

Appendix E

**CITY OF CHESAPEAKE, VIRGINIA**  
**Federally Listed, Proposed, and Candidate Species**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
None listed		

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**Species of Concern**

INVERTEBRATES

Euphyes dukesi	Scarce swamp skipper	G3
Pseudopolydesmus paludicolous	A millipede	G1
Stygobromus araeus	Tidewater interstitial amphipod	G2

NON-VASCULAR PLANTS

Sphagnum macrophyllum var. macrophyllum	Large-leaf peatmoss	G3T3
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VASCULAR PLANTS

Trillium pusillum var. virginianum	Virginia least trillium	G3T2
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May 29, 2001

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

**CITY OF NEWPORT NEWS, VIRGINIA**  
**Federally Listed, Proposed, and Candidate Species**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
Haliaeetus leucocephalus	Bald eagle	LT

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**Species of Concern**

None documented

August 26, 1999  
Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

Appendix E

**LOUISA COUNTY, VIRGINIA  
Federally Listed, Proposed, and Candidate Species**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>INVERTEBRATES</u>		
Alasmidonta heterodon	Dwarf wedgemussel	LE

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**Species of Concern**

<u>INVERTEBRATES</u>		
Elliptio lanceolata	Yellow lance	G3
Lasmigona subviridis	Green floater	G3

February 8, 2001  
Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

**HANOVER COUNTY, VIRGINIA**  
**Federally Listed, Proposed, and Candidate Species**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
Haliaeetus leucocephalus	Bald eagle	LT
<u>INVERTEBRATES</u>		
Alasmidonta heterodon	Dwarf wedgemussel	LE
<u>VASCULAR PLANTS</u>		
Aeschynomene virginica <sup>1</sup>	Sensitive joint-vetch	LT
Isotria medeoloides <sup>1</sup>	Small whorled pogonia	LT

**Species of Concern**

<u>INVERTEBRATES</u>		
Elliptio lanceolata	Yellow lance	G3
Lasmigona subviridis	Green floater	G3
Sigara depressa	Virginia Piedmont water boatmen	G1G3
<u>VASCULAR PLANTS</u>		
Chamaecrista fasciculata var. macrosperma <sup>1</sup>	Marsh senna	G5T2

<sup>1</sup>This species has been documented in an adjacent county and may occur in this county.

May 29, 2001  
 Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

Appendix E

**POWHATAN COUNTY, VIRGINIA**  
**Federally Listed, Proposed, and Candidate Species**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
Haliaeetus leucocephalus	Bald eagle	LT
<u>INVERTEBRATES</u>		
Pleurobema collina <sup>1</sup>	James spinymussel	LE
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<b>Species of Concern</b>		
<u>INVERTEBRATES</u>		
Lexingtonia subplana	Virginia pigtoe	G1Q
<u>VASCULAR PLANTS</u>		
Isoetes piedmontana	Piedmont quillwort	G3

<sup>1</sup>This species has been documented in an adjacent county and may occur in this county.

February 8, 2001  
Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

**HENRICO COUNTY, VIRGINIA**  
**Federally Listed, Proposed, and Candidate Species**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
Haliaeetus leucocephalus <sup>1</sup>	Bald eagle	LT
<u>VASCULAR PLANTS</u>		
Aeschynomene virginica <sup>2</sup>	Sensitive joint-vetch	LT
Helonias bullata	Swamp pink	LT
Isotria medeoloides <sup>3</sup>	Small whorled pogonia	LT

**Species of Concern**

<u>INVERTEBRATES</u>		
Fusconaia masoni	Atlantic pigtoe	G2
<u>VASCULAR PLANTS</u>		
Chamaecrista fasciculata var. macrosperma <sup>1</sup>	Marsh senna	G5T2
Juncus caesariensis	New Jersey rush	G2
Trillium pusillum var. virginianum	Virginia least trillium	G3T2

<sup>1</sup>Nesting occurs in this county; concentrated shoreline use has been documented on the James River.

<sup>2</sup>This species has been documented in an adjacent county and may occur in this county.

<sup>3</sup>This species has been documented in an adjacent county and may occur in this county east of I-295.

May 29, 2001

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

## Appendix E

### CHESTERFIELD COUNTY, VIRGINIA Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
Haliaeetus leucocephalus <sup>1</sup>	Bald eagle	LT
<u>INVERTEBRATES</u>		
Alasmidonta heterodon <sup>2</sup>	Dwarf wedgemussel	LE
<u>VASCULAR PLANTS</u>		
Aeschynomene virginica	Sensitive joint-vetch	LT
Rhus michauxii <sup>2</sup>	Michaux's sumac	LE

#### Species of Concern

<u>INVERTEBRATES</u>		
Elliptio lanceolata	Yellow lance	G3
Speyeria diana	Diana fritillary	G3
<u>VASCULAR PLANTS</u>		
Chamaecrista fasciculata var. macrosperma	Marsh senna	G5T2
Desmodium ochroleucum	Creamflower tick-trefoil	G2G3
Trillium pusillum var virginianum	Virginia least trillium	G3T2

<sup>1</sup>Nesting occurs in this county; concentrated shoreline use has been documented on the James River.

<sup>2</sup>This species has been documented in an adjacent county and may occur in this county.

May 29, 2001  
Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

**SPOTSYLVANIA COUNTY, VIRGINIA**  
**Federally Listed, Proposed, and Candidate Species**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>INVERTEBRATES</u>		
Alasmidonta heterodon	Dwarf wedge mussel	LE
<u>VASCULAR PLANTS</u>		
Isotria medeoloides	Small whorled pogonia	LT

**Species of Concern**

<u>INVERTEBRATES</u>		
Elliptio lanceolata	Yellow lance	G3
Lasmigona subviridis	Green floater	G3
Sigara depressa	Virginia Piedmont water boatmen	G1G3
Speyeria idalia	Regal fritillary	G3
<u>NON-VASCULAR PLANTS</u>		
Sphagnum carolinianum	Carolina peatmoss	G3

April 5, 2001  
 Prepared by U.S. Fish and Wildlife Service, Virginia Field Office



Appendix E

**CAROLINE COUNTY, VIRGINIA**  
**Federally Listed, Proposed, and Candidate Species**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
Haliaeetus leucocephalus <sup>1</sup>	Bald eagle	LT
<u>VASCULAR PLANTS</u>		
Aeschynomene virginica <sup>2</sup>	Sensitive joint-vetch	LT
Helonias bullata	Swamp pink	LT
Isotria medeoloides	Small whorled pogonia	LT

**Species of Concern**

<u>BIRDS</u>		
Aimophila aestivalis	Bachman's sparrow	G3
<u>INVERTEBRATES</u>		
Sigara depressa	Virginia piedmont water boatman	G1G3
Stygobromus indentatus	Tidewater amphipod	G2G3
<u>VASCULAR PLANTS</u>		
Chamaecrista fasciculata var. macrosperma <sup>2</sup>	Marsh senna	G5T2
Desmodium ochroleucum	Creamflower tick-trefoil	G2G3
Eriocaulan parkeri	Parker's pipewort	G3
Juncus caesariensis	New Jersey rush	G2
Sabatia kennedyana	Plymouth gentian	G3

<sup>1</sup>Nesting occurs in this county; concentrated shoreline use has been documented on the Rappahannock River.

<sup>2</sup>This species has been documented in an adjacent county and may occur in this county.

May 29, 2001

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

**ORANGE COUNTY, VIRGINIA**  
**Federally Listed, Proposed, and Candidate Species**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
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None documented

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**Species of Concern**

INVERTEBRATES

Elliptio lanceolata	Yellow lance	G3
Lasmigona subviridis	Green Floater	G3
Speyeria idalia	Regal fritillary	G3

March 22, 1999

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

Appendix E

**CULPEPER COUNTY, VIRGINIA**  
**Federally Listed, Proposed, and Candidate Species**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
Haliaeetus leucocephalus	Bald eagle	LT
<u>INVERTEBRATES</u>		
Alasmidonta heterodon <sup>1</sup>	Dwarf wedgemussel	LE

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**Species of Concern**

<u>INVERTEBRATES</u>		
Elliptio lanceolata	Yellow lance	G3
Lasmigona subviridis	Green floater	G3
<u>VASCULAR PLANTS</u>		
Agalinis auriculata <sup>1</sup>	Earleaf foxglove	G3

<sup>1</sup>This species has been documented in an adjacent county and may occur in this county.

May 29, 2001  
Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

**FAUQUIER COUNTY, VIRGINIA**  
**Federally Listed, Proposed, and Candidate Species**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
Haliaeetus leucocephalus	Bald eagle	LT
<u>INVERTEBRATES</u>		
Alasmidonta heterodon	Dwarf wedgemussel	LE

**Species of Concern**

<u>INVERTEBRATES</u>		
Elliptio lanceolata	Yellow lance	G3
Lasmigona subviridis	Green floater	G3
Speyeria idalia	Regal fritillary	G3
Stygobromus spinosus	Blue Ridge Mountain amphipod	G2G3
<u>VASCULAR PLANTS</u>		
Agalinis auriculata <sup>1</sup>	Earleaf foxglove	G3
Carex polymorpha <sup>1</sup>	Variable sedge	G2G3
Carex schweinitzii <sup>1</sup>	Schweinitz's sedge	G3
Poa paludigena	Bog bluegrass	G3
Pycnanthemum torrei	Torrey's mountain-mint	G2

<sup>1</sup>This species has been documented in an adjacent county and may occur in this county.

