

APPENDIX D
STATE HISTORIC PRESERVATION OFFICER DETERMINATION

D-2 Letter, Faggert (VP) to Wise (Virginia Department of Historic Resources), April 12, 2000

*Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, Virginia 23060*

April 12, 2000

Mr. Alexander Wise, Director
Virginia Department of Historic Resources
2801 Kensington Avenue
Richmond, VA 23221



**Re: Surry and North Anna Power Stations Nuclear License Renewal
and Environmental Reports**

Dear Mr. Wise:

Virginia Power is in the process of preparing applications for renewing the operating licenses for its Surry and North Anna Power Stations. We intend the applications to be consistent with the Department of Historic Resources' requirements and with the priorities of our communities. As part of the license renewal process, the Nuclear Regulatory Commission (NRC) requires that applicants identify impacts to cultural resources, including historical and archeological sites, resulting from continued operation of the facility or from refurbishment activities associated with license renewal. We do not believe there will be any impact on these resources from our activities. In addition, no future operational or refurbishment activities are planned which would invalidate this conclusion.

As a matter of course, the NRC will request an informal consultation with your agency regarding our actions. The time frame for the NRC consultation request is anticipated to be in the second half of 2001, following a September applications submittal. To assist you in responding to this request, I have enclosed figures for each station depicting site and surrounding areas.

It is our expectation that, by contacting you early in the application process, we can identify any questions needing to be addressed or data needed to facilitate a smooth and expeditious NRC consultation. We will appreciate your notifying us of your comments and of any information or actions required of Virginia Power in advance to assist in meeting commonly shared objectives.

Following your review, a letter confirming the above conclusion would also be greatly appreciated.

Please contact Mr. Tony Banks at (804) 273-2170 should you or your staff have any questions or comments.

Respectfully,

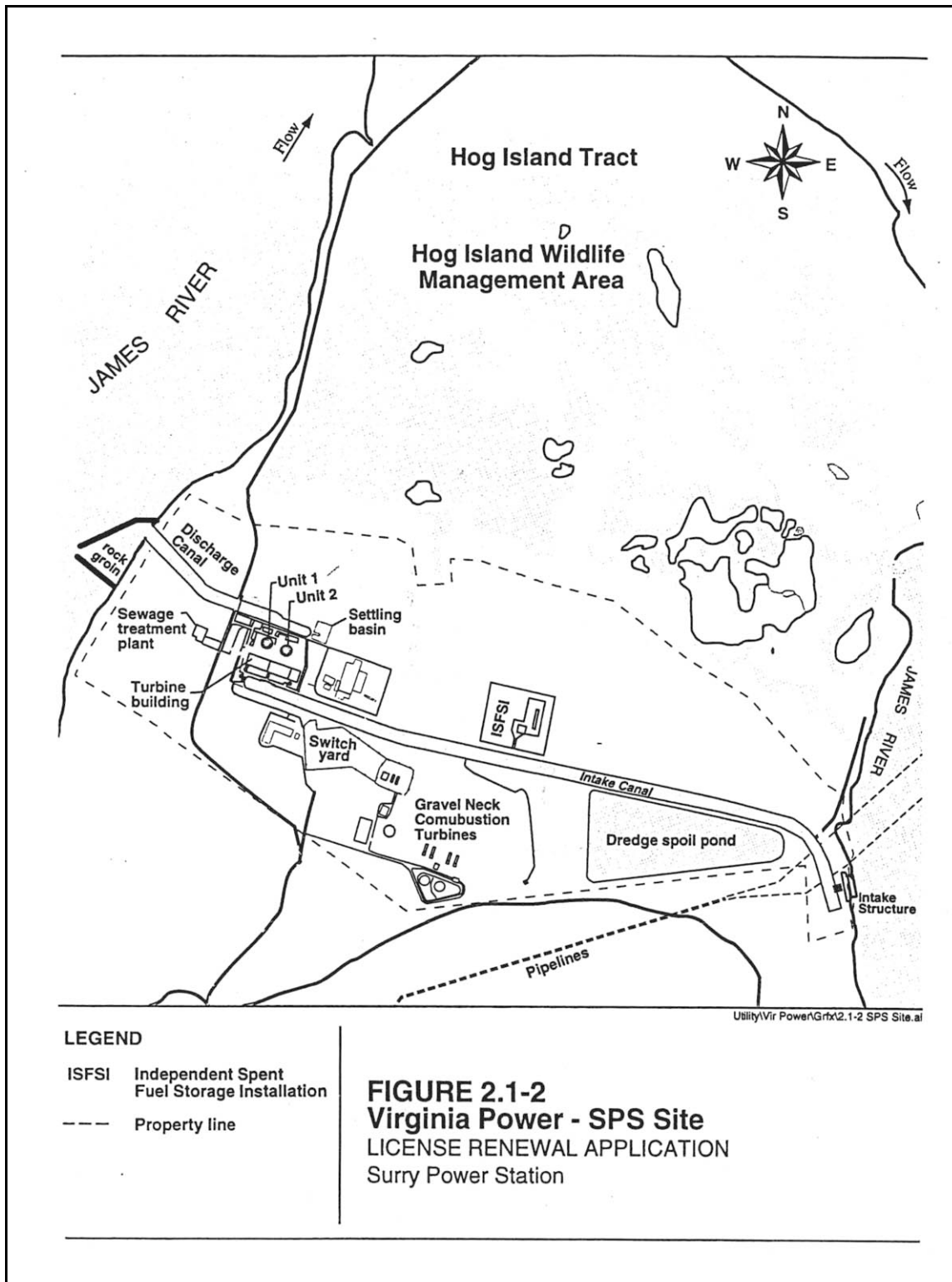
A handwritten signature in black ink that reads "P. F. Faggert".

