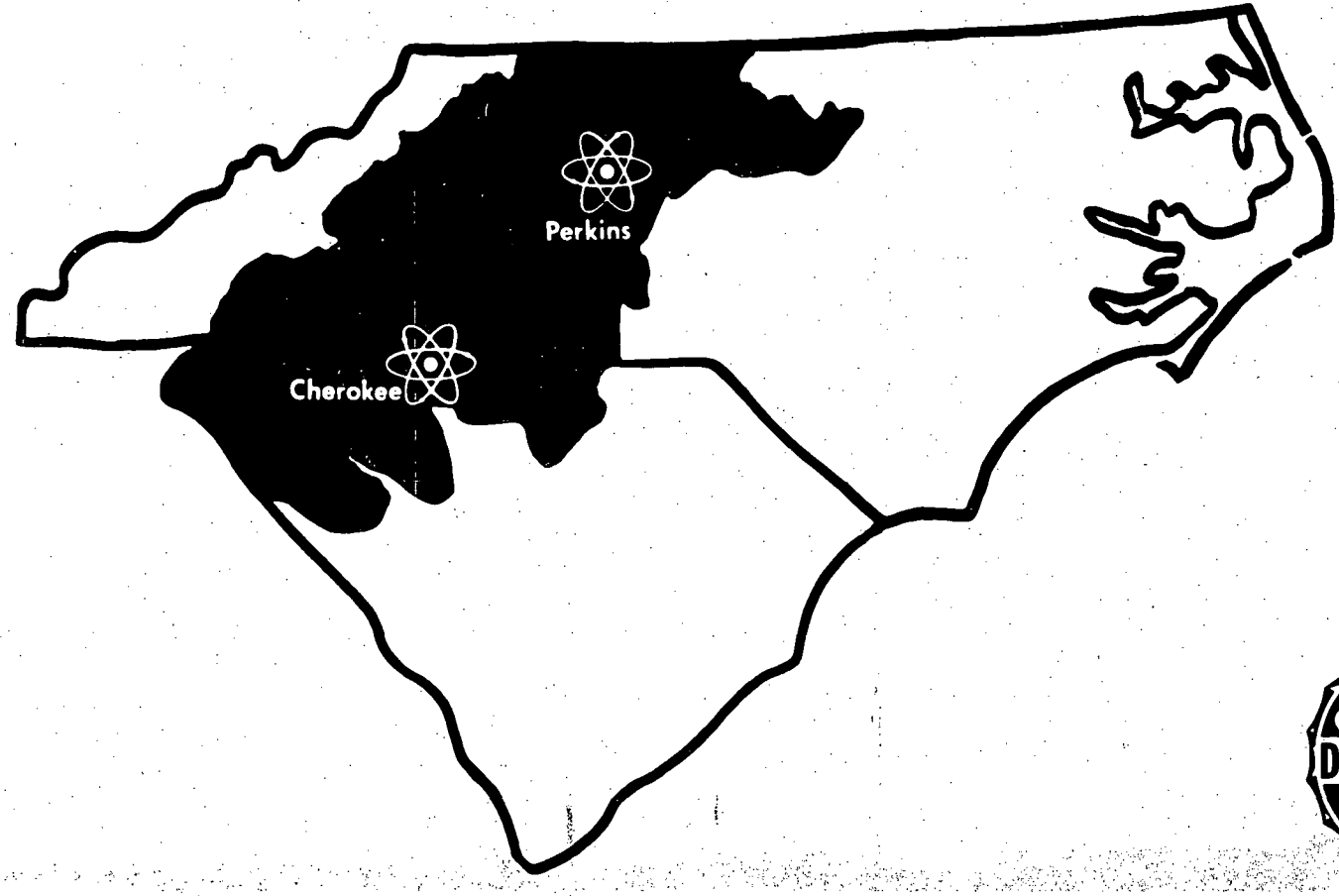
Duke Power Company

PROJECT 81

Cherokee Nuclear Station

Environmental Report

Volume III



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TABLES FOR SECTION 2.7
CHEROKEE NUCLEAR STATION
ENVIRONMENTAL REPORT

ER Table 2.7.1-1

Cherokee Nuclear Station
Potential Vegetation Associations and Communities along
the Broad River in the Vicinity of the Cherokee Nuclear Station

A. OAK-HICKORY PINE FOREST ASSOCIATION

1. Oak-Pine Forest

a. Shortleaf pine-Oak (Type 76)

b. Loblolly pine-Hardwood (Type 82)

2. Loblolly-Shortleaf Pine Forest

a. Shortleaf pine (Type 75)

b. Shortleaf pine-Virginia pine (Type 77)

c. Virginia pine (Type 79)

d. Loblolly pine-Shortleaf pine (Type 80)

e. Loblolly pine (Type 81)

B. APPLACHIAN OAK FOREST ASSOCIATION

1. Oak-Hickory Forest

a. Scarlet oak (Type 41)

b. White oak-Red oak-Hickory (Type 52)

c. White oak (Type 53)

C. SOUTHERN FLOODPLAIN FOREST ASSOCIATION

1. Oak-Gum-Cypress Forest

a. River birch-Sycamore (Type 90)

b. Cottonwood (Type 63)

c. Beech-Southern magnolia (Type 90)

d. Black willow (Type 95)

D. NORTHEASTERN OAK-PINE FOREST

a. Chestnut oak (Type 44)

NOTE: The forest type number listed following each association or community name refers to the standard system established by the Society of American Foresters in 1954.

ER Table 2.7.1-2

Cherokee Nuclear Station

Synonomy of Plant Communities from the Broad River Basin.

Source:

Kuchler, 1964 (1)	Forest Atlas of The South, 1969 (2)	Major forest types S. C., 1950 (4)	Major forest types N. C., 1955 (3)
Appalachian Oak	Oak-Hickory	Oak-Hickory	Oak-Hickory-Scrub Oak
Oak-Hickory-Pine	Loblolly-Shortleaf Pine Oak-Pine	Shortleaf Pine-Virginia pine-Loblolly pine Hardwood-Pine	Shortleaf Pine-Virginia Pine-Loblolly pine Hardwood-Pine
Southern Floodplain	Oak-Gum-Cypress	Swamp and Bottomland Hardwoods	Oak-Gum-Cypress

Amendment 2
(Revised)

ER Table 2.7.1-3

Cherokee Nuclear Station
Dominance Classes and Constancy Values of Plant Species In the Cattail Marsh Community near the Cherokee Nuclear Station

	Dominance[1] Stand numbers : 7	11	24	Outside[2] system constancy%	Inside[2] system constancy%
TREES AND SUBSTORY TREES					
Salix nigra	1	2	2	1	100
VINES					
Clematis sp.	2			lacking	33
Rhus radicans	2			19	33
HERBS					
Bidens frondosa	2			lacking	33
Boehmeria cylindrica	2			10	33
Chenopodium ambrosioides	2			10	33
Eupatorium coelestinum	1			lacking	33
Hypericum mutilum	1			lacking	33
Ipomoea coccinea	2			lacking	33
Ipomoea purpurea	2			lacking	33
Ludwigia decurrens	3	4		10	66
Oxalis stricta	2			lacking	33
Peltandra virginica	2			lacking	33
Polygonum cespitosum	3			14	33
Polygonum pensylvanicum	2			10	33
Sagittaria latifolia	4	3		lacking	66
Typha latifolia	4	4	5	lacking	100

1 - definitions given in table 6.1-4-1
2 - for definition see section 6.1.4.3.1.2

Amendment 2
(Revised)

E.R. Table 2.7.1-4 (page 1 of 2)
Cherokee Nuclear Station
Quadrat analysis data for the
Cattail Marsh
Community Type, Stand 24

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Trees and Shrubs								
Acer negundo	.15	33	.31	.79	22.4	14.3	48.4	85.1
Cornus amomum	.04	66	.04	.74	6.0	28.6	6.3	40.9
Populus deltoides	.21	33	.16	.70	31.3	14.3	25.0	70.6
Salix nigra	.21	33	.08	.62	31.3	14.3	12.5	58.1
Sambucus canadensis	.06	66	.05	.77	9.0	28.6	7.8	45.4
Saplings								
Salix nigra	.06	.20	.01	.27	50.0	50.0	50.0	150.0
Sambucus canadensis	.06	.20	.01	.27	50.0	50.0	50.0	150.0
Seedlings								
Acer negundo	.03	.13	.01	.17	21.4	50.0	50.0	121.4
Salix nigra	.11	.13	.01	.25	78.6	50.0	50.0	178.6
Lianas								
Clematis spp.	.01	.13	.01	.15	6.7	33.3	33.3	73.3
Rhus radicans	.09	.13	.01	.23	60.0	33.3	33.3	126.6
Smilax glauca	.05	.13	.01	.19	33.3	33.3	33.3	99.9
Herbs								
Bidens frondosa	1.71	50	.09	2.3	2.3	9.3	3.2	14.8
Carex lurida	5.38	80	.22	6.4	7.3	14.8	7.9	30.0
Carex spp.	4.01	80	.19	5.0	5.5	14.8	6.8	27.1
Eleocharis obtusa	7.17	80	.34	8.31	9.8	14.8	12.2	36.8

(contd.)

Amendment 2
(Revised)

E.R. Table 2.7.1-4 (page 2 of 2)
Cherokee Nuclear Station
Quadrat analysis data for the
Cattail Marsh
Community Type, Stand 24

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd [1]	Rel. Den.[1]	Rel. Freq. [1]	Rel. Dom.[1]	I.V.[1]
Fimbristylis autumnalis	4.21	50	.40	5.11	5.7	9.3	14.3	29.3
Junucus effusus	6.03	40	.40	6.83	8.2	7.4	14.3	29.9
Panicum spp.	.08	10	.05	.23	.1	1.9	1.8	3.8
Peltandra virginica	.75	20	.03	.98	1.0	3.7	1.1	5.8
Polygonum cespitosum	1.33	20	.07	1.6	1.8	3.7	2.5	8.0
Sagittaria latifolia	3.50	40	.13	4.03	4.8	7.4	4.7	16.9
Scirpus validus	3.14	20	.10	3.44	4.3	3.7	3.6	11.6
Typha latifolia	36.0	50	.77	37.27	49.1	9.3	27.6	86.0

[1] for definitions see Section 6.1.4.3.1.3

Amendment 2
(Revised)

ER Table 2.7.1-5

Cherokee Nuclear Station
Dominance Classes and Constancy Values of Plant Species Sighted
in Alluvial Forest Communities near the Cherokee Nuclear Station

	Dominance[1] - Stand numbers : 8	13	23	Outside[2] system constancy %	Inside[2] system constancy%
TREES AND SUBSTORY TREES					
Acer negundo	5	5		10	66
Acer saccharum floridanum			1	38	33
Alnus serrulata			2	05	33
Betula nigra	2	1	5	lacking	100
Celtis laevigata		1		lacking	33
Fraxinus pensylvanica	2	2		10	66
Juglans nigra	2			lacking	33
Liquidambar styraciflua			2	38	33
Liriodendron tulipifera	2	1	2	29	100
Morus rubra	3	1		5	66
Platanus occidentalis	2	1	3	5	100
Populus deltoides	2	3	2	10	100
Quercus nigra			3	14	33
Quercus phellos			2	24	33
SHRUBS					
Cornus amomum			2	lacking	33
Ligustrum sinense	1	4	2	lacking	100
Sambucus canadensis	2			14	33
Viburnum dentatum lucidum			3	lacking	33
VINES					
Anisostichus carpreolata			2	lacking	33
Lonicera japonica	4		3	43	66
Parthenocissus quinquefolia	2			lacking	33
Rhus radicans		1		19	33
Smilax bon-nox			3	19	33
Smilax glauca			2	57	33
HERBS					
Aster sagittifolius	2	2		lacking	66
Boehmeria cylindrica	2	1		5	66
Dioscorea batatas	4	1		lacking	66
Impatiens capensis	2	1		5	66
Phytolacca americana	2	2		lacking	66
Polygonum cespitosum	2	2		10	66
Viola papilionacea	3	3		lacking	66

1 - definition given in table 6.1-4-1
2 - for definition see section 6.1.4.3.1.2

Amendment 2
(Revised)

E.R. Table 2.7.1-6 (page 1 of 3)
Cherokee Nuclear Station
Quadrat analysis data for the
Alluvial Forest
Community Type, Stand No. 8

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Canopy								
Acer saccharum floridanum	.013	20	.12	.333	0.6	4.4	3.6	8.6
Betula nigra	.195	100	.78	1.975	8.5	22.2	23.2	53.9
Celtis laevigata	.001	10	.07	.108	0.0	2.2	2.1	4.3
Diospyros virginiana	.05	20	.06	.31	2.2	4.4	1.8	8.4
Fraxinus pennsylvanica	.01	10	.07	.18	0.4	2.2	2.1	4.7
Liquidambar styraciflua	.19	20	.21	.60	8.3	4.4	6.3	19.0
Liriodendron tulipifera	.01	10	.18	.29	0.4	2.2	5.4	8.0
Platanus occidentalis	.76	60	.37	1.73	33.2	13.3	11.0	57.5
Populus deltoides	.37	60	.24	1.21	16.2	13.3	7.1	36.6
Salix nigra	.26	60	.31	1.17	11.4	13.3	9.2	33.9
Ulmus alata	.13	20	.17	.50	5.7	4.4	5.1	15.2
Ulmus americana	.04	20	.09	.33	1.7	4.4	2.7	8.8
Quercus nigra	.19	30	.41	.90	8.3	6.7	12.2	27.2
Quercus phellos	.06	10	.28	.44	2.6	2.2	8.3	13.1
Subcanopy								
Betula nigra	.17	30	.07	.540	14.5	13.0	7.4	34.9
Fraxinus pennsylvanica	.10	20	.11	.410	8.5	8.7	11.7	28.9
Platanus occidentalis	.06	20	.06	.320	5.1	8.7	6.4	20.2
Quercus nigra	.48	40	.23	1.110	41.0	17.4	24.5	82.9
Quercus phellos	.11	40	.19	.700	9.4	17.4	20.2	47.0
Ulmus alata	.25	80	.28	1.330	21.4	34.8	29.8	86.0
Shrubs								
Alnus serrulata	.13	10	.01	.24	.7	4.2	.2	5.1
Cephalanthus occidentalis	.03	10	.02	.15	.2	4.2	.3	4.7

(contd.)

E.R. Table 2.7.1-6 (page 2 of 3)
Cherokee Nuclear Station
Quadrat analysis data for the
Alluvial Forest
Community Type, Stand No. 8

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Cornus amomum	.06	10	.01	.17	.3	4.2	.2	4.7
Ligustrum sinense	.931	20	.15	1.281	5.4	8.3	2.4	16.1
Morus rubra	.06	40	.20	.660	.3	16.7	3.1	20.1
Rhus copallina	.63	10	.05	.780	3.6	4.2	.8	8.6
Rosa spp.	.19	10	.17	.46	1.1	4.2	2.7	8.0
Rubus spp.	15.3	100	5.61	21.910	88.1	41.7	88.3	218.1
Viburnum dentatum lucidum	.038	30	.13	.468	.2	12.5	2.0	14.7
Saplings								
Acer saccharum floridanum	.38	40	1.01	1.790	54.8	28.6	49.2	132.6
Betula nigra	.09	20	.96	1.25	13.0	14.3	46.8	74.1
Fraxinus pennsylvanica	.001	10	.001	.102	.1	7.1	0.0	7.2
Platanus occidentalis	.05	20	.01	.26	7.2	14.3	.5	22.0
Quercus nigra	.17	30	.05	.52	24.5	21.4	2.4	48.3
Quercus phellos	.001	10	.01	.111	.1	7.1	.5	7.7
Ulmus alata	.001	10	.01	.111	.1	7.1	.5	7.7
Seedlings								
Acer saccharum floridanum	.54	20	1.80	2.54	48.8	28.6	54.7	132.1
Liquidambar styraciflua	.38	20	.74	1.32	34.4	28.6	22.5	85.5
Liriodendron tulipifera	.176	10	.51	.786	15.9	14.3	15.5	45.7
Quercus nigra	.01	20	.24	.45	.9	28.6	7.3	36.8
Lianas								
Anisostichus carpeolata	7.74	10	5.65	13.49	3.0	5.9	5.1	14.0
Clematis spp.	1.9	10	1.9	3.9	.7	5.9	1.7	8.3
Lonicera japonica	95.2	40	33.7	129.3	36.8	23.5	30.6	90.9

(contd.)

Amendment 2
(Revised)

E.R. Table 2.7.1-6 (page 3 of 3)
Cherokee Nuclear Station
Quadrat analysis data for the
Alluvial Forest
Community Type, Stand No.8

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Smilax bona-nox	31.8	40	16.4	48.6	12.3	23.5	14.9	50.7
Smilax glauca	122.1	70	52.6	175.4	47.2	41.2	47.7	136.1
Herbs								
Aster sagittifolius	15.0	40	3.99	19.39	5.4	14.3	3.5	23.2
Carex spp.	57.5	60	22.84	80.94	20.8	21.4	19.8	62.0
Elephantopus tomentosa	5.0	10	.53	5.63	1.8	3.6	.5	5.9
Fragaria virginiana	55.0	30	15.01	70.31	19.9	10.7	13.0	43.6
Impatiens capensis	2.5	10	.06	2.66	.9	3.6	.1	4.6
Panicum spp.	23.4	40	1.17	24.97	8.5	14.3	1.0	23.8
Polygonum cespitosum	2.7	10	.08	2.88	1.0	3.6	.1	4.7
Prunella vulgaris	20	10	.80	20.9	7.2	3.6	.7	11.5
Viola papilionacea	95	70	71.01	166.71	34.4	25.0	61.5	120.9

[1] for definitions see Section 6.1.4.3.1.3

Amendment 2
(revised)

ER Table 2.7.1- 7

Cherokee Nuclear Station
Dominance Classes and Constancy Values of Plant Species Sighted in the Alluvial Thicket Community near the Cherokee Nuclear Station

	Dominance[1] Stand numbers: 8	13	23	Outside[2] system constancy %	Inside[2] system constancy %
TREES AND SUBSTORY TREES					
Acer negundo	2	3		10	66
Alnus serrulata		2		5	33
Fraxinus pensylvanica	2	3		10	66
Platanus occidentalis	2			14	33
Populus deltoides	4	3		14	66
Salix nigra	3	3	5	14	66
SHRUBS					
Rhus glabra			2	10	33
Sambucus canadensis	2	3	3	5	100
VINES					
Rhus radicans		2		19	33
HERBS					
Aster simplex	1			lacking	33
Chenopodium ambrosioides	4	3		5	66
Datura stramonium tatula	3			lacking	33
Eupatorium coelestinum	2			5	33
Impatiens capensis		1		10	33
Ipomoea purpurea	1			5	33
Ludwigia decurrens		1	4	10	66
Lycopus uniflorus	2			lacking	33
Oenothera biennis	1	2		lacking	66
Physalis angulata	2			lacking	33
Polygonum cespitosum	2			14	33
Polygonum pensylvanicum	4	2		5	66
Verbena brasiliensis	2			lacking	33
Xanthium strumarium	2	1		lacking	66

1 - definition given in table 6.1-4-1
2 - for definition see section 6.1.4.3.1.2

Amendment 2
(Revised)

E.R. Table 2.7.1-8 (page 1 of 2)
Cherokee Nuclear Station
Quadrat analysis data for the
Alluvial Thicket/Forest
Community Type, Stand 8

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Canopy								
Acer negundo	.06	80	.22	1.08	39.5	30.8	42.3	112.6
Betula nigra	.01	20	.02	.23	6.6	7.7	3.8	18.1
Fraxinus pennsylvanica	.002	20	.01	.212	1.3	7.7	1.9	10.9
Populus deltoides	.04	80	.20	1.04	26.3	30.8	38.5	95.6
Salix nigra	.04	60	.07	.71	26.3	23.1	13.5	62.9
Subcanopy								
Acer negundo	.02	40	.03	.45	83.3	50.0	85.7	219.0
Fraxinus pennsylvanica	.002	20	.003	.205	8.3	25.0	8.6	41.9
Morus rubra	.002	20	.002	.204	8.3	25.0	5.7	39
Shrubs								
Ligustrum sinensis	.01	20	.02	.23	50.0	33.3	28.6	111.9
Sambuscus canadensis	.01	40	.05	.46	50.0	66.7	71.4	188.1
Saplings								
Acer negundo	.01	40	.07	.48	8.9	30.8	24.0	63.7
Carpinus caroliniana	.002	20	.002	.204	1.8	15.4	.7	17.9
Fraxinus pennsylvanica	.01	10	.05	.16	8.9	7.7	17.7	33.7
Morus rubra	.02	10	.01	.13	17.9	7.7	3.4	29.0
Platanus occidentalis	.01	10	.01	.12	8.9	7.7	3.4	20.0
Populus deltoides	.01	20	.05	.26	8.9	15.4	17.1	41.4
Salix nigra	.05	20	.10	.35	44.6	15.4	34.2	94.2

(contd.)

E.R. Table 2.7.1-8 (page 2 of 2)
Cherokee Nuclear Station
Quadrat analysis data for the
Alluvial Thicket/Forest
Community Type, Stand 8

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Seedlings								
Acer negundo	.13	50	.16	.79	19.4	29.4	39.0	87.8
Betula nigra	.09	40	.08	.57	13.4	23.5	19.5	56.4
Fraxinus pennsylvanica	.01	10	.01	.12	1.5	5.9	2.4	9.8
Platanus occidentalis	.03	10	.02	.15	4.5	5.9	4.9	15.3
Populus deltoides	.17	20	.05	.42	25.4	11.8	12.2	49.4
Salix nigra	.24	40	.09	.73	35.8	23.5	22.0	81.3
Lianas								
Lonicera japonica	13.13	100	22.9	155.2	47.8	37.0	30.4	115.2
Parthenocissus quinquefolia	80	100	17.6	19.4	29.2	37.0	23.4	89.6
Vitis rotundifolia	63.1	70	34.8	98.6	23.0	25.9	46.2	95.1
Herbs								
Aster sp.	2.5	10	.91	3.51	1.6	5.9	20.7	28.2
Carex spp.	57.5	40	1.10	59.0	36.8	23.5	25.0	85.3
Elephantopus tomentosa	1.2	20	.07	1.47	.8	11.8	1.6	14.2
Galium pilosum	5.0	10	.06	5.16	3.2	5.9	1.4	10.5
Ludwigia decurrens	37.5	20	1.32	39.02	24.0	11.8	30.0	65.8
Oenothera fruticosa	2.5	10	.05	2.65	1.6	5.9	1.1	8.6
Polygonum cespitosum	5.3	10	.04	5.44	3.4	5.9	.9	10.2
Solanum carolinense	0.7	10	.01	.81	.4	5.9	.2	6.5
Stellaria media	43.2	30	.83	44.33	27.7	17.6	18.9	64.2
Xanthium strumarium	0.8	10	.01	.91	.5	5.9	.2	6.6

[1] for definitions see Section 6.1.4.3.1.3

Amendment 2
(Revised)

ER Table 2.7.1-9

Cherokee Nuclear Station
Dominance Classes and Constancy Values of Plant Species Sighted in the Hardwood Mountain Laurel Forest Community Near the Cherokee Nuclear Station

	Dominance[1] Stand numbers: 3	18	14	Outside[2] system constancy%	Inside[2] system constancy%
TREES AND SUBSTORY TREES					
Acer rubrum	3	1		19	66
Acer saccharum floridanum	3		2	33	66
Carya cordifolius	2			lacking	33
Carya tomentosa		2		33	33
Cornus florida	2		1	48	66
Diospyros virginiana	3	3	1	33	100
Fagus grandifolia	5	3	4	19	100
Ilex opaca	3	3	3	52	100
Juniperus virginiana	2	2	1	43	100
Liquidambar styraciflua	2			38	33
Liriodendron tulipifera	2			43	33
Pinus echinata		2		43	33
Pinus rigida			1	5	33
Quercus alba	2	4		43	66
Quercus prinus		3	4	lacking	66
Quercus rubra	2	2	2	43	100
Quercus stellata		2		lacking	33
SHRUBS					
Euonymus americanus		1		5	33
Kalmia latifolia	5	5	5	10	100
Vaccinium stamineum	2	2		24	66
VINES					
Mitchella repens	3	2	1	10	100
Rhus radicans	2			19	33
Smilax glauca		2	2	52	66
Vitis rotundifolia	2			14	33
HERBS					
Aster cordifolius	2			lacking	33
Chimaphila maculata	3	2	3	52	100
Corallorhiza odontorhiza	1			lacking	33
Epifagus virginiana	3			5	66
Goodyera pubescens		2		14	33
Hepatica americana	2			10	33
Hexastylis virginica	3	2	3	5	100
Pernanthes alba	1			lacking	33
Polygonatum biflorum	2			5	33
Prunella vulgaris	2			lacking	33
Smilacina racemosa	2			lacking	33

1 - definition given in table 6.1-4-1
2 - for definition see section 6.1.4.3.1.2

Amendment 2
(Revised)

E.R. Table 2.7.1-10 (page 1 of 2)
Cherokee Nuclear Station
Quadrat analysis data for the
Mountain Laurel - Hardwood
Community Type, Stand No. 14

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Canopy								
Fagus grandifolia	0.04	100	1.38	2.42	100.0	100.0	100.0	300.0
Subcanopy								
Cornus florida	0.02	70	0.05	.77	32.8	50.0	41.7	124.5
Magnolia tripetala	0.001	10	0.01	.111	1.6	7.1	8.3	17.0
Oxydendron arboreum	0.04	60	0.06	.70	65.6	42.9	50.0	158.5
Shrubs								
Kalmia latifolia	0.2	100	0.87	2.07	100.0	100.0	100.0	300.0
Saplings								
Acer rubrum	0.04	80	0.34	1.18	33.3	42.1	41.5	116.9
Liriodendron tulipifera	0.04	60	0.27	.91	33.3	31.6	32.9	97.8
Oxydendron arboreum	0.04	50	0.21	.75	33.3	26.3	25.6	85.2
Seedlings								
Acer rubrum	0.48	90	.02	1.4	37.5	22.5	8.0	68.0
Carya tomentosa	0.20	20	.01	.41	15.6	5.0	4.0	24.6
Cornus florida	0.04	40	.001	.441	3.1	10.0	.4	13.5
Fagus grandifolia	0.32	100	.17	1.49	25.0	25.0	67.7	117.7
Liquidambar styraciflua	0.04	80	.02	.86	3.1	20.0	8.0	31.1
Liriodendron tulipifera	0.16	30	.01	.47	12.5	7.5	4.0	24.0
Oxydendron arboreum	0.04	40	.02	.46	3.1	10.0	8.0	21.1

(contd.)

Amendment 2
(Revised)

E.R. Table 2.7.1-10 (page 2 of 2)
Cherokee Nuclear Station
Quadrat analysis data for the
Mountain Laurel - Hardwood
Community Type, Stand No. 14

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Lianas								
Vitis rotundifolia	0.98	60	2.46	4.04	100.0	100.0	100.0	300.0
Herbs								
Chimaphila maculata	18.3	70	3.01	22.01	6.9	13.5	16.0	36.4
Epifagus virginiana	5.1	100	2.78	8.88	1.9	19.2	14.8	35.9
Goodyera pubescens	2.8	50	.93	4.23	1.1	9.6	4.9	15.6
Hepatica americana	6.7	60	.76	8.06	2.5	11.5	4.0	18.0
Hexastylis virginica	13.8	60	.84	15.24	5.2	11.5	4.5	21.2
Luzula acuminata	94.5	50	.01	95.01	35.4	9.6	.1	45.1
Mitchella repens	117.4	90	10.43	128.73	44.0	17.3	55.4	116.7
Polystichum acrosticoides	8.0	40	.05	8.45	3.0	7.7	.3	11.0

[1] - For definition, see Section 6.1.4.3.1.3

Amendment 2
(Revised)

E.R. Table 2.7.1-11 (page 1 of 2)
Cherokee Nuclear Station
Quadrat analysis data for the
Mountain Laurel - Hardwood
Community Type, Stand No. 3

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Canopy								
Quercus prinus	0.04	75	0.62	1.41	80.0	50.0	79.5	209.5
Quercus velutina	0.01	75	0.16	.92	20.0	50.0	20.5	90.5
Subcanopy								
Acer rubrum	0.02	20	0.06	.28	12.5	8.5	20.7	41.7
Cornus florida	0.01	25	0.02	.28	6.3	10.6	6.9	23.8
Ilex opaca	0.02	20	0.02	.24	12.5	8.5	6.9	27.9
Oxydendron arboreum	0.01	10	0.01	.12	6.3	4.3	3.4	14.0
Pinus virginiana	0.03	30	0.03	.36	18.8	12.8	10.3	41.9
Quercus prinus	0.01	30	0.02	.33	6.3	12.8	6.9	26.0
Quercus stellata	0.01	25	0.02	.28	6.3	10.6	6.9	23.8
Quercus velutina	0.05	75	0.11	.91	31.3	31.9	37.9	101.1
Shrubs								
Kalmia latifolia	0.3	100	0.87	2.17	99.7	83.3	98.9	281.9
Vaccinium stamineum	0.001	20	.01	.211	.3	16.7	1.1	18.1
Saplings								
Acer rubrum	0.07	100	0.13	1.2	63.6	62.5	56.5	182.6
Liquidambar styraciflua	0.01	20	0.02	.23	9.1	12.5	8.7	30.3
Quercus prinus	0.03	40	0.08	.51	27.3	25.0	34.8	87.1
Seedlings								
Acer rubrum	0.04	80	0.14	.98	40.0	36.4	26.4	102.8

(contd.)

Amendment 2
(Revised)

E.R. Table 2.7.1-11 (page 2 of 2)
Cherokee Nuclear Station
Quadrat analysis data for the
Mountain Laurel - Hardwood
Community Type, Stand No. 3

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Quercus prinus	0.05	100	0.30	1.35	50.0	45.5	56.6	152.1
Quercus velutina	0.01	40	0.09	.5	10.0	18.2	17.0	45.2
Lianas								
Smilax bona-nox	0.83	30	0.91	2.04	62.9	37.5	47.4	147.8
Smilax glauca	0.42	40	0.77	1.59	31.8	50.0	40.1	121.9
Vitis spp.	0.07	10	0.24	.41	5.3	12.5	12.5	30.3
Herbs								
Chimaphila maculata	45.7	100	0.33	47.03	68.6	55.6	53.2	177.4
Epigaea repens	3.1	10	0.01	3.21	4.7	5.6	1.6	11.9
Viola spp.	17.8	70	0.28	18.78	26.7	38.9	45.2	110.8

[1] for definitions see Section 6.1.4.3.1.3

Amendment 2
(Revised)

ER Table 2.7.1-12

Cherokee Nuclear Station
Dominance Classes and Constancy Values of Plant Species Sighted in In Mixed Mesophytic Hardwood Community at the Cherokee Site.

	Dominance[1] Stand numbers: 6	15	19	Outside[2] system constancy %	Inside[2] system constancy%
TREES AND SUBSTORY TREES					
Acer rubrum	3			24	33
Acer saccharum floridanum	3	2	3	29	100
Carpinus carolina			2	lacking	33
Carya tomentosa		3	3	24	100
Cerus canadensis	2			lacking	33
Cornus florida	3	2	2	43	100
Diospyros virginiana	3	3		38	66
Fagus grandifolia	3	5	2	19	100
Ilex opaca	3	3	3	52	100
Juniperus virginiana	3	2	3	43	100
Liquidambar styraciflua	2	2	2	29	100
Liriodendron tulipifera	3		3	38	66
Morus rubra	3			10	33
Pinus echinata	3	1	2	33	100
Prunus serotina		2		29	33
Quercus alba	3	2	3	33	100
Quercus falcata	3			29	33
Quercus nigra	3			14	33
Quercus phellos	2		2	19	66
Quercus rubra	2	3		48	66
SHRUBS					
Euonymus americanus			2	05	33
Kalmia latifolia		2	2	14	66
Vaccinium arboreum	2		2	24	66
Vaccinium stamineum	2		1	24	66
VINES					
Gelsemium sempervirens			3	19	33
Lonicera japonica	2	2	2	38	100
Mitchella repens	1		2	14	66
Smilax bon-nox	2			19	33
Smilax glauca	2	2	3	48	100
Smilax rotundifolia	2			lacking	33
HERBS					
Aplectrum hyemale			2	05	33
Chimaphila maculata	2	3	2	52	100
Epifagus virginiana			2	10	33
Galsum circaezan	2			lacking	33
Gentiana saponaria			1	lacking	33
Goodyera pubescens	1		1	10	66
Hepatica americana		3	2	05	66
Hexastylis virginica		3		10	33

1 - definitions given in Table 6.1-4.1
2 - for definition see section 6.1.4.3.1.2

Amendment 2
(Revised)

E.R. Table 2.7.1-13 (page 1 of 4)
Cherokee Nuclear Station
Quadrat analysis data for the
Mixed Mesophytic Hardwood
Community Type, Stand No.6

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Canopy								
Acer rubrum	.01	100	.72	1.73	4.4	14.5	9.3	28.2
Acer saccharum floridanum	.001	20	.11	.311	.4	2.9	1.4	4.7
Carya carolinae-septentrionales	.002	10	.08	.182	.8	1.4	1.0	3.2
Carya ovata	.01	20	.05	.26	4.4	2.9	.6	7.9
Carya tomentosa	.05	100	.91	1.96	22.1	14.5	11.7	48.3
Fagus grandifolia	.03	80	1.90	2.73	13.2	11.6	24.4	49.2
Fraxinus pennsylvanica	.001	30	.20	.501	.4	4.3	2.6	7.3
Liquidambar styraciflua	.02	40	.20	.62	8.8	5.8	2.6	17.2
Liriondendron tulipifera	.04	90	1.01	1.95	17.6	13.0	13.0	43.6
Pinus echinata	.001	50	.72	1.23	.4	7.2	9.3	16.9
Quercus alba	.05	100	1.33	2.38	22.1	14.5	17.1	53.7
Quercus phellos	.001	20	.09	.291	.4	2.9	1.2	4.5
Quercus velutina	.01	30	.46	.77	4.4	4.3	5.9	14.6
Subcanopy								
Acer rubrum	.02	100	.72	1.74	7.5	20.4	22.0	49.9
Carpinus caroliniana	.001	20	.09	.291	.4	4.1	2.7	7.2
Cornus florida	.02	100	.13	1.15	7.5	20.4	4.0	31.9
Celtis occidentalis	.001	10	.08	.181	.4	2.0	2.4	4.8
Diospyros virginiana	.001	30	.11	.411	.4	6.1	3.4	9.9
Ilex opaca	.01	30	.22	.53	3.8	6.1	6.7	16.6
Juniperus virginiana	.002	40	.34	.742	.8	8.2	10.4	19.4
Morus rubra	.001	10	.01	.111	.4	2.0	.3	2.7
Ostrya virginiana	.01	10	.02	.13	3.8	2.0	.6	6.4
Oxydendron arboreum	.04	70	.24	.98	15.0	14.3	7.3	36.6
Pinus echinata	.05	10	.31	.46	18.8	2.0	9.5	30.3
Quercus velutina	.11	60	1.01	1.72	41.4	12.2	30.8	84.4

(contd.)

Amendment 2
(Revised)

E.R. Table 2.7.1-13 (page 2 of 4)
Cherokee Nuclear Station
Quadrat analysis data for the
Mixed Mesophytic Hardwood
Community Type, Stand No. 6

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Shrubs								
Crataegus uniflora	.01	40	.88	1.29	2.3	23.5	51.2	77.0
Euonymus americanus	.36	60	.43	1.39	83.5	35.3	25.0	143.8
Ilex decidua	.01	20	.09	.30	2.3	11.8	5.2	19.3
Rubus spp.	.009	20	.09	.299	2.1	11.8	5.2	19.1
Vaccinium aboreum	.002	10	.06	.162	.5	5.9	3.5	9.9
Vaccinium stamineum	.01	10	.06	.17	2.3	5.9	3.5	11.7
Viburnum acerfolium	.03	10	.11	.24	7.0	5.9	6.4	19.3
Saplings								
Acer rubrum	.03	100	1.04	2.07	3.2	23.8	25.9	52.9
Acer saccharum floridanum	.01	30	.07	.38	1.1	7.1	1.7	9.9
Carya tomentosa	.03	60	.29	.92	3.2	14.3	7.2	24.7
Carya ssp.	.001	10	.05	.151	.1	2.4	1.2	3.7
Cornus florida	.01	30	.11	.42	1.1	7.1	2.7	10.9
Fagus grandifolia	.22	90	1.00	2.12	23.4	21.4	24.9	69.7
Liquidambar styraciflua	.37	70	.83	1.9	39.3	16.7	20.6	76.6
Pinus echinata	.06	10	.09	.25	6.4	2.4	2.2	11.0
Quercus alba	.21	20	.54	.95	22.3	4.8	13.4	40.5
Seedlings								
Acer spp.	.04	100	.75	1.79	15.2	43.5	39.9	98.6
Carya spp.	.17	60	.23	1.0	64.6	26.1	12.2	102.9
Diospyros virginiana	.001	20	.04	.241	.4	8.7	2.1	11.2
Morus rubra	.001	10	.02	.121	.4	4.3	1.1	5.8
Quercus alba	.05	30	.66	1.01	19.0	13.0	35.1	67.1
Quercus phellos	.001	10	.18	.281	.4	4.3	9.6	14.3

(contd.)

Amendment 2
(Revised)

E.R. Table 2.7.1-13 (page 3 of 4)
Cherokee Nuclear Station
Quadrat analysis data for the
Mixed Mesophytic Hardwood
Community Type, Stand No. 6

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Lianas								
Gelsemium sempervirens	2.8	10	.24	3.14	4.4	2.5	1.5	8.4
Lonicera japonica	15.68	50	5.51	21.69	24.9	12.7	34.6	72.2
Parthenocissus quinquefolia	6.9	1.00	2.34	10.24	11.0	25.3	14.7	51.0
Rhus radicans	19.1	.95	4.00	24.05	30.3	24.1	25.1	79.5
Smilax bona-nox	0.6	.05	.27	.92	1.0	1.3	1.7	4.0
Smilax glauca	0.8	.05	.20	1.05	1.3	1.3	1.3	3.9
Smilax rotundifolia	11.9	.75	1.56	14.21	18.9	19.0	9.8	47.7
Vitis rotundifolia	4.6	.45	.99	6.04	7.3	11.4	6.2	24.9
Vitis spp.	0.6	.10	.83	1.53	1.0	2.5	5.2	8.7
Herbs								
Adiantum pedatum	.01	20	.10	.31	.1	4.3	1.1	4.4
Aster spp.	.134	30	.14	.574	.8	6.5	1.6	8.9
Carex spp.	2.8	30	1.01	4.11	16.3	6.5	11.4	34.2
Chimaphila maculata	11.01	100	5.00	17.01	64.0	21.7	56.6	142.3
Desmodium spp.	.7	10	.09	.89	4.1	2.2	1.0	7.3
Epifagus virginiana	.9	20	.04	1.14	5.2	4.3	.5	10.0
Erythronium americanum	.01	10	1.33	1.44	.1	2.2	15.1	17.4
Galium circaezar	.01	10	.07	.18	.1	2.2	.8	3.1
Gentiana saponaria	.001	10	.001	.102	0.0	2.2	0.0	2.2
Goodyera pubescens	.001	20	.001	.202	0.0	4.3	0.0	4.3
Hepatica americana	.02	30	.06	.38	.1	6.5	.7	7.3
Hexastylis virginica	.05	30	.07	.42	.3	6.5	.8	7.6
Luzula acuminata	.94	20	.25	1.39	5.5	4.3	2.8	12.6
Lycopodium flabelliforme	.001	10	.001	.102	0.0	2.2	0.0	2.2
Oxalis stricta	.06	10	.01	.17	.3	2.2	.1	2.6

(contd.)

Amendment 2
(Revised)

E.R. Table 2.7.1-13 (page 4 of 4)
Cherokee Nuclear Station
Quadrat analysis data for the
Mixed Mesophytic Harwood
Community Type, Stand No. 6

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Podophyllum peltatum	.009	10	.001	.11	.1	2.2	0.0	2.3
Polystichum acrostichoides	.009	20	.001	.21	.1	4.3	0.0	4.4
Prunella vulgaris	.11	30	.11	.52	.6	6.5	1.2	8.3
Ranunculus recurvatus	.38	20	.47	1.05	2.2	4.3	5.3	11.8
Solidago spp.	.04	10	.08	.22	.2	2.2	.9	3.3
Tiarella cordifolia	.001	10	.001	.102	0.0	2.2	0.0	2.2

[1] for definitions see Section 6.1.4.3.1.3

Amendment 2
(Revised)

ER Table 2.7.1- 14

Cherokee Nuclear Station

Dominance Classes and Constancy Values of Plant Species Sighted in the Mesic Pine Forest Community near the Cherokee Nuclear Station

	Dominance[1] - Stand numbers: 1	10	20	Outside[2] system constancy %	Inside[2] system constancy%
TREES AND SUBSTORY TREES					
Acer saccharum floridanum		3		38	33
Carya tomentosa	3			33	33
Cornus florida	3	3	2	43	100
Diospyros virginiana	2	3	1	33	100
Fagus grandifolia	3			29	33
Fraxinus americana	2			lacking	33
Ilex opaca	2	1	2	52	100
Juniperus virginiana	3	3	3	43	100
Liquidambar styraciflua	3	2	2	29	100
Liriodendron tulipifera		2	3	38	66
Pinus echinata	5	4	5	33	100
Pinus rigida		1		05	33
Pinus virginiana	3	4		19	66
Prunus serotina	2	1	2	19	100
Quercus alba	2	2		38	66
Quercus falcata	2		2	24	66
Quercus marilandica	2			10	33
Quercus nigra	2		1	10	66
Quercus phellos	2		2	19	66
Quercus rubra	2			52	33
SHRUBS					
Ascyrum hypericoides		2	1	05	66
Crataegus uniflora	3	2		05	66
Rhus copallina		2		05	33
Rhus glabra	1	1		05	66
Vaccinium arboreum	2	2		24	66
Vaccinium stamineum	1			29	33
VINES					
Gelsemium sempervirens			2	19	33
Lonicera japonica		5	2	43	66
Smilax bon-nox		2	2	14	66
Smilax glauca	2		2	52	66
Vitis rotundifolia	2	2		10	66
HERBS					
Aster linariifolius	2	2		05	66
Chimaphila maculata	2		2	51	66
Eupatorium purpureum	2			05	33
Fragaria virginiana			2	05	33
Gentiana villosa		1		lacking	33
Goodyera pubescens			1	14	33
Heterotheca mariana	2	3		05	66
Solidago speciosa	2			05	33

1 - definitions given in table 6.1.4-1
2 - for definitions see section 6.1.4.3.1.2

Amendment 2
(Revised)

E.R. Table 2.7.1-15 (page 1 of 2)
Cherokee Nuclear Station
Quadrat analysis data for the
Mesic Pine Forest
Community Type, Stand No. 1

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Canopy								
Pinus echinata	.22	90	.26	1.38	20.4	45.0	11.7	77.1
Pinus virginiana	.76	100	1.93	3.69	70.4	50.0	86.5	206.9
Liquidambar styraciflua	.10	10	.04	.24	9.3	5.0	1.8	16.1
Subcanopy								
Acer rubrum	.20	80	.10	1.1	44.3	32.0	9.2	85.5
Carya tomentosa	.02	20	.02	.24	4.4	8.0	1.8	14.2
Cornus florida	.05	40	.05	.5	11.1	16.0	4.6	31.7
Diospyros virginiana	.12	60	.09	.81	26.6	24.0	8.3	58.9
Ilex opaca	.01	10	.10	.21	2.2	4.0	9.2	15.4
Pinus echinata	.02	10	.30	.42	4.4	4.0	27.5	35.9
Pinus virginiana	.03	20	.42	.65	6.7	8.0	38.5	53.2
Prunus serotina	.001	10	.01	.111	.2	4.0	.9	5.1
Shrubs								
Crataegus uniflora	.03	20	1.5	1.73	7.1	16.7	37.5	61.3
Euonymus americanus	.09	10	1.3	1.49	21.4	8.3	32.5	62.2
Ilex decidua	.01	10	0.7	.81	2.4	8.3	17.5	28.2
Vaccinium stamineum	.21	70	0.4	1.31	50.0	58.3	10.0	118.3
Viburnum acerifolium	.08	10	0.1	.28	19.0	8.3	2.5	29.8
Saplings								
Acer rubrum	.04	10	.03	.17	25.0	20.0	1.7	46.7
Cornus florida	.01	10	.08	.19	6.3	20.0	4.4	30.7
Pinus virginiana	.11	30	1.7	2.11	68.8	60.0	93.9	222.7

(contd.)

Amendment 2
(Revised)

E.R. Table 2.7.1-15 (page 2 of 2)
Cherokee Nuclear Station
Quadrat analysis data for the
Mesic Pine Forest
Community Type, Stand No. 1

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Seedlings								
Acer rubrum	.01	10	.01	.12	4.0	25.0	.9	29.9
Carya spp.	.02	10	1.02	1.14	8.0	25.0	93.6	126.6
Ilex opaca	.01	.05	.04	.10	4.0	12.5	3.7	20.2
Prunus serotina	.01	.05	.01	.07	4.0	12.5	.9	17.4
Juniperus virginiana	.20	.10	.01	.31	80.0	25.0	.9	105.9
Lianas								
Rhus radicans	3.1	70	.11	3.91	12.2	41.2	23.9	77.3
Smilac glauca	22.4	100	.35	23.75	87.8	58.8	76.1	222.7
Herbs								
Andropogon ssp.	13.65	100	.65	15.3	26.2	23.0	30.7	79.9
Aristida dichotoma	7.85	100	.05	8.9	15.1	23.0	2.4	40.5
Chimaphila maculata	21.05	100	.88	22.93	40.4	23.0	41.5	104.9
Fragaria virginiana	8.65	70	.10	9.45	16.6	16.1	4.7	37.4
Gnaphalium purpureum	.5	40	.31	1.21	1.0	9.2	14.6	24.8
Potentilla canadensis	.3	10	.10	.50	.6	2.3	4.7	7.6
Senecio ssp.	.15	15	.03	.33	.3	3.4	1.4	5.1

[1]for definitions see Section 6.1.4.3.1.3

Amendment 2
(Revised)

ER Table 2.7.1-16

Cherokee Nuclear Station
Dominance Classes and Constancy Values of Plant Species Sighted in the Pine Scrub Community near the Cherokee Nuclear Station

	Dominance[1] Stand numbers: 5	9	22	Outside[2] system constancy%	Inside[2] system constancy%
TREES AND SUBSTORY TREES					
Acer saccharum floridanum		2		38	33
Cornus florida		2		52	33
Diospyros virginiana		2		43	33
Ilex opaca	3	2	2	52	100
Juniperus virginiana		1		52	33
Liquidambar styraciflua		2		38	33
Liriodendron tulipifera		2		43	33
Pinus echinata			1	43	33
Pinus virginiana	5	5	5	14	100
Quercus falcata		2		29	33
Quercus phellos		2		24	33
SHRUBS					
Ascyrum hypericoides		1		10	33
Rhus copallina		2		05	33
Vaccinium arboreum		2		29	33
Vaccinium stamineum		2		29	33
VINES					
Gelsemium sempervirens	2		3	14	66
Lonicera japonica	2	2	3	38	100
Smilax glauca	2	2	2	48	100
HERBS					
Aster linariifolius		3		10	33
Chimaphila maculata	1	3	3	52	100
Eupatorium coelestinum		2		05	33
Fragaria virginiana	2			33	05
Gnaphalium obtusifolium		1		lacking	33
Heterotheca graminifolia		3		lacking	33
Heterotheca mariana		2		10	33
Solidago speciosa		3		05	33

1 - definitions given in table 6.1-4-1
2 - for definition see section 6.1.4.3.1.2

Amendment 2
(Revised)

E.R. Table 2.7.1-17 (page 1 of 2)
Cherokee Nuclear Station
Quadrat analysis data for the
Pine Scrub
Community Type, Stand No. 9

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Canopy								
Pinus virginiana	.60	100	0.57	2.17	98.4	80.0	91.9	270.3
Quercus falcata	.01	25	0.05	.31	1.6	20.0	8.1	29.7
Subcanopy								
Juniperus virginiana	.01	50	.01	.52	11.1	28.6	12.5	52.2
Oxydendron arboreum	.02	25	.01	.28	22.2	14.3	12.5	49.0
Pinus virginiana	.06	100	.06	1.12	66.7	57.1	75.0	198.8
Shrubs								
Crataegus spp.	.06	.10	.05	.21	15.8	7.7	3.7	27.2
Ilex decidua	.13	.10	.09	.32	34.2	7.7	6.7	48.6
Rhus copallina	.06	.50	.10	.66	15.8	38.5	7.5	61.8
Vaccinium stamineum	.13	.60	1.10	1.83	34.2	46.2	82.1	162.5
Saplings								
Cornus florida	.06	10	.07	.23	7.9	6.5	4.0	18.4
Ilex opaca	.03	10	.06	.19	3.9	6.5	3.4	13.8
Juniperus virginiana	.13	5	.22	.69	17.1	3.2	29.1	49.4
Liquidambar styraciflua	.06	5	.22	.33	7.9	3.2	12.6	23.7
Oxydendron arboreum	.16	25	.12	.53	21.1	16.1	6.9	44.1
Pinus virginiana	.32	100	.77	2.09	42.1	64.5	44.0	150.6
Seedlings								
Acer rubrum	.17	25	.43	.85	17.5	13.2	19.4	50.1
Cornus florida	.03	20	.12	.35	3.1	10.5	5.4	19.0

(contd.)

Amendment 2
(Revised)

E.R. Table 2.7.1-17 (page 2 of 2)
Cherokee Nuclear Station
Quadrat analysis data for the
Pine Scrub
Community Type, Standard No. 9

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Ilex opaca	.07	10	.23	.4	7.2	5.3	10.4	22.9
Liquidambar styraciflua	.02	10	.09	.21	2.1	5.3	4.1	11.5
Pinus virginiana	.40	100	.35	1.75	41.2	52.6	15.8	109.6
Quercus alba	.28	25	1.00	1.53	28.9	13.2	45.0	87.1
Lianas								
Gelsemium sempervirens	8.19	10	.08	8.37	20.4	9.1	7.7	37.2
Lonicera japonica	10.31	30	.27	10.88	25.7	27.3	26.0	79.0
Smilax glauca	21.56	70	.69	22.95	53.8	63.6	66.3	183.7
Herbs								
Andropogon spp.	13.65	100	.30	14.95	47.4	23.8	19.0	90.2
Aster spp.	.05	50	.27	.82	.2	11.9	17.1	29.2
Chimaphila maculata	7.1	100	.18	8.28	24.7	23.8	11.4	59.9
Eupatorium coelestinum	.45	40	.09	.94	1.6	9.5	5.7	16.8
Fragaria virginiana	6.4	80	.51	7.71	22.2	19.0	32.3	73.5
Gnaphalium obtusifolium	.2	20	.13	.53	.7	4.8	8.2	13.7
Solidago spp.	.95	30	.10	1.35	3.3	7.1	6.3	16.7

[1] for definitions see Section 6.1.4.3.1.3

Amendment 2
(Revised)

ER Table 2.7.1-18

Cherokee Nuclear Station
Dominance Classes and Constancy Values of Plant Species Sighted in Oak-hickory Forest Community near the Cherokee Nuclear Station

	Dominance[1] Stand numbers: 2	16	21	Outside[2] system constancy %	Inside[2] system constancy %
TREES AND SUBSTORY TREES					
Acer rubrum	3	2		19	66
Acer saccharum floridanum	3		2	33	66
Carya tomentosa	4	2	2	24	100
Cornus florida	3	3	3	43	100
Diospyros virginiana	3			43	33
Ilex opaca		2	2	57	66
Juniperus virginiana		1	1	48	66
Liriodendron tulipifera	2			43	33
Oxydendrum arboreum			2	lacking	33
Pinus echinata		1	2	38	66
Pinus virginiana		1		24	33
Prunus serotina	2	1	2	19	100
Quercus alba	4	1	2	38	100
Quercus coccinea	3	4	5	lacking	100
Quercus falcata	2	1	2	19	100
Quercus marilandica		3	2	05	66
Quercus rubra	3	4	3	43	100
SHRUBS					
Crataegus uniflora	2			10	33
Vaccinium arboreum	3		2	24	66
Vaccinium stamineum			2	29	33
VINES					
Gelsemium semperumens		2		19	33
Lonicera japonica		2		48	33
Rhus radicans	2			19	33
Smilax bon-vox	2			19	33
Smilax glauca		3	2	52	66
Vitis rotunidifolia	3			14	33
HERBS					
Aplectrum hyemale	1			05	33
Chimaphila maculata	3	5	2	52	100
Polygonatum biflorum	1			05	33

1 - definitions given in table 6.1-4-1
2 - for definition see section 6.1.4.3.1.2

Amendment 2
(Revised)

E.R. Table 2.7.149 (page 1 of 3)
Cherokee Nuclear Station
Quadrat analysis data for the
Oak - Hickory
Community Type, Stand No. 2

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Canopy								
Carya glabra	0.09	50	0.82	1.41	7.8	14.3	15.2	37.3
Carya tomentosa	0.1	70	1.51	2.31	8.6	20.0	27.9	56.5
Liriondendron tulipifera	0.07	10	0.03	.2	6.0	2.9	.6	9.5
Pinus echinata	0.01	10	0.11	.22	.9	2.9	2.0	5.8
Quercus alba	0.4	70	0.71	1.81	34.5	20.0	13.1	67.6
Quercus coccinea	0.2	20	0.36	.76	17.2	5.7	6.7	29.6
Quercus falcata	0.1	10	0.17	.37	8.6	2.9	3.1	14.6
Quercus rubra	.16	80	1.01	1.97	13.8	22.9	18.7	55.4
Quercus velutina	.03	30	0.69	1.02	2.6	8.6	12.8	24.0
Subcanopy								
Acer rubrum	.063	100	.31	1.373	42.0	45.5	49.2	136.7
Cornus florida	.014	20	.19	.404	9.3	9.1	30.2	48.6
Diospyros virginiana	.009	30	.08	.389	6.0	13.6	12.7	32.3
Ilex opaca	.002	10	.01	.112	1.3	4.5	1.6	7.4
Juniperus virginiana	.001	10	.01	.111	.7	4.5	1.6	6.8
Oxydendron arboreum	.061	50	.03	.591	40.7	22.7	4.8	68.2
Shrubs								
Crataegus uniflora	.31	20	.10	.61	18.2	11.6	32.3	62.1
Gaylussacia baccata	.23	15	.02	.40	13.5	8.7	6.5	28.7
Hypericum hypericoides	.06	10	.01	.17	3.5	5.8	3.2	12.5
Euonymus americanus	.363	70	.09	1.153	21.3	40.8	29.0	91.1
Rosa carolina	.37	10	.01	.48	21.7	5.8	3.2	30.7
Vaccinium vacillans	.331	40	.05	.781	19.4	23.3	16.1	58.8
Viburnum rufidulum	.04	6.7	.03	.137	2.3	3.9	9.7	15.9

(contd.)

Amendment 2
(Revised)

E.R. Table 2.7.1-19 (page 2 of 3)
Cherokee Nuclear Station
Quadrat analysis data for the
Oak - Hickory
Community Type, Stand No. 2

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Saplings								
Acer rubrum	.051	80	.10	.951	14.0	15.7	8.0	37.7
Carya tomentosa	.036	100	.16	1.196	9.9	19.6	12.8	42.3
Cornus florida	.086	100	.33	1.416	23.6	19.6	26.4	69.6
Oxydendron arboreum	.019	30	.05	.369	5.2	5.9	4.0	15.1
Quercus alba	.103	100	.27	1.373	28.2	19.6	21.6	29.4
Quercus rubra	.01	20	.09	.3	2.7	3.9	7.2	13.8
Quercus velutina	.05	50	.11	.66	13.7	9.8	8.8	32.3
Prunus serotina	.010	30	.14	.45	2.7	5.9	11.2	19.8
Seedlings								
Acer rubrum	.788	100	.20	1.988	15.5	28.6	40.0	84.1
Carya ssp.	.806	100	.20	2.006	15.8	28.6	40.0	84.4
Diospyros virginiana	.81	50	.01	1.32	15.9	14.3	2.0	32.2
Nyssa sylvatica	.88	20	.01	1.09	17.3	5.7	2.0	25.0
Prunus serotina	.19	20	.01	.40	3.7	5.7	2.0	11.4
Quercus alba	1.56	50	.05	2.11	30.6	14.3	10.0	54.9
Quercus rubra	.06	10	.02	.18	1.2	2.9	4.0	8.1
Lianas								
Parthenocissus quinquefolia	5.0	20	.08	5.28	14.8	13.3	12.3	40.4
Rhus radicans	20.0	70	.21	20.91	59.2	46.7	32.3	138.2
Smilax glauca	3.1	10	.17	3.37	9.2	6.7	26.2	42.1
Smilax rotundifolia	1.3	20	.09	1.59	3.8	13.3	13.8	30.9
Vitis rotundifolia	4.4	30	.10	4.8	13.0	20.0	15.4	48.4

(contd.)

Amendment 2
(Revised)

E.R. Table 2.7.1-19 (page 3 of 3)
Cherokee Nuclear Station
Quadrat analysis data for the
Oak - Hickory
Community Type, Stand No. 2

Species	Den.[1]	Freq.[1]	Dom.[1]	dfd[1]	Rel. Den.[1]	Rel. Freq.[1]	Rel. Dom.[1]	I.V.[1]
Herbs								
Aplectrum hyemale	6.0	10	.02	6.12	6.3	3.6	.1	10.0
Carex ssp.	5.0	10	.17	5.27	5.2	3.6	.7	9.5
Chimaphila maculata	30.0	100	11.52	42.52	31.3	35.7	49.8	116.8
Desmodium ssp.	17.5	30	8.11	25.91	18.2	10.7	35.1	64.0
Goodyera pubescens	20.0	70	.88	21.58	20.8	25.0	3.8	49.6
Hieracium venosum	2.5	10	.75	3.35	2.6	3.6	3.2	9.4
Potentilla canadensis	10.0	30	.66	10.96	10.4	10.7	2.9	24.0
Uvularia sessilifolia	5.0	20	1.01	6.21	5.2	7.1	4.4	16.7

[1] for definitions see Section 6.1.4.3.1.3

Amendment 2
(Revised)

ER Table 2.7.1-20

Cherokee Nuclear Station
Dry Weight of Leaf Litter Standing Crops at the
Site of the Cherokee Nuclear Station

Community	Stand No.	Mean total dry weight (kg/hectare)	Percent Deciduous of total dry weight				Percent Evergreen of total dry weight				Initial Mean Dry weight of litter in decomposition bags (g/.5 m^2)
			Total	lvs.	stems	fruits	Total	lvs.	stems	fruits	
Mesic Pine Forest	1	8239.4	27	26	0.1	0.9	73	66	7.0	0	144.75
Pine Scrub	5	3022.6	2.9	1.1	1.6	0.2	97.1	83.6	9.1	4.4	54.68
Oak-Hickory	2	6361.8	99.4	88.3	9.6	1.5	0.6	0.6	0	0	109.00
Hardwood-Laurel	3	6789.6	95.4	90.0	4.7	0.7	4.6	4.6	0	0	100.03
Mixed Mesophytic Hardwood	6	4525.8	81.6	70.0	9.1	2.5	18.4	13.9	4.5	0	96.50
Alluvial Thicket	8	1026.0	100.0	98.6	1.2	0.2	0	0	0	0	43.75
Alluvial Forest	4	1736.6	100.0	93.6	4.0	2.4	0	0	0	0	74.00

Amendment 2
(Revised)

E. R. Table 2.7.1-21 (Page 1 of 5)
Cherokee Nuclear Station
Wet and dry weights of litter, by species components
in leaf litter traps, October 1973-January 1974.

Mesic Pine Community, Stand. No. 1	Weight (grams)							
	Sample 1 - 1		Sample 1 - 2		Sample 1 - 3		Sample 1 - 4	
Species	wet	dry	wet	dry	wet	dry	wet	dry
Acer saccharum, ssp. floridanum	9.3	8.2					1.7	1.1
Carya tomondosa	3.2	2.6			4.4	3.6		
Cornus florida	0.9	0.5			1.4	0.8		
Gaylussacia brachycera	0.6	0.2						
Liquidambar styraciflua	92.6	80.6			1.8	1.3		
Pinus echinata	47.1	42.2						
Pinus virginiana	94.1	84.6			74.8	66.7	36.9	32.7
Quercus alba			3.0	2.5	18.6	16.0	1.4	0.6
Quercus falcata	8.3	7.0	10.4	9.1	23.9	20.8		
Quercus marilandica							9.5	8.2
Quercus nigra			2.2	1.8	1.4	0.6	1.9	1.4
Quercus palustris							24.4	20.8
Quercus rubra			5.6	4.9	11.7	9.9		
Quercus velutina			9.4	8.2	9.4	8.1	16.6	14.1
Vitis rotundifolia	0.8	0.4						
Miscellaneous leaves	7.0	5.4					1.6	1.0
Acer samaras	0.3	0.1						
Liquidambar follicles	4.1	3.4						
Liriodendron samaras	0.2	0.1	0.4	0.1				
Miscellaneous fruits	2.6	1.9						
Miscellaneous twigs	11.0	9.4			11.6	10.1	31.1	27.3

Amendment 2
(Revised)

E. R. Table 2.7.1-21 (Page 2 of 5)
Cherokee Nuclear Station
Wet and dry weights of litter, by species components
in leaf litter traps, October 1973-January 1974.

	Weight (grams)							
Hardwood-Mountain Laurel Community Stand. No. 3	Sample 3 - 1		Sample 3 - 2		Sample 3 - 3		Sample 3 - 4	
Species	wet	dry	wet	dry	wet	dry	wet	dry
Acer rubrum							18.7	15.8
Acer saccaharum ssp. floridanum	0.7	0.3	4.7	3.4	1.6	1.1		
Carya tomentosa	1.9	1.3	5.5	4.3	12.6	10.7	1.6	1.1
Cornus florida	0.6	0.3						
Fagus grandifolia	109.4	86.7	138.9	123.9	64.9	57.1	140.1	120.4
Kalmia latifolia	1.0	0.5			6.8	5.7	29.0	24.6
Liquidambar styraciflua			3.5	2.6	7.2	6.4		
Liriodendron tulipifera	0.5	0.1					3.0	2.4
Quercus alba	0.3	0.2					1.4	1.0
Quercus falcata							5.2	4.3
Quercus velutina	22.4	19.6	8.2	6.8	3.3	2.5	13.8	11.8
Fagus nuts	10.5	8.9	15.8	13.5	1.2	0.7		
Liriodendron samaras	2.1	1.4	1.0	0.4	0.3	0.1		
Fagus twigs	3.7	3.1	17.1	13.3				

Amendment 2
(Revised)

E. R. Table 2.7.1-21 (Page 3 of 5)
Cherokee Nuclear Station
Wet and dry weights of litter, by species components
in leaf litter traps, October 1973-January 1974.

	Weight (grams)							
Alluvial Forest Community, Stand. No. 4	Sample 4 - 1		Sample 4 - 2		Sample 4 - 3		Sample 4 - 4	
Species	wet	dry	wet	dry	wet	dry	wet	dry
Acer negundo	28.2	24.2	29.3	24.7				
Cornus florida							3.9	2.9
Fraxinus pennsylvanica					42.6	36.8	38.0	32.0
Platanus accidentalis					4.4	3.1	22.8	18.5
Populus deltoides	71.7	61.7	18.2	15.5	43.2	37.1	6.7	5.0
Acer samaras	7.7	6.2	7.0	5.7	7.8	6.1	7.6	6.1
Fraxinus samaras	0.4	0.1	0.2	0.1	0.5	0.1	0.6	0.4
Miscellaneous twigs					6.2	4.8	8.9	7.3

Amendment 2
(Revised)

E. R. Table 2.7.1-21 (Page 4 of 5)
Cherokee Nuclear Station
Wet and dry weights of litter, by species components
in leaf litter traps, October 1973-January 1974.

Mixed Mesophytic Hardwood Community, Stand. No. 1	Weight (grams)							
	Sample 6 - 1		Sample 6 - 2		Sample 6 - 3		Sample 6 - 4	
Species	wet	dry	wet	dry	wet	dry	wet	dry
Acer rubrum	68.3	59.4	9.3	7.4			20.2	16.8
Carya tomentosa	11.6	9.6	32.0	26.9			7.6	6.4
Cercis canadensis			1.2	0.5				
Cornus florida	2.8	1.9	5.1	3.8			12.4	10.2
Fagus grandifolia	3.4	2.5	10.2	8.2				
Liquidambar styraciflua							1.5	1.0
Pinus echinata			20.5	17.5				
Quercus alba	35.4	29.6	33.0	28.0	18.6	15.8	0.7	0.1
Quercus nigra	30.8	26.6	46.4	40.4			50.8	44.0
Quercus phellos	2.3	1.5						
Quercus rubra					25.4	21.6	2.0	1.2
Quercus velutina	5.4	4.7	3.3	2.4	22.7	19.5	2.2	1.5
Rubus spp.	0.6	0.1	0.8	0.2				
Vitis rotundifolia	0.9	0.3					1.0	0.4
Miscellaneous leaves	21.1	17.7						
Quercus acorns	12.7	10.7	12.1	10.2				

Amendment 2
(Revised)

E. R. Table 2.7.1-21 (Page 5 of 5)
Cherokee Nuclear Station
Wet and dry weights of litter, by species components
in leaf litter traps, October 1973-January 1974.

Alluvial Thicket Community, Stand. No. 8	Weight (grams)							
	Sample 8 - 1		Sample 8 - 2		Sample 8 - 3		Sample 8 - 4	
Species	wet	dry	wet	dry	wet	dry	wet	dry
Fraxinus pennsylvanica					7.5	6.1		
Populus deltoides	256.0	221.5	1.6	0.7	0.6	0.1		
Salix nigra	8.1	6.5	2.4	1.4	2.1	1.3		
Miscellaneous leaves					3.0	2.2		
Fraxinus samaras	0.1	0.05	0.2	0.05	0.1	0.05		

Amendment 2
(Revised)

E. R. Table 2.7.1-22 (Page 1 of 4)
Cherokee Nuclear Station
Wet and dry weights of litter, by species components in leaf-litter traps, May 1974.

Oak-Hickory Community Stand No. 2	Weight (grams)							
	Sample 2-1		Sample 2-2		Sample 2-3		Sample 2-4	
Species	wet	dry	wet	dry	wet	dry	wet	dry
Acer rubrum	1.3	0.8	4.0	3.1				
Carya tomentosa	11.2	9.7	7.4	6.4	8.0	6.7	14.1	12.3
Cornus florida			0.2	0.1	1.7	1.0		
Liriodendron tulipifera	0.3	0.1			5.2	4.4		
Morus rubra					1.3	0.8		
Quercus alba	23.7	21.2	27.1	23.8	37.8	32.8	22.8	20.4
Quercus falcata	1.8	1.0			4.5	3.7		
Quercus stellata	10.5	9.3			6.4	5.9		
Quercus velutina	1.9	0.9	2.7	2.0			11.4	10.1
Miscellaneous leaves	0.6	0.2	27.1	22.3	0.5	0.2	0.2	0.1
Miscellaneous twigs	14.5	12.0			9.9	8.1		

Amendment 2
(Revised)

E. R. Table 2.7.1-22(Page 2 of 4)
Cherokee Nuclear Station
Wet and dry weights of litter, by species components in leaf-litter traps, May 1974.

Hardwood-Mountain Laurel Community, Stand No. 3	Weight (grams) Sample 3-1		Sample 3-2		Sample 3-3		Sample 3-4	
Species	wet	dry	wet	dry	wet	dry	wet	dry
Acer saccharum floridanum			0.8	0.5			0.2	0.1
Carya tomentosa					0.4	0.2		
Fagus grandifolia	11.7	10.8	20.1	19.1	0.9	0.5		
Kalmia latifolia	1.4	1.0					1.0	0.9
Quercus prinus	1.0	0.8						

Amendment 2
(Revised)

E. R. Table 2.7.1-22 (Page 3 of 4)
Cherokee Nuclear Station
Wet and dry weights of litter, by species components in leaf-litter traps, May 1974.

Alluvial Forest Community, Stand No. 4	Weight (grams)							
	Sample 4-1		Sample 4-2		Sample 4-3		Sample 4-4	
Species	wet	dry	wet	dry	wet	dry	wet	dry
Acer negundo	5.1	4.9			3.2	3.1		
Fraxinus pennsylvanica					10.8	10.5	5.6	5.4
Populus deltoides	20.1	19.4			2.0	1.7		
Miscellaneous leaves	1.7	1.2					3.0	2.5
Miscellaneous twigs	9.9	9.3	1.0	0.7				

Amendment 2
(Revised)

E. R. Table 2.7.1-22 (Page 4 of 4)

Cherokee Nuclear Station

Wet and dry weights of litter, by species components in leaf-litter traps, May 1974.

Mixed Mesophytic Hardwood Community, Stand No. 6	Weight (grams)							
	Sample 6-1		Sample 6-2		Sample 6-3		Sample 6-4	
Species	wet	dry	wet	dry	wet	dry	wet	dry
Acer rubrum					0.9	0.7	1.7	1.4
Carya tomentosa			1.6	1.1				
Cornus florida					0.9	0.6		
Pinus echinata			4.5	4.3				
Quercus alba	9.1	7.6	33.4	30.6				
Quercus phellos					3.8	3.6		
Miscellaneous leaves			11.2	10.2			27.1	23.8

Amendment 2
(Revised)

E. R. Table 2.7.1-23 (Page 1 of 3)
Cherokee Nuclear Station
Wet and dry weights of litter by species components in litter traps, August 1974.

Hardwood-Mountain Laurel Community, Stand No. 3	Weights Grams Sample 3-1		Sample 3-2		Sample 3-3		Sample 3-4	
Species	wet	dry	wet	dry	wet	dry	wet	dry
Carya tomentosa	5.1	4.7						
Fagus grandifolia			2.9	2.7	9.3	8.7		
Kalmia latifolia	0.2	0.1			0.2	0.1	2.3	1.9
Liquidambar styraciflua			1.4	1.1				
Quercus alba	0.2	0.1						
Quercus velutina	0.2	0.1			0.4	0.2		
Miscellaneous twigs	1.1	0.8					5.4	5.0

Amendment 2
(Revised)

E. R. Table 23 (Page 2 of 3)
Cherokee Nuclear Station
Wet and dry weights of litter, by species components in leaf-litter traps, August 1974.

Alluvial Forest Community, Stand No. 4	Weight (grams) Sample 4-1		Sample 4-2		Sample 4-3		Sample 4-4	
Species	wet	dry	wet	dry	wet	dry	wet	dry
Acer negundo			10.7	10.1				
Fraxinus pennsylvanica					9.2	8.6	3.3	3.0
Platanus occidentalis					1.0	0.8		
Populus deltoides	1.7	1.5						
Miscellaneous leaves	2.4	2.1	3.9	8.4				

Amendment 2
(Revised)

E. R. Table 23 (Page 3 of 3)
Cherokee Nuclear Station
Wet and dry weights of litter, by species components in leaf-litter traps, August 1974.