May 29, 2001  
 Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

Appendix E

**CITY OF HOPEWELL, VIRGINIA**  
**Federally Listed, Proposed, and Candidate Species**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
Haliaeetus leucocephalus	Bald eagle	LT

May 21, 2002  
Prepared by U.S. Fish and Wildlife Service, Virginia Field Office



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

Mr. Tony Banks, MPH, CHMM  
 Dominion Generation  
 5000 Dominion Boulevard  
 Glen Allen, VA 23060

MAR 23 2001

Dear Mr. Banks:

This letter is in response to your inquiry on February 6, 2001, requesting information on the presence of any federally listed threatened or endangered species and/or designated critical habitat for listed species in the vicinity of Dominion's Surry Power Station, Glen Allen, Virginia. Dominion Generation is applying for nuclear license renewal as required by the U.S. Nuclear Regulatory Commission (NRC) renewal process. The renewal process requires all applicants to identify adverse impacts to threatened or endangered species that may result from continued operation of the facility or refurbishment activities associated with renewal.

Potential spawning habitat for shortnose sturgeon has been thought to occur in the James River, but there have been no reports of shortnose sturgeon in this river system. However, Atlantic sturgeon, a candidate species under the Endangered Species Act of 1973, has been documented in the vicinity of the proposed project. Nevertheless, no federally listed or proposed threatened or endangered species and/or designated critical habitat for listed species under the jurisdiction of the National Marine Fisheries Service are known to exist in the project area. No further consultation pursuant to Section 7 of the Endangered Species Act of 1973, as amended, is required. If, however, project plans change or new information becomes available that changes the basis for this determination, then consultation should be reinitiated.

Sincerely,

Mary Colligan  
 Acting Assistant Regional Administrator  
 for Protected Resources

File Code: 1514 - 05(A).nsp



## Appendix E

November 6, 2002

John P. Wolflin, Supervisor  
Chesapeake Bay Field Office  
U.S. Fish and Wildlife Service  
177 Admiral Cochrane Drive  
Annapolis, MD 21401

SUBJECT: BIOLOGICAL ASSESSMENT FOR BALD EAGLES FOR LICENSE RENEWAL  
AT SURRY POWER STATION, UNITS 1 AND 2, AND REQUEST FOR  
INFORMAL CONSULTATION (TAC NOS. MB1992 AND MB1993)

Dear Mr. Wolflin:

The Nuclear Regulatory Commission (NRC) is evaluating an application submitted by Virginia Electric and Power Company (VEPCo) for the renewal of the operating licenses for an additional 20 years for its Surry Power Station (SPS), Units 1 and 2. The SPS is located on the Gravel Neck Peninsula in Surry County, Virginia. The current license for Unit 1 will expire on May 25, 2012, and for Unit 2 on January 29, 2013. License renewal will extend the operating license for each unit an additional 20 years past the above dates. The proposed action would include the continued operation and maintenance of the existing facilities at the SPS site and the transmission corridor that connects the SPS, Units 1 and 2, to the regional electrical grid. The proposed action will not include any new construction or onsite disturbance. The NRC is preparing a supplement to its 1996 "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (NUREG-1437) for this proposed license renewal. As part of the renewal review, we evaluate potential impacts to Federally listed, proposed, or candidate species, as well as designated or proposed critical habitat.

In a letter to the Virginia Field Office of the U.S. Fish and Wildlife Service (FWS) dated January 24, 2002, the NRC staff requested a list of Federally protected species and any critical habitat known from the vicinity of the SPS. In April 2002 the NRC staff issued the draft supplemental environmental impact statement (SEIS) for the license renewal of the SPS, Units 1 and 2. The NRC staff received correspondence from Ms. K. Mayne of FWS, dated May 22, 2002, that provided listed, proposed, or candidate species known from the vicinity of the plant site. The NRC staff also visited the SPS and surrounding areas with Mr. David Sutherland of your staff on May 23, 2002. On July 10, 2002, you provided comments on the NRC staff's draft SEIS. In the draft SEIS, the NRC staff concluded that listed aquatic species would not be adversely affected and that the impacts to threatened or endangered terrestrial species would be small as a result of the proposed action. However, in your letter you requested that the NRC staff prepare a biological assessment (BA) to more fully document the basis for its conclusion with respect to the bald eagle (*Haliaeetus leucocephalus*).

The NRC staff and its contractor, Pacific Northwest National Laboratory, has evaluated the potential impact of the power plant re-licensing on the list of species provided in the May 22, 2002, correspondence. We have prepared the enclosed BA that provides an evaluation of the potential for impact for the bald eagle. The staff has determined that the proposed action is not

J. Wolflin

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a major construction activity and that the proposed action will have “no effect” on the bald eagle.

The reasons for our conclusion related to the “no effect” finding for the bald eagle are documented in the enclosed BA. We are placing a copy of the BA in our project files and on our public docket for this license renewal application and are requesting your concurrence with our determination.

Both the July 10, 2002, letter from FWS regarding the SPS and the July 24, 2002, letter regarding North Anna Power Station (North Anna) included a statement about bringing these plants “into compliance with current environmental regulations.” The NRC staff is concerned that this statement could lead some readers to believe that VEPCo is not operating these stations in compliance with the regulations. Based on our review, the NRC staff did not find any situations in which the operation of the SPS and North Anna was not in compliance with the regulations.

If you have questions regarding the proposed action, the BA, or the staff’s request for concurrence, please contact the environmental project manager, Andrew Kugler, by telephone at 301-415-2828 or e-mail at [ajk1@nrc.gov](mailto:ajk1@nrc.gov).

Sincerely,

**ORIGINAL SIGNED BY**

Pao-Tsin Kuo, Program Director  
License Renewal and Environmental Impacts  
Division of Regulatory Improvement Program  
Office of Nuclear Reactor Regulation

Docket Nos.: 50-280 and 50-281

Enclosure: As stated

cc w/encl.: See next page



## **Evaluation of Potential Effects of the Proposed License Renewal for Surry Power Station, Units 1 and 2, on the Bald Eagle (*Haliaeetus leucocephalus*)**

### **Project Description**

The proposed Federal action is renewal of the operating licenses (OLs) for Surry Power Station (SPS), Units 1 and 2. The current OL for Unit 1 (DPR-32) expires on May 25, 2012, and for Unit 2 (DPR-37) on January 29, 2013. By letter dated May 29, 2001, Virginia Electric and Power Company (VEPCo), the licensee, submitted an application to the U.S. Nuclear Regulatory Commission (NRC) (VEPCo 2001) to renew these OLs for an additional 20 years of operation (i.e., until May 25, 2032, for Unit 1 and January 29, 2033, for Unit 2).

The plant has two Westinghouse-designed light-water reactors, each with a design rating for net electrical power output of 855 megawatts electric (MW[e]). Plant cooling is provided by a once-through cooling system that withdraws and returns water from the James River. The SPS is connected to the transmission system via nine transmission lines, totaling approximately 480 km (300 mi) and covering approximately 2000 ha (5000 ac). A more detailed description of the facility and the local environment can be found in the NRC staff's draft supplemental environmental impact statement (SEIS) for the license renewal of the SPS, Units 1 and 2, previously provided.

Prior consultations with the U.S. Fish and Wildlife Service (FWS) include issuance of a permit to VEPCo under the Migratory Bird Treaty Act (16 USC 703-712) (permit #MB705136-0, expiration date March 31, 2003) for the removal of osprey (*Pandion haliaetus*) nests causing safety hazards (NRC 2002b). The NRC also consulted with FWS on an informal basis regarding threatened and endangered species under Section 7 of the Endangered Species Act (16 USC 1536) by letter dated January 24, 2002, for purposes of this license renewal (NRC 2002a). FWS responded in a letter dated May 22, 2002, (FWS 2002a) and also provided comments on the NRC staff's April 2002 draft SEIS in a letter dated July 10, 2002 (FWS 2002b).

### **Project Area**

The SPS is located in the southeastern part of Virginia, in Surry County, on the south side of the James River, across from Jamestown and Williamsburg, Virginia. The SPS occupies approximately 340 ha (840 ac) on Gravel Neck Peninsula, located approximately 40 km (25 mi) upstream of the point where the James River enters the Chesapeake Bay (Figure 1).

The terrestrial ecosystem of the SPS and vicinity contains communities similar to those of the majority of the Virginia and North Carolina coastal plain. The primary plant community on the SPS site consists of remnants of mixed pine-hardwood forest dominated by loblolly pine (*Pinus taeda*) and white oak (*Quercus alba*) (VEPCo 2001).