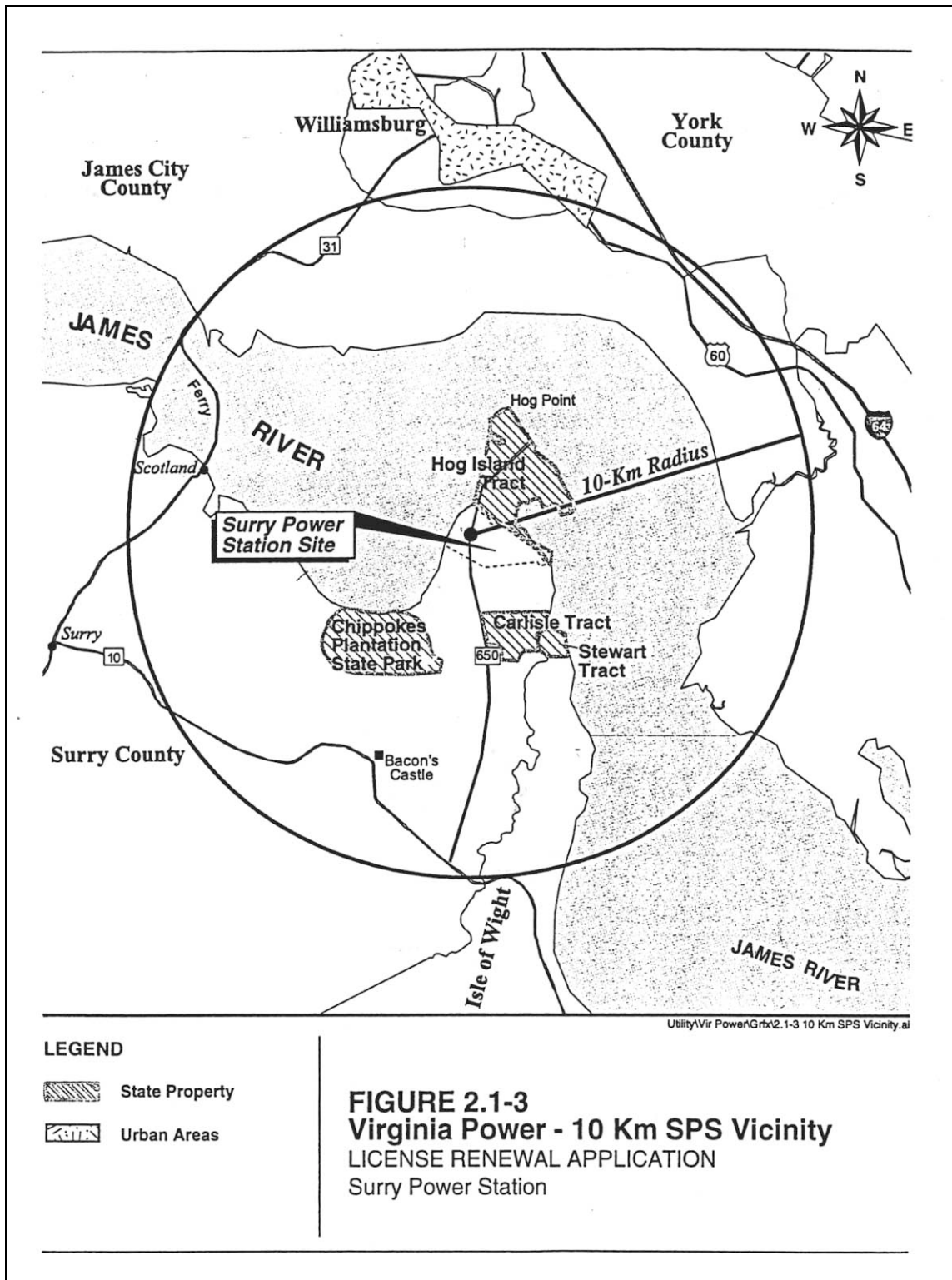
P. F. Faggert, Vice-President and
Chief Environmental Officer