Mixed Mesophytic Hardwood Community, Stand No. 6	Weight (grams)							
	Sample 6-1		Sample 6-2		Sample 6-3		Sample 6-4	
Species	wet	dry	wet	dry	wet	dry	wet	dry
Acer rubrum	3.0	2.3						
Cornus florida					0.2	0.1		
Fagus grandifolia			4.0	3.1	11.9	10.3	4.7	4.1
Liquidambar styraciflua	1.0	0.6	6.1	4.9				
Quercus alba			1.3	0.8			2.3	1.8
Quercus falcata	3.1	2.2	1.0	0.8				
Quercus velutina					0.9	0.3	0.9	0.5
Vitus rotundifolia	0.6	0.2	0.2	0.1				
Miscellaneous leaves	8.0	6.5			12.6	10.0		

Amendment 2
(Revised)

E. R. Table 2.7.1-24
Cherokee Nuclear Station
Decomposition rates of leaf litter

Community	Mean dry weight of litter in decomposition bags (g)		Decomposition rate (Percent/Mo)
	Initial wt.	Final wt. (after 10 mos.)	
Mesic Pine	144.75	103.76	2.83
Pine Scrub	54.68	39.81	2.72
Oak-Hickory	109.00	52.44	5.19
Hardwood-Laurel	100.03	57.00	4.30
Mixed Hardwood	96.50	45.65	5.27
Alluvial Thicked	43.75	21.53	5.08
Alluvial Forest	74.00	37.09	4.99

E. R. Table 2.7.1-25
Cherokee Nuclear Station
Dominant Floristic Composition

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Acer negundo	1, 2	DTM_2	Pte	D-L	3-4 5-10	T	Low woods and stream banks
Acer rubrum	4, 5, 8	DTM_2	Pte	D-L	1-3 4-6	T	Low and rich woods
Acer saccharum ssp. floridanum	2, 3, 4, 5, 7, 8	DTM_2	Pte	D-L	4-5 6-10	P,C	Low woods
Adiantum pedatum	4	Pt Geo	Bal	P	6-8	M, P	Humus-rich woods and shady slopes
Aesculus octandra	4	DTM_1	Enz	D-L	4-6 8-10	M, P	Mixed deciduous woods
Albizia julibrissin	7	DTM_2	Enz	D-L	5-8 7-11	T	Cultivated and naturalized along roadsides and woodland borders
Alisma subcordatum	6	Hel	Hyd	P	4-11	P	Stream banks and marshes
Alnus serrulata	1, 2	DSM_3	Pte	D-L	2-3	T	Stream banks and marshes
Ambrosia artemisiifolia	5	Th	Pog	A	8-11	T	Fields, pastures, roadsides and waste places

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Amphicarpa bracteata	2, 7	V th	Enz	A	7-9	T	Thickets
Andropogon scoparius	3, 7	Gr Geo	Pog	P	8-10	T	Dry weeds, fields
Anisostichus carpreolata	2	DVM_3	Pte	D-L	4-5 7-8	P, C	Thickets, alluvial forests and mixed or deciduous woodlands
Aplectrum hyemale	4, 5	Sp Geo	Spo	P	5-6	M, P	Wet heavy soil of flood-plains or low rich woods
Aralia spinosa	4, 5	DSM_3	Enz	D-L	6-9	T	Upland and low woods, pocosins and savannahs
Aristida dichotoma	5	Gr	Spo	A	8-10	T	Roadsides, ditches and fields
Aristida purpurascens	3	Gr Geo	Epz	P	8-10	T	Sandy fields and road-sides
Arundinaria gigantea	1, 2	Gr Geo	Ate	P	4-7	T	Bogs, low woods, savannahs and dry woods; Plants flower sporadi-cally and presumably die after fruiting

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Asclepias incarnata	1, 2, 6	Par Hemi	Ate	P	7-9	M, P	Marshes, stream banks and moist meadows
Ascyrium hypericoides	3, 7	DSN	Ate	D-L	5-8	C, P	Dry Woods
Asimina triloba	4	DTM_2	Enz	D-L	3-4 7-8	T	Low Woods
Asplenium platyneuron	3, 5	Pt Geo	Bal	P	4-10	T	Rocky woods, old fields, sandy pinelands, thickets and road banks
Aster cordifolius	8	Pro Hemi	Pog	P	9-12	M, P	Rich woodlands and wooded road banks; Scattered locations in Piedmont
Aster linariifolius	3, 7	Pro Hemi	Pog	P	9-11	T	Woodlands and woodland borders, fields and pastures
Aster patens	4, 5	Gr Geo	Pog	P	9-10	M, P, C	Woodlands, woodland borders, field and pastures
Aster sagittifolius	2	Pro Hemi	Pog	P	8-10	P, C	Rich woods and wooded road banks

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Aster simplex	1	Sp Geo	Pog	P	9-10	P, C	Alluvial fields and lo woods
Athyrium asplenioides	1, 4	Pt Geo	Bal	P			
Athyrium felix-femina	1, 4	Pt Geo	Bal	P	5-9	T	Woods and swamps
Aureolaria laevigata	4, 5	Pro Hemi	Bal	P	8-10	M, P	Deciduous upland woods; parasitic on white oaks
Betula nigra	2	DTM_2	Pte	D-L	3-4	P, C	Low woods
Bidens aristosa	2, 6	Th	Epz	A	8-11	P, C	Marshes, meadows and ditches
Bidens frondosa	6	Th	Epz	A	9-10	T	Fields, pastures, alluvial woods, marshes and waste places
Bidens sp.	1, 2, 3, 6	Th	Epz	A	9-12	T	Woodlands
Boehmeria cylindrica	2, 6	Sp Geo	Ate	P	7-8	T	Low ground, bogs, swamp forest, marshes and alluvial woods or cove
Boehmeria nivea	1, 2, 8	D Pro Hemi	Epz	P	4-5 9-10	T	Low woods, alluvial fo ests or coves

Species	Community[1]	Life Form[2]	Diaspore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Botrychium dissectum	1, 2, 4	Pt Geo	Bal	P	8-10	M, P	Woods, brushy fields, alluvial plains and thickets
Botrychium virginianum	2, 4	Pt Geo	Bal	P	4-6	T	Rich woods and thickets
Campsis radicans	1, 4, 3	DVM_3	Bal	D-L	5-6 9-11	P, C	Woodlands
Carex lurida	6	Gr Geo	Spo	P	6-10	T	Marshes, ditches and meadows
Carex spp.	1, 2, 3, 4, 5, 6, 7, 8	Gr Geo	Epz	P	5-7	T	Woods and thickets
Carpinus caroliniana	4	DTM_2	Pte	D-L	3-4 9-10	T	Stream banks, low or rich woods
Carya carolinae-septentrionalis	4	DTM_2	Bar	D-L	4 10	T	Rich or low woods
Carya cordiformis	8	DTM_2	Bar	D-L	4 10	T	Rich or low woods
Carya glabra	4, 5	DTM_2	Bar	D-L	4-6 10	T	Dry to moist woods

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Carya tomentosa	8, 4, 3, 5	DTM_2	Bar	D-L	5 10	T	Dry woods
Cassandra calyculata	2, 6	Esn	Bal	E-L	3-5 7-10	P, C	Bogs and pocosins
Celtis laevigata	2	DTM_2	Enz	D-L	4-5	T	Alluvial woods, rarely uplands; rare in mountains
Cercis canadensis	4	DTM_3	Ate	D-L	3-4 6-11	P	Woodlands
Chasmanthium latifolium	1, 4	Gr Geo	Ate	P	6-10	T	Low woods, basic dikes and ditches
Chelone glabra	1, 4	Pro Hemi	Ate	P	8-10	T	Stream banks, wet ditches, low pastures and woodlands
Chenopodium ambrosioides	1, 6	Pro Hemi	Ate	A	7-11	T	Common weed of cultiva fields, pastures and waste places
Chimaphila maculata	3, 4, 5, 7	E Sp Geo	Spo	P	5-6 7-10	T	Upland coniferous or hardwood forests

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Chrysanthemum leucanthemum	3, 7	Sp Geo	Pog	P	4-9	T	Old fields, pastures, roadsides and meadows
Chrysanthemum spp.	3, 7	Sp Geo	Pog	P	4-6	T	Old fields, roadsides, meadows
Cicuta maculata	1, 6	Pro Hemi	Epi	P	5-8 7-10	T	Swamps, stream banks, marshes, wet meadows and low roadside ditches
Cirsium horridulum	3, 7	Pro Hemi	Pog	B	3-6	P, C	Roadsides, fields, meadows and waste plac
Clematis sp.	1, 2, 3, 4, 7, 8	DVM_3	Enz	P	4-8	M, P	Low woods, stream bank
Cleome gynandra	4, 8	Th	Ate	A	6-10	P	Fields and disturbed places
Clitoria mariana	5	VN	Enz	P	6-8 7-10	T	Open woods and clearings
Collinsonia canadensis	4, 8	Pro Hemi	Ate	P	7-9 9-10	M, P	Rich, moist woods
Collinsonia tuberosa	2	Par Hemi	Ate	P	7-9 9-11	T	Moist woods, usually o basic to circumneutral soils

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Commelina virginica	4, 8	Sp Geo	Ate	P	7-10	P, C	Low woods
Convolvulus arvensis	5, 7	DVM_3	Bal	P	6-11	T	Fields and waste place
Corallorhiza odontorhiza	8	Sap Sp Geo	Spo	P	8-10	M, P	Coniferous or deciduou forests on slopes
Cornus amomum	2	DSM_3	Enz	D-L	5-6 8-9	M, P	Marshes, swamp forests and alluvial woods
Cornus florida	3, 4, 5, 7	DTM_2	Enz	D-L	3-4 9-10	T	Woodlands; the great beauty of the flower and the hardness of th wood have considerable horticultural and commercial value
Cornus stricta	6	DTM_3	Enz	D-L	7-10	M, P	Marshes, swamp forests and alluvial woods
Crataegus sapthulata	1, 6	DSN	Enz	D-L	9-11	P	Stream banks and low woods
Crataegus uniflora	3, 5	DSM_3	Enz	D-L	4-5 8-10	T	Thickets and woodlands usually xeric

Amendment 2
(Revised)

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Crataegus sp.	1, 2, 4, 5 7, 8	DSM 3	Enz	D-L	4-5	T	Thickets and woodlands
Crotolaria mucronata	7	Th	Enz	A	7-9 8-10	P, C	Roadsides and fields
Cuscuta spp.	2, 6	V Th	Ate	A		T	Rootless, leafless parasite
Cynodon dactylon	7	Gr	Spo	P	7-10	T	Fields, pastures, roadsides and waste places
Cyperus strigosus		Sp Geo	Epz	P	7-10	T	Marshes, ditches and low waste places
Datura stramonium var. tatula	2, 6, 7	Th	Ate	A	7-9 8-10	T	Fields, roadsides, barn lots and waste places; All parts of the plant, and especially the seed are dangerously poisonous to man and livestoc
Daucus carota	2, 4, 6, 7	Pro Hemi	Epz	B	5-9	T	Roadsides, fallow field and waste places

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Desmodium cuspidatum	3, 6, 7	Pro Hemi	Epz	P	6-8	M, P	Woodland borders and woods
Desmodium marilandicum	2, 3, 7	Pro Hemi	Epz	P	6-9	T	Fields and open woods
Desmodium nudiflorum	4, 5, 7	Pro Hemi	Epz	P	7-8 8-10	T	Woodlands
Desmodium rotundifolium	4, 5, 7	Pro Hemi	Epz	P	6-10	M, P	Woodlands
Desmodium sp.	3, 4, 5, 7,	Pro Hemi	Epz	P	6-10	M, P	Woodlands
Digitaria sanguinalis	3, 7	Gr	Spo	A	7-10	T	Fields, pastures, road-sides and waste places
Diodia teres	7	Th	Enz	A	6-11	T	Sandy fields, woodlands
Dioscorea batatas	2	V Sp Geo	Pte	P	6-8	M, P	Alluvial woods, fencerow and waste places
Dioscorea villosa	1, 2, 4, 5	DVM_2	Bal	D-L	4-5 9-10	T	Woodlands
Diospyros virginiana	3, 4, 5, 7,	DTM_2	Enz	D-L	5-6	M, P, C	Usually dry deciduous forests, pinelands and old fields

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Echinochloa crusgalli	7	Gr	Spo	A	7-10	T	Low fields, marshes and waste places
Eleocharis obtusa	6	Th	Epi	A	6-10	T	Ditches, marshes and pools
Elephantopus carolinianus	4	Ros Hemi	Pog	P	7-11	T	Mesic woodlands
Elephantopus tomentosus	4, 5, 7	Ros Hemi	Pog	P	7-9 8-11	P, C	Woodlands
Eleusine indica	3, 7	Gr Th	Ate	A	6-10	T	Fields, roadsides and waste places
Elymus virginicus	6	Gr	Pog	P	6-11	T	Low woods, ditches and waste places
Epifagus virginiana	4, 8	Par Sp Geo	Ate	P	9-11	T	Rich woods, parasitic or beech roots
Epigaea repens	5	ESN	Enz	E-L	2-5 4-6	T	Sandy and rocky usually xeric woodlands
Erythronium americanum	4, 8	Sp Geo	Spo	P	2-4	M, P	Alluvial woods and mois woodlands

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Euonymus americana	4, 8	DSN	Bal	D-L	5-6	T	Mixed deciduous forests low woodlands and swamp forests
Eupatorium album	4	Par Ros Hemi	Pog	P	4-9	T	Woodlands, old fields
Eupatorium coelestinum	1, 6, 7	Sp Geo	Pog	P	7-8	P, C	Low woods, wet meadows and ditches
Eupatorium purpureum	3	Pro Hemi	Pog	P	7-10	M, P	Wooded slopes
Euphorbia corollata	5	Sp Geo	Enz	P	6-10	T	Woodland borders
Fagus grandifolia	3, 4, 8	DTM_2	Bar	D-L	3-4	T	Rich, damp woods
Fimbristylis autumnalis	6	Gr Geo	Spo	P	8-10	T	Meadows, ditches and low waste places
Fragaria virginiana	3, 7	Sp Geo	Enz	P	3-6	M, P	Old fields and woodland borders
Fraxinus americana	1, 3	DTM_2	Pte	D-L	4-5 8-10	T	Dry, rich and low woods
Fraxinus pennsylvanica	2	DTM_2	Pte	D-L	4	P, C	Low Woods
Galium circaezans	4	Pro Hemi	Epz	P	4-6	M, P	Rich woods and mixed deciduous forests

Amendment 2
(Revised)

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Gaylussacia baccata	5	DSM_3	Enz	D-L	4-6 8-10	M, P	Xeric woods
Galium sp.	1, 2, 4, 5, 8	Pro Hemi	Epz	P	4-6	M, P	Woodlands
Gelsemium sempervirens	3, 4, 5, 7	EVM_3	Bar	EB-L	3-5 9-11	P, C	Thickets, woodlands, fencerows and roadsides
Gentiana saponaria	4	Pro Hemi	Pte	P	9-11	T	Bogs, marshes, low woods and roadside ditches
Gentiana villosa	3	Pro Hemi	Ate	P	8-11	T	Upland woods
Gleditsia triacanthos	4, 5	DTM_2	Enz	D-L	4-5 7-11	M, P	Woods and wooded borders
Gnaphalium obtusifolium	7	Th	Pog	A	8-10	T	Fields, pastures, disturbed places and ope woodlands
Gnaphalium sp.	3, 7	Th	Pog	A	8-10	T	Fields, open woodlands
Goodyera pubescens	3, 4, 8	Sp Geo	Ate	P	6-8	M, P	Dry to moist coniferous or hardwood forests
Halesia carolina	4, 8	DTM_3	Pte	D-L	3-5 8-9	M, P	Rich deciduous woods, river bottoms and stream banks

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Helenium amarum	7	Th	Pog	A	5-11	P, C	Roadsides, pastures, fields and waste places; if eaten by cows, causes milk to be sour
Helenium flexuosum	6	Par Hemi	Pog	P	5-8	T	Alluvial pastures, wet meadows and ditches
Hepatica americana	4, 8	E Sp Geo	Ate	EB-L	2-4	P	Rich woods
Heterotheca graminifolia	7	Par Ros Hemi		Pog	P	7-10	Upland woods, old fields and road banks
Heterotheca mariana	3, 7	Par Ros Hemi	Pog	P	6-10	T	Old fields, woodlands and pine barrens
Heuchera sp.	4, 8	Sp Geo	Pte	P	4-6	M, P	Rich woods
Hexastylis arifolia	3, 4, 5, 7	E Sp Geo	Enz	P	3-5	T	Deciduous or pine woods
Hexastylis virginica	4, 8	E Sp Geo	Ate	EB-L	4-5	T	Deciduous forests and rocky slopes; Heart leaf Wild Ginger
Hibiscus moscheuto ssp palustris	6	Pro Hemi	Enz	P	6-9 7-10	T	Marshes and wet places

Amendment 2
(Revised)

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Hieracium venosum	4, 5	Ros Hemi	Pog	P	4-7	M, P	Woodlands and woodland borders
Hypericum gentianoides	4, 5	Th	Enz	A	5-10	T	Fields, roadsides and rock outcrops
Hypericum hypericoides	5	DSN	Spo	D-L	4-7	P, C	Dry Woods
Hypericum mutilum	6	Pro Hemi	Ate	EB-L	4-5	T	Bogs, marshes, ditches, meadows
Hypericum spathulatum	2, 6	DSM_3	Bal	D-L	6-7 7-11	M, P	Meadows, seepage slopes and rocky woods
Ilex decidua	4, 5, 7, 8	DSM_3	Enz	D-L	4-5 9-10	P, C	Upland and alluvial forests and thickets; Possum Haw
Ilex opaca	3, 4, 5, 7,	ETM_2	Enz	EB-L	4-6 9-10	T	Mixed deciduous woods American Holly
Impatiens capensis	1, 2	Th	Bal	A	5-10	T	Marshes, stream margins and alluvial woods Spotted Touch-Me-Not, Jewel-Weed

Amendment 2
(Revised)

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Ipomoea coccinea	6	V Th	Ate	A	8-10	P, C	Cultivated and fallow roadsides and waste places
Ipomoea purpurea	1, 6	V Th	Ate	A	7-9	T	Cultivated and fallow fields, roadsides, thic and waste places; Common Morning Glory
Juglans nigra	2	DTM_2	Bar	D-L	4 10	T	Rich woods Black Walnut
Juncus effusus	6	Gr	Spo	P	7-9 9-10	T	Wet places
Juniperus virginiana	3, 4, 5, 7, 8	ETM_2	Enz	EN-L	1-3 10-11	T	Old fields and woods and dry soils; Red Ceda
Kalmia latifolia	4, 8	ESM_3	Ate	EB-L	4-6 9-10	T	Rocky or sandy woods Mountain Laurel or
Lespedeza cuneata	5, 7	Pro Hemi	Epi	P	7-10 9-11	T	Fields, roadsides and waste places

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Lespedeza procumbens	4, 5, 6	Pro	Ate	P	7-9 8-11	T	Open woods
Lespedeza violacea	5, 7	Par Hemi	Epz	P	7-9 10-11	P	Fields, roadsides and open woods
Leucothoe axillaris editorum	4, 8	ESN	Ate	EP-L	4-5	M, P	Along streams and in ericaceous thickets Rare in lower Piedmont; Leucothoe
Ligustrum sinense	2	ESM_3	Enz	EB-L	5-6	T	Low wood and waste places; Privet
Liquidambar styraciflua	2, 3, 4, 7, 8	DTM_2	Bar	D-L	4-10	T	Low and rich woods; Sweet Gum
Liriodendron tulipifera	2, 3, 4, 5,	DTM_2	Pte	D-L	4-6	T	Rich low woods and waste places; Tulip Tree
Lobelia cardinalis	1, 2, 6	Par Hemi	Bal	P	7-11	T	Marshes, streambanks, wet meadows and low woods
Lobelia puberula	6	Par Ros Hemi	Ate	P	8-10	T	Bogs, woodlands and meadows

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Lonicera japonica	2, 3, 5, 7	EVM_3	Enz	EB-L	4-6	T	Woodlands, roadsides, fencerows and pastures; Japanese Honeysuckle
Lonicera sempervirens	4, 5, 7	DVM_2	Enz	D-L	4-6 7-10	P, C	Woodlands, thickets and fencerows
Ludwigia alternifolia	2, 6	Pro Hemi	Spo	P	5-10	T	Marshes, ditches, savannahs and low woods
Ludwigia decurrens	1, 6	Pro Hemi	Ate	P	6-10	T	Marshes and ditches
Ludwigia hirtella	6	Par Hemi	Spo	P	6-10	P, C	Savannahs, ditches and bogs
Ludwigia linearis	2, 6	Par Hemi	Spo	P	6-10	P. C.	Savannahs, ditches and bogs
Lycopodium flabelliforme	4, 8	Pt Geo	Spo	P	7-9	M, P	Dry woods, slopes and pinelands; Running Pine
Lycopodium lucidulum	4, 8	Pt. Geo	Spo	P	6-8	M, P	Rich woods and swamps ; Shining Clubmoss
Lycopodium tristachyum	5	Geo	Spo	P	7-11	M, P	Dry, sandy woods and rocky slopes

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Lycopus uniflorus	1	Act Ch	Ate	P	7-10	M	Bogs and wet woods
Lycopus virginicus	1, 2	Act Ch	Ate	P	7-10	T	Swamp forests, alluvial woods and wet fields
Lyonia mariana	3, 5	DSN	Enz	D-L	4-5 9-11	P, C	Dry sandy or rocky woods
Magnolia macrophylla	1	DTM_3	Enz	D-L	5-6 7-9	P	Alluvial woods
Magnolia tripetala	4, 8	DTM_3	Enz	D-L	4-5 7-10	T	Rich woods
Magnolia virginiana	8	ETM_3	Enz	E-L	4-7 7-10	P, C	Bays, pocosins and savannahs
Mikania scandens	6	V Sp Geo	Ate	P	7-10	P, C	Woods, thickets, marshes and bogs, usually very w habitats
Miscanthus sinensis	3, 7	Gr Geo	Spo	P	9-11	T	Roadsides, ditches and woodland borders; A rapidly spreading introduction along roadsides

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Mitchella repens	4, 8	E Act Ch	Enz	P	5-6	T	Rich or low deciduous woods, stream banks
Morus rubra	2, 4	DTM_2	Enz	D-L	4-5	T	Alluvial woods and on th adjacent lower slopes
Nyssa sylvatica	4, 8	DTM_2	Enz	D-L	5-6	T	Upland and low woods
Oenothera biennis	1	Pro Hemi	Ate	B	6-10	T	Fields and waste places Evening Primrose
Oenothera fruticosa	5, 7	Pro Hemi	Bal	P	5-10	T	Dry woods
Onoclea sensibilis	1, 2, 4, 8	Pt Geo	Bal	P	5-6	T	Muddy ditches, marshes, swamps and seepage areas Sensitive Fern
Osmorhiza longistylis	1, 2	Pro Hemi	Epz	P	4-5	T	Moist deciduous forest and low areas
Osmunda cinnamomea	2, 7	Pt Geo	Bal	P	3-5	T	Swamps, marshes, stream banks
Ostrya virginiana	4, 8	DTM_2	Enz	D-L	5-6 8-10	M, P	Rich and low woods

E. R. Table 2.7.1-25
Cherokee Nuclear Station
Dominant Floristic Composition

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Oxalis montana	4, 8	Sp Geo	Enz	P	6-8	M, P	Rich, moist forests
Oxalis stricta	6	Sp Geo	Ate	P	5-10	T	Common, mostly in woodlands, thickets, hedgerc and occasional as a gard weed. Creeping Lady's Sorrel
Oxalis spp.	1, 2, 4, 8	Sp Geo	Spo	P	5-10	T	Woodlands, Thickets
Oxydendron arboreum	5	DTM_2	Ate	D-L	6-7	T	Wooded slopes, stream banks and other similarl well-drained habitats; Sourwood
Panicum dichotom	2, 3, 4, 7, 8	Gr Geo	Spo	P	4-10	T	Bogs, ditches, savannahs and low pinelands
Panicum sphaerocarpon	1, 3, 4, 7	Gr Geo	Spo	P	6-10	T	Woods, meadows and ditch
Panicum spp.	1, 2, 3, 4,	Gr Geo	Spo	P	4-10	T	Woodlands, meadows
Parthenium integritolium	5, 7	Par Ros Hemi	Pog	P	5-9	T	Woodlands, thickets and old fields
Parthenocissus quinquefolia	2	DVM_2	Enz	D-L	6-7 7-8	T	Dry, rocky or rich wood Virginia Creeper

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Paspalum dilatatum	2	Gr	Pog	P	5-10	T	Roadsides, fields and waste places
Passiflora incarnata	3, 7	VN	Enz	P	4-5	T	Fields, roadsides, thick
Passiflora lutea	1, 2	V Th	Enz	A	6-9 8-10	T	Mixed deciduous woodland and thickets
Peltandra virginica	6	Hel	Hyd	P	5-6	T	Bogs and marshes
Physalis angulata	1	Th	Enz	A	8-10	P, C	Sandy field margins, roadsides and open woodlands
Phytolacca americana	2	Pro Hemi	Enz	P	5-10	T	Waste ground and pasture usually disturbed habita Poke, Pigeonberry
Pinus echinata	3, 4, 5, 7,	ETM_2	Spo	EN-L	3-4 9-10	T	Old fields and upland woods; Important lumber tree, Short-leaf Pine
Pinus pungens	7	ETM_2	Spo	EN-L	5 9-10	M	Poor soils; Rare in Piedmont; Table Mountain Pine

Amendment 2
(Revised)

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Pinus rigida	3, 8	ETM_2	Spo	EN-L	5 9-10	M	Poor soils; rare in Piedmont; Pitch Pine
Pinus taeda	3, 7	ETM_2	Spo	EN-L	3-4 10-11	P	Low woods, old fields Loblolly Pine
Pinus virginica	3, 5, 7	ETM_2	Spo	EN-L	3-5 9-11	M, P	Poor, dry or rocky soil and old fields; Scrub P
Platanus occidentalis	1, 2	DTM_2	Epz	D-L	4-5	T	Low woods; Sycamore
Poa pratensis	2	Gr Geo	Ate	P	4-8	T	Lawns, roadsides and wa places; Blue Grass
Podophyllum peltatum	1, 4	Sp Geo	Enz	P	4-5 6-7	M, P	Mixed deciduous forests, alluvial woodlands and meadows and moist road banks
Polygonatum biflorum	5, 8	Sp Geo	Enz	P	4-6 8-10	T	Moist woodlands; Solomon's Seal
Polygonum cespitosum var. longisetum	1, 2, 6	Th	Ate	A	5-10	T	Disturbed, usually mois habitats, often on woodland borders

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Polygonum pennsylvanicum	1, 6	Th	Ate	A	7-10	T	Alluvial fields and disturbed habitats
Polypodium polypodioides	4, 7	Pt Geo	Bal	P	6-10	T	Rocks, limbs and crotche of trees
Polystichum acrostichoides	4, 8	Pt Geo	Bal	P	6-10	T	Shaded rocky slopes, woods and swamp edges; Christmas Fern
Populus deltoides	1, 2	DTM_2	Ate	D-L	3-4	P	Swamp forests; Cottonwood
Potentilla canadensis	3, 4, 5	Par Ros Hemi	Enz	P	3-5 5-8	T	Upland woodland borders and pastures, usually ir xeric situations
Potentilla sp.	1, 2, 6, 7	Sp Geo	Enz	P	3-6	T	Swamp forests
Prenanthes alba	8	Pro Hemi	Pog	B	8-10	M	Wooded slopes and road banks; White-Lettuce
Prenanthes altissima	4, 7	Pro Hemi	Pog	B	8-10	M, P	Woodlands
Prunella vulgaris	8	Pro Hemi	Ate	P	4-10	T	Naturalized in part; fields, pastures, roadsides and lawns

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Prunus serotina	3, 4, 5	DTM_2	Enz	D-L	4-5	T	Woodlands, fencerows, pastures; Black Cherry
Prunus spp.	3, 4, 5, 7	DTM_2	Enz	D-L	4-8	T	Woodlands
Pteridium aquilinum	3, 7	Pt. Geo	Bal	P	7-9	T	Old fields and secondary woods; Bracken Fern
Pueraria lobata	3, 7	DVM_2	Ate	P	7-10	T	Woods, roadsides and fields
Quercus alba	3, 4, 5, 8	DTM_1	Bar	D-L	4 9-11	T	Woodlands; White Oak
Quercus coccinea	5	DTM_2	Bar	D-L	4 9-11	M, P	Abundant in poor soils; Scarlet Oak
Quercus falcata	3, 4, 5, 7	DTM_2	Bar	D-L	4 9-11	P	Dry woods; Spanish Oak, Southern Re Oak
Quercus lyrata	1	DTM_1	Enz	D-L	3-4 10-11	P, C	River bottoms and low grounds
Quercus marilandica	3, 5	DTM_2	Bar	D-L	4 9-11	T	Dry, poor soil; Black Jack Oak

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Quercus nigra	2, 3, 4	DTM_2	Bar	D-L	4	P, C	Along stream, low ground Water Oak
Quercus phellos	2, 3, 4, 7	DTM_2	Bar	D-L	3-4	P, C	Low grounds; Willow Oak
Quercus prinus	8	DTM_2	Bar	D-L	4 9-11	M, P	Rocky ridges and bluffs Rock Chestnut Oak
Quercus rubra	3, 4, 5, 8	DTM_2	Bar	D-L	4	M, P	Rich, hardwood forests; Red Oak
Quercus shumardii	4, 5, 8	DTM_2	Bar	D-L	4 9-10	P, C	Rich woods and bottom lands; Swamp Red Oak
Quercus stellata	8	DTM_2	Bar	D-L	4 9-11	T	Dry, poor or rich soil; Post Oak
Quercus velutina	5, 7	DTM	Enz	D-L	5 9-11	T	Dry, well drained soil Black Oak
Ranunculus recurvatus	4, 8	Pro Hemi	Enz	P	4-6	T	Rich and low woods
Rhododendron maximum	4	ESM_3	Ate	EB-L	6-8	M, P	Stream banks and mesic woods, mostly below 3,000 ft. Rosehay, Great Laurel

Amendment 2
(Revised)

E. R. Table 2.7.1-25
Cherokee Nuclear Station
Dominant Floristic Composition

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Rhus copallina	3, 7	DSM_3	Enz	D-L	7-9 8-10	T	Woodlands, thickets, fencerows and old fields Dwarf or Winged Sumac
Rhus glabra	7	DSM_3	Enz	D-L	3-7 6-10	T	Woodland borders, meadow Waste places
Rhus radicans	1, 2, 5, 6, 8	DVM_2	Enz	D-L	4-5 8-10	T	Woodlands, meadows, fencerows, roadsides and waste places
Rhus typhina	5	DSN	Enz	D-L	4-6 6-10	M, P	Meadows, pastures, thickets and woodland borders
Robinia pseudo-acacia	7	DTM_2	Bal	D-L	5-7 7-11	M, P	Woods and Thickets
Rosa palustris	2, 6	D Suff Cham	Enz	D-L	4-5 9-10	T	Along streams, ponds and swamp forests
Rosa carolina	2, 3, 6, 7	DSN	Enz	D-L	8-10	T	Woodland borders and pine lands
Rosa spp.	1, 2, 7	Suf Cham	Enz	D-L	5-7 9-10	T	Woodlands, swamps

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Rubus spp.	1, 2, 7	Suf Cham	Enz	D-L	5-6	T	Woodlands, fields and meadows
Rudbeckia laciniata	1, 2	Sp Geo	Pog	P	7-10	M, P	Woodlands, meadows and stream banks, usually i moist soil; Coneflower
Sabatia angularis	6	Th	Bal	A	7-8 9-10	T	Woodlands, marshes and fields
Sagittaria latifolia	6	Hel	Hyd	P	6-9	C	Marshes, low meadow and stream and pond margins Wapato, Duck-potato
Salix nigra	1, 6	DTM_2	Ate	D-L	3-4	T	Stream banks and low, moist areas; Black Willow
Sambucus canadensis	1, 2	DSM_3	Enz	D-L	7-8	T	Swamp forests, alluvial woods and pastures, usually in open habitat
Sanguinaria canadensis	4, 8	Sp Geo	Ate	P	3-4 4-5	M, P	Mixed deciduous forests and wooded slopes
Sanicula canadensis	4	Par Ros Hemi	Epz	B	4-5	T	Mixed deciduous woods

Amendment 2
(Revised)

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Schrankia microphylla	5	Pro Hemi	Enz	P	6-9 7-11	T	Open woods
Scirpus cyperinus	2, 6	Gr Geo	Hyd	P	7-9	T	Marshes; Bulrush
Scirpus validus	6	Gr	Spo	P	6-10	T	Marshes and rocky stream beds
Senecio smallii	4, 5	Par Ros	Pog	P	6-8	T	Woodlands
Sicyos angulatus	1, 2, 6	Th	Enz	A	8-11	T	Alluvial woods, thickets roadsides, riverbanks
Smilacina racemosa	8	Sp Geo	Enz	P	4-6 8-10	T	Common in moist deciduou forests; False Solomon's Seal
Smilax bona-nox	2, 3, 4, 5	DVM_2	Enz	D-L	4-5 9-11	T	Common, most abundant in cutover habitats; Greenbrier, Catbrier
Smilax glauca	2, 3, 4, 5	EVM_3	Enz	EB-L	4-6	T	Swamp forests, pocosins, sandhills, upland and alluvial woods, old fields and fencerows; Greenbrier, Catbrier

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Smilax rotundifolia	4	EVM_3	Enz	D-L	4-5	T	Deciduous woods and usually moist thickets; Greenbrier, Catbrier
Solanum carolinense	5	Pro Hemi	Ate	P	5-7 8-10	T	Roadsides and old fields
Solidago speciosa	3, 7	Sp Geo	Pog	P	9-10	M, P	Pastures, road banks, old fields and woodland borders; Goldenrod
Solidago spp.	2, 4, 5, 8	Par Ros	Pog	P	4-6	M, P	Woodlands
Sorghum halepense	3, 4, 5, 7	Gr	Spo	P	5-10	T	One of the Carolinas' most pernicious weeds, roadsides and waste places
Stellaria media	2	Th	Ate	A	1-5	T	Waste places and fields; Chickweed
Stewartia ovata	4, 5, 8	DSM_3	Ate	D-L	6-7 8-9	M	River bluffs and wooded stream margins - rare. Mountain Camellia
Stipa avenacea	5	Gr Geo	Epz	P	4-6	T	Dry woods; Needle Grass

Amendment 2
(Revised)

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Taraxacum officinale	2, 4, 5, 7, 8	Ros Hemi	Pog	P	2-6	T	Roadsides, pastures, lawns and waste places; Common dandelion
Thaspium trifoliatum	4	Par Hemi	Epi	P	4-6 7-10	M, P	Mixed deciduous forests and woodland borders
Thelypteris hexagonoptera	2, 5, 8	Pt Geo	Bal	P	4-8	T	Moist, rich woodlands a thickets Broad Beech-Fern
Thelypteris palustris	2, 5	Pt Geo	Bal	P	6-9	T	Marshes, margins of swamps and bogs; Marsh Fern
Tiarella cordifolia	4, 8	Ros Hemi	Ate	P	5-10	M, P	Rich woods
Trichostema dichotonum	3, 5	Th	Ate	A	8-11	T	Sandy or rocky woodland fields
Trifolium spp.	2, 5, 6, 8	Th	Enz	S	4-8	T	Fields, roadsides
Tripsacum dactyloides	2, 4	Gr	Epz	P	5-11	T	Low woods, roadsides
Typha latifolia	6	Hel	Hyd	P	5-7 6-11	T	Shallow water of lakes, ponds, river banks and wet ditches; Common Cattail

Species	Community[1]	Life Form[2]	Diaspore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Ulmus alata	1, 4	DTM_2	Pte	D-L	2-3	T	Usually in upland soils, occasional along streams and rivers
Ulmus americana	1, 2	DTM_2	Pte	D-L	2-3	T	Alluvial woods or swamp forests and along streams and rivers
Uniola latifolia	1, 2	Gr	Pog	P	6-10	T	Low woods, basic dikes and ditches
Urtica dioica	6	Sp Geo	Epi	P	5-7 7-9	P	Usually in waste ground
Uvularia perfoliata	1, 8	Sp Geo	Ate	P	4-5	M, P	Wooded coves and alluvial woods
Uvularia sessilifolia	1, 8	Sp Geo	Enz	P	3-4 7-10	P	Alluvial woods and coves
Vaccinium arboreum	5, 7	ESM_2	Enz	E-L	5-6 10-11	P, C	Sandy or rocky woods, usually xeric woodlands
Vaccinium stamineum	3, 4, 5,	DSM_3	Enz	D-L	4-6 8-10	T	Rocky or sandy, usually xeric woodlands; Squaw-Huckleberry, Gooseberry
Vaccinium vacillans	5, 7	DSN	Enz	D-L	3-4 6-7	M, P	Xeric woodlands

Amendment 2
(Revised)

Species	Community[1]	Life Form[2]	Diaspore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Verbascum thapsus	7	Ros Hemi	Spo	B	6-11	T	Roadsides, pastures and waste places
Verbena brasiliensis	1	Pro	Ate	P	5-10	P, C	Old fields and waste place
Viburnum acerifolium	4, 5, 7	DSN	Enz	D-L	4-6	M, P	Mixed deciduous forests
Viburnum dentatum var. lucidum	2	DSM_3	Enz	D-L	4-6	T	Bogs, alluvial woods and swamp forests
Viburnum prunifolium	1, 2	DTM_3	Enz	D-L	3-4	P, C	Low woods and bogs
Viburnum rufidulum	3, 5	DSM_3	Enz	D-L	3-4	P	Pine-oak and oak-hickory woods
Viola papilionacea	2	Sp Geo	Ate	P	2-4	T	Lawns, hedge rows, alluvia woods, roadsides and pastures; Violet
Viola spp.	1, 2, 3, 4	Sp Geo	Ate	P	2-6	T	Fields,woodlands
Vitis aestivalis	1, 6	VM_2	Enz	D-L	5-6	T	Low woods and stream banks
Vitis rotundifolia	3, 5, 8	DVM_2	Enz	D-L	5-6 8-10	T	Low woods, upland woods and sand dunes; Muscadine

Species	Community[1]	Life Form[2]	Disapore Type[3]	Duration[4]	Phenology[5]	Range[6]	Comments
Vitis spp.	1, 2, 3, 4, 5, 6, 7, 8	DVM_2	Enz	D-L	5-10	T	Woodlands
Xanthium strumarium	1	Th	Epz	A	7-10	T	Fields, pastures, waste places and sandy beaches Cockleburr
Zigadenus densus	5	Sp Geo	Ate	P	5-6 7-9	C	Savannahs and pocosins
Zizia trifoliata	4, 5	Par Ros	Epz	P	4-5	M, P	Open woodlands, streams and margins and road banks

Legend

1 - 1 Alluvial Forest
2 Alluvial Thicket
3 Mesic Pine Forest
4 Mixed Mesophytic Hardwood Forest
5 Oak-Hickory Forest
6 Cattail Marsh
7 Pine Scrub Forest
8 Mountain Laurel - Hardwood Forest

2 - T - Tree
S - Shrub
V - Liana
Ep - Eiphyte
E - Evergreen
D - Deciduous
Phanerophytes - buds higher than 30 cm
M_1 - Megophanerophyte - plant height greater than 30 M
M_2 - Mesophanerophyte - plant height equals 8 - 30 M
M_3 - Microphanerophyte - plant height equals 2 - 8 M
N - Nanophanerophyte - plant height equals 0.5 - 2 M
Chamophytes - buds from 25 - 30 cm above the ground
Suff Cham - Suffruticose Chamophyte - erect aerial shoots which die back during unfavorable seasons
Pass Cham - Passive Chamophyte - shoots persistent and with onset of unfavorable conditions become procumbent
Act Cham - Active Chamophytes - vegetative shoots persistently oriented along the ground, usually rooting along their length (stoloniferous)
Cus Cham - Cushion Chamophyte - reduced compact, active chamophyte
Hemicryptophytes - surviving bud situated at the soil surface (perennial herbs)
Pro Hemi - Protohemicryptophyte - lowermost leaves less well developed than uppermost leaves
Par Ros Hemi - Partial Rosette Hemicryptophyte - best developed leaves form a rosette at base of plant but some upper leaves are persistent
Ros Hemi - Rosette Hemicryptophyte - leaves are restricted to a rosette at the base of the plant
Cryptophytes - perennating bud below ground level or submerged in water
Geophytes - plant with rhizome, bulb or tuber
Pt Geo - Pterophytic Geophyte - ferns and fern allies
Sp Geo - Spermatophytic Geophyte - seed plants
Helo - Helophyte - perennating organ in soil or mud below water level with aerial shoots above the water level
Hydro - Hydrophyte - perennating buds under water and with their leaves submerged or floating.

2 -

Th - Therophyte - annual seed plants (except grasses)
Gr - Graminophyte - grasses and grass-like plants

3 - Diaspore type, dispersal agent and description:

Sporochore - Wind - minute or dust-like spores, seeds, or fruits
Pterochore - Wind - winged seeds or fruits
Pogonochore - Wind - plumed seeds or fruits
Cyclochore - Wind - tumbling fruit-bearing structures or plants
Epizoochore - Animal - barbed, hooked or viscid seeds or fruits
Synzoochore - Animal - intentionally buried or stored seeds or fruits
Endozoochore - Animal - visceral (non-digestible) seeds or fruits
Ballochore - Mechanical - expulsion of seeds or fruits
Barochore - Gravity - heavy seeds or fruits
Hydrochore - Water - floating seeds, fruits, or vegetative parts
Anthropochore - None - dispersal by man
Atelechore - None - no special adaptation, on the spot dispersal
Polychore - More than one agent - could be wind and animal adapted fruits on the same plant

4 -

A - Annual
B - Biennial
P - Perennial
D-L - Deciduous-leaved
EB-L - Evergreen Broad-leaved
EN-L - Evergreen Needle-leaved

5 - Months during which flowering and fruiting occur:

1 - January	5 - May	9 - September
2 - February	6 - June	10 - October
3 - March	7 - July	11 - November
4 - April	8 - August	12 - December

6 - Range of plant occurrence in the Carolinas:

M - Mountains
P - Piedmont
C - Coastal Plain
T - Throughout

Cherokee Nuclear Station

Phylogenetic Listing of Dominant Vascular Plant Species.

Division Pteridophyta
- Class Lycopodiinae
  - Order Lycopodiales
    - Family Lycopodiaceae
      - *Lycopodium flabelliforme* (Fernald) Blanchard.
      - *Lycopodium lucidulum* Michaux.
      - *Lycopodium tristachyum* Pursh
- Class Filicinae
  - Order Filiacles
    - Family Osmundaceae
      - *Osmunda cinnomomea* L.
    - Family Ophioglossaceae
      - *Botrychium dissectum* Sprengel.
      - *Botrychium virginianum* (L.) Swartz.
    - Family Pteridaceae
      - *Adiantum pedatum* L.
      - *Pteridium aquilinum* (L.) Kuhn.
    - Family Aspidaceae
      - *Athyrium asplenioides* (Michaux) A. A. Eaton.
      - *Athyrium filix-femina* var. *asplenoides* (Michaux) Farwell.
      - *Onoclea sensibilis* L.
      - *Polystichum acrostichoides* (Michaux) Schoot.
      - *Thelypteris hexagonoptera* (Michaux) Weatherby.
      - *Thelypteris palustris* Schoot.
    - Family Aspleniaceae
      - *Asplenium platyneuron* (L.) Oakes.
    - Family Polypodiaceae
      - *Polypodium polypodioides* (L.) Watt.

Division Spermatophyta
- Subdivision Gymnospermae
  - Order Coniferae
    - Family Pinaceae
      - *Pinus echinata* Miller.
      - *Pinus pungens* Lambert.
      - *Pinus rigida* Miller.
      - *Pinus virginiana* Miller.
    - Family Cupressaceae
      - *Juniperus virginiana* L.

Phylogenetic Listing of Dominant Vascular Plant Species.

Subdivision Angiospermae
Class Alternifoliae (Monocotyledoneae)
Subclass Alternifoliae-Strobiloideae
Order Alismatales
Family Alismataceae

Alisma subcordatum Raf.
Sagittaria latifolia Willd.

Family Typhaceae

Typha latifolia L.

Order Xeridales
Family Juncaceae

Juncus effusus L.
Luzula acuminata Raf.

Order Liliales
Family Commelinaceae

Commelina virginica L.

Family Liliaceae

Erythronium americanum Ker.
Polygonatum biflorum (Walter) Ell.
Smilacina racemosa (L.) Desf.
Smilax bona-nox L.
Smilax gluaca Walter.
Smilax rotundifolia L.
Uvularia perfoliata L.
Uvularia sessilifolia L.
Zigadenus densus (Desr.) Fernald

Order Arales
Family Araceae

Peltandra virginica (L.) Kunth.

Order Graminales
Family Poaceae

Andropogon scoparius Michaux.
Andropogon spp.
Aristida purpurascens Poiret.
Aristida dichotoma Michaux.
Arundinaria gigantea (Walter) Muhl.
Cynodon dactylon (L.) Person
Digitaria sanguinalis (L.) Scopoli
Echinochloa crusgalli (L.) Beauvoir

Phylogenetic Listing of Dominant Vascular Plant Species.

Eleusine indica (L.) Gaertner.
Elymus virginicus L.
Micanthus sinensis Andersson.
Panicum dichotom L.
Panicum sphaerocarpon Ell.
Panicum spp.
Paspalum dilatatum Poiret.
Poa pratensis L.
Sorghum halepense (L.) Willd.
Stipa avenacea L.
Tripsacum dactyloides L.
Uniola latifolia Michaux.

Family Cyperaceae

Carex lurida Wahlenberg.
Carex spp.
Cyperus strigosus L.
Eleocharis obtusa (Willd.) Schultes.
Fimbristylis autumnalis (L.) R. & S.
Scirpus cyperinus (L.) Kunth.
Scirpus validus Vahl.

Subclass Alternifoliae-Cotyloideae
Order Iridales
Family Dioscoreaceae

Dioscorea batatas Dcne.
Dioscorea villosa L.

Order Orchidales
Family Orchidaceae

Aplectrum hyemale (Muhl. ex Willd.) Torrey.
Corallorhiza odontorhiza Raf.
Goodyera pubescens (Willd.) R. Broun.

Class Oppositifoliae (Dictyledoneae)
Subclass Oppositifoliae-Strobiloideae
Superorder Strobiloideae-Apopetalae-Polycarpellatae
Order Ranales
Family Magnoliaceae

Liriodendron tulipifera L.
Magnolia macrophylla Michaux.
Magnolia tripetala L.
Magnolia virginiana L.

Family Annonaceae

Asimina triloba (L.) Dunal.

Cherokee Nuclear Station

Phylogenetic Listing of Dominant Vascular Plant Species.

Family Ranunculaceae

Clematis spp.
Hepatica americana (DC.) Ker.
Ranunculus recurvatus Poiret.

Family Berberidaceae

Podophyllum peltatum L.

Order Malvales
Family Malvaceae

Hibiscus mascheutos spp. *palustris* (L.) Clausen

Family Ulmaceae

Celtis laevigata Willd.
Ulmus alata Michaux.
Ulmus americana L.

Family Moraceae

Morus rubra L.

Family Urticaceae

Boehmeria cylindrica (L.) Swartz
Boehmeria nivea (L.) Gaudin
Utrica dioica L.

Order Geraniales
Family Oxalidaceae

Oxalis montana Raf.
Oxalis stricta L.
Oxalis spp.

Family Balsaminaceae

Impatiens capensis Meerb.

Family Euphorbiaceae

Euphorbia corollata L.

Order Guttiferales
Family Theaceae

Stewartia ovata (Cav.) Weatherby

Family Hypericaceae

Ascyrum hypericoides L.
Hypericum gentianoides (L.) BSP
Hypericum hypericoides (L.) Crantz
Hypericum mutilum L.
Hypericum spathulatum (Spach.) Steudal

Cherokee Nuclear Station
Phylogenetic Listing of Dominant Vascular Plant Species.

Family Passifloraceae
Passiflora incarnata L.
Passiflora lutea L.

Family Violaceae
Viola papilionacea Pursh.
Viola spp.

Order Rhoeadales
Family Capparidaceae
Cleome gynandra L.

Family Papaveraceae
Sanguinaria canadensis L.

Order Caryophyllales
Family Salicaceae
Populus deltoides Marshall.
Salix nigra Marshall.

Family Caryophyllaceae
Stellaria media (L.) Cyrillo.

Family Phytolaccaceae
Phytolacca americana L.

Family Chenopodiaceae
Chenopodium ambrosioides L.

Family Polygonaceae
Polygonum cespitosum var. longisetum (DeBruyn) Steward.
Polygonum pennsylvanicum L.

Superorder Strobiloideae-Sympetalae-Polycarpellatae
Order Ebenales
Family Ebenaceae
Diospyros virginiana L.

Family Symplocaceae
Halesia carolina L.

Order Ericales
Family Ericaceae
Cassandra calyculata (L.) D. Don
Chimaphila maculata (L.) Pursh.
Epigaea repens L.
Gaylusaccia baccata (Wang.) K. Koch
Kalmia latifolia L.
Leucothoe axillaris (Lam) D. Don var.

Phylogenetic Listing of Dominant Vascular Plant Species.

editorum (Fernald & Schubert) Ahles.
Lyonia mariana (L.) D. Don
Oxydendrum arboreum (L.) DC.
Rhododendrum maximum L.
Vaccinium arboreum Marshall.
Vaccinium stamineum L.
Vaccinium vacillans Torrey.

Superorder Strobiloideae-Sympetalae-Dicarpellate
Order Gentianales
Family Oleaceae

Fraxinus americana L.
Fraxinus pennsylvanica Marshall.
Ligustrum sinense Lour.

Family Loganiaceae

Gelsemium sempervirens (L.) Aiton.

Family Asclepidaceae

Asclepias incarnata L.

Family Gentianaceae

Gentiana saponaria L.
Gentiana villosa L.
Sabatia angularis (L.) Pursh.

Order Polemoniales
Family Convolvulaceae

Convolvulus arvensis L.
Cuscuta sp. L.
Ipomoea coccinea L.
Ipomoea purpurea (L.) Roth.

Family Solanaceae

Datura stramonium var. tatula (L.) Torrey.
Physalis angulata L.
Solanum carolinense L.

Order Scrophulariales
Family Scrophulariaceae

Aureolaria laevigata (Raf.) Raf.
Chelone glabra L.
Verbascum thapsus L.

Family Bignoniaceae

Anisostichus carpreolata (L.) Bureau.
Campsis radicans (L.) Seeman

Phylogenetic Listing of Dominant Vascular Plant Species.

Family Orobanchaceae

Epifagus virginiana (L.) Barton

Order Lamiales
Family Verbenaceae

Verbena brasiliensis Vellozo.

Family Lamiaceae

Collinsonia tuberosa Michaux.
Collinsonia canadensis L.
Lycopus uniflorus Michaux.
Lycopus virginicus L.
Prunella vulgaris L.
Trichostema dichotomum L.

Subclass Oppositifoleae-Cotyloideae
Superorder Cotyloideae-Apopetalae
Order Rosales
Family Rosaceae

Crataegus uniflora Muenchh.
Crataegus sapthulata Michaux.
Crataegus sp.
Fragaria virginiana Duchesne.
Potentilla canadensis L.
Potentilla sp.
Prunus serotina Ehrhart.
Rosa carolina L.
Rosa palustris Marshall
Rosa sp.
Rubus sp.

Family Fabaceae

Albiza julbrissin Durazzini.
Amphicarpa bracteata (L.) Fernald
Cercis canadensis L.
Clitoria mariana L.
Crotolaria mucronata Desvaux.
Desmodium cuspidatum (Muhl. ex Willd.) Louden.
Desmodium marilandicum (L.) DC.
Desmodium nudiflorum (L.) DC.
Desmodium rotundifolium DC.
Desmodium sp.
Gleditsia triacanthos L.
Lespedeza procumbens Michaux.
Lespedeza violacea L.
Pueraria lobata (Willd.) Ohwi.
Robinia pseudo-acacia L.
Schrankia microphylla L.
Trifolium sp.

Phylogenetic Listing of Dominant Vascular Plant Species.

Family Saxifragaceae
Heuchera sp.
Tiarella cordifolia L.

Family Hamamelidaceae
Liquidambar styraciflua L.

Family Platanaceae
Platanus occidentalis L.

Order Myrtales
Family Aristolochiaceae
Hexastylis arifolia (Michaux) Small
Hexastylis virginica (L.) Small.

Family Onagraceae
Ludwigia alternifolia L.
Ludwigia decurrens Walter.
Ludwigia hirtella Raf.
Ludwigia linearis Walter.
Oenothera biennis L.
Oenothera fruticosa L.

Order Loasales
Family Cucurbitaceae
Sidyos angulatus L.

Order Celastrales
Family Vitaceae
Parthenocissus quinquefolia (L.) Planchon.
Vitis aestivalis Michaux.
Vitis spp.

Family Celastraceae
Euonymus americanus L.

Family Aquifoliaceae
Ilex decidua Walter.
Ilex opaca Aiton.

Order Sapindales
Family Hippocastanaceae
Aesculus octandra Marshall.

Family Aceraceae
Acer negundo L.
Acer rubrum L.
Acer saccharum ssp. *floridanum* (Chapman) Desmarais.

Phylogenetic Listing of Dominant Vascular Plant Species.

Family Anacardiaceae

Rhus copallina L.
Rhus glabra L.
Rhus radicans L.
Rhus typhina L.

Family Juglandaceae

Carya carolinae-septentrionalis (Ashe) Engler and Graebner.
Carya cordiformis (Wang.) K. Koch.
Carya glabra Miller.
Carya tomentosa (Poiret) Nuttall.
Juglans nigra L.

Family Betulaceae

Alnus serrulata (Aiton) Willd.
Betula nigra L.
Carpinus carolinana Walter.
Corylus americana Walter.
Ostrya virginiana (Miller) K. Koch.

Family Fagaceae

Fagus grandifolia Ehrhart.
Quercus alba L.
Quercus coccinea Muenchh.
Quercus falcata Michaux.
Quercus lyrata Walter.
Quercus marilandica Muenchh.
Quercus nigra L.
Quercus phellos L.
Quercus prinus L.
Quercus rubra L.
Quercus shumardii Buckley.
Quercus stellata Wang.
Quercus velutina Lam.

Order Umbellales
Family Araliaceae

Aralia spinosa L.

Family Nyssaceae

Nyssa sylvatica Marshall.

Family Apiaceae

Cicuta maculata L.
Daucus carota L.
Osmorhiza longistylis (Torrey) DC.
Sanicula canadensis L.
Thaspium trifoliatum (L.) Gray
Zizia trifoliata (Michaux) Fernald.

Phylogenetic Listing of Dominant Vascular Plant Species.

Family Cornaceae

Cornus amomum Miller.
Cornus florida L.
Cornus stricta Lam.

Superorder Cotyloideae-Sympetalae
Order Rubiales
Family Rubiaceae

Cephalanthus occidentalis L.
Diodia teres Walter.
Galium circaezans Michaux.
Galium pilosum Aiton.
Galium spp.
Mitchella repens L.

Family Campanulaceace

Lobelia puberula Michaux.

Family Caprifoliaceae

Lonicera japonica Thunberg.
Lonicera sempervirens L.
Sambucus canadensis L.
Viburnum acerifolium L.
Viburnum dentatum var. lucidum Aiton.
Viburnum prunifolium L.
Viburnum rufidulum Raf.

Order Asterales
Family Asteraceae

Ambrosia artemisiifolia L.
Aster cordifolius L.
Aster linariifolius L.
Aster patens Aiton.
Aster sagittifolius Wedem. ex Willd.
Aster simplex Willd.
Aster spp.
Bidens aristosa Britton
Bidens frondosa L.
Bidens sp.
Chrysanthemum leucanthemum L.
Cirsium horridulum Michaux.
Elephantopus tomentosa L.
Eupatorium album L.
Eupatorium coelestinum L.
Eupatorium purpureum L.
Gnaphalium obtusifolium L.
Gnaphalium sp.
Helenium amarum (Raf.) H. Rock

Cherokee Nuclear Station

Phylogenetic Listing of Dominant Vascular Plant Species.

Helenium flexuosum Raf.
Heterotheca graminifolia (Michaux) Shinners.
Heterotheca mariana (L.) Shinners.
Hieracium venosum L.
Mikania scandens (L.) Willd.
Parthenium integrifolium L.
Prenanthes alba L.
Prenanthes altissima L.
Rudbeckia laciniata L.
Senecio spp.
Solidago speciosa Nuttall:
Solidago sp.
Taraxacum officinale Wiggers.
Xanthium strumarium L.

E. R. Table 2.7.1-27
Cherokee Nuclear Station
Potential and observed mammal species occurring in the vicinity of the proposed Cherokee Nuclear Station.1

Species List (18,19,20):

Common name	Scientific name	Observation Period: Fall	Winter	Spring	Summer
Opossum	Didelphis marsupialis	X	X	X	X
Southeastern shrew	Sorex longirostris				
Least shrew	Cryptotis parva				
Shortail shrew	Blarina brevicauda	X		X	X
Eastern mole	Scalopus aquaticus				
Little brown myotis	Myotis lucifugus				
Keen myotis	Myotis keeni				
Silver-haired bat	Lasionycteris noctivagans				
Eastern pipistrel	Pipistrellus subflavus				
Big brown bat	Eptesicus fuscus				
Red bat	Lasiurus borealis				
Hoary bat	Lasiurus cinereus				
Seminole bat	Lasiurus seminolus				
Evening bat	Nycticeius humeralis				
Eastern big-eared bat	Plecotus rafinesquei				
Raccoon	Procyon lotor	X	X	X	X
Longtail weasel	Mustela frenata				
Mink	Mustela vison				
River otter	Lutra canadensis				
Striped skunk	Mephitis mephitis	X			X
Red fox	Vulpes fulva			X	X
Gray fox	Urocyon cinereoargenteus				
Bobcat	Lynx rufus		X		
Eastern chipmunk	Tamias striatus	X			
Eastern gray squirrel	Sciurus carolinensis	X	X	X	X
Eastern fox squirrel	Sciurus niger	X	X	X	X
Southern flying squirrel	Glaucomys volans				
Beaver	Castor canadensis				
Eastern harvest mouse	Reithrodontomys humulis			X	
White-footed mouse	Peromyscus leucopus	X		X	
Golden mouse	Peromyscus nuttalli			X	
Rice rat	Oryzomys palustris	X		X	X
Hispid cotton rat	Sigmodon hispidus			X	
Meadow vole	Microtus pennsylvanicus			X	
Pine vole	Pitymys pinetorum				
Muskrat	Ondatra zibethica			X	X
Norway rat	Rattus norvegicus				

(contd)

Common name	Scientific name	Fall	Winter	Spring	Summer
Black rat	Rattus rattus			X	X
House mouse	Mus musculus				X
Meadow jumping mouse	Zapus hudsonius				
Eastern cottontail	Sylvilagus floridanus	X	X	X	X
Whitetail deer	Odocoileus virginianus	X	X	X	X

Cherokee Nuclear Station

Potential and observed bird species occurring in the vicinity of the proposed Cherokee Nuclear Station.[1]

Species List (21,22)		Observation Period			
Common name	Scientific name	Fall	Winter	Spring	Summer
Common Loon	Gavia immer				
Red-throated Loon	Gavia stellata				
Red-necked Grebe	Podiceps grisegena				
Horned Grebe	Podiceps auritus				
Pied-billed Grebe	Podilymbus podiceps				
Double-crested Cormorant	Phalacrocorax auritus				
Canada Goose	Branta canadensis				
Brant	Branta bernicla				
Snow Goose	Chen caerulescens				
Mallard	Anas platyrhynchos	X		X	
Black Duck	Anas rubripes				
Pintail	Anas acuta				
Gadwall	Anas strepera				
American Wigeon	Anas americana				
Northern Shoveler	Anas clypeata				
Blue-winged Teal	Anas discors				
Green-winged Teal	Anas crecca				
Wood Duck	Aix sponsa	X		X	X
Redhead	Aythya americana				
Canvasback	Aythya valisineria				
Ring-necked Duck	Aythya collaris				
Greater Scaup	Aythya marila				
Lesser Scaup	Aythya affinis				
Common Goldeneye	Bucephala clangula				
Bufflehead	Eucephala albeola				
Ruddy Duck	Oxyura jamaicensis				
Red-breasted Merganser	Mergus serrator				
Hooded Merganser	Lophodytes cucullatus				
Turkey Vulture	Cathartes aura	X	X	X	X
Black Vulture	Coragyps atratus	X		X	X
Cooper's Hawk	Accipiter cooperii	X			
Sharp-shinned Hawk	Accipiter striatus				
Marsh Hawk	Circus cyaneus		X	X	
Red-tailed Hawk	Buteo jamaicensis	X	X	X	X
Red-shouldered Hawk	Buteo lineatus	X		X	X
Broad-winged Hawk	Buteo platypterus			X	

(contd)

Common name	Scientific name	Fall	Winter	Spring	Summer
Golden Eagle	Aquila chrysaetos				
Bald Eagle	Haliaeetus leucocephalus				
Osprey	Pandion haliaetus				
Peregrine Falcon	Falco peregrinus				
Merlin	Falco columbarius				
American Kestrel	Falco sparverius	X	X	X	
Turkey	Meleagris gallopavo				
Bobwhite	Colinus virginianus	X		X	X
Great Egret	Casmerodius albus	X			X
Snowy Egret	Egretta thula				
Cattle Egret	Bubulcus ibis				
Great Blue Heron	Ardea herodias	X	X	X	X
Louisiana Heron	Hydranassa tricolor				
Little Blue Heron	Florida caerulea	X			
Green Heron	Butorides virescens	X		X	X
Black-crowned Night Heron	Nycticorax nycticorax				
Yellow-crowned Night Heron	Nyctanassa violacea				
American Bittern	Botaurus lentiginosus				
Least Bittern	Ixobrychus exilis				
Glossy Ibis	Plegadis falcinellus				
Virginia Rail	Rallus limicola				
Sora	Porzana carolina				
Yellow Rail	Coturnicops noveboracensis				
Black Rail	Porzana jamaicensis				
King Rail	Rallus elegans				
Common Gallinule	Gallinula chloropus				
American Coot	Fulica americana	X			
Black-bellied Plover	Pluvialis squatarola				
Piping Plover	Charadrius melodus				
Semipalmated Plover	Charadrius semipalmatus				
Killdeer	Charadrius vociferus	X	X	X	X
Upland Plover	Bartramia longicauda				
Solitary Sandpiper	Tringa solitaria				
Spotted Sandpiper	Actitis macularia				X
Greater Yellowlegs	Tringa melanoleucus				
Lesser Yellowlegs	Tringa flavipes				

(contd)

Common name	Scientific name	Fall	Winter	Spring	Summer
Stilt Sandpiper	Micropalama himantopus				
Short-billed Dowitcher	Limnodromus griseus				
Long-billed Dowitcher	Limnodromus scolopaceus				
Ruddy Turnstone	Arenarius interpres				
Pectoral Sandpiper	Calidris melanotos				
Red Knot	Calidris canutus				
Dunlin	Calidris alpina				
Sanderling	Calidris alba				
White-rumped Sandpiper	Calidris fuscicollis				
Least Sandpiper	Calidris minutilla				
Semipalmated Sandpiper	Calidris pusillus				
Western Sandpiper	Calidris mauri				
American Woodcock	Philohela minor	X	X	X	
Common Snipe	Capella gallinago		X	X	
Herring Gull	Larus argentatus	X		X	
Ring-billed Gull	Larus delawarensis			X	
Bonaparte's Gull	Larus philadelphia				
Common Tern	Sterna hirundo				
Caspian Tern	Hydroprogne caspia				
Black Tern	Chlidonias niger				
Rock Dove	Columba livia	X	X	X	X
Mourning Dove	Zenaida macroura	X	X	X	X
Yellow-billed Cuckoo	Coccyzus americanus			X	X
Black-billed Cuckoo	Coccyzus erythropthalmus				
Screech Owl	Otus asio				X
Great Horned Owl	Bubo virginianus				
Long-eared Owl	Asio otus				
Short-eared Owl	Asio flammeus				
Barn Owl	Tyto alba				
Barred Owl	Strix varia		X		X
Saw-whet Owl	Aegolius acadicus				
Chuck-will's-widow	Caprimulgus carolinensis			X	
Whip-poor-will	Caprimulgus vociferus			X	X
Common Nighthawk	Chordeiles minor	X			X
Chimney Swift	Chaetura pelagica			X	X
Ruby-throated Hummingbird	Archilochus colubris			X	X
Belted Kingfisher	Megaceryle alcyon	X		X	X

(contd)

Common name	Scientific name	Fall	Winter	Spring	Summer
Common Flicker	Colaptes auratus		X	X	X
Pileated Woodpecker	Dryocopus pileatus	X		X	X
Red-bellied Woodpecker	Centurus carolinus	X	X	X	X
Red-cockaded Woodpecker	Dendrocopos borealis				
Red-headed Woodpecker	Melanerpes erythrocephalus	X			
Yellow-bellied Sapsucker	Sphyapicus varius				
Hairy Woodpecker	Dendrocopos villosus	X	X	X	X
Downy Woodpecker	Dendrocopos pubescens	X	X	X	X
Eastern Kingbird	Tyrannus tyrannus			X	X
Great Crested Flycatcher	Myiarchus crinitus			X	X
Eastern Phoebe	Sayornis phoebe	X	X	X	X
Yellow-bellied Flycatcher	Empidonax flaviventris				
Acadian Flycatcher	Empidonax virescens				
Willow Flycatcher	Empidonax traillii				
Least Flycatcher	Empidonax minimus				
Eastern Wood Pewee	Contopus virens			X	X
Horned Lark	Eremophila alpetris				
Barn Swallow	Hirundo rustica			X	
Cliff Swallow	Petrochelidon pyrrhonota				
Tree Swallow	Iridoprocne bicolor				
Bank Swallow	Riparia riparia				
Rough-winged Swallow	Stelgidopterx ruficollis			X	X
Purple Martin	Progne subis			X	X
Blue Jay	Cyanocitta cristata	X	X	X	X
Common Crow	Corvus brachyrhynchos	X	X	X	X
Carolina Chickadee	Parus carolinensis	X	X	X	X
Tufted Titmouse	Parus bicolor	X	X	X	X
White-breasted Nuthatch	Sitta carolinensis	X		X	
Red-breasted Nuthatch	Sitta canadensis				
Brown-headed Nuthatch	Sitta pusilla				
Brown Creeper	Certhia familiaris	X	X		
House Wren	Troglodytes aedon				
Winter Wren	Troglodytes troglodytes				
Carolina Wren	Thryothorus ludovicianus	X	X	X	X
Long-billed Marsh Wren	Telmatodytes palustris	X			
Short-billed Marsh Wren	Cistothorus platensis	X			
Mockingbird	Mimus polyglottos	X	X	X	X

(contd)

Table 2.7.1-28 (contd) (Sheet 5 of 7)

Common name	Scientific name	Fall	Winter	Spring	Summer
Gray Catbird	Dumetella carolinensis			X	X
Brown Thrasher	Toxostoma rufum		X	X	X
American Robin	Turdus migratorius	X	X	X	X
Wood Thrush	Hylocichlia mustelina			X	X
Hermit Thrush	Catharus guttata			X	
Swainson's Thrush	Catharus ustulata			X	
Gray-cheeked Thrush	Catharus minima				
Veery	Catharus fuscescens				
Eastern Bluebird	Sialia sialis	X	X	X	X
Blue-gray Gnatcatcher	Polioptila caerulea			X	X
Golden-crowned Kinglet	Regulus satrapa	X	X	X	
Ruby-crowned Kinglet	Regulus calendula	X	X	X	
Water Pipit	Anthus spinoletta				
Cedar Waxwing	Bombycilla cedrorum				
Loggerhead Shrike	Lanius ludovicianus	X	X	X	X
Starling	Sturnus vulgaris	X	X	X	X
Solitary Vireo	Vireo solitarius				
White-eyed Vireo	Vireo griseus			X	X
Yellow-throated Vireo	Vireo flavifrons			X	
Red-eyed Vireo	Vireo olivaceus			X	X
Philadelphia Vireo	Vireo philadelphicus				
Warbling Vireo	Vireo gilvus				
Black-and-white Warbler	Mniotilta varia				X
Prothonotary Warbler	Prothonotaria citra			X	X
Swainson's Warbler	Limnothylpis swainsonii				
Worm-eating Warbler	Helmitheros vermivorus				
Blue-winged Warbler	Vermivora pinus				
Tennessee Warbler	Vermivora peregrina				
Orange-crowned Warbler	Vermivora celata				
Nashville Warbler	Vermivora ruficapilla				
Parula Warbler	Parula americana				
Yellow Warbler	Dendroica petechia			X	
Magnolia Warbler	Dendroica magnolia				
Cape May Warbler	Dendroica tigrina				
Yellow-rumped Warbler	Dendroica coronata			X	
Black-throated Green Warbler	Dendroica virens	X			
Black-throated Blue Warbler	Dendroica caerulescens				

(contd)

Amendment 2
(Revised)

Common name	Scientific name	Fall	Winter	Spring	Summer
Cerulean Warbler	Dendroica cerulea				
Yellow-throated Warbler	Dendroica dominica				
Blackburnian Warbler	Dendroica fusca				
Chestnut-sided Warbler	Dendroica pensylvanica				
Bay-breasted Warbler	Dendroica castanea	X			
Blackpoll Warbler	Dendroica striata			X	
Pine Warbler	Dendroica pinus			X	X
Prairie Warbler	Dendroica discolor				
Palm Warbler	Dendroica palmarum				
Ovenbird	Seiurus aurocapillus				
Northern Waterthrush	Seiurus noveboracensis				
Louisiana Waterthrush	Seiurus motacilla	X			
Common Yellowthroat	Geothlypis trichas			X	X
Yellow-breasted Chat	Icteria virens			X	X
Kentucky Warbler	Oporornis formosus				
Mourning Warbler	Oporornis philadelphis				
Connecticut Warbler	Oporornis agilis				
Hooded Warbler	Wilsonia citrina				
Wilson's Warbler	Wilsonia pusilla				
Canada Warbler	Wilsonia canadensis				
American Redstart	Setophaga ruticilla				
House Sparrow	Passer domesticus	X	X	X	X
Bobolink	Dolichonyx oryzivorus				
Eastern Meadowlark	Sturnella magna		X	X	X
Red-winged Blackbird	Agelaius phoeniceus	X	X	X	X
Rusty Blackbird	Euphagus carolinus	X			
Brewer's Blackbird	Euphagus cyanocephalus				
Common Grackle	Quiscalus quiscula		X	X	X
Brown-headed Cowbird	Molothrus ater		X	X	X
Orchard Oriole	Icterus spurius			X	X
Northern Oriole	Icterus galbula				
Scarlet Tanager	Piranga olivacea				
Summer Tanager	Piranga rubra			X	X
Cardinal	Cardinalis cardinalis	X	X	X	X
Rose-breasted Grosbeak	Pheucticus ludovicianus			X	
Evening Grosbeak	Hesperiphona vespertina				
Blue Grosbeak	Guiraca caerulea			X	X

(contd)

Common name	Scientific name	Fall	Winter	Spring	Summer
Indigo Bunting	Passerina cyanea			X	X
Purple Finch	Carpodacus purpureus				
Pine Siskin	Spinus pinus				
American Goldfinch	Spinis tristis	X		X	X
Rufous-sided Towhee	Pipilo erythrophthalmus	X	X	X	X
Savannah Sparrow	Passerculus sandwichensis				
Grasshopper Sparrow	Ammodramus savannarum				
Henslow's Sparrow	Ammodramus henslowii				
LeConte's Sparrow	Ammospiza leconteii				
Sharp-tailed Sparrow	Ammospiza caudacuta				
Vesper Sparrow	Pooecetes gramineus				
Dark-eyed Junco	Junco hyemalis	X	X	X	
Bachman's Sparrow	Aimophila aestivalis				
Chipping Sparrow	Spizella passerina			X	X
Field Sparrow	Spizella pusilla			X	X
White-crowned Sparrow	Zonotrichia leucophrys	X		X	
White-throated Sparrow	Zonotrichia albicollis	X	X	X	
Fox Sparrow	Passerella iliaca		X		
Swamp Sparrow	Melospiza georgiana	X	X	X	
Song Sparrow	Melospiza melodia	X	X	X	X
Lapland Longspur	Calcarius lapponicus				

ER Table 2.7.1-29 (Sheet 1 of 4)
Cherokee Nuclear Station
Potential and observed herp species occurring in the vicinity of the proposed Cherokee Nuclear Station.[1]

Species (24): Common name	Scientific name	Observation Period: Fall	Winter	Spring	Summer
CLASS REPTILIA					
CHELONIA (Turtles)					
Common snapping turtle	Chelydra serpentina			X	X
Stinkpot	Sternothaerus odoratus			X	X
Eastern mud turtle	Kinasternon subrubrum subrubrum			X	
Bog turtle	Clemmys muhlenbergi				
Eastern box turtle	Terrapene carolina carolina	X	X	X	X
Eastern painted turtle	Chrysemys picta picta				
Yellow-bellied turtle	Pseudemys scripta scripta				
River cooter	Pseudemys concinna concinna			X	X
Gulf coast softshell	Trionyx spinifer asper	X			X
SQUAMATA (Lizards)					
Green anole	Anolis carolinensis carolinensis	X			X
Northern fence lizard	Sceloporus undulatus hyacinthinus	X		X	X
Six-lined racerunner	Cnemidophorus sexlineatus			X	X

(contd)

Table 2.7.1- 29 (contd) (Sheet 2 of 4)

Common name	Scientific name	Fall	Winter	Spring	Summer
Ground skink	Lygosoma laterale			X	
Five-lined skink	Eumeces fasciatus				
Broad-headed skink	Eumeces laticeps				
Southeastern five-lined skink	Eumeces inexpectatus				
Eastern slender glass lizard	Ophisaurus attenuatus longicaudus				
(Snakes)					
Northern water snake	Natrix sipedon sipedon			X	X
Queen snake	Natrix septemvittata				
Northern brown snake	Storeria dekayi dekayi				
Midland brown snake	Storeria dekayi wrightorum				
Northern red-bellied snake	Storeria occipitomaculata occipitomaculata				
Eastern garter snake	Thamnophis sirtalis sirtalis				
Eastern ribbon snake	Thamnophis sauritus sauritus				
Rough earth snake	Haldea striatula				
Eastern smooth earth snake	Haldea valeriae valeriae				X
Eastern hognose snake	Heterodon platyrhinos				
Southern ringneck snake	Diadophis punctatus punctatus			X	
Eastern worm snake	Carphophis amoenus amoenus				
Northern black racer	Coluber constrictor constrictor	X			X
Eastern coachwhip	Masticophis flagellum flagellum				X

(contd)

Amendment 2
(Revised)

Table 2.7.1-29 (contd) (Sheet 3 of 4)

Common name	Scientific name	Fall	Winter	Spring	Summer
Rough green snake	Opheodrys aestivus				X
Corn snake	Elaphe guttata guttata				
Black rat snake	Elaphe obsoleta obsoleta			X	X
Northern pine snake	Pithuophis melanoleucus melanoleucus				
Eastern kingsnake	Lampropeltis getulus getulus				
Scarlet kingsnake	Lampropeltis doliata doliata				
Mole snake	Lampropeltis calligaster rhombomaculata				
Scarlet snake	Cemophora coccinea				
Southeastern crowned snake	Tantilla coronata coronata				
Southern copperhead	Agkistrodon contortrix contortrix				
Carolina pigmy rattlesnake	Sistrurus miliarius miliarius				
Timber rattlesnake	Crotalus horridus horridus				
	CLASS AMPHIBIA				
URODELA (Salamanders)					
Marbled salamander	Ambystoma opacum				
Spotted salamander	Ambystoma maculatum				
Red-spotted newt	Diemictylus viridescens viridescens		X	X	X
Northern dusky salamander	Desmognathus fuscus fuscus	X		X	X
Slimy salamander	Plethodon glutinosus glutinosus		X	X	X

(contd)

Amendment 2
(Revised)

Table 2.7.1-29 (contd) (Sheet 4 of 4)

Common name	Scientific name	Fall	Winter	Spring	Summer
Four-toed salamander	Hemidactylium scutatum				
Eastern mud salamander	Pseudotriton montanus montanus				
Northern red salamander	Pseudotriton ruber ruber	X			
Southern two-lined salamander	Eurycea bislineata cirrigera	X			
Three-lined salamander	Eurycea longicauda guttolineata				
ANURA (Frogs & Toads)					
Eastern spadefoot	Scaphiopus holbrooki				X
Fowler's toad	Bufo woodhousei fowleri	X		X	X
Northern cricket frog	Acris crepitans crepitans		X	X	X
Northern spring peeper	Hyla crucifer crucifer		X	X	X
Eastern gray treefrog	Hyla versicolor versicolor				X
Upland chorus frog	Pseudacris triseriata feriarum		X	X	X
Eastern narrow-mouthed toad	Gastrophryne carolinensis				
Bullfrog	Rana catesbeiana			X	X
Bronze frog	Rana clamitans clamitans			X	X
Southern leopard frog	Rana pipiens sphenocephala	X		X	X
Pickerel frog	Rana palustris		X	X	X

E.R. Table 2.7.1-30
Cherokee Nuclear Station
Small mammal population estimates based on trap returns from 10 December to 16 December 1973 in vicinity of the proposed Cherokee Nuclear Station

Stand No.		Estimated Population Density* (no./acre)	
24	Cattail Marsh		
	Oryzomys palustris	40	
13	Alluvial thicket		
	Oryzomys palustris	23	
	Didelphis marsupialis	0.1	
	Felis domesticus	-	(No Estimate)
17	Alluvial forest		
	Peromyscus leucopus	0.4	
	Didelphis marsupialis	0.1	
	Felis domesticus	1.2	
3	Hardwood - Mountain laurel		
	Canis domesticus	-	(No Estimate)
1	Mesic pine		
	Blarina brevicauda	0.4	
	Sylvilagus floridana	0.2	
2	Oak - hickory	-	(No Captures)

*Based on mean home ranges as given in the literature.

Amendment 2
(Revised)

E.R. Table 2.7.1-31
Cherokee Nuclear Station
Small mammal population estimates based on trap returns from 25 April to 1 May 1974 in vicinity of the Proposed Cherokee Nuclear Station

Stand No.		Estimated Population Density (No./Acre)*	
24	Cattail Marsh		
	Peromyscus leucopus	1.5	
	Sigmodon hispidis	1.5	
	Oryzomys palustris	1.5	
	Reithrodontomys humulis	0.7	
13	Alluvial Thicket		
	Peromyscus leucopus	7.3	
	Mus musculus	1.3	
17	Alluvial Forest		
	Peromyscus leucopus	2.5	
	Peromyscus nuttailli	0.4	
3	Hardwood-Mountain Laurel		
	Peromyscus leucopus	2.0	
1	Mesic Pine	-	(No Captures)
15	Mixed Mesic Hardwood	-	"
2	Oak-Hickory	-	"
9	Pine Scrub		
	Peromyscus nuttalli	4.0	
		4.0	

* Based on mean home ranges as given in the literature.

ER Table 2.7.1-32

Cherokee Nuclear Station
Relative Abundance of Bird Species Observed
in the Vicinity of the Cherokee Nuclear Station (fall, 1973)

	Cattail Marsh	Alluvial Thicket	Alluvial Forest	Mesic Pine	Mt. Laurel-Hardwood	Oak-Hickory
Turkey Vulture		R				
Red-tailed Hawk		R				
Great Blue Heron		R	R			
Hairy Woodpecker		R				
Downy Woodpecker		R	R			U
Red-bellied Woodpecker		R		U		U
Blue Jay				C		C
Common Crow		U	U			
Carolina Chickadee		MC	U	A	C	
Tufted Titmouse		MC	MC		A	A
White-breasted Nuthatch					R	
Brown Creeper					R	
Long-billed Marsh Wren	U					
Short-billed Marsh Wren	U					
Golden-crowned Kinglet				U	U	
Ruby-crowned Kinglet	U					
Black-throated Green Warbler					U	
Bay-breasted Warbler				R	U	
Louisiana Waterthrush	U					
Red-winged Blackbird	A					
Cardinal	U	MC	R		MC	A
American Goldfinch		U				
Rufous-sided Towhee		R				
Slate-colored Junco				U		
White-crowned Sparrow	C					
White-throated Sparrow	C	U				
Song Sparrow	U	C				
Swamp Sparrow	U	U				

Relative Abundance Scale:

A = Abundant
C = Common
MC = Moderately common
U = Uncommon
R = Rare

ER Table 2.7.1- 33

Cherokee Nuclear Station

Relative Abundance of Bird Species Observed
in the Vicinity of the Cherokee Nuclear Station (winter, 1973)

	Cattail Marsh	Alluvial Thicket	Alluvial Forest	Mesic Pine	Mt. Laurel/ Hardwood	Oak-Hickory	Mixed Mesic Hardwood	Pine Scrub
Turkey Vulture	U							
Marsh Hawk		R						
Red-tailed Hawk		U						
Great Blue Heron							R	
American Woodcock		R						
Common Snipe	R							
Mourning Dove								U
Barred Owl			R					
Red-bellied Woodpecker				U		U		
Hairy Woodpecker							R	
Downy Woodpecker				U		U		
Eastern Phoebe						R		
Blue Jay				MC	U			
Common Crow		R						
Carolina Chickadee			MC	MC	MC	MC	C	
Tufted Titmouse			U		MC	MC	MC	
Brown Creeper					R			
Golden-crowned Kinglet				MC		C	A	C
Ruby-crowned Kinglet				U		U	MC	U
Red-winged Blackbird	U							
Cardinal		MC		U			U	U
Rufous-sided Towhee						MC		
White-throated Sparrow		A						
Fox Sparrow		R						
Swamp Sparrow	A	MC						
Song Sparrow	A	A						

Relative Abundance Scale:

A = Abundant
C = Common
MC = Moderately common
U = Uncommon
R = Rare

Table 2.7.1-34
Cherokee Nuclear Station
Relative Abundance of Bird Species Observed
in the Vicinity of the Cherokee Nuclear Station (Spring, 1973)

	Cattail Marsh	Alluvial Thicket	Alluvial Forest	Mesic Pine	Mt. Laurel/ Hardwood	Oak-Hickory	Mixed Mesic Hardwood	Pine Scrub
Red-tailed Hawk							R	
American Woodcock		R	MC					
Mourning Dove			MC					
Red-bellied Woodpecker			R		C			
Hairy Woodpecker						R		
Downy Woodpecker						C		U
Blue Jay					R	C		
Carolina Chickadee			A		R	U	A	C
Tufted Titmouse			C	U	C	C	C	
Golden-crowned Kinglet							R	U
Ruby-crowned Kinglet								U
Red-winged Blackbird	A	A						
Cardinal		A	A	C	R	C	MC	C
Rufous-sided Towhee			C					
White-throated Sparrow		R	C					
Swamp Sparrow	C	A						
Song Sparrow	MC	A	R					
Pine Warbler				A			R	A
Summer Tanager				R		C	R	U
Red-eyed Vireo						C	MC	
White-eyed Vireo			MC			R		
Wood Thrush						C	MC	
Ruby-throated Hummingbird						R		
Carolina Wren			A		R	C		
Yellow-rumped Warbler			R	R			R	
Hermit Thrush				R				
American Goldfinch		C						
American Robin	R	A						
White-crowned Sparrow		R						
Catbird	MC	R	R					
Field Sparrow	R	C						
Yellowthroat	MC	C	R					
Yellow-billed Cuckoo		R						
Barn Sparrow		C	R					
Rough-winged Swallow		C						
Mockingbird		R						
Brown Thrasher		R	U					
Blackpoll Warbler			R					

Relative Abundance Scale:
A = Abundant
C = Common
MC = Moderately common
U = Uncommon
R = Rare

(cont'd)

Table 2.7.1-34
Cherokee Nuclear Station
Relative Abundance of Bird Species Observed
in the Vicinity of the Cherokee Nuclear Station (Spring, 1973)

	Cattail Marsh	Alluvial Thicket	Alluvial Forest	Mesic Pine	Mt. Laurel/ Hardwood	Oak-Hickory	Mixed Mesic Hardwood Pine Scrub
Bobwhite			MC				
Eastern Bluebird			R				
Pileated Woodpecker			R				
Blue-gray Gnatcatcher			R				
Wood Duck			R				
Mallard			MC				
Purple Grackle	R						
Swainson's Thrush							R
Great-crested Flycatcher							R

Relative Abundance Scale:

A = Abundant
C = Common
MC = Moderately Common
U = Uncommon
R = Rare

Amendment 2
(Revised)

E.R. Table 2.7.1-35
Cherokee Nuclear Station
Breeding bird census by community type, in vicinity of the proposed Cherokee Nuclear Station.
March-May 1974

Species	Communities and Number of Probable Breeding Pairs							
	Cattail Marsh	Alluvial Thicket	Alluvial Forest	Mesic Pine	Mt. Laural-Hardwood	Oak-Hickory	Mixed Mesophytic Hardwood	Pine Scrub
Bobwhite			1					
American Woodcock		1						
Red-bellied Woodpecker					1			
Great Creasted Flycatcher							1	
Downy Woodpecker						1		
Blue Jay				1	1	1		
Carolina Chickadee			1					
Tufted Titmouse			1	2	1	1	1	
Carolina Wren			1	1		1		
Gray Catbird	1							
Robin		1						
Wood Thrush						1	1	
White-eyed vireo			1					
Red-eyed vireo						1	2	
Pine Warbler				2				
Common Yellowthroat	1	1	1					
Red-winged Blackbird	5	4						
Summer Tanager				1		1		1
Cardinal			1			1	1	1
American Goldfinch		1						
Rufous-sided Towhee			1					
Field Sparrow	1	1						

Amendment 2
(Revised)

E. R. Table 2.7.1-36

Cherokee Nuclear Station
Relative Abundance of Bird Species Observed
in the Vicinity of the Cherokee Nuclear Station (summer, 1974)

Species	Cattail Marsh	Alluvial Thicket	Alluvial Forest	Mesic Pine	Mt. Laurel Hardwood	Oak Hickory	Mixed Mesic Hardwood	Pine Scrub
Bobwhite	R							
Mourning Dove	C	A						
Yellow-billed Cuckoo					MC		U	
Chimney Swift	R							
Red-bellied Woodpecker					MC			
Downy Woodpecker							R	
Eastern Kingbird	R							
Great-crested Flycatcher							R	
Blue Jay				U			U	R
Carolina Chickadee			MC	R	U	MC		MC
Tufted Titmouse				R		U	U	
Carolina Wren			R	MC				R
Mockingbird	R	U						
Gray Catbird	MC	MC	R					
Brown Thrasher				U				
Robin	R	U						
Wood Thrush							R	
Blue-gray Gnatcatcher	R	R						
White-eyed Vireo			R					
Pine Warbler							R	
Common Yellowthroat	U	R						
Yellow-breasted Chat		R						
Red-winged Blackbird	A	A						
Summer Tanager				MC		C		MC
Cardinal	U	A	MC	U	U		MC	
Blue Grosbeak	R	U						
Indigo Bunting		U	U					
American Goldfinch	U	C						
Rufous-sided Towhee				MC			R	
Field Sparrow		R						
Song Sparrow	R	R						

A = Abundant
C = Common
MC = Moderately common
U = Uncommon
R = Rare

Amendment 2
(Revised)

E.R. Table 2.7.1- 37
Cherokee Nuclear Station
Reptile and amphibian population estimates based on intensive plot censuses from 19-21 May 1974. Proposed Cherokee Nuclear Station site.