The SPS utilizes the James River for main condenser cooling. Approximately 80 fish species are known to inhabit the brackish portion of the river downstream from the SPS and approximately 40 species have been recorded for the freshwater portion of the river upstream (VEPCo 1977).

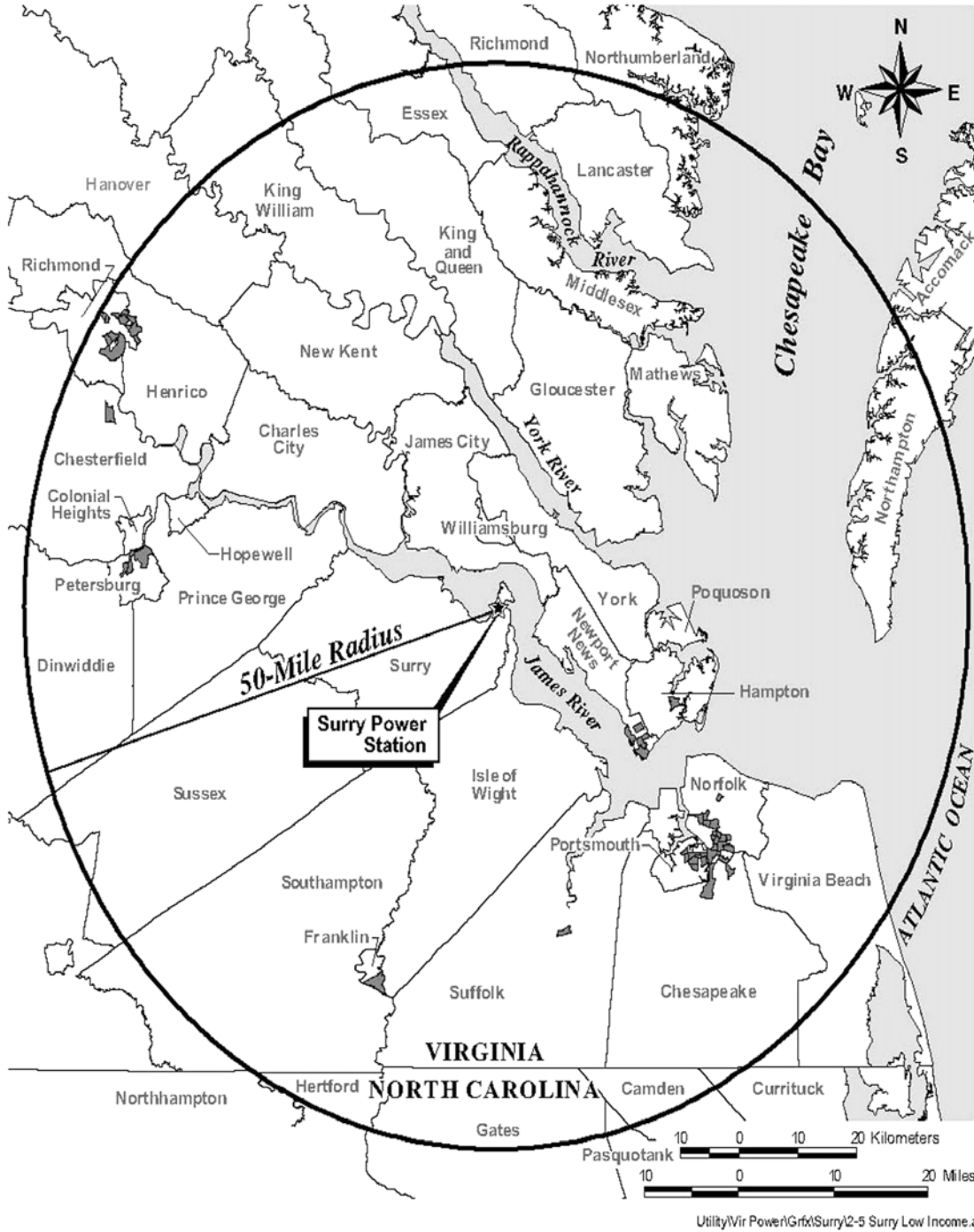


Figure 1. Location of Surry Power Station, 80-km (50-mi) region

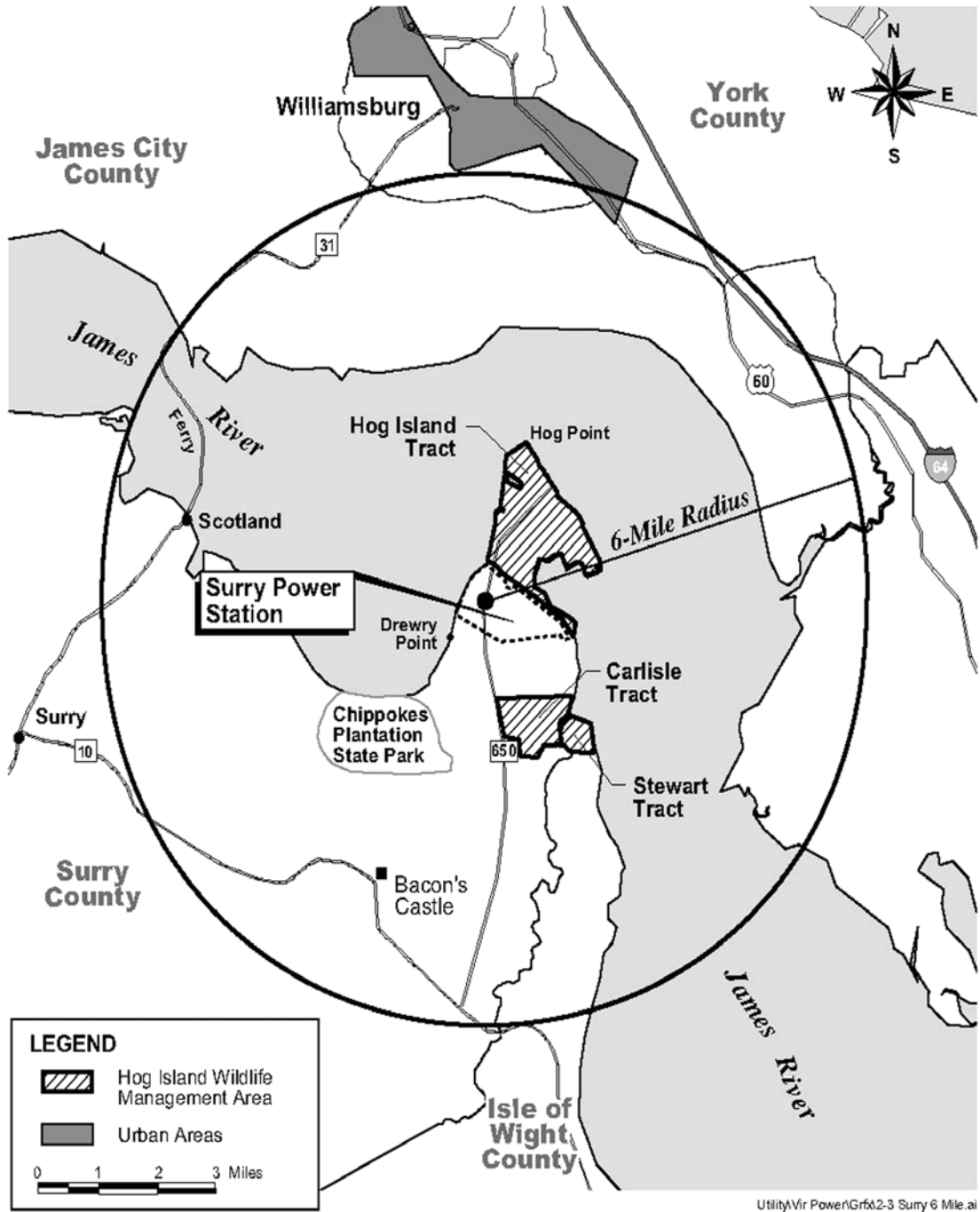


Figure 2. Location of Surry Power Station, 10-km (6-mi) region

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The adjacent Hog Island Wildlife Management Area (HIWMA) consists of three tracts; Hog Island Tract (HIT) (1200 ha [2900 ac]), located adjacent to the northern boundary of the SPS (Figure 2) at the tip of the Gravel Neck Peninsula, and the Carlisle Tract and Stewart Tract (410 ha [1000 ac] total), both located southeast of the SPS (Figure 2). The HIT consists primarily of tidal marshes and diked impoundments interspersed with pine forests. The Carlisle and Stewart Tracts consist primarily of upland forested areas, but also contain tidal marshes. The tidal flats and marshes provide habitat for large numbers of waterfowl. All three tracts of the HIWMA are managed by the Virginia Department of Game and Inland Fisheries (VDGIF) (VEPCo 2001).

