

APPENDIX A

NRC NEPA ISSUES FOR LICENSE RENEWAL OF NUCLEAR POWER PLANTS

Exelon has prepared this Environmental Report in accordance with the requirements of U.S. Nuclear Regulatory Commission (NRC) regulation 10 CFR 51.53. NRC included in the regulation a list of National Environmental Policy Act issues for license renewal of nuclear power plants. [Table A-1](#) lists these 92 issues and identifies the section in which Exelon addressed each issue in the Environmental Report. For expediency, Exelon has assigned a number to each issue and uses the issue numbers throughout the Environmental Report.

TABLE A-1
PEACH BOTTOM ATOMIC POWER STATION
ENVIRONMENTAL REPORT DISCUSSION OF
LICENSE RENEWAL NEPA ISSUES^a

Issue	Category	Section of this Environmental Report
1. Impacts of refurbishment on surface water quality	1	4.0
2. Impacts of refurbishment on surface water use	1	4.0
3. Altered current patterns at intake and discharge structures	1	4.0
4. Altered salinity gradients	1	4.0
5. Altered thermal stratification of lakes	1	4.0
6. Temperature effects on sediment transport capacity	1	4.0
7. Scouring caused by discharged cooling water	1	4.0
8. Eutrophication	1	4.0
9. Discharge of chlorine or other biocides	1	4.0
10. Discharge of sanitary wastes and minor chemical spills	1	4.0
11. Discharge of other metals in waste water	1	4.0
12. Water use conflicts (plants with once-through cooling systems)	1	4.0
13. Water use conflicts (plants with cooling ponds or cooling towers using make-up water from a small river with low flow)	2	4.1
14. Refurbishment impacts to aquatic resources	1	4.0
15. Accumulation of contaminants in sediments or biota	1	4.0
16. Entrainment of phytoplankton and zooplankton	1	4.0
17. Cold shock	1	4.0
18. Thermal plume barrier to migrating fish	1	4.0
19. Distribution of aquatic organisms	1	4.0
20. Premature emergence of aquatic insects	1	4.0
21. Gas supersaturation (gas bubble disease)	1	4.0
22. Low dissolved oxygen in the discharge	1	4.0
23. Losses from predation, parasitism, and disease among organisms exposed to sublethal stresses	1	4.0
24. Stimulation of nuisance organisms (e.g., shipworms)	1	4.0
25. Entrainment of fish and shellfish in early life stages for plants with once-through and cooling pond heat dissipation systems	2	4.2

TABLE A-1 (Cont'd)
PEACH BOTTOM ATOMIC POWER STATION
ENVIRONMENTAL REPORT DISCUSSION OF
LICENSE RENEWAL NEPA ISSUES^a

Issue	Category	Section of this Environmental Report
26. Impingement of fish and shellfish for plants with once-through and cooling pond heat dissipation systems	2	4.3
27. Heat shock for plants with once-through and cooling pond heat dissipation systems	2	4.4
28. Entrainment of fish and shellfish in early life stages for plants with cooling-tower-based heat dissipation systems	1	4.0
29. Impingement of fish and shellfish for plants with cooling-tower-based heat dissipation systems	1	4.0
30. Heat shock for plants with cooling-tower-based heat dissipation systems	1	4.0
31. Impacts of refurbishment on groundwater use and quality	1	4.0
32. Groundwater use conflicts (potable and service water; plants that use < 100 gpm)	1	4.0
33. Groundwater use conflicts (potable, service water, and dewatering; plants that use > 100 gpm)	2	4.5
34. Groundwater use conflicts (plants using cooling towers withdrawing make-up water from a small river)	2	4.6
35. Groundwater use conflicts (Ranney wells)	2	4.7
36. Groundwater quality degradation (Ranney wells)	1	4.0
37. Groundwater quality degradation (saltwater intrusion)	1	4.0
38. Groundwater quality degradation (cooling ponds in salt marshes)	1	4.0
39. Groundwater quality degradation (cooling ponds at inland sites)	2	4.8
40. Refurbishment impacts to terrestrial resources	2	4.9
41. Cooling tower impacts on crops and ornamental vegetation	1	4.0
42. Cooling tower impacts on native plants	1	4.0
43. Bird collisions with cooling towers	1	4.0
44. Cooling pond impacts on terrestrial resources	1	4.0
45. Power line right-of-way management (cutting and herbicide application)	1	4.0