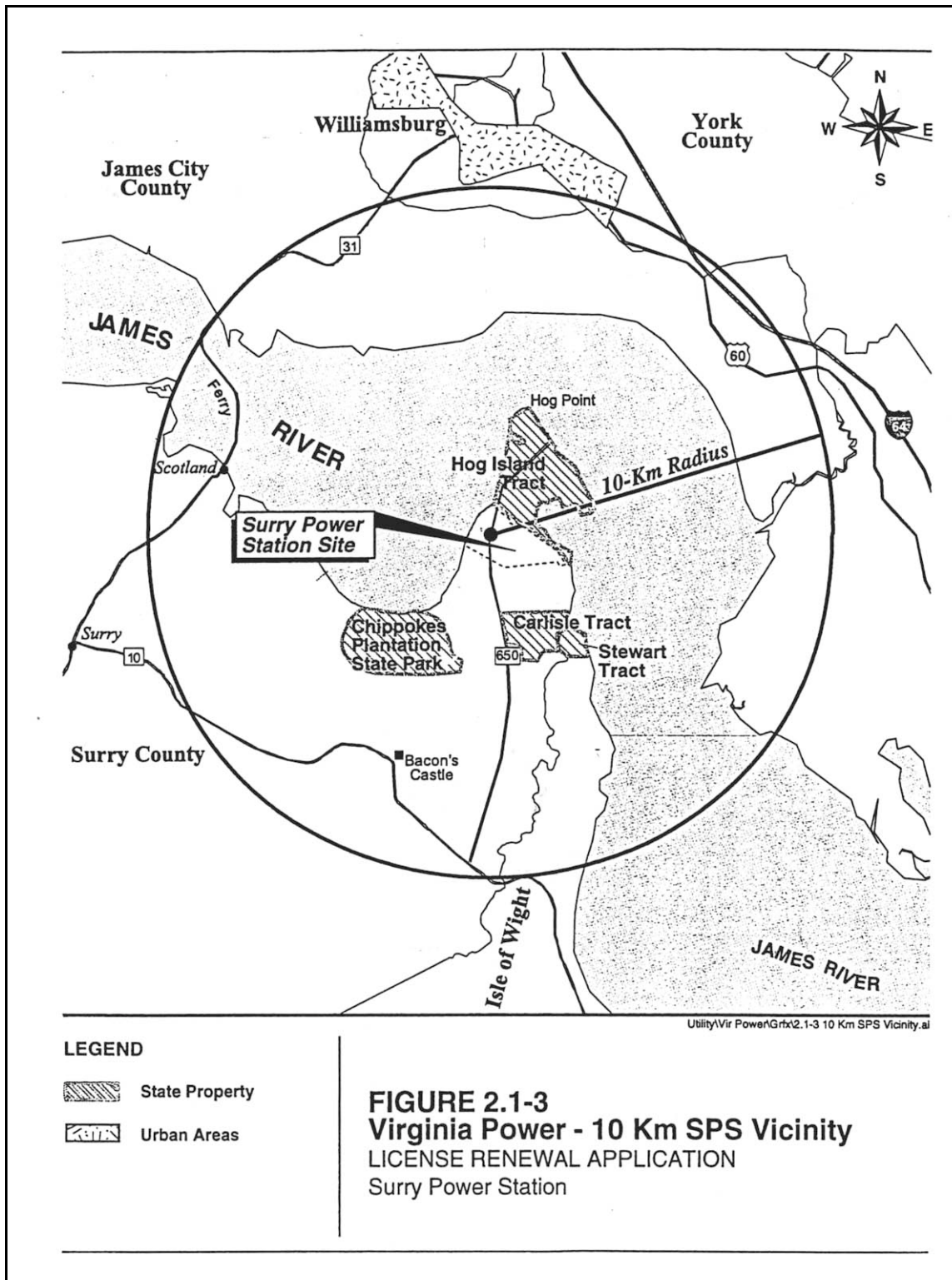
Enclosure: Figures of Surry and North Anna Sites