The transmission corridors (Table 1, Figure 3) traverse land-use categories typical of coastal Virginia, such as row crops, pasture, pine plantations, and old fields. In addition, the transmission corridors pass through more natural habitat types, such as pine-hardwood forests, bottomland hardwood forests, and shrub bogs. The Suffolk-to-Yadkin transmission corridor traverses a 4-km (2-mi) portion of the Great Dismal Swamp National Wildlife Refuge (Figure 3), where hardwood swamp comprises the transmission corridor habitat. The Chuckatuck-to-Wheaton corridor crosses the James River and a 304-m (1000-ft) portion of the Ragged Island Wildlife Management Area (Figure 3), a 622-ha (1537-ac) tract along the lower James River that consists of brackish marsh and pine-covered islands (VEPCo 2001).

**Table 1.** Surry Power Station Transmission Line Corridors

Substation	Number of Lines (line number)	kV	Approximate Distance		Corridor	Corridor Width		Approximate Corridor Area	
			km	(mi)		m	(ft)	hectares (acres)	
Chickahominy	1 (567)	500	87	(54)	1	46 to 107	(150 to 350)	110	(270)
Chuckatuck	1 (290)	230	39	(24)	2	90 to 137	(295 to 450)	270	(650)
Churchland	1 (226)	230	63	(39)	2	38 to 137	(125 to 450)	92	(230)
Hopewell	2 (212 and 240)	230	85	(53)	1	37 to 107	(120 to 350)	760	(1900)
Septa	1 (578)	500	19	(12)	2	73 to 107	(240 to 350)	200	(500)
Wheaton	1 (214)	230	61	(38)	2	32 to 137	(105 to 450)	72	(180)
Yadkin	2 (223 and 531)	230 500	79 82	(49) (51)	2 1	38 to 137	(125 to 450)	61 330	(150) (820)
Total			480	(300)				2000	(5000)

Source: VEPCo 2001

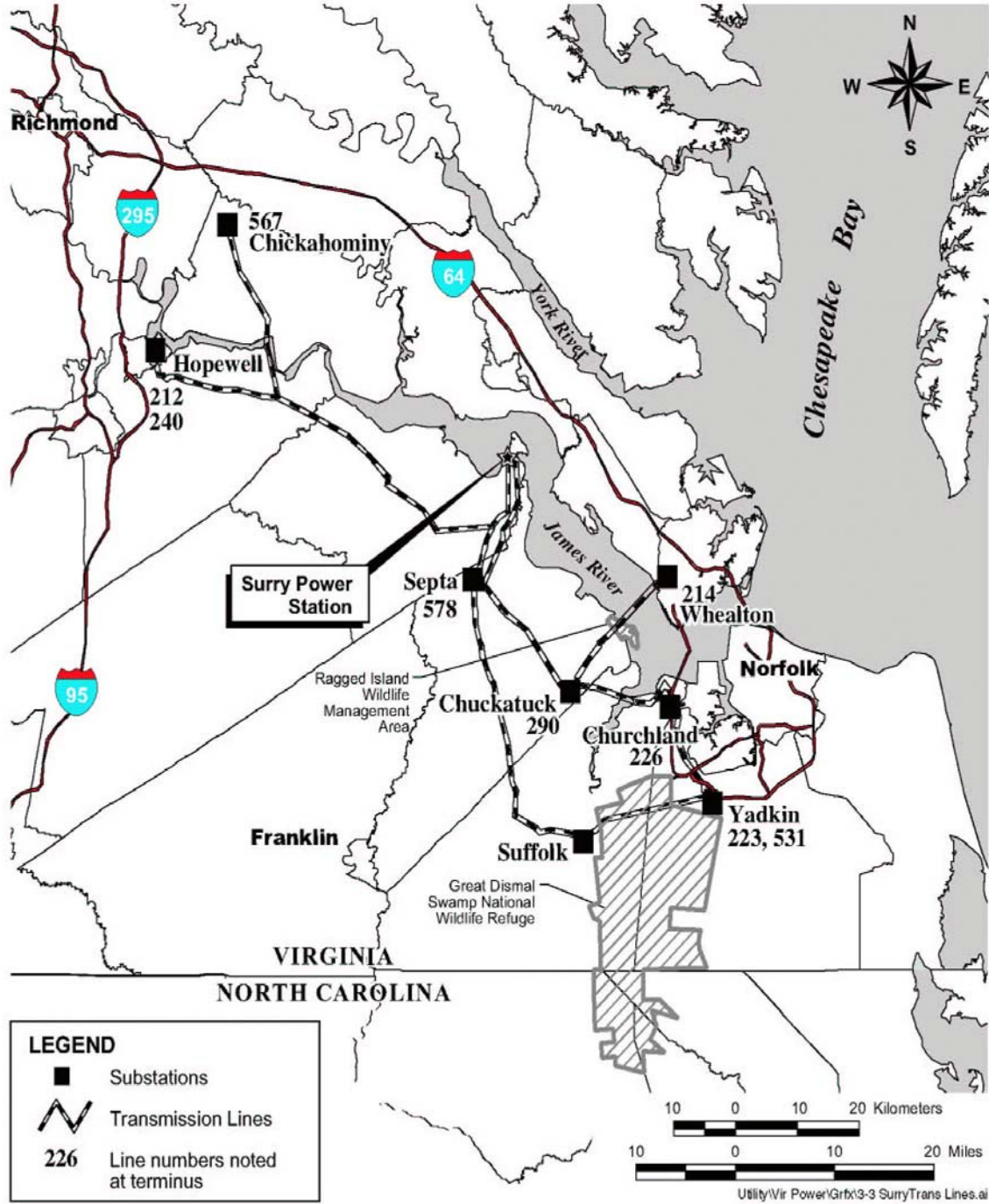


Figure 3. Surry Power Station transmission lines

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**Bald Eagle Use of Surry Power Station Site and Transmission Line Corridors**

The bald eagle (*Haliaeetus leucocephalus*) is the only Federally listed threatened or endangered species currently known to occur on and in the vicinity of the SPS site or along its transmission corridors (VEPCo 2001). Bald eagles generally nest in tall trees near major waterways, such as the James River, and feed on fish, waterfowl, and occasionally carrion.

**Active Nests.** The Center for Conservation Biology at the College of William and Mary in Williamsburg, Virginia, in collaboration with FWS and VDGIF, annually tracks locations of bald eagle nests throughout the Commonwealth. There are four active nests in the vicinity of the SPS site and transmission line corridors (VEPCo 2002a and Watts 2002).

The first nest is located south of the SPS site ~4.0 km (~2.5 mi) and approximately 200 m from the transmission line corridor to the Septa substation. This nest may have been constructed by a pair of eagles that previously nested ~0.8 km (~0.5 mi) closer to the SPS (VEPCo 2002a and Watts 2002). The former nest site no longer exists, since the nest tree has toppled (Watts 2002).

The second nest is located northeast of the SPS site ~1.6 km (~1.0 mi) in the HIT of the HIWMA (VEPCo 2002a and Watts 2002).

A third nest was constructed this year and was reported to be located ~0.4 km (~0.25 mi) west of the SPS site (VEPCo 2002a and Watts 2002) on land behind the site security firing range (VEPCo 2002b). VEPCo's Environmental Policy and Compliance staff biologists, in concert with VDGIF Environmental Services specialists, conducted a search on September 25, 2002, to confirm and ground truth the reported nest location. Their search employed two Global Positioning System (GPS) units, each independently programmed using topographic map coordinates. They searched for several hours, but were unable to find the nest. Consequently, VEPCo and VDGIF staff have concluded that the nest, if it exists, is located further south and west of the SPS site than 0.4 km (0.25 mi). The decision whether to continue the search for this nest has not been made (VEPCo 2002b).

The fourth nest is located east of the town of Hopewell, just east of Windmill Point, adjacent to the south side of the James River approximately 50 m to 100 m from the transmission line corridor to the Chickahominy substation (Watts 2002).

The NRC staff can provide more precise locations for the nests if needed.

**Abandoned Nests.** Formerly, there were several nests located along the boundary of Hog Island, four of which were on the SPS site. These nests have been abandoned for three or more consecutive nesting seasons (Watts 2002). Three of the four nest trees on the SPS site likely still stand, although no evidence of the nests remains. The fourth nest tree on the SPS site has been toppled by wind throw (Watts 2002).

**High Use Areas.** As many as 50 eagles may forage within the HIWMA and vicinity during spring migration (NRC 2002b). However, there are no eagle concentration areas (e.g., roost

sites or shoreline foraging areas, as discussed in the BEPG) currently known to occur on or in the vicinity<sup>1</sup> of the SPS site or along its transmission corridors (VEPCo 2002a and NRC 2002b).