TABLE A-1 (Cont'd)
PEACH BOTTOM ATOMIC POWER STATION
ENVIRONMENTAL REPORT DISCUSSION OF
LICENSE RENEWAL NEPA ISSUES^a

Issue	Category	Section of this Environmental Report
46. Bird collisions with power lines	1	4.0
47. Impacts of electromagnetic fields on flora and fauna (plants, agricultural crops, honeybees, wildlife, livestock)	1	4.0
48. Floodplains and wetlands on power line right-of-way	1	4.0
49. Threatened or endangered species	2	4.10
50. Air quality during refurbishment (non-attainment and maintenance areas)	2	4.11
51. Air quality effects of transmission lines	1	4.0
52. Onsite land use	1	4.0
53. Power line right-of-way land use impacts	1	4.0
54. Radiation exposures to the public during refurbishment	1	4.0
55. Occupational radiation exposures during refurbishment	1	4.0
56. Microbiological organisms (occupational health)	1	4.0
57. Microbiological organisms (public health) (plants using lakes or canals, or cooling towers or cooling ponds that discharge to a small river)	2	4.12
58. Noise	1	4.0
59. Electromagnetic fields, acute effects (electric shock)	2	4.13
60. Electromagnetic fields, chronic effects	NAb	4.0
61. Radiation exposures to public (license renewal term)	1	4.0
62. Occupational radiation exposures (license renewal term)	1	4.0
63. Housing impacts	2	4.14
64. Public services: public safety, social services, and tourism and recreation	1	4.0
65. Public services: public utilities	2	4.15
66. Public services: education (refurbishment)	2	4.16
67. Public services: education (license renewal term)	1	4.0
68. Offsite land use (refurbishment)	2	4.17.1
69. Offsite land use (license renewal term)	2	4.17.2
70. Public services: transportation	2	4.18
71. Historic and archaeological resources	2	4.19
72. Aesthetic impacts (refurbishment)	1	4.0

TABLE A-1 (Cont'd)
PEACH BOTTOM ATOMIC POWER STATION
ENVIRONMENTAL REPORT DISCUSSION OF
LICENSE RENEWAL NEPA ISSUES^a

Issue	Category	Section of this Environmental Report
73. Aesthetic impacts (license renewal term)	1	4.0
74. Aesthetic impacts of transmission lines (license renewal term)	1	4.0
75. Design basis accidents	1	4.0
76. Severe accidents	2	4.20
77. Offsite radiological impacts (individual effects from other than the disposal of spent fuel and high-level waste)	1	4.0
78. Offsite radiological impacts (collective effects)	1	4.0
79. Offsite radiological impacts (spent fuel and high-level waste disposal)	1	4.0
80. Nonradiological impacts of the uranium fuel cycle	1	4.0
81. Low-level waste storage and disposal	1	4.0
82. Mixed waste storage and disposal	1	4.0
83. Onsite spent fuel	1	4.0
84. Nonradiological waste	1	4.0
85. Transportation	1	4.0
86. Radiation doses (decommissioning)	1	4.0
87. Waste management (decommissioning)	1	4.0
88. Air quality (decommissioning)	1	4.0
89. Water quality (decommissioning)	1	4.0
90. Ecological resources (decommissioning)	1	4.0
91. Socioeconomic impacts (decommissioning)	1	4.0
92. Environmental justice	NAb	2.11

a. Source: 10 CFR 51, Subpart A, Appendix A, Table B-1. (Issue numbers added to facilitate discussion.)

b. Not applicable. Regulation does not categorize this issue.
 NEPA = National Environmental Policy Act.

APPENDIX B

NPDES PERMIT

The NPDES permit for Peach Bottom Atomic Power Station is approximately 35 pages long. Only the cover page, providing the authority to discharge is provided. No other pages are pertinent to any Category 2 issues.



Pennsylvania Department of Environmental Protection
WATER MANAGEMENT PROGRAM

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
NPDES PERMIT NO. PA 0009733

In compliance with the provisions of the Clean Water Act, 33 U.S.C. Section 1251 et seq. (the "Act") and Pennsylvania's Clean Streams Law, as amended, 35 P.S. Section 691.1 et seq.,

PECO Energy Company
Peach Bottom Atomic Power Station
1848 Lay Road
Delta, PA 17314

is hereby authorized to discharge from a facility located in **Peach Bottom Township, York County** to the receiving waters named **Susquehanna River in Watershed 7-I (Kreutz - Muddy Creeks)** in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts A, B, and C hereof.

THIS PERMIT SHALL BECOME EFFECTIVE ON DECEMBER 1, 2000

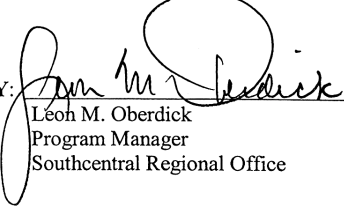
AND EXPIRE AT MIDNIGHT, DECEMBER 1, 2005

The authority granted by this permit is subject to the following further qualifications:

1. If there is a conflict between the application, its supporting documents and/or amendments and the terms and conditions of this permit, the terms and conditions shall apply.
2. Failure to comply with the terms or conditions of this permit is grounds for enforcement action; for permit termination, revocation and reissuance or modification; or for denial of a permit renewal application.
3. Application for renewal of this permit, or notification of intent to cease discharging by the expiration date, must be submitted to the Department at least 180 days prior to the above expiration date (unless permission has been granted by the Department for submission at a later date), using the appropriate NPDES Permit Application Form. In the event that a timely and complete application for renewal has been submitted and the Department is unable, through no fault of the permittee, to reissue the permit before the above expiration date, the terms and conditions to this permit will be automatically continued and will remain fully effective and enforceable pending the grant or denial of the application for permit renewal.
4. This permit does not constitute authorization to construct or make modifications to wastewater treatment facilities necessary to meet the terms and conditions of this permit.

PERMIT ISSUED: _____ NOV 3 2000 _____

PERMIT AMENDED: _____

BY:  _____
Leon M. Oberdick
Program Manager
Southcentral Regional Office