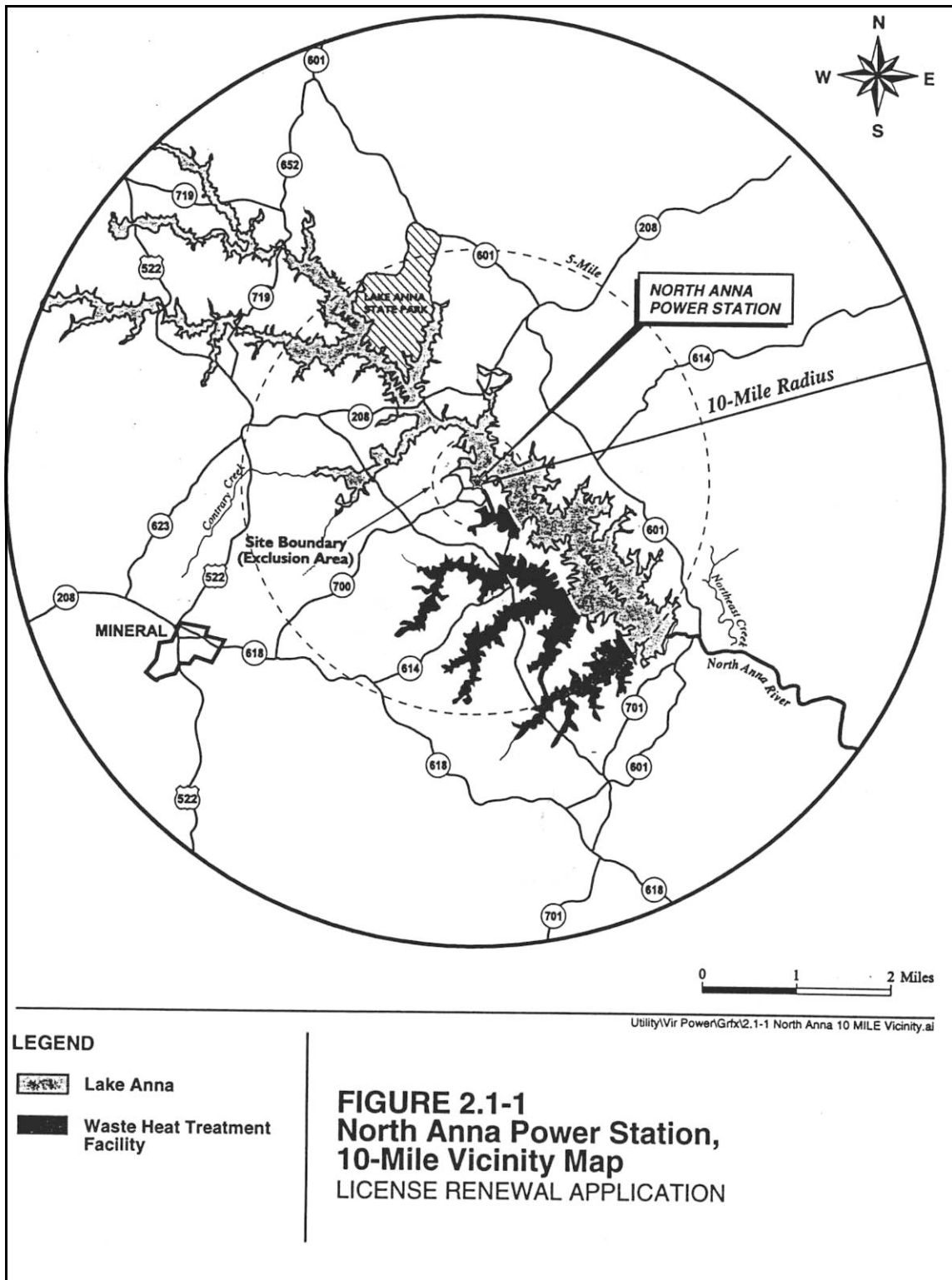
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APPENDIX E
COASTAL ZONE MANAGEMENT ACT CONSISTENCY CERTIFICATION

FEDERAL CONSISTENCY CERTIFICATION FOR FEDERAL PERMIT AND LICENSE APPLICANTS¹

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 the applicant to certify to the licensing agency that the proposed activity 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 or objects to the consistency certification. See 16 USC 1456(c)(3)(A).

The National Oceanic and Atmospheric Administration 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 has also published documentation of the Virginia program (Ref. 2). Like many states, Virginia has a "networked" program, which means that it is based on a variety of existing Commonwealth authorities rather than a single law and set of regulations. The Virginia Department of Environmental Quality administers Virginia's Coastal Resources Management Program and has identified enforceable regulatory authorities that comprise the program (Ref. 3).

CONSISTENCY CERTIFICATION

Dominion has determined that U. S. Nuclear Regulatory Commission (NRC) renewal of the Surry Power Station (SPS) licenses to operate would comply with the federally approved Virginia Coastal Resources Management Program. Dominion expects SPS operations during the license renewal term to be a continuation of current operations as described below, with no changes that would affect Virginia's coastal zone.

NECESSARY DATA AND INFORMATION

Proposed Action

SPS is located on the James River in Surry County, Virginia. SPS transmission lines traverse the Virginia Counties of Prince George, Charles City, Surry, Isle of Wight, Suffolk, and Chesapeake. The Virginia Department of Environmental Quality lists all these counties as being within the Virginia Coastal Resources Management Area. [Figures E-1](#) and [E-2](#) show the SPS 50-mile and 6-mile regions, respectively, and [Figure E-3](#) shows the SPS transmission line corridors.

1. This certification is patterned after the draft model certification included as Attachment 6 of Reference 1.

SPS uses uranium dioxide fuel in 2 nuclear reactors to produce steam in turbines that generate approximately 1,600 megawatts of electricity for offsite use. Dominion operates SPS Units 1 and 2 in accordance with NRC licenses DPR-32 and DPR-37, respectively. The Unit 1 license will expire May 25, 2012, and the Unit 2 license on January 29, 2013. Dominion is applying to NRC for renewal of both licenses, which would enable 20 additional years of operation (i.e., until May 25, 2032, for Unit 1 and January 29, 2033, for Unit 2).

SPS withdraws at maximum approximately 1.7 million gallons per minute of water from the James River through a shore-side intake, primarily for non-contact cooling of spent steam. Dominion performs periodic maintenance dredging in the river in front of the intake in accordance with permits from the U. S. Army Corps of Engineers and the Virginia Marine Resources Commission (see [Table E-](#) for permit information). SPS discharges the heated effluent (11.9×10^9 British thermal units per hour) through a canal to the river. The highest discharge temperature recorded during a comprehensive 5-year study was 99.9°F. Dominion holds a Virginia Pollutant Discharge Elimination System permit for this and other plant and stormwater discharges. In accordance with permit conditions, Dominion monitors discharge characteristics and reports results to the Virginia Department of Environmental Quality.