### **Analysis of Effects**

***Basis for Analysis – Bald Eagle Protection Guidelines for Virginia (BEPG).*** The BEPG (FWS and VDGIF 2000) prescribe two management zones around eagle nests, night roosts, and shoreline use areas in which the provisions of various laws and their implementing regulations may apply. The two management zones prescribed in the BEPG are “primary” (229 m [750 ft]) and “secondary” (229 m - 400 m [750 ft -1320 ft]) (FWS and VDGIF 2000). The BEPG provided recommendations, excluding certain activities within these zones to preclude take of a bald eagle (FWS and VDGIF 2000).

***Active Nests.*** The SPS site is located beyond the secondary management zone buffers of the four active nests. Consequently, the potential for activities at the SPS site to disturb breeding/nesting at these four nest sites is minimal.

The Chickahominy and Septa transmission line corridors lie within the primary management zones of two of the four active nests. Transmission line rights-of-way (ROW) are generally maintained on a 3-year cycle (NRC 2002b). The SPS’s transmission line ROW maintenance practices take into consideration threatened and endangered species, such as the bald eagle, and conform to the BEPG by conducting maintenance activities outside the breeding/nesting season (VEPCo 2002c). Consequently, the potential for ROW maintenance practices to disturb breeding/nesting at these two nest sites is very small.

The SPS operational activities both at the site and within its transmission line corridors are and will remain in conformance with the BEPG for existing and future active nests.

***Abandoned Nests.*** The above-mentioned abandoned nests on or in the vicinity of the SPS site have been abandoned for three or more consecutive nesting seasons (Watts 2002), thereby excluding them from the management zone provisions of the BEPG (FWS and VDGIF 2000).

***High Use Areas.*** Since there are no known eagle concentration areas (i.e., night roosts or foraging areas) on or in the vicinity of the SPS site or along its associated transmission line corridors (VEPCo 2002a and NRC 2002b), no evaluation of compliance with the pertinent BEPG requirements or the potential for disturbing roosting/foraging activities is provided.

***Electrocution.*** Lehman (2001) summarized the literature regarding raptor electrocutions on power lines, and emphasized that nearly all electrocutions in the United States occur on comparatively low-voltage distribution lines supplying individual users and businesses, not transmission lines. For example, the four bald eagle electrocutions in Virginia documented in FWS Law Enforcement files for the period 1989-1991 were all associated with lower voltage 3-phase (three cases) and single-phase (one case) distribution lines (Cline 1992).

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<sup>1</sup> By “vicinity,” the staff means within the 400 m (1320 ft) zone defined in the BEPG.

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The SPS has a rigorous Raptor Incident Reporting (RIR) system. The RIR was developed in collaboration with the VDGIF, Center for Conservation Biology at the College of William and Mary, and FWS. The RIR has a requirement to report all incidents to the local FWS law enforcement section. There are no known records of bald eagle electrocutions at the SPS or on the SPS's transmission lines (VEPCo 2002a).

Based on a review of the circumstances surrounding past electrocutions of bald eagles in Virginia and the lack of any reported electrocutions associated with the SPS's transmission lines, the staff concludes that potential eagle losses due to transmission line-related electrocutions are highly unlikely.

**Collisions.** There are no known reports of bald eagle collisions with the SPS's transmission lines or other SPS structures.

There are no known eagle concentration areas (e.g., roost sites or shoreline foraging areas) currently known to occur on the SPS site or along its transmission line corridors (VEPCo 2002a and NRC 2002b). The nearest known eagle concentration area consists of as many as 50 eagles that forage within the HIWMA during spring migration (NRC 2002b). Because of their acute vision, maneuverability, and the fact that they migrate neither in flocks nor at night, the likelihood of collisions involving these eagles is remote.

### **Conclusion**

Based on the locations of the four active eagle nests relative to the SPS site and associated transmission lines and on the licensee's compliance with the BEPG, the potential for disturbance during nesting/breeding, either from activities at the SPS site or from ROW maintenance, is highly unlikely. Based on the lack of eagle concentration areas near transmission lines, a review of the literature, and the lack of any eagle mortalities associated with the SPS site or its transmission lines, the potential for electrocutions and collisions is also highly unlikely. Consequently, the NRC staff makes a finding of "no effect" to bald eagles for the renewal of the OLs for the SPS, Units 1 and 2.

### **References**

- (1) Cline, K.W. 1992. Bald Eagle Concentration Areas and Power Line Mitigation in Virginia: Final Report. Unpublished report prepared for the U.S. Fish and Wildlife Service, Virginia Department of Game and Inland Fisheries, and Virginia Electric and Power Company. 27 pp.
- (2) Lehman, R.N. 2001. Raptor Electrocution on Power Lines: Current Issues and Outlook. *Wildlife Society Bulletin* 29(3): 804-813.
- (3) Migratory Bird Treaty Act of 1918. 16 USC 703 et seq.
- (4) U.S. Fish and Wildlife Service and Virginia Department of Game and Inland Fisheries. 2000. Bald Eagle Protection Guidelines for Virginia. 6 pp. Updated May 15, 2000.



## Appendix E

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- (5) U.S. Fish and Wildlife Service. 2002a. Letter from Ms. Karen Mayne of the U.S. Fish and Wildlife Service to NRC providing a list of protected species within the area under evaluation for the Surry and North Anna Power Stations license renewal. May 22, 2002.
- (6) U.S. Fish and Wildlife Service. 2002b. General comment letter from Michael T. Chezik, U.S. Fish and Wildlife Service's Chesapeake Bay Field Office, regarding Surry Power Station, Units 1 and 2, license renewal. July 10, 2002.
- (7) U.S. Nuclear Regulatory Commission (NRC). 2002a. NRC letter to Ms. Karen Mayne of the U.S. Fish and Wildlife Service requesting a list of protected species within the area under evaluation for the Surry and North Anna Power Stations license renewal. January 24, 2002.
- (8) U.S. Nuclear Regulatory Commission (NRC). 2002b. *Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Surry Power Station Units 1 and 2*. NUREG-1437, Supplement 6, Draft Report for Comment, Washington, D.C. April 2002.
- (9) Virginia Electric and Power Company (VEPCo). 1977. *Section 316(a) Demonstration (Type I) – Surry Power Station – Units 1 and 2*. Richmond, Virginia.
- (10) Virginia Electric and Power Company (VEPCo). 2001. *Application for License Renewal for Surry Power Station, Units 1 and 2*, "Appendix E, Environmental Report - Operating License Renewal Stage." Richmond, Virginia.
- (11) Virginia Electric and Power Company (VEPCo). 2002a<sup>1</sup>. Email from T. Banks regarding the location of active bald eagle nests and eagle concentration areas in the vicinity of Surry Power Station and its transmission line corridors. Virginia Electric and Power Company, Surry Power Station, Virginia. September 9, 2002.
- (12) Virginia Electric and Power Company (VEPCo). 2002b<sup>1</sup>. Email from T. Banks regarding the location of active bald eagle nests in the vicinity of Surry Power Station and its transmission line corridors. Virginia Electric and Power Company, Surry Power Station, Virginia. September 27, 2002.
- (13) Virginia Electric and Power Company (VEPCo). 2002c<sup>1</sup>. Email from T. Banks regarding Surry Power Station transmission line right-of-way maintenance practices. Virginia Electric and Power Company, Surry Power Station, Virginia. October 18, 2002.
- (14) Watts, B. 2002<sup>1</sup>. Email from B. Watts, Center for Conservation Biology, College of William and Mary, Williamsburg, Virginia, regarding the location of bald eagle nests in the vicinity of Surry Power Station and its transmission line corridors. October 25, 2002.

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<sup>1</sup> These emails may be found under accession number ML023050100 in the NRC's Electronic Reading Room on the NRC Web Page ([www.nrc.gov](http://www.nrc.gov)).

## **Appendix F**

### **GEIS Environmental Issues Not Applicable to Surry Power Station, Units 1 and 2**

## Appendix F

### GEIS Environmental Issues Not Applicable to Surry Power Station, Units 1 and 2

Table F-1 lists those environmental issues listed in the *Generic Environmental Impact Statement (GEIS) for License Renewal of Nuclear Plants* (NRC 1996; 1999)<sup>(a)</sup> and 10 CFR Part 51, Subpart A, Appendix B, Table B-1, that are not applicable to Surry, Units 1 and 2, because of plant or site characteristics.

**Table F-1.** GEIS Environmental Issues Not Applicable to Surry Power Station, Units 1 and 2

ISSUE—10 CFR Part 51, Subpart A, Appendix B, Table B-1	Category	GEIS Sections	Comment
<b>SURFACE WATER QUALITY, HYDROLOGY, AND USE (FOR ALL PLANTS)</b>			
Altered thermal stratification of lakes	1	4.2.1.2.2 4.4.2.2	Surry, Units 1 and 2, do not discharge into a lake.
Water-use conflicts (plants with cooling ponds or cooling towers using makeup water from a small river with low flow)	2	4.3.2.1 4.4.2.1	Surry, Units 1 and 2, cooling systems do not use makeup water from a small river with low flow.
<b>AQUATIC ECOLOGY (FOR PLANTS WITH COOLING TOWER BASED HEAT DISSIPATION SYSTEMS)</b>			
Entrainment of fish and shellfish in early life stages	1	4.3.3	North Anna does not dissipate heat using cooling towers.
Impingement of fish and shellfish	1	4.3.3	North Anna does not dissipate heat using cooling towers.
Heat shock	1	4.3.3	North Anna does not dissipate heat using cooling towers.