Stand No.		Estimated Population Density (No./Acre)
24	Cattail Marsh	
	Bufo woodhousei fowleri	3
	Hyla crucifer crucifer	5
	Rana catesbeiana	2
13	Alluvial Thicket	
	Bufo woodhousei fowleri	2
	Hyla Crucifer crucifer	4
17	Alluvial Forest	
	Bufo woodhousei fowleri	4
	Bufo americauus	1
	Rana palustrie	1
	Rana pipieus sphenocephala	2
3	Hardwood - Mt. Laurel	
	Desmognathus fuscus fuscus	1
1	Mesic Pine	0
2	Oak - Hickory	
	Lygosoma laterale	3
9	Pine Scrub	
	Cnemidophorus sexlineatus	1
	Bufo woodhousei fowleri	1

Amendment 2
(Revised)

E.R. Table 2.7.1-38 (Page 1 of 1)
Cherokee Nuclear Station
Reptile and Amphibian Population Estimates
Based on Intensive Plot Censuses on 12 and 13
August 1974 in Vicinity of the Proposed Cherokee
Nuclear Station

Stand No.		Estimated Population Density (no./acre)
24	Cattail Marsh	
	Rana catesbeiana	1
	Rana pipiens	1
	Bufo woodhousei fowleri	1
	Natrix sipedon sipedon	1
13	Alluvial Thicket	
	Rana pipiens	1
	Bufo woodhousei	1
	Acris crepitans	1
17	Alluvial Forest	
	Natrix sipedon sipedon	1
2	Oak-Hickory Forest	
	Sceloporus undulatus	2
	Plethodon glutinosus	1
	Anolis carolinensis	1
3	Mt. Laurel-Hardwood	
	Diemictylus viridescens viridescens	1
	Rana clamitans melanota	1
22	Pine Scrub	
	Sceloporus undulatus	1
	Bufo woodhousei fowleri	2
	Cnemidophorus sexlineatus	1
15	Mesic Hardwood	
	Plethodon glutinosus	2
	Anolis carolinensis	1

ER Table 2.7.1-39

Nuclear Station
Rare and Endangered Species Which May Occur in the Vicinity of the Nuclear Station[a]

Rare or Endangered Species	Species Recorded at Site	Status[a]
Plants		
Small whorled pogonia *Isotria medeoloides*		R[2]
Ginseng *Panax quinquefolium* L.		R[2]
Invertebrates		
(None)		
Amphibians		
Four-toed salamander *Hemidactylium scutatum*		R[2]
Reptiles		
Bog turtle *Clemmys muhlenbergi*		R[1]
Birds		
Turkey Vulture *Cathartes aura*	X	U[2]
Black Vulture *Coragyps atratus*	X	U[2]
Cooper's Hawk *Accipiter cooperii*	X	U[2]
Sharp-shinned Hawk *Accipiter striatus*		U[2]
Red-shouldered Hawk *Buteo lineatus*	X	U[2]
Southern Bald Eagle *Haliaetus l. leucocephalus*		E[1]
American Osprey *Pandion haliaetus carolinensis*		U[1]
American Peregrine Falcon *Falco peregrinus canatum*		E[1]
Black Rail *Laterallus jamaicensis*		R[2]
Piping Plover *Charadrius melodus*		P[2]
Common Tern *Sterna hirundo*		P[2]
Red-cockaded Woodpecker *Dendrocopos borealis*		E[1]
Red-headed Woodpecker *Melanerpes erythrocephalus*	X	U[2]
Eastern Bluebird *Sialia sialis*	X	U[2]
Swainson's Warbler *Limnothlypis swainsonii*		U[2]
Bachman's Sparrow *Aimophila aestivalis*		U[2]
Mammals		
Eastern Cougar *Felis concolor cougar*		E[1]

[a]See Section 2.7.1.3

ER Table 2.7.2-1
Cherokee Nuclear Station
Master Species List of Phytoplankton and Periphyton
Collected form the Broad River

Group Phytoplankton-Periphyton	
Phylum Chlorophyta	
Class (no classes given)	
Order Volvocales	
Family Polyblepharidaceae	
Genus & Species	Spermatozoopsis exultans
Family Chlamydomonadaceae	
Genus & Species	Carteria cordiformis
	Chlamydomonas sp. A
	Chlamydomonas globosa
	Chlamydomonas polypyrenoideum
Family Haematococcaceae	
Genus & Species	Haematococcus lacustris
Family Volvocaceae	
Genus & Species	Eudorina elegans
	Gonium pectorale
	Pandorina morum
	Volvox globator
Order Tetrasporales	
Family Gloeocystaceae	
Genus & Species	Asterococcus limneticus
Order Chlorococcales	
Family Chlorococcaceae	
Genus & Species	Characium debaryanum
	Schroederia setigera
	Tetraedron caudatum
	Tetraedron duospinum
	Tetraedron minimum
Family Oocystaceae	
Genus & Species	Ankistrodesmus convolutus
	Ankistrodesmus falcatus
	Cerasterias staurastroides
	Chlorella ellipsoidea
	Chlorella vulgaris
	Lagerheimia quadriseta
	Lagerheimia subsalsa
	Closteriopsis longissima

Amendment 2
(New)

	Franceia droescheri
	Kirchneriella lunaris
	Kirchneriella obesa
	Oocystis sp. A
	Selenastrum westii
	Treubaria setigerum
Family Micractiniaceae	
Genus & Species	Golenkinia paucispina
	Micractinium pusillum
Family Dictyosphaeriaceae	
Genus & Species	Dictyosphaerium ehrenbergianum
Family Scenedesmaceae	
Genus & Species	Actinastrum hantzschii
	Coelastrum cambricum
	Coelastrum microporum
	Coelastrum sphaericum
	Crucigenia crucifera
	Crucigenia tetrapedia
	Scenedesmus denticulatus
	Scenedesmus dimorphus
	Scenedesmus obliquus
	Scenedesmus quadricauda
Family Hydrodictyaceae	
Genus & Species	Pediastrum biradiatum
	Pediastrum duplex clathratum
	Pediastrum duplex gracilimum
	Pediastrum tetras tetraodon
Family Coccomyaceae	
Genus & Species	Dispora crucigenioides
Order Ulotrichales	
Family Ulotrichaceae	
Genus & Species	Geminella interrupta
Order Siphonocladales	
Family Cladophoraceae	
Genus & Species	Cladophora glomerata
Order Zygnematales	
Family Zygnemataceae	
Genus & Species	Mougeotia sp. A
	Spirogyra stictica

Amendment 2
(New)

Family Desmidiaceae Genus & Species	Arthrodesmus octocornis Closterium acerosum Closterium enrenbergii Cosmarium cucumis Cosmarium nitidulum Cosmarium subcrenatum Euastrum pulchellum Staurastrum alternans Staurastrum gracile Staurastrum hexacerum Staurastrum margaritaceum Staurastrum polymorphum Unidentified green filament A Unidentified green coccoid A Unidentifed green filament B
Phylum Euglenophyta Class (no classes given) Order Euglenales Family Euglenaceae Genus & Species	Unidentified flagellate Euglena acus rigida Euglena elastica Lepocinclis fusiformis Phacus sp. A Phacus acuminatus Phacus caudatus Phacus longicauda Phacus swirenkoi Trachelomonas girardiana Trachelomonas hispida Trachelomonas playfairii Trachelomonas schauinslandii Trachelomonas varians
Phylum Pyrrophyta Class Dinophyceae Order Dinokontae Family Gymnodiniaceae Genus & Species	Gymnodinium sp. A
Family Glenodiniaceae Genus & Species	Glenodinium sp. A
Family Peridiniaceae Genus & Species	Peridinium sp. A

Amendment 2
(New)

Family Ceratiaceae	
Genus & Species	Ceratium hirundinella
Phylum Chrysophyta	
Class Subphylum Xanthophyceae	
Order Mischococcales	
Family Pleurochloridaceae	
Genus & Species	Arachnochloris minor
Family Sciadaceae	
Genus & Species	Centritractus belanophorus
Class Subphylum Chrysophyceae	
Order Rhizochrysidales	
Family Rhizochrysidaceae	
Genus & Species	Rhizochrysis limnetica
Order Ochromonadales	
Family Dinobryaceae	
Genus & Species	Dinobryon bavaricum Dinobryon divergens
Family Synuraceae	
Genus & Species	Mallomonas tonsurata
Class Subphylum Bacillariophyceae	
Order Centrales	
Family Coscinodisciaceae	
Genus & Species	Cyclotella sp. A Cyclotella sp. B Cyclotella sp. C Cyclotella comata Cyclotella michiganiana Cyclotella radians Cyclotella stelligera Melosira granulata angustissima Melosira sp. B Melosira granulata Melosira granulata angustissima spiralis Melosira varians Microsiphona potamos
Order Pennales	
Family Fragilariaceae	
Genus & Species	Asterionella formosa formosa Asterionella formosa gracillima Fragilaria sp. A Fragilaria construens venter Fragilaria crotonensis crotonensis

	Fragilaria vaucheriae vaucheriae
	Meridion sp. A
	Meridion circulare constrictum
	Opephora martyi martyi
	Synedra sp. A
	Synedra sp. B
	Synedra acus acus
	Synedra ampnicephala austriaca
	Synedra delicatissima angustissima
	Synedra delicatissima delicatissima
	Synedra fasciculata truncata
	Synedra goulardi
	Synedra pulchella pulchella
	Synedra radians radians
	Synedra rumpens familiaris
	Synedra rumpens menegniana
	Synedra rumpens rumpens
	Synedra socia socia
	Synedra tenera
	Synedra ulna amphirhyncus
	Synedra ulna contracta
	Synedra ulna oxyrhyncus mediocontracta
	Synedra ulna ramesi
	Synedra ulna ulna
	Tabellaria fenestrata fenestrata
	Tabellaria flocculosa flocculosa
Family Eunotiaceae Genus & Species	
	Eunotia arcus bidens
	Eunotia curvata curvata
	Eunotia exigua exigua
	Eunotia incisa incisa
	Eunotia maior maior
	Eunotia naegelii naegelii
	Eunotia pectinalis minor
	Eunotia perpusilla perpusilla
Family Achanthaceae Genus & Species	
	Achnanthes sp. A
	Achnanthes sp. B
	Achnanthes sp. C
	Achnanthes sp. D
	Achnanthes affinis affinis
	Achnanthes coarctata
	Achnanthes exigua constricta
	Achnanthes exigua exigua

Achnanthes hauckiana hauckiana
Achnanthes hauckiana rostrata
Achnanthes lanceolata dubia
Achnanthes lanceolata lanceolata
Achnanthes lemmermanii lemmermanii
Achnanthes linearis linearis
Achnanthes microcephala
microcephala
Achnanthes stewartii
Achnanthes sublaevis crassa
Achnanthes wellsiae
Cocconeis placentula euglypta
Cocconeis placentula lineata
Rhiocosphenia curvata curvata

Family Naviculaceae
Genus & Species

Amphipleura pellucida pellucida
Caloneis sp. A
Caloneis ventricosa truncatula
Caloneis ventricosa subundulata
Capartogramma crucicula crucicula
Frustulia sp. A
Frustulia rhomboides
amphipleuroides
Frustulia rhomboides capitata
Frustulia rhomboides crassinervia
Frustulia rhomboides rhomboides
Frustulia rhomboides saxonica
Frustulia weinholdii weinholdii
Gyrosigma sp. A
Gyrosigma sp. B
Gyrosigma nodiferum nodiferum
Gyrosigma obtusatum obtusatum
Navicula sp. A
Navicula sp. B
Navicula sp. C
Navicula accomoda
Navicula aikenensis
Navicula arvensis arvensis
Navicula atomus atomus
Navicula capitata capitata
Navicula contenta biceps
Navicula cryptocephala
Navicula decussis decussis
Navicula elginensis elginensis
Navicula elginensis lata

Navicula exigua capitata
Navicula festiva festiva
Navicula gottlandica
Navicula hambergii hambergii
Navicula heufleri leptocephala
Navicula hustedtii
Navicula incomposita minor
Navicula lateropunctata
lateropunctata
Navicula minima minima
Navicula mobiliensis minor
Navicula mutata
Navicula mutica stigma
Navicula mutica mutica
Navicula notha notha
Navicula placenta placenta
Navicula pupula capitata
Navicula pupula mutata
Navicula pupula pupula
Navicula pupula rectangularis
Navicula radiosa parva
Navicula rhyncocephala germainii
Navicula rhyncocephala rhyncocephala
Navicula schroeteri escambia
Navicula seminulum hustedtii
Navicula symmetrica symmetrica
Navicula variostriata
Navicula ventralis chilensis
Navicula viridula linearis
Navicula viridula rostellata
Navicula viridula viridula
Neidium binode
Neidium ladogense denestriatum
Neidium temperei temperei
Pinnularia sp. A
Pinnularia biceps biceps
Pinnularia borealis rectangularis
Pinnularia formica formica
Pinnularia hilseana hilseana
Pinnularia mesolepta mesolepta
Pinnularia microstauron
microstauron
Pinnularia obscura obscura
Pinnularia subcapitata
paucistriata
Pinnularia viridis viridis
Stauroneis sp. A
Stauroneis anceps americana
Stauroneis anceps gracilis

	Stauroneis kriegeri kriegeri
	Stauroneis obtusa
	Stauroneis phoenicenteron
	gracilis
	Stauroneis smithii incisa
Family Gomphonemaceae Genus & Species	Gomphonema sp. A
	Gomphonema sp. B
	Gomphonema sp. C
	Gomphonema sp. E
	Gomphonema acuminatum
	Gomphonema angustatum angustatum
	Gomphonema angustatum producta
	Gomphonema constrictum
	Gomphonema gracile
	Gomphonema lanceolatum
Family Cymbellaceae Genus & Species	Cymbella ehrenbergii
	Cymbella gracilis
	Cymbella lanceolata
	Cymbella naviculiformis
	Cymbella obtusiuscula
	Cymbella tumida
	Cymbella turgida
	Cymbella ventricosa
Family Epithemiaceae Genus & Species	Epithemia sp. A
	Rhopalodia sp. A
	Rhopalodia gibberula
Family Nitzschiaceae Genus & Species	Hantzschia amphioxys capitata
	Nitzschia acicularis
	Nitzschia clausii
	Nitzschia dissipata
	Nitzschia fonticola
	Nitzschia ignorata
	Nitzschia invisitata
	Nitzschia kutzingiana
	Nitzschia linearis
	Nitzschia lorenziana
	Nitzschia palea
	Nitzschia paradoxa
	Nitzschia philippanarum
	Nitzschia pseudoamphioxys
	Nitzschia sigmoidea
	Nitzschia vermicularis

Family Surirellaceae	
Genus & Species	Cymatopleura sp. A
	Surirella sp. A
	Surirella sp. B
	Surirella angusta
	Surirella elegans
	Surirella minuta
	Surirella patella neupauri
	Surirella tenera nervosa
Phylum Cyanophyta	
Class (no classes given)	
Order Chroococcales	
Family Chroococcaceae	
Genus & Species	Aphanocapsa sp. A
	Chroococcus limneticus
	Chroococcus minutus
	Chroococcus prescotti
	Coelosphaerium naegelianum
	Dactylococcopsis acicularis
	Merismopedia tenuissima
	Microcystis aeruginosa
Order Oscillatoriales	
Family Oscillatoriaceae	
Genus & Species	Oscillatoria sp. A
	Oscillatoria agardhii
	Oscillatoria geminata
	Oscillatoria limosa
	Oscillatoria tenuis
	Spirulina major
Order Nostocales	
Family Nostocaceae	
Genus & Species	Anabaena levanderi
Order Scytonematales	
Family Hammatoideaceae	
Genus & Species	Raphidiopsis curvata

ER Table 2.7.2-2a
Cherokee Nuclear Station
Estimated Densities of Species of Phytoplankton, in no./ml, at
Sampling Stations on the Broad River System
Sampling Period 1: 8-12 Oct 73 (Page 1 of 10)

Species	Density (no./ml) Code No.	Station Numbers 1An	2An	3An	4Aa	4Ab	4Ac	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn
Spermatazoopsis exultans	4100103070.200								4						
Carteria cordiformis	4100104020.200									4					
Chlamydomonas globosa	4100104030.200							11	871	39		405	28	101	48
Chlamydomonas polypyrenoideum	4100104030.300	14									39	296		548	
Haematococcus lacustris	4100104060.200														
Eudorina elegans	4100106020.200											4			
Pandorina morum	4100106040.200														
Volvox globator	4100106080.200														
Asterococcus limneticus	4100202010.200														
Characium debaryanum	4100301020.200														
Tetraedron caudatum	4100301080.200												4		
Tetraedron minimum	4100301080.600		7	11	7	4				7	7	44	7	13	
Ankistrodesmus convolutus	4100303010.200			14	4	37	7	4							
Ankistrodesmus falcatus	4100303010.300	11	4	102	21	4	4		14	14	18	37	49	92	
Cerasterias staurastroides	4100303020.200		4												
Chlorella ellipsoidea	4100303030.200														
Lagerheimia quadriseta	4100303040.500														
Lagerheimia subsalsa	4100303040.600													9	
Kirchneriella lunaris	4100303070.400											15	14		9
Selenastrum westii	4100303080.500						4					22	4		
Treubaria setigerum	4100303090.200													13	
Golenkinia paucispina	4100304030.200														
Micractinium pusillum	4100304040.200						4		4			15		9	
Dictyosphaerium ehrenbergianum	4100305030.200												4	4	
Actinastrum hantzschii	4100306020.200											11			
Coelastrum cambricum	4100306030.200														
Coelastrum microporum	4100306030.400													4	
Coelastrum sphaericum	4100306030.700											15	7	4	
Crucigenia crucifera	4100306040.200													4	
Crucigenia tetrapedia	4100306040.700										4	15	4	4	
Scenedesmus dimorphus	4100306070.600		4												
Scenedesmus obliquus	4100306070.800											81	39	145	18
Scenedesmus quadricauda	4100306070.900			7	11	37									

Amendment 2
(New)

ER Table 2.7.2-2a
Cherokee Nuclear Station
Sampling Period I: 8-12 Oct 73

Species	Density (no./ml) / Code No.	Station Numbers														
		11Sn	11Bn	12Sn	12Bn	13Sn	13Bn	14Sa	14Ba	15Sa	15Ba	16An	17An	18An	19An	20An
Spermatazoopsis exultans	4100103070.200					14										
Carteria cordiformis	4100104020.200															
Chlamydomonas globosa	4100104030.200	14		32									7			
Chlamydomonas polypyrenoideum	4100104030.300	147	28	235	7	232	21	49	32	21	4	1	7		15	7
Haematococcus lacustris	4100104060.200					18		11	28	18	13			5	33	
Eudorina elegans	4100106020.200												4			
Pandorina morum	4100106040.200															
Volvox globator	4100106080.200		4								4				4	
Asterococcus limneticus	4100202010.200				4											
Characium debaryanum	4100301020.200			7												
Tetraedron caudatum	4100301080.200			4												
Tetraedron minimum	4100301080.600															
Ankistrodesmus convolutus	4100303010.200		4	18	7		10	11	14		4			16	7	4
Ankistrodesmus falcatus	4100303010.300		7		21		16	4		29	18		18		11	7
Cerasterias staurastroides	4100303020.200															
Chlorella ellipsoidea	4100303030.200								7							
Lagerheimia quadriseta	4100303040.500						4	4						5		
Lagerheimia subsalsa	4100303040.600	4														
Kirchneriella lunaris	4100303070.400									4						
Selenastrum westii	4100303080.500		21	32		21										
Treubaria setigerum	4100303090.200			4		7		7		4						
Golenkinia paucispina	4100304030.200															
Micractinium pusillum	4100304040.200										4		4			
Dictyosphaerium ehrenbergianum	4100305030.200			7	4	35	7	7			4				18	14
Actinastrum hantzschii	4100306020.200		4	7	4	11	7	7		4						
Coelastrum cambricum	4100306030.200															
Coelastrum microporum	4100306030.400												4			
Coelastrum sphaericum	4100306030.700	4	4					4								
Crucigenia crucifera	4100306040.200				4			18	7	4						
Crucigenia tetrapedia	4100306040.700			4		4				4			11	21		11
Scenedesmus dimorphus	4100306070.600		4	4	7	21	16		7		7		7		4	7
Scenedesmus obliquus	4100306070.800	4	4			7							4	5	4	
Scenedesmus quadricauda	4100306070.900			28	21	56	63	18		11	4	35	25	5		18

Amendment 2
(New)

ER Table 2.7.2-2a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct 73

Species	Code No. / Density (no./ml)	Station Numbers													
		1An	2An	3An	4Aa	4Ab	4Ac	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn
Pediastrum biradiatum	4100307040.200											11	4	4	
Pediastrum duplex clathratum	4100307040.320													4	
Pediastrum duplex gracilimum	4100307040.340														
Pediastrum tetras tetraodon	4100307040.720		4										4		
Dispora crucigenioides	4100308040.200		4	14									7		
Closterium ehrenbergii	4100803020.400		4												
Closterium venus	4100803020.800												4		
Cosmarium cucumis	4100803030.300														
Staurastrum gracile	4100803080.400		4			4						4			4
Staurastrum hexacerum	4100803080.500														
Staurastrum margaritaceum	4100803080.700								4		7				
Staurastrum polymorphum	4100803080.800														
unknown green filament A	4100000000.001												7		
Euglena acus rigida	4200101030.200														
Euglena elastica	4200101030.400		7	4	4		18			4		40	7	55	55
Phacus caudatus	4200101060.300						4		4	21					
Phacus longicauda	4200101060.500					4								4	
Phacus swirenkoi	4200101060.800		11	7	7						7	26		13	
Trachelomonas hispida	4200101080.400	7	18	14	4	11	4			11		15	4	4	
Ceratium hirundinella	4320105020.200														
Rhizochrysis limnetica	4620401060.400														
Dinobryon sertularia	4620602020.600	4													
Mallomonas tonsurata	4620603020.800						4								
Cyclotella sp. A	4630101030.001			297								60	32	1056	
Cyclotella sp. B	4630101030.002														
Cyclotella stelligera	4630101030.800	1			96	56	40	2	1	14	30	20	32		1430
Melosira sp. A	4630101050.001			54		86						40	32		
Melosira sp. B	4630101050.002	3				28	20							144	330
Melosira granulata angustissima	4630101050.300	42						1							550
Melosira varians	4630101050.900						20						32		4
Asterionella formosa formosa	4630201020.300														110
Asterionella formosa gracillima	4630201020.350	1	10		16		20			14			32		
Fragilaria sp. A	4630201050.001						20								

Amendment 2 (New)

ER Table 2.7.2-2a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct 73

Species	Code No. / Density (no./ml)	Station Numbers														
		11Sn	11Bn	12Sn	12Bn	13Sn	13Bn	14Sa	14Ba	15Sa	15Ba	16An	17An	18An	19An	20An
Pediastrum biradiatum	4100307040.200							4								
Pediastrum duplex clathratum	4100307040.320															
Pediastrum duplex gracilimum	4100307040.340				4		4									
Pediastrum tetras tetraodon	4100307040.720															
Dispora crucigenioides	4100308040.200															
Closterium ehrenbergii	4100803020.400									4						
Closterium venus	4100803020.800															
Cosmarium cucumis	4100803030.300					4										
Staurastrum gracile	4100803080.400												4			
Staurastrum hexacerum	4100803080.500											4		5		
Staurastrum margaritaceum	4100803080.700			4					7							
Staurastrum polymorphum	4100803080.800													5		
unknown green filament A	4100000000.001															
Euglena acus rigida	4200101030.200									4	4					
Euglena elastica	4200101030.400			29		11	4							21	4	4
Phacus caudatus	4200101060.300		4	4		14	4	7			4	4				
Phacus longicauda	4200101060.500															
Phacus swirenkoi	4200101060.800															
Trachelomonas hispida	4200101080.400		7	4				7			13					4
Ceratium hirundinella	4320105020.200										4					
Rhizochrysis limnetica	4620401060.400			4		11		11								
Dinobryon sertularia	4620602020.600								7							4
Mallomonas tonsurata	4620603020.800				4							4				
Cyclotella sp. A	4630101030.001					342									1	
Cyclotella sp. B	4630101030.002														1	
Cyclotella stelligera	4630101030.800	54				171	585	46	46	11	207	54	108	156		
Melosira sp. A	4630101050.001				32											
Melosira sp. B	4630101050.002															
Melosira granulata angustissima	4630101050.300				92		117	46	276					156		44
Melosira varians	4630101050.900				4		16	11	11	220	4		4			
Asterionella formosa formosa	4630201020.300															110
Asterionella formosa gracillima	4630201020.350			65		57		46			69				1	
Fragilaria sp. A	4630201050.001			390			234									

Amendment 2
(New)

ER Table 2.7.2-2a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct 73

Species	Density (no./ml) / Code No.	Station Numbers													
		1An	2An	3An	4Aa	4Ab	4Ac	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn
Fragilaria construens venter	4630201050.300												128		
Fragilaria vaucheriae vaucheriae	4630201050.800		10		16	28			1				32		
Meridion circulare constrictum	4630201060.300			54					3						110
Opephora martyi martyi	4630201070.400							1							
Synedra sp. A	4630201080.001					392		1		14					
Synedra sp. B	4630201080.002														
Synedra delicatissima angustissima	4630201080.300							3							
Synedra fasciculata truncata	4630201080.350									21					
Synedra radians radians	4630201080.700														
Synedra rumpens familiaris	4630201080.750	1	20												
Synedra rumpens meneghiana	4630201080.760	3													
Synedra rumpens rumpens	4630201080.770									7				48	
Synedra ulna contracta	4630201080.820				16								32		
Synedra ulna ramesi	4630201080.860														
Synedra ulna ulna	4630201080.880	1	20		16				1	7					
Tabellaria fenestrata fenestrata	4630201090.300	1			16										440
Eunotia exigua exigua	4630202020.400					56	20								
Eunotia pectinalis minor	4630202020.600		10	27											
Achnanthes sp. A	4630203010.001		90	270	80	84	80	1	8	14	30	160	192	144	330
Achnanthes sp. B	4630203010.002	4	40		96								32		
Achnanthes hauckiana hauckiana	4630203010.440				16					7					110
Achnanthes hauckiana rostrata	4630203010.460														
Achnanthes lanceolata dubia	4630203010.520	1	30	270		28	20		8						
Achnanthes linearis linearis	4630203010.540	2													
Achnanthes microcephala microcephala	4630203010.600	1				56							32		
Cocconeis placentula euglypta	4630203030.550										30				
Cocconeis placentula lineata	4630203030.560	1				56				35					
Carpatogramma crucicula crucicula	4630204045.300	2													
Frustulia rhomboides crassinervia	4630204050.600				16										110
Frustulia rhomboides rhomboides	4630204050.660					28	20								
Gyrosigma obtusatum obtusatum	4630204060.600		10								30				
Navicula sp. A	4630204070.001														
Navicula aikenensis	4630204070.115				64	28	40		2		30		64		550

Amendment 2
(New)

ER Table 2.7.2-2a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct 73

Species	Density (no./ml) / Code No.	Station Numbers														
		11Sn	11Bn	12Sn	12Bn	13Sn	13Bn	14Sa	14Ba	15Sa	15Ba	16An	17An	18An	19An	20An
Fragilaria construens venter	4630201050.300												54			
Fragilaria vaucheriae vaucheriae	4630201050.800															
Meridion circulare constrictum	4630201060.300				46											
Opephora martyi martyi	4630201070.400															
Synedra sp. A	4630201080.001															
Synedra sp. B	4630201080.002								460							
Synedra delicatissima angustissima	4630201080.300															
Synedra fasciculata truncata	4630201080.350	54			46	114			46	44					1	
Synedra radians radians	4630201080.700												54			
Synedra rumpens familiaris	4630201080.750															
Synedra rumpens meneghiana	4630201080.760								46			54		156		
Synedra rumpens rumpens	4630201080.770	162			46		117				69			156		
Synedra ulna contracta	4630201080.820	54														
Synedra ulna ramesi	4630201080.860														1	
Synedra ulna ulna	4630201080.880				46											
Tabellaria fenestrata fenestrata	4630201090.300					57	234		184				54			
Eunotia exigua exigua	4630202020.400						117									
Eunotia pectinalis minor	4630202020.600									44						
Achnanthes sp. A	4630203010.001		98	195	322	57			92	88						
Achnanthes sp. B	4630203010.002		49		92		234	46	92		138	54	162	312	1	44
Achnanthes hauckiana hauckiana	4630203010.440				189					44	69		54	156		
Achnanthes hauckiana rostrata	4630203010.460								46							
Achnanthes lanceolata dubia	4630203010.520	108					117	46				54			1	
Achnanthes linearis linearis	4630203010.540															
Achnanthes microcephala microcephala	4630203010.600					57										
Cocconeis placentula euglypta	4630203030.550															
Cocconeis placentula lineata	4630203030.560						117			44	138					
Carpatogramma crucicula crucicula	4630204045.300							46								
Frustulia rhomboides crassinervia	4630204050.600															
Frustu ia rhomboides rhomboides	4630204050.660				46						69					
Gyrosigma obtusatum obtusatum	4630204060.600	54	49		46						69	54				
Navicula sp. A	4630204070.001									44						
Navicula aikenensis	4630204070.115	270			184			184	230	88				156		

Amendment 2
(New)

ER Table 2.7.2-2a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct 73

Species	Density (no./ml) / Code No.	Station Numbers												
		1An	2An	3An	4Aa	4Ab	4Ac	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn
Navicula atomus atomus	4630204070.120														
Navicula capitata capitata	4630204070.220	1				28									
Navicula cryptocephala	4630204070.240	11	20	270		84	100	17	36		30	20	64	192	220
Navicula elginensis elginensis	4630204070.320	4	70	594	32	190		1	10	7			32		
Navicula exiqua capitata	4630204070.340			162	48		60	1							
Navicula festiva festiva	4630204070.420														
Navicula heufleri leptocephala	4630204070.465	2		81			60		1						
Navicula mobiliensis minor	4630204070.550				16	28	20			7					
Navicula mutica tropica	4630204070.588							1	2	7					220
Navicula notha notha	4630204070.660	11	120	270	48	56	80		13	14	150	60	64		
Navicula pupula pupula	4630204070.680			27			40	4	11						110
Navicula rhyncocephala rhyncocephala	4630204070.770														
Navicula symmetrica symmetrica	4630204070.880	1		810	192	140	40		16	42	30	20	32	144	330
Navicula viridula rostellata	4630204070.960				16				7						
Pinnularia biceps biceps	4630204080.220		10	27	16	28		4	4	7	30				
Pinnularia borealis rectangularis	4630204080.240														110
Pinnularia microstauron microstauron	4630204080.560		20					10	5						
Stauroneis sp. A	4630204090.001	1	10	27	32	28									
Stauroneis anceps gracilis	4630204090.220	1													
Stauroneis smithii incisa	4630204090.840														
Gomphonema sp. A	4630205020.001								4	7					
Gomphonema sp. B	4630205020.002								53						
Gomphonema sp. C	4630205020.003														
Gomphonema angustatum	4630205020.230			108	32		20								
Cymbella gracilis	4630206020.300					28									
Cymbella naviculiformis	4630206020.500					28									
Cymbella tumida	4630206020.850		20		16			1		7			32		220
Cymbella turgida	4630206020.860			27	48						30				110
Rhopalodia sp. A	4630207040.001	30	10		16	140	80		7	28		20			440
Nitzschia acicularis	4630208050.200					112					30	60		480	110
Nitzschia clausii	4630208050.250												64		
Nitzschia invisitata	4630208050.400										30				
Nitzschia kutzingiana	4630208050.450				16	28						20			

Amendment 2
(New)

ER Table 2.7.2-2a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct 73

Species	Density (no./ml) / Code No.	Station Numbers														
		11Sn	11Bn	12Sn	12Bn	13Sn	13Bn	14Sa	14Ba	15Sa	15Ba	16An	17An	18An	19An	20An
Navicula atomus atomus	4630204070.120															
Navicula capitata capitata	4630204070.220					57										
Navicula cryptocephala	4630204070.240	54			230				46	44	69					
Navicula elginensis elginensis	4630204070.320	54					117		92	132	69					
Navicula exiqua capitata	4630204070.340		49													
Navicula festiva festiva	4630204070.420											54				
Navicula heufleri leptocephala	4630204070.465						117				69					
Navicula mobiliensis minor	4630204070.550			65												
Navicula mutica tropica	4630204070.588				46			46							1	
Navicula notha notha	4630204070.660	162		368		342			138	176	276	216			8	
Navicula pupula pupula	4630204070.680		49			57	117		46							
Navicula rhyncocephala rhyncocephala	4630204070.770	54														
Navicula symmetrica symmetrica	4630204070.880	432	196		184	51	819	92	230	269	69	162	162	312	2	44
Navicula viridula rostellata	4630204070.960															
Pinnularia biceps biceps	4630204080.220			65	46		468									
Pinnularia borealis rectangularis	4630204080.240															
Pinnularia microstauron microstauron	4630204080.560			65												
Stauroneis sp. A	4630204090.001															
Stauroneis anceps gracilis	4630204090.220															
Stauroneis smithii incisa	4630204090.840															44
Gomphonema sp. A	4630205020.001				138	114			46	176						
Gomphonema sp. B	4630205020.002									88						
Gomphonema sp. C	4630205020.003					57										
Gomphonema angustatum	4630205020.230	54				57										
Cymbella gracilis	4630206020.300									44						
Cymbella naviculiformis	4630206020.500		49													
Cymbella tumida	4630206020.850		147		92						69					
Cymbella turgida	4630206020.860						234									
Rhopalodia sp. A	4630207040.001	378	147		92		468	276		440			162		1	44
Nitzschia acicularis	4630208050.200		49	65	46	57	702	92		44			108	312		44
Nitzschia clausii	4630208050.250															
Nitzschia invisitata	4630208050.400															
Nitzschia kutzingiana	4630208050.450				189		117		184	44	138					

Amendment 2
(new)

ER Table 2.7.2-2a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct 73

Species	Density (no./ml) / Code No.	Station Numbers												
		1An	2An	3An	4Aa	4Ab	4Ac	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn
Nitzschia linearis	4630208050.500		10	216					8						
Nitzschia lorenziana	4630208050.550														
Nitzschia palea	4630208050.720	1	100	810	80	420	160	11	73	14	150	280	320	192	1540
Nitzschia philippanarum	4630208050.740					28	20	2					32	96	550
Nitzschia pseudoamphioxys	4630208050.760				16										
Surirella angusta	4630209050.210				16	28							32		110
Surirella elegans	4630209050.300										30				
Surirella tenera nervosa	4630209050.860	1	30	27	16				7						
Aphanocapsa sp. A	4900101010.001				11	4									
Chroococcus limneticus	4900101020.400												25		
Chroococcus minutus	4900101020.530										14	52			
Chroococcus prescotti	4900101020.600					4									
Merismopedia tenuissima	4900101040.700			4	4							44	11	4	
Microcystis aeruginosa	4900101050.200								4			15	11		
Oscillatoria agardhii	4900301050.220			4			4		4						
Oscillatoria geminata	4900301050.300		52	99	50	21	11	21	4	4	18	88	46	74	52
Anabaena affinis	4900401010.200	53	56	28	74	58	67			39	56	22	25	18	18
Raphidiopsis curvata	4900602040.200			4	4			4			11				
Calothrix atricha	4900701030.200											15			

Amendment 2
(new)

ER Table 2.7.2-2a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct 73

pecies	Density (no./ml) / Code No.	Station Numbers														
		11Sn	11Bn	12Sn	12Bn	13Sn	13Bn	14Sa	14Ba	15Sa	15Ba	16An	17An	18An	19An	20An
itzschia linearis	4630208050.500															
litzschia lorenziana	4630208050.550								46							
litzschia palea	4630208050.720	432	49	520	598	342		184		264	690	162	270		2	302
litzschia philippanarum	4630208050.740	54			92								108			44
litzschia pseudoamphioxys	4630208050.760				368								54			
Surirella angusta	4630209050.210				138				46							
Surirella elegans	4630209050.300					57					69					
Surirella tenera nervosa	4630209050.860	54					117								1	
Aphanocapsa sp. A	4900101010.001															
Chroococcus limneticus	4900101020.400															
Chroococcus minutus	4900101020.530	4		7	4	28	10	11	4				14		7	
Chroococcus prescotti	4900101020.600															
Merismopedia tenuissima	4900101040.700	4		46		70	32	14	14					11		
Microcystis aeruginosa	4900101050.200			21		4	4			4					15	
Oscillatoria agardhii	4900301050.220															
Oscillatoria geminata	4900301050.300	18	11	39		46	37	22	21	11	4		21		11	21
Anabaena affinis	4900401010.200	70	28	63	11	26		28	49	42	39	11	18		11	7
Raphidiopsis curvata	4900602040.200	7				32	16	21	11				14	11		4
Calothrix atricha	4900701030.200		7													

Amendment 2
(new)

ER Table 2.7.2-2b
Cherokee Nuclear Station
Estimated Densities of Species of Phytoplankton, in no./ml, at
Sampling Stations on the Broad River System
Sampling Period 2: 5-10 Nov 73 (Page 1 of 8)

Species	Density (no./ml) / Code No.	Station Numbers																		
		1An	2An	3An	4Aa	4Ab	4Ac	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn	11Sn	11Bn	12Sn	12Bn	13Sn	13Bn
Spermatazoopsis exultans	4100103070.200			11																4	
Carteria cordiformis	4100104020.200											4								39	18
Chlamydomonas globosa	4100104030.200			84				55	25	4				60	21	4		11		67	
Chlamydomonas polypyrenoideum	4100104030.300			4					21	4											4
Haematococcus lacustris	4100104060.200			26														4			
Eudorina elegans	4100106020.200			18												4					
Pandorina morum	4100106040.200	4									4							7			
Volvox globator	4100106080.200			18																	
Schroederia setigerum	4100301060.200	4		63	4	4	7	9		7	4	14	21			4	15	7	14	32	7
Ankistrodesmus convolutus	4100303010.200														4						
Ankistrodesmus falcatus	4100303010.300												4		4						
Chlorella vulgaris	4100303030.400																	4			
Franceia droescheri	4100303060.200												4	4	7			7		4	
Kirchneriella lunaris	4100303070.400			4								4									4
Selenastrum westii	4100303080.500																				
Golenkinia paucispina	4100304030.200											4						4			
Micractinium pusillum	4100304040.200																				
Dictyosphaerium ehrenbergianum	4100305030.200			18				9	4	4					4		4	4	4	4	
Actinastrum hantzschii	4100306020.200						7														
Coelastrum sphaericum	4100306030.700			14		4					4	4									
Crucigenia crucifera	4100306040.200			11							4	18	18	18	21		4	21	32	39	4
Crucigenia tetrapedia	4100306040.700														4						
Scenedesmus dimorphus	4100306070.600																				
Scenedesmus obliquus	4100306070.800																				
Scenedesmus quadricauda	4100306070.900																				
Pediastrum biradiatum	4100307040.200																				
Dispora crucigenioides	4100308040.200																				
Spirogyra stictica	4100801080.700					4															
Closterium acerosum	4100803020.200						7			4						7					
Closterium ehrenbergii	4100803020.400																				

Amendment 2
(New)

ER Table 2.7.2-2b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov 73

Species	Density (no./ml) / Code No.	Station Numbers															
		14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15Aa	15Ab	15Ac	16An	17An	18An	19An	22An
Spermatazoopsis exultans	4100103070.200																	
Carteria cordiformis	4100104020.200																	
Chlamydomonas globosa	4100104030.200			11														
Chlamydomonas polypyrenoideum	4100104030.300		25			7							14		11			4
Haematococcus lacustris	4100104060.200		4	4														
Eudorina elegans	4100106020.200																	
Pandorina morum	4100106040.200																	
Volvox globator	4100106080.200												4					
Schroederia setigerum	4100301060.200																	
Ankistrodesmus convolutus	4100303010.200					4												
Ankistrodesmus falcatus	4100303010.300	21	18	25	4	11	14	7	7	14	7				14	7	7	4
Chlorella vulgaris	4100303030.400	4																
Franceia droescheri	4100303060.200																	
Kirchneriella lunaris	4100303070.400																	
Selenastrum westii	4100303080.500			7								14						
Golenkinia paucispina	4100304030.200																	
Micractinium pusillum	4100304040.200																	
Dictyosphaerium ehrenbergianum	4100305030.200			4		4		4				4	4				4	
Actinastrum hantzschii	4100306020.200										4							
Coelastrum sphaericum	4100306030.700																	
Crucigenia crucifera	4100306040.200		14		4							4						
Crucigenia tetrapedia	4100306040.700																	
Scenedesmus dimorphus	4100306070.600	4	4				4		4						4		4	
Scenedesmus obliquus	4100306070.800					4							4				4	
Scenedesmus quadricauda	4100306070.900		11	11	4					7		7			11	7	7	
Pediastrum biradiatum	4100307040.200																	
Dispora crucigenioides	4100308040.200															4		
Spirogyra stictica	4100801080.700												4					
Closterium acerosum	4100803020.200																	
Closterium ehrenbergii	4100803020.400								4									

Amendment 2
(New)

ER Table 2.7.2-2b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov 73

Species	Density (no./ml) / Code No.	Station Numbers																			
		1An	2An	3An	4Aa	4Ab	4Ac	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn	11Sn	11Bn	12Sn	12Bn	13Sn	13Bn
Cosmarium cucumis	4100803030.200						4														
Cosmarium isthmium	4100803030.400																				
Cosmarium subcrenatum	4100803030.800		7			4												4			4
Euastrum pulchellum	4100803040.500																4				
Staurastrum alternans	4100803080.200																4				
Staurastrum gracile	4100803080.400	4																			
Staurastrum margaritaceum	4100803080.700																				
Staurastrum polymorphum	4100803080.800	4		4																	
unknown green filament A	4100000000.001	21	4					64	7	7			7	32	46	18	15	35	49	25	32
Euglena acus rigida	4200101030.200								4												
Euglena elastica	4200101030.400	7	4			4				4		7	11	4	14			11	11	28	14
Phacus caudatus	4200101060.300																		4		
Phacus swirenkoi	4200101060.800														7					7	
Trachelomonas hispida	4200101080.400			14				9		4		4									
Trachelomonas varians	4200101080.900												11								
Peridinium sp. A	4320104020.001	21					7	9				7	4	14			4	25		25	
Centritractus belanophorus	4610406020.200																				
Dinobryon bavaricum	4620602020.200	21	7															4	4		
Dinobryon sertularia	4620602020.600																		4		
Cyclotella sp. B	4630101030.002			99										7							
Cyclotella stelligera	4630101030.800											7									
Melosira sp. A	4630101050.001												7								
Melosira sp. B	4630101050.002																	28			
Melosira sp. C	4630101050.003											7									
Melosira varians	4630101050.900	7	95	7	35	53	28			11	7		11	4	14	11	25	4	11		7
Fragilaria crotonensis crotonensis	4630201050.330													7						7	
Synedra fasciculata truncata	4630201080.350																				
Synedra ulna contracta	4630201080.820															21					
Synedra ulna oxyrhyncus	4630201080.840		7																		

Amendment 2
(New)

ER Table 2.7.2-2b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov 73

Species	Density (no./ml) / Code No.	Station Numbers															
		14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15Aa	15Ab	15Ac	16An	17An	18An	19An	22An
Cosmarium cucumis	4100803030.200					4												
Cosmarium isthmium	4100803030.400								4									
Cosmarium subcrenatum	4100803030.800	4			4				4						4			
Euastrum pulchellum	4100803040.500																	
Staurastrum alternans	4100803080.200																	
Staurastrum gracile	4100803080.400																	
Staurastrum margaritaceum	4100803080.700										4							
Staurastrum polymorphum	4100803080.800																	
unknown green filament A	4100000000.001	42	49	35	25	14	18	14	15	25	4	28	11		18	15	7	
Euglena acus rigida	4200101030.200																	
Euglena elastica	4200101030.400	7	7	7	4	4	4		4				7		4			
Phacus caudatus	4200101060.300												4					
Phacus swirenkoi	4200101060.800																	
Trachelomonas hispida	4200101080.400																	
Trachelomonas varians	4200101080.900																	
Peridinium sp. A	4320104020.001		4	4		4	4					4						
Centritractus belanophorus	4610406020.200											4						
Dinobryon bavaricum	4620602020.200																	
Dinobryon sertularia	4620602020.600							39	7			4						
Cyclotella sp. B	4630101030.002			14									9	9				
Cyclotella stelligera	4630101030.800		9									49						
Melosira sp. A	4630101050.001																	
Melosira sp. B	4630101050.002																	
Melosira sp. C	4630101050.003																	
Melosira varians	4630101050.900		28	18	14	39	14	21	7	39	39	18	43	4	156		14	
Fragilaria crotonensis crotonensis	4630201050.330																	
Synedra fasciculata truncata	4630201080.350				7							18						
Synedra ulna contracta	4630201080.820																	
Synedra ulna oxyrhyncus	4630201080.840						7									9		

Amendment 2
(New)

ER Table 2.7.2-2b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov 73

Species	Density (no./ml) / Code No.	Station Numbers																	
		1An	2An	3An	4Aa	4Ab	4Ac	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn	11Sn	11Bn	12Sn	12Bn	13Sn	13Bn
Synedra ulna ulna	4630201080.880																				
Eunotia maior maior	4630202020.500																				
Achnanthes sp. A	4630203010.001											7			21						
Achnanthes sp. B	4630203010.002					9	7									7					
Achnanthes affinis affinis	4630203010.200																				
Achnanthes hauckiana rostrata	4630203010.460																				
Achnanthes lanceolata dubia	4630203010.520																				
Achnanthes microcephala microcephala	4630203010.600					9															
Cocconeis sp. A	4630203030.001																				
Cocconeis placentula lineata	4630203030.560						7														
Gyrosigma obtusatum obtusatum	4630204060.600																				
Navicula aikenensis	4630204070.115			9	14		9					7				14		7		4	
Navicula capitata capitata	4630204070.220																				
Navicula elginensis elginensis	4630204070.320			9										7						7	
Navicula mutica stigma	4630204070.587																				
Navicula mutica tropica	4630204070.588		7																		
Navicula notha notha	4630204070.660		14	9		9	7								21		7			14	9
Navicula pupula pupula	4630204070.680																				
Navicula rhyncocephala rhyncocephala	4630204070.770											7									
Navicula symmetrica symmetrica	4630204070.880					9															
Neidium ladogense densestriatum	4630204075.200														7						
Pinnularia biceps biceps	4630204080.220			9			7														
Gomphonema sp. A	4630205020.001																	7			
Gomphonema angustatum	4630205020.230																7				
Cymbella tumida	4630206020.850																				
Nitzschia fonticola	4630208050.350			9		9				7											
Nitzschia palea	4630208050.720												7		7	14					
Nitzschia philippanarum	4630208050.740																				18
Surirella angusta	4630209050.210			9														7			

Amendment 2
(New)

ER Table 2.7.2-2b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov 73

Species	Density (no./ml) / Code No.	Station Numbers															
		14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15Aa	15Ab	15Ac	16An	17An	18An	19An	22An
Synedra ulna ulna	4630201080.880														9			
Eunotia maior maior	4630202020.500				7													
Achnanthes sp. A	4630203010.001			7	7								27					
Achnanthes sp. B	4630203010.002											9						
Achnanthes affinis affinis	4630203010.200						7											
Achnanthes hauckiana rostrata	4630203010.460																9	
Achnanthes lanceolata dubia	4630203010.520										9							
Achnanthes microcephala microcephala	4630203010.600							7		7								
Cocconeis sp. A	4630203030.001												9	9				
Cocconeis placentula lineata	4630203030.560																	
Gyrosigma obtusatum obtusatum	4630204060.600											9						
Navicula aikenensis	4630204070.115			14		7	7			7					9			
Navicula capitata capitata	4630204070.220						7			7		9				27		
Navicula elginensis elginensis	4630204070.320			14			14			7							9	9
Navicula mutica stigma	4630204070.587				7													
Navicula mutica tropica	4630204070.588																	
Navicula notha notha	4630204070.660						7		7				18			18		18
Navicula pupula pupula	4630204070.680									7								
Navicula rhyncocephala rhyncocephala	4630204070.770				7													
Navicula symmetrica symmetrica	4630204070.880										18							
Neidium ladogense densestriatum	4630204075.200																	
Pinnularia biceps biceps	4630204080.220								7									
Gomphonema sp. A	4630205020.001			7														
Gomphonema angustatum	4630205020.230																	
Cymbella tumida	4630206020.850														9		9	
Nitzschia fonticola	4630208050.350			28					7			9						
Nitzschia palea	4630208050.720			7	7	7	70			14	18			9		9	9	
Nitzschia philippanarum	4630208050.740																	
Surirella angusta	4630209050.210																	

Amendment 2
(New)

ER Table 2.7.2-2b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov 73

Species	Density (no./ml) / Code No.	Station Numbers																			
		1An	2An	3An	4Aa	4Ab	4Ac	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn	11Sn	11Bn	12Sn	12Bn	13Sn	13Bn
Aphanocapsa sp. A	4900101010.001																4	4			
Chroococcus minutus	4900101020.530					4															4
Dactylococcopsis acicularis	4900101030.200														4						
Merismopedia tenuissima	4900101040.700																				4
Microcystis aeruginosa	4900101050.200	4						9	18												
Oscillatoria agardhii	4900301050.220			4					4					4							
Oscillatoria geminata	4900301050.300	7	4	7			4	109	14			4	39	18	7			4	7	4	7
Oscillatoria limosa	4900301050.530																				
Oscillatoria tenuis	4900301050.800							369													
Anabaena affinis	4900401010.200	49	35	14	18	11	32	9	11	21	14	11	4	11	14	56	18	7	14	14	
Raphidiopsis curvata	4900602040.200														42		4	25	11	28	46

Amendment 2
(New)

ER Table 2.7.2-2b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov 73

Species	Density (no./ml) / Code No.	Station Numbers																
		14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15Aa	15Ab	15Ac	16An	17An	18An	19An	22An
Aphanocapsa sp. A	4900101010.001				4													
Chroococcus minutus	4900101020.530	4																
Dactylococcopsis acicularis	4900101030.200																	
Merismopedia tenuissima	4900101040.700				11													
Microcystis aeruginosa	4900101050.200																	
Oscillatoria agardhii	4900301050.220				4													
Oscillatoria geminata	4900301050.300		4	4	4				4	7		11	4	4		4		
Oscillatoria limosa	4900301050.530																	4
Oscillatoria tenuis	4900301050.800																	
Anabaena affinis	4900401010.200	21	25	7	21	46	25	28	25	39	35	18	18		18	18	18	
Raphidiopsis curvata	4900602040.200		49	53	11	14	11		4	7	11	4	7					4

Amendment 2
(new)

ER Table 2.7.2-2c
Cherokee Nuclear Station
Estimated Densities of Species of Phytoplankton, in no./ml, at
Sampling Stations on the Broad River System
Samplig Period 3: 3-7 Dec 73 (Page 1 of 10)

Species	Density (no./ml) / Code No.	Station Numbers																			
		1An	2An	3An	4Aa	4Ab	4Ac	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn	11Sn	11Bn	12Sn	12Bn	14Sa	14Sb
Carteria cordiformis	4100104020.200														291						
Chlamydomonas globosa	4100104030.200	4	7	4			4			4					14	7	4				
Chlamydomonas polypyrenoideum	4100104030.300			11	4				4			49	18	32		11	4	81	14		
Haematococcus lacustris	4100104060.200						7								7			4			
Gonium pectorale	4100106030.200												4								
Pandorina morum	4100106040.200														4						
Tetraedron duospinum	4100301080.300							11													
Ankistrodesmus convolutus	4100303010.200														28						
Ankistrodesmus falcatus	4100303010.300	7	11	60	4		7			4	4	21	18	46		4	11	88	14	7	14
Chlorella vulgaris	4100303030.400								5766	330	14	7				7	4				
Kirchneriella lunaris	4100303070.400													4							
Kirchneriella obesa	4100303070.600																	7	4		
Selenastrum westii	4100303080.500												7	7					14		
Treubaria setigerum	4100303090.200											4						4			
Micractinium pusillum	4100304040.200																		4		
Dictyosphaerium ehrenbergianum	4100305030.200	7												4							
Crucigenia crucifera	4100306040.200															4					
Crucigenia tetrapedia	4100306040.700																				
Scenedesmus bijuga	4100306070.300																				
Scenedesmus denticulatus	4100306070.500												4					4			
Scenedesmus dimorphus	4100306070.600			4										4					4		
Scenedesmus obliquus	4100306070.800							4						4	4						
Scenedesmus quadricauda	4100306070.900	7			4		4						11	14	18	4		4			
Pediastrum biradiatum	4100307040.200																		4		
Pediastrum duplex gracilimum	4100307040.340																				
Dispora crucigenioides	4100308040.200			4																	
Geminella interrupta	4100401020.300																7				
Closterium acerosum	4100803020.200						4														
Closterium ehrenbergii	4100803020.400																				
Staurastrum alternans	4100803080.200							4													

Amendment 2
(New)

ER Table 2.7.2-2c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec 73

Species	Density (no./ml) / Code No.	Station Numbers																
		14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15Aa	15Ab	16An	17An	18An	19An	20An	21Aa	21Ab	22An
Carteria cordiformis	4100104020.200																	
Chlamydomonas globosa	4100104030.200																	
Chlamydomonas polypyrenoideum	4100104030.300	4												7	21			
Haematococcus lacustris	4100104060.200																	
Gonium pectorale	4100106030.200																	
Pandorina morum	4100106040.200																	
Tetraedron duospinum	4100301080.300																	
Ankistrodesmus convolutus	4100303010.200																	
Ankistrodesmus falcatus	4100303010.300	11	7	7			18	4	11	7		14	18	21		4		4
Chlorella vulgaris	4100303030.400																	
Kirchneriella lunaris	4100303070.400																	
Kirchneriella obesa	4100303070.600	4										4						
Selenastrum westii	4100303080.500																	
Treubaria setigerum	4100303090.200																	
Micractinium pusillum	4100304040.200																	
Dictyosphaerium ehrenbergianum	4100305030.200														4			
Crucigenia crucifera	4100306040.200																	
Crucigenia tetrapedia	4100306040.700													7				
Scenedesmus bijuga	4100306070.300													4				
Scenedesmus denticulatus	4100306070.500																	
Scenedesmus dimorphus	4100306070.600																	4
Scenedesmus obliquus	4100306070.800															21	7	
Scenedesmus quadricauda	4100306070.900									7		7		4				
Pediastrum biradiatum	4100307040.200																	
Pediastrum duplex gracilimum	4100307040.340											21		4				
Dispora crucigenioides	4100308040.200																	
Geminella interrupta	4100401020.300						4								7			
Closterium acerosum	4100803020.200																	
Closterium ehrenbergii	4100803020.400			4														
Staurastrum alternans	4100803080.200																	

Amendment 2
(New)

ER Table 2.7.2-2c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec 73

Species	Density (no./ml) / Code No.	Station Numbers																		
		1An	2An	3An	4Aa	4Ab	4Ac	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn	11Sn	11Bn	12Sn	12Bn	14Sa	14Sb
Staurastrum gracile	4100803080.400			4						4											
Staurastrum margaritaceum	4100803080.700															7					
unknown green filament A	4100000000.001		7	14			4	11		11			4		4	4					
Euglena elastica	4200101030.400												4	7			4				
Lepocinclis fusiformis	4200101050.200													4	4						
Phacus acuminatus	4200101060.200														4			11	7		
Phacus caudatus	4200101060.300																				
Trachelomonas playfairii	4200101080.600																		7		
Gymnodinium sp. A	4320101020.001												4								
Glenodinium sp. A	4320103020.001										4	7		4	28	7	14	14	4	4	4
Peridinium sp. A	4320104020.001		4																		
Dinobryon bavaricum	4620602020.200	4																			
Dinobryon sertularia	4620602020.600		11				21				14			14	4	7	7	4	4		25
Cyclotella sp. A	4630101030.001	4												42	56			32	50	42	
Cyclotella sp. B	4630101030.002									8			70		29			48	20		
Cyclotella sp. C	4630101030.003			98						8		40	42	14		8	24	24	60		
Cyclotella stelligera	4630101030.800	24	4	7				4		8	7	20	42	7	24	8	16	8	20	42	
Melosira sp. A	4630101050.001											20	28		8			8			
Melosira sp. B	4630101050.002											50	14		8			8			
Melosira sp. C	4630101050.003																		10		
Melosira granulata angustissima	4630101050.300																				
Melosira varians	4630101050.900	12									49	10	14				24			14	7
Asterionella formosa formosa	4630201020.300	12										50	14		40	16		24	40	14	21
Asterionella formosa gracillima	4630201020.350																		10		
Fragilaria crotonensis crotonensis	4630201050.330			21							14									14	
Fragilaria vaucheriae vaucheriae	4630201050.800																				
Meridion circulare constrictum	4630201060.300																				
Synedra sp. A	4630201080.001															8			10		
Synedra sp. B	4630201080.002													10				8		14	
Synedra amphicephala austriaca	4630201080.150																				

Amendment 2
(New)

ER Table 2.7.2-2c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec 73

Species	Density (no./ml) / Code No.	Station Numbers															
		14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15Aa	15Ab	16An	17An	18An	19An	20An	21Aa	21Ab	22An
Staurastrum gracile	4100803080.400																	
Staurastrum margaritaceum	4100803080.700						4			7		4		4				
unknown green filament A	4100000000.001																	
Euglena elastica	4200101030.400											4						
Lepocinclis fusiformis	4200101050.200																	
Phacus acuminatus	4200101060.200				4													
Phacus caudatus	4200101060.300																	
Trachelomonas playfairii	4200101080.600						4		7	4					4			
Gymnodinium sp. A	4320101020.001														14			
Glenodinium sp. A	4320103020.001													35				
Peridinium sp. A	4320104020.001												7		14			
Dinobryon bavaricum	4620602020.200				14										28			10
Dinobryon sertularia	4620602020.600										16		7		7			20
Cyclotella sp. A	4630101030.001																	
Cyclotella sp. B	4630101030.002	14		14	14	12		14					7		7			10
Cyclotella sp. C	4630101030.003		14	14		12	42					14	7	7				10
Cyclotella stelligera	4630101030.800		14	14					12									
Melosira sp. A	4630101050.001			28								7						
Melosira sp. B	4630101050.002	14					14											
Melosira sp. C	4630101050.003				14	12												
Melosira granulata angustissima	4630101050.300																	
Melosira varians	4630101050.900	28	115	140	168	96	140	216	60	173		35	175					
Asterionella formosa formosa	4630201020.300	14				12		14				7	7		7			
Asterionella formosa gracillima	4630201020.350		28												7			10
Fragilaria crotonensis crotonensis	4630201050.330																	
Fragilaria vaucheriae vaucheriae	4630201050.800	70				12												
Meridion circulare constrictum	4630201060.300		14					28		14								
Synedra sp. A	4630201080.001														7			
Synedra sp. B	4630201080.002																	
Synedra amphicephala austriaca	4630201080.150		14															

Amendment 2
(New)

ER Table 2.7.2-2c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec 73

Species	Density (no./ml) / Code No.	Station Numbers																		
		1An	2An	3An	4Aa	4Ab	4Ac	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn	11Sn	11Bn	12Sn	12Bn	14Sa	14Sb
Synedra delicatissima angustissima	4630201080.300																		10		7
Synedra fasciculata truncata	4630201080.350			8			4		8	8			14							14	
Synedra pulchella pulchella	4630201080.600												14				16				
Synedra rumpens meneghiana	4630201080.760	12											28								
Synedra rumpens rumpens	4630201080.770		4									10				16			10		
Synedra ulna contracta	4630201080.820																8			14	7
Synedra ulna ramesi	4630201080.860	4					8														
Synedra ulna ulna	4630201080.880				14								14							14	7
Tabellaria fenestrata fenestrata	4630201090.300											10									
Tabellaria flocculosa flocculosa	4630201090.350																		10		
Eunotia curvata curvata	4630202020.200																				
Eunotia pectinalis minor	4630202020.600																	8		14	
Achnanthes sp. A	4630203010.001					7	24			24			56		56	8	8	16		28	28
Achnanthes sp. B	4630203010.002	4	8	20	1	14			16	8	35		28	14			8	40	10	70	7
Achnanthes sp. C	4630203010.003																		10		14
Achnanthes coarctata	4630203010.250												14								
Achnanthes exiqua constricta	4630203010.300																				7
Achnanthes hauckiana hauckiana	4630203010.440																		10		
Achnanthes lanceolata dubia	4630203010.520			4			4		16	8			14				16			28	14
Achnanthes lanceolata lanceolata	4630203010.525																				14
Achnanthes lemmermanni lemmermanni	4630203010.530																				
Achnanthes microcephala microcephala	4630203010.600																				
Cocconeis placentula lineata	4630203030.560																			14	7
Carpatogramma crucicula crucicula	4630204045.300																				
Frustulia rhomboides crassinervia	4630204050.600	20																			7
Frustulia rhomboides rhomboides	4630204050.660			4		7											8	8		14	
Frustulia weinholdii weinholdii	4630204050.880	4														8					
Gyrosigma obtusatum obtusatum	4630204060.600			40							7									14	
Navicula sp. A	4630204070.001																				
Navicula accomoda	4630204070.110																				

Amendment 2
(New)

ER Table 2.7.2-2c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec 73

Species	Density (no./ml) / Code No.	Station Numbers																
		14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15Aa	15Ab	16An	17An	18An	19An	20An	21Aa	21Ab	22An
Synedra delicatissima angustissima	4630201080.300											42						
Synedra fasciculata truncata	4630201080.350		14			12		42	12				7		14			
Synedra pulchella pulchella	4630201080.600																	
Synedra rumpens meneghiana	4630201080.760				14			14										
Synedra rumpens rumpens	4630201080.770		14		28				12			14						
Synedra ulna contracta	4630201080.820	56			14	12	14	14	12	14		7	7		7			
Synedra ulna ramesi	4630201080.860	14				24	28		12									
Synedra ulna ulna	4630201080.880		28	28	14		14	14	12	42	8	7	7					
Tabellaria fenestrata fenestrata	4630201090.300							14				7						
Tabellaria flocculosa flocculosa	4630201090.350												7					
Eunotia curvata curvata	4630202020.200		28						12									
Eunotia pectinalis minor	4630202020.600													7				
Achnanthes sp. A	4630203010.001	14	28	42	56		28		36	14	8	28	84		7			
Achnanthes sp. B	4630203010.002	28	56		56	24	14	14	24	14	8	35	28	7	14			20
Achnanthes sp. C	4630203010.003	28											7					
Achnanthes coarctata	4630203010.250																	
Achnanthes exiqua constricta	4630203010.300																	
Achnanthes hauckiana hauckiana	4630203010.440	28				12												
Achnanthes lanceolata dubia	4630203010.520	42	14		28	12	28	14	12	14		7						
Achnanthes lanceolata lanceolata	4630203010.525																	
Achnanthes lemmermanni lemmermanni	4630203010.530														7			
Achnanthes microcephala microcephala	4630203010.600												7					
Cocconeis placentula lineata	4630203030.560		14			24		14				14						
Carpatogramma crucicula crucicula	4630204045.300						14	14										
Frustulia rhomboides crassinervia	4630204050.600						14											
Frustulia rhomboides rhomboides	4630204050.660	28																
Frustulia weinholdii weinholdii	4630204050.880			14			14			14								
Gyrosigma obtusatum obtusatum	4630204060.600			28	28	24	56	56	12			7	7					
Navicula sp. A	4630204070.001						14											
Navicula accomoda	4630204070.110						14											

Amendment 2
(New)

ER Table 2.7.2-2c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec 73

Species	Density (no./ml) / Code No.	Station Numbers																			
		1An	2An	3An	4Aa	4Ab	4Ac	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn	11Sn	11Bn	12Sn	12Bn	14Sa	14Sb
Navicula aikenensis	4630204070.115			12							7		14		24	8		8	10	42	42
Navicula capitata capitata	4630204070.220			3																	
Navicula cryptocephala	4630204070.240	8	20		3	28	16	28	24	24	7	30	84	21	48	40	56	24	60	98	28
Navicula elginensis elginensis	4630204070.320																8			28	7
Navicula exigua capitata	4630204070.340	4											14				8	16		14	21
Navicula festiva festiva	4630204070.420																	16			
Navicula hambergii hambergii	4630204070.460																				
Navicula heufleri leptocephala	4630204070.465	-																		28	
Navicula mobiliensis minor	4630204070.550	4											14								14
Navicula mutica tropica	4630204070.588				1								14						10		
Navicula notha notha	4630204070.660	8					4			8		30	14			8	24		10		28
Navicula pupula pupula	4630204070.680				3								14						10	42	
Navicula rhyncocephala rhyncocephala	4630204070.770									8		10	14		16		8		10	14	7
Navicula symmetrica symmetrica	4630204070.880	7	16	4	3	7	12						28					24	10		35
Navicula viridula linearis	4630204070.940	4																			
Navicula viridula rostellata	4630204070.960											10									
Pinnularia biceps biceps	4630204080.220																			14	7
Pinnularia borealis rectangularis	4630204080.240																				7
Pinnularia mesolepta mesolepta	4630204080.550																				
Pinnularia microstauron microstauron	4630204080.560																	8			7
Pinnularia viridis viridis	4630204080.880																			84	
Stauroneis sp. A	4630204090.001																				
Stauroneis anceps gracilis	4630204090.220																				
Stauroneis obtusa	4630204090.600																				
Stauroneis smithii incisa	4630204090.840																			14	
Gomphonema sp. A	4630205020.001									8			28			8	8			84	21
Gomphonema sp. B	4630205020.002																			14	
Gomphonema angustatum	4630205020.230					7		4								8			20		21
Cymbella naviculiformis	4630206020.500				3																
Cymbella tumida	4630206020.850									8	21									14	

Amendment 2
(New)

ER Table 2.7.2-2c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec 73

Species	Density (no./ml) / Code No.	Station Numbers															
		14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15Aa	15Ab	16An	17An	18An	19An	20An	21Aa	21Ab	22An
Navicula aikenensis	4630204070.115		14	28	42	36	28	56	12	56	8	14	28	7	7			
Navicula capitata capitata	4630204070.220																	
Navicula cryptocephala	4630204070.240	56	56	126	42	72	56	56	12	14	64	49	49	28	7	10		10
Navicula elginensis elginensis	4630204070.320	14		28	14	24	28			42		7		7				
Navicula exigua capitata	4630204070.340	14	14	14	28	12	14		12	14								
Navicula festiva festiva	4630204070.420																	
Navicula hambergii hambergii	4630204070.460							14				7						
Navicula heufleri leptocephala	4630204070.465			14	14		14	14	12	14		14		14				
Navicula mobiliensis minor	4630204070.550	14		14		24			12			7	7					
Navicula mutica tropica	4630204070.588			14		12		14				14		7				
Navicula notha notha	4630204070.660	56	70	14	14		28	56	60		40	42	21	7	21			
Navicula pupula pupula	4630204070.680	14										14						
Navicula rhyncocephala rhyncocephala	4630204070.770		14	42	70	36			36				7	7				
Navicula symmetrica symmetrica	4630204070.880	14	56	14	14	84	42	84	48	98		42	70	21	21			
Navicula viridula linearis	4630204070.940																	
Navicula viridula rostellata	4630204070.960	28	25				14			28								
Pinnularia biceps biceps	4630204080.220			14	14		14	14		14			7	7				
Pinnularia borealis rectangularis	4630204080.240	14																
Pinnularia mesolepta mesolepta	4630204080.550	14								28								
Pinnularia microstauron microstauron	4630204080.560		42	14			14	14	12	14								
Pinnularia viridis viridis	4630204080.880							14										
Stauroneis sp. A	4630204090.001		28						12									
Stauroneis anceps gracilis	4630204090.220	14																
Stauroneis obtusa	4630204090.600						14	14										
Stauroneis smithii incisa	4630204090.840			14														
Gomphonema sp. A	4630205020.001	42	14		28		70	14		14	8		14					
Gomphonema sp. B	4630205020.002											7						
Gomphonema angustatum	4630205020.230		42	28	14	24	28						7					
Cymbella naviculiformis	4630206020.500		14	14		12		14	12		8							
Cymbella tumida	4630206020.850		28	14				14	36	28		7	14	7				

Amendment 2
(New)

FR Table 2.7.2-2c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec 73

Species	Density (no./ml) / Code No.	Station Numbers																			
		1An	2An	3An	4Aa	4Ab	4Ac	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn	11Sn	11Bn	12Sn	12Bn	14Sa	14Sb
Rhopalodia gibberula	4630207040.400	12																			
Cymbella turgida	4630206020.860	16																8		28	14
Cymbella ventricosa	4630206020.900																			14	7
Rhopalodia sp. A	4630207040.001	8	4			14						10	14					16	40	42	35
Hantzschia sp. A	4630208040.001																				
Nitzschia acicularis	4630208050.200	16	4					4			14	10	14	14	24		8	40	20	14	
Nitzschia clausii	4630208050.250	4											14	7							
Nitzschia invisitata	4630208050.400		4																		
Nitzschia kutzingiana	4630208050.450		4	4								20	70						8		
Nitzschia linearis	4630208050.500																		10		
Nitzschia palea	4630208050.720					7	12		24				130		8	8		24	30	14	28
Nitzschia philippanarum	4630208050.740	8	4					4				70	14	7	48		40		30	42	28
Nitzschia pseudoamphioxys	4630208050.760													7							
Surirella sp. A	4630209050.001												14								14
Surirella angusta	4630209050.210					7							14							42	7
Surirella elegans	4630209050.300																			14	
Surirella tenera nervosa	4630209050.860																				
Chroococcus minutus	4900101020.530	7	11		4		4														
Microcystis aeruginosa	4900101050.200			11		4			7					4					4		
Oscillatoria acutissima	4900301050.200														4						
Oscillatoria agardhii	4900301050.220																				
Oscillatoria geminata	4900301050.300									7		4	4					4		7	4
Oscillatoria limosa	4900301050.530			11																	4
Oscillatoria tenuis	4900301050.800	4	7	21	4		7	21			7	4									
Spirulina major	4900301070.500	49	4				4							4							4
Anabaena affinis	4900401010.200		35		18	25	25	7		25	21	4	14	14	7	42	49	25	53	25	18
Raphidiopsis curvata	4900602040.200		8						7	7				4							

Amendment 2
(New)

ER Table 2.7.2-2c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec 73

Species	Density (no./ml) / Code No.	Station Numbers															
		14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15Aa	15Ab	16An	17An	18An	19An	20An	21Aa	21Ab	22An
Rhopalodia gibberula	4630207040.400																	
Cymbella turgida	4630206020.860	14	42	14	56		42	56	36	56								
Cymbella ventricosa	4630206020.900	42	42			24	14						7					
Rhopalodia sp. A	4630207040.001	42	14		28	12			24	14		7	14					
Hantzschia sp. A	4630208040.001			14									7		7			
Nitzschia acicularis	4630208050.200											7	14				10	
Nitzschia clausii	4630208050.250	14		14	14			14										
Nitzschia invisitata	4630208050.400																	
Nitzschia kutzingiana	4630208050.450	14				28					80				14			
Nitzschia linearis	4630208050.500	14	14	28			28	14	12			7			7			
Nitzschia palea	4630208050.720			14	14	36	14				40	28		14	14			
Nitzschia philippanarum	4630208050.740	28	42	56	14	48	14	70	36		32	21	28		49			
Nitzschia pseudoamphioxys	4630208050.760								12									
Surirella sp. A	4630209050.001	14		14		12	14		12									
Surirella angusta	4630209050.210			14	28		14								14			
Surirella elegans	4630209050.300						14											
Surirella tenera nervosa	4630209050.860		28			12		14										
Chroococcus minutus	4900101020.530																	
Microcystis aeruginosa	4900101050.200																	
Oscillatoria acutissima	4900301050.200																	
Oscillatoria agardhii	4900301050.220																	
Oscillatoria geminata	4900301050.300																	
Oscillatoria limosa	4900301050.530																	
Oscillatoria tenuis	4900301050.800			4			7	7										
Spirulina major	4900301070.500			4														
Anabaena affinis	4900401010.200	11	14	25	18		18	32		14			39					
Raphidiopsis curvata	4900602040.200																	

Amendment 2
(New)

ER Table 2.7.2-2d
Cherokee Nuclear Station
Estimated Densities of Species of Phytoplankton, in no./ml, at
Sampling Stations on the Broad River System
Sampling Period 4: 31 Dec 73 -
4 Jan 74

Species	Code Number	Total Number	Station Numbers												
			1An	2An	3An	4Aa	4Ab	4Ac	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn
Spermatazoopsis exultans	4100103070.200															
Chlamydomonas sp. A	4100104030.001				4											
Chlamydomonas globosa	4100104030.200									235						
Chlamydomonas polypyrenoideum	4100104020.300									84						
Volvox globator	4100106080.200											4				
Asterococcus limneticus	4100202010.200										4					
Schroederia setigera	4100301060.200				4											
Ankistrodesmus falcatus	4100303010.300			4	11			4	4				18	7	4	14
Closteriopsis longissima	4100303050.200															
Crucigenia crucifera	4100306040.200															
Geminella interrupta	4100401020.300															
Mougeotia sp. A	4100801030.001															
Cosmarium cucumis	4100803030.300															
Cosmarium subcrenatum	4100803030.800															
Staurastrum margaritaceum	4100803080.700															
unknown green filament A	4100000000.001				4	4	4				4					
Euglena elastica	4200101030.400		4													
Lepocinclis fusiformis	4200101050.200															
Trachelomonas hispida	4200101080.400									11						4
Trachelomonas playfarii	4200101080.600															
Glenodinium sp. A	4320103020.001		4													4
Dinobryon bavaricum	4620602020.200									4						
Dinobryon sertularia	4620602020.600					4		7	4	11			4	4		
Mallomonas tonsurata	4620603020.800											4			4	
Cyclotella sp. B	4630101030.002									18		32	55		55	
Cyclotella stelligera	4630101030.800		8													
Melosira sp. A	4630101050.001							60								
Melosira sp. B	4630101050.002							60								

Amendment 2
(New)

ER Table 2.7.2-2d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec 73 -
4 Jan 74

Species	Code Number	Total Number	Station Numbers												
			1An	2An	3An	4Aa	4Ab	4Ac	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn
Melosira granulata angustissima	4630101050.900															
Asterionella formosa gracillima	4630201020.350									18	16		110			
Synedra rumpens familiaris	4630201080.750				7											
Synedra ulna amphirhyncus	4630201080.810															
Synedra ulna contracta	4630201080.820															37
Synedra ulna ulna	4630201080.880															
Tabellaria fenestrata fenestrata	4630201080.300												55			
Achnanthes lanceolata lanceolata	4630203010.525					10		10				64				
Achnanthes linearis linearis	4630203010.540			8		10					16	16				
Achnanthes microcephala microcephala	4630203030.001		8		14		7		14	36	16	32	110		55	
Cocconeis placentula lineata	4630203030.560				7											
Frustulia rhomboides amphipleuroides	4630204050.580															
Frustulia rhomboides rhomboides	4630104050.660															
Frustulia rhomboides saxonica	4630204050.680													49		
Gyrosigma obtusatum obtusatum	4630204060.600		8								16	16				37
Navicula aikenensis	4630204070.115		8			10					16					
Navicula cryptocephala	4630204070.240			8		130				54	32	32	55			
Navicula exigua capitata	4630204070.340														55	
Navicula heufleri leptocephala	4630204070.465			8		60				18	32	32	55	49		37
Navicula mobiliensis minor	4630204070.550			8												
Navicula notha notha	4630204070.660											16				
Navicula pupula capitata	4630104070.675													49		
Navicula pupula pupula	4630204070.680															
Navicula rhynococephala rhyncocephala	4630204070.770		8			20	7							49	55	

Amendment 2
(New)

ER Table 2.7.2-2d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec 73 - 4 Jan 74

Species	Code Number	Total Number	Station Numbers												
			1An	2An	3An	4Aa	4Ab	4Ac	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn
Navicula schroeteri escambia	4630204070.830										16				55	
Navicula symmetrica symmetrica	4630204070.880					20										
Navicula viridula viridula	4630204070.980										48					
Pinnularia biceps biceps	4630204080.220											16				
Pinnularia obscura obscura	4630204080.660											16				
Pinnularia subcapitata paucistriata	4630204080.700															
Stauroneis kriegeri kriegeri	4630204090.500										16					
Gomphonema sp. A	4630205020.001				7	30					32	32		49		
Gomphonema lanceolatum	4630205020.400													49		
Cymbella tumida	4630206020.850									18						
Cymbella turgida	4630206020.860															
Cymbella ventricosa	4630206020.900	8														37
Nitzschia acicularis	4630208050.200					40										
Nitzschia clausii	4630208050.250															
Nitzschia fonticola	4630208050.350							10	7		16					
Surirella sp. B	4630209050.002															
Surirella angusta	4630209050.210				7											
Surirella elegans	4630209050.200	8														
Chroococcus limneticus	4900101020.400										4					
Microcystis aeruginosa	4900101050.200															
Oscillatoria agardhii	4900201050.110															
Oscillatoria geminata	4900301050.300				7	4		21	4	7	4		18	7	14	4
Oscillatoria tenuis	4900301050.800					7										
Spirulina major	4900301070.500											4				
Anabaena sp. A	4900401010.001			4												
Anabaena affinis	4900401010.200						4	4	7			4			7	

Amendment 2
(New)

ER Table 2.7.2-2d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec 73 - 4 Jan 74

Species	Total Number Code Number	Station Numbers 11Sn	11Bn	12Sn	12Bn	13Sn	13Bn	14Sa	14Sb	14Ma	14Mb	14Mc	14Ba	14Bb
Spermatazoopsis exultans	4100103070.200		4											
Chlamydomonas sp. A	4100104030.001													
Chlamydomonas globosa	4100104030.200		4											
Chlamydomonas polypyrenoideum	4100104020.300				4									
Volvox globator	4100106080.200													
Asterococcus limneticus	4100202010.200													
Schroederia setigera	4100301060.200													
Ankistrodesmus falcatus	4100303010.300	4		7			14	4	11					
Closteriopsis longissima	4100303050.200													
Crucigenia crucifera	4100306040.200	4												
Geminella interrupta	4100401020.300											4		
Mougeotia sp. A	4100801030.001													
Cosmarium cucumis	4100803030.300													
Cosmarium subcrenatum	4100803030.800													
Staurastrum margaritaceum	4100803080.700						31							
unknown green filament A	4100000000.001				4					4		4	4	
Euglena elastica	4200101030.400			4										
Lepocinclis fusiformis	4200101050.200													
Trachelomonas hispida	4200101080.400		4											
Trachelomonas playfarii	4200101080.600													
Glenodinium sp. A	4320103020.001													
Dinobryon bavaricum	4620602020.200								14					
Dinobryon sertularia	4620602020.600													18
Mallomonas tonsurata	4620603020.800													
Cyclotella sp. B	4630101030.002													
Cyclotella stelligera	4630101030.800													
Melosira sp. A	4630101050.001													62
Melosira sp. B	4630101050.002												74	

Amendment 2
(New)

ER Table 2.7.2-2d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec 73
4 Jan 74

Species	Code Number	Total Number	Station Numbers											
			11Sn	11Bn	12Sn	12Bn	13Sn	13Bn	14Sa	14Sb	14Ma	14Mb	14Mc	14Ba	14Bb
Melosira granulata angustissima	4630101050.900														
Asterionella formosa gracillima	4630201020.350														
Synedra rumpens familiaris	4630201080.750														
Synedra ulna amphirhyncus	4630201080.810														
Synedra ulna contracta	4630201080.820								22						
Synedra ulna ulna	4630201080.880									22					
Tabellaria fenestrata fenestrata	4630201080.300														
Achnanthes lanceolata lanceolata	4630203010.525										31				
Achnanthes linearis linearis	4630203010.540										31			37	
Achnanthes microcephala microcephala	4630203030.001	49		26		31			22	22					
Cocconeis placentula lineata	4630203030.560										31				
Frustulia rhomboides amphipleuroides	4630204050.580														
Frustulia rhomboides rhomboides	4630104050.660														
Frustulia rhomboides saxonica	4630204050.680									22					
Gyrosigma obtusatum obtusatum	4630204060.600														
Navicula aikenensis	4630204070.115			110										37	
Navicula cryptocephala	4630204070.240					37			44					37	31
Navicula exigua capitata	4630204070.340			55			31								
Navicula heufleri leptocephala	4630204070.465	49			26	37	31		22	22	93			37	
Navicula mobiliensis minor	4630204070.550														
Navicula notha notha	4630204070.660														
Navicula pupula capitata	4630104070.675														
Navicula pupula pupula	4630204070.680										31				
Navicula rhynococephala rhyncocephala	4630204070.770								22	22					62

Amendment 2
(New)

ER Table 2.7.2-2d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec 73 - 4 Jan 74

Species	Code Number	Total Number	Station Numbers											
			11Sn	11Bn	12Sn	12Bn	13Sn	13Bn	14Sa	14Sb	14Ma	14Mb	14Mc	14Ba	14Bb
Navicula schroeteri escambia	4630204070.830	49					31			22					
Navicula symmetrica symmetrica	4630204070.880														
Navicula viridula viridula	4630204070.980														
Pinnularia biceps biceps	4630204080.220														
Pinnularia obscura obscura	4630204080.660														
Pinnularia subcapitata paucistriata	4630204080.700					37									
Stauroneis kriegeri kriegeri	4630204090.500													37	
Gomphonema sp. A	4630205020.001							31	22						
Gomphonema lanceolatum	4630205020.400														
Cymbella tumida	4630206020.850	49													
Cymbella turgida	4630206020.860													74	
Cymbella ventricosa	4630206020.900					37					31				
Nitzschia acicularis	4630208050.200														
Nitzschia clausii	4630208050.250														
Nitzschia fonticola	4630208050.350	49	110						44	22					
Surirella sp. B	4630209050.002														
Surirella angusta	4630209050.210														
Surirella elegans	4630209050.200														
Chroococcus limneticus	4900101020.400														
Microcystis aeruginosa	4900101050.200		18	7	46		7								
Oscillatoria agardhii	4900201050.110														
Oscillatoria geminata	4900301050.300	11		14	4		7	4	4				4	4	
Oscillatoria tenuis	4900301050.800	11							14	14	7	7	11	7	18
Spirulina major	4900301070.500										4				
Anabaena sp. A	4900401010.001													7	
Anabaena affinis	4900401010.200	4						4	4	7	4		4		14

Amendment 2
(New)

ER Table 2.7.2-2d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec 73
4 Jan 74

Species	Code Number	Total Number	Station Numbers										
			14Bc	15Sa	15Sb	15Sc	16An	17An	18An	19An	20An	21An	22An	23An
Spermatazoopsis exultans	4100103070.200													
Chlamydomonas sp. A	4100104030.001	4		4							4			7
Chlamydomonas globosa	4100104030.200													
Chlamydomonas polypyrenoideum	4100104020.300													
Volvox globator	4100106080.200													
Asterococcus limneticus	4100202010.200													
Schroederia setigera	4100301060.200													
Ankistrodesmus falcatus	4100303010.300	4				4		14					14	4
Closteriopsis longissima	4100303050.200										4			
Crucigenia crucifera	4100306040.200													
Geminella interrupta	4100401020.300							4						
Mougeotia sp. A	4100801030.001					4								
Cosmarium cucumis	4100803030.300							4						
Cosmarium subcrenatum	4100803030.800				4									
Staurastrum margaritaceum	4100803080.700												4	
unknown green filament A	4100000000.001	4		4		4					4		7	4
Euglena elastica	4200101030.400													
Lepocinclis fusiformis	4200101050.200	4					4							
Trachelomonas hispida	4200101080.400	4				4								
Trachelomonas playfarii	4200101080.600	4											4	
Glenodinium sp. A	4320103020.001													
Dinobryon bavaricum	4620602020.200	4			4									
Dinobryon sertularia	4620602020.600	29					25		4		28			
Mallomonas tonsurata	4620603020.800													
Cyclotella sp. B	4630101030.002													
Cyclotella stelligera	4630101030.800													
Melosira sp. A	4630101050.001	74					74							
Melosira sp. B	4630101050.002													

Amendment 2
(New)

ER Table 2.7.2-2d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec 73 - 4 Jan 74

Species	Code Number	Total Number	Station Numbers										
			14Bc	15Sa	15Sb	15Sc	16An	17An	18An	19An	20An	21An	22An	23An
Melosira granulata angustissima	4630101050.900												42	
Asterionella formosa gracillima	4630201020.350													
Synedra rumpens familiaris	4630201080.750													
Synedra ulna amphirhyncus	4630201080.810												42	
Synedra ulna contracta	4630201080.820										42			
Synedra ulna ulna	4630201080.880							42						
Tabellaria fenestrata fenestrata	4630201080.300													
Achnanthes lanceolata lanceolata	4630203010.525									42				98
Achnanthes linearis linearis	4630203010.540													
Achnanthes microcephala microcephala	4630203030.001						37			42				
Cocconeis placentula lineata	4630203030.560	42												
Frustulia rhomboides amphipleuroides	4630204050.580												42	
Frustulia rhomboides rhomboides	4630104050.660									42				
Frustulia rhomboides saxonica	4630204050.680													
Gyrosigma obtusatum obtusatum	4630204060.600									42			42	
Navicula aikenensis	4630204070.115				37	42								
Navicula cryptocephala	4630204070.240	84		74		42		84		42	84			
Navicula exiqua capitata	4630204070.340													
Navicula heufleri leptocephala	4630204070.465					84	37			42	42		42	
Navicula mobiliensis minor	4630204070.550				37									
Navicula notha notha	4630204070.660													
Navicula pupula capitata	4630104070.675													
Navicula pupula pupula	4630204070.680													
Navicula rhynococephala rhyncocephala	4630204070.770			37			74							

Amendment 2
(New)

ER Table 2.7.2-2d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec 73 - 4 Jan 74

Species	Total Number Code Number	Station Numbers 14Bc	15Sa	15Sb	15Sc	16An	17Ar	18An	19An	20An	21An	22An	23An
Navicula schroeteri escambia	4630204070.830		74			37				42		42	
Navicula symmetrica symmetrica	4630204070.880								42				
Navicula viridula viridula	4630204070.980	42											
Pinnularia biceps biceps	4630204080.220		37										
Pinnularia obscura obscura	4630204080.660												
Pinnularia subcapitata paucistriata	4630204080.700					42							
Stauroneis kriegeri kriegeri	4630204090.500												
Gomphonema sp. A	4630205020.001			74	42							42	
Gomphonema lanceolatum	4630205020.400												
Cymbella tumida	4630206020.850								42				
Cymbella turgida	4630206020.860												
Cymbella ventricosa	4630206020.900												
Nitzschia acicularis	4630208050.200			37		74							
Nitzschia clausii	4630208050.250											42	
Nitzschia fonticola	4630208050.350	42	74							84			
Surirella sp. B	4630209050.002											42	
Surirella angusta	4630209050.210	42	37										
Surirella elegans	4630209050.200												
Chroococcus limneticus	4900101020.400												
Microcystis aeruginosa	4900101050.200						4						
Oscillatoria agardhii	4900201050.110			4								14	
Oscillatoria geminata	4900301050.300							4			165		
Oscillatoria tenuis	4900301050.800	14	18	7	7		11	4	11	4	18		
Spirulina major	4900301070.500			4									
Anabaena sp. A	4900401010.001											7	
Anabaena affinis	4900401010.200		4	4	11	4			4			4	

Amendment 2
(New)

ER Table 2.7.2-2e
Cherokee Nuclear Station
Estimated Densities of Species of Phytoplankotn, in no./ml, at
Sampling Station on the Broad River System
Sampling Period 5: 28 Jan 74 -
2 Feb 74

Species	Code Number	Station Numbers												
		01A	02A	03A	04Aa	04Ab	04Ac	05A	06A	07A	08A	09S	09B	10S	10B
no organisms found	4000000000.000											-5			
Chlamydomonas sp. A	4100104030.001									14	4		4	18	
Chlamydomonas polypyrenoideum	4100104030.300														
Tetraedron minimum	4100301080.600												4		
Ankistrodesmus falcatus	4100303010.300				4		18	7					4	4	4
Scenedesmus quadricauda	4100306070.900												4		
unknown green filament A	4100000000.001						11	7		4			4	4	
unknown green colony A	4100000000.002		4												
unknown green coccoid	4100000000.003												7	7	
Euglena elastica	4200101030.400								4						
Phacus sp. A	4200101060.001														4
Phacus swirenkoi	4200101060.800			4											
Trachelomonas hispida	4200101080.400						4	11	4						
Trachelomonas varians	4200101080.900				4										
Glenodinium sp. A	4320103020.001													18	4
Rhizochrysis limnetica	4620401060.400													7	
Dinobryon sertularia	4620602020.600										4			46	
Mallomonas tonsurata	4620603020.800		4												
Cyclotella sp. A	4630101030.001														
Cyclotella sp. B	4630101030.002					8									
Cyclotella sp. C	4630101030.003			8									36	11	
Cyclotella stelligera	4630101030.800				7	8	27	47			8		12		
Melosira sp. A	4630101050.001						9		8	13				11	21
Melosira sp. B	4630101050.002	4			40	32	27	126		39			24	21	
Melosira varians	4630101050.900				7						8				
Asterionella formosa formosa	4630201020.300														11
Asterionella formosa gracillima	4630201020.350									13				11	
Fragilaria crotonensis	4630201050.330			8											
Meridion sp. A	4630201060.001												12		
Meridion circulare constrictum	4630201060.300				7					13			12		

Amendment 2
(New)

ER Table 2.7.2-2e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan 74 -
2 Feb 74

Species	Code Number	Station Numbers 01A	02A	03A	04Aa	04Ab	04Ac	05A	06A	07A	08A	09S	09B	10S	10B
Synedra sp. B	4630201080.002									26				11	
Synedra acus	4630201080.100							8							
Synedra fasciculata truncata	4630201080.350				13		9							11	
Synedra rumpens meneghiana	4630201080.760				8									11	
Synedra rumpens rumpens	4630201080.770	4	5	8		8		16		13					
Synedra socia socia	4630201080.800														
Synedra ulna amphirhyncus	4630201080.810														
Synedra ulna contracta	4630201080.820				7										
Synedra ulna ramesi	4630201080.860			8											
Synedra ulna ulna	4630201080.880			8											
Tabellaria fenestrata	4630201090.300				7										
Tabellaria flocculosa	4630201090.350									13	8				
Eunotia curvata	4630202020.200				7										
Eunotia exigua	4630202020.400	4				8							12	11	
Eunotia incisa	4630202020.450														
Eunotia maior	4630202020.500								8						
Eunotia naegelii	4630202020.550														
Eunotia pectinalis minor	4630202020.600	4	14		7		9	8		13					
Eunotia sudetica	4630202020.700														
Achnanthes sp. A	4630203010.001	11	5	24	20	8	9			13			36	63	11
Achnanthes sp. B	4630203010.002	4	9	40	7	32	27			80	24			32	32
Achnanthes sp. C	4630203010.003	4	5				9			13					
Achnanthes exigua constricta	4630203010.300			8		8									11
Achnanthes hauckiana	4630203010.440														
Achnanthes lanceolata dubia	4630203010.520	4		24		24	9	16	8	39	24				
Achnanthes lanceolata lanceolata	4630203010.525		5	71		8		16					48		
Achnanthes linearis	4630203010.540														
Achnanthes microcephala	4630203010.600	4		8									12		
Cocconeis placentula lineata	4630203030.560		5					8							
Rhiocosphenia curvata	4630203040.100														
Caloneis sp. A	4630204040.001														
Caloneis ventricosa subundulata	4630204040.900														