SPS uses approximately 220 gallons per minute of groundwater for domestic, process, and cooling purposes. The site is located within the Eastern Virginia Groundwater Management Area, an area that the Commonwealth established to better manage its groundwater resources. Dominion holds Virginia Department of Environmental Quality permit GW0003900 for the SPS groundwater appropriation. In accordance with permit conditions, Dominion monitors groundwater usage and reports results to the Virginia Department of Environmental Quality.

Dominion holds permits and annually re-registers several air emission sources at SPS. Most of these sources are emergency equipment (e.g., generators) for safe plant operation in case of loss of other power sources. As such, the sources generally operate for minimal periods of time for testing purposes.

Dominion employs approximately 880 workers at SPS, with an additional 70-110 contract and matrixed employees. Approximately 60 percent of the employees live in Isle of Wight, James City or Surry Counties, or the City of Newport News. Once or twice a year, as many as 700 additional workers are onsite during refueling outages. In compliance with NRC regulations, Dominion has analyzed the effects of SPS aging and identified activities needed to safely operate for an additional 20 years. Although Dominion does not expect to have to add additional staff to perform these activities, Dominion has assumed as many as 60 additional staff for impact analysis purposes.

Environmental Impacts

NRC has prepared a generic environmental impact statement (GEIS) on impacts that nuclear power plant operations can have on the environment (Ref. 4) and has codified its findings (10 CFR

51, Subpart A, Appendix B, Table B-1). The codification identifies 92 potential environmental issues, 69 of which NRC identifies as having small impacts and calls "Category 1" issues. NRC defines "small" as follows:

Small – For the issue, environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource. For the purpose of assessing radiological impacts, the Commission has concluded that those impacts that do not exceed permissible levels in the Commission's regulations are considered small as the term is used in this table. (10 CFR 51, Subpart A, Appendix B, Table B-1).

The NRC codification and the GEIS discuss the following types of Category 1 environmental issues:

- Surface water quality, hydrology, and use
- Aquatic ecology
- Groundwater use and quality
- Terrestrial resources
- Air quality
- Land use
- Human health
- Postulated accidents
- Socioeconomics
- Uranium fuel cycle and waste management
- Decommissioning

In its decisionmaking for plant-specific license renewal applications, absent new and significant information to the contrary, NRC will rely on its codified findings, as amplified by supporting information in the GEIS, for assessment of environmental impact from Category 1 issues (10 CFR 51.95[c][4]). For plants such as SPS that are located in the coastal zone, many of these issues involve impact to the coastal zone. Dominion has adopted by reference the NRC findings and GEIS analyses for all 51² applicable Category 1 issues.

The NRC regulation identifies 21 issues as "Category 2," for which license renewal applicants must submit additional site-specific information.³ Of these, 12 apply to SPS⁴ and, like the Category 1

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2. The other 18 Category 1 issues apply to design or operational features that SPS does not have (e.g., cooling towers) or to an activity, refurbishment, that Dominion will not undertake.
 3. 10 CFR 51, Subpart A, Appendix B, Table B-1 also identifies 2 issues as "NA," for which NRC could not come to a conclusion regarding categorization. Dominion believes that these issues, chronic effects of electromagnetic fields and environmental justice, do not affect the "coastal zone" as that phrase is defined by the Coastal Zone Management Act [16 USC 1453(1)].
 4. The rest apply to design or operational features that SPS does not have (e.g., cooling towers) or to an activity, refurbishment, that Dominion will not undertake.

issues, could involve impact to the coastal zone. The applicable issues and Virginia Power's impact conclusions are listed below:

- Aquatic ecology
 - 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. Dominion has conducted studies of this issue under direction of the Commonwealth and, in issuing the plant's discharge permit, the Commonwealth has approved the plant's intake structure as best available technology to minimize impact. Dominion concludes that these impacts are small during current operations and has no plans that would change this conclusion for the license renewal term.
 - 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. Dominion 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 caused by exposure to heated plant effluent. Dominion has conducted studies of this issue under direction of the Commonwealth and, in issuing the plant's discharge permit, the Commonwealth has determined that more stringent limits on the heated effluent are not necessary to protect the aquatic environment. Dominion concludes that these impacts are small during current operations and has no plans that would change this conclusion for the license renewal term.
- Groundwater use and quality
 - Groundwater use conflicts – This issue addresses effects that SPS groundwater withdrawals could have on offsite groundwater users. Dominion has calculated that withdrawals during the license renewal term would lower groundwater levels less than 0.5 feet in the nearest offsite well. Dominion concludes that this impact is small.
- Threatened or endangered species – This issue addresses effects that SPS operations could have on species that are listed under federal law as threatened or endangered. In analyzing this issue, Dominion has also considered species that are listed under Commonwealth of Virginia law. Several species could occur on the SPS site, in the site vicinity in the James River, or along associated transmission corridors. Dominion environmental studies and environmental protection programs have identified no adverse impacts to such species and Dominion consultation with cognizant Federal and Commonwealth agencies has identified no impacts of concern. Dominion concludes that

SPS impacts to these species are small during current operations and has no plans that would change this conclusion for the license renewal term.