(a) The GEIS was originally issued in 1996. Addendum 1 to the GEIS was issued in 1999. Hereafter, all references to the "GEIS" include the GEIS and its Addendum 1.

Table F-1. (contd)

ISSUE—10 CFR Part 51, Subpart A, Appendix B, Table B-1	Category	GEIS Sections	Comment
<b>GROUNDWATER USE AND QUALITY</b>			
Groundwater-use conflicts (potable and service water, and dewatering; plants that use <100 gpm)	1	4.8.1.1 4.8.2.1	Surry, Units 1 and 2, use >100 gpm of groundwater.
Groundwater-use conflicts (plants using cooling towers withdrawing makeup water from a small river)	2	4.8.1.3 4.4.2.1	This issue is related to heat-dissipation systems that are not installed at Surry, Units 1 and 2.
Groundwater-use conflicts (Ranney wells)	2	4.8.1.4	Surry, Units 1 and 2, do not have or use Ranney wells.
Groundwater quality degradation (Ranney wells)	1	4.8.2.2	Surry, Units 1 and 2, do not have or use Ranney wells.
Groundwater quality degradation (cooling ponds in salt marshes)	1	4.8.3	Surry, Units 1 and 2, do not use cooling ponds
Groundwater quality degradation (cooling ponds at inland sites)	2	4.8.3	Surry, Units 1 and 2, are not located at an inland site.
<b>TERRESTRIAL RESOURCES</b>			
Cooling tower impacts on crops and ornamental vegetation	1	4.3.4	This issue is related to a heat-dissipation system that is not installed at Surry, Units 1 and 2.
Cooling tower impacts on native plants	1	4.3.5.1	This issue is related to a heat-dissipation system that is not installed at Surry, Units 1 and 2.
Bird collisions with cooling towers	1	4.3.5.2	This issue is related to a heat-dissipation system that is not installed at Surry, Units 1 and 2.
Cooling pond impacts on terrestrial resources	1	4.4.4	Surry, Units 1 and 2, do not use cooling ponds

Table F-1. (contd)

ISSUE—10 CFR Part 51, Subpart A, Appendix B, Table B-1	Category	GEIS Sections	Comment
<b>HUMAN HEALTH</b>			
Microbiological organisms <sup>(a)</sup> (occupational health)	1	4.3.6	This issue is related to workers maintaining cooling towers, which Surry does not have.
Microbiological organisms, public health (plants using lakes or canals or cooling towers or cooling ponds that discharge to a small river)	2	4.3.6	Surry, Units 1 and 2, do not use cooling lakes, towers, or ponds and do not discharge into a small river (the location of discharge into the James River is categorized as an estuary).
<p>(a) In its Environmental Report (VEPCo 2001), Virginia Electric and Power Company inadvertently stated that this issue was considered to apply to Surry. During discussions with the staff during the September site visit to Surry and the October site visit to North Anna, the staff established that this issue is not applicable to Surry.</p>			

## F.1 References

10 CFR Part 51. Code of Federal Regulations, *Title 10, Energy*, Part 51, “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions.”

U.S. Nuclear Regulatory Commission (NRC). 1996. *Generic Environmental Impact Statement for License Renewal of Nuclear Plants*. NUREG-1437, Volumes 1 and 2, Washington, D.C.

U.S. Nuclear Regulatory Commission (NRC). 1999. *Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Main Report*, “Section 6.3 -Transportation, Table 9.1, ‘Summary of findings on NEPA issues for license renewal of nuclear power plants, Final Report’.” NUREG-1437, Volume 1, Addendum 1, NRC, Washington, D.C.

Virginia Electric and Power Company (VEPCo). 2001. *Application for License Renewal for Surry Power Station, Units 1 and 2*, “Appendix E, Environmental Report - Operating License Renewal Stage.” Richmond, Virginia.

## **Appendix B**

### **Contributors to the Supplement**

## Appendix B

### Contributors to the Supplement

The overall responsibility for the preparation of this supplement was assigned to the Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission (NRC). The statement was prepared by members of the Office of Nuclear Reactor Regulation with assistance from other NRC organizations and the Pacific Northwest National Laboratory, Lawrence Livermore National Laboratory, and Los Alamos National Laboratory.

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## Appendix B

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<p>(a) Pacific Northwest National Laboratory is operated for the U.S. Department of Energy by Battelle Memorial Institute.</p> <p>(b) Lawrence Livermore National Laboratory is operated for the U.S. Department of Energy by the University of California.</p> <p>(c) Los Alamos National Laboratory is operated for the U.S. Department of Energy by the University of California.</p>		



## **Appendix C**

### **Chronology of NRC Staff Environmental Review Correspondence Related to Virginia Electric and Power Company's Application for License Renewal of Surry Power Station, Units 1 and 2**

## Appendix C

### Chronology of NRC Staff Environmental Review Correspondence Related to Virginia Electric and Power Company's Application for License Renewal of Surry Power Station, Units 1 and 2

This appendix contains a chronological listing of correspondence between the U.S. Nuclear Regulatory Commission (NRC) and the Virginia Electric and Power Company (VEPCo) and other correspondence related to the NRC staff's environmental review, under 10 CFR Part 51, of VEPCo's application for renewal for the Surry Power Station, Units 1 and 2, operating licenses. All documents, with the exception of those containing proprietary information, have been placed in the Commission's Public Document Room, at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland, and are available electronically from the Public Electronic Reading Room found on the Internet at the following web address: <http://www.nrc.gov/reading-rm.html>. From this site, the public can gain access to the NRC's Agencywide Document Access and Management System (ADAMS), which provides text and image files of NRC's public documents in the Publicly Available Records (PARS) component of ADAMS. The ADAMS accession numbers for each document are included below.

- |                 |   |
|-----------------|---|
| May 16, 2001    | Letter from NRC to Mr. Alan Zoellner, Swem Library, concerning the maintenance of reference material for the Surry license renewal application (Accession No. ML011360033)  |
| May 29, 2001    | Letter from Mr. David A. Christian, Virginia Electric Power Company (VEPCo) to the NRC, submitting the application for the renewal of the operating licenses for the Surry and North Anna Power Stations, Units 1 and 2 (Accession No. ML011500502) |
| August 8, 2001  | Letter from NRC to Mr. David A. Christian, VEPCo, forwarding the Notice of Intent to prepare an environmental impact statement and conduct scoping process for license renewal for Surry Power Station, Units 1 and 2 (Accession No. ML012130132)   |
| August 21, 2001 | Notice of September 19, 2001, public meeting to discuss environmental scoping process for the Surry Power Station, Units 1 and 2, license renewal application (Accession No. ML012330263)   |
| August 22, 2001 | Letter from NRC to Ms. Reeva Tilley, Chairman, Virginia Council on Indians, inviting scoping comments (Accession No. ML012360236)   |

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- October 10, 2001 Summary of September 19, 2001, public scoping meetings for the Surry Power Station, Units 1 and 2, license renewal application (Accession No. ML012830412)
- October 17, 2001 NRC letter to Mr. David A. Christian, VEPCo, "Request for Additional Information Related to the Staff's Review of Severe Accident Mitigation Alternatives for the Surry and North Anna Power Stations, Units 1 and 2" (Accession No. ML012910292)
- November 15, 2001 Letter to NRC from John P. Wolflin, U.S. Fish and Wildlife Service, providing scoping comments on Surry Power Station license renewal (Accession No. ML013460237)
- December 10, 2001 Letter from Mr. David A. Christian, VEPCo, to NRC, responding to the October 17, 2001, request for additional information related to the staff's review of severe accident mitigation alternatives for the Surry and North Anna Power Stations, Units 1 and 2 license renewal (Accession No. ML013520484)
- December 26, 2001 Memo to file, socioeconomic and aquatic information provided by VEPCo (Accession No. MLO13610514)
- January 3, 2002 NRC letter to Ms. Cara H. Metz, Virginia Department of Historic Resources, concerning the potential for license renewal at the Surry and North Anna Power Stations to affect historic resources (Accession No. ML020070569)
- January 16, 2002 NRC letter to Mr. David A. Christian, VEPCo, "Issuance of Environmental Scoping Summary Report Associated with the Staff's Review of the Application by Dominion for Renewal of the Operating Licences for Surry Power Station, Units 1 and 2" (Accession No. ML020160586)
- January 17, 2002 NRC note to file, information provided by VEPCo during the NRC site audits in relation to the license renewal applications for the Surry and North Anna Power Stations, Units 1 and 2 (Accession No. ML020180119)
- January 23, 2002 NRC note to file, information provided by VEPCo in relation to severe accident mitigation alternatives in its license renewal application for the Surry Power Station, Units 1 and 2 (Accession No. ML020250545)