Amendment 1 (New)

ER Table 2.7.2-2e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan 74 - 2 Feb 74

Species	Code Number	Station Numbers												
		01A	02A	03A	04Aa	04Ab	04Ac	05A	06A	07A	08A	09S	09B	10S	10B
Capartogramma crucicula	4630204045.300														
Frustulia rhomboides capitata	4630204050.590	4			7	8									11
Frustulia rhomboides rhomboides	4630204050.660			8		8									
Frustulia weinholdii weinholdii	4630204050.880				7		9								
Gyrosigma nodilerum	4630204060.500														
Gyrosigma obtusatum	4630204060.600														
Navicula sp. A	4630204070.001														
Navicula sp. B	4630204070.002														11
Navicula sp. C	4630204070.003					16									
Navicula accomoda	4630204070.110														
Navicula aikenensis	4630204070.115									26	8				
Navicula atomus	4630204070.120		5												
Navicula capitata	4630204070.220														11
Navicula contenta biceps	4630204070.230			8											
Navicula cryptocephala	4630204070.240		5	47	13	16	9		16	52	40		48	42	7
Navicula decussis	4630204070.260				7										
Navicula elginensis	4630204070.320		9			32	9			80	16		24		
Navicula elginensis lata	4630204070.325										8				
Navicula exigua capitata	4630204070.340			8											
Navicula hambergii	4630204070.460					8									
Navicula heufleri leptocephala	4630204070.465						27	8					36		32
Navicula lateropunctata	4630204070.500					16				13					
Navicula minima	4630204070.540														
Navicula mobiliensis minor	4630204070.550														
Navicula mutica tropica	4630204070.588					8			8		8				
Navicula notha	4630204070.660	7		32		16	36	16		80	47		83	11	
Navicula placenta	4630204070.670														
Navicula pupula capitata	4630204070.675														
Navicula pupula pupula	4630204070.680					24			16		8			11	
Navicula pupula rectangularis	4630204070.685														
Navicula radiosa parva	4630204070.700				13										Amendment 1 (New)

ER Table 2.7.2-2e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan 74 - 2 Feb 74

Species	Code Number	Station Numbers 01A	02A	03A	04Aa	04Ab	04Ac	05A	06A	07A	08A	09S	09B	10S	10B
Navicula rhyncocephala	4630204070.770			8	7								12	21	
Navicula schroeteri escambia	4630204070.830				7	8	9						24		
Navicula symmetrica	4630204070.880			40			9			26	40		24		
Navicula viridula linearis	4630204070.940					8									
Navicula viridula rostellata	4630204070.960		5		7	8								11	11
Navicula viridula viridula	4630204070.980														
Neidium temperei	4630204075.680														
Pinnularia sp. A	4630204080.001									13					
Pinnularia abaujensis rostrata	4630204080.215														
Pinnularia biceps	4630204080.220			8		16				13					
Pinnularia borealis rectangularis	4630204080.240			8	7										
Pinnularia mesolepta	4630204080.550														
Pinnularia microstauron	4630204080.560														
Pinnularia subcapitata paucistriata	4630204080.700					8	9								
Pinnularia viridis	4630204080.880									13					
Stauroneis sp. A	4630204090.001														
Stauroneis anceps gracilis	4630204090.220			8	7										
Stauroneis smithii incisa	4630204090.840														
Gomphonema sp. A	4630205020.001	4		40	13	8	9	8		39	16				
Gomphonema sp. B	4630205020.002						18								
Gomphonema angustatum	4630205020.230				13			8							
Cymbella lanceolata	4630206020.400	4													
Cymbella naviculiformis	4630206020.500												24		
Cymbella tumida	4630206020.850									13					
Cymbella turgida	4630206020.860	15					9			26					11
Cymbella ventricosa	4630206020.900	4				8									
Rhopalodia sp. A	4630207040.001	11				8				13			12	32	21
Rhopalodia gibberula	4630207040.400														
Hantzschia sp. A	4630208040.001														

Amendment 1
(New)

ER Table 2.7.2-2e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan 74 -
2 Feb 74

Species	Code Number	Station Numbers													
		01A	02A	03A	04Aa	04Ab	04Ac	05A	06A	07A	08A	09S	09B	10S	10B
Nitzschia acicularis	4630208050.200							8						21	
Nitzschia clausii	4630208050.250													11	
Nitzschia dissipata	4630208050.300			16											
Nitzschia fonticola	4630208050.350														
Nitzschia kutzingiana	4630208050.450					24		16			8				
Nitzschia linearis	4630208050.500	4					9	24			8				
Nitzschia palea	4630208050.720			8	7	8		8		39			12		84
Nitzschia paradoxa	4630208050.725	19		55											
Nitzschia phillipinarum	4630208050.740	7	5	32	7	8	27	40	8		32		95	42	11
Nitzschia pseudoamphioxys	4630208050.760				7	8				26	8		12		11
Nitzschia sigmoidea	4630208050.850				7		9								
Surirella sp. A	4630209050.001			24											
Surirella angusta	4630209050.210			32	13		18				8				
Surirella elegans	4630209050.300														
Surirella minuta	4630209050.500			8											
Surirella tenera nervosa	4630209050.860			8	7					13					
Chroococcus limneticus	4900101020.400												4		
Merismopedia tenuissima	4900101040.700						4								
Oscillatoria sp. A	4900301050.001	4													
Oscillatoria agardhii	4900301050.220														
Oscillatoria geminata	4900301050.300					4		7	11		4				
Oscillatoria tenuis	4900301050.800		4												
Spirulina major	4900301070.500		4												
Anabaena affinis	4900401010.200							4			4				

Amendment 1
(New)

ER Table 2.7.2-2e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan 74 -
2 Feb 74

Species	Code Number	Station Numbers												
		11S	11B	12S	12B	13S	13B	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba
no organisms found	4000000000.000	-5	-5											
Chlamydomonas sp. A	4100104030.001			11	4	4								
Chlamydomonas polypyrenoideum	4100104030.300													
Tetraedron minimum	4100301080.600													
Ankistrodesmus falcatus	4100303010.300			4	4	4		7	4	4				
Scenedesmus quadricauda	4100306070.900			4										
unknown green filament A	4100000000.001						4						4	
unknown green colony A	4100000000.002													
unknown green coccoid	4100000000.003													
Euglena elastica	4200101030.400					4								
Phacus sp. A	4200101060.001													
Phacus swirenkoi	4200101060.800													
Trachelomonas hispida	4200101080.400													
Trachelomonas varians	4200101080.900													
Glenodinium sp. A	4320103020.001			7		7								
Rhizochrysis limnetica	4620401060.400													
Dinobryon sertularia	4620602020.600													
Mallomonas tonsurata	4620603020.800													
Cyclotella sp. A	4630101030.001													
Cyclotella sp. B	4630101030.002				32									
Cyclotella sp. C	4630101030.003				21			8	9				11	
Cyclotella stelligera	4630101030.800			21	21	21	9		9	16		11		
Melosira sp. A	4630101050.001				11	11	9	8	9				11	
Melosira sp. B	4630101050.002			11		11	9	8	9		11	22		
Melosira varians	4630101050.900				11		63		18	16				
Asterionella formosa formosa	4630201020.300				11	11					11	11		
Asterionella formosa gracillima	4630201020.350													
Fragilaria crotonensis	4630201[illegible]50.330													
Meridion sp. A	4630201[illegible]0.001													
Meridion circulare constrictum	4630201[illegible]0.300					11		16		16				

Amendment 1
(New)

ER Table 2.7.2-2e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan 74 -
2 Feb 74

Species	Code Number	Station Numbers												
		11S	11B	12S	12B	13S	13B	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba
Synedra sp. B	4630201080.002													
Synedra acus	4630201080.100													
Synedra fasciculata truncata	4630201080.350			11			18						11	
Synedra rumpens meneghiana	4630201080.760				21		9					11		
Synedra rumpens rumpens	4630201080.770				21	11	9	8	9		11	11		
Synedra socia socia	4630201080.800						36							
Synedra ulna amphirhyncus	4630201080.810						9							
Synedra ulna contracta	4630201080.820													
Synedra ulna ramesi	4630201080.860				11		18							13
Synedra ulna ulna	4630201080.880						16	9	32					
Tabellaria fenestrata	4630201090.300						8		16					13
Tabellaria flocculosa	4630201090.350													
Eunotia curvata	4630202020.200						9							
Eunotia exigua	4630202020.400			11	11			24	18					
Eunotia incisa	4630202020.450								9			11		
Eunotia maior	4630202020.500											11		
Eunotia naegelii	4630202020.550									16				
Eunotia pectinalis minor	4630202020.600				11			8	9					
Eunotia sudetica	4630202020.700													
Achnanthes sp. A	4630203010.001			42	85	32	63	55	64	111	11	34	56	77
Achnanthes sp. B	4630203010.002			21	21	21	9	47	73	48	45	11	22	27
Achnanthes sp. C	4630203010.003				21			24	9					
Achnanthes exigua constricta	4630203010.300											22		
Achnanthes hauckiana	4630203010.440													
Achnanthes lanceolata dubia	4630203010.520					11		16		16				
Achnanthes lanceolata lanceolata	4630203010.525			11	11	11	100		46	48		22		13
Achnanthes linearis	4630203010.540													
Achnanthes microcephala	4630203010.600				11						11			
Cocconeis placentula lineata	4630203030.560						9		18	16	11			
Rhiocosphenia curvata	4630203040.100													
Caloneis sp. A	4630204040.001													
Caloneis ventricosa subundulata	4630204040.900						9							

Amendment 1
(New)

ER Table 2.7.2-2e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan 74 -
2 Feb 74

Species	Code Number	Station Numbers												
		11S	11B	12S	12B	13S	13B	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba
Capartogramma crucicula	4630204045.300						9							
Frustulia rhomboides capitata	4630204050.590													
Frustulia rhomboides rhomboides	4630204050.660						9	24						
Frustulia weinholdii weinholdii	4630204050.880							16	9					13
Gyrosigma nodilerum	4630204060.500						18							
Gyrosigma obtusatum	4630204060.600						18					11		
Navicula sp. A	4630204070.001										11			
Navicula sp. B	4630204070.002					11						11		
Navicula sp. C	4630204070.003					11		8	9			22		
Navicula accomoda	4630204070.110							8				11		13
Navicula aikenensis	4630204070.115				11			8	18		11		11	
Navicula atomus	4630204070.120							8						
Navicula capitata	4630204070.220						9							
Navicula contenta biceps	4630204070.230													
Navicula cryptocephala	4630204070.240			42	126	84	127	47	55	95	11	78	11	
Navicula decussis	4630204070.260													
Navicula elginensis	4630204070.320				105	21	54	32	55	63		45	45	13
Navicula elginensis lata	4630204070.325													
Navicula exigua capitata	4630204070.340													
Navicula hambergii	4630204070.460													
Navicula heufleri leptocephala	4630204070.465				11		9							
Navicula lateropunctata	4630204070.500													
Navicula minima	4630204070.540													
Navicula mobiliensis minor	4630204070.550				21			8						
Navicula mutica tropica	4630204070.588				11		27							
Navicula notha	4630204070.660			32	126	21	91	72	55	48	34	22	22	13
Navicula placenta	4630204070.670								9					
Navicula pupula capitata	4630204070.675				11	21	18							
Navicula pupula pupula	4630204070.680			11		11	9		9					
Navicula pupula rectangularis	4630204070.685				11									
Navicula radiosa parva	4630204070.700													

Amendment 1
(New)

ER Table 2.7.2-2e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan 74 - 2 Feb 74

Species	Code Number	Station Numbers												
		11S	11B	12S	12B	13S	13B	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba
Navicula rhyncocephala	4630204070.770				32	11	18		18					
Navicula schroeteri escambia	4630204070.830					11			18	32				
Navicula symmetrica	4630204070.880				73		36	24	9		22		11	
Navicula viridula linearis	4630204070.940													
Navicula viridula rostellata	4630204070.960						18		9	48		11		
Navicula viridula viridula	4630204070.980						18							
Neidium temperei	4630204075.680				11			8		16		11		
Pinnularia sp. A	4630204080.001													
Pinnularia abaujensis rostrata	4630204080.215													
Pinnularia biceps	4630204080.220					11	9		9					
Pinnularia borealis rectangularis	4630204080.240													
Pinnularia mesolepta	4630204080.550													
Pinnularia microstauron	4630204080.560				11		9							
Pinnularia subcapitata paucistriata	4630204080.700			11		11	27							
Pinnularia viridis	4630204080.880													
Stauroneis sp. A	4630204090.001				11									
Stauroneis anceps gracilis	4630204090.220													
Stauroneis smithii incisa	4630204090.840											22		
Gomphonema sp. A	4630205020.001						36	40	9	32	11		22	13
Gomphonema sp. B	4630205020.002				21		18	16	18			11	11	27
Gomphonema angustatum	4630205020.230						18							
Cymbella lanceolata	4630206020.400													
Cymbella naviculiformis	4630206020.500						18			16				
Cymbella tumida	4630206020.850									16	11		11	
Cymbella turgida	4630206020.860				32	11	108		9	16	22	11		13
Cymbella ventricosa	4630206020.900				11		9	8	9					
Rhopalodia sp. A	4630207040.001					63	9		27				11	
Rhopalodia gibberula	4630207040.400						9							
Hantzschia sp. A	4630208040.001								9			11		

Amendment (New)

ER Table 2.7.2-2e
Cherokee Nuclear Station
Samplint Period 5: 28 Jan 74 -
2 Feb 74

Species	Code Number	Station Numbers												
		11S	11B	12S	12B	13S	13B	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba
Nitzschia acicularis	4630208050.200			11	21				9					
Nitzschia clausii	4630208050.250						9						34	
Nitzschia dissipata	4630208050.300													
Nitzschia fonticola	4630208050.350							24	9					
Nitzschia kutzingiana	4630208050.450													
Nitzschia linearis	4630208050.500				32		18		18	16				
Nitzschia palea	4630208050.720			95	74	21	64	32			11	34	22	
Nitzschia paradoxa	4630208050.725			11				24	18					
Nitzschia phillipinarum	4630208050.740			53	136	53	118	47	109	32	22	67	56	27
Nitzschia pseudoamphioxys	4630208050.760				21		9		9					
Nitzschia sigmoidea	4630208050.850				21						11			
Surirella sp. A	4630209050.001				11		18							
Surirella angusta	4630209050.210				21	11	27	16	27			11		13
Surirella elegans	4630209050.300													
Surirella minuta	4630209050.500													
Surirella tenera nervosa	4630209050.860						9							
Chroococcus limneticus	4900101020.400													
Merismopedia tenuissima	4900101040.700													
Oscillatoria sp. A	4900301050.001													
Oscillatoria agardhii	4900301050.220													
Oscillatoria geminata	4900301050.300									4			4	
Oscillatoria tenuis	4900301050.800													
Spirulina major	4900301070.500													
Anabaena affinis	4900401010.200													

Amendment 1
(New)

ER Table 2.7.2-2e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan 74 -
2 Feb 74

Species	Code Number	Station Numbers												
		14Bb	14Bc	15Aa	15Ab	15Ac	16A	17A	18A	19A	20A	21A	22A	23A
no organisms found	4000000000.000													
Chlamydomonas sp. A	4100104030.001													
Chlamydomonas polypyrenoideum	4100104030.300										7		7	4
Tetraedron minimum	4100301080.600					4							4	
Ankistrodesmus falcatus	4100303010.300													
Scenedesmus quadricauda	4100306070.900						4	4			4			
unknown green filament A	4100000000.001													
unknown green colony A	4100000000.002												4	
unknown green coccoid	4100000000.003													
Euglena elastica	4200101030.400													
Phacus sp. A	4200101060.001													
Phacus swirenkoi	4200101060.800													
Trachelomonas hispida	4200101080.400													
Trachelomonas varians	4200101080.900			4										
Glenodinium sp. A	4320103020.001										4			
Rhizochrysis limnetica	4620401060.400													
Dinobryon sertularia	4620602020.600										7		11	
Mallomonas tonsurata	4620603020.800													
Cyclotella sp. A	4630101030.001													
Cyclotella sp. B	4630101030.002													
Cyclotella sp. C	4630101030.003													
Cyclotella stelligera	4630101030.800		16			48								
Melosira sp. A	4630101050.001													
Melosira sp. B	4630101050.002	16	16											
Melosira varians	4630101050.900			16				21			19			
Asterionella formosa formosa	4630201020.300													
Asterionella formosa gracillima	4630201020.350													
fragilaria crotonensis	4630201050.330													
Meridion sp. A	4630201060.001													
Meridion circulare constrictum	4630201060.300					24								

Amendment 1
(New)

ER Table 2.7.2-2e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan 74 -
2 Feb 74

Species	Code Number	Station Numbers 14Bb	14Bc	15Aa	15Ab	15Ac	16A	17A	18A	19A	20A	21A	22A	23A
Synedra sp. B	4630201080.002													
Synedra acus	4630201080.100													
Synedra fasciculata truncata	4630201080.350													
Synedra rumpens meneghiana	4630201080.760							21						
Synedra rumpens rumpens	4630201080.770										19			
Synedra socia socia	4630201080.800													
Synedra ulna amphirhyncus	4630201080.810													
Synedra ulna contracta	4630201080.820										19			
Synedra ulna ramesi	4630201080.860				39									
Synedra ulna ulna	4630201080.880				19		24							
Tabellaria fenestrata	4630201090.300							21						
Tabellaria flocculosa	4630201090.350													
Eunotia curvata	4630202020.200													
Eunotia exigua	4630202020.400										19			
Eunotia incisa	4630202020.450										19			
Eunotia maior	4630202020.500													
Eunotia naegelii	4630202020.550													
Eunotia pectinalis minor	4630202020.600													
Eunotia sudetica	4630202020.700													
Achnanthes sp. A	4630203010.001	32	32	111		48	71	84	24					
Achnanthes sp. B	4630203010.002				39	24	24			21				
Achnanthes sp. C	4630203010.003	16	16		19			42						
Achnanthes exigua constricta	4630203010.300													
Achnanthes hauckiana	4630203010.440								24					
Achnanthes lanceolata dubia	4630203010.520				19									
Achnanthes lanceolata lanceolata	4630203010.525	16	32		39	71	49	42	24		19			
Achnanthes linearis	4630203010.540						24		24					
Achnanthes microcephala	4630203010.600													
Cocconeis placentula lineata	4630203030.560													
Rhiocosphenia curvata	4630203040.100		16											19
Caloneis sp. A	4630204040.001		32								37			
Caloneis ventricosa subundulata	4630204040.900													Amendment 1 (New)

ER Table 2.7.2-2e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan 74 - 2 Feb 74

Species	Code Number	Station Numbers												
		14Bb	14Bc	15Aa	15Ab	15Ac	16A	17A	18A	19A	20A	21A	22A	23A
Capartogramma crucicula	4630204045.300													
Frustulia rhomboides capitata	4630204050.590													
Frustulia rhomboides rhomboides	4630204050.660			16					24					
Frustulia weinholdii weinholdii	4630204050.880													
Gyrosigma nodilerum	4630204060.500													
Gyrosigma obtusatum	4630204060.600						48						21	
Navicula sp. A	4630204070.001													
Navicula sp. B	4630204070.002									21			21	19
Navicula sp. C	4630204070.003			16										
Navicula accomoda	4630204070.110							21			19			
Navicula aikenensis	4630204070.115				19			21					21	
Navicula atomus	4630204070.120													
Navicula capitata	4630204070.220													
Navicula contenta biceps	4630204070.230													
Navicula cryptocephala	4630204070.240	32		48		48		21	24	105	56		42	
Navicula decussis	4630204070.260													
Navicula elginensis	4630204070.320	16	16	48			24						63	37
Navicula elginensis lata	4630204070.325													
Navicula exigua capitata	4630204070.340													
Navicula hambergii	4630204070.460													
Navicula heufleri leptocephala	4630204070.465			32	39									
Navicula lateropunctata	4630204070.500													
Navicula minima	4630204070.540						95							
Navicula mobiliensis minor	4630204070.550										19			
Navicula mutica tropica	4630204070.588									21				
Navicula notha	4630204070.660				39			21		21			21	
Navicula placenta	4630204070.670													
Navicula pupula capitata	4630204070.675					48								
Navicula pupula pupula	4630204070.680			16									42	
Navicula pupula rectangularis	4630204070.685													
Navicula radiosa parva	4630204070.700												21	

Amendment 1 (New)

ER Table 2.7.2-2e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan 74 -
2 Feb 74

Species	Code Number	Station Numbers												
		14Bb	14Bc	15Aa	15Ab	15Ac	16A	17A	18A	19A	20A	21A	22A	23A
Navicula rhyncocephala	4630204070.770						24	42	24	63				
Navicula schroeteri escambia	4630204070.830					24				63	37			
Navicula symmetrica	4630204070.880		32			24							42	19
Navicula viridula linearis	4630204070.940								48					
Navicula viridula rostellata	4630204070.960	16	16					21						
Navicula viridula viridula	4630204070.980													
Neidium temperei	4630204075.680													
Pinnularia sp. A	4630204080.001													
Pinnularia abaujensis rostrata	4630204080.215													
Pinnularia biceps	4630204080.220		16					21		21	19			
Pinnularia borealis rectangularis	4630204080.240													
Pinnularia mesolepta	4630204080.550			16										
Pinnularia microstauron	4630204080.560					24					19			
Pinnularia subcapitata paucistriata	4630204080.700													
Pinnularia viridis	4630204080.880													
Stauroneis sp. A	4630204090.001			16										
Stauroneis anceps gracilis	4630204090.220													
Stauroneis smithii incisa	4630204090.840												21	
Gomphonema sp. A	4630205020.001			16	39	48	24		24		19			
Gomphonema sp. B	4630205020.002			16		24				21	19		63	
Gomphonema angustatum	4630205020.230													
Cymbella lanceolata	4630206020.400													
Cymbella naviculiformis	4630206020.500					48					19			
Cymbella tumida	4630206020.850					24		21			19		42	
Cymbella turgida	4630206020.860		16											
Cymbella ventricosa	4630206020.900						24							
Rhopalodia sp. A	4630207040.001	16			19							19		
Rhopalodia gibberula	4630207040.400												21	
Hantzschia sp. A	4630208040.001													

Amendment 1
(New)

ER Table 2.7.2-2e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan 74 -
2 Feb 74

Species	Code Number	Station Numbers												
		14Bb	14Bc	15Aa	15Ab	15Ac	16A	17A	18A	19A	20A	21A	22A	23A
Nitzschia acicularis	4630208050.200													
Nitzshia clausii	4630208050.250													
Nitzschia dissipata	4630208050.300													
Nitzschia fonticola	4630208050.350	16			19	48		42		21	37			
Nitzschia kutzingiana	4630208050.450													
Nitzschia linearis	4630208050.500						71						21	
Nitzschia palea	4630208050.720				39			42		42	56			
Nitzschia paradoxa	4630208050.725			16			95	21		63	19			
Nitzschia phillipinarum	4630208050.740	16	48	48		24		42	24	21			105	
Nitzschia pseudoamphioxys	4630208050.760							21						
Nitzschia sigmoidea	4630208050.850						24			21				
Surirella sp. A	4630209050.001													
Surirella angusta	4630209050.210		16	16			24							
Surirella elegans	4630209050.300		16				24			21				
Surirella minuta	4630209050.500													
Surirella tenera nervosa	4630209050.860													
Chroococcus limneticus	4900101020.400													
Merismopedia tenuissima	4900101040.700													
Oscillatoria sp. A	4900301050.001													
Oscillatoria agardhii	4900301050.220	4							4			7		
Oscillatoria geminata	4900301050.300		4				4	4			11	7	11	7
Oscillatoria tenuis	4900301050.800					4				4	4			
Spirulina major	4900301070.500													
Anabaena affinis	4900401010.200													

Amendment 1
(New)

ER Table 2.7.2-2f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb 74 - 1 Mar 74

SPECIES	STATION NUMBERS 01A	02A	03A	04Aa	04Ab	04Ac	05A	06A	07A	08A	09S	09B	10S
no organisms found			-5										
unknown green filament A													
Chlamydomonas sp. A		4					42						7
Ankistrodesmus falcatus							32		7				
Dictyosphaerium ehrenbergianum							4			7			
Scenedesmus dimorphus													
Scenedesmus quadricauda							4						
Dispora crucigenioides							4						
Geminella interrupta													
Cladophora glomerata	4												
Cosmarium subcrenatum													
Euglena elastica								4			4		
Phacus sp. A													
Phacus swirenkoi													
Trachelomonas hispida							4	4					
Trachelomonas varians													
Glenodinium sp. A							4						
Dinobryon sertularia							11						
Cyclotella sp. B													
Cyclotella sp. C													
Cyclotella stelligera	26						42						
Melosira sp. A													
Melosira sp. B				14	16	63	42						19
Asterionella formosa													
Fragilaria vaucheriae													
Meridion circulare constrictum					16								
Opephora martyi		21											

(Cont'd.)

Amendment 2
(New)

ER Table 2.7.2-2f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb 74 -
1 Mar 74

SPECIES	STATION NUMBERS 10B	11S	11B	12S	12B	13S	13B	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba
no organisms found			-5										05	
unknown green filament A														
Chlamydomonas sp. A				7	4	14				4				
Ankistrodesmus falcatus					4	4	25			4				
Dictyosphaerium ehrenbergianum														
Scenedesmus dimorphus						4								
Scenedesmus quadricauda				4		4								
Dispora crucigenioides														
Geminella interrupta														
Cladophora glomerata														
Cosmarium subcrenatum														
Euglena elastica				4			4							
Phacus sp. A														
Phacus swirenkoi					4									
Trachelomonas hispida														
Trachelomonas varians														
Glenodinium sp. A						4								
Dinobryon sertularia														
Cyclotella sp. B				40		20			20	20				
Cyclotella sp. C	716						24					20		
Cyclotella stelligera										20				27
Melosira sp. A								20						
Melosira sp. B	358			40		20				20				
Asterionella formosa					31			40			24			
Fragilaria vaucheriae														
Meridion circulare constrictum														
Opephora martyi														

(Cont'd.)

Amendment 2
(New)

ER Table 2.7.2-2f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb 74 - 1 Mar 74

SPECIES	STATIONS NUMBERS 14Bb	14Bc	15Aa	15Ab	15Ac	16A	17A	18A	19A	20A	21A	22A	23A
no organisms found													
unknown green filament A							4						
Chlamydomonas sp. A								11	4				
Ankistrodesmus falcatus												4	
Dictyosphaerium ehrenbergianum													
Scenedesmus dimorphus													
Scenedesmus quadricauda										4			
Dispora crucigenioides													
Geminella interrupta												4	
Cladophora glomerata													
Cosmarium subcrenatum									4				
Euglena elastica										4			
Phacus sp. A								7					
Phacus swirenkoi													
Trachelomonas hispida													
Trachelomonas varians											28		
Glenodinium sp. A													
Dinobryon sertularia								7					
Cyclotella sp. B													
Cyclotella sp. C													
Cyclotella stelligera		61								24			
Melosira sp. A													
Melosira sp. B													
Asterionella formosa		20	63	27									
Fragilaria vaucheriae		81						36					
Meridion circulare constrictum													
Opephora martyi								36					

(Cont'd.)

Amendment 1 (New)

Amendment 2 (New)

ER Table 2.7.2-2f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb 74 - 1 Mar 74

SPECIES	STATION NUMBERS 01A	02A	03A	04Aa	04Ab	04Ac	05A	06A	07A	08A	09S	09B	10S
Synedra sp. B													
Synedra delicatissima													
Synedra fasciculata truncata								16					
Synedra pulchella						21							
Synedra rumpens familiaris	26												
Synedra rumpens meneghiana													
Synedra rumpens rumpens	26	42		37	16	21			19	71		240	
Synedra ulna contracta		21											
Synedra ulna ulna					16							710	19
Tabellaria fenestrata												240	
Tabellaria flocculosa													
Eunotia incisa													
Eunotia pectinalis minor													
Achnanthes sp. A	26	21		14	79	84			56				
Achnanthes sp. B		21			32	42				24			
Achnanthes sp. C												240	
Achnanthes exigua constricta													
Achnanthes haukiana													
Achnanthes lanceolata dubia													
Achnanthes lanceolata lanceolata		42		37				32			56		
Achnanthes linearis	26										19		39
Achnanthes microcephala		21											
Cocconeis placentula lineata													
Amphipleura pellucida									205				
Frustulia rhomboides capitata					16								
Frustulia rhomboides saxonica									37				
Navicula sp. B													

(Cont'd.)

Amendment 2
(New)

ER Table 2.7.2-2f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb 74 - 1 Mar 74

SPECIES	STATION NUMBERS 10B	11S	11B	12S	12B	13S	13B	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba
Synedra sp. B						20						20		
Synedra delicatissima							24							
Synedra fasciculata truncata					31									
Synedra pulchella														
Synedra rumpens familiaris														
Synedra rumpens meneghiana														
Synedra rumpens rumpens					31	40						101		
Synedra ulna contracta														
Synedra ulna ulna						20		20				20		27
Tabellaria fenestrata	358							20						
Tabellaria flocculosa												20		
Eunotia incisa														
Eunotia pectinalis minor														
Achnanthes sp. A						20		61	20	40		61		55
Achnanthes sp. B		31									47			27
Achnanthes sp. C					63	40								
Achnanthes exigua constricta											24			
Achnanthes haukiana				40					20	20		20		
Achnanthes lanceolata dubia														
Achnanthes lanceolata lanceolata									20					
Achnanthes linearis						40		20						
Achnanthes microcephala														
Cocconeis placentula lineata														
Amphipleura pellucida														
Frustulia rhomboides capitata														
Frustulia rhomboides saxonica														
Navicula sp. B									40					

(Cont'd.)

Amendment 2
(New)

ER Table 2.7.2-2f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb 74 - 1 Mar 74

SPECIES	14Bb	14Bc	15Aa	15Ab	15Ac	16A	17A	18A	19A	20A	21A	22A	23A
Synedra sp. B			31										
Synedra delicatissima													
Synedra fasciculata truncata													
Synedra pulchella													
Synedra rumpens familiaris													
Synedra rumpens meneghiana					27								
Synedra rumpens rumpens		40		27			72			24	20		
Synedra ulna contracta													
Synedra ulna ulna													
Tabellaria fenestrata			31	27									
Tabellaria flocculosa							36						
Eunotia incisa		20											
Eunotia pectinalis minor									24				
Achnanthes sp. A	110	20		27		27	107		24		34		
Achnanthes sp. B		40							47				
Achnanthes sp. C				27									
Achnanthes exigua constricta	27												
Achnanthes haukiana		20											
Achnanthes lanceolata dubia							36						
Achnanthes lanceolata lanceolata					27		36		47	24	20		
Achnanthes linearis	55		63				36			24			
Achnanthes microcephala			31										
Cocconeis placentula lineata						27							
Amphipleura pellucida													
Frustulia rhomboides capitata		20											
Frustulia rhomboides saxonica													
Navicula sp. B													

(Cont'd.)

Amendment 2
(New)

ER Table 2.7.2-2f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb 74 -
1 Mar 74

SPECIES	STATION NUMBERS 01A	02A	03A	04Aa	04Ab	04Ac	05A	06A	07A	08A	09S	09B	10S
Navicula accomoda									19			240	
Navicula aikenensis											19		
Navicula capitata capitata												240	
Navicula contenta biceps													
Navicula cryptocephala	26	21		19			21	63		48			19
Navicula elginensis					16	21							
Navicula hambergii													
Navicula heufleri leptocephala													
Navicula mobiliensis minor	26												
Navicula mutica tropica		21							19				
Navicula notha				14		21						480	
Navicula placenta													
Navicula pupula									19				
Navicula radiosa parva													
Navicula rhyncocephala		21					21						
Navicula schroeteri escambia													
Navicula symmetrica												240	19
Navicula ventralis chilensis									19				
Navicula viridula linearis													
Navicula viridula rostellata												480	
Neidium ladogense densestriatum													
Epithemia sp. A													
Pinnularia sp. A													
Pinnularia biceps												240	
Pinnularia borealis rectangularis													
Pinnularia microstauron													
Pinnularia obscura													
Pinnularia subcapitata paucistriata													

(Cont'd.)

Amendment 2
(New)

ER Table 2.7.2-2f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb 74 - 1 Mar 74

SPECIES	10B	11S	11B	12S	12B	13S	13B	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba
Navicula accomoda														
Navicula aikenensis										20	24	20		
Navicula capitata capitata					31									
Navicula contenta biceps						20		20						
Navicula cryptocephala	1074	63		80	31	40	47	40	40	40	24	20		
Navicula elginensis							24	40		40		20		
Navicula hambergii														
Navicula heufleri leptocephala		31					24					20		
Navicula mobiliensis minor								20						
Navicula mutica tropica	358						24							
Navicula notha		31		40		40	24			40	47	81		
Navicula placenta														
Navicula pupula									40		24	61		
Navicula radiosa parva														
Navicula rhyncocephala				40						20				
Navicula schroeteri escambia											24			
Navicula symmetrica						20						20		
Navicula ventralis chilensis														
Navicula viridula linearis														
Navicula viridula rostellata														27
Neidium ladogense densestriatum					31									
Epithemia sp. A														
Pinnularia sp. A														
Pinnularia biceps														
Pinnularia borealis rectangularis								20						
Pinnularia microstauron							24							
Pinnularia obscura							24							
Pinnularia subcapitata paucistriata														

(Cont'd.)

Amendment 2
(New)

ER Table 2.7.2-2f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb 74 - 1 Mar 74

SPECIES	14Bb	14Bc	15Aa	15Ab	15Ac	16A	17A	18A	19A	20A	21A	22A	23A
Navicula accomoda	27	20	31										
Navicula aikenensis												17	
Navicula capitata capitata													
Navicula contenta biceps													
Navicula cryptocephala	55	40				27	27	36		24		17	
Navicula elginensis	27	20		27	27				24	24		17	
Navicula hambergii	27												
Navicula heufleri leptocephala		20											
Navicula mobiliensis minor				27									
Navicula mutica tropica													
Navicula notha	27	20	63				27				20	17	
Navicula placenta											20		
Navicula pupula			31										
Navicula radiosa parva										24			
Navicula rhyncocephala					27		27						
Navicula schroeteri escambia		20											
Navicula symmetrica				27									
Navicula ventralis chilensis													
Navicula viridula linearis										24			
Navicula viridula rostellata						27							
Neidium ladogense densestriatum													
Epithemia sp. A											20		
Pinnularia sp. A													
Pinnularia biceps												17	
Pinnularia borealis rectangularis													
Pinnularia microstauron			31										
Pinnularia obscura													
Pinnularia subcapitata paucistriata		20	31										

(Cont'd.)

Amendment 2
(New)

ER Table 2.7.2-2f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb 74 -
1 Mar 74

SPECIES	STATION NUMBERS 01A	02A	03A	04Aa	04Ab	04Ac	05A	06A	07A	08A	09S	09B	10S
Stauroneis phoenicenteron gracilis													
Gomphonema sp. A									56			240	
Gomphonema sp. B									19				
Gomphonema acuminatum				14									
Gomphonema angustatum					16					24			
Gomphonema gracile													
Cymbella ehrenbergii													
Cymbella naviculiformis				14									
Cymbella obtusiuscula												240	
Cymbella tumida													
Cymbella turgida										24			
Cymbella ventricosa												480	
Rhopalodia sp. A	51								19		19		
Rhopalodia gibberula													
Nitzschia acicularis							42						
Nitzschia dissipata		21											
Nitzschia fonticola									37				
Nitzschia linearis												250	37
Nitzschia palea	77			14				16				240	
Nitzschia philippanarum		21									130	480	
Nitzschia pseudoamphioxys													
Surirella sp. A						21							
Surirella angusta				14									
Oscillatoria sp. A						21							
Oscillatoria geminata													
Oscillatoria tenuis													
Spirulina major													
Anabaena affinis													

(Cont'd.)

Amendment 2
(New)

ER Table 2.7.2-2f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb 74 - 1 Mar 74

SPECIES	STATION NUMBERS 10B	11S	11B	12S	12B	13S	13B	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba
Stauroneis phoenicenteron gracilis														27
Gomphonema sp. A	358			40		141	24	20	20	20				
Gomphonema sp. B						20		20						
Gomphonema acuminatum														
Gomphonema angustatum												20	27	
Gomphonema gracile									20					
Cymbella ehrenbergii														
Cymbella naviculiformis														
Cymbella obtusiuscula														
Cymbella tumida	358											20		
Cymbella turgida	358													27
Cymbella ventricosa					31	20	47		20	20	24			
Rhopalodia sp. A	358			40		81	24		40	20				
Rhopalodia gibberula														
Nitzschia acicularis	358	31					24							
Nitzschia dissipata														
Nitzschia fonticola					95									
Nitzschia linearis					31									
Nitzschia palea				40		40	24		20					
Nitzschia philippanarum	74	63				121	24			81	24	40		27
Nitzschia pseudoamphioxys						20								
Surirella sp. A														
Surirella angusta	58	63												
Oscillatoria sp. A														
Oscillatoria geminata						4								
Oscillatoria tenuis														
Spirulina major														
Anabaena affinis														

(Cont'd.)

Amendment 2 (New)

ER Table 2.7.2-2f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb 74 - 1 Mar 74

SPECIES	STATION NUMBERS 14Bb	14Bc	15Aa	15Ab	15Ac	16A	17A	18A	19A	20A	21A	22A	23A
Stauroneis phoenicenteron gracilis													
Gomphonema sp. A		40		27	27		27	36					
Gomphonema sp. B									24				
Gomphonema acuminatum													
Gomphonema angustatum					27								
Gomphonema gracile				27						24			
Cymbella ehrenbergii										24			
Cymbella naviculiformis													
Cymbella obtusiuscula													
Cymbella tumida													
Cymbella turgida													
Cymbella ventricosa	27	61											
Rhopalodia sp. A		40		27	55		27			24			
Rhopalodia gibberula											20		
Nitzschia acicularis										24			
Nitzschia dissipata													
Nitzschia fonticola		20	31							24			
Nitzschia linearis													
Nitzschia palea												17	17
Nitzschia philippanarum		40				27	27		71	24		34	
Nitzschia pseudoamphioxys													
Surirella sp. A													
Surirella angusta										24			
Oscillatoria sp. A													
Oscillatoria geminata											189		
Oscillatoria tenuis										4			
Spirulina major							4						
Anabaena affinis											4		

(Cont'd.)

Amendment 2
(New)

ER Table 2.7.2-2g
Cherokee Nuclear Station
Estimated Densities of Species of Phytoplankton, in no./ml, at
Sampling Stations on the Broad River System
Sampling Period 7: 25-30 Mar 74 (Page 1 of 6)

Species	Station Numbers																		
	1A	2A	3A	4Aa	4Ab	4Ac	5A	6A	7A	8A	9S	9B	10S	10B	11S	11B	12S	12B	13S	13B
Carteria cordiformis							7													
Chlamydomonas sp. A		4		4																
Chlamydomonas globosa									7		42	7								
Chlamydomonas polypyrenoideum			25			11							39						49	7
Gonium sociale									11						7					
Pandorina morum																			56	
Volvox globator											4				7					
Schroederia setigerum			7																7	
Ankistrodesmus falcatus		4	18	11	7	7	11		7		7	11	4	7	7			35	14	21
Chlorella vulgaris			716																	
Kirchneriella obesa																				
Oocystis sp. A																				
Selenastrum westii			7					4					7							
Dictyosphaerium ehrenbergianum		11			14	14			7	7			4				7	14	35	7
Crucigenia crucifera																				
Scenedesmus denticulatus									4											
Scenedesmus dimorphus			4																	
Scenedesmus obliquus																		7		
Scenedesmus quadricauda			4							4										
Cosmarium cucumis				4																
Green Filament A					4															
Unidentified green colony		4			4		4		4	4	4			4						
Green Coccoid							435	42			14		253	130	49		77	133		21
Euglena elastica																			28	
Euglena sp. A						4	4						7	4						
Lepocinclis fusiformis																				
Phacus sp. A	4																			
Trachelomonas similis	11																			
Trachelomonas varians																				
Glenodinium sp. A	4											4								
Peridinium sp. A							4		7											
Rhizochrysis limnetica																				
Dinobryon divergens		67	4	18		4			7	4			4	35						
Cyclotella stelligera																				
Cyclotella sp. B													646	323	102			28	70	70
Melosira granulata angustissima							23													
Melosira sp. B																		56		
Melosira granulata angustissima spiralis																				
Melosira varians						28														
Asterionella formosa gracillima																				14
Fragilaria sp. A													303							
Fragilaria construens venter																				
Fragilaria crotonensis crotonensis											34	20					17	14		14

(contd.)

Amendment 2
(New)

ER Table 2.7.2-2g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar 74

Species	Station Numbers																		
	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15Aa	15Ab	15Ac	16A	17A	18A	19A	20A	21A	22A	23A
Carteria cordiformis																				
Chlamydomonas sp. A	14																			
Chlamydomonas globosa																				
Chlamydomonas polypyrenoideum					7					7			21	14			7			
Gonium sociale																				
Pandorina morum																				
Volvox globator																				
Schroederia setigerum																				
Ankistrodesmus falcatus	14	35	7	14	21	7		14	7			14	14			14				28
Chlorella vulgaris																				
Kirchneriella obesa				7																
Oocystis sp. A				7																
Selenastrum westii																				
Dictyosphaerium ehrenbergianum			7	7	7	7	14	14		28	7	7		28			21			
Crucigenia crucifera																7				
Scenedesmus denticulatus																				
Scenedesmus dimorphus																				
Scenedesmus obliquus																				
Scenedesmus quadricauda		7															7			
Cosmarium cucumis																				
Green Filament A						7		7												
Unidentified green colony			7	21		14	7			7		7				14				
Green Coccoid	21	21		14	7	7				14	7	7					14			
Euglena elastica																				
Euglena sp. A																	7			
Lepocinclis fusiformis										7										
Phacus sp. A																				
Trachelomonas similis														7						
Trachelomonas varians					7															
Glenodinium sp. A							7													
Peridinium sp. A											7			7		14				
Rhizochrysis limnetica									7											
Dinobryon divergens			7					7			7				35					
Cyclotella stelligera													17			14				
Cyclotella sp. B		34					17	17			51									
Melosira granulata angustissima																				
Melosira sp. B										40				68						
Melosira granulata angustissima spiralis										7				17						
Melosira varians											17									
Asterionella formosa gracillima	17																			
Fragilaria sp. A																				
Fragilaria construens venter									20				85	17		14	14			
Fragilaria crotonensis crotonensis	17		20																	

Amendment 2 (New)

(contd.)

ER Table 2.7.2-2g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar 74

Species	Station Numbers																		
	1A	2A	3A	4Aa	4Ab	4Ac	5A	6A	7A	8A	9S	9B	10S	10B	11S	11B	12S	12B	13S	13B
Fragilaria vaucheriae vaucheriae												20								
Synedra rumpens rumpens									14						17				28	
Synedra ulna contracta	9																			
Synedra ulna ulna	9		11																	
Eunotia exigua exigua			11																	
Achnanthes lanceolata lanceolata			11				11			24				17					14	14
Achnanthes linearis linearis					11					24			20		102	14			42	
Achnanthes microcephala microcephala										24		40	20		68		17		14	42
Cocconeis sp. A																				
Frustulia rhomboides capitata																				
Frustulia rhomboides rhomboides																				
Frustulia weinholdii weinholdii	9																			
Navicula aikenensis															17					
Navicula cryptocephala		11		11				14	14				20	51	85		51	14	56	14
Navicula exigua capitata																		14		
Navicula lateropunctata lateropunctata																				
Navicula mobiliensis minor				23																
Navicula notha notha														17						
Navicula pupula capitata														17						
Navicula pupula pupula															17					
Navicula rhyncocephala rhyncocephala					11													14		
Navicula schroeteri escambia										24										
Navicula symmetrica symmetrica																			14	
Navicula ventralis chilensis																				
Navicula viridula viridula			11												17			14	14	
Pinnularia biceps biceps		11																		14
Pinnularia obscura obscura																				
Gomphonema sp. A																				
Gomphonema gracile																			14	
Gomphonema parvulum									14										42	
Cymbella tumida																			14	
Cymbella turgida				11																
Cymbella ventricosa													20							
Nitzschia fonticola										24		40		17	34				14	14
Nitzschia linearis														17					14	
Nitzschia palea			34					28	56				61	34	68			42	14	14
Nitzschia paradoxa																				
Nitzschia philippinarum																				
Surirella sp. B															17				14	
Surirella angustata																				
Aphanocapsa sp. A													4							
Chroococcus limneticus																			7	

Amendment 2 (New)

(contd.)

ER Table 2:7.2-2g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar 74

Species	Station Numbers																		
	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15Aa	15Ab	15Ac	16A	17A	18A	19A	20A	21A	22A	23A
Fragilaria vaucheriae vaucheriae																				
Synedra rumpens rumpens								17												
Synedra ulna contracta							17				51					14				
Synedra ulna ulna																				
Eunotia exigua exigua	34			14	20								17		17		14			
Achnanthes lanceolata lanceolata		17	81	28		34	17		20	20	17		17							
Achnanthes linearis linearis			20		20												14			
Achnanthes microcephala microcephala								17			34									
Cocconeis sp. A			20																	
Frustulia rhomboides capitata			20																	
Frustulia rhomboides rhomboides																				
Frustulia weinholdii weinholdii																				
Navicula aikenensis	68		20	42	20		68			20	34	17				56	14			
Navicula cryptocephala											17									20
Navicula exigua capitata	17																			
Navicula lateropunctata lateropunctata							17													
Navicula mobiliensis minor																				
Navicula notha notha																				
Navicula pupula capitata																				
Navicula pupula pupula						17														
Navicula rhyncocephala rhyncocephala					20						17									
Navicula schroeteri escambia																				
Navicula symmetrica symmetrica											17									
Navicula ventralis chilensis			40														14			
Navicula viridula viridula															17			17		
Pinnularia biceps biceps								17												
Pinnularia obscura obscura	34	17		42				17					34							
Gomphonema sp. A				28			17		20		17				17	14				
Gomphonema gracile																				
Gomphonema parvulum						17	17													
Cymbella tumida			20				34				17		34							
Cymbella turgida			20																	
Cymbella ventricosa		17	20	28				51		20	17		34		17	42				40
Nitzschia fonticola	17												119	17	17		28			
Nitzschia linearis													51							
Nitzschia palea				14												14				
Nitzschia paradoxa			20																	
Nitzschia philippinarum																				
Surirella sp. B																				
Surirella angustata																				
Aphanocapsa sp. A																				
Chroococcus limneticus																				

(contd.)

Amendment 2
(New)

ER Table 2.7.2-2g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar 74

Species	Station Numbers																		
	1A	2A	3A	4Aa	4Ab	4Ac	5A	6A	7A	8A	9S	9B	10S	10B	11S	11B	12S	12B	13S	13B
Coelosphaerium naegelianum																				
Oscillatoria sp. A						4							4							
Oscillatoria geminata		4	35	11											7		7	7		7
Oscillatoria limosa																				
Oscillatoria tenuis			7	18	7	21	147	14	7											
Spirulina major				4																
Anabaena affinis							11								7					

Amendment 2
(New)

ER Table 2.7.2-2g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar 74

Species	Station Numbers																		
	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15Aa	15Ab	15Ac	16A	17A	18A	19A	20A	21A	22A	23A
Coelosphaerium naegelianum																	7			
Oscillatoria sp. A						7														
Oscillatoria geminata		7						14	7											
Oscillatoria limosa															14					
Oscillatoria tenuis			21															70		
Spirulina major																				
Anabaena affinis															14					

Amendment 2
(New)

ER Table 2.7.2-2h
Cherokee Nuclear Station
Estimated Densities of Species of Phytoplankton, in no./ml, at
Sampling Stations on the Broad River System
Sampling Period 8: 22-27 April 1974

Species	Station Numbers																	
	1	2	3	4a	4b	4c	5	6	7	8	9S	9B	10S	10B	11S	11B	12S	12B
Carteria cordiformis							4											
Chlamydomonas sp. A								4			18	11	7	14				
Chlamydomonas polypyrenoidaum		4															8	
Gonium pectorale		4																
Gonium sociale					4					4								
Ankistrodesmus falcatus				7	7				4	7	25	11	18	8			8	8
Closteriopsis longissima						4												
Kirchneriella lunaris																		
Selenastrum westii					11		53											8
Dictyosphaerium ehrenbergianum											11	7	14	14			8	28
Crucigenia crucifera											7							
Scenedesmus quadricauda																		
Pediastrum biradiatum																		
Cladophora glomerata								11		4					8			
Arthrodesmus octocornis																		
Closterium venus								4										
Cosmarium subcrenatum				4					4					8				
green filament A	7						4											
unknown green colony	4	4		7							4							
unknown flagellate							298											
Euglena elastica								4					4					8
Phacus acuminatus								4										8
Phacus caudatus																		22

Amendment 2
(New)

ER Table 2.7.2-2h
Cherokee Nuclear Station
Sampling Period 8: 22-27 April 1974

Species	Station Numbers																	
	1	2	3	4a	4b	4c	5	6	7	8	9S	9B	10S	10B	11S	11B	12S	12B
Phacus swirenkoi								88										
Phacus sp. A													4					
Trachelomonas hispida							11											
Gymnodinium sp. A	4																	
Glenodinium sp. A						4												
Peridinium sp. A											7							
Arachnochioris minor													84	70				
Dinobryon divergens							4	1										
Cyclotella sp. A							23				17			34				
Cyclotella sp. B			11								17	11	114	68			263	210
Cyclotella stelligera							80				17			34				
Melosira granulata angustissima							23			17								14
Melosira sp. B		11				51	23						34		11			
Melosira varians			23										103					
Microsiphona potamos											18	14	88	196	8		42	8
Asterionella formosa gracillima	34			11		11			11	34				11				
Fragilaria construens venter			11															
Fragilaria crotonensis crotonensis			11	11		11	11				17	11		11			40	28
Meridion circulare constrictum																		
Synedra delicatissima angustissima					11													
Synedra delicatissima delicatissima			11															
Synedra rumpens rumpens																		
Synedra socia socia									11	34								

Amendment 2
(New)

ER Table 2.7.2-2h
Cherokee Nuclear Station
Sampling Period 8: 22-27 April 1974

Species	Station Numbers																	
	1	2	3	4a	4b	4c	5	6	7	8	9S	9B	10S	10B	11S	11B	12S	12B
Synedra ulna contracta				11						17								
Synedra ulna ramesi																		
Synedra ulna ulna				11											11			
Tabellaria fenestrata fenestrata	11																	
Tabellaria flocculosa flocculosa																		
Eunotia curvata curvata																		
Eunotia naegelii naegelii						11												
Achnanthes lanceolata lanceolata					11		11	14							11			
Achnanthes linearis linearis		34		23	46	68	11	14		68			11		68		81	28
Achnanthes microcephala microcephala	11	11	11	11	11	11		14	11	119	17	11		11				
Cocconeis placentula lineata																		
Diploneis puella puella																		
Frustulia rhomboides amphipleuroides						11												
Frustulia rhomboides saxonica					11													
Navicula sp. C	11	11																
Navicula aikenensis																		
Navicula cryptocephala	11	11		11	23	11		64		17	51	23	23				20	14
Navicula exigua capitata	11	23		23		11				17		11			11			
Navicula lateropunctata lateropunctata																		
Navicula minima minima				11														
Navicula mobiliensis minor									11									
Navicula mutica tropica																		

Amendment 2
(New)

ER Table 2.7.2-2h
Cherokee Nuclear Station
Sampling Period 8: 22-27 April 1974

Species	Station Numbers																	
	1	2	3	4a	4b	4c	5	6	7	8	9S	9B	10S	10B	11S	11B	12S	12B
Navicula pupula capitata	11						11											
Navicula pupula pupula															11			
Navicula rhyncocephala rhyncocephala								14										
Navicula schroeteri escambia				11														
Navicula symmetrica symmetrica												11						
Navicula viridula viridula																		
Pinnularia sp. A										17								
Pinnularia microstauron microstauron																		
Pinnularia obscura obscura																		
Gomphonema sp. A	23		11	11					11									
Gomphonema constrictum				11														
Gomphonema gracile					11													
Gomphonema parvulum	11								11									
Cymbella turgida	11													11				
Cymbella ventricosa		11								17				11				
Rhopalodia sp. A											17							
Hantzschia amphioxys capitata	11													11				14
Nitzschia acicularis												11						
Nitzschia clausii													23					
Nitzschia fonticola	11			11	46		28	11		34								
Nitzschia linearis								14										
Nitzschia palea	23			11	11		11	14	34	17					46			

Amendment 2
(New)

ER Table 2.7.2-2h
Cherokee Nuclear Station
Sampling Period 8: 22-27 April 1974

Species	Station Numbers																	
	1	2	3	4a	4b	4c	5	6	7	8	9S	9B	10S	10B	11S	11B	12S	12B
Nitzschia philippinarum																		
Surirella sp. B											17							
Surirella angustata					11	11			11	17							20	
Merismopedia tenuissima							4											
Microcystis aeruginosa											7							8
Oscillatoria sp. A								4										
Oscillatoria acutissima							4											
Oscillatoria agardhii				4						4								
Oscillatoria geminata								238							14			
Oscillatoria tenuis						4							4					
Anabaena sp. A																		
Anabaena affinis							4							8				

Amendment 2
(new)

ER Table 2.7.2-2h
Cherokee Nuclear Station
Sampling Period 8: 22-27 April 1974

Species	Station Numbers																
	13S	13B	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15Aa	15Ab	15Ac	16	17	18
Carteria cordiformis																	
Chlamydomonas sp. A				14													
Chlamydomonas polyrenoidaum	28	14	8							8							
Gonium pectorale																	
Gonium sociale																	
Ankistrodesmus falcatus	8		8	8													
Closteriopsis longissima																	
Kirchneriella lunaris						8											
Selenastrum westii		8	8	8													
Dictyosphaerium ehrenbergianum	14		14	8			8	8		22	8		21	14			
Crucigenia crucifera																	
Scenedesmus quadricauda						8											
Pediastrum biradiatum	14																
Cladophora glomerata							8										
Arthrodesmus octocornis			8														
Closterium venus																	
Cosmarium subcrenatum						8										7	
green filament A																	
unknown green colony							8	8	22					7		7	
unknown flagellate																	
Euglena elastica	36	50	8														
Phacus acuminatus																	
Phacus caudatus																	

Amendment 2
(New)

ER Table 2.7.2-2h
Cherokee Nuclear Station
Sampling Period 8: 22-27 April 1974

Species	Station Numbers																
	13S	13B	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15Aa	15Ab	15Ac	16	17	18
Phacus swirenkoi																	
Phacus sp. A																	
Trachelomonas hispida																	
Gymnodinium sp. A		8															
Glenodinium sp. A								8	8								
Peridinium sp. A																	
Arachnochloris minor														7			
Dinobryon divergens																	
Cyclotella sp. A		17															
Cyclotella sp. B								17						27			
Cyclotella stelligera		17						17									
Melosira granulata angustissima	14						20										
Melosira sp. B		51	34							17		55					
Melosira varians				17				17				55				47	
Microsiphona potamos	22	14					8		16	8						7	
Asterionella formosa gracillima						17	20										
Fragilaria construens venter				8													
Fragilaria crotonensis crotonensis								34					27		61		
Meridion circulare constrictum												27					
Synedra delicatissima angustissima																	
Synedra delicatissima delicatissima																	
Synedra rumpens rumpens						20											
Synedra socia socia																	

Amendment 2
(New)

ER Table 2.7.2-sh
Cherokee Nuclear Station
Sampling Period 8: 22-27 April 1974

Species	Station Numbers																	
	13S	13B	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15Aa	15Ab	15Ac	16	17	18
Synedra ulna contracta																24	
Synedra ulna ramesi																24	
Synedra ulna ulna			17	34							20		27				
Tabellaria fenestrata fenestrata																24	
Tabellaria flocculosa flocculosa	14																
Eunotia curvata curvata				17													
Eunotia naegelii naegelii																	
Achnanthes lanceolata lanceolata										24			27		20		
Achnanthes linearis linearis	14		17			51		34	47	47			27	27	81	71	71
Achnanthes microcephala microcephala				17				17		71							
Cocconeis placentula lineata															20		
Diploneis puella puella										24							
Frustulia rhomboides amphipleuroides																	
Frustulia rhomboides saxonica						17											
Navicula sp. C																	
Navicula aikenensis						17											
Navicula cryptocephala	28	51	34	34		17	40							27	20	24	
Navicula exigua capitata	14							17	24						20		
Navicula lateropunctata lateropunctata										24							
Navicula minima minima																	
Navicula mobiliensis minor							20										
Navicula mutica tropica			17			17											

Amendment 2
(New)

ER Table 2.7.2-2h
Cherokee Nuclear Station
Sampling Period 8: 22-27 April 1974

Species	Station Numbers																
	13S	13B	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15Aa	15Ab	15Ac	16	17	18
Navicula pupula capitata																	
Navicula pupula pupula																	
Navicula rhyncocephala rhyncocephala											20						
Navicula schroeteri escambia																	
Navicula symmetrica symmetrica															20		
Navicula viridula viridula		17										27					
Pinnularia sp. A																	
Pinnularia microstauron microstauron												27					
Pinnularia obscura obscura									24	24							
Gomphonema sp. A			17			34						27					
Gomphonema constrictum																	
Gomphonema gracile						17											
Gomphonema parvulum			17			17						55					
Cymbella turgida																	
Cymbella ventricosa		17						17		24							
Rhapolodia sp. A															20		
Hantzschia amphioxys capitata																	
Nitzschia acicularis				17													
Nitzschia clausii																	
Nitzschia fonticola		17	17	34				24				55	55	27	61		47
Nitzschia linearis																	
Nitzschia palea	14					34	40	34		47						24	

Amendment 2
(New)

ER Table 2.7.2-2h
Cherokee Nuclear Station
Sampling Period 8: 22-27 April 1974

Species	Station Numbers																
	13S	13B	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15Aa	15Ab	15Ac	16	17	18
Nitzschia philippinarum															61		
Surirella sp. B						17							27			24	
Surirella angustata													55				
Merismopedia tenuissima																	
Microcystis aeruginosa																	
Oscillatoria sp. A																	
Oscillatoria acutissima																	
Oscillatoria agardhii																	7
Oscillatoria geminata							14					14		7			
Oscillatoria tenuis																	
Anabaena sp. A												8					
Anabaena affinis																	7

Amendment 2
(New)

ER Table 2.7.2-2h
Cherokee Nuclear Station
Sampling Period 8: 22-27 April 1974

Species	Station Numbers 19	20	21	22	23
Carteria cordiformis					
Chlamydomonas sp. A				7	
Chlamydomonas polypyrenoidaum					
Gonium pectorale					
Gonium sociale					
Ankistrodesmus falcatus				7	
Closteriopsis longissima					
Kirchneriella lunaris					
Selenastrum westii					
Dictyosphaerium ehrenbergianum		21			7
Crucigenia crucifera					
Scenedesmus quadricauda					
Pediastrum biradiatum					
Cladophora glomerata					
Arthrodesmus octocornis					
Closterium venus					
Cosmarium subcrenatum					
green filament A					
unknown green colony					
unknown flagellate					
Euglena elastica					
Phacus acuminatus					
Phacus caudatus					

Amendment 2
(new)

ER Table 2.7.2-2h
Charokee Nuclear Station
Sampling Period 8: 22-27 April 1974

Species	Station Numbers 19	20	21	22	23
Phacus swirenkoi					
Phacus sp. A					
Trachelomonas hispida					
Gymnodinium sp. A		7			
Glenodinium sp. A					
Peridinium sp. A					
Arachnochloris minor					
Dinobryon divergens					
Cyclotella sp. A					
Cyclotella sp. B					
Cyclotella stelligera					
Melosira granulata angustissima					
Melosira sp. B		55			
Melosira varians					
Microsiphona potamos		21			7
Asterionella formosa gracillima					
Fragilaria construens venter					
Fragilaria crotonensis crotonensis					
Meridion circulare constrictum					
Synedra delicatissima angustissima					
Synedra delicatissima delicatissima					
Synedra rumpens rumpens					
Synedra socia socia					

Amendment 2
(New)

ER Table 2.7.2-2h
Cherokee Nuclear Station
Sampling Period 8: 22-27 April 1974 (Page 13 of 15)

Species	Station Numbers 19	20	21	22	23
Synedra ulna contracta					
Synedra ulna ramesi					
Synedra ulna ulna					
Tabellaria fenestrata fenestrata					
Tabellaria flocculosa flocculosa					
Eunotia curvata curvata					
Eunotia naegelii naegelii					
Achnanthes lanceolata lanceolata	31				
Achnanthes linearis linearis					
Achnanthes microcephala microcephala					
Cocconeis placentula lineata					
Diploneis puella puella					
Frustulia rhomboides amphipleuroides					
Frustulia rhomboides saxonica					
Navicula sp. C					
Navicula aikenensis					
Navicula cryptocephala					
Navicula exigua capitata					
Navicula lateropunctata lateropunctata	31				
Navicula minima minima					
Navicula mobiliensis minor		27			
Navicula mutica tropica	31				

Amendment 2
(New)

ER Table 2.7.2-2h
Cherokee Nuclear Station
Sampling Period 8: 22-27 April 1974 (Page 14 of 15)

	Station Numbers				
Species	19	20	21	22	23
Navicula pupula capitata					
Navicula pupula pupula					
Navicula rhyncocephala rhyncocephala					
Navicula schroeteri escambia					
Navicula symmetrica symmetrica					
Navicula viridula viridula					
Pinnularia sp. A					
Pinnularia microstauron microstauron					
Pinnularia obscura obscura					
Gomphonema sp. A					
Gomphonema constrictum		27			
Gomphonema gracile					
Gomphonema parvulum	31				
Cymbella turgida					
Cymbella ventricosa					
Rhapolodia sp. A					
Hantzschia amphioxys capitata					
Nitzschia acicularis					
Nitzschia clausii					
Nitzschia fonticola					
Nitzschia linearis					
Nitzschia palea					

Amendment 2
(new)

ER Table 2.7.2-2h
Cherokee Nuclear Station
Sampling Period 8: 22-27 April 1974 (Page 15 of 15)

Species	Station Numbers 19	20	21	22	23
Nitzschia philippinarum					
Surirella sp. B					
Surirella angustata					
Merismopedia tenuissima					
Microcystis aeruginosa					
Oscillatoria sp. A					
Oscillatoria acutissima					
Oscillatoria agardhii					
Oscillatoria geminata					7
Oscillatoria tenuis				7	
Anabaena sp. A					
Anabaena affinis					

Amendment 2
(New)

ER Table 2.7.2-2i
Cherokee Nuclear Station
Estimated Densities of Species of Phytoplankton, In no./ml, at
Sampling Stations on the Broad River System
Sampling Period 9: 20-25 May '74

Species	Station Numbers													
	4a	4b	4c	8	9S	9B	10S	10B	11	12S	12B	13S	13B	14Sa
Carteria cordiformis								4	4	7				
Chlamydomonas sp. A					11	4		39	4					
Gonium sociale					4					7				
Pandorina morum					7		14					7		
Ankistrodesmus falcatus					11	7	21	4	7	35	7	21	21	
Closteriopsis longissima														
Kirchneriella obesa			4	4	4									
Selenastrum westii							4							
Treubaria setigerum					4				4				7	
Dictyosphaerium ehrenbergianum							11							7
Actinastrum hantzschii								4			7			
Crucigenia crucifera						7						28		
Crucigenia tetrapedia														
Scenedesmus denticulatus					4	4			4					
Scenedesmus dimorphus					7			4				14		
Scenedesmus obliqus									4	7			14	
Scenedesmus quadricauda							14	4	4	63	7	21	14	
Pediastrum birdadiatum							4							
Cosmarium isthmium											7			
Staurastrum alternans									4					
Staurastrum margaritaceum														14
unidentified green colony		4					4							
Euglena elastica					11		18	14	4	28	7	154	63	
Phacus sp. A	4		4											
Phacus swirenkoi					4			4						
Trachelomonas hispida					4			4						
Trachelomonas similis									7					
Glenodinium sp. A				4	7		14			7		28		
Peridinium sp. A											7			
Arachnochloris minor					25		46	88	18	210	7	49	21	
Ophiocytium capitatum								4	4				7	
Dinobryon bavaricum						4								
Dinobryon divergens					7		4	7			7			
Cyclotella sp. A					41	54	1476	846	36	1224	63	117	775	27
Cyclotella sp. B							315	315		551	198	2304	388	36
Cyclotella sp. D								18	9	20				

Amendment 2
(New)

ER Table 2.7.2-2i
Cherokee Nuclear Station
Sampling Period 9: 20-25 May '74

Species	Station Numbers													
	4a	4b	4c	8	9S	9B	10S	10B	11	12S	12B	13S	13B	14Sa
Cyclotella stelligera		34	63	13		18	549	288	18	802	18	9	340	
Stephanodiscus sp. A						9	9							
Melosira sp. B				13	13	9								
Melosira granulata		7		7	7	18								
Melosira granulata angustissima			9					9	9					9
Melosira granulata augustissima spiralis		7												
Melosira varians			9						9					
Microsiphona potamos					81	7	25	28		483	14	126	70	
Asterionella formosa formosa	5		18	20	7	18		18	27	7	9		7	
Asterionella formosa gracillima														
Fragilaria vaucheriae					7									
Meridion circulare constrictum						9								
Synedra sp. B	5									7				
Synedra acus			9	7	7	18			18				13	
Synedra delicatissima angustissima													7	
Synedra fasciculata truncata														
Synedra pulchella		7					9					9		
Synedra rumpens familiaris					13	36	27	18	9	20	9		20	27
Synedra rumpens meneghiana		7						9					7	
Synedra rumpens rumpens			18	7					18					
Synedra socia	5				7					7		9		
Synedra ulna contracta			27		7	18	9		18					
Synedra ulna ramesi		20												
Synedra ulna ulna		20												
Tabellaria fenestrata									9					
Tabellaria flocculosa		7				9								
Eunotia curvata		7	9											
Eunotia pectinalis minor			9			18								
Eunotia monodon												9		
Achnanthes sp. A		13	9			18			54		9		7	
Achnanthes sp. B		7	36	26	7	9	18		36	13	18			36
Achnanthes sp. C			27			9				13				
Achnanthes sp. E			9											

Amendment 2
(New)

Table 2.7.2-2i
Cherokee Nuclear Station
Sampling Period 9: 20-25 May '74

Species	Station Numbers													
	4a	4b	4c	8	9S	9B	10S	10B	11	12S	12B	13S	13B	14Sa
Achnanthes affinis			18											
Achnanthes exigua														9
Achnanthes lanceolata dubia							9			7				
Achnanthes lanceolata lanceolata			9		20	9	18		9	13				
Achnanthes linearis linearis	25	20	45	48	7	18		18		13		27	7	9
Achnanthes linearis curta			18									9		
Achnanthes microcephala	20		54		7		9					9		
Cocconeis placentula											9		7	9
Rhoicosphenia curvata														
Amphipleura pellucida													7	
Frustulia rhomboides amphipleuroides														
Frustulia rhomboides capitata		7					18							
Frustulia rhomboides crassinervia										7				
Frustulia rhomboides rhomboides						27								9
Frustulia rhomboides viridula												9		
Gyrosigma obtusatum			9											
Navicula sp. D			9											
Navicula sp. F			9					9	9			9		
Navicula accomoda					7	9	9							9
Navicula aikenensis		7				9	9							
Navicula capitata									18			9		
Navicula contenta biceps			9				9							
Navicula cryptocephala		13	27	20	26	63	54	36	27	68	45		41	18
Navicula decussis			9											
Navicula exigua capitata												36		
Navicula hambergii							9	18	18	7	18		7	18
Navicula heufleri leptocephala			36	7		18	18		18					18
Navicula mobiliensis minor		13	9											
Navicula mutica tropica	5	13				9			9	7			7	
Navicula notha	5	20	18			9	36	9			9		34	
Navicula pupula capitata								9	9		9	9	7	
Navicula pupula pupula												18		
Navicula radiosa parva			18	13					9					
Navicula rhyncocephala		7		7	7		18		9			18		9
Navicula schroeteri escambia														
Navicula symmetrica		20	9			9			9	7	18			18

Amendment 2
(new)

ER Table 2.7.2-2i
Cherokee Nuclear Station
Sampling Period 9: 20-25 May '74

Species	Station Numbers													
	4a	4b	4c	8	9S	9B	10S	10B	11	12S	12B	13S	13B	14Sa
Navicula viridula rostellata						9							7	
Navicula viridula viridula				7	7									
Neidium iridis impliatum												9		
Pinnularia abaujensis rostrata			18					9						
Pinnularia biceps												9		
Pinnularia intermedia														
Pinnularia microstauron														
Pinnularia obscura														
Pinnularia subcapitata paucistriata						18							7	
Stauroneis sp. A												9		
Stauroneis anceps anceps														
Stauroneis anceps gracilis														
Gomphonema sp. A	5	13	18	7		45	9		63	7		18	27	9
Gomphonema sp. B		13			13									
Gomphonema sp. D														
Gomphonema sp. E									9					
Gomphonema angustatum														
Gomphonema gracile														
Gomphonema parvulum														
Cymbella hauckii		7												
Cymbella naviculiformis					7								7	
Cymbella norvegica														
Cymbella obtusiuscula			9											
Cymbella tumida			9						9			9		
Cymbella turgida					7									
Cymbella ventricosa		7	18					9	9					
Rhopalodia sp. A		7	9	7		9	18	9					13	18
Hantzschia amphioxys capitata	5	13	18				9							
Nitzschia acicularis		7		13		18	27	9		34				
Nitzschia clausii			9											
Nitzschia fonticola			9				18			7		9		
Nitzschia ignorata							9					9		
Nitzschia lancettula												9		
Nitzschia linearis			27			9								
Nitzschia palea	10	48		20	13	9	36	9	9	20	18	36	13	18
Nitzschia philipinnarum		13	81	26	54	72	90	108	99	34	90		88	45

Amendment 2
(New)

Species	Station Numbers													
	4a	4b	4c	8	9S	9B	10S	10B	11	12S	12B	13S	13B	14Sa
Nitzschia sigmoidea									9					
Surirella sp. A						9							7	
Surivella sp. B														
Surirella angustata		13	9	7		18		9		20			20	9
Surirella minuta														
Chroococcus limneticus														
Chroococcus minutus							4							
Chroococcus prescotti	7	4	4											
Microcystis aeruginosa					7									
Oscillatoria geminata						4	35	21	4	28		7		
Oscillatoria limosa														
Anabaena sp. A								4						
Anabaena affinis														
Anabaena levanderi				4			4							
Rhaphidiopsis curvata		4		4									7	

Amendment 2
(New)

ER Table 2.7.2-2i
Cherokee Nuclear Station
Sampling Period 9: 20-25 May '74

Species	Station Numbers													
	14Sb	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	19	21	23
Carteria cordiformis														
Chlamydomonas sp. A														
Gonium sociale														
Pandorina morum														
Ankistrodesmus falcatus	7		14				20	7		7		21		
Closteriopsis longissima			7											
Kirchneriella obesa														
Selenastrum westii														
Treubaria setigerum														
Dictyosphaerium ehrenbergianum							7							
Actinastrum hantzschii														
Crucigenia crucifera														
Crucigenia tetrapedia												7		
Scenedesmus denticulatus			7											
Scenedesmus dimorphus								7						
Scenedesmus obliqus														
Scenedesmus quadricauda		7			7		7	7	14	7				
Pediastrum birdadiatum														
Cosmarium isthmium														
Staurastrum alternans														
Staurastrum margaritaceum		7							7		7			
unidentified green colony														
Euglena elastica	7	14	7	21	7			7	7	7			4	
Phacus sp. A														
Phacus swirenoi												7		
Trachelomonas hispida														
Trachelomonas similis		7												
Glenodinium sp. A		7		7										
Peridinium sp. A														
Arachnochloris minor	7				14						7			
Ophiocytium capitatum								7						
Dinobryon bavaricum														
Dinobryon divergens														
Cyclotella sp. A	9	36				13								
Cyclotella sp. B							18				18			
Cyclotella sp. D			14											

Amendment 2
(New)

Species	Station Numbers													
	14Sb	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	19	21	23
Cyclotella stelligera	18	27	42	20	9	7	18	27		23	18			
Stephanodiscus sp. A							9							
Melosira sp. B									13		9			
Melosira granulata									13					
Melosira granulata angustissima		9		7	18	7							5	
Melosira granulata augustissima spiralis														
Melosira varians														
Microsiphona potamos	7				7	7		14	7	28	28	28		
Asterionella formosa formosa		9			9	27			7	11	9		5	
Asterionella formosa gracillima														
Fragilaria vaucheriae														
Meridion circulare constrictum														
Synedra sp. B														
Synedra acus	9	18	14	7										
Synedra delicatissima angustissima														
Synedra fasciculata truncata				7										
Synedra pulchella		9												
Synedra rumpens familiaris	18		14											
Synedra rumpens meneghiana		9												
Synedra rumpens rumpens			42	7		27					9			
Synedra socia					18				7					
Synedra ulna contracta			14						7	11	9			
Synedra ulna ramesi			14											
Synedra ulna ulna					18						9			
Tabellaria fenestrata														
Tabellaria flocculosa														
Eunotia curvata				7										
Eunotia pectinalis minor														
Eunotia monodon														
Achnanthes sp. A	36	27	98	41		27								
Achnanthes sp. B			56	20										
Achnanthes sp. C														
Achnanthes sp. E														

Amendment 2
(New)

ER Table 2.7.2-2i
Cherokee Nuclear Station
Sampling Period 9: 20-25 May '74

Species	Station Numbers													
	14Sb	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	19	21	23
Achnanthes affinis														
Achnanthes exigua														
Achnanthes lanceolata dubia														
Achnanthes lanceolata lanceolata	18		14	13	9		9	18		23	9			
Achnanthes linearis linearis		36	14		45	7	72	9	20	125	18			
Achnanthes linearis curta														
Achnanthes microcephala	9				18		18		7	11	27			
Cocconeis placentula														
Rhoicosphenia curvata			14							11				
Amphipleura pellucida														
Frustulia rhomboides amphipleuroides							9							
Frustulia rhomboides capitata				7										
Frustulia rhomboides crassinervia														
Frustulia rhomboides rhomboides														
Frustulia rhomboides viridula														
Gyrosigma obtusatum														
Navicula sp. D														
Navicula sp. F														
Navicula accomoda				7										
Navicula aikenensis			28							11				
Navicula capitata														
Navicula contenta biceps							9							
Navicula cryptocephala		27				7								
Navicula decussis														
Navicula exigua capitata					9		9				9			
Navicula hambergii			28	7					7					
Navicula heufleri leptocephala														
Navicula mobiliensis minor					9		27			11	18			
Navicula mutica tropica	18		28		9	7								
Navicula notha	36	45	42	13		13		9		11				
Navicula pupula capitata						7								
Navicula pupula pupula														
Navicula radiosa parva					9									
Navicula rhyncocephala				7	9		27	18	34	46			5	
Navicula schroeteri escambia					27		27		7	23				
Navicula symmetrica		9	14				18							

Amendment 2
(New)

Species	Station Numbers												
	14Sb	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	19	21	23
Navicula viridula rostellata	9	9	28						7		9			
Navicula viridula viridula				7	9	7	9			34				
Neidium iridis impliatum											9			
Pinnularia abaujensis rostrata														
Pinnularia biceps														
Pinnularia intermedia														
Pinnularia microstauron		9												
Pinnularia obscura								9						
Pinnularia subcapitata paucistriata														
Stauroneis sp. A			14											
Stauroneis anceps anceps			14											
Stauroneis anceps gracilis						7								
Gomphonema sp. A	9	18	28	20	27			9		23				
Gomphonema sp. B														
Gomphonema sp. D		9												
Gomphonema sp. E		9												
Gomphonema angustatum	18			20										
Gomphonema gracile										11		2		
Gomphonema parvulum							9				9			
Cymbella hauckii														
Cymbella naviculiformis		9												
Cymbella norvegica														
Cymbella obtusiuscula														
Cymbella tumida			14						7					
Cymbella turgida			14			7								
Cymbella ventricosa		9		7				9	20					
Rhopalodia sp. A	18		14	7		20								
Hantzschia amphioxys capitata				7										
Nitzschia acicularis							9				9			
Nitzschia clausii														
Nitzschia fonticola						13					27			
Nitzschia ignorata														
Nitzschia lancettula														
Nitzschia linearis				7									5	
Nitzschia palea	9	9		7	9			27		80	9			
Nitzschia philipinnarum	45	72	84	41	68					23				

Amendment 2
(New)

ER Table 2.7.2-2i
Cherokee Nuclear Station
Sampling Period 9: 20-25 May '74

Species	Station Numbers													
	14Sb	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	19	21	23
Nitzschia sigmoidea														
Surirella sp. A						7								
Surivella sp. B			14	7										
Surirella angustata		9				7				11				
Surirella minuta														
Chroococcus limneticus		7												
Chroococcus minutus														
Chroococcus prescotti														
Microcystis aeruginosa														
Oscillatoria geminata	7		14		7		7	28	14	14			4	
Oscillatoria limosa	7													
Anabaena sp. A														
Anabaena affinis							7							
Anabaena levanderi														
Rhaphidiopsis curvata														

Amendment 2
(New)

ER Table 2.7.2-2j
Cherokee Nuclear Station
Estimated Densities of Species of Phytoplankton, In no./ml, at
Sampling Stations on the Broad River System
Sampling Period 10: 17-22 June '74

Species	4a	4b	4c	8	9S	9B	10S	10B	11	12S	12B	13S	13B	14Sa	14Sb	14Sc
Chamydomonas sp. A							8	16				8	58			
Chlamydomonas globosa							23	16		16					8	8
Chlamydomonas polypyrenoideum					8											
Gonium sociale						8				16		8		8		
Schroederia setigerum				4	8	8	8	8	8		16					
Ankistrodesmus falcatus	12	4	16	16	62	31	31	47	8	78	8	93	47	47		
Kirchneriella obesa					16											
Selenastrum westii			4		16								23			
Micractinium pusillum							8			8						
Dictyosphaerium ehrenbergianum													12			
Coelastrum microporum													23			
Crucigenia tetrapedia														31		
Scenedesmus denticulatus						8					8					
Sconedusmus dimorphus				4												
Sconedusmus obliquus								8								
Scenedesmus quadricauda					16	23	8	23		23	8	62	116		8	8
Pediastrum biradiatum								8								
Pediastrum duplex clathratum													12			
Cosmarium subcrenatum		8														
Staurastrum gracile		4														
Staurastrum polymorphum													12			
unidentified green filament A			4						8	8						

ER Table 2.7.2-2j
Cherokee Nuclear Station
Sampling Period 10: 17-22 June '74

Species	Station Numbers												
	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	19	21	23
Chamydomonas sp. A													
Chlamydomonas globosa			8										
Chlamydomonas polypyrenoideum													
Gonium sociale													
Schroederia setigerum													
Ankistrodesmus falcatus		8	16	8		8	12	8	12				
Kirchneriella obesa													
Selenastrum westii					4						Sample destroyed		No organisms found
Micractinium pusillum													
Dictyosphaerium ehrenbergianum													
Coelastrum microporum													
Crucigenia tetrapedia													
Scenedesmus denticulatus													
Sconedusmus dimorphus													
Sconedusmus obliquus	8												
Scenedesmus quadricauda	8					8							
Pediastrum biradiatum													
Pediastrum duplex clathratum													
Cosmarium subcrenatum													
Staurastrum gracile													
Staurastrum polymorphum													
unidentified green filament A				8		4				4			

Amendment 2
(New)

ER Table 2.7.2-2j
Cherokee Nuclear Station
Sampling Period 10: 17-22 June '74

Species	Station Numbers															
	4a	4b	4c	8	9S	9B	10S	10B	11	12S	12B	13S	13B	14Sa	14Sb	14Sc
Unidentified green colony	8	4	27	16	16	8				8	16		70	31	31	
Euglena acus rigida																
Euglena elastica							23			233	47	93				
Phacus caudatus										16						
Phacus sp. A													23			
Trachelomonas hispida				4												
Trachelomonas playfairii								8				8				
Glenodinium sp. A					8		16									
Arachnochloris minor							109				8	23				
Rhizochrysis limnetica																
Dinobryon divergens																
Cyclotella sp. A						153	1360	467		80						9
Cyclotella sp. B										148	56	187				
Cyclotella sp. C					170					11						
Cyclotella sp. D					17											
Cyclotella stelligera		17	34	42	65	34	251	274	28	46	42	17	34	11	11	18
Melosira granulata								11	14						11	
Melosira granulata angustissima			17		17	17	36							11		27
Melosira varians																
Microsiphona potamos							8									
Asterionella formosa			17			17		23	42		14	17	17	11		18
Fragilaria crotonensis	14															
Fragilaria vaucheriae																

Amendment 2
(New)

ER Table 2.7.2-2j
Cherokee Nuclear Station
Sampling Period 10: 17-22 June '74

Species	Station Numbers												
	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	19	21	23
Unidentified green colony	8	31	47	31	16	12	23	4	19				
Euglena acus rigida						4							
Euglena elastica			16							4			
Phacus caudatus													
Phacus sp. A													
Trachelomonas hispida													
Trachelomonas playfairii													
Glenodinium sp. A													
Arachnochloris minor						8		4					
Rhizochrysis limnetica					4								
Dinobryon divergens		8					4						
Cyclotella sp. A			14							20			
Cyclotella sp. B	315						28						
Cyclotella sp. C					17								
Cyclotella sp. D													
Cyclotella stelligera	36	68	28	28			14	46	51				
Melosira granulata	9					14	14						
Melosira granulata angustissima								11					
Melosira varians					51		14						
Microspiphona potamos													
Asterionella formosa	18	34	14	14		42	14	11	17				
Fragilaria crotonensis							14	23					
Fragilaria vaucheriae					17								

Amendment 2
(New)

ER Table 2.7.2-2j
Cherokee Nuclear Station
Sampling Period 10: 17-22 June '74

Species	Station Numbers														
	4a	4b	4c	8	9S	9B	10S	10B	11	12S	12B	13S	13B	14Sa	14Sb
Meridion circulare constrictum				14		17									
Opephora martyi									14						
Synedra sp. B											14				
Synedra acus									14						
Synedra delicatissima															
Synedra pulchella															
Synedra rumpens familiaris					17			11	14				17		11
Synedra rumpens rumpens	28	17	34												
Synedra ulna contracta													34		
Synedra ulna ulna												17		11	
Tabellaria fenestrata	14														
Eunotia exigua	14										14	17		11	
Eunotia incisa						17					14	17		11	11
Eunotia pectinalis minor						17			42						
Achnanthes sp. A			17				72	23				17			
Achnanthes sp. B	28	17	68			17		57	28	23		17		23	34
Achnanthes sp. C			17	14					14				17		
Achnanthes exigua															
Achnanthes lanceolata dubia															
Achnanthes lanceolata lanceolata				14			36	11			14	17		11	
Achnanthes linearis	28	17	68	42	51	51		11	14	23	84		51	46	46
Achnanthes microcephala														11	
Coeconeis placentula			17												
Rhoicosphenia curvata													17		

Amendment 2
(New)