- Human health

- 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]), Dominion concludes that the issue is not subject to the certification requirement.

- Socioeconomics

As a result of its studies on managing the effects of SPS aging, Dominion expects to perform license renewal activities without adding staff. As a conservative measure, however, Dominion has assumed, for the purposes of socioeconomic impact analysis, adding as many as 60 additional employees. Dominion assumes that these employees would find housing in the same locales where current employees reside.

- Housing – This issue addresses impacts on local housing availability that could occur as a result of Dominion adding license renewal term workers and the community gaining additional indirect jobs. NRC concluded, and Virginia Power concurs, that impacts would be small for plants located in high population areas having no growth control measures. Using the NRC definitions and categorization methodology, SPS is located in a high population area and locations where additional employees would probably live have no growth control measures. Dominion concludes that impacts during the SPS license renewal term would be small.
- Public services; public utilities – This issue addresses impacts that adding license renewal term workers could have on public water supply systems. Dominion has analyzed public water supply availability in candidate locales and has found no system limitations that would suggest that additional SPS workers would cause significant impacts. Therefore, Dominion has concluded that impacts during the SPS 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. SPS property taxes are a large portion of the Surry County revenue and Dominion expects this to remain generally unchanged during the license renewal term. Land use patterns within the County, however, have not shown significant change since Dominion began making these payments. Based on past practices, Dominion concludes that impacts during the SPS license renewal term would be small.

- Public services; transportation – This issue addresses impacts that adding license renewal term workers could have on local traffic patterns. The primary access route to SPS carries a Commonwealth categorization (Level of Service = A) that indicates free flow of the traffic stream and that users are unaffected by the presence of others. NRC concluded, and Dominion concurs, that license renewal impacts in such cases would be small.
- Historic and archaeological resources – This issue address impacts that license renewal activities could have on resources of historic or archaeological significance. No such resources have been identified on the SPS site or associated transmission lines and Dominion has no plans for license renewal activities that would disturb unknown resources. Dominion consultation with the State Historic Preservation Officer has identified no issues of concern.
- Postulated accidents
 - 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. Dominion used NRC methodology to conduct a severe accident mitigation alternatives analysis and found one mitigation measure that might be cost-effective, but is unrelated to aging management or, therefore, to license renewal.

Findings

1. NRC has found that the environmental impacts of Category 1 issues are small. Dominion has adopted by reference NRC findings for Category 1 issues applicable to SPS.
2. For Category 2 issues applicable to SPS, Dominion has determined that the environmental impact is small.
3. To the best of Dominion's knowledge, SPS is in compliance with Virginia licensing and permitting requirements and is in compliance with its Commonwealth-issued licenses and permits.
4. Dominion's license renewal and continued operation of SPS would be consistent with the enforceable provisions of the Virginia coastal zone management program.

STATE NOTIFICATION

By this certification that SPS license renewal is consistent with Dominion's coastal zone management program, the Commonwealth of Virginia is notified that it has three months from receipt of this letter and accompanying information in which to concur or object with Virginia Power's certification. However, pursuant to 15 CFR 930.63(b), if the Commonwealth of Virginia has not issued a decision within three 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. The Commonwealth's concurrence, objection, or notification of review status shall be sent to:

US Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, MD. 20852-2738

Tony Banks
Dominion
Innsbrook Technical Center
500 Dominion Blvd.
Glen Allen Va. 23060

REFERENCES

1. *NRR Office Letter No. 906, Revision 2. "Procedural Guidance for Preparing Environmental Assessments and Considering Environmental Issues."* U. S. Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation. September 21, 1999.
2. *Virginia Coastal Resources Management Program Final Environmental Impact Statement.* U.S. Department of Commerce and Council on the Environment. Commonwealth of Virginia. July 1985. Reprinted April 1999.
3. *Enforceable Regulatory Programs comprising Virginia's Coastal Resources Management Program.* Commonwealth of Virginia. Department of Environmental Quality. Undated.
4. *Generic Environmental Impact Statement for License Renewal of Nuclear Plants.* U.S Nuclear Regulatory Commission. May 1996.

