ERRATA

Re: **Proposal for Information Collection - North Anna Power Station Submittal for Agency Review and Comments** 316(b) Cooling Water Intake Structures

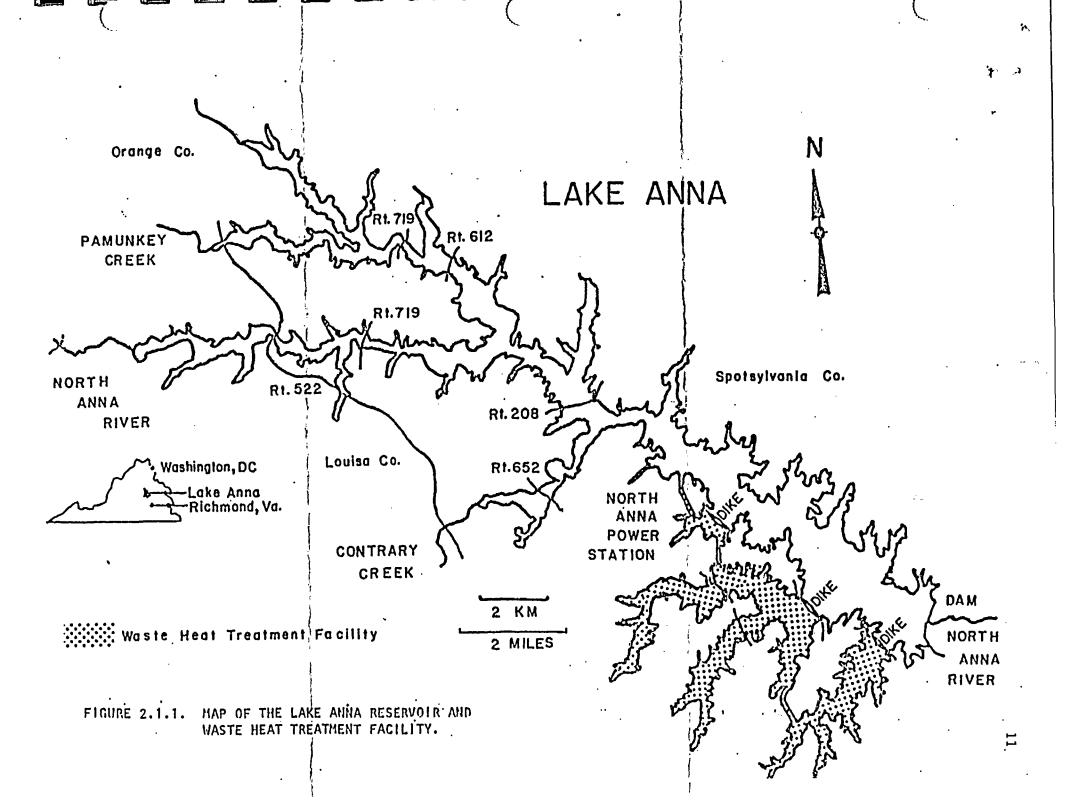
Please print this attachment and follow the enclosed instructions.

Attachment 5 - Remove page 11 (which is printed two -sided) and replace with page 11 (one-sided)

Attachment 5 - Remove pages 112/114 (two-sided) and replace with pages 112, -113, & 114 (one-sided)

Please contact Joyce Livingstone at (804) 273-2985 or Bill Bolin of Dominion Electric Environmental Services with your questions at (804) 271-5304.

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almost twice as high as the average annual impingement rate $(7.5 \times 10^3 \text{ fish})$ from 1979-1983. The estimated total number of bluegill creeled during 1984 was 9.0×10^3 (Vepco unpublished data). This value is almost twice as high as the estimated total number of bluegill impinged during 1983 (5.8×10^3) (Table 6.1.3). The comparison of data from these 2 years probably is valid as the standing crop of bluegill in Lake Anna remained relatively stable during that period (Vepco unpublished data).

