological resources that have been designated by the state historic preservation officer.

DNC Response – In 1998, the Public Archaeology Survey Team, Inc. (PAST, Inc.) performed an archaeological survey for the town of Waterford, Connecticut, including MPS property.

The quarry village schoolhouse, identified in the PAST survey, remains on DNC property. However, DNC knows of no MPS impacts to designated historical, archaeological, or paleontological resources and has no plans for license renewal that would alter this status. DNC has corresponded with the Connecticut State Historic Preservation Officer regarding license renewal, and the State Historic Preservation Officer has concurred with DNC that MPS license renewal would have no adverse impact on such resources.

CGS §22a-92(b)(2)(A) – Manage coastal bluffs and escarpments so as to preserve their slope and toe; to discourage uses which do not permit continued natural rates of erosion and to disapprove uses that accelerate slope erosion and alter essential patterns and supply of sediments to the littoral transport system.

Definition: CGS §22a-93(7)A – "Coastal bluffs and escarpments" means naturally eroding shorelands marked by dynamic escarpments or sea cliffs which have slope angles that constitute an intricate adjustment between erosion, substrate, drainage and degree of plant cover.

DNC Response – DEP has characterized as "bluffs and escarpments" approximately 3,000 feet of MPS's northwestern-most shoreline and approximately 1,000 feet of the eastern shoreline. These are outside of the developed portion of the site and remain

essentially unaffected by station operations. DNC has no plans for altering this status due to license renewal.

CGS §22a-92(b)(2)(B) – Manage rocky shorefronts so as to insure that development proceeds in a manner which does not irreparably reduce the capability of the system to support a healthy intertidal biological community; to provide feeding grounds and refuge for shorebirds and finfish, and to dissipate and absorb storm and wave energies.

Definition: CGS §93(7)(B) – "Rocky shorefronts" means shorefront composed of bedrock, boulders and cobbles that are highly erosion-resistant and are an insignificant source of sediments for other coastal landforms.

DNC Response – Much of the MPS shoreline is naturally rocky and, at the time of construction, riprap was added to a portion of the shoreline for additional erosion control. The state has categorized as "rocky shorefront" the tips of all three MPS site points (Bay, Millstone, and the unnamed point that projects into Jordan Cove). DNC has not recently modified the rocky shorefront and has no plans to do so for license renewal. Rocky intertidal studies have been performed around MPS since 1968. Those studies showed no impact on rocky shore communities due to plant operation, with the exception of the shore immediately adjacent to the discharge. In this area, for a distance of up to 150 meters to the east, and just a few meters to the west, there tended to be a slight shift in algal populations from cold-water species toward warm-water species

CGS §22a-92(b)(2)(C) – Preserve the dynamic form and integrity of natural beach systems in order to provide critical wildlife habitats, a reservoir for sand supply, a buffer for coastal flooding and erosion, and valuable recreational opportunities; to insure that coastal uses are compatible with the capabilities of the system and do not unreasonably interfere with natural processes of erosion and sedimentation, and to encourage the restoration and enhancement of disturbed or modified beach systems.

DNC Response – The state has categorized as "beaches and dunes" approximately 500 feet of shoreline on the MPS site, adjacent to the heavily developed portion of the site. DNC does not actively use the beach area and has no plans to modify the beach. The state has also categorized the property northwest of MPS, a private home on Niantic Bay, as "beach and dunes." DNC is aware of no impact that MPS operations have on this coastal resource.

CGS §22a-92(b)(2)(D) – Manage intertidal flats so as to preserve their value as a nutrient source and reservoir, a healthy shellfish habitat and a valuable feeding area for invertebrates, fish and shorebirds; to encourage the restoration and enhancement of degraded intertidal flats; to allow coastal uses that minimize change in the natural current flows, depth, slope, sedimentation, and

nutrient storage functions and to disallow uses that substantially accelerate erosion or lead to significant despoliation of tidal flats.

CGS §22a-93(7)(D) – "Intertidal flats" means very gently sloping or flat areas located between high and low tides composed of muddy, silty and fine sandy sediments and generally devoid of vegetation.

DNC Response – The state categorization of coastal resources on and adjacent to MPS does not identify any intertidal flats. DNC believes that this is correct; to the best of DNC's knowledge, there are no intertidal flats on or adjacent to the MPS site.