FIGURE E-1



FIGURE E-2

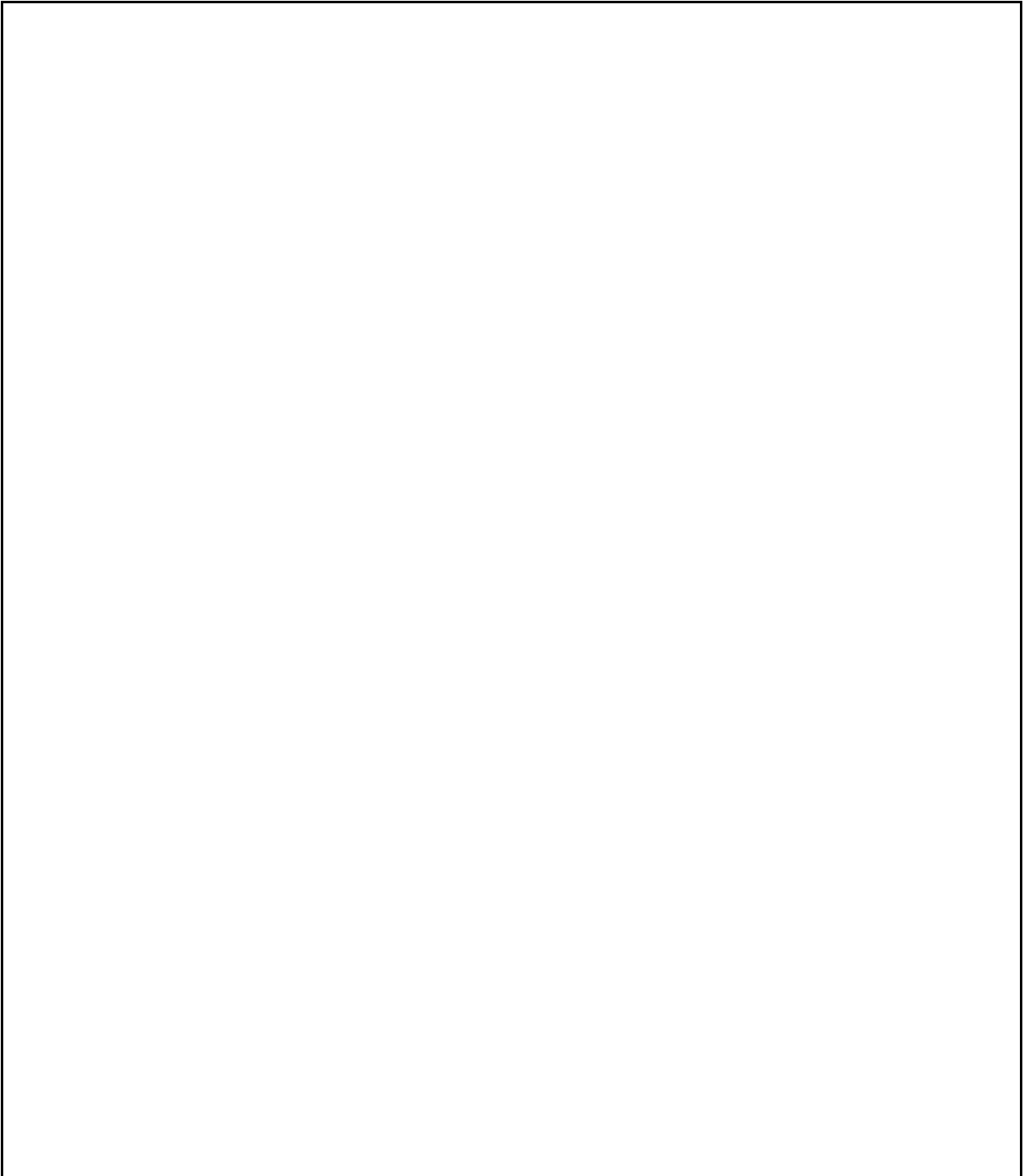
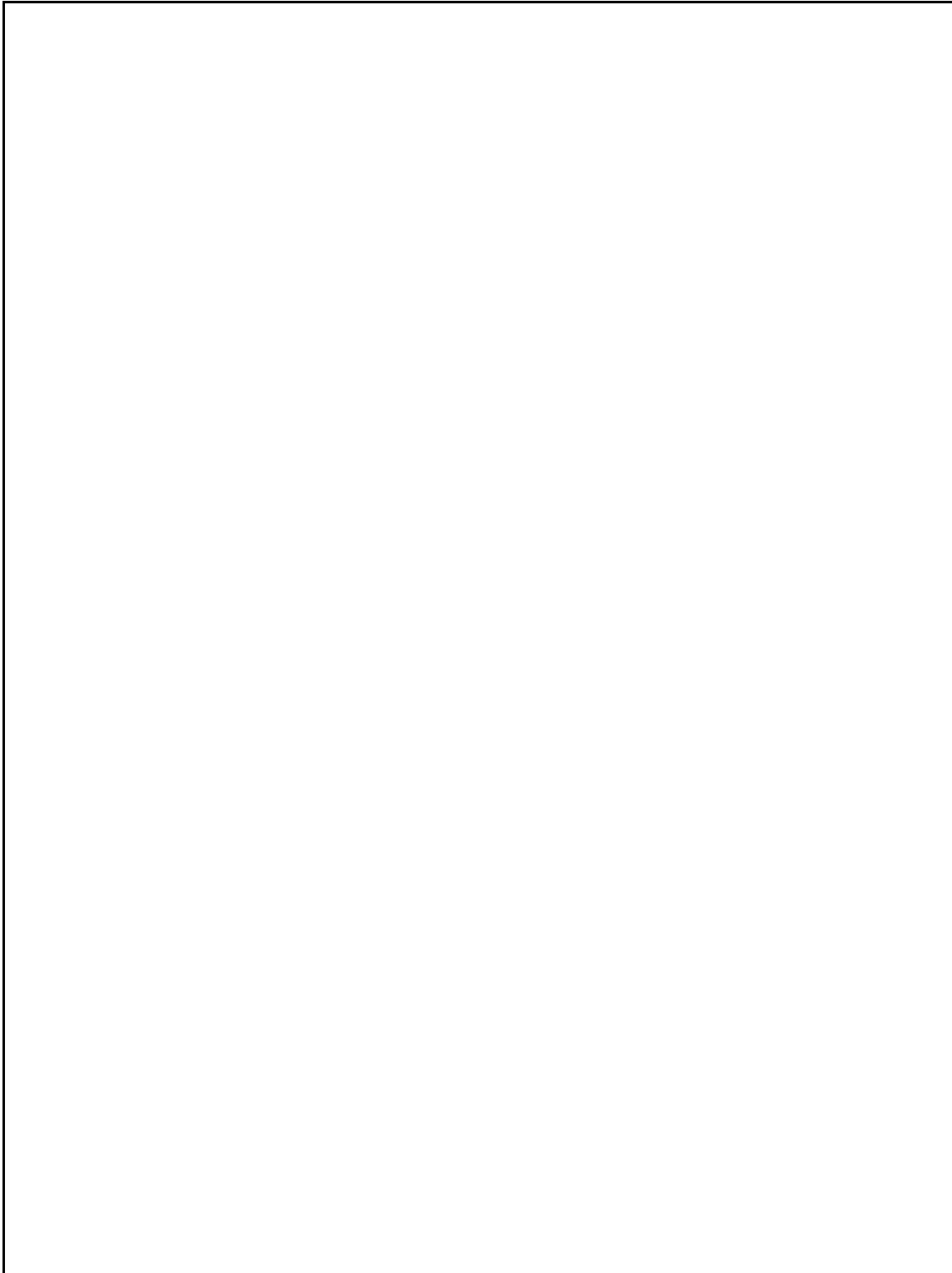