White Perch

Cove_rotenone_data_indicate_an_increasing population of white perch_in Lake Anna ranging from 2.73 kg/ha in 1979 to 24.2 kg/ha in 1982 and 21.0 kg/ha in 1983 with an annual average during the 5-plus-year study period of 12.7 kg/ha (Vepco 1983 and 1984). The estimated average annual impingement rate for white perch during that period was 122.2 kg. At this rate, 0.1% of the lake area (5.8 of 5,600 ha) would be required annually to produce the weight of impinged white perch, or an average of 0.1% of the total white perch standing crop was impinged annually. The number of white perch per hectare, readily available only for the years 1981-1983 averaged 520/ha from rotenone data (Vepco 1983 and 1984). The estimated average annual impingement number for these 3 years was 3.9×10^3 (Table 6.1.3). Thus 0.13% of the lake area (7.5 of 5,600 ha) would be required to produce the number of white perch impinged annually.

The average fecundity of white perch has been estimated at 4.0 \times 10⁴ with a maximum reported at 3.2 \times 10⁵ (Hardy 1978). As the estimated average annual number of white perch impinged was 2.7 \times 10³ during the 5-plus-year study (max. 5,168) (Table 6.1.3), one average size adult female theoretically could produce more progeny in 1-year than were impinged in a year.

The striped bass was the only other species of any significance impinged during this study. Almost exclusively the impinged striped bass were young-of-the-year with yearly impingement estimates ranging from 151 (1978) to 5.2 \times 10³ (1982) with a total of 1.0 \times 10⁴ (Table 6.1.1). During the duration of this study (1978-1983) the Virginia Commission of Game and Inland Fisheries stocked 1.5 \times 10⁶ striped bass fry in Lake Anna (personal communication C. Sledd) of which an estimated 0.7% were impinged.

Relative fish species composition in a lake can be greatly affected by introductions of new fish species. Since 1972 Lake Anna has been subject to numerous stockings of nine different species of fish (Table 7.1.2). All of these species, except Florida largemouth bass, are now found in the lake, although blueback herring is rare. Neither striped bass nor walleye have established breeding populations, hence the yearly stockings.

As these stockings were comprized of both predator and prey species, in large numbers, it is not surprising that fluctuations in species composition have occurred and are still continuing as these fishes compete for space in their respective niches.

Whether one compares impingement during the 5-plus-year study period with estimated standing crop, average fecundity or creel harvest, there apparently has been no noticeable adverse impact on the fish stocks of Lake Anna.

Table 7.1.1 - Impact assessment summary for selected species, comparing average annual impingement rates with average annual standing crop, average fecundity and creel estimates when available, at North Anna Power Station 1978-1983.

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Species	Average Annual Impingement Weight (kg) 1978-1983	Average Annual Standing Crop (Height-kg) 1979-1983	Average Annual Impingement Number 1981-1983	Average Annual Standing Crop (Number) 1981-1983	Average Annual Impingement Number 1979-1983	Fecundity of one Average Size Female Fish	Estimated Number Impinged 1983	Estimated Creel Harvest 1984
	0.32		0.4%		Ì			
Gizzard Shad	2,200	677,600	34,417	9,408,00G	116,769	378,990		
	3.8%		3.1%		ţ			
Black Crappie	1,397	37,184	22,256	728,000	28,437	37,796	11,018	15,992
	1.4%		0.6%		t	,	,	
Yellow Perch	518 ,	36,400	7,582	1,288,000	28,634	23,000		
	0.02%		. 0.02%		{			
Bluegill	80	365,680	8,362	43,456,000	7,438	18,300	5,754	9,056
	5.8 *		0.13\$		j			
White perch	122	71,120	3,898	2,912,000	2,719 🖒	40,000		
Striped bass	Total number	(er impinged - 10.024	total number s	tocked - 1.508.098	. 0.7%			

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U.S. Nuclear Regulatory Commission Document Control Desk Washington, DC 20555 RE: North Anna Units 1 and 2 Docket Nos. 50-338/50-339 License Nos. NPF-4/NPF-7

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