January 24, 2002 NRC letter to Ms. Karen Mayne of the U.S. Fish and Wildlife Service requesting a list of protected species within the area under evaluation for the Surry and North Anna Power Stations license renewal (Accession No. ML020250611)

March 14, 2002 NRC letter to Mr. John P. Wolflin, U.S. Fish and Wildlife Service, responding to scoping comments regarding license renewal for the Surry and North Anna Power Stations (Accession Nos. ML020740498 and ML020230063)

March 15, 2002 NRC letter to Mr. David A. Christian, VEPCo, "Request for Comments on the Draft Plant-Specific Supplement 6 to the Generic Environmental Impact Statement Regarding Surry Power Station, Units 1 and 2" (Accession No. ML021060300)

April 3, 2002 NRC letter to the U.S. Environmental Protection Agency, filing a copy of the supplemental environmental impact statement (NUREG-1437, Supplement 6) regarding license renewal for Surry Power Station, Units 1 and 2 (Accession Nos. ML021060405 [letter] and ML021050274 [NUREG package])

April 3, 2002 NRC letter to Mr. David A. Christian, VEPCo, "Notice of Availability of the Draft Plant-Specific Supplement to the Generic Environmental Impact Statement Regarding Surry Power Station, Units 1 and 2" (Accession No. ML021060225)

May 7, 2002 NRC Notice of Public Meeting to Discuss the Draft Environmental Impact Statement for the Surry Power Station, Units 1 and 2, License Renewal (Accession No. ML021210322)

May 22, 2002 Letter from Ms. Karen Mayne of the U.S. Fish and Wildlife Service to NRC providing a list of protected species within the area under evaluation for the Surry and North Anna Power Stations license renewal (Accession No. ML021560147)

June 17, 2002 Summary of May 29, 2002, public meetings to discuss the draft supplemental environmental impact statement for the Surry Power Station, Units 1 and 2, license renewal application (Accession No. ML021720280)

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- July 2, 2002 Letter from Mr. David A. Christian, VEPCo, to NRC, providing comments on the draft environmental impact statement for license renewal for Surry Units 1 and 2 (Accession No. ML021910257)
- July 10, 2002 General comment letter from Michael T. Chezik, U.S. Fish and Wildlife Service's Chesapeake Bay Field Office, regarding Surry Power Station, Units 1 and 2 license renewal (Accession No. ML022210134)
- July 29, 2002 NRC letter to Chief Leo Henry, Mr. Neil Patterson, and Mr. Richard Hill, Tuscarora Nation, "Availability of Draft Plant-Specific Supplements 6 and 7 to the Generic Environmental Impact Statement Regarding the License Renewal for the Surry and North Anna Power Stations" (Accession No. ML022140548)
- September 14, 2002 NRC letter to Dr. Oula Shehab, Virginia Department of Environmental Quality, "Draft Plant-Specific Supplements 6 and 7 to the Generic Environmental Impact Statement Regarding the License Renewal for the Surry and North Anna Power Stations" (Accession No. ML022610691)
- September 30, 2002 Email from Dr. Oula Shehab, Virginia Department of Environmental Quality, providing comments on draft Supplement 6 to the Generic Environmental Impact Statement Regarding the License Renewal for the Surry Power Station (Accession No. ML022830313)
- October 21, 2002 NRC letter to Mr. David A. Christian, VEPCo, "Revision of Schedule For The Review of the North Anna, Units 1 and 2, and Surry, Units 1 and 2, License Renewal Applications" (Accession No. ML022950104)
- November 1, 2002 Note to file docketing emails associated with the staff's biological assessment concerning eagles under license renewal for Surry Power Station, Units 1 and 2 (Accession No. ML02305100)
- November 6, 2002 NRC letter to Mr. John P. Wolflin, U.S. Fish and Wildlife Service, "Biological Assessment For Bald Eagles For License Renewal at Surry Power Station, Units 1 and 2, and Request For Informal Consultation" (Accession No. ML022910160)
- November 6, 2002 Note to file docketing an email from T. Banks, VEPCo, concerning river intake structure screen mesh size for Surry Power Station, Units 1 and 2 (Accession No. ML023100170)

## **Appendix D**

### **Organizations Contacted**

## Appendix D

### Organizations Contacted

During the course of the staff's independent review of environmental impacts from operations during the renewal term, the following Federal, State, regional, and local agencies were contacted:

U.S. Fish and Wildlife Service, Annapolis, Maryland

Virginia Department of Historic Resources, Portsmouth, Virginia

Virginia State Historic Preservation Office

Virginia Department of Transportation, Resident Engineer

Virginia Department of Taxation

Virginia Employment Commission

Groundwater Hydrologist, Virginia Department of Environmental Quality

County Administrator, Surry County

Community Development Director, Surry County Department of Planning, Surry, Virginia

Director, Social Services, Surry County

Planning Director, Surry County

Agricultural Extension, Surry County

Associate Superintendent, Surry County School District

Director, Surry County Parks and Recreation Department

Commissioner of Revenue, Surry County

Hope Alternatives (private social service agency in Surry County)

Isle of Wight Social Services Director

Superintendent, School District, Isle of Wight

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Director, Public Utilities Department, Isle of Wight

Director, Isle of Wight Parks and Recreation

Director, Economic Development, Isle of Wight

Director, Smithfield and Isle of Wight Convention and Tourist Bureau

Town Manager, Town of Smithfield

| Tuscarora Nation, Lewiston, New York

Deputy Director, Hampton Roads Planning District Commission

Director, James City County Social Services

Director, James City Service Authority (Water Service)

Director, James City County Economic Development Department

Director, Newport News Waterworks



## **Appendix E**

### **Virginia Electric and Power Company's Compliance Status and Consultation Correspondence**

## Appendix E

### Virginia Electric and Power Company's Compliance Status and Consultation Correspondence

The list of licenses, permits, consultations, and other approvals obtained from Federal, State, regional, and local authorities for Surry, Units 1 and 2, are shown in Table E-1. Following Table E-1 are reproductions of correspondence prepared and sent during the evaluation process for the application for renewal of the operating licenses for Surry, Units 1 and 2.

Source	Recipient	Date of Letter
United States Nuclear Regulatory Commission (C. I. Grimes)	Virginia Department of Historic Resources	January 3, 2002
United States Nuclear Regulatory Commission (C. I. Grimes)	U.S. Fish and Wildlife Service	January 24, 2002
Commonwealth of Virginia Department of Environmental Quality (E. L. Irons)	Dominion Virginia Power Company	February 20, 2002
United States Nuclear Regulatory Commission (B. Zalcman)	Tuscarora Nation	July 29, 2002
Dominion Virginia Power Company (T. Banks)	National Marine Fisheries Service	February 6, 2001
United States Department of the Interior (K. L. Mayne)	United States Nuclear Regulatory Commission	May 22, 2002
United States Department of Commerce (M. Colligan)	Dominion Generation	March 23, 2001
United States Nuclear Regulatory Commission (P.T. Kuo)	U.S. Fish and Wildlife Service	November 6, 2002

**Table E-1.** Federal, State, Local, and Regional Licenses, Permits, Consultations, and Other Approvals for Surry Power Station, Units 1 and 2

Agency	Authority	Description	Number	Issue Date	Expiration Date	Remarks
NRC	10 CFR Part 50	Operating license, Surry, Unit 1	DPR-32	05/26/72	05/25/12	Authorizes operation of Unit 1
NRC	10 CFR Part 50	Operating license, Surry, Unit 2	DPR-37	01/30/73	01/29/13	Authorizes operation of Unit 2
FWS	Migratory Bird Treaty Act (16 USC 703-712)	Permit	MB705136-0	04/22/02	03/31/03	The permit authorizes removal of up to 15 osprey nests causing safety hazards.
FWS	Section 7 of the Endangered Species Act (16 USC 1536)	Consultation	NA	Letter from NRC to FWS 01/24/02	NA	Section 7 requires a Federal agency to consult with FWS regarding whether a proposed action will affect endangered or threatened species. FWS determined that the renewal of the Surry OLs may affect the bald eagle.
NMFS	Section 7 of the Endangered Species Act (16 USC 1536)	Consultation	Letter 1514-05(A) from NMFS to VEPCo, 03/23/01	NA	NA	NMFS determined that renewal of the Surry OLs is not likely to affect species protected by the Endangered Species Act and under the purview of NMFS
U.S. Army Corps of Engineers	Section 404 of the Clean Water Act (33 USC 1344)	Authorization to use regional permit for discharge of dredged or fill material	97-RP-19, Project 99-V1336	08/27/99	08/12/03	Permit covers periodic dredging to maintain the intake channel in the James River

Table E-1. (contd)