CGS §22a-92(b)(2)(E) – Preserve tidal wetlands and to prevent the despoliation and destruction thereof in order to maintain their vital natural functions; to encourage the rehabilitation and restoration of degraded tidal wetlands and where feasible and environmentally acceptable, to encourage the creation of wetlands for the purposes of shellfish and finfish management, habitat creation and dredge spoil disposal.

DNC Response – CTDEP has categorized portions of the eastern edge of the MPS site as tidal wetlands. With the exception of an osprey nesting platform, DNC has placed no structures in this area and has no plans to do so for license renewal.

CGS §22a-92(b)(2)(F) – Manage coastal hazard areas so as to insure that development proceeds in such a manner that hazards to life and property are minimized and to promote nonstructural solutions to flood and erosion problems except in those instances where structural alternatives prove unavoidable and necessary to protect existing inhabited structures, infrastructural facilities or water dependent uses.

DNC Response – CTDEP has categorized the inland edge of most of the MPS coastline as a coastal "flood" hazard area. Active site use of this resource category is limited to a small park and boat ramp that DNC had to close in response to U. S. Nuclear Regulatory Commission post-9/11 security measures at U. S. nuclear power plants. In accordance with state-issued permits, the site has installed riprap for erosion control in some MPS coastal hazard areas. With the exception of the intake and discharge structures, the developed portions of the site are at an elevation that is above this resource area.

CGS §22a-92(b)(2)(G) – Promote, through existing state and local planning, development, promotional and regulatory programs, the use of existing developed shorefront areas for marine-related uses, including but not limited to, commercial and recreational fishing, boating and other water-dependent commercial, industrial and recreational uses.

CGS §22a-93(7)(I) – "Developed shorefront" means those harbor areas which have been highly engineered and developed resulting in the functional impairment or substantial alteration of their natural physiographic features or systems.

DNC Response – The CTDEP categorization of coastal resources on and adjacent to MPS does not identify any developed shorefront. DNC believes that this is correct because there are no harbor areas on or adjacent to the MPS site.

CGS §22a-92(b)(2)(H) – Manage undeveloped islands in order to promote their use as critical habitats for those bird, plant and animal species which are indigenous to such islands or which are increasingly rare on the mainland; to maintain the value of undeveloped islands as a major source of recreational open space; and to disallow uses which will have significant adverse impacts on islands or their resource components.

CGS §22a-93(7)(J) – "Island" means land surrounded on all sides by water.

DNC Response – The state categorization of coastal resources on and adjacent to MPS does not identify any islands. DNC believes that this is correct because there are no islands on or adjacent to the MPS site. DNC notes that old maps of the area show a Fox Island located southeast of the peninsula upon which MPS is located. However, the intervening area was filled prior to purchase for MPS construction and the area is now part of the peninsula. Other islands in Niantic Bay nearshore waters are not part of the MPS site.

CGS §22a-92(b)(2)(I) – Regulate shoreland use and development in a manner which minimizes adverse impacts upon adjacent coastal systems and resources.

CGS §22a-93(7)(M) – "Shorelands" means those land areas within the coastal boundary, exclusive of coastal hazard areas, which are not subject to dynamic coastal processes and which are comprised of typical upland features.

DNC Response – The bulk of the MPS site, including the developed portions, is shorelands, as are adjacent properties to the northwest and northeast. Construction in shorelands is subject to Town of Waterford building permit requirements; however, DNC has no plans due to license renewal that would necessitate additional construction. DNC believes that its use of MPS shorelands, as regulated by local, state, and Federal agencies, minimizes adverse impacts on adjacent coastal systems and resources.

CGS §22a-92(b)(2)(J) – Maintain the natural relationship between eroding and depositional coastal landforms and to minimize the adverse impacts of erosion and sedimentation on coastal land uses through the promotion of nonstructural mitigation measures. Structural solutions are permissible when necessary and unavoidable for the protection of infrastructural facilities, water-dependent uses, or existing inhabited structures, and where there is no feasible, less environmentally

damaging alternative and where all reasonable mitigation measures and techniques have been provided to minimize adverse environmental impacts.

DNC Response – Historically, structural solutions in the form of rip rap [see CGS §22a-92(b)(2)(B)] were used to protect MPS as a water-dependent use of coastal resources [see CGS §22a-92(a)(3)]. DNC has not recently modified the rocky shorefront and has no plans to do so for license renewal.