ER Table 2.7.2-2j
Cherokee Nuclear Station
Sampling Period 10: 17-22 June '74

Species	Station Numbers													
	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	19	21	23
Meridion circulare constrictum														
Opephora martyi														
Synedra sp. B														
Synedra acus	27				28				11	17				
Synedra delicatissima									23					
Synedra pulchella			11											
Synedra rumpens familiaris	18			28			28	14						
Synedra rumpens rumpens								56	11					
Synedra ulna contracta	9			14					11	17				
Synedra ulna ulna					28		14							
Tabellaria fenestrata		9												
Eunotia exigua	18			14										
Eunotia incisa														
Eunotia pectinalis minor														
Achnanthes sp. A				14	42									
Achnanthes sp. B	36	27	34		42	17	28		23	68				
Achnanthes sp. C						17	14		11					
Achnanthes exigua		9												
Achnanthes lanceolata dubia										17				
Achnanthes lanceolata lanceolata	18	9			14	34				17				
Achnanthes linearis	18	63	114	56	70	34	28	14	11	17				
Achnanthes microcephala					14									
Coeconeis placentula														
Rhoicosphenia curvata														

Amendment 2
(New)

ER Table 2.7.2-2j
Cherokee Nuclear Station
Sampling Period 10: 17-22 June '74

Species	Station Numbers														
	4a	4b	4c	8	9S	9B	10S	10B	11	12S	12B	13S	13B	14Sa	14Sb
Frustulia rhomboides crassinervia															
Frustulia weinholdii									14			17			
Gyrosigma obtusatum				14											
Navicula sp. C						17						34			
Navicula accomoda				14					14		14		17		
Navicula aikenensis								11			14	34			
Navicula capitata							36								
Navicula contenta biceps															
Navicula crypto cephala	14	17		28		102	36	34	14	57	70	204		11	
Navicula elginensis	14				17	17									
Navicula exigua capitata								11							
Navicula hambergii		17		84		51			28	11	14	17		34	57
Navicula heufleri leptocephala			17				36								34
Navicula mutica tropica	14														
Navicula notha	42	51	68			68	36	11				85	102	103	23
Navicula placenta											14	17			
Navicula pupula capitata			17	14							14				
Navicula pupula pupula											14			11	
Navicula radiosa parva		34		28				11	14						
Navicula rhyncocephala			17					11	14		14	17	51		
Navicula symmetrica									28					11	23
Navicula viridula rostellata															
Pinnularia biceps															

Amendment 2
(New)

ER Table 2.7.2-2j
Cherokee Nuclear Station
Sampling Period 10: 17-22 June '74

Species	Station Numbers													
	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	19	21	23
Frustulia rhomboides crassinervia									11					
Frustulia weinholdii				14										
Gyrosigma obtusatum										17				
Navicula sp. C	9													
Navicula accomoda			11	28					34					
Navicula aikenensis			34		14									
Navicula capitata														
Navicula contenta biceps		9												
Navicula crypto cephala	81	63	68	14	112	85	42	14	57	17				
Navicula elginensis			11											
Navicula exigua capitata														
Navicula hambergii	45	27			14	17	28	28	11	34	7		14	
Navicula heufleri leptocephala		27			14			14		68				
Navicula mutica tropica											7			
Navicula notha	36		80	28	42	34	28	42		51				
Navicula placenta														
Navicula pupula capitata														
Navicula pupula pupula	27	9								17				
Navicula radiosa parva				14										
Navicula rhyncocephala		18	34						11	34				
Navicula symmetrica				14						34				
Navicula viridula rostellata					14									
Pinnularia biceps						34								

Amendment 2
(New)

ER Table 2.7.2-2j
Cherokee Nuclear Station
Sampling Period 10: 17-22 June '74

Species	Station Numbers													
	4a	4b	4c	8	9S	9B	10S	10B	11	12S	12B	13S	13B	14Sa
Pinnularia hilseana														
Pinnularia microstauron														
Pinnularia subcapitata paucistriata														
Stauroneis anceps anceps	14													
Stauroneis anceps gracilis													34	23
Stauroneis obtusa											42			
Stauroneis smithii incisa				28										
Stauroneis smithii smithii							36					17		
Gomphonema sp. A	42	34	34						28		14	51	51	23
Gomphonema angustatum						17								
Gomphonema parvulum				28										
Cymbella gracilis		17	17											
Cymbella naviculiformis											14			
Cymbella tumida			17								14		17	11
Cymbella ventricosa	14		17			17								23
Rhopalodia sp. A					34		72	23		11	42		17	
Hantzschia amphioxys capitata		17										17	17	
Nitzschia acicularis			34		17	17	36	46	42	46	56	17		
Nitzschia clausii						17								
Nitzschia fonticola							36							
Nitzschia linearis		17							14					
Nitzschia palea	14	17	17				36			34	28	85		
Nitzschia paradoxa									11					

ER Table 2.7.2-2j
Cherokee Nuclear Station
Sampling Period 10: 17-22 June '74

Species	Station Numbers														
	14Sb	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	19	21	23
Pinnularia hilseana								14							
Pinnularia microstauron	11						17					7			
Pinnularia subcapitata paucistriata				11						11					
Stauroneis anceps anceps						28				11					
Stauroneis anceps gracilis															
Stauroneis obtusa															
Stauroneis smithii incisa						28									
Stauroneis smithii smithii															
Somphonema sp. A	23	27	27	34		14	34	14	70						
Gomphonema angustatum	34						34	42		11	17				
Gomphonema parvulum		36													
Cymbella gracilis															
Cymbella naviculiformis		18		11											
Cymbella tumida				11	14				14	23	51				
Cymbella ventricosa	34			11	28				28		17				
Rhopalodia sp. A		18						14	28	11	17				
Hantzschia amphioxys capitata			18	11							17				
Nitzschia acicularis		18	45		14	42		14	14	23					
Nitzschia clausii							17								
Nitzschia fonticola															
Nitzschia linearis															
Nitzschia palea			81		28				42	11	34				
Nitzschia paradoxa	11														

Amendment 2
(New)

ER Table 2.7.2-2j
Cherokee Nuclear Station
Sampling Period 10: 17-22 June '74

Species	Station Numbers														
	4a	4b	4c	8	9S	9B	10S	10B	11	12S	12B	13S	13B	14Sa	14Sb
Nitzschia philippinarum		85	119	98	136	204		68	182	46	112	187	102	57	103
Nitzschia pseudoamphioxys		17													
Nitzschia sigmoidea															11
Cymatopleura sp. A			17												23
Surirella angustata				14							14		17		
Surirella elegans							8								
Aphanocapsa sp. A								8							
Chroococcus limneticus					8										
Coelosphaerium naegelianum															
Merismopedia elegans								8		23		78	47		
Merismopedia tenuissima					8							39			
Microcystis aeruginosa									16				12		
Oscillatoria agardhii	12	12	4		8	16	8	16	16	23	16	124	116	23	8
Oscillatoria geminata		4				8	8		31	8					
Anabaena affinis	50	89	39	47	39	70	23	62	70	16	70	23	116	85	70
Anabaena levanderi															

Amendment 2
(New)

ER Table 2.7.2-2j
Cherokee Nuclear Station
Sampling Period 10: 17-22 June '74

Species	Station Numbers													
	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	19	21	23
Nitzschia philippinarum	126	135	171	60	126	204	56	98	171	170				
Nitzschia pseudoamphioxys														
Nitzschia sigmoidea							14			34				
Cymatopleura sp. A	9	9		14						17				
Surirella angustata		18		14										
Surirella elegans														
Aphanocapsa sp. A														
Chroococcus limneticus														
Coelosphaerium naegelianum		8												
Merismopedia elegans														
Merismopedia tenuissima														
Microcystis aeruginosa														
Oscillatoria agardhii											4			
Oscillatoria geminata	8		16		8	12		8	4	4				
Anabaena affinis														
Anabaena levanderi	101	620	132	93	23	77	54	50	54	97	62			

Amendment 2
(New)

ER Table 2.7.2-2k
Cherokee Nuclear Station
Estimated Densities of Species of Phytoplankton, in no./ml, at
Sampling Stations on the Broad River System
Sampling Period 11: 15-20 July '74

SPECIES	Station Numbers 4a	4b	4c	9S	9B	10S	10B	11S	12S	12B	13S	13B	14Sa	14Sb
Chlamydomonas sp. A		4	4	21	14	28	35		7					14
Chlamydomonas polypyrenoideum												28		
Gonium pectorale						4							4	
Gonium sociale									28			4		4
Pandorina morum	4	4	14				4	7	7		7	7	7	
Asterococcus limneticus														
Tetraedron gracile														
Tetraedron minimum														
Tetraedron regulare torsum									7					
Ankistrodesmus convolutus		4												
Ankistrodesmus falcatus	31	31	39	105	77	112	14	42	49	49	147	182	105	63
Closteriopsis longissima														
Kirchneriella lunaris														
Oocystis sp. A							7	7						
Selenastrum westii	7	4	14	7		35	14		7		42	84	14	4
Treubaria setigerum											7		7	
Golenkinia paucispina				14	14	7								
Dictyosphaerium ehrenbergianum						14			7		14	21		14
Coelastrum microporum	4											4		
Crucigenia crucifera			4		7									
Scenedesmus bijuga	4		4		7					4	7		14	
Scenedesmus denticulatus		4		21	28		21	4			21			
Scenedesmus dimorphus					4		7		4		14	7	4	
Scenedesmus obliquus	4		4	7		7	7		35			7		
Scenedesmus quadricauda		11	4	14	21	14	35	21	56	49	91	168		
Pediastrum biradiatum												7	4	
Pediastrum duplex clathratum											4			
Pediastrum duplex gracilimum						4								
Mougeotia sp. A	4													
Closterium ehrenbergii														
Cosmarium isthmium														7
Cosmarium subcrenatum														
Cosmarium sp. A														
Staurastrum cuspidatum														
Staurastrum gracile		4				4	7							
Staurastrum hexacerum											4			
Unidentified green filament A														7
Unidentified green colony	4	4	4	7	49	21			7			7		7
Unidentified green filament B	4					7	7				4	7		
Euglena acus rigida					4									
Euglena elastica		7		7	14	4	7	7	4	7	28	21		14
Phacus caudatus	4	4		7								4		7
Phacus swirenkoi														
Trachelomonas hispida						7								
Trachelomonas playfairii	7		7								4			
Trachelomonas schauinslandii					4							14		
Trachelomonas similis														
Trachelomonas varians				21	4									

Amendment 2
(New)

ER Table 2.7.2-2k
Cherokee Nuclear Station
Sampling Period 11: 15-20 July '74

Species	Station Numbers 14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	19	21	23
Chlamydomonas sp. A	21	14			7	7	21	14						
Chlamydomonas polypyrenoideum														
Gonium pectorale														
Gonium sociale											7			
Pandorina morum							7	4						
Asterococcus limneticus			7											
Tetraedron gracile				7										
Tetraedron minimum	4							4		7				
Tetraedron regulare torsum														
Ankistrodesmus convolutus														
Ankistrodesmus falcatus	21	91	70	56	105	49	98	49	35	14	70			
Closteriopsis longissima								4						
Kirchneriella lunaris							7							
Oocystis sp. A					7									
Selenastum westii	7	14	14	7	7		14			14				
Treubaria setigerum														
Golenkinia paucispina														
Dictyosphaerium ehrenbergianum	7	14	7		7		21	7				SAMPLE NOT TAKEN		
Coelastrum microporum														
Crucigenia crucifera	11			7			7							
Scenedesmus bijuga	7	4	7	7			7							
Scenedesmus denticulatus	7						7		7					
Scenedesmus dimorphus	4					14								
Scenedesmus obliquus														
Scenedesmus quadricauda	14	7	7	21	7		7				7			
Pediastrum biradiatum									7					
Pediastrum duplex clathratum														
Pediastrum duplex gracilimum														
Mougeotia sp. A	7								7					
Closterium ehrenbergii											4			
Cosmarium isthmium														
Cosmarium subcrenatum			7											7
Cosmarium sp. A										7				
Staurastrum cuspidatum										7				
Staurastrum gracile														
Staurastrum hexacerum									14					
Unidentified green filament A					4		7		14	4			7	
Unidentified green colony	7		7		7	7			7	7	7			
Unidentified green filament B														
Euglena acus rigida			4		4									
Euglena elastica		14		21	21	14	21	7		14				
Phacus caudatus														
Phacus swirenkoi														
Trachelomonas hispida														
Trachelomonas playfairii														
Trachelomonas schauinslandii														
Trachelomonas similis														
Trachelomonas varians														

Amendment 2
(New)

ER Table 2.7.2-2k
Cherokee Nuclear Station
Sampling Period II: 15-20 July '74

SPECIES	Station Numbers													
	4a	4b	4c	9S	9B	10S	10B	11S	12S	12B	13S	13B	14Sa	14Sb
Glenodinium sp. A								7	7		7			
Peridinium sp. A			4		21		7					4		7
Arachnochloris minor					7		42							
Ophiocytium capitatum				14	14	7	7	7	7	14	28	28	21	14
Dinobryon divergens					7					35				
Cyclotella sp. A	137	36		638	730	83	153	1156	194	81	923	707	117	252
Cyclotella sp. B	11			217	68	18		136			57	11		18
Cyclotella sp. C				11	11				23	9		11		
Cyclotella sp. D				11	11					9	11			9
Cyclotella stelligera	34	18	9	23		7		68	11	63	46	57		9
Melosira granulata angustissima										9	23			
Melosira granulata	11	9	18					17				11		
Melosira varians							17							
Microsiphona potamos														
Asterionella formosa formosa		18	9	11										45
Fragilaria construens venter													9	
Meridion circulare constrictum														
Synedra acus acus														
Synedra delicatissima delicatissima														
Synedra fasciculata truncata														
Synedra pulchella pulchella												11		9
Synedra rumpens familiaris	11	9												9
Synedra rumpens rumpens														
Synedra ulna contracta	11	9												9
Synedra ulna ulna														9
Tabellaria fenestrata fenestrata										9				
Eunotia curvata curvata			9											
Eunotia exigua exigua					11					9	11	11		
Eunotia incisa incisa	11				11						11			
Eunotia pectinalis minor														
Achnanthes sp. A	11		9		11						11			27
Achnanthes sp. B				11			34			36		11	27	9
Achnanthes sp. C	11				11									
Achnanthes exigua exigua												11		
Achnanthes lanceolata dubia	11					4								
Achnanthes lanceolata lanceolata			11					34		9				
Achnanthes linearis linearis	11		11							45		23		
Achnanthes microcephala microcephala										9	11		9	
Cocconeis placentula														
Cocconeis placentula lineata	11									9	11			
Rhoicosphenia curvata curvata										9				
Frustulia rhomboides amphipleuroides														
Frustulia rhomboides rhomboides												11		
Frustulia weinholdii weinholdii								17						
Gyrosigma obtusatum obtusatum							17							
Navicula sp. C		9										11		
Navicula accomoda												23		
Navicula elkensis												11		
Navicula angusta														

Amendment 2
(New)

ER Table 2.7.2-2k
Cherokee Nuclear Station
Sampling Period 11: 15-20 July '74

SPECIES	Station Numbers 14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	19	21	23
Glenodinium sp. A											7			
Peridinium sp. A	21	14		14	14		7	7		7	7			7
Arachnochloris minor														
Ophiocytium capitatum	14	7	7	21	7	21								
Dinobryon divergens								4						
Cyclotella sp. A	57	27	11	54	28	57	182	114	336	80	153		27	11
Cyclotella sp. B				9				23		11	18			
Cyclotella sp. C							11	23						
Cyclotella sp. D			11		14						9			
Cyclotella stelligera	11	9	11	9	70		11	11	14	11				
Melosira granulata angustissima				18	23	11					9			
Melosira granulata	11					11								
Melosira varians														
Microsiphona potamos									7					
Asterionella formosa formosa	11			9		11					18			
Fragilaria construens venter														11
Meridion circulare constrictum		9												
Synedra acus acus							11		14	11				
Synedra delicatissima delicatissima										11				
Synedra fasciculata truncata	11				14									
Synedra pulchella pulchella				9		11								
Synedra rumpens familiaris						11				11				
Synedra rumpens rumpens										11				
Synedra ulna contracta						11								
Synedra ulna ulna			11											
Tabellaria fenestrata fenestrata				9		11	11							
Eunotia curvata curvata														
Eunotia exigua exigua														11
Eunotia incisa incisa											9			
Eunotia pectinalis minor														11
Achnanthes sp. A			11							11				
Achnanthes sp. B						11								
Achnanthes sp. C				9				11	14					
Achnanthes exigua exigua														
Achnanthes lanceolata dubia									14	11				
Achnanthes lanceolata lanceolata	11										18		9	
Achnanthes linearis linearis		9	11	27	14	11	23		14	34	36			
Achnanthes microcephala microcephala								11	14		9			
Cocconeis placentula						23								
Cocconeis placentula lineata														
Rhoicosphenia curvata curvata													9	
Frustulia rhomboides amphipleuroides									14					
Frustulia rhomboides rhomboides						11								
Frustulia weinholdii weinholdii														
Gyrosigma obtusatum obtusatum									14					
Navicula sp. C			11						14					
Navicula accomoda						11			14					
Navicula aikenensis		9					11		28	23				
Navicula angusta											9			

Amendment 2
(New)

ER Table 2.7.2-2k
Cherokee Nuclear Station
Sampling Period 11: 15-20 July '74

SPECIES	Station Numbers 4a	4b	4c	9S	9B	10S	10B	11	12S	12B	13S	13B	14Sa	14Sb
Navicula capitata capitata												11		
Navicula cryptocephala	80	45	18				17	17	23	9	34	57	27	45
Navicula hambergii hambergii	11	27		11	23					18	11		9	
Navicula mobiliensis minor					11									
Navicula mutica tropica										9	11			
Navicula notha notha	11	9		11	11		17				34			27
Navicula pupula capitata											11			
Navicula pupula pupula		9								9				
Navicula radiosa parva													9	
Navicula rhynococephala rhyncocephala	11				11					27		11		23
Navicula symmetrica symmetrica	34								23					9
Navicula viridula rostellata	23									18				
Navicula viridula viridula			9											
Neidium binode		9												
Pinnularia biceps biceps		9												
Pinnularia borealis rectangularis														
Pinnularia subcapitata paucistriata														
Stauroneis smithii smithii														
Gomphonema sp. A		9	23	23							23	11	9	
Gomphonema angustatum		9			4									
Gomphonema parvulum						17	17							
Cymbella naviculiformis														
Cymbella tumida	23													18
Cymbella turgida														
Cymbella ventricosa										9				
Rhopalodia sp. A		9		11	34		34	68			46			18
Rhopalodia gibberula	11							17						
Nitzschia acicularis	46	9	9	11		7			46	18	34	23		
Nitzschia clausii			9			4		17						
Nitzschia fonticola	11		9	23								11		
Nitzschia linearis										9		11		
Nitzschia palea	23	9		11	23				34	9	80	11	9	
Nitzschia paradoxa			18							9				18
Nitzschia phillipinarum	103	81	18	46	34	4	34	102	23	54	137	91	9	54
Surirella angustata		9								9		11		
Surirella elegans	11													
Surirella minuta	11													
Chroococcus limneticus	11	4	11	7	14	21			4	14			7	
Chroococcus minor		4		21	14	14	14			7	105	98	7	7
Chroococcus prescotti	4													
Merismopedia elegans	4									4		35		
Merismopedia tenuissima			4	7	14	21	7		189	49	239	323	14	
Microcystis aeruginosa	11	4	4	70	21	28	35	7	42	21	147	112	28	14
Oscillatoria agardhii	4	4	4		14	7	7	7	7	7	7	7	7	7
Oscillatoria geminata	7	4	11	182	168	126	28	42	351	77	407	428	77	35
Oscillatoria tenuis			4			7								
Anabaena sp. A														
Anabaena affinis	7			14	14	21	21		4		14	4		
Anabaena spiroides					4				4		4	7		
Rhachidiopsis curvata	4						7					21		

Amendment 2
(New)

ER Table 2.7.2-2k
Cherokee Nuclear Station
Sampling Period 11: 15-20 July '74

SPECIES	Station Numbers 14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	19	21	23
Navicula capitata capitata							11			11				
Navicula cryptocephala			11	9		34	68	11	42	46				
Navicula hambergii hambergii						11		11	14	11	18			
Navicula mobiliensis minor									14	11				
Navicula mutica tropica	11	9	34		14									
Navicula notha notha		9	34		70		11	11	28	23	9			
Navicula pupula capitata														
Navicula pupula pupula											9			
Navicula radiosa parva						23		34						
Navicula rhynococephala rhyncocephala	23		11		28	11	34	23					9	
Navicula symmetrica symmetrica							11		28					
Navicula viridula rostellata								11	28		9			
Navicula viridula viridula														
Neidium binode														
Pinnularia biceps biceps													9	
Pinnularia borealis rectangularis							11							
Pinnularia subcapitata paucistriata			11								9			
Stauroneis smithii smithii	11								14					
Gomphonema sp. A									14		9			
Gomphonema angustatum			11				11		14	23				
Gomphonema parvulum	11								42					11
Cymbella naviculiformis				9	14									
Cymbella tumida							11							
Cymbella turgida	11							11						
Cymbella ventricosa					28					11	9			
Rhopalodia sp. A				9		23	11		42	23	18			
Rhopalodia gibberula														11
Nitzschia acicularis	46	9	11	18		23			14					
Nitzschia clausii														
Nitzschia fonticola						11					9		18	11
Nitzschia linearis											9			
Nitzschia palea	23				28	23	11	34	14	11			27	
Nitzschia paradoxa								11	14		18			
Nitzschia phillipinarum	68	9	114	36	70	34	114	46	210	125	54		27	11
Surirella angustata			11											
Surirella elegans														
Surirella minuta											18			
Chroococcus limneticus	35	21	14	7	14		7							
Chroococcus minor														
Chroococcus prescotti	4													
Merismopedia elegans	4			4		35				7				
Merismopedia tenuissima	11	35	14	14	14	7	42	4	7		14			
Microcystis aeruginosa	14	7	7	14	14	28	21		28		7		7	
Oscillatoria agardhii	7	7	21	7	7	4		7	7	14	7			
Oscillatoria geminata	56	84	49	70	42	63	105	35	21	49	70		21	
Oscillatoria tenuis														
Anabaena sp. A										7				
Anabaena affinis	7													
Anabaena spiroides		4		14	7				7	7				
Rhaphidiopsis curvata							14		4					

Amendment 2
(New)

ER Table 2.7.2-2k
Cherokee Nuclear Station
Sampling Period 11: 15-20 July '74

SPECIES	Station Numbers 4a	4b	4c	9S	9B	10S	10B	11	12S	12B	13S	13B	14Sa	14Sb
Navicula heufleri leptocephala														
Gomphonema sp. B	9													
Surirella tenera nervosa														
Anabaena levanderi	7	11	18		7			21	21	7		63	21	14

Amendment 2
(New)

ER Table 2.7.2-2k
Cherokee Nuclear Station
Sampling Period 11: 15-20 July '74

SPECIES	Station Numbers 14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	19	21	23
Navicula heufleri leptocephala					14									
Gomphonema sp. B				9										
Surirella tenera nervosa														
Anabaena levanderi	7	35	14	21	4	7	28	7	21	35	35			

Amendment 2
(New)

ER Table 2.7.2-2 1
Cherokee Nuclear Station
Estimated Densities of Species of Phytoplankton, in No./ml, at
Sampling Station on the Broad River System
Sampling Period 12: 12-17 Aug '74

SPECIES	Station Number 4a	4b	4c	8	9S	9B	10S	10B	11	12S	12B	13S	13B	14Sa
Chlamydomonas sp. A						14				42		49	7	
Eudorina elegans								1				7		
Gonium sociale							7			7		7	14	
Volvox globator	4													
Schroederia setigerum										4				
Tetraedon minimum													4	
Ankistrodesmus falcatus	11	14	31	147	91	56	49	35	133			77	84	91
Closteriopsis longissima						7		14				7		
Oocystis sp. A														
Selenastrum westii				7	7		14			56		14	14	
Treubaria setigerum										7				
Dictyosphaerium ehrenbergianum										7		14		
Coelastrum microporum												7		
Crucigenia crucifera														
Scenedesmus bijuga		4				4								
Scenedesmus dimorphus										7			14	
Scenedesmus obliquus														
Scenedesmus quadricauda				4	14		28	1				42	21	
Pediastrum biradiatum												4	4	
Pediastrum duplex gracilimum														
Cosmarium subcrenatum														
Cosmarium sp. A									4					
Staurastrum gracile		7						14				4		
Staurastrum margaritaceum					4									
Unidentified green filament A	4		4	4		4								
Unidentified green colony														
Euglena elastica					63	21	56		21			98	42	
Phacus caudatus					7				1					
Phacus longicauda														
Trachelomonas hispida	4		4	7	7		14	1						4
Trachelomonas girardiana					7					14			4	
Trachelomonas schauinslandii					7	4						4	14	
Trachelomonas similis										7				
Trachelomonas varians							14	21		4		21	7	
Glenodinium sp. A			4									28		
Peridinium sp. A				7			4			7		14		
Centritractus belanophorus										4				
Ophiocytium capitatum										7		7		
Dinobryon divergens					7									
Cyclotella sp. A														
Cyclotella stelligera														
Cyclotella comata													14	
Cyclotella bondarica stellata										7				
Cyclotella meneghiana									11					
Melosira sp. B														
Melosira granulata														
Fragilaria brevistriata														
Meridion circulare constrictum														

ER Table 2.7.2-2 1
Cherokee Nuclear Station
Sampling Period 12: 12-17 Aug '74

SPECIES	Station Numbers 4a	4b	4c	8	9S	9B	10S	10B	11	12S	12B	13S	13B	14Sa
Synedra sp. A												17		
Synedra acus acus														
Synedra delicatissima delicatissima														
Synedra fasciculata truncata													14	
Synedra goulardi														
Synedra socia socia														
Synedra tenera									11					
Synedra ulna contracta														
Synedra ulna ramesi														
Synedra ulna ulna														
Tabellaria fenestrata fenestrata														
Eunotia arcus														
Eunotia curvata curvata														
Eunotia incisa incisa														
Eunotia sudetica sudetica														
Achnanthes sp. A														
Achnanthes sp. E														
Achnanthes affinis affinis														
Achnanthes hustedtii									11					
Achnanthes lanceolata dubia														
Achnanthes lanceolata lanceolata														
Achnanthes linearis linearis														
Achnanthes lineris curta														
Achnanthes stewartii														
Rhoicosphenia curvata curvata														
Diploneis finnica														
Frustulia weinholdii weinholdii														
Frustulia rhomboides viridula														
Gyrosigma obtusatum obtusatum														
Navicula sp. A														
Navicula sp. B														
Navicula sp. C														
Navicula sp. D														
Navicula accomoda														
Navicula atomus atomus														
Navicula cryptocephala														
Navicula decussis decussis											11	17		
Navicula exigua capitata										7				
Navicula gottlandica														
Navicula lateropunctata lateropunctata														
Navicula minima minima														28
Navicula mobiliensis minor														
Navicula mutata														42
Navicula peregrina														
Navicula pupula rectangularis													14	
Navicula radiosa parva									11					
Navicula rhyncocephala rhyncocephala														

Amendment 2
(New)

ER Table 2.7.2-2 1
Cherokee Nuclear Station
Sampling Period 12: 12-17 Aug '74

SPECIES	Station Number 4a	4b	4c	8	9S	9B	10S	10B	11	12S	12B	13S	13B	14Sa
Navicula rhyncocephala germainii														14
Navicula schroeteri escambia														
Navicula symmetrica symmetrica														
Navicula variostriata								23	11					
Navicula viridula rostellata								11	11					
Navicula sp. E														
Navicula seminulum hustedtii														
Pinnularia biceps biceps														
Pinnularia subcapitata paucistriata														
Gomphonema angustatum														
Cymbella naviculiformis														
Cymbella tumida														
Cymbella turgida														
Nitzschia acicularis														
Nitzschia closterii												17	28	
Nitzschia denticula delognei														
Nitzschia dissipata														
Nitzschia palea														
Nitzschia philippinarum														
Nitzschia sigmoidea														
Nitzschia vermicularis												17		
Surirella sp. A														
Surirella sp. B														
Surirella angustata														
Surirella patella neupaueri														
Chroococcus limneticus					14								28	
Coelosphaerium naegelianum							7							
Dactylococcopsis acicularis					7									
Merismopedia elegans								1895	4	35	63	4		
Merismopedia tenussima		4		7	7			14		84			56	4
Microcystis aeruginosa								14	1	28		7		
Oscillatoria agardhii		4					7		11			14	7	7
Oscillatoria geminata		4			14	28	21	21	21			133	147	42
Oscillatoria hamelii														
Anabaena affinis					7					4				
Anabaena levanderi	91	79	109	70	28	28	14	21	56	7			35	21
Anabaena spiroides														
Anabaenopsis elenkinii										7				
Nodularia spumigena														
Rhapidiopsis curvata			4	4	49					7		7	7	

Amendment 2
(New)

ER Table 2.7.2-2 1
Cherokee Nuclear Station
Sampling Period 12: 12-17 Aug '74

SPECIES	Station Numbers 14Sb	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	21	23
Chlamydomonas sp. A														
Eudorina elegans														
Gonium sociale							7							
Volvox globator				4	7				7					
Schroederia setigerum														
Tetraedon minimum														
Ankistrodesmus falcatus	35	63	20	77	42		14	49	49	35	63	49		
Closteriopsis longissima				7				1		4		7		
Oocystis sp. A														
Selenastrum westii														
Treubaria setigerum														
Dictyosphaerium ehrenbergianum														
Coelastrum microporum														
Crucigenia crucifera							7							
Scenedesmus bijuga			4		4									
Scenedesmus dimorphus														
Scenedesmus obliquus					4									
Scenedesmus quadricauda				4	7				4	4	4			
Pediastrum biradiatum														
Pediastrum duplex gracilimum				4										
Cosmarium subcrenatum							7							
Cosmarium sp. A														
Staurastrum gracile	7				4		4	7						
Staurastrum margaritaceum														
Unidentified green filament A														
Unidentified green colony														
Euglena elastica	7	7	14											
Phacus caudatus			4											
Phacus longicauda														
Trachelomonas hispida			7		7		7							
Trachelomonas girardiana	7													
Trachelomonas schauinslandii					21									
Trachelomonas similis														
Trachelomonas varians														
Glenodinium sp. A														
Peridinium sp. A										4				
Centritractus belanophorus														
Ophiocytium capitatum														
Dinobryon divergens														
Cyclotella sp. A				10	31						11			
Cyclotella stelligera	11		11	10		11							17	
Cyclotella comata														
Cyclotella bondarica stellata														
Cyclotella meneghiana														
Melosira sp. B														
Melosira granulata														
Fragilaria brevistriata														
Meridion circulare constrictum			11											

Amendment 2
(New)

ER Table 2.7.2-2 l
Cherokee Nuclear Station
Sampling Period 12: 12-17 Aug '74

SPECIES	Station Numbers 14Sb	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	21	23
Synedra sp. A														
Synedra acus acus			11											
Synedra delicatissima delicatissima									17					
Synedra fasciculata truncata														
Synedra goulardi														
Synedra socia socia						11		10						
Synedra tenera														
Synedra ulna contracta						11								
Synedra ulna ramesi					31									
Synedra ulna ulna				10										
Tabellaria fenestrata fenestrata														
Eunotia arcus														
Eunotia curvata curvata											11			
Eunotia incisa incisa			11											
Eunotia sudetica sudetica		14				11								
Achnanthes sp. A														
Achnanthes sp. E														
Achnanthes affinis affinis	11													
Achnanthes hustedtii														
Achnanthes lanceolata dubia		14		10			10					17		
Achnanthes lanceolata lanceolata				10								34		
Achnanthes linearis linearis														
Achnanthes lineris curta								20						
Achnanthes stewartii			11				10		17	10	23			
Rhoicosphenia curvata curvata												17		
Diploneis finnica				7								17		
Frustulia weinholdii weinholdii														
Frustulia rhomboides viridula														
Gyrosigma obtusatum obtusatum								10						
Navicula sp. A														
Navicula sp. B														
Navicula sp. C														
Navicula sp. D														
Navicula accomoda							10		17					
Navicula atomus atomus														
Navicula cryptocephala	11	14	23	10		34		10			11			
Navicula decussis decussis														
Navicula exigua capitata														
Navicula gottlandica												17		
Navicula lateropunctata lateropunctata														
Navicula minima minima											11			
Navicula mobiliensis minor														
Navicula mutata								10	17					
Navicula peregrina														
Navicula pupula rectangularis														
Navicula radiosa parva	11	14	11	8	31	11		10		10				
Navicula rhyncocephala rhyncocephala														

ER Table 2.7.2-2 l
Cherokee Nuclear Station
Sampling Period 12: 12-17 Aug '74

SPECIES	Station Numbers 14Sb	14Sc	14Ma	14Mb	14Mc	14Ba	14Bb	14Bc	15a	15b	15c	17	21	23
Navicula rhyncocephala germainii														
Navicula schroeteri escambia											11			
Navicula symmetrica symmetrica														
Navicula variostriata														
Navicula viridula rostellata														
Navicula sp. E				10	31		10	10						
Navicula seminulum hustedtii											11			
Pinnularia biceps biceps						10				10				
Pinnularia subcapitata paucistriata		14		10		11					11			
Gomphonema angustatum														
Cymbella naviculiformis		14												
Cymbella tumida		14	11			11	10				11			
Cymbella turgida				31										
Nitzschia acicularis														
Nitzschia closterii														
Nitzschia denticula delognei												17		
Nitzschia dissipata	11													
Nitzschia palea														
Nitzschia philippinarum	11	14	23	10	31		10	10		10	11	17		
Nitzschia sigmoidea								10				17		
Nitzschia vermicularis														
Surirella sp. A			11											
Surirella sp. B			11								11	17		
Surirella angustata					31									
Surirella patella neupaueri												17		
Chroococcus limneticus														
Coelosphaerium naegelianum														
Dactylococcopsis acicularis														
Merismopedia elegans														
Merismopedia tenussima			14											
Microcystis aeruginosa			14	7										
Oscillatoria agardhii	7				4					4				
Oscillatoria geminata	21						7	28	14	35	28			
Oscillatoria hamelii														
Anabaena affinis								7	14	4				
Anabaena levanderi	42	56	98	97	70		56	70	56	35	84	35		
Anabaena spiroides		14		14										
Anabaenopsis elenkinii			11											
Nodularia spumigena	42	56	98	97	70		56	70	56	35	84	35		
Rhapidiopsis curvata			4	7										

Amendment 2
(New)

ER Table 2.7.2-2m
Cherokee Nuclear Station
Estimated Densities of Species of Phytoplankton, In No./ml, at
Sampling Station on the Broad River System
Sampling Period 13: 9-14 Sept '74

SPECIES	4a	4b	4c	8	9S	9B	10S	10B	11S	12S	12B	13S	13B	14Sa	14Sb	14Sc	14Ma	14Mb
Chlamydomonas sp. A		15	23		15	8	23	8		23			8	23	8			
Gonium sociale		15								4				8				
Pandorina morum		4																
Schroederia setigerum	8						8											
Tetraedron caudatum										8								
Tetraedron minimum		8										15						
Ankistrodesmus falcatus	23	15	39	15	8					15	23	23	8	8			8	
Chlorella vulgaris		15			8		23						8	8				
Closteriopsis longissima																		
Kirchneriella lunaris			8		8									4				
Kirchneriella obesa												4						
Selenastrum westii	23	15	8	15			23		23		8		8				8	
Golenkinia paucispina	8																	
Micractinium pusillum												15						
Dictyosphaerium ehrenbergianum	8						8					4						
Coelastrum microporum										4								
Crucigenia crucifera	15	15			8									8			8	
Scenedesmus abundans		8						15										
Scenedesmus barnardii								8					4					4
Scenedesmus bijuga	7	8			8			8						15				
Scenedesmus denticulatus		15	8				31	8										
Scenedesmus dimorphus							8		15	23	8	8	15				15	
Scenedesmus obliquus					8							8		4	4	4	8	
Scenedesmus quadricauda	15	23		8	8	15	46	8		77	31	31	23	8		15		
Pediastrum biradiatum																		
Pediastrum duplex clathratum					4													
Pediastrum duplex gracilimum							8					4	4					
Cladophora glomerata									8									
Closterium ehrenbergii					4													
Closterium venus											8							
Cosmarium subcrenatum																		
Staurastrum gracile	23	15	8		8	4				4				4				
Staurastrum margaritaceum							15											
unidentified green filament A												8		8		4		4
unidentified green colony					8								8					
Euglena acus rigida																		
Euglena elastica	15	4	8	8	46		15	8		8			15				4	4
Phacus sp. A																		
Phacus caudatus	8	23	8	15		8		8	8				8	4	4	8		8
Trachelomonas hispida										4								
Trachelomonas schauinslandii					8													
Peridinium sp. A							23			8			15	15		4		
Arachnochloris minor												46						
Rhizochrysis limnetica							8											
Trachelomonas varians							23	8		15	54	8	23	8				
Ophiocytium capitatum							8	8										

Amendment 2
(New)

ER Table 2.7.2-2m
Cherokee Nuclear Station
Sampling Period 13: 9-14 Sept '74

SPECIES	14Mc	14Ba	14Bb	14Bc	15A	15B	15C	17	19	21	23
Chlamydomonas sp. A				4		23	15				
Gonium sociale							7	4			
Pandorina morum						8					
Schroederia setigerum											
Tetraedron caudatum											
Tetraedron minimum						16					
Ankistrodesmus falcatus		15		8							
Chlorella vulgaris											
Closteriopsis longissima					8	4	8				
Kirchneriella lunaris											
Kirchneriella obesa								8			
Selenastrum westii			4				31	8			
Golenkinia paucispina											
Micractinium pusillum											
Dictyosphaerium ehrenbergianum			8								
Coelastrum microporum						8					
Crucigenia crucifera		15	7			7	15				
Scenedesmus abundans											
Scenedesmus barnardii					8						
Scenedesmus bijuga		8	8				15				
Scenedesmus denticulatus						8		8			
Scenedesmus dimorphus					8	8	4	8			
Scenedesmus obliquus		8	31	8	15	15	15				
Scenedesmus quadricauda				4		23	46	15			
Pediastrum biradiatum			8				8				
Pediastrum duplex clathratum											
Pediastrum duplex gracilimum											
Cladophora glomerata											
Closterium ehrenbergii				7							
Closterium venus											
Cosmarium subcrenatum	4										
Staurastrum gracile			8	8							
Staurastrum margaritaceum						4					
unidentified green filament A	4	8	8								
unidentified green colony											
Euglena acus rigida			4								
Euglena elastica	4		4	23		15	15				
Phacus sp. A							4				
Phacus caudatus				8							
Trachelomonas hispida				8	4	8					
Trachelomonas schauinslandii		8									
Peridinium sp. A	4	4	4								
Arachnochloris minor											
Rhizochrysis limnetica											
Trachelomonas varians					15						
Ophiocytium capitatum											

Amendment 2
(New)

ER Table 2.7.2-2m
Cherokee Nuclear Station
Sampling Period 13: 9-14 Sept '74

SPECIES	4a	4b	4c	8	9S	9b	10s	10b	11s	12s	12b	13s	13b	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc
Cyclotella sp. A												36		3					
Cyclotella sp. B						10													
Cyclotella sp. D											11								
Cyclotella meneghiana					7			23					23	3					
Cyclotella radians													46	6					
Cyclotella stelligera		7						23					23	3					
Cyclotella striata										36	23	54							
Stephanodiscus sp. A		7		10	56	40	8	11											
Melosira sp. B							16												
Melosira granulata						10													
Melosira granulata angustissima																			
Melosira granulata angustissima spiralis					7														
Microsiphona potamos	8																		
unidentified Pennate diatom		7						11					11						7
Asterionella formosa formosa		7										11			9				
Asterionella formosa gracillima				10	7														
Fragilaria crotonensis crotonensis							8												
Fragilaria vaucheriae vaucheriae									9		11								
Synedra delicatissima delicatissima																			
Synedra fasciculata truncata														3					
Synedra goulardi																			
Synedra rumpens familiaris								11											
Synedra rumpens meneghiana		7									11			3					
Synedra socia socia					10														
Synedra ulna contracta									9								9		
Synedra ulna ulna																			
Tabellaria fenestrata fenestrata					7						11								
Eunotia sudetica sudetica												9							7
Achnanthes sp. B																			
Achnanthes sp. C													11						
Achnanthes sp. E					10														
Achnanthes lanceolata dubia																			
Achnanthes lanceolata lanceolata					10														
Achnanthes lemmermanni lemmermanni	4		8							9		9	11	9			9	9	7
Achnanthes linearis linearis			8								11				9		9	9	7
Achnanthes linearis curta						8	8			18								9	7
Achnanthes microcephala microcephala																			
Achnanthes stewartii												9							
Achnanthes sublaevis erassa																			7
Achnanthes wellsiae																			
Cocconeis sp. A																			
Cocconeis disculus						10			9										
Diploneis puella puella													11						
Frustulia rhomboides saxonica																			

Amendment
(new)

ER Table 2.7.2-2m
Cherokee Nuclear Station
Sampling Period 13: 9-14 Sept '74 (Page 4 of 6)

SPECIES	14Ra	14Rb	14Rc	15a	15b	15c	17	19	21	23
Cyclotella sp. A					4	8				
Cyclotella sp. B						8				
Cyclotella sp. D						8				
Cyclotella meneghiana					4					
Cyclotella radians										
Cyclotella stelligera		34	11		4					
Cyclotella striata					4					
Stephanodiscus sp. A										
Melosira sp.B										
Melosira granulata										
Melosira granulata angustissima						8				
Melosira granulata angustissima spiralis										
Microsiphona potamos	10	11								
unidentified Pennate diatom										
Asterionella formosa formosa										
Asterionella formosa gracillima										
Fragilaria crotonensis crotonensis		11								2
Fragilaria vaucheriae vaucheriae					8					
Synedra delicatissima delicatissima										
Synedra fasciculata truncata										
Synedra goulardi										
Synedra rumpens familiaris				4						
Synedra rumpens meneghiana										
Synedra socia socia				7						
Synedra ulna contracta										
Synedra ulna ulna	11					8				
Tabellaria fenestrata fenestrata										
Eunotia sudetica sudetica										
Achnanthes sp. B										
Achnanthes sp. C										
Achnanthes sp. E										
Achnanthes lanceolata dubia										
Achnanthes lanceolata lanceolata										
Achnanthes lemmermanni lemmermanni										
Achnanthes linearis linearis					8					
Achnanthes linearis curta	11		7							
Achnanthes microcephala microcephala		11	7			9				
Achnanthes stewartii	11									
Achnanthes sublaevis crassa										
Achnanthes wellsiae										
Cocconeis sp. A							9			
Cocconeis disculus		11								
Diploneis puella puella										
Frustulia rhomboides saxonica										

Amendment 2
(new)

ER Table 2.7.2-2m
Cherokee Nuclear Station
Sampling Period 13: 9-14 Sept '74

	4a	4b	4c	8	9S	9b	10s	10b	11s	12s	12b	13s	13b	14Sa	14Sb	14Sc	14Ma	14Mb	14Mc
Navicula sp. F													11						
Navicula capitata capitata								11											
Navicula cryptocephala			8					34	18	9									
Navicula elginensis lata								11											
Navicula festiva festiva					7			11				9							
Navicula hambergii hambergii													11					9	
Navicula hustedtii					7										9				
Navicula incomposita minor								11											
Navicula minima minima				10	14	30	16												
Navicula mobiliensis minor													11						
Navicula mutica tropica																	9	9	
Navicula notha notha					7														
Navicula pupula capitata											11								
Navicula pupula pupula						10			9			9							
Navicula radiosa parva	4							11	9				11		9				
Navicula rhyncocephala rhyncocephala			8										11					9	7
Navicula rhyncocephala germainii				10															
Navicula schroeteri escambia									9										
Navicula seminalum hustedtii								11											
Navicula symmetrica symmetrica											11						9		7
Navicula viridula rostellata						10													
Pinnularia abauiensis rostrata										9									
Pinnularia subcapitata paucistriata																	9		
Gomphonema sp. A									9		11		11						
Gomphonema sp. E														9					
Gomphonema angustatum																	9		
Cymbella tumida				10					9										
Cymbella turgida				10					9	9									
Rhopalodia gibberula					14		8												
Nitzschia acicularis					14	10	8	11		9			11					9	
Nitzschia dissipata				10	7	20	8									5			
Nitzschia fonticola								11											
Nitzschia palea	4							11		9	11	18	11			5			
Nitzschia philippinarum	4			10		10	16		9	18	23	9		3	9		9	9	
Surirella minuta																			
Surirella tenera nervosa																			
Chroococcus limneticus	8	8															4		
Chroococcus minutus	15		8		8					8									
Merismopedia tenuissima										70		23	31	4					
Microcystis aeruginosa				15								8							
Oscillatoria agardhii						4		8											
Oscillatoria geminata		8	39	23	8	8	31	8	8	46		23	8	15	31			23	8
Anabaena sp. A					4							4							
Anabaena levanderi	116	101	116	201	116	85	70	15	101	101	70	147	147	139	62	85	77	108	132
Rhaphidiopsis curvata				8	7	8	31		8	116		86	23	8	8	23	8	31	15

Amendment
(new)

ER Table 2.7.2-2m
Cherokee Nuclear Station
Sampling Period 13: 9-14 Sept '74

SPECIES	14Ba	14Bb	14Bc	15a	15b	15c	17	19	21	23
Navicula sp. F										
Navicula capitata capitata										
Navicula cryptocephala		11				8				
Navicula elginensis lata										
Navicula festiva festiva										
Navicula hambergii hambergii	10									
Navicula hustedtii										
Navicula incomposita minor										
Navicula minima minima										
Navicula mobiliensis minor										
Navicula mutica tropica	10					8				
Navicula notha notha										
Navicula pupula capitata										
Navicula pupula pupula										
Navicula radiosa parva										
Navicula rhyncocephala rhyncocephala										
Navicula rhyncocephala germainii										
Navicula schroeteri escambia										
Navicula seminalum hustedtii										
Navicula symmetrica symmetrica			11							
Navicula viridula rostellata										
Pinnularia abauiensis rostrata		11								
Pinnularia subcapitata paucistriata										
Gomphonema sp. A										
Gomphonema sp. E										
Gomphonema angustatum										
Cymbella tumida	10			7						
Cymbella turgida										
Rhopalodia gibberula										
Nitzschia acicularis	10	11				8				
Nitzschia dissipata										
Nitzschia fonticola			11	7			9		2	
Nitzschia palea						8				
Nitzschia philippinarum		11				8				
Surirella minuta										
Surirella tenera nervosa										
Chroococcus limneticus			8			15				
Chroococcus minutus							8			
Merismopedia tenuissima					4					
Microcystis aeruginosa										
Oscillatoria agardhii										
Oscillatoria geminata		31			15	8				
Anabaena sp. A						4				
Anabaena levanderi	155	39	178	139	155	70	39			
Rhaphidiopsis curvata		15	15	8			15			

Amendment 2
(New)

ER Table 2.7.2-3a
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Phytoplankton Taxa at
Stations on the Broad River System
Sampling Period 1: 8-12 Oct '73

CHEROKEE

TAXA	STATION 1			STATION 2			STATION 3			STATION 4		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		18.6 .01	32 13013		3.6 1.0	31 1207289		3.3 .07	148 53606	49.3 ± 33.9 42134 ± 49007	3.0 .03	49.3 42134
Euglenophyta		4.1 .01	7 18844		4.2 0.1	36 154860		0.6 0.1	25 104681	18.7 ± 3.5 181355±197635	1.1 0.1	18.7 181355
Pyrrophyta	NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN					
Chrysophyta		52.3 0.2	90 221475		79.5 0.5	680 6081352		93.1 28.5	4128 21509282	1481.3±711.9 4530158 ± 1064840	89.6 3.4	1481.3 4530158
Cyanophyta		25.0 99.8	43 101774706		12.6 98.4	108 107536366		3.0 71.3	135 53783508	104 ± 33.9 127380971 ± 15407996	6.3 96.5	104.0 12738097
Total			172 102028038			855 114979867			4436 75451077	1653.3 ± 733.6 132134619 ± 15044961		1653.3 132134619

Amendment 2
(New)

ER Table 2.7.2-3a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct '73

CHEROKEE

TAXA	STATION 5			STATION 6			STATION 7			STATION 8		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		15.4	15		79.5	886		13.1	64		8.9	75
		14.0	28422		57.4	2236812		0.1	110229		.07	76847
Euglenophyta					0.4	4		3.1	15		1.3	11
					0.5	17828		.05	35936		.06	71437
Pyrrophyta	NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN		
Chrysophyta		58.8	57		19.1	213		74.9	365		78.1	660
		81.7	165929		42.1	1641643		2.3	1758659		36.8	41126400
Cyanophyta		25.8	25		1.1	12		8.8	43		11.7	94
		4.3	8628		2.1	1380		97.5	74887920		63.1	107550520
Total			97			1115			487			845
			202979			3897663			76792744			111811444

Amendment 2
(New)

ER Table 2.7.2-3a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct '73

CHEROKEE

TAXA	STATION 9S			STATION 9B			STATION 10S			STATION 10B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		50.3	975		11.7	186		26.4	958		0.9	79
		3.5	1562631		2.0	1031859			1018658		0.3	173742
Euglenophyta		4.0	81		0.7	11		2.1	76		0.6	55
		0.6	288582		.04	21835			590034		0.2	86955
Pyrrophyta	NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN		
Chrysophyta		34.0	660		80.3	1280		68.9	2494		97.5	8144
		0.8	370950		3.2	1600224			869424		31.3	15841114
Cyanophyta		11.4	221		7.4	118		2.6	96		0.8	70
		95.1	42290706		94.6	48016698			34572528		68.2	34569072
Total			1937			1595			3624			8348
			44512869			50670616			37050644			50670883

Amendment 2
(New)

ER Table 2.7.2-3a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct '73

CHEROKEE

TAXA	STATION 11S			STATION 11B			STATION 12S			STATION 12B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		6.6	173		7.5	76		19	386		2.3	81
		0.1	148757		0.2	142851		0.3	380083		1.5	419283
Euglenophyta					1.1	11		1.8	37			
					.06	36672		.06	84445			
Pyrrophyta	NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN		
Chrysophyta		89.4	2322		86.9	882		70.5	1430		97.3	3408
		6.6	9493932		6.6	3809603		1.6	1929075		23.3	6533965
Cyanophyta		3.9	103		4.5	46		8.7	176		0.4	15
		93.3	134427690		93.1	53777694		98.0	120992250		75.2	21122208
Total			2598			1015			2029			3504
			144070379			57766820			123375853			28075456

Amendment 2
(New)

ER Table 2.7.2-3a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct '73

CHEROKEE

TAXA	STATION 13S			STATION 13B			STATION 14S			STATION 14M		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		16.2 0.6	430 447849		2.7 0.6	148 553585		10.1 0.2	144 121664			
Euglenophyta		0.9 0.1	25 79789		0.1 .03	8 24152		1.0 .09	14 50043			
Pyrrophyta	NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN		
Chrysophyta		77.3	2057 75452055		95 43.4	5281 38720892		822 1.4	1172 787291			
Cyanophyta		5.6 .03	148 25180		2.2 56.0	125 49963948		6.7 98.3	96 53805186			
Total		99.3	2660 76005373			5562 89262577			1426 54764184			

Amendment 2
(New)

ER Table 2.7.2-3a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct '73

CHEROKEE

TAXA	STATION 14B			STATION 15			STATION 16			STATION 17		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		3.9 0.1	102 137472	55.0 ± 51.9 699591.0±772813	3.3 0.5	55.0 699591.0		6.0 0.4	5.4 94994		6.0 0.6	95 204964
Euglenophyta				8.3 ± 11.2 27304.0±37352.2	0.5 .02	8.3 27304.0		0.4 .08	4 17828			
Pyrrophyta	NO REPLICATES TAKEN			1.3 ± 2.3 4550.0±6434.7	.01	1.3 4550.0	NO REPLICATES TAKEN			NO REPLICATES TAKEN		
Chrysophyta		92.3 4.6	2410 4586709	1588 ± 1375.9 50645493 ± 67124369	94.3 39.2	1584 50645493		93.0 4.7	87.5 1049872		86.0 3.4	1354 1225088
Cyanophyta		3.8 95.3	99 94113022	33.3 ± 29.7 77768906 ± 4074329	2.0 60.3	33.3 77768906		1.2 94.8	11 21122112		8.0 96.0	121 34588320
Total			2611 98837203	1684.7 ± 1459.1 129114584 4 ± 62321013		1684.7 129145844			944 22284806			1570 36018372

Amendment 2
(New)

ER Table 2.7.2-3a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct '73

CHEROKEE

TAXA	STATION 18			STATION 19			STATION 20			STATION 21		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		3.0	67		60.0	103		9.0	68			
		6.3	75603		1.0	202234		0.6	89856			
Euglenophyta		1.0	21		2.0	4		1.0	8			
		2.8	33201		.03	6324		0.1	17092			
Pyrrophyta	NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN		
Chrysophyta		94.0	1872		13.0	22		85.0	620			
		89.2	1066260		0.7	138857		1.9	269160			
Cyanophyta		1.0	22		25.0	44		4.0	32			
		1.7	20460		98.3	21125868		97.4	13449972			
Total			1982			173			728			
			1195524						13826080			

Amendment 2
(New)

ER Table 2.7.2-3a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct '73

CHEROKEE

TAXA	STATION 22			STATION 23			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta												
Euglenophyta												
Pyrrophyta	NO REPLICATES TAKEN			NO REPLICATES TAKEN								
Chrysophyta												
Cyanophyta												
Total												

Amendment 2
(New)

ER Table 2.7.2-3b
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Phytoplankton Taxa at
Stations on the Broad River System
Sampling Period 2: 5-10 Nov '73

CHEROKEE

TAXA	STATION 22			STATION 23			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		30.8 1.1	8 2736									
Eyglenophyta												
Pyrrophyta	NO REPLICATES TAKEN			NO REPLICATES TAKEN								
Chrysophyta		69.2 98.9	18 248328									
Cyanophyta												
Total			26 251064									

Amendment 2
(New)

ER Table 2.7.2-3b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov '73

CHEROKEE

TAXA	STATION 18			STATION 19			STATION 20			STATION 21		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		28.2 0.3	29 45475		30.0 0.1	33 47664						
Euglenophyta												
Pyrrophyta	NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN		
Chrysophyta		61.2 0.6	63 78399		53.6 0.1	59 43354						
Cyanophyta		10.7 99.1	11 13441776		16.4 99.8	18 34563456						
Total			103 13565650			110 34654474						

Amendment 2
(New)

ER Table 2.7.2-3b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov '73

CHEROKEE

TAXA	STATION 14B			STATION 15			STATION 16			STATION 17		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	37.7 ± 7.2 499050±614661	29.6 0.8	37.7 499050	41.7 ± 23.0 187425±219512	24.8 0.4	41.7 187425					50.0 0.7	62 249176
Euglenophyta	1.3 ± 2.3 2108.2 ± 3561.2	1.0 ..01	1.3 2108.2	3.7 ± 6.4 9631.7±16682.5	2.2 .02	3.7 9631.7					3.2 .02	4 6324
Pyrrophyta				1.3 ± 2.3 10917.3±18909.4	0.8 .02	1.3 10917.3	NO REPLICATES TAKEN			NO REPLICATES TAKEN		
Chrysophyta	50.3 ± 20.8 41542.0±60907.4	39.5 0.2	50.3 91542.0	87.0 ± 8.9 85736.3±83150.3	51.8 0.2	87.0 85736.3		88.6 95.3	31 8765		29.0 0.8	36 272907
Cyanophyta	38.0 ± 13.2 58892114 ± 14158064	29.9 99.0	38.0 58892114	33.7 ± 12.0 45453034 ± 18854391	20.1 99.4	33.7 45453034		11.4 4.7	4 432		17.7 98.5	22 34569816
Total	127.3 ± 18.7 59484814 ± 13839150		127.3 59484814	158.0 ± 15.7 45746745 ± 18664533		168.0 45746745			35 9197			124 35098223

Amendment 2
(New)

ER Table 2.7.2-3b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov '73

CHEROKEE

TAXA	STATION 13S			STATION 13B			STATION 14S			STATION 14M		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		48.3 44.5	218 311353		35.6 1.2	73 325203	100.3 ± 34.0 188033 ± 106021	48.5 0.5	100.3 188033	31.3 ± 15.3 37916 ± 23794	18.0 .06	31.3 37916
Euglenophyta		7.8 15.0	35 104937		6.8 0.08	14 22134	8.3 ± 2.3 11067 ± 0.0	4.0 .03	8.3 11067	4.0 ± 0.0 6324 ± 0.0	2.3 .01	4.0 6324
Pyrrophyta	NO REPLICATES TAKEN	5.5 29.3	25 204700	NO REPLICATES TAKEN			2.7 ± 2.3 21834.3 ± 18909.4	1.3 .06	2.7 21834.3	2.7 ± 23 21834.3 ± 18909.4	1.6 .04	2.7 21834.3
Chrysophyta		7.1 4.8	32 33538		20.9 .03	43 8683	39.7 ± 46.6 48367.0 ± 73916.4	19.2 0.1	39.7 48367.0	83.0 ± 49.7 66440.3±54555.1	47.7 0.1	83.0 66440.3
Cyanophyta		31.3 6.4	141 44952		36.6 97.7	75 26957760	55.7 ± 27.5 33976772 ± 18133305	26.9 99.3	55.7 33976772	53.7 ± 15.5 58906898 ± 25786561	30.9 99.8	53.7 58906898
Total			451 699480			205 29313780	206.7 ± 82.9 34239374 ± 18126135		206.7 34239374	174.0 ± 31.6 59039446 ± 25792911		174.0 59039446

Amendment 2
(New)

ER Table 2.7.2-3b
Cherokee Nuclear Station
Sampling Period 2:5-10 Nov '73

CHEROKEE

TAXA	STATION 11S			STATION 11B			STATION 12S			STATION 12B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		21.7	34		31.8	34		46.0	104		60.0	99
		0.2	2158109		0.1	45864		1.8	353522		0.4	104182
Euglenophyta								4.9	11		9.1	15
								0.1	17391		0.1	35219
Pyrrophyta	NO REPLICATES TAKEN			NO REPLICATES TAKEN	3.7	4	NO REPLICATES TAKEN	6.2	14	NO REPLICATES TAKEN		
					0.1	32748		1.4	204700			
Chrysophyta		42.7	67		40.2	43		25.2	57		11.5	19
		0.1	130520		.06	22629		0.4	54103		.05	19448
Cyanophyta		35.7	56		24.3	26		17.7	40		19.4	32
		99.7	114839890		99.7	34571896		96.3	13483606		99.4	26900934
Total			157			107			226			165
			117128499			34673237			14059219			27059783

Amendment 2
(New)

ER Table 2.7.2-3b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov '73

CHEROKEE

TAXA	STATION 9S			STATION 9B			STATION 10S			STATION 10B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		37.0 0.2	40 52692		52.7 0.9	58 69042		62.2 1.1	125 293796		29.1 0.3	65 76437
Euglenophyta		10.2 0.1	11 21835		13.6 6.2	15 48883		2.0 .02	4 6324		9.4 0.3	21 82803
Pyrrophyta	NO REPLICATES TAKEN	6.5 0.2	7 57316	NO REPLICATES TAKEN	3.6 0.4	4 32752	NO REPLICATES TAKEN	7.0 0.4	14 114632	NO REPLICATES TAKEN		
Chrysophyta		32.4 0.1	35 15848		22.7 0.1	25 8013		12.4 0.1	25 28824		31.4 0.2	70 42315
Cyanophyta		13.9 99.4	15 21122544		7.3 92.4	8 7681200		16.4 98.4	33 26890688		30.0 99.2	67 26950664
Total			108 21270235			110 7839890			201 27219632			223 27152221

Amendment 2
(New)

ER Table 2.7.2-3b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov '73

CHEROKEE

TAXA	STATION 5			STATION 6			STATION 7			STATION 8		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		20.8 0.9	137 163285		46.7 0.3	57 67632		35.6 2.9	26 1189346		43.2 .07	16 18832
Euglenophyta		1.4 0.1	9 24228		3.2 .01	4 892		10.9 .02	8 6324			
Pyrrophyta	NO REPLICATES TAKEN	1.4 0.1	9 27000	NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN		
Chrysophyta		1.4 .04	9 6381		26.2 0.6	32 117761		24.7 .05	18 22384		18.9 .01	7 2912
Cyanophyta		75.2	496		23.8	29		28.8	21		37.8	14
Total			660 17591848			122 21313097			73 41542086			37 26904432

Amendment 2
(New)

ER Table 2.7.2-3b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov '73

CHEROKEE

TAXA	STATION 1			STATION 2			STATION 3			STATION 4		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		21.1 0.1	31 115231		6.0 4.8	11 338575		59.1 2.5	267 680060	16.3 ± 8.5 1028466.7 ± 1033822	16.5 2.6	16.3 1028466.7
Euglenophyta		4.8 .01	7 11067		5.2 .01	4 6324				1.3 ±2.3 2108 ± 3651.1	1.3 .01	1.3 2108.0
Pyrrophyta	NO REPLICATES TAKEN	14.3 1.8	21 171948	NO REPLICATES TAKEN	0.0		NO REPLICATES TAKEN	3.1 0.1	14 37688	2.3 ± 4.0 19105 ± 33091.4	2.3 .05	2.3 19105.0
Chrysophyta		19.0 .05	28 44891		70.7 0.1	130 95667		35.4 0.1	160 27875	56.0 ± 37.0 99452 ± 109449	56.6 0.2	56.0 99452.0
Cyanophyta		40.8 99.2	60 94090804		21.2 95.9	39 70555497		5.5 92.3	25 26883752	23.0 ± 11.0 39044048 ± 20532227	23.3 97.1	23.0 39044048
Total			147 94433941		21.2	184 70996063			452 27629375	98.9 ± 39.0 40193180 ± 21358747		98.9 40193180

Amendment 2
(New)

ER Table 2.7.2-3b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov '73

CHEROKEE

TAXA	STATION 1			STATION 2			STATION 3			STATION 4		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		5.3 3.3	11 15851		8.9 24.3	12 32820				14.7 ± 6.4 74204.7 ± 100623.6	7.0	14.7 74204.7
Euglenophyta												
Pyrrophyta	NO REPLICATES TAKEN	1.9 3.5	4 16768	NO REPLICATES TAKEN			NO REPLICATES TAKEN			1.3 ± 2.3 5589.3±9681.0	0.6	1.3 5589.3
Chrysophyta		92.8 93.2	194 448342		91.1 75.7	123 102356		100.0 100.0	100 140749	190.7 ± 60.1 280966.7±57508.3	91.1	190.7 280966.7
Cyanophyta										2.7 ± 2.3 377.3 ± 416.4	1.3	2.7 377.3
Total			209 480961			135 135176			100 140749	209.4 ± 59.9 361138.0 ± 37533.5		209.4 361138.0

Amendment 2
(New)

ER Table 2.7.2-3c
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Phytoplankton Taxa at
Stations on the Broad River System
Sampling Period 3: 3-7 Dec '73

CHEROKEE

TAXA	STATION 22			STATION 23			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		8.2 32.5	8 18160									
Euglenophyta												
Pyrrophyta	NO REPLICATES TAKEN			NO REPLICATES TAKEN								
Chrosophyta		91.8 67.5	90 37670									
Cyanophyta												
Total			98 55830									

Amendment 2
(New)

ER Table 2.7.2-3c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec '73

CHEROKEE

TAXA	STATION 18			STATION 19			STATION 20			STATION 21		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		2.5 0.002	18 1386		18.0 0.4	43 30301		16.7 0.1	64 24863		19.0 3.4	4 308
Euglenophyta												
Pyrrophyta	NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN	1.0 0.1	4 32752	NO REPLICATES TAKEN		
Chrysophyta		41.5 1.4	658 1035916		75.8 6.2	182 506520		76.8 1.7	294 708666		47.6 80.9	10 7420
Cyanophyta		6.0 98.6	43 74888128		6.3 93.5	15 7682931		5.5 98.1	21 40324032		33.3 15.7	7 1442
Total			719 75925430			240 8219752			383 41090313			21 9170

Amendment 2
(new)

ER Table 2.7.2-3c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec '73

CHEROKEE

TAXA	STATION 14B			STATION 15			STATION 16			STATION 17		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	11.3 ± 12.7 3639.3 ± 5770.0	1.1	11.3 3639.3	8.33 ± 7.37 5047.0±8019.3	1.8	8.33 5047.0		2.5 4.6	7 16009		3.9 0.07	22 25199
Euglenophyta											.7 0.1	4 41028
Pyrrophyta	1.3 ± 2.3 5589.3 ± 9681.0	.1	1.3 5589.3	3.67 ± 3.5 13781.3±14752.9	.8	3.67 13781.3	NO REPLICATES TAKEN			NO REPLICATES TAKEN		
Chrysophyta	9790 ± 164.2 110229253 ± 10191104.5	95.0	979.0 11022925 .3	455.7 ± 977.5 21512187 ± 1865988	90.5	455.7 2151218.7		97.5 95.4	272 329232		92.3 4.4	525 1583918
Cyanophyta	39.0 ± 14.0 65927553.3 ± 33825876.7	3.8	39.0 65927553 .3	4.7 ± 8.1 8960896 ± 15520727.2	1.0	4.7 8960896					3.2 95.4	18 34563456
Total	1030.7±156.8 76959707.3 ± 25195902.2		1030.7 76959707 .3	472.3±412.7 11130943 ± 16453552.5		472.3 11130943			272 345241			569 36213601

Amendment 2
(New)

ER Table 2.7.2-3c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec '73

CHEROKEE

TAXA	STATION 13S			STATION 13B			STATION 14S			STATION 14M		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta							13.3 ± 6.0 1714.7 ± 1592.5	1.5	13.3 1714.7	6.0 ± 5.6 389172.7±673600.1 673600.1	.6	6.0 389172.7
Euglenophyta										1.3 ± 2.3 5942.7±10293.0	.1	1.3 5942.7
Pyrrophyta	NO REPLICATES TAKEN			NO REPLICATES TAKEN			2.7 ± 2.3 11178.7±9681.0	.3	2.7 11178.7	1.3 ± 2.3 5589.3±9681.0	.1	1.3 5589.3
Chrysophyta							822.3 ± 270.1 8459944 ± 11484776.2	95.3	822.3 8459944	906 ± 17.9 4737120.0 ± 2436683.2	96.7	906 4737120.0
Cyanophyta							24.3 ± 8.62 34564538.7 ± 13441192	2.8	24.3 34564538.7	21.7 ± 10.0 36484256 ± 10692139.5	2.3	21.7 36484256
Total							862.7 ± 267.8 43037376.1 ± 23938377.2		862.7 43037376.1	936.7 ± 13.3 41622080.7 ± 10119688.7		936.7 41622080.7

Amendment 2
(New)

ER Table 2.7.2-3c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec '73

CHEROKEE

TAXA	STATION 11S			STATION 11B			STATION 12S			STATION 12B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		19.0 0.1	48 78850		5.6 0.02	30 16299		29.2 0.2	192 73704		8.7 0.04	58 38028
Euglenophyta					.7 0.01	4 6324		1.7 0.1	11 53262		2.1 0.04	14 45857
Pyrrophyta	NO REPLICATES TAKEN	1.6 0.02	4 16768	NO REPLICATES TAKEN	2.6 0.06	14 58688	NO REPLICATES TAKEN	2.1 0.1	14 58688	NO REPLICATES TAKEN	.6 0.04	4 16768
Chrysophyta		62.8 0.2	159 135225		50.6 0.3	271 317897		62.6 0.9	412 458676		80.1 1.1	534 1133986
Cyanophyta		16.6 99.7	42 80648064		40.5 99.6	217 94090048		4.40 98.7	29 48005232		8.5 98.8	57 101770816
Total			253 80878887			536 94489256			658 48649562			667 103005455

Amendment 2
(New)

ER Table 2.7.2-3c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec '73

CHEROKEE

TAXA	STATION 9S			STATION 9B			STATION 10S			STATION 10B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		15.6	81		5.6	66		37.1	115		48.1	370
		0.4	32984		0.3	78749		0.3	84004		5.2	758200
Euglenophyta					.3	4		3.5	11		1.0	8
					0.02	6324		0.2	52095		0.4	60396
Pyrrophyta	NO REPLICATES TAKEN	1.3	7	NO REPLICATES TAKEN	.3	4	NO REPLICATES TAKEN	1.3	4	NO REPLICATES TAKEN	3.6	28
		0.4	29344		0.04	12000		0.1	16768		0.8	117376
Chrysophyta		80.8	420		77.3	914		49.7	154		4.7	356
		4.6	374670		3.6	994140		0.2	65639		1.6	230084
Cyanophyta		2.3	12		16.5	195		8.4	26		.9	7
		94.6	7682024		96.1	26883120		99.2	26890688		92.0	13441344
Total			520			1183			310			769
			8119022			27974333			27109254			14607400

Amendment 2
(New)

ER Table 2.7.2-3c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec '73

CHEROKEE

TAXA	STATION 5			STATION 6			STATION 7			STATION 8		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		26.5 0.2	26 32279		98.3 95.5	5770 1270948		67.9 0.2	353 113807		8.0 0.01	18 3388
Euglenophyta												
Pyrrophyta	NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN	1.7 0.04	4 16768
Chrysophyta		44.9 0.3	44 34004		1.5 3.6	88 48184		24.6 0.6	128 295168		77.8 1.7	175 689906
Cyanophyta		28.6 99.5	28 13445670		.2 0.9	14 12250		7.5 99.2	39 48016686		12.4 98.3	28 40325474
Total			98 13511953			5872 1331382			520 48425661			225 41035536

Amendment 2
(New)

ER Table 2.7.2-3c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec '73

CHEROKEE

TAXA	STATION 1			STATION 2			STATION 3			STATION 4		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		8.0 0.04	25 27285		16.0 0.05	25 32620		29.6 14.0	101 83255	15.3 ± 16.3 290695±493238.8	10.9 0.7	15.3 290695
Euglenophyta												
Pyrrophyta	NO REPLICATES TAKEN			NO REPLICATES TAKEN	2.5 0.05	4 32752	NO REPLICATES TAKEN			3.7 ± 6.4 30022.7±52000.8	2.6 0.1	3.7 30022.7
Chrysophyta		58.0 0.9	181 575796		40.1 0.08	63 56649		55.7 84.4	190 502392	89.7 ± 66.3 148942±153279.5	64.0 0.3	89.7 148942.0
Cyanophyta		34.0 99.0	106 61458394		41.4 99.8	65 67222146		14.7 1.6	50 9540	31.7 ± 7.4 43525686 ± 7760722.2	22.6 98.9	31.7 43525686
Total			312 62061475			157 67344167			341 595187	140.3 ± 81.2 43995345.7 ± 81404117		140.3 43995345.7

Amendment 2
(New)

ER Table 2.7.2-3d
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Phytoplankton Taxa at
Stations on the Broad River System
Sampling Period 4: 31 Dec '73 - 4 Jan '74

CHEROKEE

TAXA	STATION 1			STATION 2			STATION 3			STATION 4		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken	6.3 .06	4 6324	No Replicates Taken	20.0 1.1	8 416	No Replicates Taken	29.1 0.4	23 18299	4.0 ± 0.0 5342.7 ± 4360.1	2.1 0.1	4.0 5342.
Evglenophyta												
Pyrrophyta		6.3 0.2	4 16768									
Chrysophyta		87.5 99.7	56 10560016		80.0 98.9	32 35624		62.0 93.4	49 268807	173.7 ± 174.5 138800 ± 140972	90.9 2.6	173.7 138800
Cyanophyta								8.9 0.2	7 756	13.3 ± 10.7 5121892 ± 4434066	7.0 97.3	13.3 5121892
Total			64 10583108			40 36040			79 287862	191.0 ± 177.0 5266035±4285693		191.0 5266035

Amendment 2
(New)

ER Table 2.7.2-3d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec '73 - 4 Jan '74

CHEROKEE

TAXA	STATION 5			STATION 6			STATION 7			STATION 8		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken	11.1	4	No Replicates Taken	60.0	319	No Replicates Taken	2.6	8	No Replicates Taken	1.1	4
		.01	308		53.4	655878		3.5	17032		1.0	84000
Evglenophyta					2.1	11						
					2.4	29612						
Pyrrophyta												
Chrysophyta		69.4	25		36.7	195		94.7	288		97.7	340
		0.2	25524		44.2	542731		96.3	468384		8.3	702448
Cyanophyta		19.4	7		1.3	7		2.6	8		1.1	4
		99.8	13441344		.01	756		0.2	784		90.7	7680768
Total			36			532			304			348
			13467176			1228977			480206			846216

Amendment 2
(New)

ER Table 2.7.2-3d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec '73 - 4 Jan '74

CHEROKEE

TAXA	STATION 9S			STATION 9B			STATION 10S			STATION 10B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken			No Replicates Taken	2.2	7	No Replicates Taken			No Replicates Taken	6.6	14
					.07	539					0.1	1078
Evglenophyta												
Pyrrophyta											1.9	4
											1.4	10768
Chrysophyta		96.5	499		95.5	298		96.0	499		87.7	185
		99.6	464531		99.8	739867		4.2	594891		96.1	714766
Cyanophyta		3.5	18		2.2	7		4.0	21		1.9	4
		0.4	1944		0.1	756		95.6	13442856		.06	432
Total			517			312			520			211
			466475			741162			14037747			743812

Amendment 2
(New)

ER Table 2.7.2-3d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec '73 - 4 Jan '74

CHEROKEE

TAXA	STATION 11S			STATION 11B			STATION 12S			STATION 12B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken	4.4 .02	8 1840	No Replicates Taken	2.7 2.7	8 12856	No Replicates Taken	8.3 2.0	7 539	No Replicates Taken	2.9 4.2	8 10288
Evglenophyta								4.8 23.9	4 6324			
Pyrrophyta												
Chrysophyta		81.2 1.3	147 105546		91.4 96.6	275 455125		61.9 64.1	52 17004		79.3 92.5	222.0 2223813
Cyanophyta		14.4 98.7	26 7684222		6.0 0.6	18 2880		25 9.9	21 2632		17.9 3.2	50 7792
Total			181 7791608			301 470861			84 26499			280

Amendment 2
(New)

ER Table 2.7.2-3d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec '73 - 4 Jan '74

CHEROKEE

TAXA	STATION 13S			STATION 13B			STATION 14S			STATION 14M		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken			No Replicates Taken	39.1 1.9	45 150529	5.0 ± 5.6 577.5 ± 381.1	2.9 .01	5.0 577.5	4.0 ± 5592.0 ± 4871.5	3.0 .07	4.0 5592.0
Evglenophyta												
Pyrrophyta												
Chrysophyta		89.9 98.5	124 121613		53.9 1.2	62 95387	151.3 ± 143.7 480965 ± 44147	88.6 4.4	151.3 480965	113.7 ± 196.9 414728 ± 718330	85.9 5.6	113.7 414728
Cyanophyta		10.1 1.5	14 1876		7.0 96.9	8 7681200	14.3 ± 12.4 10564156±4073036	8.4 95.6	14.3 10564156	14.7 ± 7.5 7042898±6744136	11.1 94.3	14.7 7042898
Total			138 123489			115 7927116	170.7±158.1 11045698±4029270		170.7 11045698	132.3±197.5 7463218±6845508		132.3 7463218

Amendment 2
(New)

ER Table 2.7.2-3d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec '73 - 4 Jan '74

CHEROKEE

TAXA	STATION 14B			STATION 15			STATION 16			STATION 17		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	5.0 ± 5.6 2902.3±4762.7	1.7 .02	5.0 2902.3	6.7 ± 22021.3±16631.2	2.0 0.2	6.7 22021.3					11.3 8.2	18 22038
Evglerophyta				1.3 ± 2.3 3589.3±6216.9	0.4 .03	1.3 3589.3		1.0 0.5	4 41028			
Pyrrophyta												
Chrysophyta	262.0±66.6 1908923±762950	91.6 10.2	262.0 1308923	314.0±75.3 606625.7±663248.5	91.9 4.7	314.0 6606625.7		98.0 7.4	395 615180		79.2 90.7	126 244062
Cyanophyta	19.0±11.4 11523830±13847358	6.6 89.8	19.0 11523830	19.7±2.1 12163849±7759331	5.8 95.1	19.7 12163849		1.0 92.1	4 7680768		9.4 1.1	15 2906
Total	286.0±62.6 12835656±13103137		286.0 12835656	341.7±80.4 12796085±7471799		341.7 12796085			403 8336976			159 269006

No Replicates Taken

No Replicates Taken

Amendment 2
(New)

ER Table 2.7.2-3d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec '73 - 4 Jan '74

CHEROKEE

TAXA	STATION 18			STATION 19			STATION 20			STATION 21		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken			No Replicates Taken			No Replicates Taken	3.5 2.7	12 17968	No Replicates Taken		
Eyglenophyta								1.2 1.0	4 6836			
Pyrrophyta												
Chrysophyta		33.3 84.6	4 6876		95.7 20.0	336 192298		94.2 96.1	322 629706		16.8 44.6	37 17353
Cyanophyta		66.7 15.4	8 1256		4.3 80.0	15 7683034		1.2 0.1	4 824		83.2 55.4	183 21528
Total			12 8132			351 9605332			342 655334			220 38881

Amendment 2
(New)

ER Table 2.7.2-3d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec '73 - 4 Jan '74

CHEROKEE

TAXA	STATION 22			STATION 23			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken	5.5 0.4	25 34117	No Replicates Taken	9.3 7.8	15 24898	No Replicates Taken			No Replicates Taken		
Evglenophyta												
Pyrrophyta												
Chrysophyta		83.4 13.5	378 1218252		60.5 84.9	98 269892						
Total			453 8996445			162 317771						

Amendment 2
(New)

ER Table 2.7.2-3e
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Phytoplankton Taxa at
Stations on the Broad River System
Sampling Period 5: 28 Jan - 2 Feb '74

CHEROKEE

TAXA	STATION 1			STATION 2			STATION 3			STATION 4		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken			No Replicates Taken	4.2 0.9	4 2096	No Replicates Taken			9.7 ± 16.7 7667±13279.6	2.9	9.7 7667
Euglenophyta								0.7 1.7	4 34668	2.7 ± 2.3 14086.7±16006.1	0.8	2.7 14086.7
Pyrrophyta												
Chrysophyta		96.8 99.96	122 1067362		91.6 98.8	86 240422		99.3 98.3	581 2018920	319.3± 70.1 1031913.7±329329.1	95.5	319.3 1031913.7
Cyanophyta		3.2 0.04	4 400		4.2 0.3	4 824				2.7±2.3 504±543.6	0.8	2.7 504
Total			126 1067762			94 243342			585 2053588	334.3±79.5 1054171.3±346179.9		334.3 1054171.3

Amendment 2
(New)

ER Table 2.7.2-3e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan - 2 Feb '74

CHEROKEE

TAXA	STATION 5			STATION 6			STATION 7			STATION 8		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken	5.6 0.1	14 14294	No Replicates Taken			No Replicates Taken	2.7 1.0	18 41320	No Replicates Taken	1.4 0.1	4 9560
Euglenophyta		4.3 0.3	11 29612		8.8 6.9	8 17092						
Pyrrophyta												
Chrysophyta		85.6 19.6	215 1887693		79.1 92.6	72 228792		97.3 99.0	650 4083312		95.8 9.4	283 794770
Cyanophyta		4.3 79.9	11 7681524		12.1 0.5	11 1188					2.8 90.5	8 7681200
Total			251 9613123			91 247072			668 4124632			295 8485530

Amendment 2
(New)

ER Table 2.7.2-3e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan - 2 Feb '74

CHEROKEE

TAXA	STATION 9S			STATION 9B			STATION 10S			STATION 10B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken			No Organisms Found	2.6 2.9	16 19100	No Replicates Taken	5.0 9.5	26 51188	No Replicates Taken	1.3 0.1	4 308
Evglenophyta											1.3 3.7	4 17828
Pyrrophyta								3.5 14.0	18 75456		1.3 3.5	4 16768
Chrysophyta					96.7 97.1	593 650328		91.5 76.5	473 411226		96.1 92.7	289 446452
Cyanophyta					0.6 0.1	4 352						
Total						613 669780			517 537870			301 481356

Amendment 2
(New)

ER Table 2.7.2-3e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan - 2 Feb '74

CHEROKEE

TAXA	STATION 11S			STATION 11B			STATION 12S			STATION 12B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken	No Organisms Found		No Replicates Taken	No Organisms Found		No Replicates Taken	4.6 12.1	19 35746	No Replicates Taken	0.6 0.2	8 9868
Euglenophyta												
Pyrrophyta								1.7 9.9	7 29344			
Chrysophyta								93.7 78.0	384 230340		99.4 99.8	1273 4230437
Cyanophyta												
Total									410 295430			1281 4240305

Amendment 2
(New)

ER Table 2.7.2-3e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan - 2 Feb '74

CHEROKEE

TAXA	STATION 13S			STATION 13B			STATION 14S			STATION 14M		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken	3.2 3.4	18 33768	No Replicates Taken	0.3 0.1	4 7860	5.0±1.7 385 ± 133.4	0.6 0.02	5.0 385	1.3±2.3 2620 ± 4537.9	0.3 0.3	1.3 2620
Euglenophyta		0.7 0.6	4 6324									
Pyrrophyta		1.3 3.0	7 29344									
Chrysophyta		94.8 92.9	524 914010		99.7 99.9	1374 6254353	796.0 ± 76.3 24002703 ± 1281959.9	99.2 99.8	796.0 2402703	388.3 976445 ± 429001.4	99.4 99.7	388.3 976445
Cyanophyta							1.3 ± 2.3 144 ± 249.4	0.2 .01	1.3 144	1.3 ± 2.3 144 ± 249.4	0.3 .01	1.3 144
Total			553 983446			1378 6262213	802.3 ± 74.2 2400799.3± 1281986.3		802.3 2400799.3	391.0 ± 163.9 979209 ± 424215.7		391.0 979209

Amendment 2
(New)

ER Table 2.7.2-3e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan - 2 Feb '74

CHEROKEE

TAXA	STATION 14B			STATION 15			STATION 16			STATION 17		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta				2.7 ± 2.3	0.6	2.7	No Replicates Taken	6.0	43	No Replicates Taken	2.4	15
				3534.7±5857.5	0.4	3534.7		0.3	108246		2.1	36174
Euglenophyta				1.3 ± 2.3	0.3	1.3						
				10497.3 ± 18181.9	1.3	10497.3						
Pyrrophyta												
Chrysophyta	272.0 ± 73.3	99.0	272.0	464.7 ± 126.4	98.8	464.7		93.4	668		97.0	609
	7504930.7 ± 12385986	100.0	7504930.7	820844±732087.9	98.3	820844.0		99.7	36856127		97.9	1671747
Cyanophyta	2.7 ± 2.3	1.0	2.7	1.3 ± 2.3	0.3	1.3		0.6	4		0.6	4
	246.7 ± 222.4	.003	246.7	274.7 ± 475.7	0.03	274.7		0.001	432		0.03	432
Total	274.7 ± 72.9		274.7	470.0 ± 130.2		470.0			715			628
	75051773±12386144.8		7505177.3	3835150.7 ± 725850.3		835150.7			36964805			1708353

Amendment 2
(New)

ER Table 2.7.2-3e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan - 2 Feb '74

CHEROKEE

TAXA	STATION 18			STATION 19			STATION 20			STATION 21		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken			No Replicates Taken			No Replicates Taken	2.0 0.8	11 12109	No Replicates Taken		
Euglenophyta												
Pyrrophyta								0.7 1.1	4 16768			
Chrysophyta		98.5 99.95	264 681864		99.3 100.0	546 28527408		95.2 98.1	515 1565715		57.6 68.8	19 2850
Cyanophyta		1.5 0.05	4 308		0.7 .0003	4 824		2.8 0.1	15 2012		42.4 31.2	14 1295
Total			268 582172			550 28528232			541 1596604			33 4145