FIGURE E-3



**Table 3-1
Environmental Authorizations for Current SPS Operations**

Agency	Authority	Requirement	Number	Issue Date or Expiration Date	Activity Covered
U.S. Nuclear Regulatory Commission	Atomic Energy Act (42 USC 2011, et seq.)	License to operate	DPR-32 (Unit 1); DPR-37 (Unit 2)	Expires on 05/25/12 (Unit 1); 01/29/13 (Unit 2)	Operation of Units 1 and 2
U.S. Fish and Wildlife Service	Migratory Bird Treaty Act (16 USC 703 – 712)	Permit	MB705136-0	Issued 01/01/01; Expires 12/31/00	Removal of up to 15 osprey nests causing safety hazards
U.S. Army Corps of Engineers	Federal Clean Water Act, Section 404 (33 USC 1344)	Authorization to use regional permit	97-RP-19, Project 99-V1336	Issued 08/27/99; Expires 08/12/03	Periodic maintenance dredging of the intake channel in the James River
U.S. Department of Transportation	49 CFR 107, Subpart G	Registration	053100002 0241	Issued 06/05/00 Expires 06/30/01	Hazardous materials shipments
VMRC	Cov Title 28.2, Chapters 12 and 13	Permit	VMRC 92-1347	Issued 08/02/99; Expires 12/31/02	Maintenance dredging of the intake channel in the James River

**Table 3-1 (conditioned)
Environmental Authorizations for Current SPS Operations**

Agency	Authority	Requirement	Number	Issue Date or Expiration Date	Activity Covered
VDEQ	9 VAC 25-610-40	Permit	GW0003900	Issued 08/01/99; Expires 08/01/09	Withdrawal of groundwater from wells for use as potable, process, and cooling water for SPS and Gravel Neck Combustion Turbines Station
Virginia Department of Health, Bureau of Water Supply Engineering	Section 3.14, Waterworks Regulations of the Virginia Department of Health	Permit	3181800	Issued 03/07/78; no expiration	Authorizes operation of a non-community waterworks
VDEQ	Federal Clean Water Act, Section 402 (33 USC 1342); Virginia State Water Control Law	Permit	VA0004090	Issued 09/23/96; Expires 09/23/01	Plant and stormwater discharges

**Table 3-1 (conditioned)
Environmental Authorizations for Current SPS Operations**

Agency	Authority	Requirement	Number	Issue Date or Expiration Date	Activity Covered
VDEQ	9 VAC 5-80-10	Permit	Letter, Williams (VDEQ) to Ahladas (VP), 09/27/93	Issued 09/27/93; No expiration date	Installation and operation of the emergency blackout generator
VDEQ	9 VAC 5-20-160	Registration	50336	Annual re-certification	Air emission sources
VDEQ	Federal Clean Air Act, Title V (42 USC 7661 et seq.); 9 VAC 5-80-10	Permit	None	Application submitted 01/12/98; Revised 04/07/98	Air emission source operation

APPENDIX F MICROBIOLOGICAL ORGANISMS CORRESPONDENCE

Microbiological Organisms Correspondence is not applicable to Surry Power Station. This placeholder has been retained to maintain Table of Contents conformity with the North Anna Power Station Environmental Report, as an aid to regulatory review.