CGS §22a-92(c)(1)(A) – Minimize the risk of spillage of petroleum products and hazardous substances, to provide effective containment and cleanup facilities for accidental spills and to disallow offshore oil receiving systems that have the potential to cause catastrophic oil spills in the Long Island Sound estuary.

DNC Response – MPS management of fuel, chemicals, and hazardous materials is subject to State and Federal regulation, spill prevention control and countermeasures planning, and inventory and usage reporting. MPS has no port, harbor, or offshore oil receiving system, and has no plans for additional storage or facility changes due to license renewal.

CGS §22a-92(c)(1)(B) - Disallow any filling of tidal wetlands and nearshore, offshore and intertidal waters for the purpose of creating new land from existing wetlands and coastal waters which would otherwise be undevelopable, unless it is found that the adverse impacts on coastal resources are minimal.

DNC Response – DNC has no plans to fill tidal wetlands or nearshore, offshore, or intertidal waters due to license renewal.

CGS §22a-92(c)(1)(C) – Initiate in cooperation with the federal government and the continuing legislative committee on state planning and development a long-range planning program for the continued maintenance and enhancement of federally-maintained navigation facilities in order to effectively and efficiently plan and provide for environmentally sound dredging and disposal of dredged materials; to encourage, through the state permitting program for dredging activities, the maintenance and enhancement of existing federally-maintained navigation channels, basins and anchorages and to discourage the dredging of new federally- maintained navigation channels, basins and anchorages.

DNC Response – There are no federally maintained navigation facilities on or adjacent to the MPS site. The site periodically performs maintenance dredging at the intake structures in accordance with federal and state permits. DNC is unaware of any but temporary impacts from this dredging and foresees no change as a result of license renewal.

CGS §22a-92(c)(1)(D) – Reduce the need for future dredging by requiring that new or expanded navigation channels, basins and anchorages take advantage of existing or authorized water depths, circulation and siltation patterns and the best available technologies for reducing controllable sedimentation.

DNC Response – Federal and state agencies review dredging needs and practices prior to issuing permits authorizing MPS routine, though infrequent, maintenance dredging.

CGS §22a-92(c)(1)(E) – Disallow new dredging in tidal wetlands except where no feasible alternative exists and where adverse impacts to coastal resources are minimal

DNC Response – DNC does not dredge in site tidal wetlands and has no plans to do so due to license renewal.

CGS §22a-92(c)(1)(F) – Require that new or improved shoreline rail corridors be designed and constructed so as (i) to prevent tidal and circulation restrictions and, when practicable, to eliminate any such existing restrictions, (ii) to improve or have a negligible adverse effect on coastal access and recreation and (iii) to enhance or not unreasonably impair the visual quality of the shoreline.

DNC Response – A rail corridor bisects, but is not part of, the MPS site. DNC has no plans for license renewal that would necessitate modifying the corridor.

Policy: CGS §22a-92(c)(1)(G) – Require that coastal highways and highway improvements, including bridges, be designed and constructed so as to minimize adverse impacts on coastal resources; to require that coastal highway and highway improvements give full consideration to mass transportation alternatives and to require that coastal highways and highway improvements where possible enhance, but in no case decrease coastal access and recreational opportunities.

DNC Response – The MPS site does not include a coastal highway or bridge. DNC has no plans due to license renewal to alter this status.

CGS §22a-92(c)(1)(H) – Disallow the construction of major new airports and to discourage the substantial expansion of existing airports within the coastal boundary; to require that any expansion or improvement of existing airports minimize adverse impacts on coastal resources, recreation or access.

DNC Response – The MPS site does not include an airport. DNC has no plans due to license renewal to alter this status.

CGS §22a-92(c)(1)(I) – Manage the state's fisheries in order to promote the economic benefits of commercial and recreational fishing, enhance recreational fishing opportunities, optimize the yield of all species, prevent the depletion or extinction of indigenous species, maintain and enhance the productivity of natural estuarine resources and preserve healthy fisheries resources for future generations.

DNC Response – Overall management of the state’s fisheries is properly within the jurisdiction of state and federal agencies. The state regulates any impact from impingement and entrainment mortality due to cooling water intake resulting from plant operations through the site NPDES permit.

Millstone Environmental Laboratory scientists have documented aquatic populations over a relatively broad span of time, having conducted aquatic resources research in area waters continuously since 1968. The Applicant’s Environmental Report--Operating License Renewal Stage, Section 2.2, summarizes the findings of these studies. DNC provides to the state annual reports on this work.