Amendment 2
(New)

ER Table 2.7.2-3e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan - 2 Feb '74

CHEROKEE

TAXA	STATION 22			STATION 23			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken	1.9 0.2	11 4557	No Replicates Taken	3.8 1.3	4 2428						
Euglenophyta												
Pyrrophyta												
Chrysophyta		96.2 99.8	561 2488536		89.5 98.3	94 183194						
Cyanophyta		1.9 0.05	11 1188		6.7 0.4	7 756						
Total			583 2494281			105 186378						

Amendment 2
(New)

ER Table 2.7.2-3f
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Phytoplankton Taxa at
Stations on the Broad River System
Sampling Period 6: 25 Feb - 1 Mar '74

CHEROKEE

TAXA	STATION 1			STATION 2			STATION 3			STATION 4		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		1.3 93.6	4 294360		1.3 2.0	4 9560						
Euglenophyta												
Pyrrophyta												
Chrysohyta		98.7 6.4	310 201037		98.7 98.0	315 475608				236.0 ± 52.7 300877± 37195	99.5 99.9	236 300877.7
Cyanophyta										1.3 ± 2.3 133.3 ± 230.9	0.5 0.4	1.3 133.3
Total			314 3144797			319 485168				237.3±54.9 301011±37067.0		237.3 301011

Amendment 2
(New)

ER Table 2.7.2-3f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb - 1 Mar '74

CHEROKEE

TAXA	STATION 5			STATION 6			STATION 7			STATION 8		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	NO REPLICATES TAKEN	31.5 31.7	86 119476	NO REPLICATES TAKEN			NO REPLICATES TAKEN	1.3 0.03	7 539	NO REPLICATES TAKEN	3.5 0.07	7 441
Euglenophyta		1.5 2.9	4 10768		5.9 9.1	8 17092						
Pyrrophyta		1.5 4.4	4 16768									
Chrysophyta		65.6 60.9	179 229413		94.1 90.9	127 171018		98.7 99.9	524 1634885		96.5 99.9	191 624575
Cyanophyta												
Total			273 376425			135 188110			531 1635424			198 625016

Amendment 2
(New)

ER Table 2.7.2-3f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb - 1 Mar '74

CHEROKEE

TAXA	STATION 13S			STATION 13B			STATION 14S			STATION 14M		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		3.2 14.8	26 60768		5.7 0.3	25 1925	2.7 ± 4.6 3289.3 ± 5697.3	.7 0.8	2.7 3284.3			
Euglenophyta					0.9 1.0	4 6324						
Pyrrophyta		0.5 4.1	4 16768									
Chrysophyta		4.58 81.0	783 332544		93.3 98.7	406 637288	367.3 ± 399021.3 ± 52890.7	99.3 99.2	367.3 399021.3	435.0 ± 210.7 489513 ± 669084.9	100.0 100.0	435 489513.6
Cyanophyta		0.5 0.1	4 432									
Total			817 410512			435 645537	370.0 ± 55.1 402310 ± 51220.9		370.0 402310.6	435.0 ± 10.7 489513 ± 669084.9		435 489513.6

Amendment 2
(New)

ER Table 2.7.2-3f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb - 1 Mar '74

CHEROKEE

TAXA	STATION 14B			STATION 15			STATION 16			STATION 17		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta											2.4 4.0	4 7860
Euglenophyta												
Pyrrophyta												
Chrysophyta	454.3 ± 202.4 848096 ± 700959.1	100.0 100.0	454.3 848096.7	317.0 ± 111.4 493851 ± 193460	100.0 100.0	317.0 493851.3		100.0 100.0	135 923589		95.2 95.5	162 186246
Cyanophyta											2.4 0.5	4 1000
Total	454.3 ± 202.4 848096.7 ± 700959.1		454.3 848096.7	313.0 ± 111.4 493851.3 ± 193460		317.0 493851.3			135 923589			170 195106

Amendment 2
(New)

ER Table 2.7.2-3f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb - 1 Mar '74

CHEROKEE

TAXA	STATION 18			STATION 19			STATION 20			STATION 21		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		2.2 0.1	11 847		3.0 43.5	8 189288		1.1 0.2	4 9148			
Euglenophyta		1.4 4.7	7 31199					1.1 0.1	4 6324		8.2 2.7	28 220444
Pyrrophyta												
Chrysophyta		96.4 95.2	474 629355		97.0 56.5	261 246347		96.7 99.7	360 5035656		35.2 3.7	120 301140
Cyanophyta								1.1 0.02	4 824		56.6 93.7	143 7701180
Total			492 661401			264 435635			372 5051952			341 8222764

Amendment 2
(New)

ER Table 2.7.2-3f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb - 1 Mar '74

CHEROKEE

TAXA	STATION 22			STATION 23			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		4.7 0.4	8 1364									
Euglenophyta												
Pyrrophyta												
Chrysophyta		95.3 99.6	170 373184		100.0 100.0	17 7973						
Cyanophyta												
Total			374548			7973						

Amendment 2
(New)

ER Table 2.7.2-3g
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Phytoplankton Taxa at
Stations on the Broad River System
Sampling Period 7: 25-30 Mar '74

CHEROKEE

TAXA	STATION 1			STATION 2			STATION 3			STATION 4		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken	32.6 25.7	15 43128	No Replicates Taken	19.8 4.0	23 12657	No Replicates Taken	86.5 57.7	781 201165	26.7 ± 10.1 16947.3 ± 13377.7	30.1 10.2	26.7 16947.3
Euglenophyta										1.3 ± 2.31 2108 ± 3651.2	1.5 1.3	1.3 2108
Pyrrophyta		8.7 10.0	4 16768									
Chrysophyta		58.7 64.3	27 108099		76.7 95.9	89 304670		9.1 40.8	82 141963	39.0 ± 21.38 142563.7 ± 177979.1	44.0 86.1	39.0 142563.7
Cyanophyta					3.4 0.1	4 432		4.6 1.5	42 5222	21.7 ± 13.3 4021.3 ± 2309.1	24.5 2.4	21.7 4021.3
Total			46 167995			116 317759			905 348350	88.7 ± 24.8 165640.3 ± 173249.8		88.7 165640.3

Amendment 2
(New)

ER Table 2.7.2-3g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar '74

CHEROKEE

TAXA	STATION 5			STATION 6			STATION 7			STATION 8		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken	69.6 0.9	457 190211	No Replicates Taken	45.1 38.7	46 16648	No Replicates Taken	26.3 56.9	40 99916	No Replicates Taken	10.8 6.3	15 11685
Euglenophyta		.6 0.03	4 6324									
Pyrrophyta		.6 0.2	4 32752									
Chrysophyta		5.2 0.1	34 30800		41.2 54.6	42 23520		69.1 42.2	105 74123		89.2 93.7	124 174444
Cyanophyta		24.0 98.8	158 21152394		13.7 6.7	14 2884		4.6 0.8	7 1442			
Total			657 21412481			102 43052			152 175481			139 186129

Amendment 2
(New)

ER Table 2.7.2-3g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar '74

CHEROKEE

TAXA	STATION 9S			STATION 9B			STATION 10S			STATION 10B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorphyta	No Replicates Taken	67.6 85.6	71 200287	No Replicates Taken	12.7 11.5	18 18865	No Replicates Taken	21.6 27.8	307 124449	No Replicates Taken	20.9 3.9	141 54115
Euglenophyta								0.5 2.5	7 11067		0.6 0.5	4 6324
Pyrrophyta					2.8 10.2	4 16768		0.5 12.8	7 57316			
Chrysophyta		32.4 14.4	34 33626		84.5 78.3	120 128660		76.9 56.4	1094 252345		78.4 95.6	528 1326869
Cyanophyta								0.6 0.6	8 2480			
Total			105 233913			142 164293			1423 447657			673 1387308

Amendment 2
(New)

ER Table 2.7.2-3g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar '74

CHEROKEE

TAXA	STATION 11S			STATION 11B			STATION 12S			STATION 12B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken	11.8 1.6	70 216461	No Replicates Taken			No Replicates Taken	47.7 35.4	84 30933	No Replicates Taken	48.2 27.4	189 72597
Evglenophyta												
Pyrrophyta												
Chrysophyta		85.9 1.9	510 261630					48.3 63.7	85 55675		50.0 72.3	196 191660
Cyanophyta		2.4 96.6	14 13442100					4.0 0.9	7 756		1.8 0.3	7 756
Total			594 13920191						176 87364			392 265013

Amendment 2
(New)

ER Table 2.7.2-3g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar '74

CHEROKEE

TAXA	STATION 13S			STATION 13B			STATION 14S			STATION 14M		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken	28.0 20.8	161 407498	No Replicates Taken	21.6 4.4	56 14623	44.3 ± 21.4 24840.7 ± 19196.0	16.6 3.0	44.3 24840.7	51.3 ± 16.2 897796.7 ± 1525672.5	30.1 55.8	51.3 897796.7
Evglenophyta		4.9 2.3	28 44268				2.3 ± 4.0 3689.0 ± 6389.5	0.9 0.5	2.3 3689			
Pyrrophyta										2.3 ± 4.0 9781.3 ± 16941.8	1.3 0.6	2.3 9781.3
Chrysophyta		65.8 76.9	378 1508948		75.7 95.3	196 313362	210.3 ± 114.0 664197 ± 63938.3	79.0 95.6	210.3 664197	114.7 ± 70.7 700380.0 ± 1010458.7	67.2 43.6	114.7 700380
Cyanophyta		1.2 0.03	7 616		2.7 0.2	7 756	9.3 ± 10.7 1694 ± 2310.5	3.5 0.2	9.3 1694	2.3 ± 4.0 233.3 ± 404.1	1.3 0.07	2.3 233.3
Total			574 1961330			259 328741	266.2 ± 102.6 694420.7 ± 955937.9		266.2 694420.7	170.7 ± 82.8 1608191.3 ± 2527330.0		170.7 1608191.3

Amendment 2
(New)

ER Table 2.7.2-3g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar '74

CHEROKEE

TAXA	STATION 14B			STATION 15			STATION 16			STATION 17		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	21.0 ± 14.0	12.5	21.0	37.3 ± 21.4	21.9	37.3		4.4	21		26.9	49
	6934.7 ± 7864.0	3.5	6934.7	6892223 ± 1177815.6	83.7	689222.3		1.9	12747		8.4	10262
Evglenophyta				2.3 ± 4.0	1.3	2.3					3.8	7
				23933 ± 41453.2	2.9	23933					13.1	16100
Pyrrophyta	2.3 ± 4.0	1.4	2.3	2.3 ± 4.0	1.3	2.3					3.8	7
	9781.3 ± 16941.8	4.9	9781.3	19105.3 ± 33091.4	2.3	19105.3					46.7	57316
Chrysophyta	138.0 ± 68.6	82.0	138.0	126.3 ± 107.9	74.1	126.3		95.6	459		65.4	119
	181140.3 ± 132612.2	91.2	181140.3	91324.3 ± 130776.2	11.1	91324.3		98.1	670429		31.9	39185
Cyanophyta	7.0 ± 7.0	4.2	7.0	2.3 ± 4.0	1.3	2.3						
	756 ± 756.0	0.4	756	252 ± 436.5	0.03	252						
Total	168.3 ± 78.2		168.3	170.7 ± 95.0		170.7			480			182
	198612.3 ± 148782.7		198612.3	823837 ± 1077572.0		823837.0			683176			122863

No Replicates Taken

No Replicates Taken

Amendment 2
(New)

ER Table 2.7.2-3g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar '74

CHEROKEE

TAXA	STATION 18			STATION 19			STATION 20			STATION 21		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken			No Replicates Taken	13.3 2.8	28 8414	No Replicates Taken	36.0 15.2	63 28203	No Replicates Taken		
Evglenophyta								4.0 6.0	7 11067			
Pyrrophyta					6.7 37.9	14 114632						
Chrysophyta		81.1 0.0	120 167418		80.0 59.3	168 179186		56.0 77.5	98 144018		19.5 42.3	17 10574
Cyanophyta		18.9 99.4	28 26886398					4.0 1.4	7 2660		80.5 57.7	70 14420
Total			148 27053816			210 302232			175 185948			87 24994

Amendment 2
(New)

ER Table 2.7.2-3g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar '74

CHEROKEE

TAXA	STATION 22			STATION 23			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken	100.0 100.0	28 2156	No Replicates Taken			No Replicates Taken			No Replicates Taken		
Evglenophyta												
Pyrrophyta												
Chrysophyta					100.0 100.0	60 54140						
Cyanophyta												
Total			28 2156			60 54140						

Amendment 2
(New)

ER Table 2.7.2-3h
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Phytoplankton Taxa at
Stations on the Broad River System
Sampling Period 8: 22-27 Apr '74

CHEROKEE

TAXA	STATION 5			STATION 6			STATION 7			STATION 8		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		10.3 0.2	61 16648		3.6 84.2	19 8110960		5.7 51.8	8 189288		3.6 88.4	15 2972595
Euglenophyta		1.9 0.4	11 29612		18.0 4.3	96 417908						
Pyrrophyta		50.5 4.9	298 404088									
Chrysophyta		35.3 2.0	208 163532		33.0 11.2	176 1078952		94.3 48.2	133 175842		95.4 11.5	391 387923
Cyanophyta		2.0 92.6	12 7682488		45.4 0.3	242 26104					1.0 0.01	4 308
Total			590 8296368			533 9633924			141 365130			410 3360826

Amendment 2
(New)

ER Table 2.7.2-3h
Cherokee Nuclear Station
Sampling Period 8: 22-27 Apr '74

CHEROKEE

TAXA	STATION 9S			STATION 9B			STATION 10S			STATION 10B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken	21.8 20.4	61 50415	No Replicates Taken	14.9 26.8	18 27578	No Replicates Taken	4.8 7.5	25 18116	No Replicates Taken	11.5 2.6	44 412918
Euglenophyta								1.5 10.0	8 24152			
Pyrrophyta		2.5 11.9	7 29344									
Chrysophyta		73.2 67.3	205 166333		85.1 73.2	103 75269		92.8 55.0	480 132568		86.4 0.5	331 86596
Cyanophyta		2.5 0.5	7 1120					0.8 27.4	4 66000		2.1 96.9	8 15361536
Total			280 247212			121 102847			517 240836			383 15861050

Amendment 2
(New)

ER Table 2.7.2-3h
Cherokee Nuclear Station
Sampling Period 8: 22-27 Apr '74

CHEROKEE

TAXA	STATION 14B			STATION 15			STATION 16			STATION 17		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	22.7 ± 25.4 7488.7 ± 9092.8	11.5 3.8	22.7 7488.7	14.0± 12.1 1957.7 ± 2340.5	5.5 0.5	14.0 1957.7					4.9 48.7	14 334383
Euglenophyta												
Pyrrophyta	2.7 ± 4.6 11178.7 ± 19362.0	1.4 5.7	2.7 11178.7									
Chrysophyta	171.7 ± 153.3 177411.0 ± 421045	87.1 90.5	171.7 177411.0	229.3 ± 53.3 427617.0±283566.9	90.6 98.5	229.3 427617.0		100.0 100.0	384 964551		95.0 51.3	269 352734
Cyanophyta				9.7 ± 2.4 4756.0±7592.3	3.8 1.1	9.7 4756.0						
Total	197.0 ± 176.6 196078.4±28235.1		197.0 196078.4	253.0 ± 49.8 434330.7±282616.0		253.0 434330.7			384 964551			283 6871.7

No Replicates Taken

No Replicates Taken

Amendment 2
(New)

ER Table 2.7.2-3h
Cherokee Nuclear Station
Sampling Period 8: 22-27 Apr '74

CHEROKEE

TAXA	STATION 18			STATION 19			STATION 20			STATION 21		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken			No Replicates Taken			No Replicates Taken	13.3 0.8	21 1323	No Replicates Taken	No Replicates Taken	No Replicates Taken
Euglenophyta												
Pyrrophyta								4.4 13.3	7 21000			
Chrysophyta		89.4 0.9	118 128372		100.0 100.0	124 213838		82.3 85.9	130 135635			
Cyanophyta		10.6 99.1	14 13441883									
Total			132 13570255			124 213838			158 157958			

Amendment 2
(New)

ER Table 2.7.2-3h
Cherokee Nuclear Station
Sampling Period 8: 22-27 Apr '74

CHEROKEE

TAXA	STATION 22			STATION 23			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	No Replicates Taken			No Replicates Taken	60.0 86.3	21 17710	No Replicates Taken					
Euglenophyta												
Pyrrophyta												
Chrysophyta					20.0 10.0	7 2058						
Cyanophyta		100.0 100.0	7 1442		20.0 3.7	7 756						
Total			7 1442			35 20524						

Amendment 2
(New)

ER Table 2.7.2-3i
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Phytoplankton Taxa at
Stations on the Broad River System
Sampling Period 9: 20-25 May '74

CHEROKEE

TAXA	STATION 04			STATION 08			STATION 09S			STATION 09B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	2.7 ± 2.3	0.6	2.7		1.3	4		12.9	63		3.1	22
	783 ± 1144	0.1	783		.04	252		18.6	134820		0.9	13788
Euglenophyta	2.7 ± 2.3	0.6	2.7					1.6	8			
	11885 ± 10293	0.9	11885					8.7	62827			
Pyrrophyta				NO REPLICATES TAKEN	1.3	4	NO REPLICATES TAKEN	1.4	7	NO REPLICATES TAKEN		
					2.5	16768		4.0	29344			
Chrysophyta	426.3 ± 352.5	97.3	426.3		94.5	275		82.6	404		96.3	680
	1249698±1486939	98.8	1249698		35.9	237160		68.5	497089		99.0	1465633
Cyanophyta	6.2 ± 2.1	1.4	6.3		2.6	8		1.4	7		0.6	4
	2520 ± 3605	0.2	2520		61.5	406360		0.2	1120		.03	432
Total	438 ± 352		438.0			291			489			706
	1264886±1488447		1264886			660540			725200			1479853

Amendment 2
(New)

ER Table 2.7.2-3i
Cherokee Nuclear Station
Sampling Period 9: 20-25 May '74

CHEROKEE

TAXA	STATION 10S			STATION 10B			STATION 11			STATION 12S		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		2.3 7.5	72 138780		2.9 13.6	59 129246		5.0 5.3	35 52899		3.1 12.8	119 227654
Euglenophyta		0.6 1.5	18 28458		1.1 7.1	22 67570		0.6 2.3	4 22424		0.7 2.5	28 44268
Pyrrophyta	NO REPLICATES TAKEN	0.4 3.2	14 58688	NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN	0.2 1.7	7 29344
Chrysophyta		95.2 66.0	2919 1225098		94.8 78.4	1910 743796		93.8 92.4	652 917217		95.2 82.9	3608 1472183
Cyanophyta		1.4 21.8	43 403876		1.2 0.9	25 8268		0.6 0.04	4 432		0.7 0.2	28 3024
Total			3066 1845900			2016 948880			695 992972			3790 1776473

Amendment 2
(New)

ER Table 2.7.2-3i
Cherokee Nuclear Station
Sampling Period 9: 20-25 May '74

CHEROKEE

TAXA	STATION 12B			STATION 12S			STATION 13B			STATION 14S		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		4.6 8.5	28 35546		2.8 9.2	91 169652		2.7 5.3	56 66486	14.0 ± 9.9 34237 ± 47656	4.0 9.5	14.0 34237
Euglenophyta		1.1 2.7	7 11067		4.8 13.2	154 243474		3.0 8.0	63 99603	3.5 ± 4.9 5534 ± 7826	1.0 1.5	3.5 5534
Pyrrophyta	NO REPLICATES TAKEN	1.1 13.8	7 57316	NO REPLICATES TAKEN	0.9 6.4	28 117376	NO REPLICATES TAKEN					
Chrysophyta		93.1 75.0	568 312261		91.2 71.2	2902 1316190		94.0 85.8	1968 1067021	326.5 ± 47.4 319149±102409	93.0 88.6	326.5 319149
Cyanophyta					0.2 0.04	7 756		0.3 0.9	7 11130	7.0 ± 9.9 3106 ± 1846	2.0 0.4	7.0 3106
Total			610 416190			3182 1847448			2094 1244240	351 ± 42.43 360226 ± 140393		351.0 360226

Amendment 2
(New)

ER Table 2.7.2-3i
Cherokee Nuclear Station
Sampling Period 9: 20-25 May '74

CHEROKEE

TAXA	STATION 14M			STATION 14B			STATION 15			STATION 17		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	14.0 ± 14.0 17852 ± 27695	2.7 2.0	14.0 17852	13.7 ± 17.9 11333 ± 9865	4.4 0.2	13.7 11333	18.6 ± 4.0 43367 ± 24905	5.6 7.7	18.6 43367		2.5 5.5	7 33747
Euglenophyta	16.3 ± 8.1 27501 ± 14453	3.2 3.0	16.3 27501	2.3 ± 4.0 3689 ± 6390	0.7 0.1	2.3 3689	7.0 ± 0.0 11067 ± 0	2.1 2.0	7.0 11067			
Pyrrophyta	4.7 ± 4.0 19563 ± 16942	0.9 2.1	4.7 19563							NO REPLICATES TAKEN		
Chrysophyta	464.3 ± 188.4 845389 ± 455095	91.7 92.8	464.3 845389	290.3 ± 7.6 417884 ± 54570	92.6 8.5	290.3 417884	279.6 ± 214.3 509985 ± 284589	86.3 90.0	279.6 509985		97.5 94.5	269 584487
Cyanophyta	7.0 ± 7.0 709 ± 760	1.4 0.1	7.0 709	7.0 ± 7.0 4480952 ± 7760582	2.2 91.2	7.0 4480952	19.6 ± 8.1 2016 ± 873	5.7 0.4	18.6 2016			
Total	506 ± 221.60 911014 ± 405841		506.3 911014	313 ± 27.97 4913858 ± 7817439		313.3 4913858	323 ± 204.12 566435 ± 267567		323.8 566435			276 618234

Amendment 2
(New)

ER Table 2.7.2-3i
Cherokee Nuclear Station
Sampling Period 9: 20-25 May '74

CHEROKEE

TAXA	STATION 19			STATION 21			STATION 23			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		43.0 11.1	28 9044									
Euglenophyta		10.7 74.4	7 60669		14.3 1.9	4 6324						
Pyrrophyta	NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN					
Chrysophyta		46.2 14.5	30 11850		71.4 98.0	20 328565						
Cyanophyta					14.3 0.1	4 432						
Total			65 81563			28 335321						

Amendment 2
(New)

ER Table 2.7.2-3j
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Phytoplankton Taxa at
Stations on the Broad River System
Sampling Period 10: 17-22 June'74

CHEROKEE

TAXA	STATION 04			STATION 08			STATION 09S			STATION 09B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	30.3 ± 17.9 139241 ± 216792	5.4 1.0	30.3 139241.3		7.0 0.12	40 27500		18.8 1.33	142 55742		8.9 0.52	94 117852
Euglenophyta					0.7 0.05	4 10768						
Pyrrophyta				NO REPLICATES TAKEN			NO REPLICATES TAKEN	1.0 0.80	8 33536	NO REPLICATES TAKEN		
Chrysophyta	455.0 ± 200.8 942816±488585	81.4 10.0	455.0 942816.3		83.9 79.64	476 18529952		71.7 4.67	541 195657		82.2 1.72	867 393703
Cyanophyta	73.3 ± 31.0 8494584±7025524	13.1 89.0	73.3 8494584		8.3 20.20	47 4700000		8.3 93.2	63 3905184		8.9 97.76	94 22363184
Total	558.6 ± 197.5 9576641±7501924		558.6 9576641.6			567 23268220			754 4190119			1055 22874739

Amendment 2
(New)

ER Table 2.7.2-3j
Cherokee Nuclear Station
Sampling Period 10: 17-22 June '74

CHEROKEE

TAXA	STATION 10S			STATION 10B			STATION 11			STATION 12S		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		3.6 0.55	86 102181		9.3 2.48	126 171868		3.1 0.02	24 16400		15.5 1.32	157 235999
Euglenophyta		0.9 0.2	23 36363		0.6 0.2	8 13672					24.6 2.47	249 439685
Pyrrophyta	NO REPLICATES TAKEN	0.7 0.4	16 67072	NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN		
Chrysophyta		92.8 3.94	2232 732498		83.1 7.71	1125 533595		79.7 2.04	616 1388085		52.9 44.07	536 188093
Cyanophyta		1.9 95.0	47 17666480		6.9 89.6	94 6204592		17.2 97.93	133 66528602		6.9 54.16	70 16970150
Total			2404 18604594			1353 6923727			773 67933087			1012 17833927

Amendment 2
(New)

ER Table 2.7.2-3j
Cherokee Nuclear Station
Sampling Period 10: 17-22 June '74

CHEROKEE

TAXA	STATION 12B			STATION 13S			STATION 13B			STATION 14S		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		5.9	56		10.6	179		28.7	373	60.0 ± 51.7	8.5	60.0
		0.11	29440		7.12	260371		1.45	515633	67788 ± 36894	0.73	67788
Euglenophyta		4.9	47		6.0	101		1.8	23			
		0.28	74307		4.39	160705		0.3	102511			
Pyrrophyta	NO REPLICATES TAKEN			NO REPLICATES TAKEN			NO REPLICATES TAKEN					
Chrysophyta		80.1	764		67.8	1145		47.1	612	547.0 ± 105.7	77.6	547.0
		73.1	19321720		24.5	896192		65.56	23306983	660280±149666	7.13	660280
Cyanophyta		9.0	86		15.6	264		22.4	291	98.3 ± 17.6	13.9	98.3
		26.5	7001728		64.0	2340692		32.7	11626142	8534737±1550251	92.14	8534737
Total			953			1689			1299	705.3 ± 78.8		705.3
			26427195			3657960			35551269	9262806±1647516		9262806

Amendment 2
(New)

ER Table 2.7.2-3j
Cherokee Nuclear Station
Sampling Period 10: 17-22 June '74

CHEROKEE

TAXA	STATION 14M			STATION 14B			STATION 15			STATION 17		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	44.7 ± 24.0 34831 ± 15780	4.1 0.08	44.7 34831	33.0 ± 13.5 22060 ± 12392	4.7 0.38	33.0 22060	26.0 ± 12.3 8856 ± 5423	3.3 0.11	26.0 8856		3.5 0.13	4 7860
Euglenophyta	5.3 ± 9.2 8423 ± 14604	0.5 0.02	5.3 8432	1.3 ± 2.3 297.33 ± 514.99	0.2 0.01	1.3 297.33	1.3 ± 2.3	0.2	1.3		3.5 0.10	4 6324
Pyrrophyta										NO REPLICATES TAKEN		
Chrysophyta	741.3 ± 263.4 14642330± 12066692	68.6 34.17	741.3 14642330	607.7 ± 151.4 684628±308767	86.8 11.72	607.7 684628	678.7 ± 163.2 1460223±850918	87.2 17.87	678.7 1460223		35.7 0.51	41 31703
Cyanophyta	289.7 ± 294.3 28167650±29365607	26.8 65.73	289.7 28167650	58.0 ± 29.2 5134053±2710020	8.3 87.9	58.0 5134053	72.3 ± 24.8 6700576±2605621	9.3 82.0	72.3 6700576		57.4 99.3	66 6200308
Total	1081.0 ± 510.5 42853244±38030606		1081.0 42853244	700.0 ± 150.7 5841038±2830105		700.0 5841038	778.3 ± 194.6 8169655±3433700		778.3 8169655			115 6246195

Amendment 2
(New)

ER Table 2.7.2-3j
Cherokee Nuclear Station
Sampling Period 10: 17-22 June '74

CHEROKEE

TAXA	STATION 19			STATION 21			STATION 23			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta												
Euglenophyta												
Pyrrophyta	SAMPLE DESTROYED			NO REPLICATES TAKEN			NO REPLICATES TAKEN					
Chrysophyta					100.0	14						
Cyanophyta												
Total						14						

Amendment 2
(New)

ER Table 2.7.2-3k
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Phytoplankton Taxa at
Stations on the Broad River System
Sampling Period 11: 15-20 July '74 (Page 1 of 5)

CHEROKEE

TAXA	STATION 4 N=3			STATION 9S N=1			STATION 9B N=1			STATION 10S N=1		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	76±13	14.2	76		12.0	196		13.8	221		39.5	257
	145871±74556	1.3	145871		0.5	1483019		0.6	188757		1.3	520464
Euglenophyta	10±2	1.9	10		2.1	35		1.6	26		1.7	11
	23550±10044	0.2	23550		0.8	207599		0.2	60913		0.1	25168
Pyrrophyta	1 ± 2	0.2	1		0.0	0		1.3	21		0.0	0
	10917±18909	0.1	10917		0,0	0		0.6	171948		0.0	0
Chrysophyta	398±266	74.5	398		67.5	1106		66.4	1062		21.2	138
	5406780±8882163	48.0	5406780		0.9	245754		0.8	233931		0.1	25529
Cyanophyta	49 ± 12	9.2	49		18.4	301		16.9	270		37.6	245
	5686417±7334553	50.4	5686417		97.8	26916491		97.7	28410576		98.6	40351913
Total	534±257		534			1638			1600			651
	11273535±16273789		11273535			27518153			29066130			40923074

Amendment 2
(New)

ER Table 2.7.2-3k
Cherokee Nuclear Station
Sampling Period 11: 15-20 July 74

CHEROKEE

TAXA	N=1 STATION 10B			N=1 STATION 11			N=1 STATION 12S			N=1 STATION 12B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		23.5	158		4.4	81		17.4	214		12.0	102
		6.7	2905109		52.6	2740031		5.8	667928		5.9	124636
Euglenophyta		1.0	7		0.4	7		0.3	4		0.8	7
		0.03	11067		0.2	11067		0.1	6324		0.5	11067
Pyrrophyta		1.0	7		0.4	7		0.6	7		0.0	0
		0.1	57316		0.6	29344		0.3	29344		0.0	0
Chrysophyta		57.8	389		90.3	1673		31.2	384		65.2	553
		0.2	94012		6.0	314838		1.0	118795		59.1	1248678
Cyanophyta		16.6	112		4.5	84		50.5	622		21.9	186
		92.9	40329779		40.6	2117325		92.8	10677517		34.4	727436
Total			673			1852			1231			848
			43397283			5212605			11499908			2111817

Amendment 2
(New)

ER Table 2.7.2-3k
Cherokee Nuclear Station
Sampling Period 11: 15-20 July 74 (Page 3 of 5)

CHEROKEE

TAXA	N=1 STATION 13S			N=1 STATION 13B			N=3 STATION 14S			N=3 STATION 14M		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		12.5 1.3	362 366873		18.6 3.3	533 567190	138±19 237510±168488	20.9 10.8	138 237510	125±20 198422±168192	23.1 4.8	125 198422
Euglenophyta		1.1 0.2	32 51104		1.4 0.4	39 73429	7 ± 12 17778±30792	1.1 0.8	7 17778	20 ± 9 53231±35659	3.7 1.3	20 53231
Pyrrophyta		0.2 0.1	7 29344		0.1 0.2	4 32752	9 ± 11 76421±87552	1.4 3.5	9 76421	9 ± 8 114632±0	1.7 2.8	9 114632
Chrysophyta		54.2 1.7	1564 480510		41.7 6.6	1196 1142880	382±204 445473±246634	58.0 20.3	382 445473	234±116 200679±144054	43.2 4.9	234 200679
Cyanophyta		32.0 96.8	923 27817438		38.3 89.6	1098 15573464	123±42 1413154±701523	18.7 64.5	123 1413154	154±37 3550139±1874406	28.4 86.2	154 3550139
Total			2888 28745269			2870 17389715	659±170 2190336±326223		659 2190336	542±52 4117103±1617469		542 4117103

Amendment 2
(New)

ER Table 2.7.2-3k
Cherokee Nuclear Station
Sampling Period 11: 15-20 July 74 (Page 4 of 5)

CHEROKEE

TAXA	STATION 14B N=3			STATION 15 N=3			STATION 17 N=1			STATION 19 N=1		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	144±63 979589±1484966	17.7 27.5	144 979589	78±16 192110±141534	9.3 5.1	78 192110		13.0 21.9	95 1241025			
Euglenophyta	27 ± 6 50942±16312	3.3 1.4	27 50942	7 ± 7 11067±11067	0.8 0.3	7 11067		0.0 0.0	0 0			
Pyrrophyta	7 ± 7 57316±57316	0.9 1.6	7 57316	5 ± 4 38211±33091	0.6 1.0	5 38211		1.9 1.5	14 86660			
Chrysophyta	481±82 685799±178088	59.2 19.2	481 685799	658±340 506101±144767	78.6 13.3	658 506101		66.8 14.5	486 820827			
Cyanophyta	154±58 1793360±1065166	18.9 50.3	154 1793360	89 ± 33 3046292±2145115	10.6 80.3	89 3046292		18.3 62.1	133 3512999			
Total	813 ± 185 3567006±1788419		813 3567006	837± 352 3793781±2152349		837 3793781			728 5661511			

NO SAMPLE TAKEN

Amendment 2
(New)

ER Table 2.7.2-3k
Cherokee Nuclear Station
Sampling Period 11: 15-20 July 74 (Page 5 of 5)

CHEROKEE

TAXA	STATION 21 N=1			STATION 23 N=1			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		4.1 4.3	7 13755		5.7 67.0	7 330715						
Euglenophyta		0.0 0.0	0 0		0.0 0.0	0 0						
Pyrrophyta		0.0 0.0	0 0		5.7 11.6	7 57316						
Chrysophyta		79.4 94.6	135 299628		71.5 14.6	88 71885						
Cyanophyta		16.5 1.1	28 3388		17.1 6.8	21 33390						
Total			170 316771			123 493306						

Amendment 2
(New)

ER Table 2.7.2-3 1
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Phytoplankton Taxa at
Stations on the Broad River System
Sampling Period 12: 12-17 Aug '74 (Page 1 of 5)

CHEROKEE

TAXA	STATION 4 N=3			STATION 8 N=1			STATION 9S N=1			STATION 9B N=1		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	26 ± 8 42854±43852	20.8 0.5	26 42854		63.0 0.4	162 28355		34.1 0.4	116 58337		51.2 1.9	85 55391
Euglenophyta	3 ± 2 7179±6217	2.4 0.1	3 7179		2.7 0.3	7 18844		26.8 1.3	91 210728		15.1 1.4	25 39601
Pyrrophyta	1 ± 2 5590±9682	0.8 0.1	1 5590		2.7 0.8	7 57316		0.0 0.0	0 0		0.0 0.0	0 0
Chrysophyta	0 ± 0 0 ± 0	0.0 0.0	0 0		0.0 0.0	0 0		2.1 0.1	7 12033		0.0 0.0	0 0
Cyanophyta	95 ± 16 9002727±1954087	76.0 99.4	95 9002727		31.5 98.5	81 7008250		37.1 98.3	126 16324658		33.7 96.7	56 2803024
Total	125 ± 27 9058350±1962387		125 9058350			257 7112765			340 16605756			166 2898016

Amendment 2
(New)

ER Table 2.7.2-3 l
Cherokee Nuclear Station
Sampling Period 12: 12-17 Aug 74

CHEROKEE

TAXA	STATION 10S N=1			STATION 10B N=1			STATION 11 N=1			STATION 12S N=1		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		39.4 6.5	98 117383		3.1 1.8	65 52468		41.8 1.6	137 95501		36.2 2.1	130 181983
Euglenophyta		33.7 13.2	84 236446		1.1 5.8	22 168025		6.7 0.6	22 37658		7.0 1.7	25 147356
Pyrrophyta		1.6 1.8	4 32752		0.0 0.0	0 0		0.0 0.0	0 0		1.9 0.6	7 57316
Chrysophyta		0.0 0.0	0 0		2.2 2.8	45 80268		23.5 5.5	77 330739		7.0 0.2	25 18479
Cyanophyta		25.3 78.5	63 1407707		93.7 89.7	1951 2617698		28.0 92.4	92 5604195		47.9 95.4	172 8429096
Total			249 1794288			2083 2918459			328 6068093			359 8834230

Amendment 2
(New)

ER Table 2.7.2-3 1
Cherokee Nuclear Station
Sampling Period 12: 12-17 Aug 74

CHEROKEE

TAXA	STATION 12B N=1			STATION 13S N=1			STATION 13B N=1			STATION 14S N=3		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		0.0	0		34.7	232		17.1	162	65 ± 25	26.1	65
		0.0	0		9.5	387570		5.8	242907	10094±7294	0.2	10094
Euglenophyta		0.0	0		18.4	123		7.1	67	8 ± 5	3.2	8
		0.0	0		8.0	326671		4.1	172417	27595±28886	0.6	27595
Pyrrophyta		0.0	0		6.3	42		0.0	0	0 ± 0	0.0	0
		0.0	0		5.7	232008		0.0	0	0 ± 0	0.0	0
Chrysophyta		25.9	22		13.8	92		13.3	126	100 ± 25	40.2	100
		59.5	25036		7.0	283660		6.2	259532	355882±398844	7.5	355882
Cyanophyta		74.1	63		26.8	179		62.6	595	76 ± 7	30.5	76
		40.5	17010		69.7	2828772		84.0	3545129	4337218±1224892	91.7	4337218
Total			85			668			950	249 ± 41		249
			42046			4058681			4219985	4730789±1583978		4730789

Amendment 2
(New)

ER Table 2.7.2-3 1
Cherokee Nuclear Station
Sampling Period 12: 12-17 Aug 74 (Page 4 of 5)

TAXA	N=3 STATION 14M			N=3 STATION 14B			N=3 STATION 15			N=1 STATION 17		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	79±15	20.5	79	32±29	17.2	32	57±12	23.3	57		19.0	56
	166051±223659	2.1	166051	137540±221436	1.5	137540	18004±8368	0.1	18004		0.1	4732
Euglenophyta	18±9	4.7	18	2±4	1.1	2	0+0	0.0	0		0.0	0
	157687±227824	2.0	157687	6281±10880	0.1	6281	0+0	0.0	0		0.0	0
Pyrrophyta	0±0	0.0	0	0±0	0.0	0	1+2	0.4	1		0.0	0
	0±0	0.0	0	0±0	0.0	0	10917±18909	0.1	10917		0.0	0
Chrysophyta	163±21	42.2	163	94±21	50.5	94	80±48	32.7	80		69.2	204
	434336±184994	5.4	434336	305683±73776	3.3	305683	266512±242997	1.5	266512		9.4	364527
Cyanophyta	126±33	32.6	126	58±56	31.2	58	107±41	43.7	107		11.9	35
	7271915±5776001	90.6	7271915	8685418±10570866	95.1	8685418	17381740±13149705	98.3	17381740		90.5	3500000
Total	386±32		386	186±83		186	245±97		245			235
	8030039±5776001		8030039	9134922±10476212		9134922	17677173±1309606		17677173			3869259

Amendment 2
(New)

ER Table 2.7.2-3 1
Cherokee Nuclear Station
Sampling Period 12: 12-17 Aug 74 (Page 5 of 5)

CHEROKEE

TAXA	N=1 STATION 21			N=1 STATION 23			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	NO ORGANISMS FOUND			NO ORGANISMS FOUND								
Euglenophyta												
Pyrrophyta												
Chrysophyta												
Cyanophyta												
Total												

Amendment 2
(New)

ER Table 2.7.2-3m
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Phytoplankton Taxa at
Stations on the Broad River System
Sampling Period 13: 9-14 Sept '74

CHEROKEE

TAXA	N=3 STATION 4			N=1 STATION 8			N=1 STATION 9S			N=1 STATION 9B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta	130 ± 26	40.6	130		10.8	46		19.4	87		11.4	35
	170,219 ± 110,186	1.5	170,219		0.1	21,527		9.7	1,276,126		0.9	80.013
Euglenophyta	22 ± 6	6.9	22		5.4	23		12.1	54		2.6	8
	72,170 ± 32,231	0.6	72,170		0.4	79,503		0.7	85,526		0.4	35,656
Pyrrophyta	0 ± 0	0.0	0		0.0	0		0.0	0		0.0	0
	0 ± 0	0.0	0		0.0	0		0.0	0		0.0	0
Chrysophyta	28 ± 4	8.8	28		25.8	110		36.6	164		51.9	160
	26,163 ± 23,705	0.2	26,163		2.6	541,260		1.0	132,265		1.3	110,270
Cyanophyta	140 ± 23	43.8	140		58.0	247		31.9	143		34.1	105
	11,102,345 ± 866,700	97.6	11,102,345		96.9	20,117,594		98.6	11,618,186		97.4	8,513,892
Total	320 ± 11	320				426			448			308
	11,370,897 ± 736,398	11,370,897				20,759,884			13,112,103			8,739,831

Amendment 2
(New)

ER Table 2.7.2-3m
Cherokee Nuclear Station
Sampling Period 13: 9-14 Sept 74

CHEROKEE

TAXA	N=1 STATION 10S			N-1 STATION 10B			N=1 STATION 11			N=1 STATION 12S		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		38.1 11.0	193 927427		14.6 4.2	47 79,213		16.0 35.6	46 5,954,557		23.0 3.5	158 389,021
Euglenophyta		7.5 2.4	38 204,794		7.5 5.9	24 111,288		2.8 0.2	8 35,656		3.9 1.3	27 141,511
Pyrrophyta		4.5 2.2	23 188324		0.0 0.0	0 0		0.0 0.0	0 0		1.2 0.6	8 65,504
Chrysophyta		2.37 0.8	120 68,248		68.3 10.8	220 203,960		40.6 3.8	117 631,782		22.3 2.7	153 308,263
Cyandphyta		26.1 83.5	132 7,052,638		9.6 79.2	31 1,501,480		40.6 60.4	117 10,113,584		49.6 91.9	341 10,308,500
Total			506 8,441,431			322 1,895,941			288 16,735,579			687 11,212,799

Amendment 2
(New)

ER Table 2.7.2-3m
Cherokee Nuclear Station
Sampling Period 13: 9-14 Sept 74

CHEROKEE

TAXA	N=1 STATION 12B			N=1 STATION 13S			N=1 STATION 13B			N=3 STATION 14S		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		21.8 3.5	78 278,924		19.0 3.1	120 477,116		14.6 3.0	86 476,254	44 ± 40 84230 ± 76,475	20.5 0.9	44 84,230
Euglenophyta		15.1 5.4	54 425,124		1.3 0.4	8 62,984		7.8 1.5	46 240,450	8 ± 4 44,765 ± 32,465	3.7 0.5	8 44,765
Pyrrophyta		0.0 0.0	0 0		0.0 0.0	0 0		2.5 0.8	15 122,820	6 ± 8 51,857 ± 63599	2.8 0.5	6 51,857
Chrysophyta		43.6 2.4	156 187,707		40.0 0.7	253 107,783		39.8 1.8	235 289,225	32 ± 27 25,901 ± 25,775	14.9 0.3	32 25,901
Cyanophyta		19.6 88.7	70 7,000,000		39.7 95.8	251 14,789,114		35.4 92.9	209 14,745,804	125 ± 36 9,556,019 ± 3,949,616	58.1 97.9	125 9,556,019
Total			358 7,891,755			632 15,436,997			591 15,874,539	215 ± 81 9,762,772 ± 4,105,454		215 9,762,772

Amendment 2
(New)

ER Table 2.7.2-3m
Cherokee Nuclear Station
Sampling Period 13: 9-14 Sept 74

CHEROKEE

TAXA	N=3 STATION 14M			N=3 STATION 14B			N=3 STATION 15			N=1 STATION 17		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Clorophyta	19±18	8.3	19	58±22	19.2	58	109±64	30.7	109		36.2	51
	90,535±94,366	0.8	90,535	2,847,629±4,699,688	18.3	2,847,629	209,405± 133,589	1.7	209,405		2.5	100.857
Euglenophyta	7±5	3.1	7	18±18	6.0	18	20±2	5.6	20		0.0	0
	18209±20586	0.2	18,209	37,857±48,316	0.2	37,857	71,885±49,378	0.6	71,885		0.0	0
Pyrrophyta	1±2	0.4	1	3±2	1.0	3	3±5	0.8	3		0.0	0
	10,917±8,909	0.1	10,917	21,834±18,909	0.1	21,834	21,834±37,818	0.2	21,834		0.0	0
Chysophyta	67±13	29.3	67	76±19	25.2	76	49±42	13.8	49		25.5	36
	86,240±24,139	0.8	86,240	200,162±125,235	1.3	200,162	101,791±93,802	0.8	101,791		1.9	77,706
Cyanophyta	135±40	59.0	135	147±58	48.7	147	174±27	49.0	174		38.3	54
	10,596,520±2,764,672	98.1	10,596	12,417,250±7,443,899	80.0	12,417,250	12,141,201±4,515,850	96.8	12,141,201		95.6	3,923,850
Total	229±16		229	302±31		302	355±92		355			141
	10,802,421±2,822,402		10,802,421	15,524,732±10,913,929		15,524,732	12546117±4,421,021		12,546,117			4,102,413

Amendment 2
(New)

ER Table 2.7.2-3m
Cherokee Nuclear Station
Sampling Period 13: 9-14 Sept 74

CHEROKEE

TAXA	N=1 STATION 19			N=1 STATION 21			N=1 STATION 23			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Chlorophyta		0.0 0.0	0 0		0.0 0.0	0 0		0.0 0.0	0 0			
Euglenophyta		0.0 0.0	0 0		0.0 0.0	0 0		0.0 0.0	0 0			
Pyrrophyta		0.0 0.0	0 0		0.0 0.0	0 0		0.0 0.0	0 0			
Chrysophyta		0.0 0.0	0 0		100.0 100.0	2 5,088		100.0 100.0	2 1,978			
Cyanophyta		0.0 0.0	0 0		0.0 0.0	0 0		0 0	0.0 0.0			
Total			0 0			2 5,088			2 1978			

Amendment 2
(New)

ER Table 2.7.2-4
Cherokee Nuclear Station
Master Species List of Zooplankton Collected from
the Broad River System

Group Zooplankton	
Phylum Arthropoda	
Class Crustacea	
Subclass Branchiopoda	
Order Cladocera	
Family Sididae	
Genus & Species	Diaphanosoma leuchtenbergianum
	Sida crystallina
Family Daphnidae	
Genus & Species	Ceriodaphnia sp. A
	Daphnia pulex
	Daphnia sp. A
	Daphnia sp. B
Family Bosminidae	
Genus & Species	Bosmina longirostris
Family Macrothricidae	
Genus & Species	Ilyocryptus spinifer
Family Chydoridae	
Genus & Species	Alona sp. A
	Alona costata
	Alona guttata
	Alona monacantha
	Alona quadrangularis
	Alona rectangula
	Alonella acutirostris
	Chydorus sphaericus
	Kurzia latissima
	Leydigia quadrangularis
	Pleuroxus striatus
	Pleuroxus hamulatus
	Pleuroxus sp. A
Subclass Ostracoda	
Order Podocopa	
Genus & Species	Unidentified ostracod
Subclass Copepoda	
Order Copepoda	
Suborder Calanoida	
Family Diaptomidae	
Genus & Species	Diaptomus mississippiensis
	Diaptomus sp. A

ER Table 2.7.2-4
Cherokee Nuclear Station
Master Species List of Zooplankton Collected from
the Broad River System

Suborder Cyclopoida	
Family Cyclopidae	
Genus & Species	Cyclops varicans rubellus
	Cyclops vernalis
	Ectocyclops phaleratus
	Eucyclops agilis
	Eucyclops speratus
	Eucyclops sp. A
	Macrocyclops sp. A
	Mesocyclops edax
	Mesocyclops sp. A
	Paracyclops fimbriatus poppei
	Tropocyclops prasinus
Suborder Harpacticoida	
Family Phyllognathopidae	
Genus & Species	Unidentified harpacticoid
	Phyllognathopus viguieri
	Copepodid
	Nauplius larvae
Class Insecta	
Order Diptera	
Family Culicidae	
Genus & Species	Chaoborus punctipennis
Phylum Rotifera	
Class Bdelloidea	
Order Bdelloida	Bdelloid rotifer
Family Philodinidae	
Genus & Species	Rotaria sp. A
Class Monogononta	
Order Ploima	
Family Brachionidae	
Genus & Species	Brachionus angularis
	Brachionus bidentata
	Brachionus calyciflorus
	Brachionus caudatus
	Brachionus havanaensis
	Brachionus plicatilis
	Brachionus quadridentata
	Brachionus sp. A
	Euchlanis sp. A
	Kellicottia bostoniensis

Amendment 2
(New)

ER Table 2.7.2-4
Cherokee Nuclear Station
Master Species List of Zooplankton Collected from
the Broad River System

	Keratella cochlearis
	Notholca sp. A
	Platyias patalus
	Platyias quadricornus
Family Colurinae	
Genus & Species	Colurella sp. A
	Lepadella sp. A
Family Lecanidae	
Genus & Species	Lecane sp. A
	Monostyla lunaris
	Monostyla sp. A
Family Trichocercidae	
Genus & Species	Trichocerca cylindrica
	Trichocerca sp. A
Family Gastropidae	
Genus & Species	Gastropus sp. A
Family Asplanchnidae	
Genus & Species	Asplanchna amphora
	Asplanchna sp. A
Family Synchaetidae	
Genus & Species	Ploesma sp. A
	Polyarthra sp. A
Order Fosculariaceae	
Family Testudinellidae	
Genus & Species	Filinia sp. A
Family Hexarthridae	
Genus & Species	Hexarthra sp. A
Family Conochiloides	
Genus & Species	Conochiloides sp. A
Phylum Nemotoda	Unidentified nematode

ER Table 2.7.2-5a
Cherokee Nuclear Station
Estimated Densities of Species of Zooplankton, in no./m^3, at
Sampling Stations on the Broad River System
Sampling Period 1: 8-12 Oct. 73

Species	Density (no./m^3) Code Number	Station Numbers																
		1An	2An	4Aa	5An	6An	12Sn	12Bn	13Sn	13Bn	14Sa	14Ba	15Sa	17Sn	17Bn	18An	19An	20An	21An
no organisms found	5000000000.000	0		0									0		0				
Cyclops varicans rubellus	5220202010.200							499											
Eucyclops sp. A	5220202030.220				3														
Copepodids	5220209899.999				8		91	647	88	100		15				9	10	12	
Nauplius larvae	5220209999.999						113	1,220	450	597						67		17	42
Alona sp. A	5220501010.200																20		
Daphnia pulex	5220502020.220							1,003	26										
Daphnia sp. B	5220502020.240									40									
Sida crystallina	5220504020.200						821	1,114		102	21	15							
Branchionus quadridentata	5320202010.210								8										
Euclanis sp. A	5320202020.230					10				79						67			
Kellicottia bostenensis	5320202030.240				20			80	27										
Keratella cochlearis	5320202040.260													69					
Asplanchna sp. A	5320204020.220						450	191	326	597	157								
Bdelloid rotifer	5330202099.999		26				338												

Amendment 2
(New)

ER Table 2.7.2-5b
Cherokee Nuclear Station
Estimated Densities of Species of Zooplankton, in no./m^3, at
Sampling Stations on the Broad River System
Sampling Period 2: 5-10 Nov. 73

Species	Density (no/m^3) Code No.	Station Numbers 1An	2An	3An	4An	5An	6An	7An	9Sn	10Sn	11Sn	12Sn	13Sn	14Sn	22An
Cyclops varicans rubellus	5220202010.200											10			
Eucyclops agilis	5220202030.180			27											
Paracyclops fimbriatus poppei	5220202060.200			27		32			7	42		10			
Copepodids	5220209899.999					32	20		4	14	16	18	11		
Nauplius larvae	5220209999.999			242		16	20		84	66	16	75			
Alona guttata	5220501010.400					16			15						
Alona monacantha	5220501010.500		18												
Ceriodaphnia sp. A	5220502010.200					81				7					
Daphnia pulex	5220502020.220								6	5		5			
Unknown ostracod	5220700000.100														175
Chaoborus punctipennis	5240803030.100														
Notommata sp. A	5320201050.100				287										
Brachionus angularis	5320202010.200								247	42					
Brachionus calyciflorus	5320202010.205										143				
Brachionus sp.A	5320202010.220								9	151		5			
Colurella sp.A	5320202013.100			27											
Euchlanis Sp.A	5320202020.230									42				87	
Hellicottia bostoniensis	5320202030.240					369		263				169			
Keratella cochlearis	5320202040.260				287	16			195	57			98	87	
Keratella sp.A	5320202040.270													87	
Monostyla sp.A	5320202050.280									42				37	
Monostyla lunaris	5320202050.400				287										
Platyias quadricornis	5320202060.600										143			37	
Trichocerca sp.A	5320203020.200					32			3						
Asplanchna sp.A	5320204020.220									163	143	78		173	
Bdelloid rotifer	5330202099.999				65		20				143			181	
Notaria sp.A	5330203020.300			242			20								

Amendment 2
(New)

ER Table 2.7.2-5c
Cherokee Nuclear Station
Estimated Densities of Species of Zooplankton, in no./m^3, at
Sampling Stations on the Broad River System
Sampling Period 3: 3-7 Dec. 73

Species	Density ($no./m^3$) Code No.	Station Numbers																		
		3An	5An	7An	8An	9An	9Bn	10Sn	10Bn	11Sn	11Bn	12Sn	12Bn	13Sn	13Bn	14Sa	14Ma	14Ba	16Sn	18Sn	22Sn
Cyclops vernalis	5220202010.220		23		2									4				22	10	14	9
Eucyclops agilis	5220202030.180											27									
Eucyclops speratus	5220202030.200														15	2					
Paracyclops fimbriatus poppei	5220202060.200											9	14	13	44					14	
Diaptomus mississippiensis	5220203020.200		72																		
Diaptomus sp. A	5220203020.220					7	35		10			9	7	9	15						
Copepodids	5220209899.999										17		7								
Nauplius larvae	5220209999.999	35				3			15		147							98			80
Phyllognathopus viguieri	5220406060.900													4							
Alona monacantha	5220501010.500					3		7			17			9	29						
Ceriodaphnia sp. A	5220502010.200		2																		
Daphnia pulex	5220502020.220					3			5				7								
Eubosmina longirostris	5220503010.200		5											13				11		14	
Ilyocryptus spinifer	5220505040.200														29						
Euchlanis sp. A	5320202020.230	53				3	71								15						
Kellicottia bostoniensis	5320202030.240													40							9
Keratella cochlearis	5320202040.260			122		29	70		134	93		9	122	40			48	99			
Monostyla sp. A	5320202050.280									9		79								14	
Monostyla lunaris	5320202050.400	117		24										4					10		
Platyias quadricornis	5320202060.600					3								79							
Asplanchna sp. A	5320204020.220					7						27	7								
Bdelloid sp. A	5330202099.999	11	1																		

Amendment
(New)

ER Table 2.7.2-5d
Cherokee Nuclear Station
Estimated Densities of Species of Zooplankton, in no./m^3, at
Sampling Stations on the Broad River System
Sampling Period 4: 31 Dec. 73 - 4 Jan. 74 (Page 1 of 2)

Species	Density (no./m^3) / Code No.	Station Numbers														
		1An	2An	3An	4Aa	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn	11Sn	12Sn	12Bn
No organisms found	5000000000.000															
Cyclops varicans rubellus	5220202010.200								335							
Cyclops vernalis	5220202010.220													12		22
Ectocyclops phaleratus	5220202020.200				16											
Paracyclops fimbriatus poppei	5220202060.200	36	29		97	117				67	53		60			
Tropocyclops prasinus	5220202070.200															
Diaptomus mississippienis	5220203020.200														6	12
Diaptomus sp. A	5220203020.220	54			210	77	54	95	176	32	38		34			
Copepodids	5220209899.999					127				4		21			28	56
Nauplius larvae	5220209999.999	157			144	300					171		153			28
Alona sp. A	5220501010.200													12	28	6
Alona costata	5220501010.300					33										
Alona guttata	5220501010.400			5												
Alona monacantha	5220501010.500								53							
Daphnia sp. A	5220502020.230															
Eubosmina longirostris	5220503010.200		11							83	29	71	77		28	28
Sida crystallina	5220504020.200					33										
Branchionus sp. A	5320202010.220		78													
Kellicottia bostenensis	5320202030.240								157							
Keratella cochlearis	5320202040.260						60		314						50	
Monostyla sp. A	5320202050.280										63					
Asplanchna amphora	5320204020.200									86			76		50	
Asplanchna sp. A	5320204020.220															

Amendment
(New)

ER Table 2.7.2-5d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec. 73 - 4 Jan. 74

Species	Density (no./m^3) Code No.	Station Numbers 13Sn	13Bn	14Sa	14Ma	14Ba	15Aa	16An	17An	18An	19An	20An	21An	22An	23An
No organisms found	5000000000.000														
Cyclops varicans rubellus	5220202010.200														
Cyclops vernalis	5220202010.220	126													
Ectocyclops phaleratus	5220202020.200														
Paracyclops fimbriatus poppei	5220202060.200	46	116	32							40				12
Tropocyclops prasinus	5220202070.200		90						139						
Diaptomus mississippienis	5220203020.200	71													
Diaptomus sp. A	5220203020.220		153	40		8		23		93					
Copepodids	5220209899.999				24	24	13								
Nauplius larvae	5220209999.999	225	94						2102	1030	358			268	
Alona sp. A	5220501010.200									93		17			
Alona costata	5220501010.300													15	
Alona guttata	5220501010.400	20													
Alona monacantha	5220501010.500														
Daphnia sp. A	5220502020.230					8									
Eubosmina longirostris	5220503010.200	30	116	16	16	16				70					
Sida crystallina	5220504020.200			16											
Branchionus sp. A	5320202010.220									206					
Kellicottia bostenensis	5320202030.240														
Keratella cochlearis	5320202040.260								618	412	179				
Monostyla sp. A	5320202050.280														
Asplanchna amphora	5320204020.200											77			
Asplanchna sp. A	5320204020.220														327

Amendment 2
(New)

ER Table 2.7.2-5e
Cherokee Nuclear Station
Estimated Densities of Species of Zooplankton, in no./m^3, at
Sampling Stations on the Broad River System
Sampling Period 5: 28 Jan. - 2 Feb. 74

Species	Code Number	Station Numbers												
		1An	2An	3An	4An	5An	6An	7An	8An	9Sn	9Bn	10Sn	10Bn	11Sn	12Sn
Cyclops vernalis	5220202010.220			41				130							
Ectocyclops phaleratus	5220202020.200				228	617									29
Tropocyclops prasinus	5220202070.200								54						
Diaptomus sp. A	5220203020.220	32	20	16	68	737		36	7	12	16		8	19	184
Copepodids	5220209899.999		20				15		34	12	39	27	42	80	39
Nauplius larvae	5220209999.999	190	178	73	202	1155		128	119	72	34	26	13	110	129
Alona sp. A	5220501010.200								20			16			
Alona costata	5220501010.300														24
Alona guttata	5220501010.400													25	
Alona monacantha	5220501010.500												30		
Alonella acutirostris	5220501020.200												6		
Kurzia latissima	5220501030.300												3		
Leydiaia quadrangularis	5220501040.200														
Pleuroxus striatus	5220501050.200														
Chydorus sphaericus	5220501025.800										5		5		
Daphnia pulex	5220502020.220	21			11	22									
Eubosmina longirostris	5220503010.200	21	102	74	59			166	315	65	42	52	235	192	184
Brachionus sp.A	5320202010.220				101								13		39
Lecane sp. A	5320202045.900														
Kellicottia bostoniensis	5320202030.240				303										
Keratella cochlearis	5320202040.260	95		73		96									
Monostyla sp. A	5320202050.280		89												
Trichocerca sp. A	5320203020.200					96									
Polyartha sp. A	5320205020.200														

Amendment 2
(New)

ER Table 2.7.2-5e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan. - 2 Feb. 74

Species	Code Number	Station Numbers													
		12Bn	13Sn	13Bn	14Sa	14Ma	14Ba	15Aa	16Sn	17Sn	18Sn	19Sn	20Sn	21Sn	22Sn	23Sn
Cyclops vernalis	5220202010.220							13								
Ectocyclops phaleratus	5220202020.200															
Tropocyclops prasinus	5220202070.200	35	54	22	19		12				57	37	35		5	
Diaptomus sp. A	5220203020.220	37	72	36	45	16		104			38	27				
Copepodids	5220209899.999	35	63	72	38	65	29	46			105		28			
Nauplius larvae	5220209999.999	47	160	11	33	96	26	116	108	102	422	141	63		141	
Alona sp. A	5220501010.200				11	5	6									
Alona costata	5220501010.300							13								
Alona guttata	5220501010.400		81	39												
Alona monacantha	5220501010.500															
Alonella acutirostris	5220501020.200	3														
Kurzia latissima	5220501030.300															
Leydiaia quadrangularis	5220501040.200	13											7			
Pleuroxus striatus	5220501050.200			1												
Chydorus sphaericus	5220501025.800		18	1	8											
Daphnia pulex	5220502020.220	3	18	1	4	38									11	
Eubosmina longirostris	5220503010.200	107	261	70	214	260	213	111		34	38	32	50		16	
Brachionus sp. A	5320202010.220	24										47				55
Lecane sp. A	5320202045.900							58								
Kellicottia bostoniensis	5320202030.240							290					126		94	
Keratella cochlearis	5320202040.260			22					108	106		94				
Monostyla sp. A	5320202050.280															
Trichocerca sp. A	5320203020.200										84					
Polyarthra sp. A	5320205020.200										84					

Amendment 2
(new)

ER Table 2.7.2-5f
Cherokee Nuclear Station
Estimated Densities of Species of Zooplankton, in no./m^3, at
Sampling Stations on the Broad River System
Sampling Period 6: 25 Feb. - 1 Mar. 74 (Page 1 of 2)

Species	Station Numbers														
	01A	02A	03A	04A	05A	06A	07A	08A	09S	09B	10S	10B	11S	12S	12B
Cyclops varicans rubellus									5						
Cyclops vernalis				23	734			9	32	18	34	19		99	24
Diaptomus sp. A			100	31	157		22	26	10	24	10	15	31	14	15
copepodids	54	53	36	259	546	14	135	227	32	18	77	63	112	106	24
nauplius larvae															
unknown harpacticoid									7					7	
Alona costata															
Alona quadrangularis	9										10				
Alona rectangula															9
Chydorus sphaericus														3	12
Leydigia quadrangularis	18			15	179		4		2	6	34			7	
Daphnia pulex	27	8		15			15	68	29	48	19	37	10	68	15
Eubosmina longirostris															
Ilyocryptus spinifer										6					
unknown ostracod	9	8	7					9	2	6	5	4		10	
Brachionus quadridentata	9		7												
Brachionus sp. A		8	86	107	631	41	86	51	7	61	111	108	122	24	30
Euchlanis sp. A	161		7	15		41	49	60	12	42	15	33	153	103	24
Kellicottia bostoniensis										6					
Keratella cochlearis															
Monostyla lunaris															
Platyias patulus															
Trichocerca sp. A		53		8			34		15		5			10	
Asplanchna sp. A				38	349		37	9					22	10	
Polyarthra sp. A			7	15		7	90	151					224	17	24
Bdelloid rotifer								17							
unknown nematod															

(Cont'd.)

Amendment 2
(New)

ER Table 2.7.2-5f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb. - 1 Mar. 74

Species	Station Numbers															
	13S	13B	14Sa	14Sb	14MA	14Ba	14Bb	15A	16A	17A	18A	19A	20A	21A	22A	23A
Cyclops varicans rubellus									8							
Cyclops vernalis																
Diaptomus sp. A			5		6			11	29		3	19				
copepodids	29	18	34		53	6	35	11		12	27	25	6			
nauplius larvae	97	58	59	67	107	115	153	99	82	133	102	175	87	25	71	4
unknown harpacticoid								11		30			3			
Alona costata																
Alona quadrangularis								11				6				
Alona rectangula		11	5			12										
Chydorus sphaericus	42		10		12					6	7				2	
Leydigia quadrangularis		7														
Daphnia pulex		4						11	12	12						
Eubosmina longirostris	80	18	15	12	18	12		44	4	85	51	31	6	8		
Ilyocryptus spinifer		4														
unknown ostracod										109						
Brachionus quadridentata																
Brachionus sp. A		7	25	6		6	18	22		6					2	
Euchlanis sp. A																
Kellicottia bostoniensis	139	98	49	25	71	93	82	144	184	24	3	420	46		45	
Keratella cochlearis	34	51	15	80	36	93	118	11	4	30		81	84		43	8
Monostyla lunaris			5									12				
Platyias patulus		4														
Trichocerca sp. A												12				
Asplanchna sp. A	88	4		12						12						
Polyarthra sp. A		7	5			23	24	77	106	6		200				
Bdelloid rotifer	131	4	15		83	17	183			6	68	6	31	16	6	
unknown nematod													6			

Amendment 2
(New)

ER Table 2.7.2-5g
Cherokee Nuclear Station
Estimated Densities of Species of Zooplankton, in no./m^3, at
Sampling Stations on the Broad River System
Sampling Period 7: 25-30 Mar. 74 (Page 1 of 2)

Species	Sampling Stations														
	01	02	03	04a	04b	04c	05	06	07	08	09a	09b	10a	10b	11
No organisms found															
Cyclops vernalis			189												
Paracyclops fimbriatus poppei															
Tropocyclops prasinus				16		32									
Diaptomus sp. A		25	32		40		25965	351	20		104	154		40	
Copepodids	30		32	113	93	146	20778	260	73	31		103	39	40	6
Nauplius larvae	279	98	379	665	477	681	39894	1207	206	68	414	205	117	99	29
Unknown harpacticoid			95			49			7						
Alona sp. A					13										
Alona affinis															
Pleuroxus sp. A															
Chydorus sphaericus				16	13	16		15					39	69	3
Kurzia latissima			32												
Leydigia quadrangularis											69	103			
Daphnia pulex							14129	214	3		69		39	79	6
Bosmina longirostris		49		97	27	65		46	23	14	35		39	30	6
Brachionus angularis										23					
Brachionus calyciflorus										6					
Brachionus plicatilis			474												
Brachionus sp. A															15
Euchlanis sp. A						16		61							
Kellicottia bostoniensis	20	25	253	130	239	178	11636	229	107	20	35	51	292		32
Keratella cochlearis	318	25	411	130	186	162		168	103	43			97		26
Monostyla sp. A				16	27	16		76		6					3
Notholca sp. A			126												
Platyias quadricornis													58	30	
Trichotria tetractis															
Asplanchna sp. A	199	74		178	133	259	24103	59	40	34	104		39		23
Polyarthra sp. A	109		32	276	225	324	101397	718	186	79					46
Bdelloid rotifer	109			81	119	259		275	63	48					17

Amendment 2
(New)

ER Table 2.7.2-5g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar. 74

Species	Sampling Stations																
	12a	12b	13a	13b	14a	14b	14c	15a	15b	15c	16	17	19	20	21	22	23
No organisms found															*		
Cyclops vernalis																	
Paracyclops fimbriatus poppei			127	159													
Tropocyclops prasinus																	
Diaptomus sp. A			191	106						10							
Copepodids	65	83				97	33	13	12		14		18	6		16	
Nauplius larvae			318	212	54			58	53	40		108	314	143		180	77
Unknown harpacticoid						49											
Alona sp. A																	
Alona affinis									6	3							
Pleuroxus sp. A											2						
Chydorus sphaericus	22																
Kurzia latissima																	
Leydigia quadrangularis																	
Daphnia pulex					11												
Bosmina longirostris			573	637	32		65	5	6		4	22	37				
Brachionus angularis																	
Brachionus calyciflorus		17															
Brachionus plicatilis					22	97	33										
Brachionus sp. A							65	8		18			148	56			
Euchlanis sp. A																	
Kellicottia bostoniensis	43	50			20	49		18	3	8				25			
Keratella cochlearis			64		86			35	26	30	7	27	111	156		133	
Monostyla sp. A																	
Notholca sp. A																	
Platyias quadricornis																	
Trichotria tetractis																	77
Asplanchna sp. A	43				129	146	131	5	15	6		27	102				
Polyarthra sp. A					86			3	6			32					
Bdelloid rotifer					11								37	19			

Amendment 2
(New)

ER Table 2.7.2-5h
Cherokee Nuclear Station
Estimated Densities of Species of Zooplankton, in no./m^3, at
Sampling Stations on the Broad River System
Sampling Period 8: 22-27 Apr. 74 (Page 1 of 2)

Species	Sampling Stations															
	01	02	03	04a	04b	04c	05	06	07	08	09a	09b	10a	10b	11	12a
Mesocyclops edax																509
Tropocyclops prasinus													4877	1897		
Diaptomus sp. A			17	3			16				150		199	358		227
Copepodids	70		474	16		3	20	4	23	26	243	299	1574	465	54	660
Nauplius larvae	181	106	930	102	54	61	85	12	70	81	1307	1183	13709	8878	173	1136
Unknown harpacticoid				3			2									
Alona sp. A					3											
Chydorus sphaericus			9								866	1118				
Kurzia latissima										3						
Daphnia pulex			189				2						1306	967		87
Bosmina longirostris	10						6		7		136	52	142	36	10	173
Sida crystallina							1									
Ilyocryptus spinifer																
Brachionus calyciflorus																11
Brachionus havanaensis																
Brachionus plicatilis			249		3					31				36	10	11
Kellicottia bostoniensis		32		12	9	13	35		50	31	91	169	3917	3258	39	606
Keratella cochlearis	573	171	77	68	87	70	24		130	102	243	286	1250	608	198	162
Lecane sp. A				3				576	90	147		13	57		7	11
Lepadella sp. A																
Monostyla sp. A			9	12		6		8								
Notholca sp. A																
Platyias quadricornis			17													
Trichocerca sp. A			25						7	15						
Asplanchna sp. A	100				18	10	4		17	31	76	286	114	36	17	
Polyarthra sp. A	442	89	77	62	48	99	36		57	60		182		107	12	
Filinia longiseta														179		
Bdelloid rotifer	50	73	112	19	18	19	9		17	47	91	26			20	

Amendment 2
(New)

ER Table 2.7.2-5h
Cherokee Nuclear Station
Sampling Period 8: 22-27 Apr. 74

Species	12b	13a	13b	14a	14b	14c	15a	15b	15c	16	17	18	19	20	21	22	23
Mesocyclops edax	602																
Tropocyclops prasinus																	
Diaptomus sp. A	334	128	286									7					
Copepodids	869	149	176	85	110	76	16	13	11	4	2	10	28			25	8
Nauplius larvae	2317	916	1780	391	927	1031	60	45	50	6	31	190	184		74		102
Unknown harpacticoid						19									28		33
Alona sp. A																	
Chydorus sphaericus										4						8	8
Kurzia latissima																	
Daphnia pulex	134																
Bosmina longirostris	123		44		63	57				4		17					8
Sida crystallina																	
Ilyocryptus spinifer				51													
Brachionus calyciflorus	67	255	373		79		6	2	3			58					
Brachionus havanaensis												37					
Brachionus plicatilis	56			34	157	57	4						14				
Kellicottia bostoniensis	2239	277	264		110	76	4	11	11		4	54	269	64			
Keratella cochlearis	535	234	242	170	613	649	76	68	137	9	77	218	453	96			
Lecane sp. A				34	110	115	86	19	39								
Lepadella sp. A										9		7	85			8	8
Monostyla sp. A							2						14				
Notholca sp. A											2						
Platyias quadricornis																	
Trichocerca sp. A							4	6	5			7	28				
Asplanchna sp. A		341	352	170	110	153	14		5		6	37	14				
Polyarthra sp. A	89			255	314	363	12		16		15	45	85				
Filinia longiseta																	
Bdelloid rotifer											11			32			

Amendment 2
(New)

ER Table 2.7.2-5i
Cherokee Nuclear Station
Estimated Densities of Species of Zooplankton, in no./m^3, at
Sampling Stations on the Broad River System
Sampling Period 9: 20-25 May 74.