Agency	Authority	Description	Number	Issue Date	Expiration Date	Remarks
DOT Research and Special Programs Administration	49 CFR Part 107, Subpart G	Registration	0531000020241	05/25/01	06/30/02	Registration covers hazardous materials shipments
VMRC	COV Title 28.2, Chapters 12 and 13	Permit	VMRC 92-1347	08/02/99	12/31/02	Maintenance dredging of the intake channel in the James River
VDHR	Section 106 of the National Historic Preservation Act (16 USC 470f)	Consultation	NA	Letter from NRC to VDHR 01/03/02	NA	The National Historic Preservation Act requires Federal agencies to take into account the effect of any undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places.
VDEQ	Section 307(c)(3)(A) of the Coastal Zone Management Act (16 USC 1456[c][3][A])	Consistency determination with the Virginia Coastal Management Program	NA	Letter from VDEQ to VEPCo (02/20/02)	NA	Certification that the Surry Power Station complies with the Virginia Coastal Program
VDEQ	9 VAC 25-610-40	Permit	GW0003900	08/01/99	08/01/09	Permit for withdrawal of groundwater for use as potable, process, and cooling water
VDEQ	33 USC 1342	Virginia pollutant discharge elimination system (NPDES) permit	VA0004090	11/02/01	11/01/06	The NPDES permit covers plant and stormwater discharges

Table E-1. (contd)

Agency	Authority	Description	Number	Issue Date	Expiration Date	Remarks
VDEQ	9 VAC 5-80-10	Air operating permit				An application for an air operating permit was submitted to VDEQ on 0/12/98 and revised on 04/07/98. Issuance of the permit is pending.
VDEQ	9 VAC 5-20-160	Registration	50336	NA	NA	Annual recertification of air emission sources
VDEQ	9 VAC 5-80-10	Permit		09/27/93	None	Air pollution permit covering installation and operation of the emergency blackout generator
Virginia Department of Health, Bureau of Water Supply Engineering	Waterworks regulations, section 3.14	Permit	3181800	03/07/78	None	Permit authorizes operation of a noncommunity waterworks

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CFR = Code of Federal Regulations  
COV = Code of Virginia  
DOT = U.S. Department of Transportation  
EPA = U.S. Environmental Protection Agency  
FWS = U.S. Fish and Wildlife Service  
NA = not applicable  
NMFS = National Marine Fisheries Service  
NRC = U.S. Nuclear Regulatory Commission  
USC = United States Code  
VAC = Virginia Administrative Code  
VDEQ = Virginia Department of Environmental Quality  
VDHR = Virginia Division of Historic Resources  
VEPCo = Virginia Electric and Power Company  
VMRC = Virginia Marine Resources Commission

January 3, 2002

Ms. Cara H. Metz, Director  
Division of Resource Services and Review  
Virginia Department of Historic Resources  
2801 Kensington Avenue  
Richmond, VA 23221

Dear Ms. Metz:

This letter responds to issues raised in your letter dated February 13, 2001, to Mr. William Corbin of Virginia Electric and Power Company (VEPCo), regarding the license renewal Environmental Reports for the Surry and North Anna Power Stations. Our response has benefitted from productive discussions between representatives of my staff and Dr. Ethel Eaton of your staff, including a meeting held at the Virginia Department of Historic Resources on September 21, 2001, for Surry.

In response to your original letter, VEPCo authorized cultural resource assessments of the Surry and North Anna sites. These assessments were conducted by the Louis Berger Group, Inc., and the completed reports were delivered to VEPCo in March 2001, with an addendum to the North Anna report delivered in October 2001. A copy of the Surry report was provided to the U.S. Nuclear Regulatory Commission (NRC) during our recent visit to the site in September 2001. Also during this September visit, Dr. Eaton and our consulting archaeologist, Dr. W. Bruce Masse of Los Alamos National Laboratory, had the opportunity to tour the grounds of the Surry Power Plant. Dr. Masse later reviewed the assessment report and pertinent archival records on file at the Virginia Department of Historic Resources. We received a copy of the North Anna report and its addendum following our visit to that site in October 2001.

The NRC is acutely aware of the richness of the history in and around Gravel Neck Peninsula, and the lower James River in general. We are also aware of the potential for significant intact historic and archaeological resources to be present in the undeveloped portions of the Surry and North Anna Power Stations. We have discussed this topic at considerable length with the station managers and with other appropriate representatives from VEPCo, and are confident they share our concern for these cultural resources. Station procedures provide for the protection of cultural resources during future site activities.

Dr. Eaton, our reviewers, and the cultural resources assessment reports are in agreement that there is little likelihood that intact cultural resources exist in the presently developed portions of the Surry and North Anna Power Stations.

Because there are current operating procedures that take into account the inadvertent discovery of historic and archaeological remains at both stations, and because the license renewal is not expected to result in major refurbishment nor the need to expand operations into the currently undeveloped portions of the stations, we believe that license renewal is unlikely to

Appendix E

C. Metz

- 2 -

affect cultural resources. We therefore also consider it unnecessary at this time to enter into a programmatic agreement pursuant to the license renewal. However, should conditions specific to either of the stations change, or should the NRC license renewal process change in general, we would be prepared to reconsider this decision.

Please let us know if you have any other questions or concerns about the license renewal process. We will send you copies of the completed draft Supplemental Environmental Impact Statements for both the Surry and North Anna Power Stations as soon as they become available for review. Also, if you do not yet have a copy of the Berger Group cultural resource assessment reports for the two stations and wish to obtain copies for your files, we would be happy to provide you with copies.

Sincerely,  
**Original Signed By: CIGrimes**  
Christopher I. Grimes, Program Director  
License Renewal and Environmental Impacts  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket Nos. 50-280, 50-281, 50-338, and 50-339

Enclosure: As stated

cc w/encl: see next page

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\*See previous concurrence

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DATE	12/13/01	12/13/01	12/14/01	01/04/02	01/03/02

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January 24, 2002

Ms. Karen Mayne, Supervisor  
Virginia Field Office  
U.S. Fish and Wildlife Service  
6669 Short Lane  
Gloucester, Virginia 23061

SUBJECT: REQUEST FOR LIST OF PROTECTED SPECIES WITHIN THE AREA UNDER  
EVALUATION FOR THE SURRY AND NORTH ANNA POWER STATIONS  
LICENSE RENEWAL

Dear Ms. Mayne:

The Nuclear Regulatory Commission (NRC) is evaluating an application submitted by Virginia Electric and Power Company for the renewal of the operating licenses for its Surry and North Anna Power Stations, Units 1 and 2. The NRC is preparing station-specific supplements to its "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (NUREG-1437) for this proposed license renewal, for which we are required to evaluate potential impacts to threatened and endangered species.

The proposed action would include use and continued maintenance of existing facilities and transmission lines and would not result in new construction or disturbance. The Surry Power Station is located on the James River in Surry County, Virginia. The transmission line corridors for this station pass through portions of Surry, Isle of Wight, Prince George, and Charles City counties, and the corporate limits of the cities of Suffolk, Chesapeake, Newport News, and Hopewell, Virginia. In total, the corridors include about 5000 acres (170 miles in length).

The North Anna Power Station is located on the south side of Lake Anna in Louisa County, Virginia. The transmission line corridors for this station pass through portions of Louisa, Hanover, Goochland, Powhatan, Henrico, Chesterfield, Spotsylvania, Caroline, Orange, Culpeper, and Fauquier counties, Virginia. In total, the corridors include about 2900 acres (120 miles in length). In addition, Lake Anna, which is fed by the North Anna River and impounded by the North Anna Dam, is used as part of the cooling system for North Anna Power Station. Therefore, the lake and the Lower North Anna River are considered part of the aquatic environment of interest.

To support the environmental impact statement preparation process and to ensure compliance with Section 7 of the Endangered Species Act, the NRC requests a list of species and information on threatened, endangered, proposed, and candidate species and critical habitat that may be in the vicinity of the Surry and North Anna Power Stations and their associated transmission lines. We have enclosed figures showing the location of the stations and their associated transmission lines.

Also, we would like confirmation that the Chesapeake Bay Field Office will serve as the U.S. Fish and Wildlife Service's point of contact for Endangered Species Act compliance, including any Section 7 consultation that may be needed, for the Surry and North Anna Power Stations.



Appendix E

K. Mayne

- 2 -

If you have any comments or questions, please contact Andrew J. Kugler, Senior Project Manager, at (301) 415-2828.

Sincerely,  
**CIGrimes**  
Christopher I. Grimes, Program Director  
License Renewal and Environmental Impacts  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket Nos. 50-280, 50-281, 50-338 and 50-339

Enclosure: As stated

cc: John P. Wolflin, Supervisor  
Chesapeake Bay Field Office  
U.S. Fish and Wildlife Service  
177 Admiral Cochrane Drive  
Annapolis, Maryland 21401

cc: See next page

**Accession nos.:**

1. Cover letter: ML020250603
2. Enclosure: Figures Depicting the Location of the Surry and North Anna Power Stations and Their Associated Transmission Lines - ML020100388
3. Package: ML020250611

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\*See previous concurrence

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