CGS §22a-92(c)(1)(J) – Make effective use of state- owned coastal recreational facilities in order to expand coastal recreational opportunities including the development or redevelopment of existing state-owned facilities where feasible.

DNC Response – There are no state-owned recreational facilities on or adjacent to the MPS site. DNC had to close the site to general public access in response to NRC post-9/11 security measures at U. S. nuclear power plants.

CGS §22a-92(c)(1)(K) – Require as a condition in permitting new coastal structures, including but not limited to, groins, jetties or breakwaters, that access to, or along, the public beach below mean high water must not be unreasonably impaired by such structures and to encourage the removal of illegal structures below mean high water which unreasonably obstruct passage along the public beach.

DNC Response – The state has categorized as “beaches and dunes” approximately 500 feet of shoreline on the MPS site, adjacent to the heavily developed portion of the site. DNC does not actively use the beach area and has no plans to modify the beach. DNC plans no new coastal structures as a result of license renewal and is aware of no illegal structures on site. Public access to the beach is restricted due to NRC post-9/11 security measures at U.S. nuclear power plants. The state has also categorized the property northwest of MPS, a private home on Niantic Bay, as “beach and dunes.” DNC is not aware of any impact that MPS operations have on this coastal resource.

CGS §22a-92(c)(1)(L) – Promote revitalization of inner city urban harbors and waterfronts.

DNC Response – DNC believes that this policy applies to the state, and not to license applicants. The MPS site is not located in or adjacent to an inner city harbor or waterfront.

CGS §22a-92(c)(2)(A) – Manage estuarine embayments so as to insure that coastal uses proceed in a manner that assures sustained biological productivity, the maintenance of healthy marine populations and the maintenance of essential patterns of circulation, drainage and basin

configuration; to protect, enhance and allow natural restoration of eelgrass flats except in special limited cases, notably shellfish management, where the benefits accrued through alteration of the flat may outweigh the long-term benefits to marine biota, waterfowl, and commercial and recreational finfisheries.

CGS §22a-93(7)(G) – "Estuarine embayments" means a protected coastal body of water with an open connection to the sea in which saline sea water is measurably diluted by fresh water including tidal rivers, bays, lagoons and coves.

DNC Response – MPS withdraws water from nearshore water of Niantic Bay and discharges to a surface impoundment and thence to nearshore waters of Long Island Sound. The state has categorized the waterbody located east of the site, Jordan Cove, as an estuarine embayment. The state regulates MPS impacts to these waterbodies through provisions of the site National Pollutant Discharge Elimination System (NPDES) permit. The aquatic resources of the MPS area have been monitored continuously since 1968. DNC provides monthly and annual reports, in addition to special reports, and the state performs a detailed review in connection with the permit's renewal.

CGS §22a-92(c)(2)(B) – Maintain, enhance, or, where feasible, restore natural patterns of water circulation and fresh and saltwater exchange in the placement or replacement of culverts, tide gates or other drainage or flood control structures.

DNC Response – DNC has no plans due to license renewal that would necessitate onsite construction and has no plans for culvert, tide gate, drainage, or flood control structure construction or replacement.

Policy: CGS §22a-92(d) – The policies of the state plan of conservation and development shall be applied.

DNC Response – DNC has reviewed the plan and concludes that MPS license renewal would be consistent with it. See Attachment E-2 for discussion.

Attachment E-2

Connecticut Conservation and Development Plan, 1998 - 2003¹

The Connecticut Coastal Management Act is codified in the General Statutes of Connecticut (CGS)² and requires persons seeking approval for coastal activities to demonstrate that the activity is consistent with all applicable goals and policies in Section 22a-92, Legislative Goals and Policies.³ Sections 22a-92(a)(8) and -92(d) adopt by reference policies of the state plan of conservation and development.

Dominion Nuclear Connecticut (DNC) is seeking U. S. Nuclear Regulatory Commission (NRC) renewal of operating licenses for Millstone Power Station (MPS) Units 2 and 3. The following paragraphs enumerate plan policies that are pertinent to MPS license renewal and explain the DNC basis for concluding that MPS license renewal is consistent with those policies. The state has organized the plan using a hierarchy of (in descending order) major topical subjects, policies, and strategies. The following paragraphs identify the topics but focus on the policies.