Taxa	Station Numbers										
	04a	04b	04c	08	09a	09b	10a	10b	11	12a	12b
Eucyclops speratus											86
Diaptomus sp. A	17			6			44				
Copepodids		17	17	31	241	1006	1406	1363	32	1706	3465
Nauplius larvae	85	96	112	243	4329	3073	2636	3571	208	6398	6930
Unidentified harpacticoid				19							
Alona sp. A											
Chydorus sphaericus					601	503			5		
Daphnia pulex							307	519		427	2475
Bosmina longirostris		35	17		361	279	87	194	18		86
Diaphanosoma leuchtenbergianum					241	335	483	584	28	7535	11056
Brachionus calyciflorus				143	902	391				1564	2805
Brachionus plicatilis										427	413
Brachionus quadridentata				25					5		
Colurella sp. A				6							
Kellicottia bostoniensis		9		817	8718	6426	4217	5390	32	14641	
Keratella cochlearis	178	288	310	1129	6494	4470	4399	4740	1088	2986	2640
Lecane sp. A											
Lepadella sp. A				19					23		330
Monostyla sp. A				12			44				
Notholca sp. A											
Platyias quadricornus									14		
Trichocerca sp. A	9	52	34		301	391	87	130	55	596	1073
Asplanchna sp. A	9		26	218		168	1406	2402	175	17204	6188
Polyarthra sp. A	153	140	190	193	1623	335	922	1429	231	1279	2475
Bdelloid rotifer				37					55	3270	743

Amendment 2
(New)

ER Table 2.7.2-5i
Cherokee Nuclear Station
Sampling Period 9: 20-25 May 74

Taxa	Station Numbers										
	13a	13b	14a	14b	14c	15a	15b	15c	17	21	23
Eucyclops speratus											
Diaptomus sp. A	693	543		32							
Copepodids	1212	1086	115		59			19	7		61
Nauplius larvae	3896	4210	490	127	527	111	157	132	37	34	142
Unidentified harpacticoid											
Alona sp. A	693	543					17				
Chydorus sphaericus				95							
Daphnia pulex	693	689									
Bosmina longirostris			86	95	146			38	20		
Diaphanosoma leuchtenbergianum	5628	4889	86	95	88						
Brachionus calyciflorus	4502	2445	29	32							
Brachionus plicatilis											
Brachionus quadridentata	2338	2037					35				
Colurella sp. A											
Kellicottia bostoniensis	866	815		64		56	35		7		
Keratella cochlearis	952	951	981	1273	1200	204	262	207	125		41
Lecane sp. A					88						
Lepadella sp. A			115	159	88			19			
Monostyla sp. A											
Notholca sp. A									2		
Platyias quardricornus									2		
Trichocerca sp. A	173	407	173	255	205	56	35		10		20
Asplanchna sp. A	4329	5568	259	159	146	93	87	38	24		
Polyarthra sp. A	1558	6654	749	1146	1142	185	192	225	66	34	41
Bdelloid rotifer		136	202	223	177	56	52	19	29		

ER Table 2.7.2-5j
Cherokee Nuclear Station
Estimated Densities of Species of Zooplankton, in no./m^3, at
Sampling Stations on the Broad River System
Sampling Period 10: 17-22 June 74 (Page 1 of 2)

Taxa	Station Numbers (a,b,c = replicate net tows)										
	04a	04b	04c	08	09a	09b	10a	10b	11	12a	12b
Eucyclops speratus											
Mesocyclops edax							1345	673		2217	4159
Tropocyclops prasinus					685	728					
Diaptomus Sp. A					57		67	67	24	341	252
Copepodid	24	29	24	35	628	572	269	426	216	6651	7310
Nauplius larvae	137	58	88	207	4223	2911	830	1053	479	13983	9831
Alona sp. A											
Daphnia pulex					571	676	135	112		11596	8696
Bosmina longirostris					57	52	45	45			
Diaphanosoma leuchtenbergianum				24	8047	7589	1502	1188	228	28649	34284
Ilyocryptus spinifer											
Filinia sp. A											126
Brachionus bidentata									12		
Brachionus calyciflorus			8								
Brachionus havanaensis										511	504
Brachionus plicatilis	56	96	80								
Brachionus quadridentata											
Kellicottia bostoniensis	32	19		71	4509	2807	224	381	72	9720	3529
Keratella cochlearis	186	221	175	498	3710	2807	157	381	563	171	126
Lecane sp. A		19	32	47							
Lepadella sp. A	32	48	48								
Monostyla sp. A				47					72		
Platyias patulus						103					
Trichocerca sp. A	89	125	72	113		52			108		
Asplanchna sp. A	73	67	40	296	114	260	67	67	263	4092	2521
Polyarthra sp. A	8			6	342	260			132	341	
Bdelloid rotifer				41					36		

Amendment 2
(New)

ER Table 2.7.2-5j
Cherokee Nuclear Station
Sampling Period 10: 17-22 June 74

Station Numbers (a,b,c = replicate net tows)

Taxa	13a	13b	14a	14b	14c	15a	15b	15c	17	21	23
Eucyclops speratus					4						
Mesocyclops edax											
Tropocyclops prasinus											
Diaptomus Sp. A	856										
Copepodid	2140	631	23	6	8			8			38
Nauplius larvae	2568	315	19	28	16	40	66	39	14		
Alona sp. A		315									
Daphnia pulex	1712										
Bosmina longirostris		631			49	6			14		
Diaphanosoma leuchtenbergianum	38094	22114	43	52	57						
Ilyocryptus spinifer			16	9	8						
Filinia sp. A											
Brachionus bidentata	3424	631									
Brachionus calyciflorus	428										
Brachionus havanaensis	2568	631		6	12	11			62		
Brachionus plicatilis			4			46	66	39			
Brachionus quadridentata	428	315									
Kellicottia bostoniensis	428							8			96
Keratella cochlearis		315	58	49	53	172	167	201	178		
Lecane sp. A	428								7		
Lepadella sp. A											19
Monostyla sp. A											
Platyias patulus			4								
Trichocerca sp. A		315	54	28	29	46	73	46	110		
Asplanchna sp. A	5992	4422	93	43	65						
Polyarthra sp. A			27	21	12				34		
Bdelloid rotifer						29	58	62			

Amendment 2
(New)

ER Table 2.7.2-5k
Cherokee Nuclear Station
Estimated Densities of Species of Zooplankton, in no./m^3, at
Sampling Stations on the Broad River System
Sampling Period 11: 15-20 July 74

Station Numbers (a,b,c = replicate net tows)

TAXA	04a	04b	04c	08	09a	09b	10a	10b	11	12a	12b	13a	13b	14a	14b	14c	15a	15b	15c	17	21	23
Cyclops vernalis					551	531																
Diaptomus sp. A					371	716	729	1154	89					46				4	9			
Copepodid				7	1088	3422	3078	2370	286	5273	4486	387	381	183	250	121	48	33	17			
Nauplius larvae	42	46		47	212	849	648	608	411	931	1108	91	127	91	50	362	120	49	43	6		9
Leydigia quadrangularis						27																
Pleuroxus hamulatus														46	100	60						
Daphnia pulex					239	531	1620	729	36	1303	1531	182	212	46	100							
Bosmina longirostris												23										
Diaphanosoma leuchtenbergianum					2176	3900	4537	4739	250	2481	4592	1866	1587	457	550	362	43	20	43			
Ilyocryptus spinifer																		8				
Unidentified ostracod									18													
Brachionus bidentata																60	72	33	39			
Brachionus calyciflorus				7		53												4				
Brachionus havanaensis			5						339	186	106		63	91		543	239	216	100		12	
Brachionus plicatilis	77	153	86	149					161													
Brachionus quadridentata													21	46		60			4			
Kellicottia bostoniensis			10				162	182	54	434	158	23						8	9		12	
Keratella cochlearis	68	23	14	16					71							181	33	33		12		
Platyias patulus																	5	8				
Platyias quadricornus																60			4			
Trichocerca sp. A	68	46	24	102					18							60	38	33	39			
Asplanchna sp. A		38	19	106		186			357	124	211	319	677	228	450	543	38	24	48			
Polyarthra sp. A	17								196		53	23	63	46	50	121	48	41	30			
Filinia sp. A									143	186	53	46	106			121		4	4	6		
Hexarthra sp. A									125								5		4			
Bdelloid rotifer	42	92		55					161					46	50	121				18		

Amendment 2
(New)

ER Table 2.7.2-51
Cherokee Nuclear Station
Estimated Densities of Species of Zooplankton, in no./m^3, at
Sampling Stations on the Broad River System
Sampling Period 12: 12-17 Aug. 74

Station Number (a,b,c = replicate net tows)

Taxa	04a	04b	04c	08	09a	09b	10a	10b	11	12a	12b	13a	13b	14a	14b	14c	15a	15b	15c	17	21	23
Mesocyclops edax					173	102	1154	2064		1208	553											
Diaptomus sp. A					317	255	3104	6192	68	427	415	42	148		69	114						
Copepodid		10	11	39	1180	1707	5044	4816	87	8104	7054	840	1033	297	275	1079	21		27			
Nauplius larvae			11	109	950	1783	2328	3784	106	3270	4703	966	1328	430	377	568	165	141	126	11		
Daphnia pulex					460	408	4268	3784	10				148			511						
Bosmina longirostris									10				148							56		
Diaphanosoma leuchtenbergianum					345	127	13580		10	1280	830	1973	6346	66	69	85	21	26	45		12	
Unidentified ostracod																	21					
Chaoborus punctipennis					115	153	388	1032				168	590									
Brachionus calyciflorus													148			28	41					
Brachionus caudatus									10								124	106	72			
Brachionus havanaensis													148				21	35	162	23		
Kellicottia bostoniensis		20		30	144	204	388	1376	10	427	138			231	206	284	83	18	63	45		
Keratella cochlearis	44	30	11	109	144	225		344	135				148		34		536	556	532	90		
Lecane sp. A																			9			
Monostyla sp. A									10					33				9				
Trichocerca sp. A	77	51	77	109													165	79	81			
Trichocerca cylindrica					86	102			29													
Asplanchna sp. A					115	51	388				692	1176	1623	198	275	199	62	62	72			
Ploesma sp. A				296					10								62	26	45			
Polyarthra sp. A				30	57	51	1154	2064	19			126					41	159	144			
Filinia sp. A						25													18			
Hexarthra sp. A				30																		
Conochiloides sp. A							3880	1720		2275	1521	462	1181									
Bdelloid rotifer	11	20		20								42		264	206	57	62	53	72			

NO ORGANISMS FOUND

Amendment 2
(New)

ER Table 2.7.2-5m
Cherokee Nuclear Station
Estimated Densities of Species of Zooplankton, in no./m^3 at
Sampling Stations on the Broad River System
Sampling Period 13: 9-14 Sept. 74 (Page 1 of 2)

TAXA	Station Numbers (a, b, c = replicate net tows)										
	04Sa	04Sb	04Sc	08S	09Ia	09Ib	10Ia	10Ib	11S	12Ia	12Ib
Diaphanosoma leuchtenbergianum					42	270	466	1226		467	289
Daphnia pulex								40			
Leydigia quadrangularis	4										
Pleuroxus hamulatus											
Diaptomus sp. A								356			
Mesocyclops edax							668	1107			
Copepodid				34	297	315	425	1780			83
Nauplius larvae		17			466	405	1701	3085	102	340	124
Bdelloid rotifer		51	17	56	424	315			23		
Brachionus angularis									11		
Brachionus caudatus							61			849	2311
Brachionus havanaensis					42				57	297	83
Euchlanis sp. A									11		
Kellicottia bostoniensis				721	84	45	1458	1780	91	42	
Keratella cochlearis				811				79	124	85	
Platyias quadricornus											41
Monostyla sp. A									23		
Trichocerca sp. A				90							
Asplanchna sp. A				45			121	356	11	637	371
Polyarthra sp. A				282			547	910	45	594	206
Hexarthra sp. A				259					45		
Conochiloides sp. A							2186	4311	137	297	165
Gastropus sp. A				214	466	451	182		79	212	206

Amendment 2
(New)

ER Table 2.7.2-5m
Cherokee Nuclear Station
Sampling Period 13: 9-14 Sept. 74 (Page 2 of 2)

TAXA	Station Numbers (a, b, c - replicate net tows) 13Ia	13Ib	14Ia	14Ib	14Ic	15Sa	15Sb	15Sc	17S	21S	23S
Diaphanosoma leuchtenbergianum			117	118			28				
Daphnia pulex											
Leydigia quadrangularis											
Pleuroxus hamulatus					111						
Diaptomus sp. A	60					32					
Mesocyclops edax											
Copepodid	60		117	237	111					24	
Nauplius larvae			350	355	668	96	83	90			
Bdelloid rotifer	241	234	466	355	334						
Brachionus angularis											
Brachionus caudatus	2050	2223	175	118	334						
Brachionus havanaensis	422	293	816	710	890		28				
Euchlanis sp. A											
Kellicottia bostoniensis			117	355	111	96	28	60			
Keratella cochlearis		59	233	592				30			
Platyias quadricornus					111		28				
Monostyla sp. A								30			
Trichocerca sp. A	181	234	408	237	223	32	28				
Asplanchna sp. A	483	936									
Polyarthra sp. A	633	644	525	473	890						
Hexarthra sp. A											
Conochiloides sp. A	1266	1287	466	1065	557						
Gastropus sp. A	543	1170	292	355	111						

NO ORGANISMS FOUND

NO ORGANISMS FOUND

Amendment 2
(New)

ER Table 2.7.2-6a
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Zooplankton Taxa at
Stations on the Broad River System
Sampling Period 1: 8-12 Oct. 73

CHEROKEE

TAXA	n=1 STATION 2			n=1 STATION 5			n=1 STATION 6			n=1 STATION 125		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda					35.5 99.6	11 45.0					5.0 3.4	91 273.0
Cladocera											45.3 83.5	821 6650.1
Rotifera		100 100	26 0.26		64.5 0.4	20 0.20		100 100	10 0.10		43.5 13.1	788 104288
Nauplius larvae											6.2 70.1	113 1.13
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			26 0.26			31 48.2			10 0.10			1813 7967.11

Amendment 2
(New)

ER Table 2.7.2-6a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct. '73

CHEROKEE

TAXA	n=1 STATION 12B			n=1 STATION 13S			n=1 STATION 13B			n=1 STATION 14S		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		24.5 6.2	1146 2939		9.8 25.8	88 264		11.9 11.8	100 300			
Cladocera		45.3 92.9	2117 44128.4					16.9 87.9	142 2226.2		8.2 31.9	21 170.1
Rotifera		4.1 .9	191 441.21		40.2 73.7	361 753.79					91.8 68.1	236 363.46
Nauplius larvae		26.1 0.1	1220 12.20		50.0 0.4	450 4.50		71.2 0.2	597 5.97			
Unidentified harpacticoids												
Unidentified Ostracods												
Chaoborus punctipennis												
Total Zooplankton			4674 47520.91			899 1022.29			839 2532.17			257 53356
Unidentified nematodes										Amendment 2 (New)		

ER Table 2.7.2-6a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct '73

CHEROKEE

TAXA	n=1 STATION 14B			n=1 STATION 17			n=1 STATION 18			n=1 STATION 19		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		50.0 27.0	15 45.0					6.3 95.3	9 27		33.3 42.9	10 30
Cladocera		50.0 73.0	15 121.5								66.7 57.1	20 40
Rotifera					100 100	69 0.88		46.9 2.4	67 0.67			
Nauplius larvae								46.9 2.4	67 0.67			
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			30 166.5			69 0.88			143 28.34			.30 70
Unidentified nematodes										Amendment 2 (New)		

ER Table 2.7.2-6a
C Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct '73

CHEROKEE

TAXA	n=1 STATION 20			n=1 STATION 21			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		100 100	12 36.0		100 100	42 0.42						
Cladocera												
Rotifera												
Nauplius larvae												
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			12 36.0			42 0.42						
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6b
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Zooplankton Taxa at
Stations on the Broad River System
Sampling Period 2: 5-10 Nov. 73

CHEROKEE

TAXA	n=1 STATION 2			n=1 STATION 3			n=1 STATION 4AA			n=1 STATION 5		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda					9.6	54					12.9	64
					98.3	297					34.0	192
Cladocera		100	18								20.0	97
		100	34.2								65.4	369
Rotifera					47.6	269		100	926		64.2	318
					.9	2.69		100	10.03		0.6	3.18
Nauplius larvae					42.8	242					3.2	.16
					.8	2.42					0.1	0.16
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			18			565		100	926			.495
			34.2			302.11		100	10.03			564.34
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov '73

CHEROKEE

TAXA	n=1 STATION 6			n=1 STATION 7			n=1 STATION 9S			n=1 STATION 9B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		25.0 99.0	20 60					3.7 7.7	11 33		1.8 34.0	10 30
Cladocera								3.7 89.4	11 385		5.4 59.1	29 52.2
Rotifera		50.0 0.7	40 .40		100 100	263 2.63		75.6 2.9	225 12.32		71.0 5.5	384 4.88
Nauplius larvae		25.0 .3	20 .20					16.8 0.1	50 .50		21.8 1.3	118 1.18
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			80 60.6			263 2.63			297 430.82			541 88.26
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov '73

CHEROKEE

TAXA	n=1 STATION 10S			n=1 STATION 10B			n=1 STATION 11S			n=1 STATION 12S		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		56.2 85.4	320 2645.6		14.1 38.0	112 432.9		2.6 12.1	16 48		7.0 12.4	17 51.0
Cladocera		2.3 1.8	13 54.6		1.1 27.7	9 315.0						
Rotifera		34.8 11.9	198 370.08		73.0 34.2	579 359.66		94.7 87.8	522 348.12		71.4 87.4	172 358.22
Nauplius larvae		6.7 .1	38 0.38		11.7 .1	93 0.93		2.6 .1	16 0.16		21.6 0.1	52 0.52
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			569 3108.78			793 1138.49			604 396.28			241 409.74
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov '73

CHEROKEE

TAXA	n=1 STATION 12B			n=1 STATION 13S			n=1 STATION 14S			n=1 STATION 14B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		9.5 21.4	57 152.0		10.1 96.4	11 33						
Cladocera		1.7 49.3	10 350.0									
Rotifera		72.8 29.2	438 207.3		89.9 3.6	98 1.24		100 100	1211 808.85		100 100	162 5.07
Nauplius larvae		16.1 0.1	97 0.97									
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			602 710.27			109 34.24			1211 808.85			162 5.07
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov '73

CHEROKEE

TAXA	STATION n=1 22			STATION			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda												
Cladocera												
Rotifera												
Nauplius larvae												
Unidentified harpacticoids												
Unidentified ostracods		100 100	175 6125.0									
Chaoborus punctipennis												
Total Zooplankton			175 6125.0									
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6c
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Zooplankton Taxa at
Stations on the Broad River System
Sampling Period 3: 3-7 Dec. 73

CHEROKEE

TAXA	n=1 STATION 1			n=1 STATION 2			n=1 STATION 3			n=1 STATION 4		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		18.7 99.0	28 134.4									
Cladocera												
Rotifera		68.7 0.9	103 1.16					83.8 83.8	181 1.81			
Nauplius larvae		12.7 0.1	19 0.19					16.2 16.2	35 0.35			
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			150 135.75						216 2.16			
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec '73

CHEROKEE

TAXA	n=1, STATION 5			n=1 STATION 6			n=1 STATION 7			n=1 STATION 8		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		92.4 98.3	98 835.0		100 100	221 1119.4					100 100	2 17.2
Cladocera		6.6 1.7	7 14.4									
Rotifera		0.9 .1	1 0.01					100 100	146 1.79			
Nauplius larvae												
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			106 849.41			221 1119.4			146 1.79			2 17.2
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec '73

CHEROKEE

TAXA	n=1 STATION 9S			n=1 STATION 9B			n=1 STATION 10S			n=1 STATION 10B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		12.1 30.8	7 56.7		19.8 99.4	35 283.5		0 0	0 0		6.1 31.4	10 81.0
Cladocera		10.3 60.1	6 110.7					100 100	7 13.3		3.0 67.9	5 175.0
Rotifera		72.4 9.1	42 16.74		80.2 .6	1.42 1.61					81.7 0.7	134 1.7
Nauplius larvae		5.2 .1	3 0.03								9.1 .1	15 0.15
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			58 184.17			177 285.11			7 13.3			164 257.85
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec '73

CHEROKEE

TAXA	STATION 11S			STATION 11B			STATION 12S			STATION 12B		
	n=1 $\bar{X} \pm$ S.D.	%N	D	n=1 $\bar{X} \pm$ S.D.	%N	D	n=1 $\bar{X} \pm$ S.D.	%N	D	n=1 $\bar{X} \pm$ S.D.	%N	D
Copepoda								28.1 83.3	45 315.9		17.1 31.3	28 119.7
Cladocera					10.4 95.2	17 32.3					43 64.1	7 245.0
Rotifera		100 100	102 1.27					71.9 16.7	115 63.27		78.7 4.6	129 17.72
Nauplius larvae					89.6 4.4	147 1.47						
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			102 1.27			164 33.77			160 379.17			164 382.42
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec '73

CHEROKEE

TAXA	n=1 STATION 13S			n=1 STATION 13B			n=1 STATION 14S			n=1 STATION 14M		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		11.9 44.0	26 146.3		50.3 76.7	74 373.5		100 100	2 16			
Cladocera		11.9 12.2	26 40.7		39.4 23.2	58 113.1						
Rotifera		74.4 1.6	163 5.47		10.2 .1	15 0.15					100	48 0.61
Nauplius larvae												
Unidentified harpacticoids												
Unidentified ostracods		1.8 42.1	4 140.0									
Chaoborus punctipennis												
Total Zooplankton			219 332.47			147 486.75			2 16.0			48 0.61
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec '73

CHEROKEE

TAXA	n=1 STATION 14B			n=1 STATION 15			n=1 STATION 16			n=1 STATION 17		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		9.5 92.4	22 189.2					50 99.9	10 86.0			
Cladocera		4.8 6.4	11 13.2									
Rotifera		42.9 0.6	99 1.26					5.0 0.1	10 0.10			
Nauplius larvae		42.9 0.5	99 0.99									
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			231 204.65						20 86.1			
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec '73

CHEROKEE

TAXA	n=1 STATION 18			n=1 STATION 19			n=1 STATION 20			n=1 STATION 22		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		50.0 90.6	28 162.4		20.1 83.9	40 273.0		9.6 98.6	22 182.6		9.2 98.9	9 77.4
Cladocera		25.0 9.4	14 16.8		15.1 15.7	30 51.0						
Rotifera		25.0 .1	14 0.14		54.8 0.3	109 1.09		90.4 1.4	208 2.61		9.2 0.1	9 0.09
Nauplius larvae					10.1 .1	20 0.20					81.6 1.0	80 0.80
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			56 179.34			199 325.29			230 185.21			98 78.29
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6d
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Zooplankton Taxa at
Stations on the Broad River System
Sampling Period 4: 31 Dec. 73 - 4 Jan. 74

CHEROKEE

TAXA	n=1 STATION 1			n=1 STATION 2			n=1 STATION 3			n=1 STATION 4		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		36.4 99.7	90 545.4		24.6 83.1	29 87.0					69.2 99.9	323 2120.0
Cladocera					9.3 12.6	11 13.2		100.0 100.0	5 9.0			
Rotifera					66.1 4.3	78 4.46						
Nauplius larvae		63.6 0.3	157 1.57								30.8 0.1	144 1.44
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			247 546.97			118 104.66			5 9.0			467 2121.44
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec '73 - 4 Jan '74

CHEROKEE

TAXA	STATION 5 n=1			STATION 6 n=1			STATION 7 n=1			STATION 8 n=1		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		46.7 78.6	321 1355.7		47.4 99.8	54 437.4		100.0 100.0	95 769.5		49.4 95.2	511 2095.6
Cladocera		4.6 21.2	66 366.3								5.1 9.6	53 100.7
Rotifera					52.6 0.2	60 0.76					45.5 0.3	471 5.56
Nauplius larvae		43.7 0.2	300 3.00									
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			687 1725.0			114 438.16			95 769.5			1035 2201.86
Unidentified nematodes												

Amendment 2 (New)

ER Table.2.7.2-6d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec '73 - 4 Jan '74

CHEROKEE

TAXA	n=1 STATION 9S			n=1 STATION 9B			n=1 STATION 10S			n=1 STATION 10B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		55.4 82.6	103 472.2		24.1 79.2	91 466.8		13.5 42.3	21 63.0		23.5 72.8	94 454.4
Cladocera		44.6 17.4	83 99.6		7.7 5.9	29 34.8		45.8 57.2	71 85.2		19.3 14.8	77 92.4
Rotifera					22.8 14.6	86 86.0		40.6 0.4	63 0.63		19.0 12.2	76 76.0
Nauplius larvae					45.4 0.3	171 1.71					38.3 0.2	153 1.53
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			186 571.8			377 589.31			155 148.83			400 624.33
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec '73 - 4 Jan '74

CHEROKEE

TAXA	n=1 STATION 11S			n=1 STATION 12S			n=1 STATION 12B			n=1 STATION 13S		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Cladocera		50.0 18.9	12 24.0		29.5 32.8	56 89.6		22.4 9.1	34 45.6		9.7 3.8	50 72.0
Rotifera					52.6 18.6	100 50.63						
Nauplius larvae								18.4	28 0.28		43.4 0.1	225 2.25
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			24 127.2			190 272.83			152 500.28			518 1870.95
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec '73 - 4 Jan '74

CHEROKEE

TAXA	n=1 STATION 13B			n=1 STATION 14S			n=1 STATION 14M			n=1 STATION 14B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		63.1 93.0	359 1857.3		69.2 73.8	72 420.0		60.0 78.9	24 72.0		57.1 31.4	32 136.8
Cladocera		20.4 7.0	116 139.2		30.8 26.2	32 148.8		40.0 21.1	16 19.2		42.9 68.6	24 299.2
Rotifera												
Nauplius larvae		16.5 2.1	94 0.94									
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			569 1997.44			104 568.8			40 91.2			56 436
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec '73 - 4 Jan '74

CHEROKEE

TAXA	n=1 STATION 15			n=1 STATION 16			n=1 STATION 17			n=1 STATION 18		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		100.0 100.0	13 39.0		100.0 100.0	23 186.3					11.4 79.7	232 1170.3
Cladocera											8.0 18.4	163 270.0
Rotifera								22.7 27.2	618 7.85		30.2 1.2	618 17.01
Nauplius larvae								77.3 72.8	2102 21.02		50.4 0.7	1030 10.3
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			13 39.0			23 186.3			2720 28.87			2043 1467.71
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec '73 - 4 Jan '74

CHEROKEE

TAXA	n=1 STATION 19			n=1 STATION 20			n=1 STATION 22			n=1 STATION 23		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		6.9 95.4	40 120.0									
Cladocera					18.1 30.6	17 34.0		5.3 94.4	15 45.0		3.5 4.5	12 36.0
Rotifera		31.0 1.8	179 2.27		81.9 69.4	77 77.0					46.5 95.5	327 755.37
Nauplius larvae		62.0 2.8	358 3.58					94.7 5.6	268 2.68			
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			577 125.85			94 111.0			283 47.68			339 791.37
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6e
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Zooplankton Taxa at
Stations on the Broad River System
Sampling Period 5: 28 Jan. - 2 Feb. 74

CHEROKEE

TAXA	n=1 STATION 1			n=1 STATION 2			n=1 STATION 3			n=1 STATION 4		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		36.4 99.7	90 545.4		9.8 64.0	40 222.0		20.6 84.2	57 482.2		30.5 83.6	296 2374.8
Cladocera					24.9 35.3	102 122.4		26.7 15.5	74 88.8		7.0 16.0	68 453.4
Rotifera					21.8 0.3	89 0.89		26.4 0.2	73 0.93		41.6 0.3	404 8.81
Nauplius larvae		63.3 0.3	157 1.57		43.5 0.6	178 1.78		26.4 0.1	73 0.73		20.8 0.1	202 2.02
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton			247 546.97			409 347.07			277 572.66			970 2839.05
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan-2 Feb '74

CHEROKEE

TAXA	STATION 5 n=1			STATION 6 n=1			STATION 7 n=1			STATION 8 n=1		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		49.7 93.3	1345 10905.7		100.0 100.0	15 45.0		36.1 87.5	166 1409.6		17.3 42.2	95 320.7
Cladocera		0.8 6.6	22 770.0					36.1 12.4	166 199.2		61.0 57.6	335 438.0
Rotifera		7.1 2.1	192 2.18									
Nauplius larvae		42.4 0.1	1155 11.55					27.9 0.1	128 1.28		21.7 0.2	119 1.19
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton			2723 11689.43			15 45.0			460 1610.08			549 759.89
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan-2 Feb '74

CHEROKEE

TAXA	STATION 9S n=1			STATION 9B n=1			STATION 10S n=1			STATION 10B n=1		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		14.9 62.9	24 133.2		37.7 50.1	55 246.6		22.3 42.3	27 81.0		14.1 24.6	50 190.8
Cladocera		40.4 36.8	65 78.0		32.2 45.8	47 225.4		56.2 57.6	68 110.4		12.4 38.9	44 302.2
Rotifera											69.9 36.4	248 282.74
Nauplius larvae		44.7 0.3	72 0.72		23.3 0.1	34 0.34		21.5 0.1	26 0.26		3.7 2.1	13 0.13
Unidentified harpacticoids					6.8 4.1	10 20.0						
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton			161 211.92			146 492.34			121 191.66			355 775.87
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan-2 Feb '74

CHEROKEE

TAXA	n=1 STATION 11S			n=1 STATION 12S			n=1 STATION 12B			n=1 STATION 13S		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		23.2 58.5	99 393.9		39.9 86.4	252 1694.4		35.2 61.3	107 509.7		37.6 51.1	243 1096.2
Cladocera		50.9 41.3	217 277.9		32.9 13.5	208 264.0		41.4 38.5	126 320.4		47.3 47.2	306 1013.4
Rotifera					6.8 0.1	43 2.46		7.9 0.2	24 1.37			
Nauplius larvae		25.8 0.2	110 1.10		20.4 0.1	129 1.29		15.5 0.1	47 0.47		12.4 2.1	80 0.80
Unidentified harpacticoids											2.8 1.7	18 36.0
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton			426 672.9			632 1962.15			304 831.94			647 2146.4
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan-2 Feb '74

CHEROKEE

TAXA	n=1 STATION 13B			n=1 STATION 14S			n=1 STATION 14M			n=1 STATION 14B		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		45.8 73.1	130 573.6		27.4 55.2	102 535.4		16.9 16.4	81 324.6		14.3 31.5	14 123.0
Cladocera		39.4 68.0	112 193.2		63.7 44.8	237 434.8		63.1 83.5	303 1652.0		76.6 68.5	219 267.6
Rotifera		7.7 .1	22 0.28									
Nauplius larvae		3.9 .1	11 0.11		8.9 .1	33 0.33		20.0 .1	96 0.96		9.1 0.1	26 0.26
Unidentified harpacticoids		3.2 2.3	9 18.0									
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton			284 785.19			372 970.53			480 1977.56			286 390.86
Unidentified nematodes												

Amendment 2 (New)

ER Table 2.7.2-6e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan-2 Feb '74

CHEROKEE

TAXA	STATION 15 n=1			STATION 16 n=1			STATION 17 n=1			STATION 18 n=1		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		23.5	163								24.2	200
		86.1	1092.2								93.0	793.8
Cladocera		17.9	124					14.3	34		4.6	38
		13.6	172.2					94.6	40.8		5.3	45.6
Rotifera		58.6	406		50.0	108		42.9	102		20.3	168
		0.3	4.06		55.9	1.37		3.0	1.3		1.2	10.16
Nauplius larvae					50.0	108		42.9	102		51.0	422
					44.1	1.08		2.4	1.02		0.5	4.22
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton			693			216			238			828
			1268.46			2.45			43.12			853.78
Unidentified nematodes												

Amendment 2 (New)

ER Table 2.7.2-63
Cherokee Nuclear Station
Sampling Period 5: 28 Jan-2 Feb '74

CHEROKEE

TAXA	n=1 STATION 20			n=1 STATION 22			n=1 STATION 23			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		20.4 64.5	63 189.0		1.9 3.6	5 15.0						
Cladocera		18.4 34.8	57 102.0		10.1 95.9	27 404.2						
Rotifera		40.8 0.4	126 1.26		35.2 0.2	94 0.94		100.0 100.0	55 3.15			
Nauplius larvae		20.4 0.2	63 0.63		52.8 0.3	141 1.41						
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton			309 292.89			267 421.55			55 3.15			
Unidentified nematodes												Amendment 2 (New)

ER Table 2.7.2-6f
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Zooplankton Taxa at
Stations on the Broad River System
Sampling Period 6: 25 Feb. - 1 Mar. 74

CHEROKEE

TAXA	n=1 STATION 1			n=1 STATION 2			n=1 STATION 3			n=1 STATION 4		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda								41.7 99.4	100 300		10:3 32.9	54 279.3
Cladocera		18.8 99.5	54 679.5		6.2 7.2	8 9.60					5.7 64.0	30 543.0
Rotifera		62.4 0.4	179 2.64		53.1 92.4	69 122.97		43.3 0.5	104 1.49		34.8 2.8	183 24.11
Nauplius larvae		18.8 0.1	54 0.54		40.8 0.4	53 0.53		15.0 0.1	36 0.36		49.2 0.3	259 2.59
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			287 682.68			130 133.10			240 301.85			526 849.0
Unidentified nematodes												

Amendment 2
(new)

ER Table 2.7.2-6f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb-1 Mar '74

CHEROKEE

TAXA	n=1 STATION 5			n=1 STATION 6			n=1 STATION 7			n=1 STATION 8		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		34.1 50.4	881 6416.4					4.7 21.3	22 66.0		5.7 63.0	35 150.9
Cladocera		6.9 49.2	179 6265.0					4.0 50.9	19 158.0		11.1 34.1	68 81.6
Rotifera		37.9 0.4	980 45.05		86.4 87.7	89 1.0		62.7 27.4	296 85.03		45.9 1.8	280 4.29
Nauplius larvae		21.1 .1	546 5.46		15.6 12.3	14 0.14		28.6 0.4	135 1.35		37.2 0.9	227 2.27
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			2586 12731.9			103 1.14			472 310.38			610 239.06
Unidentified nematodes												

Amendment 2 (new)

ER Table 2.7.2-6f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb-1 Mar '74

CHEROKEE

TAXA	n=2 STATION 9			n=2 STATION 10			n=1 STATION 11			n=2 STATION 12		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda	44.5 ± 3.54 274.6 ± 81.46	22.9 56.0	44.5 274.6	39. ± 7.07 252.15 ± 75.31	13.0 28.1	39.0 252.15		4.6 81.6	31 93.0	76.0 ± 52.33 544.65 ± 427.45	23.2 68.3	76.0 541.65
Cladocera	22.0 ± 22.63 167.9 ± 59.54	11.3 34.3	22.0 167.9	50.0 ± 18.39 638.1 ± 639.62	16.7 71.0	50.0 638.1		1.5 10.5	10 12.0	60.5 ± 34.65 236.75 ± 182.08	18.5 29.9	60.5 236.75
Rotifera	102.5 ± 94.05 47.23 ± 17.32	52.8 9.6	102.5 47.23	140.5 ± 6.36 7.44 ± 8.07	46.9 0.8	140.5 7.44		77.3 6.9	521 7.84	126.0 ± 67.88 13.67 ± 18.14	38.5 1.7	126.0 13.67
Nauplius larvae	25.0 ± 9.90 0.25 ± 0.099	12.9 0.1	25.0 0.25	70.0 ± 9.90 0.70 ± .099	23.4 0.1	70.0 0.70		16.6 1.0	112 1.12	65.0 ± 57.98 0.65 ± 0.58	19.8 0.1	65.0 0.65
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton	194.0 ± 57.98 489.98 ± 4.70		194.0 489.98	299.5 ± 28.99 898.39 ± 923.09		299.5 898.39			674 113.96	327.5 ± 212.84 792.72 ± 628.25		327.5 792.72
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb-1 Mar '74

CHEROKEE

TAXA	n=2 STATION 13			n=4 STATION 14			n=1 STATION 15			n=1 STATION 16		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda	23.5 ± 7.78 70.5 ± 23.34	5.1 18.2	23.5 70.5	20.0 ± 19.85 66.38 ± 68.39	5.6 64.2	20.0 66.38		5.0 20.5	22 122.1		8.6 36.4	37 250.9
Cladocera	83.0 ± 55.15 206.25 ± 37.12	17.9 53.3	83.0 206.25	16.5 ± 13.30 24.78 ± 21.54	4.6 24.0	16.5 24.78		12.5 73.7	55 437.8		3.7 6.5	16 424.8
Rotifera	280.0 ± 158.39 109.37 ± 137.24	60.3 28.3	280.0 109.37	223.5 ± 144.64 11.30 ± 12.19	62.3 10.9	223.5 11.30		57.6 1.9	254 11.39		68.5 2.0	294 13.66
Nauplius larvae	77.5 ± 27.58 0.77 ± 0.28	16.7 0.2	77.5 0.77	98.5 ± 43.95 0.98 ± 0.44	27.5 0.9	98.5 0.98		22.4 0.2	99 0.99		19.1 0.1	82 0.82
Unidentified harpacticoids								2.5 3.7	11 22.0			
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton	464.0 ± 248.90 386.89 ± 123.73		464.0 386.89	358.5 ± 185.45 103.44 ± 66.99		358.5 103.44			441 594.28			429 690.18
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb-1 Mar '74

CHEROKEE

TAXA	n=1 STATION 17			n=1 STATION 18			n=1 STATION 19			n=1 STATION 20		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		2.5 0.8	12 36.0		10.2 57.6	30 105.3		4.5 72.2	44 228.9		2.3 53.1	6 18.0
Cladocera		21.9 11.9	103 534.0		19.7 41.2	58 75.2		3.7 18.5	37 58.8		2.3 21.2	6 7.2
Rotifera		17.8 0.7	84 29.41		35.6 0.6	105 1.14		74.1 8.7	731. 27.73		61.2 5.4	161 1.84
Nauplius larvae		28.2 .1	133 1.33		34.6 0.6	102 1.02		17.7 0.6	175 1.75		33.1 2.6	87 0.87
Unidentified harpacticoids		6.4 1.3	30 60.0								1.2 17.7	3 6.0
Unidentified ostracods		23.1 85.2	109 3815.0									
Chaoborus punctipennis												
Total Zooplankton			471 4475.74			295 182.66			987 317.18			263 33.91
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb-1 Mar '74

CHEROKEE

TAXA	n=1 STATION 21			n=1 STATION 22			n=1 STATION 23			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda												
Cladocera		16.3 95.9	8 9.60		1.2 68.0	2 4.0						
Rotifera		32.7 1.6	16 0.16		56.8 19.9	96 1.17		50.0 1.2	8 0.1			
Nauplius larvae		51.0 2.5	25 0.25		42.0 12.1	71 0.71		25.0 0.5	4 0.04			
Unidentified harpacticoids								25.0 98.3	4 8.0			
Unidentified ostracods												
Chaoborus punctipennis												
Total Zooplankton			49 10.01			169 5.88			16 8.14			
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6g
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Zooplankton Taxa at
Stations on the Broad River System
Sampling Period 7: 25-30 Mar. 74

CHEROKEE

TAXA	N=1 STATION 1			N=1 STATION			N=1 STATION 3			N=3 STATION 4		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		2.8	30		8.4	25		12.3	253	146.67 ± 27.2	8.1	146.67
		15.8	90.0		46.8	202.5		85.5	1980.6	508.0 ± 110.32	46.3	508.0
Cladocera					16.6	49		6.2	127	50.0 ± 32.60	2.8	50.0
					13.6	58.8		12.6	292.4	75.47 ± 39.76	6.9	75.47
Rotifera		71.0	755		41.9	124		63.1	1296	984.67 ± 207.19	54.5	984.67
		83.7	477.12		39.6	171.51		1.7	39.67	475.05 ± 153.41	43.3	475.05
Nauplius larvae		26.2	279		33.1	98		18.4	379	607.67 ± 113.44	33.7	607.67
		0.5	2.79		0.2	0.98		0.2	3.79	6.07 ± 1.13	0.6	6.07
Unidentified harpacticoids										16.33 ± 28.29	0.9	16.33
										32.67 ± 56.58	3.0	32.67
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton			1064			296			2055	1805.3 ± 344.7		1805.3
			569.91			432.81			2316.46	1097.26±265.56		1099.26
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar '74

CHEROKEE

TAXA	N=1 STATION 5			N=1 STATION 6			N=1 STATION 7			N=1 STATION 8		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		21.9	46743		14.8	611		11.2	93		8.3	31
		35.0	272650.5		29.0	3623.1		59.0	381.0		46.3	93.0
Cladocera		6.6	14129		6.6	275		3.1	26		3.8	14
		63.5	494515		60.6	7575.2		20.5	132.6		8.4	16.8
Rotifera		52.9	113033		49.4	2046		60.0	499		69.6	259
Nauplius larvae		18.2	39894		29.2	1207		24.8	206		18.3	68
		0.1	398.94		0.1	12.07		0.3	2.06		0.3	0.68
Unidentified harpacticoids								0.8	7			
								2.2	14.0			
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton			213799			4139			831			372
			778935.87			12497.5			645.72			200.74
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar 74

CHEROKEE

TAXA	N=2 STATION 9			N=2 STATION 10			N=1 STATION 11			N=2 STATION 12		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda	180.5 ± 108.19 1199.4 ± 504.87	25.0 39.1	180.5 1199.4	59.5 ± 28.99 280.5 ± 231.22	10.4 11.0	59.5 280.5		2.8 6.0	6 18.0	74.0 ± 12.3 222.0 ± 38.18	42.9 75.2	74.0 222.0
Cladocera	138.0 ± 49.5 1744.5 ± 1593.11	19.1 56.9	138.0 1744.5	147.5 ± 43.13 2214.4 ± 1024.74	25.7 87.0	147.5 2214.4		7.1 74.0	15 223.2	11.0 ± 15.56 22.0 ± 31.12	6.4 7.5	11.0 22.0
Rotifera	95.0 ± 62.23 120.55 ± 169.76	13.1 3.9	95.0 120.55	258.0 ± 322.44 49.64 ± 67.77	45.0 2.0	258.0 49.64		76.4 19.9	162 19.9	87.5 ± 28.99 51.25 ± 70.39	50.7 17.4	87.5 51.25
Nauplius larvae	309.5 ± 147.79 3.09 ± 1.48	42.8 0.1	309.5 3.09	108.0 ± 12.73 1.08 ± 0.13	18.8 .1	108.0 1.08		13.7 0.1	29 0.29			
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton	723.0 ± 151.32 3067.55±1259.48		723.0 3067.55	573.0 ± 263.04 2545.62±1188.07		573.0 2545.62			212 301.44	172.5 ± 31.82 295.25 ± 63.32		172.5 295.25
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar 74

CHEROKEE

TAXA	N=2 STATION 13			N=3 STATION 14			N=3 STATION 15			N=1 STATION 16		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda	291.5 ± 37.48 1631.85±418.96	24.4 69.1	291.5 1631.85	43.3 ± 49.32 130.0 ± 147.96	10.7 20.0	43.3 130.0	11.67 ± 1.53 52.0 ± 25.16	8.7 51.9	11.67 52.0		51.9 82.5	.14 42.0
Cladocera	605.0 ± 45.26 726.0 ± 54.31	50.7 30.8	605.0 726.0	36.0 ± 33.06 167.13 ± 225.3	8.9 25.7	36.0 167.13	11.33 ± 3.51 26.27 ± 11.90	8.5 26.2	11.33 26.27		22.2 17.3	6 8.8
Rotifera	32.0 ± 45.26 0.41 ± 0.57	2.7 2.1	32.0 0.41	292.3 ± 63.5 320.58 ± 19.7	72.0 49.3	292.3 320.58	60.3 ± 9.61 21.3 ± 12.49	45.1 21.3	60.3 21.3		25.9 0.2	7 .09
Nauplius larvae	265.0 ± 74.95 2.65 ± 0.75	22.2 0.1	265.0 2.65	18.0 ± 31.18 0.18 ± 0.31	4.4 2.1	18.0 0.18	50.3 ± 9.29 0.5 ± .09	37.6 0.5	50.3 0.5			
Unidentified harpacticoids				16.3 ± 28.29 32.6 ± 56.6	4.0 5.0	16.3 32.6						
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton	1193.5 ± 112.43 2360.91 ± 365.98		1193.5 2360.91	406.0 ± 68.83 650.56 ± 143.19		406.0 650.56	133.7 ± 12.9 100.1 ± 30.4		133.7 100.1			27 50.89
Unidentified nematodes											Amendment 2 (New)	

ER Table 2.7.2-6g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar '74

CHEROKEE

TAXA	N=1 STATION 17			N=1 STATION 18			N=1 STATION 19			N=1 STATION 20		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda								2.3 15.5	18 54.0		1.5 71.9	6 18.0
Cladocera		10.2 28.2	22 26.4					4.8 12.8	37 44.4			
Rotifera		39.8 70.7	86 66.26					51.9 70.8	398 245.87		63.2 22.4	256 5.62
Nauplius larvae		50 1.2	108 1.08					40.9 0.9	314 3.14		35.3 5.7	143 1.43
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton			216 93.74						767 347.41			405 25.05
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar 74

CHEROKEE

TAXA	N=1 STATION 21			N=1 STATION 22			N=1 STATION 23			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda					4.9 93.2	16 48.0						
Cladocera												
Rotifera					40.4 3.3	133 1.69		57.2 57.2	103 1.03			
Nauplius larvae					54.7 3.5	180 1.8		42.8 42.8	77 0.77			
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton						329 51.49			180 1.80			
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6h
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Zooplankton Taxa at
Stations on the Broad River System
Sampling Period 8: 22-27 Apr. 74

CHEROKEE

TAXA	N=1 STATION 1			N=1 STATION 2			N=1 STATION 3			N=3 STATION 4		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		4.9 41.0	70 210.0					22.6 19.0	491 1559.7	7.33 ± 10.21 27.1 ± 39.4	2.9 36.4	7.33 27.1
Cladocera		0.7 2.3	10 12.00					8.7 80.6	189 6615.0	1.0 ± 1.73 2.0 ± 3.46	0.4 2.7	1.0 2.0
Rotifera		81.7 56.3	1165 287.84		77.5 92.5	365 13.10		26.0 0.3	566 26.2	170.7 ± 53.58 42.61 ± 6.76	67.7 57.2	170.7 42.61
Nauplius larvae		12.7 0.4	181 1.81		22.5 7.5	106 1.06		42.7 0.1	930 9.3	72.3 ± 25.93 0.72 ± 0.26	28.7 1.0	72.3 0.72
Unidentified harpacticoids										1.0 ± 1.73 2.0 ± 3.46	0.4 2.7	1.0 2.0
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton			1426 511.65			471 14.16			2176 8210.2	252.3 ± 24.91 74.44 ± 42.79		252.3 74.44
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6h
Cherokee Nuclear Station
Sampling Period 8: 22-27 Apr '74

CHEROKEE

TAXA	N=1 STATION 5			N=1 STATION 6			N=1 STATION 7			N=1 STATION 8		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		7.3 55.4	16 129.6		0.7 67.6	4 12.0		4.9 54.3	23 69.0		4.5 45.4	26 78.0
Cladocera		4.1 36.5	9 85.3					1.5 6.6	7 8.40		0.5 5.6	3 9.60
Rotifera		49.1 6.0	108 13.98		99.3 32.4	576 5.76		78.6 38.5	368 48.89		80.8 48.6	464 83.54
Nauplius larvae		38.6 0.4	85 0.85					15.0 0.6	70 0.70		14.1 0.5	81 0.81
Unidentified harpacticoids		0.9 1.7	2 4.0									
Unidentified ostracods												
Chaobrous p punctipennis												
Total zooplankton			220 233.73			580 17.76			468 126.99			574 171.95
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6h
Cherokee Nuclear Station
Sampling Period 8: 22-27 Apr '74

CHEROKEE

TAXA	N=2 STATION 9			N=2 STATION 10			N=2 STATION 12			N=2 STATION 13		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda	365.5 ± 38.89 1578.45±516.97	11.1 38.3	365.5 1578.45	3685 ± 2778.93 15475.4±7763.4	21.3 14.2	4685 15475.4	1600.5 ± 289.2 14564.5±2239.9	34.7 78.1	1600.5 14564.5	369.5 ± 130.8 2164.2 ± 962.23	13.3 71.5	369.5 2164.2
Cladocera	1086.0 ± 118.79 2096.8 ± 285.1	32.8 50.9	1086.0 2096.8	2125.5±314.66 39884.3±8479.8	5.6 36.6	1225.5 39884.3	258.5 ± 2.12 4045.1±1120.7	5.6 21.7	258.5 4045.1	22.0 ± 31.11 26.4 ± 37.35	0.8 0.9	22.0 26.4
Rotifera	610.0 ± 497.8 431.98 ± 360.05	18.4 10.5	610.0 431.98	4781.0 ± 787.72 230.69 ± 124.84	21.7 0.2	4781.0 230.69	1509.5 ± 1974.9 24.76 ± 30.17	34.5 0.1	1589.5 24.76	1048.0 ± 83.4 822.57 ± 20.55	37.6 27.2	1048.0 822.57
Nauplius larvae	1245.0 ± 87.68 1245 ± 0.88	37.7 0.3	1245.0 12.45	11293.5±3416.0 112.94 ± 34.16	51.4 0.1	11293.5 112.94	1158.5±1638.4 11.58 ± 16.38	25.1 0.1	1158.5 11.58	1348.0±610.94 13.48 ± 6.11	48.4 0.4	1348.0 13.48
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton	3306.5±490.03 4119.68±127.32		3306.5 4119.68	21985.0±7297.3 109115.8±59134.5		21985.0 109115.8	4607±3900.4 18646.0±3407.3		4607 18646.0	2787.5±689.43 3026.65±1026.2		2787.5 3026.65
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6h
Cherokee Nuclear Station
Sampling Period 8: 22-27 Apr 74

CHEROKEE

TAXA	N=3 STATION 14			N=3 STATION 15			N=1 STATION 16			N=1 STATION 17		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda	90.33 ± 17.62 271.0 ± 5285	4.3 23.8	90.33 271.0	13.3 ± 2.52 40.0 ± 7.55	5.4 61.0	13.3 40.0		11.1 47.9	4 12.0		1.4 26.1	2 6.6
Cladocera	57.0 ± 6.0 82.0 ± 17.69	2.7 7.2	57.0 82.0					22.2 51.1	8 12.8			
Rotifera	1141.67 ± 444.24 766.38 ± 606.46	54.9 67.2	1141.67 766.38	182.67 ± 47.72 25.10 ± 10.16	73.8 38.3	182.67 25.10		50.0 0.8	18 0.20		77.7 72.5	115 16.67
Nauplius larvae	783.0 ± 343.41 7.83 ± 3.43	37.7 0.7	783 7.83	51.67 ± 7.64 0.52 ± .08	20.9 0.8	51.67 0.52		16.7 0.2	6 .06		20.9 1.3	31 0.31
Unidentified harpacticoids	6.33 ± 10.97 12.67 ± 21.94	0.3 1.1	6.33 12.67									
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton	2078.3 ± 800.76 1139.38±642.45		2078.3 1139.83	247.67 ± 53.93 65.61 ± 17.77		247.67 65.61			36 25.06			1.43 22.98
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6h
Cherokee Nuclear Station
Sampling Period 8: 22-27 Apr '74

CHEROKEE

TAXA	N=1 STATION 18			N=1 STATION 19			N=1 STATION 20			N=1 STATION 21		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		3.6 42.1	17 86.7		2.4 60.8	28 84.0						
Cladocera		3.6 9.9	17 20.4									
Rotifera		52.2 47.0	245 96.74		81.9 37.9	962 52.28		100.0 100.0	192 2.18			
Nauplius larvae		40.5 0.9	190 1.9		15.7 1.3	184 1.84					72.5 1.3	74 0.74
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton			469 205.74			1174 138.12			192 2.18			102 56.74
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6h
Cherokee Nuclear Station
Sampling Period 8: 22-27 Apr '74

CHEROKEE

TAXA	N=1 STATION 22			N=1 STATION 23			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		61.0 82.3	25 75.0		4.8 20.6	8 24.0						
Cladocera		19.5 17.6	3 16.0		9.6 21.9	16 25.6						
Rotifera		19.5 0.1	8 .08		4.8 0.1	8 .08						
Nauplius larvae					61.1 0.9	102 1.02						
Unidentified harpacticoids			–		19.8 56.6	33 66.0						
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton			41 91.08			167 116.7						
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6i
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Zooplankton Taxa at
Stations on the Broad River System
Sampling Period 9: 20-25 May 74.

CHEROKEE

TAXA	N=3 STATION 4			N=1 STATION 8			N=2 STATION 9			N=2 STATION 10		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda	17 ± 0.00 79.9 ± 50.06	2.8 53.22	17 79.90		1.3 19.1	37 141.60	624 ± 540.94 1870.5 ± 1622.8	3.0 39.3	624 1870.5	1407 ± 61.52 4381.4 ± 413.5	7.7 17.37	1407 4381.4
Cladocera	17 ± 17.50 20.8 ± 21.0	2.8 13.85	17 20.8				1160 ± 60.81 2323.2 ± 15.4	5.6 48.8	1160 2323.2	1087 ± 296.98 16170.75±5544.6	6.0 64.12	1087 16170.8
Rotifera	466 ± 107.36 48.45 ± 33.59	77.9 32.27	466 48.45		89.7 75.4	2599 557.86	15110±4141.52 488.5 ± 188.9	73.4 103	15110 488.5	12583±2132.63 4635.85±1678.3	69.2 18.38	12583 4635.85
Nauplius larvae	98 ± 13.58 0.98 ± 0.14	16.4 0.65	98 0.98		8.4 0.3	243 2.43	3701 ± 888.13 74.00 ± 2.0	18.0 1.6	3701 74.0	3104 ± 661.14 31.035 ± 6.611	17.1 0.12	3104 31.035
Unidentified harpacticoids					0.7 5.1	19 38						
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton	598 ± 131.90 150.13 ± 33.15		598 150.13			2898 739.89	20595±4549.53 4719.2±1717.42		20595 4719.20	18180±3029.25 25219.05±6816.01		18180 25219.05
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6i
Cherokee Nuclear Station
Sampling Period 9: 20-25 May '74

CHEROKEE

TAXA	N=1 STATION 11			N=2 STATION 12			N=2 STATION 13			N=3 STATION 14		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		1.6 14.6	32 96	2672 ± 1365.42 8448.8 ± 4710.46	5.4 7.42	2672 8448.8	1767 ± 195.16 8452.80±1126.42	6.0 13.53	1767 8452.8	69 ± 32.34 260.4 ± 84.01	1.9 20.24	69 260.40
Cladocera		2.6 17.2	51 112.80	10790±3998.69 77793.55±57978.58	21.8 68.35	10790 77793.55	6568 ± 631.45 41742.20±311.13	22.5 66.82	6568 41742.20	230 ± 56.59 454.17 ± 115.30	6.3 53.3	230 454.17
Rotifera		85.2 67.9	1678 446.55	29304 ± 17870.71 27513.94±17968.83	59.3 24.17	29304 27513.94	16865 ±3037.02 12234.68±2330.65	57.7 19.58	16865 12234.68	2945 ± 425.04 568.26 ± 115.78	81.2 44.17	2945 568.26
Nauplius larvae		10.6 0.3	208 2.08	6664) 376.18 66.64 ± 3.76	13.5 0.06	6664 66.64	4053 ± 222.03 40.53 ± 2.22	13.9 0.06	4053 40.53	381 ± 221.03 3.81 ± 2.21	10.5 0.3	381 3.81
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton			1969 657.43	49430±12130.42 113822.93± 44723.98		49430 113822.93	29253±2432.45 62470.21 ± 895.32		29253 62470.21	3625 ± 324.92 1286 ± 165.23		36.25 1286.64
Unidentified namatodes												

Amendment 2
(New)

ER Table 2.7.2-6i
Cherokee Nuclear Station
Sampling Period 9: 20 - 25 May '74

CHEROKEE

TAXA	N=3 STATION 15			N=1 STATION 17			N=1 STATION 21			N=1 STATION 23		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda	6 ± 10.97 19 ± 32.91	0.8 7.86	6 19		2.1 18.9	7 21					20.0 96.5	61 183
Cladocera	18 ± 19.04 26.53 ± 23.699	2.3 10.98	18 26.53		5.9 21.6	20 24.0						
Rotifera	619 ± 98.80 194.74 ± 68.61	79.8 80.6	619 194.74		81.2 55.1	277 65.63		50.0 91.8	34 3.774		33.4 2.8	102 5.27
Nauplius larvae	133 ± 23.03 1.33 ± 0.23	17.1 0.55	133 1.33		10.9 0.3	37 .37		50.0 8.3	34 0.34		46.6 0.7	142 1.42
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton	776 ± 88.55 241.6 ± 22.37		776 241.6			341 111.0			68 4.11			305 189.69
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6j
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Zooplankton Taxa at
Stations on the Broad River System
Sampling Period 10: 17-22 June 74

CHEROKEE

TAXA	N=3 STATION 4			N=1 STATION 8			N=2 STATION 9			N=2 STATION 10		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda	26 ± 2.89 77 ± 8.66	4.1 34.13	26 77		2.5 12.0	35 105	1335 ± 49.50 4150.35±354.05	6.4 8.42	1335 4150.35	1424 ± 364.16 19747.2±8220.12	31.5 70.04	1424 19747.2
Cladocera					1.7 8.0	24 69.6	8496 ± 253.14 44560.1±1655.20	40.7 90.4	8496 44560.1	1514 ± 238.29 8277 ± 1213.11	33.5 29.36	1514 8277
Rotifera	509 ± 75.50 147.66 ± 40.65	80.9 65.45	509 147.66		80.8 79.7	1119 693.94	7482 ± 1687.16 546.55 ± 216.43	35.8 1.11	7482 546.55	638 ± 269.41 161.21 ± 3.13	14.1 0.57	638 161.21
Nauplius larvae	94 ± 39.88 .94 ± .40	14.9 .42	94 .94		14.9 0.2	207 2.07	3567 ± 927.72 35.67 ± 9.28	17.1 .07	3567 35.67	941 ± 157.68 9.42 ± 1.58	20.8 .03	941 9.42
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton	629 ± 57.95 225.6 ± 44.66		629 225.6			1385 870.61	20880 ± 2917.52 49292.67±1508.3		20880 49292.67	4517 ± 175.36 28194.83±9428.53		45.17 28194.83
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6j
Cherokee Nuclear Station
Sampling Period 10: 17 - 22 Jun '74

CHEROKEE

TAXA	N=1 STATION 11			N=2 STATION 12			N=2 STATION 13			N=3 STATION 14		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		10.9 39.34	240 842.4	10465 ± 1776.25 80697.15±25563.39	14.0 6.0	10465 80697.15	1813 ± 1672.31 7623.30 ± 8103.87	4.0 5.53	1813 7623.30	14 ± 8.62 47.7 ± 26.5	4.7 12.08	14 47.7
Cladocera		10.3 30.88	228 66.12	41612 ± 1933.94 1267638±43780.52	55.6 93.0	41612 1267638.5	31433 ± 11841.21 117955.2±74157.68	70.1 85.56	31433 117955.2	78 ± 31.19 188.53 ± 45.07	26.1 47.73	78 188.53
Rotifera		57.1 29.56	1258 632.9	10820 ± 5677.36 7755.87±2634.83	14.5 1.0	10820 7755.87	10163±4997.12 12277 ± 2778.7	22.7 8.9	10163 12277	186 ± 48.28 158.53 ± 58.51	62.2 40.14	196 158.53
Nauplius larvae		21.7 0.22	479 4.79	11907 ± 2935.91 119.07 ± 29.36	15.9 .01	11907 119.07	1441 ± 1593.11 14.42 ± 15.93	3.2 .01	1441 14.42	21 ± 6.24 .21 ± .0624	7.0 .05	21 .21
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton			2205 2141.29	74804 ± 4903.08 1356210±66679.72		74804 1356210.59	44850±20103.75 137869.92 ± 85056.41		44850 137869.92	299 ± 51.03 394.97 ± 90.91		2.99 394.97
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6j
Cherokee Nuclear Station
Sampling Period 10: 17 -22 Jun '74

CHEROKEE

TAXA	N=3 STATION 15			N=1 STATION 17			N=1 STATION 21			N=1 STATION 23		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda	3 ± 4.62 8.00 ± 13.856	0.8 46.0	3 8.00								24.8 99.0	38 114
Cladocera	2 ± 3.46 2.4 ± 4.1569	0.5 14.0	2 2.4		3.3 60.67	14 16.8						
Rotifera	341 ± 32.58 6.447 ± .6728	86.5 37.0	341 6.447		93.3 38.82	391 10.75					75.2 1.00	115 1.15
Nauplius larvae	48 ± 15.31 .4833 ± .1531	12.2 3.0	48 .4833		3.3 0.51	14 .14						
Unidentified harpacticoids												
Unidentified ostracods												
Chaoborus punctipennis												
Total zooplankton	394 ± 40.70 17.33 ± 11.64		394 17.33			419 27.69						153 115.15
Unidentified nematodes												

Amendment 2
(New)

ER Table 2.7.2-6k
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Zooplankton Taxa at
Stations on the Broad River System
Sampling Period 11: 15-20 July 74.

CHEROKEE

TAXA	STATION 4 N=3			STATION 8 N=1			STATION 9 N=2			STATION 10 N=2		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda					1.4	7	3339 ± 1880.2	45.0	3339	3665±200.1	35.7	3665
					7.6	21	15820±6805.2	41.2	15820	15798±931.9	22.5	15798
Cladocera							3437±1444.6	46.3	3437	5812±487.2	56.6	5812
							22366±10876.7	58.2	22366	54558±21636	77.5	54558
Rotifera	261 ± 97.5	90.0	261		89.0	435	120 ± 168.9	1.6	120	172 ± 14.1	1.7	172
	52.01 ± 45.0	99.4	52.01		92.2	255.47	216 ± 306.0	0.6	216	1.72 ± .14	0.0	1.72
Nauplius larvae	29 ± 25.5	10.0	29		9.6	47	531±450.4	7.1	531	628±28.3	6.1	628
	.29 ±.25	0.6	.29		0.2	.47	5.3 ± 4.5		5.3	6.28±.28	0.0	6.28
Unidentified harpacticoids												
Unidentified Ostracods												
Chaoborus Punctipennis												
Total Zooplankton	290±121.8		290			489	7427±3944.2		7427	10277±701.5		10277
	52.30±45.0		52.30			277	38408±17992.3		38408	70364±207048		70364
Unidentified Nematodes												

Amendment 2
(New)

ER Table 2.7.2-6k
Cherokee Nuclear Station
Sampling Period 11: 15-20 Jul '74

CHEROKEE

TAXA	STATION 11 N=1			STATION 12 N=2			STATION 13 N=2			STATION 14 N=3		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		13.8 31.1	375 1579	4880±556.5 14639±1669.5	42.0 19.6	4880 14639	381±381 1152±12.7	12.3 3.1	381 1152	200±69.2 678±286.3	10.5 14.1	200 678
Cladocera		10.5 39.1	286 1985	4954±1653.9 59851±9971.6	42.7 79.9	4954 59851	1935±192.3 11915±150.6	62.6 83.7	1935 11915	574±165.4 3164±2065.9	30.2 65.8	574 3164
Rotifera		59.9 17.4	1625 883.43	756±246.8 405±138.5	6.5 0.5	756 405	671±367 1160±592.3	21.7 8.2	671 1160	959±790.3 968±394.5	50.4 20.1	959 968
Nauplius Larvae		15.1 0.1	411 4.11	1020±125.2 10 ± 1.3	8.8 0.0	1020 10	106±21.2 1.1 ± .2	3.4 0.0	106 1	168±169.5 1.7 ± 1.7	8.8 0.0	168 1.7
Unidentified Harpacticoids												
Unidentified Ostracods		0.7 12.4	18 630	0 ± 0.0 0 ± 0.0	0 0	0 0	0 ± 0.0 0 ± 0.0	0 0	0 0	0 ± 0.0 0 ± 0.0	0 0	0 0
Chaohorus Punctipennis												
Total Zooplankton			2715 5082	11610±978.5 74905±8441.4		11610 74905	3093±191.6 14228±731.1		3093 14228	1901±769.8 4812±2136.7		1901 4812
Unidentified Nematodes												

Amendment 2
(New)

ER Table 2.7.2-6k
Cherokee Nuclear Station
Sampling Period 11: 15-20 Jul '74

CHEROKEE

TAXA	n=3 STATION 15			N=1 STATION 17			N=1 STATION 21			N=1 STATION 23		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepeda	37 ± 11.0 133 ± 10.1	7.3 38.4	37 133		0 0	0 0		0 0	0 0		0 0	0 0
Cladocera	38 ± 8.7 108 ± 29.5	7.5 31.2	38 108		0 0	0 0		0 0	0 0		0 0	0 0
Rotifera	361 ± 143.4 104 ± 24.8	71.2 30.1	361 104		85.7 89.3	36 50		1000 1000	24 .80		0 0	0 0
Nauplius Larvae	71 ± 42.3 .7 ± .4	14.0 0.2	71 .7		14.3 10.7	6 .06		0 0	0 0		100 100	9 .09
Unidentified Harpacticoids												
Unidentified Ostracods	0 ± 0.0 0 ± 0.0	0 0	0 0		0 0	0 0		0 0	0 0		0 0	0 0
Chaohorus Punctipennis												
Total Zooplankton	507 ± 188.3 346 ± 55.9		507 346			42 .56			24 .80			9 .09
Unidentified Nematodes												

Amendment 2
(New)

ER Table 2.7.2-61
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Zooplankton Taxa at
Stations on the Broad River System
Sampling Period 12: 12-17 Aug. 74

CHEROKEE

TAXA	STATION 4 (N=3)			STATION 8 (N=1)			STATION 9 (N=2)			STATION 10 (N=2)		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda	7.00±6.08	5.63	7.00		5.05	39.00	1867.0±278.60	40.24	1867.0	11187.0±2665.79	35.60	11187.0
	21.00±18.25	94.38	21.00		83.52	117.00	9122.1±140.85	34.70	9122.1	87787.8±19752.8	35.92	37737.9
Cladocera	0.00±0.00	0	0.00		0	0.00	670.00±190.92	14.44	670.0	10816.0±9944.75	34.42	10816.0
	0.00±0.00	0	0.00		0	0.00	15874.4±1733.96	60.39	15874.4	150101.0±54674.9	61.42	150101.0
Rotifera	113.67±22.90	91.43	113.67		80.83	624.00	602.00±79.20	12.98	602.00	5657.00±216.37	18.00	5657.00
	1.2131±0.2730	5.45	1.2131		15.71	22.0043	203.05±103306	0.77	203.0571	777.743±628.63	0.32	777.743
Naupliius Larvae	3.67 ± 6.35	2.95	3.67		14.12	109.00	1366.50±589.02	29.45	1366.50	3056±1029.55	9.72	3056.0
	0.0366±0.0635	0.16	0.0366		0.78	1.09	13.665±5.8902	0.05	13.6650	30.56±10.295	0.01	30.56
Unidentified Harpacticoids	0.00±0.00	0	0.00		0	0.00	0.00±0.00	0	0.00	0.00±0.00	0	0.00
	0.00±0.00	0	0.00		0	0.00	0.00±0.00	0	0.00	0.00±0.00	0	0.00
Unidentified Ostracods	0.00±0.00	0	0.00		0	0.00	0.00±0.00	0	0.00	0.00±0.00	0	0.00
	0.00±0.00	0	0.00		0	0.00	0.00±0.00	0	0.00	0.00±0.00	0	0.00
Chaohorus Punctipennis	0.00±0.00	0	0.00		0	0.00	134.00±26.87	2.89	134.00	710.00±455.38	2.26	710.00
	0.00±0.00	0	0.00		0	0.00	1072.0±214.96	408	1072.00	5680.0±3643.01	2.32	5680.0
Total Zooplankton	124.33±12.42		124.33			772.00	4639.50±782.77		4639.50	31426.00±6010.41		31426.00
	22.2498±18.0744		22.2498			140.0943	26285.22±1757.29		26285.22	244377.1±31897.3		244377.1
Unidentified Nematodes		0	0.00		0	0.00		0	0.00		0	0.00
		0	0.00		0	0.00		0	0.00		0	0.00

Amendment 2
(New)

ER Table 2.7.2-6 1
Cherokee Nuclear Station
Sampling Period 12: 12 - 17 Aug '74

CHEROKEE

TAXA	N=1 STATION 11			N=2 STATION 12			N=2 STATION 13			N=3 STATION 14		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		30.16	155.00	8880.50±1214.10	54.00	8880.50	1031.50±21142	10.98	1031.50	611.33±504.28	30.80	611.33
		0	0.0	41996.1±10632.9	91.31	41996.1	3578.70±1016.11	14.60	3578.70	2145.10±1762.61	24.25	2145.10
Cladocera		5.84	30.00	1055.00±318.20	6.41	1055.0	4307.50±3301.48	45.86	4307.50	243.67±305.13	12.27	243.67
		98.38	391.00	3059.5±922.77	6.65	3059.5	14741.35±12755.71	60.10	14741.35	6174.33±10355.21	69.80	6174.33
Rotifera		43.39	223.00	2526.50±248.19	15.36	2526.50	2527.00±1019.65	26.91	2527.00	671.67±89.81	33.84	671.67
		1.36	5.3855	896.988±	1.95	896.985	3155.53±567.75	12.90	3155.5284	522.3878±101.68	5.91	522.3878
Nauplius Larvae		20.62	106.00	3986.50±1013.26	24.24	3986.50	1147.00±255.97	12.21	1147.00	458.33±98.60	23.09	458.33
		0.27	1.06	39.66±1107.62	0.10	39.66	11.47±2.5597	0.05	11.47	4.5833±0.9860	0.05	4.5833
Unidentified Harpacticoids		0	0.00	0.00±0.00	0	0.00	0.00±0.00	0	0.00	0.00±0.00	0	0.00
		0	0.00	0.00±0.00	0	0.00	0.00±0.00	0	0.00	0.00±0.00	0	0.00
Unidentified Ostracods		0	0.00	0.00±0.00	0	0.00	0.00±0.00	0	0.00	0.00±0.00	0	0.00
		0	0.00	0.00±0.00	0	0.00	0.00±0.00	0	0.00	0.00±0.00	0	0.00
Chaohorus Punctipennis		0	0.00	0.00±0.00	0	0.00	379.00±298.40	4.04	379.00	0.00±0.00	0	0.00
		0	0.00	0.00±0.00	0	0.00	3032.00±2387.19	12.37	3032.00	0.00±0.00	0	0.00
Total Zooplankton			514.00	16448.50±767.21		16448.50	9392±5086.93		9392.00	1985±814.07		1985.00
			397.4455	45992.45±10443.92		45992.45	24519.05±16729.32		24519.05	8846.40±12056.27		8846.40
Unidentified Nematodes		0	0.00		0	0.00		0	0.00		0	0.00
		0	0.00		0	0.00		0	0.00		0	0.00

Amendment 2
(New)

ER Table 2.7.2-6 1
Cherokee Nuclear Station
Sampling Period 12: 12 - 17 Aug '74

CHEROKEE

TAXA	N=3 STATION 15			N=1 STATION 17			N=1 STATION 21			N=1 STATION 23		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda	16 ± 14.18	1.30	16.00		0	0.00		0	0.00		0	0.00
	48.00±42.532	8.43	48.00		0	0.00		0	0.00		0	0.00
Cladocera	30.67±12.66	2.50	30.67		24.89	56.00		100.00	12.00		0	0.00
	88.933±36.72	15.62	88.933		95.70	67.2		100.00	34.80		0	0.00
Rotifera	1029.00±285.29	83.89	1029.00		70.22	158.00		0	0.00		0	0.00
	185.917±19.017	32.66	185.917		4.14	2.9086		0	0.00		0	0.00
Nauplius Larvae	144.00±19.67	11.74	144.00		4.89	11.00		0	0.00		0	0.00
	1.44±0.1967	0.25	1.44		0.16	0.11		0	0.00		0	0.00
Unidentified Harpacticoids	0.00±0.00	0	0.00		0	0.00		0	0.00		0	0.00
	0.00±0.00	0	0.00		0	0.00		0	0.00		0	0.00
Unidentified Ostracods	7.00±12.12	0.57	7.00		0	0.00		0	0.00		0	0.00
	245.00±424.352	43.04	245.00		0	0.00		0	0.00		0	0.00
Chaohorus Punctipennis	0.00±0.00	0	0.00		0	0.00		0	0.00		0	0.00
	0.00±0.00	0	0.00		0	0.00		0	0.00		0	0.00
Total Zooplankton	1226.67±265.66		1226.67			225.00			12.00		0	0.00
	569.2933±409.0451		569.2933			70.2186			34.80		0	0.00
Unidentified Nematodes		0	0.00		0	0.00		0	0.00		0	0.00
		0	0.00		0	0.00		0	0.00		0	0.00

Amendment 2
(New)

ER Table 2.7.2-6m
Cherokee Nuclear Station
Relative Abundance and Biomass of major Zooplankton Taxa at
Stations on the Broad River System
Sampling Period 13: 9-14 Sept. 74

CHEROKEE

TAXA	STATION 04S N=3			STATION 08S			STATION 091 N=2			STATION 101 N=2		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda	0.0±0 0.0±0	0 0	0 0		1.35 34.46	34 102	306±12.7 918±38.18	16.89 65.37	306 918	2169±1521.7 20724±10501	18.99 82.34	2169 20724
Cladocera	1.33±2.31 8 ± 13.86	4.48 96.79	1.33 8		0.0 0.0	0 0	156 ± 161.2 453±467.39	8.61 32.26	156 453	866±565.7 3153±2548.4	7.58 12.53	866 3153
Rotifera	22.67±25.97 .0209±0.267	76.41 2.53	22.67 0.209		98.65 65.54	2478 194	914±144.9 29±3.62	50.44 2.07	914 29	5996±2037 1267±154.8	52.49 5.03	5996 1267
Nauplius Larvae	5.67±9.81 0.0567±0.0981	19.11 0.69	5.67 0.0567		0.0 0.0	0 0	436±43.1 4.4±43	24.06 0.31	436 4.4	2393±978.6 23.9±9.786	20.95 0.09	2393 23.9
Unidentified Harpacticoids												
Unidentified Ostracods												
Chaoborus Punctipennis												
Total Zooplankton			29.67 8.2657			2512 296	1812±56.57 1404±502.05		1812 1404	11422±5101.78 25168±13541.09		11424 25168
Unidentified Nematodes												

Amendment 2
(New)

ER Table 2.7.2-6m
Cherokee Nuclear Station
Sampling Period 13: 9 - 14 Sept '74

CHEROKEE

TAXA	STATION 11S			STATION 12I N=2			STATION 18I N=2			STATION 14I N=3		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda		0.0	0	42 ± 58.7	1.09	42	60±84.9	0.93	60	155±71.1	3.44	155
		0.0	0	125±175.1	4.91	125	333±470.9	1450	333	465±213.23	48.43	465
Cladocera		0.0	0	378±125.9	9.82	378	00±0.0	0.0	0	115±3.8	2.55	115
		0.0	0	1088±352.85	42.71	1088	0 ± 0.0	0.0	0	301±68.43	31.37	301
Rotifera		86.56	657	3198±261.6	83.06	3198	6449±891.7	99.07	6449	3373±422.9	74.94	3373
		98.12	53.17	1332.3±419.974	52.30	1332.3	1963.46±766.35	85.50	1963.46	189.48±24.72	19.74	189.48
Nauplius Larvae		13.44	102	232±152.7	6.03	232	0 ± 0.0	0.0	0	458±182.2	10.18	458
		1.88	1.02	232±1.527	0.24	2.32	0 ± 0.0	0.0	0	4.58±1.822	0.48	4.58
Unidentified Harpacticoids												
Unidentified Ostracods												
Chaoborus Punctipennis												
Total Zooplankton			759	3850±41.72		3850	6509±806.81		6509	4501±446.11		4501
			54.19	2547.58±598.92		2547.58	2296±295.57		2296	960±250.28		960
Unidentified Nematodes												

Amendment 2
(New)

ER Table 2.7.2-6m
Cherokee Nuclear Station
Sampling Period 13: 9 - 14 Sept '74

CHEROKEE

TAXA	STATION 15S N=3			STATION 17S			STATION 21S			STATION 23S		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Copepoda	11 ± 18.5 86±149.5	4.78 74.14	11 86					100.0 100.0	24 72			
Cladocera	9±16.2 27±46.7	3.91 23.28	9 27									
Rotifera	120±8.0 2.1±1.42	52.17 1.81	120 2.1									
Nauplius Larvae	90±6.5 .90±0.005	39.13 0.78	90 .90									
Unidentified Harpacticoids												
Unidentified Ostracods												
Chaoborus Punctipennis												
Total Zooplankton	230±23.71 116±132.14		230 116			0			24 72			0
Unidentified Nematodes												

Amendment 2
(New)

ER Table 2.7.2-7
Cherokee Nuclear Station
Substrates, Currents, and Depths at Sampling Stations on the Broad River System:

Station No.	Substrate	Current	Depth (Meters)	Comments
1	rock	moderate	.6	riffles present
2	sand, gravel	moderate	up to 2	riffles and pools present
3	sand, gravel	swift	.2-1.5	riffles and pools present
4	rock		2-2.5 in pools	riffles and pools present
5	sand, gravel	slow	.1-1	riffles and pools present
6	sand, rock	moderate	.2-1.5	sunken logs, brushpiles, pools
7	sand			
8	sand		up to 2-2.5	
9	silted loam	none	up to 4-5	stumps and submerged logs
10	silted loam	slow	up to 5-6	
11	sand	swift	up to 2	
12	silted loam	none	6-7	
13	loam	none	up to 2-3	
14	sand	moderate	10-11	right behind dam
15	rock	swift	1-2	shoals and rapids
16	gravel	moderate		riffles
17	sand	moderate	1-2	
18	sand, gravel	moderate	1-1.5	a few riffles
19	sand, rock	swift	2-3	canal area
20	sand, rock	moderate	up to 1.5	a few riffles
21	rock	slight	.2	riffles and pools
22	sand, rock	moderate	1-1.5	
23	sand, gravel		.1-.4	riffles and pools

Amendment 2
(New)

ER Table 2.7.2-8
Cherokee Nuclear Station
Genera of Periphytous Algae (Exclusive of Diatoms) Found On Artificial Substrate Samplers at Selected Stations on the Broad River System.
(+ Indicates Presence)

Station No.	Date	Genera			
		Cladophora	Oscillatoria	Cosmarium	Closterium
4	11/29/73	+			+
8	"		+		
12	"		+	+	
15	"				
24	"		+		

ER Table 2.7.2-8
Cherokee Nuclear Station

Station No.	Date	Genera							
		Anabaena	Cladophora	Closterium	Cosmarium	Dinobryon	Microcystis	Oedogonium	Oscillatoria
4	11/21/73		+	+					
8	"								+
12	"				+				+
15	"								
24	"								+
2	12/6/73							+	+
4	"	+		+					+
7	"						+	+	+
8	"								+
12	"				+	+	+		+
15	"								+
16	"								
4	12/20/73								+
8	"								
12	"								+
15	"								
16	1/1/74								
23	"	+							+

Amendment 2
(New)

ER Table 2.7.2-8
Cherokee Nuclear Station

Period	Station No.	Date	Genera								
			Anabaena	Cladophora	Closterium	Cosmarium	Mougeotia	Oscillatoria	Spirogyra	Stigeoclonium	Ulothrix
8 SSS	12	4/11/74	+	+				+			
8 FSS	8	4/23/74						+	+		
8 FSS	11	4/23/74		+	+	+				+	
8 FSS	12	4/23/74		+			+	+		+	
8 FSS	16	4/23/74		+	+			+			+
8 FSS	17	4/24/74		+				+			
8 FSS	23	4/22/74	+	+			+	+			+
9 FSS	4	5/22/74		+							
9 FSS	17	5/22/74		+				+			
9 FSS	21	5/22/74		+				+			

Amendment 2
(New)

ER Table 2.7.2-8
Cherokee Nuclear Station

Period	Station No.	Date	Genera			
			Anabaena	Cladophora	Mougeotia	Oscillatoria
10 SSS	12	6/6/74		+		+
10 SSS	15	6/6/74		+		+
10 SSS	23	6/6/74	+	+		+
10 FSS	12	6/18/74	+	+	+	+
10 FSS	17	6/19/74				+
10 FSS	23	6/18/74				+

Amendment 2
(New)

ER Table 2.7.2-8
Cherokee Nuclear Station

Period	Station No.	Date	Genera						
			Anabaena	Cladophora	Closterium	Mougeotia	Oedogonium	Oscillatoria	Scenedesmus
11 SSS	8	7/2/74					+	+	
11 SSS	12	7/2/74						+	
11 SSS	17	7/2/74						+	
11 FSS	8	7/17/74				+		+	+
11 FSS	23	7/15/74							
12 SSS	8	7/31/74	+		+			+	
12 SSS	12	7/31/74		+		+		+	
12 SSS	17	7/31/74						+	
12 FSS	12	8/13/74		+				+	
12 FSS	23	8/13/74						+	

ER Table 2.7.2-8
Cherokee Nuclear Station

Period	Station No.	Date	Genera			
			Cladophora	Cosmarium	Oscillatoria	Scenedesmus
13 FSS	8	9/10/74	+		+	
13 FSS	12	9/10/74			+	+
13 FSS	16	9/10/74	+		+	
13 FSS	17	9/10/74		+	+	
13 FSS	23	9/10/74	+		+	

Amendment 2
(New)

ER Table 2.7.2-9a
Cherokee Nuclear Station
Estimated Density of Periphyton (in no./cm^2) on Artificial Substrate
Samplers at Selected Stations on the Broad River System
Sampling Period: 3-7 Dec '73

Species	Code No.	Density (no./cm^2)	Station Numbers									
			2An	4Aa	4Ab	4Ac	7An	8An	12An	15Aa	15Ab	15Ac	16An
Cyclotella sp.B	4630101030.002				36		18						
Cyclotella stelligera	4630101030.800								15				93
Melosira varians	4630101050.900		42	1016		20		89					
Fragilaria crotonensis crotonensis	4630201050.330												183
Meridion circulare constrictum	4630201060.300										13		
Synedra rumpens meneghiana	4630201080.760				18								
Synedra socia socia	4630201080.800							18		21			
Synedra ulna contracta	4630201080.820				54								
Synedra ulna ulna	4630201080.880							18					
Tabellaria fenestrata fenestrata	4630201090.300		42			20							
Achnanthes sp.B	4630203010.002				18								
Achnanthes lanceolata dubia	4630203010.520				54								
Achnanthes lanceolata lanceolata	4630203010.525		42	1219			18						122
Achnanthes microcephala microcephala	4630203010.600		42	2032	18		18		15				457
Cocconeis placentula lineata	4630203030.560		21	1625	36	40		18					31
Diatoma crucicula crucicula	4630204045.300					20							
Frustulia rhomboides crassinervia	4630204050.600		21	203						21			
Gyrosigma obtusatum obtusatum	4630204060.600		21	203				36					62
Navicula aikenensis	4630204070.115		42	2641	89	80		54					62
Navicula cryptocephala	4630204070.240									21		18	62
Navicula elginensis elginensis	4630204070.320						18						
Navicula exigua capitata	4630204070.340		42		18								122
Navicula houfleri leptocephala	4630204070.465				36								

Amendment 2
(New)

ER Table 2.7.2-9a
Cherokee Nuclear Station
Sampling Period: 3-7 Dec '73

Species	Density (no./cm^2) Code No.	Station Numbers 2An	4Aa	4Ab	4Ac	7An	8An	12An	15Aa	15Ab	15Ac	16An
Navicula mobiliensis minor	4630204070.550					18						
Navicula mutica tropica	4630204070.588					36						
Navicula notha notha	4630204070.660	105		302								
Navicula rhyncocephala rhyncocephala	4630204070.770	63	406				36	15	63	13		93
Navicula schroeteri escambia	4630204070.830						36	15	21			183
Navicula symmetrica symmetrica	4630204070.880	21	1422		20	18			21			93
Navicula viridula linearis	4630204070.940		406					15				
Navicula viridula rostellata	4630204070.960				20			30				
Pinnularia biceps biceps	4630204080.220	21	1625									
Somphonema sp. A	4630205020.001	21		142	40		107					62
Somphonema angustatum	4630205020.230		203									
Somphonema lanceolatum	4630205020.400						18			26		518
Cymbella naviculiformis	4630206020.500			54								
Cymbella tumida	4630206020.850	63	812	54	20		18					
Cymbella turgida	4630206020.860			18	20							122
Nitzschia fonticola	4630208050.350			124	20	18	18	15		63		31
Nitzschia palea	4630208050.720	42		36								183
Nitzschia paradoxa	4630208050.725				20	36		135				93
Nitzschia sigmoidea	4630208050.850				20							
Surirella angusta	4630209050.210	21										93

Amendment 2
(New)

ER Table 2.7.2-9b
Cherokee Nuclear Station
Estimated Density of Periphyton (in no./cm^2) on Artificial Substrate
Samplers at Selected Stations on the Broad River System
Sampling Period: 31 Dec - 4 Jan '74

Species	Code Number	Density ($no.cm^2$) 4Aa	4Ab	4Ac	8Aa	*8Ab	12Aa	*12Ab	*12Ac	15Aa	15Ab	16Aa	*16Ab	*16Ac	*16Ad	23Aa	*23Ab	*23Ac	*23Ad
Melosira granulata angustissima	4630101050.300						56												
Synedra ulna contracta	4630201080.820	38												330					
Achnanthes sp. A	4630203010.001																		
Achnanthes sp. B	4630203010.002	38										51	287	55	155	96	101	98	49
Achnanthes lanceolata dubia	4630203010.520																		
Achnanthes lanceolata lanceolata	4630203010.525			40															
Achnanthes linearis	4630203010.540	38																	
Achnanthes microcephaia	4630203010.600						56												
Cocconeis placentula lineata	4630302030.560											51	143	110	52				
Frustulia weinholdii	4630204050.880														52				
Gyrosigma nodilerum	4630204060.600	38																	
Navicula aikenensis	4630204070.115									35									
Navicula cryptocephala	4630204070.240		62	40	29		168	37					765	110		48	50		
Navicula elginensis	4630204070.320																50		
Navicula exigua capitata	4630204070.340																	49	
Navicula notha	4630204070.660														52				
Navicula rhyncocephala	4630204070.770															48			
Navicula schroeteri escambia	4630204070.830						56												
Navicula symmetrica	4630204070.880				29														
Navicula viridula linearis	4630204070.940	38											478	110	52				
Gomphonema angustatum	4630205020.230												48						
Cymbella turgida	4630206020.860																		
Cymbella ventricosa	4630206020.900		62						36										
Nitzschia palea	4630208050.720			80															
Nitzschia paradoxa	4630208010.200						56		72	35									
Nitzschia philippinarum	4630208050.740											51	95						
No organisms found	4000000000.000					0					0								

Amendment 2
(New)

ER Table 2.7.2-9c
Cherokee Nuclear Station
Estimated Density of Periphyton (in no./cm^2) on Artificial Substrate
Samplers at Selected Stations on the Broad River System
Sampling Period: 14-18 Jan '74

Species	Code Number	Station Numbers	
		15Aa	23A
Achnanthes lanceolata lanceolata	4630203010.525		84
Achnanthes linearis linearis	4630203010.540	27	21
Navicula rhyncocephala rhyncocephala	4630204070.770		21
Nitzschia palea	4630208050.720	27	

Amendment 2
(New)

ER Table 2.7.2-9d
Cherokee Nuclear Station
Estimated Density of Periphyton (in no./cm^2) on Artificial Substrate
Samplers at Selected Stations on the Broad River System
Sampling Period: 28 Jan - 1 Feb '74

Species	Code Number	Station Numbers				
		04Aa	04Ab	04Ac	16A	23A
Melosira sp. B	4630101050.002				56	
Melosira varians	4630101050.900					31
Synedra rumpens rumpens	4630201080.770			54		
Eunotia exigua exigua	4630202020.400		23	27		
Achnanthes lanceolata lanceolata	5630203010.525			27	550	31
Achnanthes linearis linearis	4630203010.540			54	138	
Achnanthes microcephala microcephala	4630203010.600		46		303	
Cocconeis placentula lineata	4630203030.560				28	
Frustulia rhomboides crassinervia	4630204050.600	43				
Gyrosigma obtusatum obtusatum	4630204060.600				28	
Navicula cryptocephala	4630204070.240	43				
Navicula exigua capitata	4630204070.340				56	
Navicula pupula capitata	4630204070.675			27		
Navicula rhyncocephala rhyncocephala	4630204070.770				83	
Navicula viridula viridula	4630204070.980			27		
Gomphonema gracile	4630205020.300				56	
Gomphonema sp. A	4630205020.001	43				
Cymbella tumida	4630206020.850		23			
Nitzschia kutzingiana	4630208050.450		23	54		
Nitzschia palea	4630208005.720		23		28	
Suriella angusta	4630209050.210			27	28	

Amendment 2
(New)

ER Table 2.7.2-9e
Cherokee Nuclear Station
Estimated Density of Periphyton (in no./cm^2) on Artificial Substrate
Samplers at Selected Stations on the Broad River System
Sampling Period: 11-15 Feb '74

Species	Station Numbers														
	02A	04Aa	04Ab	04Ac	07A	08A	10A	12S	15Aa	15Ab	15Ac	16A	17A	21A	23A
No organisms present	-5	-5		-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
Surirella angusta			42												

Amendment 2
(New)

ER Table 2.7.2-9f
Cherokee Nuclear Station
Estimated Density of Periphyton (in no./cm^2) on Artificial Substrate
Samplers at Selected Stations on the Broad River System
Sampling Period: 25 Feb - 1 March '74

Species	Station Numbers														
	02A	04Aa	04Ab	04Ac	07A	08A	10A	12S	15Aa	15Ab	15Ac	16A	17A	21A	23A
No organisms present	-5				-5	-5	-5		-5	-5	-5			-5	
Cyclotella stelligera												14			
Melosira sp. A												28			
Melosira sp. B			54												
Melosira varians												172			
Asterionella formosa formosa			27												
Fragilaria crotonensis			27									29			
Meridion circulare constrictum												14			
Synedra pulchella								35							
Synedra rumpens rumpens				70									46		
Synedra ulna ulna												29			
Tabellaria fenestrata			27												
Eunotia curvata				35								14			
Eunotia exigua			27									14			36
Eunotia naegelii												14			
Achnanthes lanceolata dubia												29			
Achnanthes lanceolata lanceolata			81	105				35				3217	46		180
Achnanthes linearis		31	160	105				70				345			36
Achnanthes microcephala			54	70								259			36
Cocconeis placentula lineata												58			
Rhoicosphenia curvata												29			36
Frustulia rhomboides crassinervia												14			
Frustulia rhomboides rhomboides												29			
Gryrosigma obtusatum												14			
Navicula aikenensis												29			
Navicula cryptocephala		41	27	105				35				316	23		72
Navicula exigua capitata			27	35								58			36

(Cont'd.)

Amendment
(New)

ER Table 2.7.2-9f
Cherokee Nuclear Station
Sampling Period: 25 Feb - 1 March '74

Species	Station Numbers														
	02A	04Aa	04Ab	04Ac	07A	08A	10A	12S	15Aa	15Ab	15Ac	16A	17A	21A	23A
Navicula lateropunctata			27									29			
Navicula mobiliensis			27									29			
Navicula notha			27												
Navicula pupula capitata		31										29			
Navicula pupula pupula			54									115			
Navicula pupula rectangularis												29			
Navicula rhyncocephala				35								546			36
Navicula schroeteri												29			
Navicula symmetrica												14			
Navicula viridula viridula			27												
Pinnularia biceps												14			
Stauroneis smithii smithii												14			
Gomphonema sp. A			27	35								115	69		72
Gomphonema gracile			54									115			
Gomphonema lanceolatum												29			36
Cymbella gracilis			27												
Cymbella obtusiuscula												29			
Cymbella tumida												14			
Cymbella turgida												14			
Cymbella ventricosa												14	23		
Nitzschia clausii												14			
Nitzschia fonticola		31										201	23		
Nitzschia linearis												86			
Nitzschia palea		62		177				70				431			
Nitzschia paradoxa			27									115			
Nitzschia philippinarum												86			
Surirella angusta				70								546			
Surirella sp. A												86			Amendment 2 (New)

ER Table 2.7.2-9g
Cherokee Nuclear Station
Estimated Density of Periphyton (in no./cm^2) on Artificial Substrate
Samplers at Selected Stations on the Broad River System
Sampling Period: 11 - 15 March '74

Species	Stations									
	2	4	7	8	12	15	16	17	21	23
Melosira varians		533								
Synedra rumpens		94								19
Eunotia perpusilla		16								
Achnanthes lanceolata		110								37
Achnanthes lanceolata dubia		16								
Achnanthes linearis		235								19
Achnanthes microcephala		32								
Frustalia weinholdii		16								
Navicula cryptocephala		110								
Navicula mobiliensis minor		63								
Navicula mutica tropica		16								
Pinnularia biceps		32								
Stauroneis phoenicenteron		16								
Gomphonema sp. A		141								
Gomphonema gracile		110								
Gomphonema pervulum		47								19
Cymbella tumida		16								
Cymbella ventricosa		63								
Nitzschia fonticola		16								
Nitzschia linearis		16								
Nitzschia palea		189								
Nitzschia paradoxa		32								
Surirella angustata		173								

Amendment 2
(New)

ER Table 2.7.2-9h
Cherokee Nuclear Station
Estimated Density of Periphyton (in no./cm^2) on Artificial Substrate Samplers at Selected Stations on the Broad River System
Sampling Period: 25 - 30 March '74

Species	Stations 2	4	7	8	12	15	16	17	21	23
Melosira sp. B					97					
Melosira varians		4339			340			63		
Fragilaria crotonensis					49			31		
Synedra rumpens		136						31		
Synedra ulna		54								
Eunotia exigua		27								
Achnanthes lanceolata		298						31		
Achnanthes linearis		624			243			31		
Achnanthes microcephala		81			87					
Cocconeis placentula		54								
Gyrosigma obtusatum		108			243			31		
Navicula aikenensis					97					
Navicula capitata					146					
Navicula cryptocephala		190			1552			94		
Navicula mobiliensis minor		108						31		
Navicula rhyncocephala		27			243					
Navicula viridula viridula		81			49					
Navicula symmetrica		49								
Pinnularia biceps		27								
Gomphonema gracile		54								
Gomphonema sp. A		163			388					
Gomphonema lanceolatum		27			49					
Gomphonema parvulum		27			146			63		
Cymbella tumida		136			485			31		
Cymbella turgida								31		
Cymbella ventricosa		136			97					

(Cont'd.)