Economic Opportunity

Policy A – Maintain a diversified economy capable of developing opportunities in key industry sectors and able to prosper in a global economy.

Policy B – Improve the environment for innovation, product development, and entrepreneurial success in Connecticut.

Policy C – Manage government responsibilities in a manner that promotes growth of economic opportunities. Channel growth to locations where infrastructure is available or expandable and where open-space and environmental quality will be protected.

Policy D – Increase compositeness of Connecticut workers.

Policy E – Secure a sustainable supply of energy at the best possible cost and promote its efficient use.

DNC Response – MPS is Connecticut's largest source of electricity, producing approximately one half of the electricity generated in the state. The site employs approximately 1,550-1,650 workers and annually pays a significant portion of Waterford's property taxes. The site's presence is a major

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1. *Connecticut Conservation and Development Policies Plan, 1998 – 2003*, State of Connecticut, available online at <http://www.opm.state.ct.us/pdpd3/physical/C&DPlan/C&DIntro.htm>. Accessed April 2, 2003.
 2. Connecticut General Statutes (CGS) Volume 8, Title 22a, Environmental Protection, Chapter 444, Coastal Management, Sections 22a-90 through 22a-113(d).
 3. CGS Section 22a-98.

stabilizing factor to the area's economy and, as a result, encourages investors in the area. License renewal would enable MPS to continue contributing to Connecticut's economy for an additional 20 years.

Transportation

Policy A – Maintain the condition of, and encourage efficient use of, existing transportation systems and support alternatives to single-occupancy vehicle use.

Policy B – Improve the relationship of transportation and land use decisions with particular emphasis on directing new industrial, commercial, and residential development to transit accessible locations.

Policy C – Foster and coordinate public and private transit and non-conventional approaches that serve the basic needs of all segments of the population.

Policy D – Expand the state's integrated transportation system, in accordance with available public resources, where justified by the need for improved safety, choice of mode, mobility, and convenience.

Policy E – Coordinate transportation, air quality, water quality, and energy planning.

Policy F – Promote telecommunications infrastructure and services that are compatible with the state's economic and other policy goals.

DNC Response – MPS is not a transportation facility and DNC has no plans for additional impact to the state's transportation system due to license renewal.

Housing

Policy A – Provide an adequate supply of decent and affordable housing in order to give consumers of all races and economic classes a real choice of housing type, ownership, and location.

Policy B – Facilitate homeownership of existing housing stock.

Policy C – Coordinate multi-agency strategies for housing and community development in a concerted effort to enhance the health, safety, and economic vitality of Connecticut neighborhoods.

Policy D – Preserve existing residential neighborhoods and housing stock.

Policy E – Coordinate federal, state, municipal, and private housing actions with the policies of this Plan.

DNC Response – DNC is unaware of any effect that MPS license renewal would have on state housing or related policies.

Water Supply

Policy A – Protect health by meeting or exceeding state and federal drinking water standards for water supplies by preventing the degradation of water supplies and by providing adequate levels of treatment.

Policy B – Identify water supply sources needed in the future and secure such sources by acquisition of potential well field and reservoir sites and by regulating land uses of the associated watersheds and aquifer areas so as to preserve these drinking water sources.

Policy C – Ensure that water conservation is a priority consideration in all water supply planning activities and decisions.

Policy D – Promote regionally efficient supply and delivery systems through coordination among viable water utilities.

DNC Response – The groundwater aquifer beneath MPS, due to the presence of salt water, is not an important water supply. The site receives its domestic and process water from municipal supply. DNC has no plans due to license renewal that would alter MPS water usage.

Food Production

Policy A – Protect prime agriculture land in sufficient quantity to ensure a long-range food production capability within the state. Consider food production as the most appropriate use for prime agricultural lands in priority farm preserve areas. Further, protect all active agricultural lands until the necessity for conversion to non-agricultural uses is substantial or preservation is no longer feasible through available programs.

Policy B – Enhance the economics of Connecticut agriculture as a means of improving its competitive position relative to other areas of the country and other professions within the state.

Policy C – Ensure that a safe, affordable and quality food supply is available to all Connecticut residents.

Policy D – Due in large part to the Long Island Sound Study and its management initiatives, the waters of the Sound continue to improve. Connecticut must continue to restore and protect the quality of Long island Sound and manage the marine resources to ensure the seafood production capability of the state.

DNC Response – The MPS site does not include agricultural land. MPS impacts to Long Island Sound biota are regulated by the state through the site's NPDES permit and are subject to re-review during permit renewal. Millstone Environmental Laboratory scientists have documented aquatic populations over a relatively broad span of time, having conducted aquatic resources research in area waters continuously since 1968. DNC provides to the state annual reports on this work. See CGS §22a-92(c)(1)(I) for discussion of shellfish concentration areas.

Water Quality Management

Policy A – Continue to provide for the timely resolution of water resource conflicts. Balance the competing needs of water for human consumption, waste assimilation, habitat, recreation, power production, and transport. Encourage continued federal financial assistance to the state to meet clean water goals.

Policy B – Continue to improve the quality of ground and surface water through a combination of pollution prevention and pollution abatement practices.

Policy C – Coordinate land use with wastewater management policies.

Policy D – Improve water quality of Long Island Sound.

DNC Response – As noted previously, the MPS site is not an important groundwater source. MPS uses a municipal wastewater system for sanitary and some process wastewaters and is subject to state NPDES regulation for cooling water intake and discharge. DNC has no plans due to license renewal that would alter MPS impacts on water quality.

Solid, Hazardous, & Low-Level Radioactive Waste

Solid Waste Management

Policy A – Continue the timely planning, financing, construction, and operation of a statewide integrated recycling, composting, resource recovery, and landfill system.

DNC Response – MPS uses licensed commercial haulers for its solid wastes. The site also has a comprehensive recycling program, through which approximately 300 tons of paper and cardboard are recycled annually.

Hazardous Waste Management

Policy A – Pollution prevention, the efficient use of energy, and recycling of material resources will be the primary means to maintain a clean and healthful environment.

Policy B – Protect public health and safety, the environment, and economic interests in managing hazardous wastes and the remediation of contaminated sites.

DNC Response - MPS uses licensed commercial haulers for its hazardous wastes.

Low-Level Radioactive Waste Management (LLRW)

Policy A – Protect public health and safety and the environment while pursuing cost-effective solutions to managing LLRW that is generated in Connecticut.

DNC Response – MPS disposes of its LLRW at licensed facilities out of state.

Air Quality

Policy A – Seek to attain National Ambient Air Quality Standards by the applicable deadlines with emphasis on cost-effective strategies and effective enforcement.

Policy B – Develop strategies to achieve and maintain healthy air quality that will enable and foster economic development within the urban areas of the state as designated within this Plan.

Policy C – Foster transportation and development plans and projects that promote attainment and maintenance of healthy air.

Policy D – Establish and maintain standards that will protect citizens from the dangers of hazardous air pollutants and integrate monitoring and regulation of such pollution into air quality enforcement activities.

Policy E – In order to reduce the risk of global climate change, seek to reduce statewide carbon dioxide emissions to 1990 levels and to reduce further where technically and economically feasible. Also, seek to reduce emissions of other substances that contribute to global warming.

DNC Response – MPS is a small air emissions generator due to the need to routinely test emergency diesel and other fuel-burning equipment. DNC estimates that a coal-fired alternative to MPS license renewal would annually generate 3,445 – 13,780 tons of sulfur oxides, 1,486 to 4,459 tons of nitrogen oxides, 1,486 tons of carbon monoxide, 16,379,473 tons of carbon dioxide, and 144 tons of particulates. MPS license renewal, therefore, could enable the state to avoid a significant increase in air contaminant emissions and resultant impacts on air quality.

Natural and Cultural Resources

Policy A – Identify and protect critical environmental areas of the state.

Policy B – Provide a wide variety of high quality outdoor recreational opportunities to all citizens emphasizing activities that broaden understanding of and contact with the natural environment.

Policy C – Encourage management of natural resources that preserves the diversity of habitats and species and achieves sustainable yields of renewable resources. In particular, retain healthy, vigorous forestlands and achieve sustainable yields of forest resource-based benefits through scientific management of these resources.

Policy D – Encourage a wide variety of cultural opportunities for all citizens.

DNC Response – DNC is unaware of any critical environmental areas on or adjacent to the MPS site. In the past, the site has allowed on-site public fishing but has had to discontinue this practice in response to post-9/11 security measures that NRC has imposed at U. S. nuclear power plants. The MPS site does not contain forestland for forest resources.