Amendment 2
(New)

ER Table 2.7.2-9h
Cherokee Nuclear Station
Sampling Period: 25 - 30 March '74

Species	2	4	7	8	12	15	16	17	21	23
Hantzschia amphioxys capitata		54								
Nitzschia fonticola					49					
Nitzschia linearis		136			146			157		
Nitzschia palea		27			243					
Nitzschia paradoxa		81			146					
Surirella sp. B		27								
Surirella angustata		81			49					

Amendment 2
(New)

ER Table 2.7.2-9i
Cherokee Nuclear Station
Estimated Density of Periphyton (in no./cm^2) on Artificial Substrate Samplers at Selected Stations on the Broad River System
Sampling Period: 8 - 12 Apr '74

Species	Stations									
	2	4	7	8	12	15	16	17	21	23
Melosira varians					23					
Synedra rumpens					34					
Synedra ulna					91					
Achnanthes lanceolata					433					
Achnanthes linearis					661					
Achnanthes microcephala					148					
Cocconeis placentula placentula					137					
Navicula cryptocephala					23					
Navicula exigua capitata					23					
Navicula rhyncocephela					46					
Navicula viridula viridula					57					
Neidium binode					11					
Pinnularia obscura					11					
Stauroneis smithii					11					
Gomphonema sp. A					23					
Gomphonema gracile					91					
Cymbella naviculiformis					11					
Cymbella ventricosa					34					
Nitzschia fonticola					23					
Nitzschia linearis					11					
Nitzschia palea					46					
Nitzschia paradoxa					57					

Amendment 2
(New)

ER Table 2.7.2-9j
Cherokee Nuclear Station
Estimated Density of Periphyton (in no./cm^2) on Artificial Substrate
Samplers at Selected Stations on the Broad River System
Sampling Period: 22-26 April '74

Species	Stations									
	2	4	7	8	12	15	16	17	21	23
Melosira varians					27					
Achnanthes lanceolata										76
Achnanthes linearis										
Cocconeis placentula cuglypta					14					
Frustulia rhomboides capitata					27					
Navicula capitata					5					
Navicula cryptocephala										61
Navicula pupula pupula										15
Navicula rhyncocephala					9					
Navicula viridula viridula										15
Gomphonema sp. A										137
Gomphonema gracile					23			4		15
Cymbella tumida					32					15
Cymbella turgida					5					
Cymbella ventricosa					14					46
Nitzschia clausii					18					
Nitzschia fonticola					18			4		
Nitzschia paradoxa					27					

Amendment 2
(New)

ER Table 2.7.2-9 k
Cherokee Nuclear Station
Estimated Density of Periphyton (in no./cm^2) on Artificial Substrate
Samplers at Selected Stations on the Broad River System
Sampling Period: 20-25 May '74

Species	Station Number 4	17	21
Achnanthes sp. B	24		
Achnanthes lanceolata	71	24	449
Cocconeis placentula		24	
Navicula cryptocephala		48	112
Navicula notha	24		
Navicula symmetrica	24	24	22
Gomphonema sp. D			45
Cymbella ventricosa	24		
Rhopalodia sp. A		24	
Nitzschia philipinnarum	47		22

Amendment 2
(New)

ER Table 2.7.2-9 1
Cherokee Nuclear Station
Estimated Density of Periphyton (in no./cm^2) on Artificial Substrate Samplers at Selected Stations on the Broad River System
Sampling Period: 17-22 June '74

Species	Station Number 12	17	23
Cyclotella sp. B	14		
Melosira varians		20	
Synedra rumpens familiaris		20	
Achnanthes sp. B		59	
Achnanthes lanceolata	41	432	15
Achnanthes linearis	41		
Cocconeis placentula		39	
Navicula cryptocephala	27	39	
Navicula notha		20	
Gomphonema sp. A	41		
Gomphonema sp. E		39	
Rhopalodia sp. A	41		
Nitzschia clausii	14		
Nitzschia paradoxa	27		
Nitzschia philipinnarum	41	20	

Amendment 2
(New)

ER Table 2.7.2-9 m
Cherokee Nuclear Station
Estimated Density of Periphyton (in no./cm^2) on Artificial Substrate
Samplers at Selected Stations on the Broad River System
Sampling Period: 15 - 19 July '74

Species	Station Number 8	17	23
Achnanthes lanceolata			38
Navicula cryptocephala			19
Navicula notha		12	
Nitzschia fonticola		12	
Nitzschia paradoxa	13		

Amendment 2
(New)

ER Table 2.7.2-9 n
Cherokee Nuclear Station
Estimated Density of Periphyton (in no./cm^2) on Artificial Substrate
Samplers at Selected Stations on the Broad River System
Sampling Period: 12-16 Aug '74

ad

Species	Station Number			
	8	12	17	23
Eunotia curvata	19			
Achnanthes sp. C			31	
Achnanthes linearis	19	124		15
Achnanthes lanceolata				93
Frustulia rhomboides capitata			16	
Navicula aikenensis		14		
Navicula cryptocephala		14		
Navicula notha		69		
Navicula radiosa parva		28		
Navicula symmetrica	37			
Navicula viridula rostellata	37			
Gomphonema sp. A		14		
Cymbella tumida		28	16	
Rhopalodia sp. A		248		
Nitzschia fonticola	56	152	16	
Nitzschia paradoxa		14		
Nitzschia philippinarum		41		

Amendment 2
(New)

ER Table 2.7.2-9 o
Cherokee Nuclear Station
Estimated Density of Periphyton (in no./cm^2) on Artificial Substrate
Samplers at Selected Stations on the Broad River System
Sampling Period: 9 - 13 Sept '74

Species	Station Number 8	12	16	17	23
Cyclotella meneghiana		83			
Stephanodiscus sp. A		188			
Fragilaria crotonensis				14	
Meridion circulare constrictum				14	
Tabellaria fenestrata		83	51	14	
Achnanthes sp. D			13		
Achnanthes lanceolata dubia		63			
Cocconeis disculus		42	472		
Gyrosigma obtusatum				14	
Navicula aikcenensis		21			
Navicula contenta biceps		355		28	
Navicula cryptocephala			13		
Navicula exigua capitata				28	
Navicula lateropunctata		42			
Navicula minima		501	77	55	
Navicula pupula capitata		42	26		
Navicula radiosa parva		355	38	139	
Navicula rhyncocephala		42		83	
Navicula viridula rostellata				42	
Cymbella tumida		21		28	
Epithemia sp. A			13		
Rhopalodia gibberula		459	26		
Nitzschia acicularis				14	
Nitzschia dissipata		438	13	97	

No Organisms Found

No Organisms Found

Amendment 2
(New)

ER Table 2.7.2-10a
Cherokee Nuclear Station
Mean Dry and Ash - Free Dry Weights of Periphyton, in mg/cm^2, Collected From Artificial Samplers In The Broad River System
Sampling Period: 6-29 Nov '74

Station No.	Samplers out	Samplers retrieved	Dry weight (mg/cm^2)	Ash-free dry weight (mg/cm^2)	Number of growth slides
4	11/6/73	11/29/73	0.955	0.014	3
8	11/6/73	11/29/73	1.183	0.016	3
12	11/6/73	11/29/73	1.459	0.018	3
15	11/6/73	11/29/73	0.897	0.033	3
24	11/6/73	11/29/73	0.850	0.006	3

Amendment 2
(New)

ER Table 2.7.2-10b
Cherokee Nuclear Station
Mean Dry and Ash - Free Dry Weights of Periphyton, in mg/cm^2, Collected From Artificial Samplers In The Broad River System
Sampling Period: 5 Dec '73 - 4 Jan '74

Station No.	Date In	Date Out	Dry Weight	Ash-free Dry Weight
4a	12/5/73	12/20/73	1.273	0.766
4b	12/5/73	12/20/73	1.116	0.646
4c	12/5/73	12/20/73	0.846	0.631
8a	12/5/73	12/20/73	0.796	0.438
8b	12/5/73	12/20/73	0.409	0.259
12a	12/5/73	12/20/73	0.831	0.431
12b	12/5/73	12/20/73	1.083	0.655
12c	12/5/73	12/20/73	0.318	0.235
15a	12/5/73	12/20/73	0.981	0.610
16a	12/5/73	1/1/74	0.898	0.755
16b	12/5/73	1/1/74	1.186	1.157
16c	12/5/73	1/1/74	1.077	1.023
23a	12/5/73	1/4/74	0.726	0.724
23b	12/5/73	1/4/74	0.941	0.800
23c	12/5/73	1/4/74	0.805	0.723
23d	12/5/73	1/4/74	0.859	0.791

Amendment 2
(New)

ER Table 2.7.2-10c
Cherokee Nuclear Station
Mean Dry and Ash - Free Dry Weights of Periphyton, in mg/cm^2, Collected
From Artificial Samplers In The Broad River System
Sampling Period: 26 Mar - 22 Apr '74

8 SSS	8	3/26/74	4/11/74	15.210	2.407
8 FSS	8	3/26/74	4/23/74	0.509	0.242
8 FSS	11	3/28/74	4/23/74	5.044	1.240
8 FSS	12	3/28/74	4/23/74	2.144	0.617
8 FSS	16	3/28/74	4/23/74	2.992	1.168
8 FSS	17	3/26/74	4/24/74	0.427	0.114
8 FSS	23	3/28/74	4/22/74	1.224	0.578

Amendment 2
(New)

ER Table 2.7.2-10d
Cherokee Nuclear Station
Mean Dry and Ash - Free Dry Weights of Periphyton, in mg/cm^2 Collected
From Artificial Samplers In The Broad River System
Sampling Period: 23 Apr - 18 Jun '74

Period	Station No.	Date IN	Date OUT	Dry Weight (mg/cm^2)	Dry Weight (Ash-free) (mg/cm^2)
9 FSS	4	4/23/74	5/21/74	1.40	0.60
9 FSS	17	4/24/74	5/22/74	0.80	0.40
9 FSS	21	4/22/74	5/22/74	0.90	0.30
10 SSS	8	5/21/74	6/6/74	1.03	0.64
10 SSS	12	5/21/74	6/6/74	2.81	1.45
10 SSS	15a	5/22/74	6/6/74	1.43	0.75
10 SSS	15b	5/22/74	6/6/74	1.32	0.65
10 SSS	23	5/22/74	6/6/74	0.94	0.62
10 FSS	12	5/21/74	6/19/74	1.77	0.80
10 FSS	17	5/22/74	6/18/74	1.83	0.80
10 FSS	23	5/22/74	6/18/74	1.08	1.69

Amendment 2
(New)

ER Table 2.7.2-10e
Cherokee Nuclear Station
Mean Dry and Ash - Free Dry Weights of Periphyton, in mg/cm^2, Collected From Artificial Samplers In The Broad River System
Sampling Period: 10 Jun - 13 Aug '74

Period	Station No.	Date In	Date Out	Dry weight (mg/cm^2)	Ash-free dry weight, (mg/cm^2)
11 SSS	8	6/10/74	7/2/74	1.247	0.411
11 SSS	12	6/10/74	7/2/74	1.777	0.573
11 SSS	17	6/10/74	7/2/74	1.651	0.606
11 FSS	8	6/19/74	7/17/74	2.123	0.544
11 FSS	23	6/18/74	7/15/74	2.609	1.708
12 SSS	8	7/17/74	7/31/74	1.685	0.518
12 SSS	12	7/17/74	7/31/74	2.216	0.662
12 SSS	17	7/17/74	7/31/74	1.370	0.526
12 FSS	12	7/17/74	8/13/74	2.101	0.791
12 FSS	17	7/17/74	8/13/74	1.696	0.757
12 FSS	23	7/15/74	8/13/74	1.569	0.519

Amendment 2
(New)

ER Table 2.7.2-10f
Cherokee Nuclear Station
Mean Dry and Ash - Free Dry Weights of Periphyton, in mg/cm^2, Collected From Artificial Samplers In The Broad River System
Sampling Period: 13 Aug - 10 Sept '74

Period	Station No.	In	Out	Dry weight (mg/cm^2)	Ash-free dry weight (mg/cm^2)
13 FSS	8	8/13/74	9/10/74	1.524	0.807
13 FSS	12	8/13/74	9/10/74	2.505	1.148
13 FSS	16	8/13/74	9/10/74	2.636	1.496
13 FSS	17	8/13/74	9/10/74	2.933	1.146
13 FSS	23	8/13/74	9/10/74	1.364	0.968

Amendment 2
(New)

ER Table 2.7.2-11
Cherokee Nuclear Station
Emergent Aquatic Macrophytes Known To Occur In The Carolina Piedment

Phylum I.	Pteridophyta	
Family	a. Equisetaceae	
Genus		1. Equisetum arvense L.
		2. Equisetum hyamele var. affine (Engelman) A.A. Eaton
Phylum II.	Spermatophyta	
Family	a. Alismataceae	
Genus		1. Alisma subcordatum Raf.
		2. Sagittaria latifolia var. latifolia Willd.
		3. Sagittaria latifolia var. pubescens (Muhl) J. G. Smith
		4. Sagittaria longirostra (Micheli) J. G. Smith
Family	b. Araceae	
Genus		1. Peltandra virginica (L.) Kunth
Family	c. Cyperaceae	
Genus		1. Carex spp.
		2. Cyperus spp.
		3. Eleocharis spp.
		4. Fimbrystylis spp.
		5. Rynchospora spp.
		6. Scirpus spp.
		7. Juncus spp.
Family	d. Saururaceae	
Genus		1. Saururus cernus L.
Family	e. Typhaceae	
Genus		1. Typha latifolia L.

Amendment 2
(New)

ER Table 2.7.2-12
Cherokee Nuclear Station
Submergent And Floating Aquatic Macrophytes Known To Occur
In The Carolina Piedmont

Phylum I.		Thallophyta
Family	a.	Characeae
Genus	1.	*Nitella* sp.
Phylum II.		Bryophyta
Family	a.	Fontinalaceae
Genus	1.	*Fontinalis* sp.
Family	b.	Hypnaceae
Genus	1.	*Leptodictyum* sp.
	2.	*Sciaromium* sp.
Phylum III.		Pteridophyta
Family	a.	Salviniaceae
Genus	1.	*Azolla* sp.
	2.	*Salvinia* sp.
Phylum IV.		Spermatophyta
Family	a.	Brassicaeae
Genus	1.	*Nasturtium officinale* R. Brown
Family	b.	Cabombaceae
Genus	1.	*Brasenia schreberi* Gmelin
Family	c.	Ceratophyllaceae
Genus	1.	*Ceratophyllum demersum* L.
Family	d.	Lemnaceae
Genus	1.	*Lemna perpusilla* Torrey
	2.	*Wolffia papulifers* Thompson
Family	e.	Najadaceae
Genus	1.	*Najas gracillima* Magnus
	2.	*Potomageton* spp.
Family	f.	Nymphaceae
Genus	1.	*Nuphar luteum macrophyllum* (Small) E. O. Beal
	2.	*Nymphaea odorata* Aiton
Family	g.	Podostomaceae
Genus	1.	*Podostemon ceratophyllum*
Family	h.	Hydrocharitaceae
Genus	1.	*Elodea* sp.
	2.	*Vallisneria* sp.
Family	i.	Lentibulariaceae
Genus	1.	*Utricularia* sp.
Family	j.	Haloragaceae
Genus	1.	*Myriophyllum* spp.

Amendment 2
(new)

ER Table 2.7.2-13
Cherokee Nuclear Station
Master Species List of Benthos Found In The Broad River System

Group Benthos	
Phylum Bryozoa	
Class Phylactolaemata	
Order Plumatellina	
Family Lophopodidae	
Genus & Species	*Pectinatella magnifica*
Order Gymnolaemata	
Family Paludicellidae	
Genus & Species	*Paludicella articulata*
Phylum Mollusca	
Class Gastropoda	
Order Ctenobranchiata	
Family Amnicolidae	
Genus & Species	*Gillia altilis* *Pyrgulopsis* sp. Unidentified gastropod
Order Pleuroceridae	
Genus & Species	Unidentified pleurocerid
Order Pulmonata	
Family Ancylidae	
Genus & Species	*Ferrissia* sp.
Family Lymnaeidae	
Genus & Species	*Lymnaea* sp.
Class Pelecypoda	
Order Sphaeridae	
Genus & Species	Unidentified sphaerid
Phylum Platyhelminthes	
Class Turbellaria	
Order Tricladida	
Family Planariidae	
Genus & Species	*Phagocata morgani*
Phylum Annelida	
Class Hirudinea	
Order Rhynchobdellida	
Family Glossiphoniidae	
Genus & Species	*Helobdella lineata*

ER Table 2.7.2-13
Cherokee Nuclear Station

	Unidentified hirudinea
Class Oligochaeta	Unidentified oligochaeta
Phylum Arthropoda	
Class Crustacea	
Order Isopoda	
Family Asellidae	
Genus & Species	Asellus militaris
Order Decapoda	
Family Astacidae	
Genus & Species	Cambarus bartoni
	Unidentified decapod
Class Insecta	
Order Diptera	
Family Chironomidae	
Genus & Species	Ablabesmyia sp.
	Brillia sp.
	Chironomus sp.
	Cladotanytarsus sp.
	Coelotanypus sp.
	Corynoneura sp.
	Cricotopus sp.
	Cryptochironomus sp.
	Cryptocladopelma sp.
	Cryptosadisus sp.
	Dicrotendipes sp.
	Diplocladius sp.
	Demicryptochironomus sp.
	Eukiefferiella sp.
	Metriocnemus sp.
	Microtendipes sp.
	Nanocladius sp.
	Paracladopelma sp.
	Paralauterborniella sp.
	Phaenopsectra sp.
	Polypedilum sp.
	Procladius sp.
	Psectrocladius sp.
	Rheotanytarsus sp.
	Stenochironomus sp.
	Tanytarsus sp.
	Thienemanniella sp.
	Trichocladius sp.
	Trissocladius sp.
	Unidentified chironomids

Family Chaoboridae	
Genus & Species	Chaoborus punctipennis
Family Ceratopogonidae	
Genus & Species	Culicoides sp.
	Dasyhelia sp.
	Palpomyia sp.
	Unidentified ceratopogonid
Family Simuliidae	
Genus & Species	Simulium venustum
	Unidentified simulid
Family Tipulidae	
Genus & Species	Antocha sp.
	Erioptera sp.
	Helobia sp.
	Tipula abdominalis
	Tipula sp.
	Unidentified tipulid
Family Tabanidae	
Genus & Species	Tabanus sp.
Family Dixidae	
Genus & Species	Dixa sp.
Family Empididae	
Genus & Species	Hemerodromia sp.
	Unidentified empidid
Family Stratiomyiidae	
	Unidentified stratiomyiid
Family Dolichopodidae	
	Unidentified dolichopodidae
Family Ephydridae	
	Unidentified ephydrid
Order Ephemeroptera	
Family Baetidae	
Genus & Species	Ameletus sp.
	Baetisca sp.
	Baetis sp.

	Caenis sp.
	Cloeon sp.
	Ephemerella sp.
	Isonychia sp.
	Paraleptophlebia sp.
	Pseudiron sp.
	Tricorythodes sp.
	Unidentified baetids
Family Ephemeridae	
Genus & Species	Hexagenia sp.
	Hexagenia bilineata
Family Heptageniidae	
Genus & Species	Stenonema sp.
Order Trichoptera	
Family Hydropsychidae	
Genus & Species	Cheumatopsyche sp.
	Hydropsyche sp.
	Unidentified hydropsychid
Family Psycomyiidae	
Genus & Species	Polycentropus sp.
Family Hydroptilidae	
Genus & Species	Hydroptila sp.
	Stactobiella sp.
	Unidentified hydroptilid
Family Glossosomatidae	
Genus & Species	Glossosoma nigrior
Family Molannidae	
Genus & Species	Molanna blenda
Family Limnephilidae	
Genus & Species	Drusinus sp.
	Neophylax oligius
	Neophylax consimilis
	Unidentified limnephilid
Family Rhyacophilidae	
Genus & Species	Rhyacophila sp.

Family Psychomyiidae	
Genus & Species	Lype diversa
Family Leptoceridae	
Genus & Species	Oecetis sp.
Order Odonata (Anisoptera)	
Family Gomphidae	
Genus & Species	Dromogomphus spinosus
	Gomphus consanguis
	Gomphus stylurus notatus
	Gomphus sp.
	Ophiogomphus mainensis
	Progomphus obscurus
	Unidentified gromphid
Family Aehnidae	
Genus & Species	Gomphaeschna sp.
Order Odonata (Zygoptera)	
Family Coenagrionidae	
Genus & Species	Argia moesta
	Ischnura sp.
	Unidentified coenagrionid
Order Coleoptera	
Family Ptilodactylidae	
Genus & Species	Anchtarsus bicolor
Family Tingidae	
Genus & Species	Corythuca ciliata
Family Elmidae	
Genus & Species	Dubiraphia sp.
	Macronychus glabratus
	Optioservus sp.
	Stenelmis sp.
	Unidentified elmid
Family Crysomelida	
Genus & Species	Donacia sp.
Family Psephenidae	
Genus & Species	Psephenus herricki

ER Table 2.7.2-13
Cherokee Nuclear Station

Family Gyrinidae	
Genus & Species	Dineutus sp.
Order Plecoptera	
Family Perlidae	
Genus & Species	Acroneuria abnormis
	Eccoptura xanthenes
	Perlesta sp.
	Perlinella drymo
Family Peltoperlidae	
Genus & Species	Peltoperla sp.
Family Perlodidae	
Genus & Species	Isoperla sp.
Family Nemouridae	
Genus & Species	Allocapnia sp.
	Amphinemoura sp.
	Brachyptera sp.
	Leuctra sp.
	Nemoura (Prostoia) completa
	Oemopteryx or Strophopteryx sp.
	Taeniopteryx burksi
	Unidentified plecoptera
Order Megaloptera	
Family Corydalyidae	
Genus & Species	Chauliodes sp.
	Corydalus cornutus
Order Hemiptera	
Family Belostomatidae	
Genus & Species	Belostoma sp.
Family Gerridae	
Genus & Species	Gerris sp.
Family Veliidae	
Genus & Species	Rhagovelia sp.
Order Neuroptera	
Family Sisyridae	
	Unidentified sisyrid

Amendment 2
(New)

ER Table 2.7.2-13
Cherokee Nuclear Station

Order Collembola	
	Unidentified collembola
Class Arachnoidea	
Order Hydracarina	
	Unidentified hydracarinid
Phylum Nematoda	
	Unidentified nematode

ER Table 2.7.2-14a
Cherokee Nuclear Station
Estimated Densities of Taxa of Benthos,
in no/m^2, at Sampling Stations
On The Broad River System
Sampling Period 1: 8-12 Oct '73

Species	Code No.	Density (no./m^2)	Station Numbers													
			1An	2An	3An	4An	5An	6An	7An	8An	9An	10An	11An	12An	13An	14An	16An
Unknown Oligochaete	6599999999.998		7		50	22	2	33			77				36	239	
Asellus militaris	6620202020.200				4												
Ablabmesyia sp. A	6630102006.200							6								5	2
Chironomus sp. A	6630102009.240			6				43				4			13	81	4
Cladotanytarsus sp. A	6630102012.200			6		16		6				4		13			2
Coelotanypus sp. A	6630102013.200															5	
Cricotopus sp. A	6630102015.200			11		16	4	334	38			4				5	
Cryptochironomus fulvus	6630102018.200			22													
Cryptochironomus sp. A	6630102018.220				4	6						31			2	19	
Cryptocladopelma sp. A	6630102021.200						2					54			13		
Cryptosadisus sp. A	6630102024.200							6									
Dicrotendipes sp.	6630102027.200											15					
Demicryptochironomus sp. A	6630102030.200		57	16	11	721		6	325				58		11		26
Eukiefferiella sp. A	6630102036.200		4														
Paracladopelma sp. A	6630102042.200											4			2	5	
Paralauterborniella sp. A	6630102045.200		6													24	
Phaenopsectra sp. A	6630102048.200							6								5	
Polypedilum scalatnum	6630102051.200					11											
Polypedilum sp. A	6630102051.240		4	6		11	4	33	38			4	19			72	4
Procladius sp. A	6630102054.220											38		45	78		9
Psectrocladius sp. A	6630102057.200			6				22			29						
Rheotanytarsus sp. A	6630102063.200		4			6	56	102				4			2		17
Tanytarsus sp. A	6630102066.200		4	11	4			33		43		23					26
Thienemanniella sp. A	6630102072.200							16	19								6
Trichocladius cricotopus	6630102075.200					6		22				4			4		6
Trissocladius sp. A	6630102078.200										48						
unknown Chironomids	6630102099.999															19	
Chaoborus punctipennis	6630102520.200						2				163	830			147		15
unknown Ceratopogonid	6630103099.999				18							15	67	1259		5	
unknown Simulid	6630103599.999						2										

Amendment 2
(New)

ER Table 2.7.2-14a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct '73 (Page 2 of 2)

Species	Code No.	Density (no./m^2)	Station Numbers													
			1An	2An	3An	4An	5An	6An	7An	8An	9An	10An	11An	12An	13An	14An	16An
Erioptera sp. A	6630104030.200						9										
Ameletus sp. A	6630152010.200					76											15
Baetisca sp. A	6630152015.200							11									
Baetis sp. A	6630152020.200						65										
Caenis sp. A	6630152025.200											15					
Cloeon sp. A	6630152030.200																4
unknown Baetids	6630152099.999					6											
Stenonema sp. A	6630154020.200		771			215	34										9
Cheumatopsyche sp. A.	6630202020.200		79			1426	49	242									159
Hydropsyche sp. A	6630202030.200						88										
unknown Limnephilid	6630206099.999					11											
Ophiogomphus mainensis	6630252030.200				4							4					2
unknown Gomphid	6630252099.999															48	
Stenelmis sp. A	6630352050.200					6											
Dineutus sp. A	6630355020.200																2
Eccoptura xanthenes	6630402020.200		7														
Taeniopteryx sp. A	6630405050.200					6											
Corydalus cornutus	6630452020.200		4			49											17
Belostoma sp. A	6630504020.200																2

Amendment 2
(New)

ER Table 2.7.2-14b
Cherokee Nuclear Station
Estimated Densities of Taxa of Benthos,
in no/m^2, at Sampling Stations
On The Broad River System
Sampling Period 2: 5-10 Nov '73

Species	Code No.	Density (no./m^2)	Station Numbers													
			1An	2An	4An	5An	6An	7An	8An	9An	10An	12An	13An	14An	15An	16An	21An
Gillia altilis	6320202020.200																147
Unknown Oligochaete	6599999999.998		3					14					65	129	10		
Unknown Decapod	6620402099.999					22											38
Cladotanytarsus sp. A	6630102012.200					4											
Cricotopus sp. A	6630102015.200					8											
Cryptochironomus sp. A	6630102018.220					4											
Demicryptochironomus sp. A	6630102030.200		56		280	50	11								957	59	51
Rheotanytarsus sp. A	6630102063.200					97											
Tanytarsus sp. A	6630102066.200					4											
Thienemanniella sp. A	6630102072.200					4											
unknown Chironomids	6630102099.999		124	6	699	323	1055	72	162	345	216	366	840		536	452	51
Chaoborus punctipennis	6630102520.200									661	4522	2304	474	65			
Unknown Ceratopogonid	6630103099.999								32								
Simulium venustum	6630103520.200					29										6	
Unknown Tipulid	6630104099.999		6													65	64
Ameletus sp. A	6630152010.200		8		1108		11									27	
Ephemerella sp. A	6630152035.200		3												5		
Unknown Baetids	6630152099.999		3		6												
Orieanthus sp. A	6630153040.200		3														
Stenonema sp. A	6630154020.200		121												833		64
Cheumatopsyche sp. A	6630202020.200		43		1614	76									584	361	38
Hydropsychid	6630202099.999			6	699												
Tascobia sp. A	6630204060.200																13
Progomphus obscurus	6630252040.200							5					22				
unknown Gomphid	6630252099.999		124			4								65	206		
Macromia illinoiensis	6630253030.200								11								
Gomphaeschna sp. A	6630254030.200															10	6
Psephenus herricki	6630354020.200																89

Amendment 2
(New)

ER Table 2.7.2-14b
Cherokee Nuclear Station

Species	Code No.	Density (no./m^2)	Station Numbers													
			1An	2An	4An	5An	6An	7An	8An	9An	10An	12An	13An	14An	15An	16An	21An
Eccoptura xanthenes	6630402020.200																6
Perlinella drymo	6630402030.200		3			11											
Peltoperla sp. A	6630403030.200																32
Isoperla sp. A	6630404020.200					8											
Corydalus cornutus	6630452020.200														10		

Amendment 2
(New)

ER Table 2.7.2-14c
Cherokee Nuclear Station
Estimated Densities of Taxa of Benthos,
in no/m^2, at Sampling Stations
On The Broad River System
Sampling Period 3: 3-7 Dec '73

Species	Code Number	Density (no./m^2)	Station Numbers																	
			1An	3An	4Aa	4Ab	5An	6An	7An	8An	*9An	10An	11An	12An	13An	14An	15An	16An	17An	21An	23An
Gillia altilis	6320202020.200		90					6													
Helobdella lineata	6440202030.200															22					
Branchiura sowerbyi	6520402020.200					4															
unknown Oligochaete	6599999999.998		4	90		803	4	4,982			144	108	43	108		151	43	70	181	25	38
Asellus militaris	6620202020.200						7														
Cambarus bartoni	6620402020.200																			7	5
Ablabmesyia sp. A	6630102006.200																			10	
Corynoneura sp. A.	6630102014.200																			74	
Cricotopus sp. A	6630102015.200				29												98				
Diplocladius sp. A	6630102028.200																			7	
Demicryptochironomus sp. A	6630102030.200						4														
Eukiefferiella sp. A	6630102036.200																5				
Psectrocladius sp. A	6630102057.200																5			45	
Pseudochironomus sp. A	6630102060.200		147																		
Rheotanytarsus sp. A	6630102063.200				7												15			5	
Thienemanniella sp. A	6630102072.200																			21	
Trichocladius cricotopus	6630102075.200																			3	
unknown Chironomids	6630102099.999		1,440	994	50	958	93	3,901	81	1,184	1,292	495	1,593	1,034	1,636	517	151	355	103	283	86
Chaoborus punctipennis	6630102520.200					7				1,895		6,158		1,615	797				69		
Palpomyia sp. A	6630103030.200										14										
unknown Ceratopogonid	6630103099.999								237	151											
Simulium venustum	6630103520.200							13													
Antocha sp. A	6630104020.200			14														70			
Tipula abdominalis	6630104060.200																			4	
Tipula sp. A	6630104060.220		18																		11
unknown Tipulid	6630104099.999							3													
Dixa sp. A	6630106020.200																			7	

(Cont'd.)

Amendment 2
(new)

ER Table 2.7.2-14c
Cherokee Nuclear Station

Species	Code Number	Density (no./m²)	Station Numbers																
			1An	3An	4Aa	4Ab	5An	6An	7An	8An	*9An	10An	11An	12An	13An	14An	15An	16An	17An	21An	23An
Hemerodromia sp. A	6630107020.200		4	18		25		27								43		32			
Ephemerella sp. A	6630152035.200		7	68														27			
Habrophlebia sp. A	6630152037.200																			2	
Hexagenia sp. A	6630153030.200										28										
Stenonema sp. A	6630154020.200		65	154	7	251	14											5		25	86
Cheumatopsyche sp. A	6630202020.200		29	18	280	1,743	25									43		597		18	27
Hydropsyche sp. A	6630202030.200					610		16								43		27			
Polycentropus sp. A	6630203020.200			1,280																7	
unknown Hydrophilid	6630204099.999					111															
Glossosoma sp. A	6630205020.200		7															11			
unknown Limnephilid	6630206099.999																			4	
Rhyacophila sp. A	6630207020.200																			4	16
Gomphus consanguis	6630252020.200																		9		
Progomphus obscurus	6630252040.200															86					
unknown Gomphid	6630252099.999			4												22					
Argia sp. A	6630303020.200					4															
Optioservus sp. A	6630352040.200		11																		
Stenelmis sp. A	6630352050.200																			4	
Laccobius agilis	6630356020.200					4															
Peltoperla sp. A	6630403030.200																			14	
Isoperla sp. A	6630404020.200																			14	
Allocapnia sp. A	6630405020.200																			18	22
Brachyptera sp. A	6630405030.200																	11			
Taeniopteryx sp. A	6630405050.200		7															5			
unknown Plecoptera	6630409999.999																			4	
Corydalus cornutus	6630452020.200					4		3													
Order Collembola	6630600000.000					7															
Order Hydracarina	6640200000.000					7															
Pyrgulopsis sp. A	6320202060.200																			14	

Amendment 2
(New)

ER Table 2.7.2-14d
Cherokee Nuclear Station
Estimated Densities of Taxa of Benthos,
in no/m^2, at Sampling Stations
On The Broad River System
Sampling Period 4: 31 Dec '73 - 4 Jan '74

Species	Code Numbers	Station Numbers												
		5An	8An	9An	10An	11An	12An	13An	14An	15An	16An	19An	21An	23An
Pyrgulopsis sp. A	6320202060.200												5	4
unknown Oligochaete	6599999999.998	22				212					32	98		
Asellus militaris	6620202020.200										4			
unknown Chironomids	6630102099.999	129	29		211	295	756	1991	48	57	126	455	43	65
Chaoborus punctipennis	6630102520.200		10	689	1738		2555	325	19	19			16	
unknown Ceratopogonid	6630103099.999								10					
unknown Simulid	6630103599.999												5	
Tipula abdominalis	6630104060.200													4
Tipula sp. A	6630104060.220										11			7
unknown Tipulid	6630104099.999										11			
Dixa sp. A	6630106020.200												11	
Hemerodromia sp. A	6630107020.200											5		
Ephemerella sp. A	6630152035.200					5								4
Stenonema sp. A	6630154020.200					233						21	32	43
Cheumatopsyche sp. A	6630202020.200					124			29		4	5	151	136
Hydropsyche sp. A	6630202030.200								29			5		
Glossosoma sp. A	6630205020.200													4
unknown Limnephilid	6630206099.999													25
Macronychus glabratus	6630352035.200											10		
Stenelmis sp. A	6630352050.200												22	4
Psephenus herricki	6630354020.200												5	
Peltoperla sp. A	6630403030.200												48	
Allocapnia sp. A	6630405020.200												11	

Amendment 2
(New)

ER Table 2.7.2-14e
Cherokee Nuclear Station
Estimated Densities of Taxa of Benthos,
in no/m^2, at Sampling Stations
On The Broad River System
Sampling Period 5: 28 Jan '74 - 2 Feb '74

Species	Code Number	Density (no./m^2)	Station Numbers											
			5	6	8	9	10	11	12	13	14	16	21	23
Pectinatella magnifica	6220202020.200										+			
unknown Gastropod	6320202099.999													
Phatocata morgani	6420202030.200													
unknown Oligochaete	6599999999.998			57	10	10	48		19		61	25	11	
unknown Chironomids	6630102099.999		43	14	38	1101	766	852	1904	1770	50	172		
Chaoborus punctipennis	6630102520.200				29	746	2182		2536	115	11	7		
Palpomyia sp. A	6630103030.200					10					4			
Antocha sp. A	6630104020.200											4		
Helobia sp. A	6630104035.200										4			
unknown Tipulid	6630104099.999										4			
Hemerodromia sp. A	6630107020.200													
unknown Stratiomyiidae	6630107599.999													
unknown Dolichopodidae	6630108099.999									19	4			
Baetis sp. A	6630152020.200													
Ephemerella sp. A	6630152035.200											11		
Stenonema sp. A	6630154020.200			4					10		4		22	11
Cheumatopsyche sp. A	6630202020.200		11									11		
Hydropsyche sp. A	6630202030.200										27			
Drusinus sp. A	6630206030.200												6	
Dromogomphus spinosus	6630252010.200										10			
Progomphus obscurus	6630252040.200		5											
unknown Gomphid	6630252099.999													
Ischnura sp. A	6630303040.200													
unknown Coenagrionid	6630303099.999													
Macronychus glabratus	6630352035.200													
Optioservus sp. A	6630352035.200										4		6	
Stenelmis sp. A	6630352050.200												2	
Peltoperla sp. A	6630403030.200													
Isoperla sp. A	6630404020.200													
Allocapnia sp. A	6630405020.200													
unknown Plecoptera	6630409999.999										4	4		

Amendment 2
(New)

ER Table 2.7.2-14f
Cherokee Nuclear Station
Estimated Densities of Taxa of Benthos,
in no/m^2, at Sampling Stations
On The Broad River System
Sampling Period 6: 25 Feb - 1 Mar '74

Taxa	Station Numbers												
	05A	06A	07A	08A	09B	10B	11B	12B	13B	14B	16A	21A	23A
Pectinatella magnifica					+	+			+	+			
Pyrgulopsis sp.												36	
Phagocata morgani										3			
unknown Oligochaete		29			48				19	367		7	7
Cambarus bartoni												4	
unknown Chironomids	692	22	172	366	967	593	129	144	2076	494	22	7	
Chaoborus punctipennis	57				1857	2708		2402	306	32	7		4
Palpomyia sp.										19			
Tipula abdominalis													4
unknown Tipulid												4	
Baetis sp.											4		
Ephemerella sp.	187										158		
Isonychia sp.											4		
Hexagenia sp.										6			
Stenonema sp.	11										7	36	14
Cheumatopsyche sp.	39										22	4	7
Hydropsyche sp.	11					10							
unknown Limnephilid													14
Stenelmis sp.												68	
Donacia sp.												4	
Psephenus herricki												4	
Eccoptura xanthenes	4												
Peltoperla sp.												14	
Nemoura sp.													22
unknown Plecoptera	4												
Corydalus cornutus													4

Amendment 2
(New)

ER Table 2.7.2-14g
Cherokee Nuclear Station
Estimated Densities of Taxa of Benthos,
in no/m^2, at Sampling Stations
On The Broad River System
Sampling Period 7: 25 Mar - 30 Mar '74

Taxa	Stations										
	07	08	09	10	11	12	13	14	15	21	23
Pectinatella magnifica						+					
Pyrgulopsis sp.										18	
unidentified Oligochaeta			57	38			19	99	383	61	61
unidentified Decapod										7	
unidentified Chironomids			287	354	67	823	201	332	38	423	219
Chaoborus punctipennis			182	1254		2029	57	77			
Antocha sp.											4
Tipula sp.											7
unknown Tipulid		19									15
Ephemerella sp.											15
unidentified Baetids										4	
Stenonema sp.										4	90
Hydropsyche sp.											14
Stactobiella sp.											4
Drusinus sp.											14
Gomphus cosanguis								3			
unidentified Gomphid								3			
Anchytarsus bicolor										14	7
Psephenus herricki										7	
Peltoperla sp.											29
Isoperla sp.											97
Nemoura sp.											115
unidentified Plecoptera										4	

+ indicates presence of taxon

Amendment 2
(new)

ER Table 2.7.2-14h
Cherokee Nuclear Station
Estimated Densities of Taxa of Benthos,
in no/m^2, at Sampling Stations
On The Broad River System
Sampling Period 8: 22-27 Apr '74

Taxa	Stations													
	03	05	06	07	08	09	10	11	12	13	14	16	21	23
Pectinatella magnifica							+			+				
Pyrgulopsis sp.													132	25
unidentified Oligochaete		27	229	29		96	38		57	488	329		29	
Cambarus bartoni													4	
unidentified chironomids	742	258	1751	19	96	1397	880	211	1426	1196	73	297	54	236
Chaoborus punctipennis				10		230	1770		2077	96				
Palpomyia sp.										19	3	7		
Simulium venustum														4
Antocha sp.		16												
Helobia sp.	11	16												
Tipula abdominalis													4	
Dixa sp.													4	
Hemerodromia sp.												4		
Baetis sp.			32											
Ephemerella sp.	86	124										4		4
Paraleptophlebia sp.													7	
Pseudiron sp.								10						
Stenonema sp.		5											7	
Cheumatopsyche sp.	11	5											29	7
Drusinus sp.													4	
unidentified Limnephilid														4
Lype sp.														11
Anchytarsus bicolor													122	
unidentified Elmid														4
Psephenus hirricki													14	
Eccoptura xanthenes													7	
Perlesta sp.												4		
Nemoura sp.														4
Chauliodes sp.													4	

+ indicates presence of taxon

Amendment 2
(New)

ER Table 2.7.2-4 i
Cherokee Nuclear Station
Estimated Densities of Taxa of Benthos,
in no/m^2, at Sampling Stations
On The Broad River System
Sampling Period 9:20-25 May '74

Species	Sampler and No. of samples	2P	2E9"	1E9"	2P	2E9"	2E	6E9"	3P9"	3Sr	3Sr	3P	3P	3P
	Station Numbers	08	09	10	11	12	13	14	15	21	23	15L	24L	24R
Pectinatella magnifica				+										
Pyrgulopsis sp.										39				
Phagocata morgani										25				
unidentified Oligochaete						10	258	348		22		13	32	70
unidentified Chironomids		144	105		10	38	172	73		129	47	6	179	
Chaoborus punctipennis			86	77		67	86	13						
unidentified Simulid										4				
Tipula abdominalis										7				
Dixa sp.										4				
Baetis sp.									NO		4			
Paraleptophlebia sp.										22				
Stenonema sp.									ORGANISMS	18	22			
Cheumatopsyche sp.										122	90			
Hydropsyche sp.										4				
Polycentropus sp.										90	4			
Glossosoma sp.											14			
Drusinus sp.										4				
Lype sp.										4				
Progomphus obscurus								19						
Anchytarsus bicolor										126				
Optioservus sp.										14				
Psephenus herricki										4				
Eccoptura xanthenes										7				
Peltoperla sp.										29				
unidentified Plecoptera										258				
Corydalus cornutus										4				

Amendment 2
(New)

ER Table 2.7.2-4j
Cherokee Nuclear Station
Estimated Densities of Taxa of Benthos,
in no/m^2, at Sampling Stations
On The Broad River System
Sampling Period 10: 17-22 Jun '74

Species	Sampler and No. of samples	2P9"	2E9"	2E9"	2P9"	2E9"	2E9"	6E9"	3Sr	3Sr	3P9"	3P9"	3P9"
	Station Numbers	08	09	10	11	12	13	14	21	23	15L	24L	24R
Pyrgulopsis sp.									18	7			
unidentified Oligochaete			48	191		10	268	102		7			77
Cambarus bartoni										4			
unidentified Chironomids		86	153		86	10	402	1043	22	22	83	38	147
Chaoborus punctipennis			163	402			10						
Hexagenia sp.								3					
Stenonema sp.									4				
Cheumatopsyche sp.									18	47			
Progomphus obscurus								6					
Peltoperla sp.									4	4			
unidentified Plecoptera									7				

Amendment 2
(New)

ER Table 2.7.2-4k
Cherokee Nuclear Station
Estimated Densities of Taxa of Benthos,
in no/m^2, at Sampling Stations
On The Broad River System
Sampling Period 11: 15-20 Jul '74

Taxa	Sampler and No. of samples	2P9"	2EK9"	2EK9"	2P9"	2EK9"	2EK9"	6EK9"	3Sr"	3Sr"	3P9"	3P9"	3P9"
	Station Nos.	08	09	10	11	12	13	14	21	23	24L	24R	25L
Pyrgulopsis sp.										3			
unidentified Oligochaete		10	10	10	10		144	144	8	3			25
unidentified Decapod										8			
unidentified Chironomids		48	258	10	86	29	421	523	22	8	306	33	63
Chaoborus punctipennis		10	545	565		345	19						
Baetis sp.									3				
unidentified Gomphid								4					
Dubiraphia sp.		10											
unidentified Nematoda								4					

Amendment 2
(New)

ER Table 2.7.2-14 1
Cherokee Nuclear Station
Estimated Densities of Taxa of Benthos,
in no/m^2, at Sampling Stations
On The Broad River System
Sampling Period 12: 12-17 Aug '74

Taxa	Sampler and No. of samples / Station Nos.	2P9" 08	2EK9" 09	2EK9" 10	2P9" 11	2EK9" 12	2EK9" 13	6EK9" 14	3P9" 15L	3Sr" 21	3Sr" 23	2P9" 24L	2P9" 24R
Pectinatella magnifica			+	+			+						
Pyrgulopsis sp.										165	11		
unidentified Oligochaete		10	10	29		10	10	446		11			
Cambarus bartoni										8	3		
unidentified Chironomids		249	115	57	421	10	278	138	44		11	19	10
Chaoborus punctipennis			258	718		105	29						
Palpomyia sp.							10		6				
unidentified Tipulid										8			
unidentified Baetid								4					
Hexagenia sp.								29					
Stenonema sp.										3	3		
Cheumatopsyche sp.											8		
Hydropsyche sp.										3			
Gomphus consanguis								4					
unidentified Gomphis								15					
Anchytarsus bicolor										61	3		
Psephenus herricki										32	3		
Peltoperla sp.										25	8		
Nemoura sp.										8			
Gerris sp.										3			
Rhagouelia sp.										3			

Amendment 2
(New)

ER Table 2.7.2-14m
Cherokee Nuclear Station
Estimated Densities of Taxa of Benthos,
in no/m^2, at Sampling Stations
On The Broad River System
Sampling Period 13: 9-14 Sept '74

Taxa	Sampler and No. of sample: / Station No.:	2P9 08	2EK9 09	2EK9 10	2P9 11	2EK9 12	2EK9 13	6EK9 14	3P9 15	3Sr 16	3Sr 21	2Sr 23	3P9 24L	3P9 24R
Pectinatella magnifica				+										
Paludicella articulata					+									
Unidentified Pleurocerid										4	22	16		
Unidentified Sphaerid									6				6	
Unidentified Oligochaete			29	96	163		172	242	19	4				
Cambarus bartoni											7	16		
Unidentified Chironomid		746	105		144	10	201	584	396	100	14		504	32
Chaoborus punctipennis			373	2010		211	38	19						13
Unidentified Ceratopogonid					86			3	19	11			57	
Dasyhelia sp.						10								
Unidentified Dipterean												5		
Unidentified Ephydrid										4				
Unidentified Ephemeropterid														
Hexagenia bilineata								10	6					
Stenonema sp.													32	
Hydropsyche sp.										22				
Gomphus stylurus notatus								16	6					
Gomphus sp.									6					
Corythuca ciliata						10								
Unidentified Elmid													19	
Dineutus sp.												5		
Unidentified Sisyrid													6	
Unidentified Arachnoid									6					

Amendment 2
(New)

ER Table 2.7.2-15a
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Benthic Taxa at Stations
On The Broad River System
Sampling Period 1: 8-12 Oct '73

TAXA	STATION 3-S 01			STATION s-S 02			STATION 3-S 03			STATION 3-S 04		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca										4.0±2.8284	1.7	29
Oligochaeta	1.0±1.0000	4.7	11					34.2	93	2.0±1.4142	0.8	14
Crustacea												
Diptera	4.3±1.1547	21.1	49	9.5±3.5355	95.3	101	4.0±6.0828	19.1	52	11.0±5.6569	5.3	91
Chironomidae	4.3±1.1547	21.1	49	9.5±3.5355	95.3	101	1.6±2.0817	9.6	26	11.0±5.6569	5.3	91
Chaoborus punctipennis												
Ephemeroptera	8.6±7.3711	40.1	93				10.0±11.7898	39.7	108	12.0±1.4142	5.0	86
Trichoptera	6.0±7.0000	27.6	64				1.0±1.7321	4.0	11	203±156.9777	84.8	1456
Odonata	0.3±0.5774	1.7	4	0.5±0.7071	4.7	5	0.6±0.5774	2.9	8			
Coleoptera										0.5±0.7071	0.2	4
Plecoptera	0.6±0.5774	3.0	7							0.5±0.7071	0.2	4
Megaloptera	0.3±0.5774	1.7	4							4.5±6.3640	1.9	32
Hempitera												
Total			232			106			272			1716

Amendment 2
(New)

ER Table 2.7.2-15a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct '73

TAXA	3-S STATION 05			3-S STATION 06			1-E9'' STATION 08			2-E9'' STATION 09		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca												
Oligochaeta	1.0 ± 1.7321	1.5	18	2[illegible] ± 2.0817	4.5	29				[illegible].0 ± 1.4142	7.1	19
Crustacea												
Diptera	63.3 ± 56.8712	58.0	694	41.6 ± 16.5025	69.1	450		100.0	19	14.0 ± 2.8284	92.9	250
Chironomidae	61.3 ± 57.7697	56.1	672	41.6 ± 16.5025	69.1	450		100.0	19	7.0 ± 1.4142	32.3	87
Chaoborus punctipennis	0.3 ± 0.5774	0.3	4							8.5 ± 3.5355	60.6	163
Ephemeroptera	17.6 ± 0.7125	16.2	194	0.6 ± 1.1547	1.1	7						
Trichoptera	20.3 ± 16.1067	24.0	287	15.0 ± 26.5581	25.3	165						
Odonata	0.3 ± 0.5774	0.3	4									
Coleoptera												
Plecoptera												
Megaloptera												
Hemiptera												
Total			1197			651			19			269

Amendment 2
(New)

ER Table 2.7.2-15a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct '73

TAXA	STATION 10 (3-E9)			STATION 11 (2-E9)			STATION 12 (3-E9)			STATION 13 (9-E9)		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Oligochaeta	3.0 ± 2.6458	2.4	64							2.6 ± 2.1213	14.4	51
Crustacea												
Diptera	129.6 ± 73.1596	95.6	2511	5.0 ± 0.0000	100.0	95	68.6 ± 3.7859	100.0	1315	17.3 ± 5.8949	85.1	302
Chironomidae	32.0 ± 41.0122	16.4	431	4.0 ± 1.4142	80.0	76	3.0 ± 1.7321	4.4	58	7.5 ± 3.3208	37.2	132
Chaoborus punctipennis	106.3 ± 38.8887	78.0	2048				65.6 ± 2.0817	95.6	1257	8.7 ± 3.7676	47.3	168
Ephemeroptera	1.3 ± 2.3094	1.5	39									
Trichoptera	0.3 ± 0.5774	0.2	6									
Odonata	0.3 ± 0.5774	0.2	6							0.1 ± 0.3333	0.6	2
Coleoptera												
Plecoptera												
Megaloptera												
Hemiptera												
Total			2626			95			1315			355

Amendment 2
(New)

ER Table 2.7.2-15a
Cherokee Nuclear Station
Sampling Period 1: 8-12 Oct '73

TAXA	STATION 3-E9'' 14			STATION 6-S 16			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca												
Oligochaeta	26.0±23.5160	43.4	434	0.2±0.4082	0.3	2						
Crustacea				0.2±0.4082	0.3	2						
Diptera	24.6±14.2244	47.6	476	28.8±29.3354	45.6	305						
Chironomidae	21.6±10.7858	41.3	413	27.8±30.0361	45.0	301						
Chaoborus punctipennis	3.0±3.4641	5.7	57									
Ephemeroptera				1.6±1.0328	6.1	41						
Trichoptera	1.3±2.3094	2.6	26	14.6±18.8326	46.2	309						
Odonata	3.3±2.5166	6.4	64	0.2±0.4082	0.3	2						
Coleoptera				0.5±0.5477	0.6	4						
Plecoptera												
Megaloptera				0.2±0.4082	0.3	2						
Hemiptera				0.2±0.4082	0.3	2						
Total			1000			669						

Amendment 2
(New)

ER Table 2.7.2-15b
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Benthic Taxa at Stations
On The Broad River System
Sampling Period 2: 5-10 Nov '73

TAXA	STATION 3-S 01			STATION 2-S 02			STATION 1-S 03			STATION 2-S 04		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca												
Platyhe'minthes										1.0 ± 1.4142	0.4	11
Olgochaeta	0.3 ± 0.5774	0.5	4									
Crustacea												
Diptera	22.6 ± 28.0060	33.6	247	0.5 ± 0.7071	50.0	5		73.1	613	64.0 ± 86.2670	28.8	705
Chironomidae	20.6 ± 24.5425	32.6	240	0.5 ± 0.7071	50.0	5		64.1	538	64.0 ± 86.2670	28.8	705
Chaoborus punctipennis												
Ephemeroptera	16.6 ± 16.5630	245	180	0.5 ± 0.7071	50.0	5		25.6	215	60 ± 84.84.8528	24.2	591
Trichoptera	12.6 ± 10.6927	18.5	136					1.3	11	105.5 ± 149.1995	46.4	1135
Odonata	15.3 ± 26.5581	22.4	165									
Coleoptera										0.5 ± 7071	0.2	5
Plecoptera	0.3 ± 0.5774	0.5	4									
Mefaloptera												
Total			736			10			839			2447

Amendment 2
(New)

ER Table 2.7.2-15b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov '73

TAXA	STATION 2-S 05			STATION 3-S 06			STATION 2-P9 07			STATION 2-P9 08		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
MOLLUSCA												
PLATYHELMINTHES												
OUGOCHAETA	2.5 + 3.5355	3.1	27	12.0 + 20.7846	7.4	129	1.5 + 0.7071	10.1	29			
CRUSTACEA												
DIPTERA	48.5 + 17.6777	72.6	638	129.0 + 82.8674	88.0	1531	13.5 + 14.8492	89.9	258	17.0 + 15.5563	100.0	163
CHIRONDMIDAE	44.5 + 120208	62.2	547	119.0 + 77.2722	85.6	1488	13.5 + 14.8492	89.9	258	15.5 + 14.450	76.1	124
CHAOBORUS PUNCTIPENNIS												
EPHEMEROPTERA	0.5 + 0.7071	0.6	5	0.6 + 1.1547	0.4	7						
TRICHOPTERA	12.0 + 11.3137	16.5	145	2.0 + 2.0000	4.1	72						
ODONATA												
COLEOPTERA												
PLECOPTERA	2.5 + 3.5335	6.7	59									
MEGALOPTERA												
TOTAL			879			1739			287			163

Amendment 2
(New)

ER Table 2.7.2-15b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov '73

TAXA	STATION 2-E9 09			STATION 2-E9 10			STATION 2-E9 11			STATION 2-E9 12		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
MOLLUSCA												
PLATYHELMINTHES												
OUGOCHAETA				0.5 + 0.7071	0.4	10						
CRUSTACEA												
DIPTERA	52.5 + 68.5894	100.0	1723	133.5 + 51.6188	99.6	2555	1.5 + 2.1213	59.2	29	69.0 + 12.7279	100.0	1321
CHIRONODMIDAE	18.0 + 24.0416	25.0	431	5.0 + 2.8284	3.7	96	1.5 + 2.1213	59.2	29	7.5 + 7071	10.9	144
CHAOBORUS PUNCTIPENNIS	34.5 + 44.5477	75.0	1292	128.5 + 54.4472	95.9	2459				61.5 + 12.0208	89.1	1177
EPHEMEROPTERA												
TRICHOPTERA							0.5 + 0.7071	20.4	10			
ODONATA							0.5 + 0.7071	20.4	10			
COLEOPTERA												
PLECOPTERA												
MEGALOPTERA												
TOTAL			1723			2565			49			1321

Amendment 2
(New)

ER Table 2.7.2-15b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov '73

TAXA	2-E9'' STATION 13			2-E9'' STATION 14			4-S STATION 15			2-S STATION 16		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca												
Platyhelminthes												
Oligochaeta	19.0 ± 8.4853	41.8	364	2.5 ± 2.1213	50.0	48	0.5 ± 0.5774	0.3	5			
Crustacea												
Diptera	26.0 ± 2.8284	57.1	497	1.5 ± 0.7071	30.2	29	28.1 ± 27.5801	19.2	372	48.5 ± 12.0208	52.7	522
Chironomidae	13.5 ± 6.3640	29.6	258				28.0 ± 27.5802	19.1	369	42.0 ± 19.7990	45.7	452
Chaoborus punctipennis	12.5 ± 3.5355	27.4	239	1.5 ± 0.7071	30.2	29						
Ephemeroptera							43.7 ± 50.7436	25.0	485	4.5 ± 4.9497	4.9	49
Trichoptera							78.0 ± 63.9114	49.0	449	39.0 ± 9.8995	42.3	419
Odonata	0.5 ± 0.7071	1.1	10	1.0 ± 1.4142	19.8	19	11.2 ± 21.1877	6.2	121			
Coleoptera												
Plecoptera												
Megaloptera							0.5 ± 1.0000	0.3	5			
TOTAL			871			96			1937			990

Amendment 2
(New)

ER Table 2.7.2-15b
Cherokee Nuclear Station
Sampling Period 2: 5-10 Nov '73

TAXA	STATION 6-S 21			STATION			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
PLATYHELMINTHES												
OLIGOCHAETA	0.5 + 0.8567	0.9	5									
CRUSTACEA	1.5 + 1.8708	2.9	16									
DIPTERA	12.6 + 11.2724	24.9	137									
CHIRONOMIDAE	6.6 + 5.9217	13.1	72									
CHAOBORUS PUNCTIPENNIS												
EPHEMEROPTERA	4.0 + 3.2249	7.3	40									
TRICHOPTERA	10.2 + 13.4524	20.7	114									
ODONATA	0.2 + 0.4082	0.4	2									
COLEOPTERA	6.8 + 6.7651	13.4	74									
PLECOPTERA	8.3 + 11.3959	16.3	90									
MEGALOPTERA												
TOTAL			551									

Amendment 2
(New)

ER Table 2.7.2-15c
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Benthic Taxa at Stations
On The Broad River System
Sampling Period 3: 3-7 Dec '73

TAXA	3-S STATION 01			3-S STATION 03			5-S STATION 04			3-S STATION 05		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca	22.0 ± 20.6640	15.5	237									
Hirudinea												
Oligochaeta	0.3 ± 0.5774	0.3	4	8.3 ± 2.0817	6.6	90	45.8 ± 99.6404	13.2	495	3.3 ± 4.9329	1.2	36
Crustacea							0.2 ± 0.4472	0.1	2	0.7 ± 1.1547	0.2	7
Diptera	56.0 ± 30.6105	39.4	603	95.3 ± 128.0013	75.4	1025	58.2 ± 98.9783	17.6	658	236.0 ± 386.2186	86.9	2539
Chironomidae	54.0 ± 28.5132	38.0	581	92.3 ± 127.9622	73.1	993	56.2 ± 96.0895	16.8	630	225.7 ± 368.3508	83.1	2428
Chaoborus punctipennis							0.4 ± 0.8944	0.1	4	0.3 ± 0.5774	0.1	4
Ephemeroptera	6.6 ± 4.5092	4.7	72	20.7 ± 8.1445	16.3	222	14.4 ± 25.8225	4.3	159	8.3 ± 11.0151	3.1	90
Trichoptera	55.3 ± 30.6159	38.9	595	1.7 ± 2.0817	1.3	18	224.4 ± 265.9291	64.6	2415	22.0 ± 31.1929	8.1	237
Odonata				0.3 ± 0.5774	0.3	4	0.2 ± 0.4472	0.1	2			
Coleoptera	1.0 ± 1.0000	0.7	11							0.7 ± 0.5774	0.3	8
Plecoptera	0.6 ± 0.5774	0.5	7							0.3 ± 0.5774	0.1	4
Megaloptera							0.2 ± 0.4472	0.1	2			
Collembola							0.4 ± 0.8944	0.1	4			
Arachnoidea							0.4 ± 0.8944	0.1	4			
TOTAL			1529			1359			3741			2921

Amendment 2
(New)

ER Table 2.7.2-15c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec '73

TAXA	3-S STATION 06			2-E9'' STATION 07			2-E9'' STATION 08			2-E9'' STATION 09		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca	0.3 ± 0.5774	0.04	4									
Hirundinea												
Oligochaeta	617.3 ± 468.0014	66.4	6641							5.0 ± 5.6569	4.3	96
Crustacea												
Diptera	308.0 ± 162.7298	33.2	3318	7.5 ± 4.9497	100.0	144	32.0 ± 32.5269	100.0	612	100.0 ± 120.2082	94.8	2106
Chironomidae	302.0 ± 156.1666	32.5	3249	7.5 ± 4.7497	100.0	144	32.0 ± 32.5209	100.0	612	45.0 ± 46.6690	38.8	861
Chaoborus punctipennis										64.5 ± 72.8320	55.6	1235
Ephemeroptera										1.0 ± 1.4142	0.9	19
Trichoptera	2.7 ± 3.7859	0.3	29									
Odonata												
Coleoptera												
Plecoptera												
Megaloptera	0.3 ± 0.5774	0.04	4									
Collembola												
Arachnoidea												
TOTAL			9996			144			612			2221

Amendment 2
(New)

ER Table 2.7.2-15c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec '73

TAXA	2-E9'' STATION 10			2-E9'' STATION 11			2-E9'' STATION 12			2-E9'' STATION 13		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca												
Hirundinea												
Oligochaeta	2.5 ± 0.7071	1.6	48	0.5 ± 0.7071	2.6	10	2.5 ± 0.7071	3.9	48			
Crustacea												
Diptera	155 ± 31.1177	98.4	2967	19.5 ± 24.7487	97.4	373	61.5 ± 4.9497	96.1	1177	56.5 ± 28.9914	100.0	1081
Chirondmidae	12.0 ± 5.6569	7.6	230	19.5 ± 24.7487	97.4	373	24.0 ± 11.3137	37.5	459	38.0 ± 25.4558	67.3	727
Chaoborus punctipennis	143 ± 25.4558	90.8	2737				37.5 ± 6.3640	58.6	718	18.5 ± 3.5355	32.7	354
Ephemeroptera												
Trichoptera												
Odonata												
Coleoptera												
Plecoptera												
Megaloptera												
Collembola												
Arachnoidea												
TOTAL			3015			383			1225			1081

Amendment 2
(New)

ER Table 2.7.2-15c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec '73

TAXA	STATION 6-E9'' 14			STATION 3-E9'' 15			STATION 2-S 16			STATION 5-E6'' 17		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca												
Hirudinea	0.2±0.4082	1.2	6									
Oligochaeta	3.8±3.1885	27.1	137	1.3±1.1547	36.6	26	6.5±2.1213	5.8	70	4.2±2.8341	48.8	181
Crustacea												
Diptera	11.0±6.9282	60.5	306	2.3±3.2146	63.4	45	42.5±3.5355	37.7	452	4.2±3.4205	48.8	181
Chironomidae	9.8±6.5853	53.6	271	2.3±3.2146	63.4	45	33.0±1.4142	29.6	355	2.6±2.8810	30.2	112
Chaoborus punctipennis	0.7±0.8165	2.6	13							1.6±2.6077	18.6	69
Ephemeroptera							2.5±2.1213	2.3	27			
Trichoptera	1.5±1.6432	6.3	32				59.0±22.6274	52.9	635			
Odonata	1.2±1.4720	3.2	16							0.2±0.4472	2.4	9
Coleoptera	0.5±0.8367	1.8	9									
Plecoptera							1.5±0.7071	1.3	16			
Megaloptera												
Collembola												
Arachnoidea												
Total			506			71			1200			371

Amendment (New)

ER Table 2.7.2-15c
Cherokee Nuclear Station
Sampling Period 3: 3-7 Dec '73

TAXA	STATION 3-S 21			STATION 3-S 23			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca	1.3±1.5275	3.2	14									
Hirudinea												
Oligochaeta	2.3±4.0415	5.8	25	2.3±3.2146	2.9	25						
Crustacea	0.7±1.1547	1.6	7	0.3±0.5774	0.5	4						
Diptera	27.3±38.8887	67.7	294	90.7±141.5074	85.1	736						
Chironomidae	26.3±38.0832	65.2	283	90.0±142.0895	84.3	729						
Chaoborus punctipennis												
Ephemeroptera	2.3±0.5774	5.8	25	2.7±2.3094	3.4	29						
Trichoptera	3.0±3.0000	7.6	33	4.7±4.1633	5.8	50						
Odonata												
Coleoptera	1.7±1.1547	3.2	14									
Plecoptera	3.0±1.0000	6.7	29	2.0±2.0000	2.4	21						
Megaloptera												
Collembola												
Arachnoidea												
Total			434			865						

Amendment 2
(New)

ER Table 2.7.2-15d
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Benthic Taxa at Stations
On The Broad River System
Sampling Period 4: 31 Dec '73 - 4 Jan '74

TAXA	STATION 3-S 05			STATION 2-P9 07			STATION 2-P9 08			STATION 2-E9 09		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
MOLLUSCA												
OLIGOCHAETA	1.3 + 2.3094 0.0084 + 0.0146	14.0 53.2	14 .0904									
CRUSTACEA												
DIPTERA	8.0 + 7.5498 0.0074 + 0.0108	86.0 46.8	86 .0796	10.0 + 7.0711 0.0003 + 0.0004	90.6 75.0	96 .0057	2.0 + 1.3442 0.0004 + 0.0004	100 100	39 .0077	77.0 + 67.8823 0.0354 + 0.0076	100 100	2105 .6776
CHIRONDMIDAE	8.0 + 7.5498 0.0074 + 0.0108	86.0 46.8	86 .0796	10.0 + 7.0711 0.0003 + 0.004	90.6 75.0	96 .0057	1.5 + 0.7071 0.0002 + 0.0001	74.4 49.4	29 .0038	32.5 + 4.9497 0.0177 + 0.0174	29.5 50.0	622 .3388
CHAOBORUS PUNCTIPENNIS							0.5 + 0.7071 0.0003 + 0.0004	25.6 74.0	10 .0057	44.5 + 62.9325 0.0177 + 0.0250	70.5 50.0	1483 .3388
EPHEMEROPTERA												
TRICHOPTERA				0.5 + 0.7071 0.0001 + 0.0001	9.4 25.0	10 .0019						
COLEOPTERA												
PLECOPTERA												
TOTAL			100 .1700			106 .0076			39 .0077			2105 .6776

Amendment 2
(New)

ER Table 2.7.2-15d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec 73 - 4 Jan 74 (Page 2 of 4)

TAXA	STATION 2-E9'' 10			STATION 2-P9'' 11			STATION 2-E9'' 12			STATION 1-E9'' 13		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca												
Oligochaeta							1.0 ± 1.4142 0.0001 ± 0.0001	0.6 0.3	19 .0019			
Crustacea												
Diptera	101.5±43.1335 0.0633±0.0416	100 100	1943 1.2116	3.5±2.1213 0.0002±0.0001	100 100	153 .0038	38.0±11.3137 0.0334±0.0071	99.4 99.7	3321 .6393		100 100	2316 0.5665
Chironomidae	10.5±0.7071 0.0223±0.0086	10.3 35.2	201 .4268	3.5±2.1213 0.0002±0.0001	100 100	153 .0038	37.5±12.0208 0.0332±0.0069	22.6 99.1	756 .6354		86.0 89.0	1991.0 0.5053
Chaoborus punctipennis	91.0±43.8406 0.0460±0.0400	89.7 72.7	1742 .8804				0.5±0.7071 0.0002±0.0002	76.8 0.6	2565 .0038		14.0 11.0	325.0 0.0612
Ephemeroptera												
Trichoptera												
Coleoptera												
Plecoptera												
Total			1943 1.2116			153 .0038			3340 .6412			2316 .5665

Amendmen
(New)

ER Table 2.7.2-15d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec 73 - 4 Jan 74 (Page 3 of 4)

TAXA	STATION 5-E9'' 14			STATION 2-E9'' 15			STATION 3-S 16			STATION 3-S 21		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca							0.3±0.5774 0.0768±0.1130	2.1 77.5	4 0.8264	.03±0.5774 0.0665±0.1151	0.9 56.9	3 .7155
Oligochaeta	0.4±0.8944 0.0009±0.0021	6.3 18.7	8 .0172				3.0±2.6458 0.0098±0.0098	16.7 9.9	32 .1054			
Crustacea							0.3±0.5774 0.0012±0.0021	2.1 1.2	4 .0129	0.6±1.1547 0.0217±0.0376	2.0 18.6	7 .2335
Diptera	3.8±4.9699 0.0009±0.0015	73.0 18.7	92 .0172	2.0±1.4142 0.0002±0.0001	100 100	58 .0038	13.6±13.0512 0.0018±0.0134	77.1 11.2	148 .1194	11.6±11.2398 0.0012±0.0015	35.7 1.0	126 .0129
Chironomidae	3.4±4.1593 0.0008±0.0015	63.5 16.7	80 .0153	1.0±1.4142 0.0001±0.0001	50.0 50.0	29 .0019	11.6±11.0604 0.0111±0.0127	65.6 1.8	126 .0194	10.3±11.1505 0.0007±0.0011	31.4 0.6	111 0.0075
Chaoborus punctipennis	0.2±0.4472 0.0001 ±0.0001	6.3 2.1	8 .0019	0.5±0.7071 0.0001±0.0001	32.7 50.0	19 .0019						
Ephemeroptera										2.6±3.0551 0.0137±0.0146	8.2 11.7	29 .1474
Trichoptera	1.4±2.6077 0.0030±0.0064	20.6 62.5	26 .0574				0.3±0.5774 0.0002±0.0003	2.1 0.2	4 .0022	120±13.4536 0.0012±0.0021	36.8 1.0	130 .0129
Coleoptera										1.5±1.6432 0.0083±0.0072	5.1 4.1	18 .0893
Plecoptera										4.0±6.0828 0.0046±0.0071	12.2 3.6	43 .0452
Total			126 .0918			58 .0038			192 1.0663			353 1.2567

Amendment 2
(New)

ER Table 2.7.2-15d
Cherokee Nuclear Station
Sampling Period 4: 31 Dec 73 - 4 Jan 74 (Page 4 of 4)

TAXA	STATION 3-S 23			STATION			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
MOLLUSCA	0.3 ± 0.5774 0.0170 ± 0.0295	1.6 22.5	4 .1829									
OLIGOCHAETA												
CRUSTACEA												
DIPTERA	7.0 ± 2.6458 0.0037 ± 0.0057	30.4 4.9	76 .0398									
CHIRONOMIDAE	6.0 ± 3.4641 0.0003 ± 0.0002	26.0 0.4	65 .0032									
CHOBORUS PUNCTIPENNIS												
EPHEMEROPTERA	4.3 ± 4.5092 0.0229 ±	18.8 30.3	47 .3432									
TRICHOPTERA	20.3 ± 16.0104 0.0319 ± 0.0349	47.6 42.1	119 .3432									
COLEOPTERA	0.3 ± 0.5774 0.0002 ± 0.0004	1.6 0.3	4 .0022									
PLECOPTERA												
TOTAL			250 .8145									

Amendment 2
(New)

ER Table 2.7.2-15e
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Benthic Taxa at Stations
On The Broad River System
Sampling Period 5: 28 Jan - 2 Feb '74

CHEROKEE

TAXA	STATION 2-S 05			STATION 3-S 06			STATION 2-P9'' 08			STATION 2-E9'' 09		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Oligochaeta				5.33±7.5056 0.0089±0.0152	76.0 60.1	57 .0958	0.5±0.7071 0.0004±0.0006	13.0 40.1	10 .0077	0.5±0.7071 0.0001±0.0001	0.5 0.2	10 .0019
Diptera	5.50±2.1213 0.0003±0.0003	54.6 0.9	59 .0032	1.33±1.5275 0.0040±0.0078	18.7 31.1	14 .0495	3.5±4.9497 0.0006±0.0008	87.0 59.9	67 .0115	97.0±0.0000 0.0632±0.0057	99.5 99.8	1857 1.2096
Chironomidae	5.50±2.1213 0.0003±0.0003	54.6 0.9	59 .0032	1.33±1.5275 0.0046±0.0078	18.7 31.1	14 .0495	2.0±2.8284 0.0005±0.0007	49.4 50.0	38 .0096	57.5±3.5355 0.0482±0.0073	59.0 76.1	1101 .9225
Chaoborus punctipennis							1.5±2.1213 0.0001±0.0001	37.7 9.9	29 .0019	39.0±4.2426 0.0150±0.0016	40.0 23.7	746 .2871
Ephemeroptera	3.0±4.2426 0.0133±0.0187	30.6 39.7	33 .1431	0.33±0.5774 0.0013±0.0023	5.3 8.8	4 .0140						
Trichoptera	1.0±0.0000 0.0031±0.0004	10.2 9.3	11 .0334									
Odonata	0.5±0.7071 0.0168±0.0238	4.6 50.2	5 .1808									
Coleoptera												
Plecoptera												
Total			108 .3605			75 .1593			77 .0192			1867 1.2115

Amendment 2
(New)

ER Table 2.7.2-15e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan - 2 Feb '74

CHEROKEE

TAXA	2-E9'' STATION 10			2-P9'' STATION 11			2-E9'' STATION 12			2-E9'' STATION 13		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Oligochaeta	2.5±3.5355 0.0017±0.0024	1.6 1.4	48 .0328				1±0.0000 0.0021±0.0028	0.4 1.2	19 .0402			
Diptera	154±2.8284 0.1174±0.0023	98.4 98.5	2948 2.2470	44.5±2.05061 0.0006±0.0006	100.0 100.0	852 .0115	232.0±11.3137 0.1766±0.0506	99.4 97.7	4440 3.3801	99.5±4.9497 0.0801±0.0054	99.5 90.3	1904 1.5331
Chironomidae	40.0±28284 0.0732±0.0030	25.6 61.5	766 1.4010	44.5±20.5061 0.0006±0.0006	100.0 100.0	852 .0115	99.5±9.1924 0.1215±0.0627	42.6 67.2	1904 2.3255	92.5±0.7071 0.0786±0.0038	92.5 88.6	1770 1.5044
Chaoborus punctipennis	114.0±5.6569 0.0443±0.0053	72.8 37.2	2182 0.8479				132.5±2.1213 0.0551±0.0122	56.7 30.5	2536 1.0546	6.0±7.0711 0.0015±0.0016	6.0 1.7	115 0.0287
Ephemeroptera							0.5±0.7071 0.0020±0.0014	0.2 1.1	10 .0383			
Trichoptera												
Odonata										0.5±0.7071 0.0086±0.0121	0.5 9.7	10 .1646
Coleoptera												
Plecoptera												
Total			2996 2.2795			852 .0115			4469 3.4586			1814 1.6977

Amendment 2
(New)

ER Table 2.7.2-15e
Cherokee Nuclear Station
Sampling Period 5: 28 Jan - 2 Feb '74

CHEROKEE

TAXA	STATION S-E9'' 14			STATION 3-S 16			STATION 2-S 21			STATION 1-S 23		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Oligochaeta	3.3±3.4448 0.0221±0.0234	34.5 63.0	61 .4230	2.3±0.5774 0.0029±0.0040	10.7 45.4	25 .0312	1.0±1.4142 0.0001±0.0001	15.3 0.2	11 .0011			
Diptera	4.7±3.2042 0.0006 ± 0.0062	43.5 1.7	77 .0115	17.0±27.7128 0.0009±0.0008	78.2 14.0	183 .0096						
Chironomidae	3.5±2.7386 0.0023±0.0039	28.2 6.5	50 .0440	16±26.8514 0.0003±0.0004	73.5 4.7	172 .0032						
Chaoborus punctipennis	0.2±0.4472 0.00004±0.00002	6.3 0.1	1 0.0007	0.6±1.1547 0.0001±0.0001	3.0 1.6	7 .0011						
Ephemeroptera	0.2±0.4082 0.0017±0.0041	2.3 4.8	4 .0325	1.0±1.0000 0.0020±0.0006	4.7 31.3	11 .0215	2.0±1.4142 0.0250±0.0242	30.6 49.7	22 .2690		100.0 100.0	11 0.4519
Trichoptera	1.2±1.1690 0.0101±0.0116	15.3 28.8	27 .1933	1.0±0.0000 0.0003±0.0005	4.7 4.7	11 .0032	0.5±7071 0.0004±0.0006	8.3 0.8	6 .0043			
Odonata												
Coleoptera	0.3±0.8165 0.0004±0.0011	2.3 1.1	4 .0077				3.0±4.2426 0.0248±0.0350	45.8 49.3	33 .2668			
Plecoptera	0.3±0.8165 0.0002±0.0005	2.3 0.6	4 .0032	0.3±0.5774 0.0003±0.0005	1.7 4.7	4 .0032						
Total			177 .6718			234 .0687			72 .5412			11 0.4519

Amendment 2
(New)

ER Table 2.7.2-15f
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Benthic Taxa at Stations
On The Broad River System
Sampling Period 6: 25 Feb - 1 Mar '74

CHEROKEE

TAXA	3-S STATION 05			3-S STATION 06			1-P6'' STATION 07			2-P6'' STATION 08		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca												
Platyhelminthes												
Oligochaeta				2.6±2.8868 0.0016±0.0022	56.9 66.7	29 .0172						
Crustacea												
Diptera	38.6±30.7463 0.0016±0.0012	74.5 2.2	749 .0172	1.3±1.5275 0.0008±0.0009	43.1 33.3	22 .0086		100.0 100.0	172 0.0043	8.5±0.7071 0.0001±0.0000	100.0 100.0	366 .0019
Chironomidae	36±38.7857 0.0013±0.0014	68.9 1.8	692 .0140	1.3±1.5275 0.0008±0.0009	43.1 33.3	22 .0086		100.0 100.0	172 0.0043	8.5±0.7071 0.0001±0.0000	100.0 100.0	366 .0019
Chaoborus punctipennis	2.0±1.7321 0.0003±0.0003	5.7 0.4	57 .0032									
Ephemeroptera	19.0±20.0749 0.00058±0.0037	19.7 8.1	198 .0624									
Trichoptera	4.6±5.0332 0.0273±0.0330	5.0 38.0	50 .2937									
Coleoptera												
Plecoptera	0.6±0.5774 0.0371±0.0523	0.8 51.7	8 .3992									
Megaloptera												
Total			1005 .7725			51 .0258			172 .0043			366 .0019

Amendment 2
(New)

ER Table 2.7.2-15f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb - 1 Mar '74

CHEROKEE

TAXA	2-E9'' STATION 09			2-E9'' STATION 10			2-P6'' STATION 11			2-E9'' STATION 12		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
MOLLUSCA												
PLATYHELMINTHES												
OLIGOCHAETA	2.5 ± 0.7071	1.7	48									
	0.0018 ± 0.0016	2.1	.0345									
CRUSTACEA												
DIPTERA	147.5 ± 7.7782	98.3	2824	172.5 ± 105.3589	99.7	3301	3.0 ± 1.4142	100.0	129	200.5 ± 67.1751	100.0	2546
	0.0852 ± 0.0201	97.9	1.6307	0.0727 ± 0.0536	98.2	1.3915	0.0005 ± 0.0006	100.0	.0215	0.1102 ± 0.0894	100.0	2.1092
CHIRONOMIDAE	50.5 ± 2.1213	33.7	967	31.0 ± 14.1421	17.9	593	3.0 ± 1.4142	100.0	129	75.0 ± 45.2548	5.7	144
CHAOBORUS	97 ± 5.6569	64.7	1857	141.5 ± 91.2168	81.8	2708				125.5 ± 21.9203	94.3	2402
PUNCTIPENNIS	0.0321 ± 0.0291	36.9	.6144	0.0371 ± 0.0324	50.1	0.7101				0.0556 ± 0.0220	50.5	1.0642
EPHEMEROPTERA												
TRICHOPTERA				0.5 ± 0.7071	0.3	10						
				0.0013 ± 0.0018	1.8	.0249						
COLEOPTERA												
PLECOPTERA												
MEGALOPTERA												
TOTAL			2872			3311			129			2546
			1.6652			1.4164			.0215			2.1092

Amendment 2
(New)

ER Table 2.7.2-15f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb - 1 Mar '74

CHEROKEE

TAXA	STATION 2-E9'' 13			STATION 6-E9'' 14			STATION 3-S 16			STATION 3-S 21		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca										3.3±3.5119	19.1	36
										0.3981±0.3864	77.8	4.2836
				0.2±0.4082	0.3	3						
				0.0010±0.0025	1.1	.0191						
Platyhelminthes												
Oligochaeta	1.0±0.0000	0.8	19	15.8333±8.4479	39.8	367				0.6±1.1547	3.7	7
	0.0012±0.0013	2.8	.0230	0.0337±0.0270	37.9	.6450				0.0015±0.0027	0.3	.0161
Crustacea										0.3±0.5774	2.1	4
										0.0472±0.0818	9.2	.5079
Diptera	124.5±2.1213	99.2	2382	28.5±12.6768	59.2	545	2.6±2.8868	12.9	29	1.0±1.000	5.9	11
	0.0411±0.0115	97.2	.7867	0.0359±0.0247	40.3	.6871	0.0005±0.0007	1.1	.0054	0.0017±0.0017	0.3	0.0183
Chironomidae	108±10.6066	86.5	2076	25.8±11.0167	53.6	494	2.0±1.7321	9.8	22	0.6±0.5774	3.7	7
	0.0348±0.0142	82.3	.6661	0.0291±0.0276	32.7	.5570	0.0004±0.0003	0.9	.0043	0.0016±0.0017	0.3	0.0172
Chaoborus punctipennis	16.0±8.4853	12.7	306	1.6±3.1411	3.5	32	0.6±1.1547	3.1	7			
	0.0064±0.0028	15.1	.1225	0.0003±0.0007	0.3	.0057	0.0003±0.0005	0.6	0.0032			
Ephemeroptera				0.3±0.5164	0.7	6	16.0±18.0278	77.2	173	3.3±1.1547	19.1	36
				0.0184±0.6323	20.7	.3522	0.0392±0.0273	88.9	.4218	0.0252±0.0103	4.9	.2712
Trichoptera							2.0±1.0000	9.8	22	0.3±0.5774	2.1	4
							0.0044±0.0014	10.0	.0473	0.0002±0.0003	0.04	.0022
Coleoptera										7.0±10.4403	40.4	76
										0.0114±0.0163	2.2	.1227
Plecoptera										1.3±2.3094	7.4	14
										0.263±0.0456	5.1	0.2830
Megaloptera												
Total			2401			921			224			188
			.8097			1.7034			.4745			5.5050

Amendment 2
(new)

ER Table 2.7.2-15f
Cherokee Nuclear Station
Sampling Period 6: 25 Feb - 1 Mar '74

CHEROKEE

TAXA	STATION 3-S 23			STATION			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
MOLLUSCA												
PLATYHELINTHES												
OLIGOCHAETA	0.6 ± 0.5774 0.0238 ± 0.0405	9.2 32.4	7 .2561									
CRUSTACEA												
DIPTERA	0.6 ± 0.5774 0.0360 ± 0.0620	10.0 49.0	8 .3874									
CHIRONOMIDAE												
CHAOBOURS PUNCTIPENNIS	0.3 ± 0.5774 0.0001 ± 0.0002	5.3 0.1	4 .0011									
EPHEMEROPTERA	1.3 ± 1.5275 0.0071 ± 0.0113	18.4 9.7	14 .0764									
TRICHOPTERA	20 ± 1.7321 0.0027 ± 0.0026	27.6 3.7	21 .0291									
COLEOPTERA												
PLECOPTERA	2.0 ± 0.0000 0.0005 ± 0.0003	28.9 0.7	22 .0054									
MEGALOPTERA	0.3 ± 0.5774 0.0033 ± 0.0058	5.3 4.5	4 .0355									
TOTAL			76 .7899									

Amendment 2
(New)

ER Table 2.7.2-15g
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Benthic Taxa at Stations
On The Broad River System
Sampling Period 7: 25-30 Mar'74

CHEROKEE

TAXA	STATION 07			STATION 08			STATION 09			STATION 10		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
MOLLUSCA							5.0 ± 4.2426	10.8	57	2.0 ± 1.4142	2.3	38
OLIGOCHAETA							0.00008 ± 0.0011	4.2	.0153	0.0008 ± 0.0006	1.7	.0153
CRUSTACEA							24.5 ± 4.9497	89.2	469	84.0 ± 5.6569	97.7	1608
DIPTERA					100.0	19	0.0183 ± 0.0021	95.8	.3503	0.0460 ± 0.0008	98.3	.8804
CHIRONOMIDAE					100.0	0.4689	14.5 ± 3.5355	54.6	287	18.5 ± 3.5355	21.5	.3445
							0.0108 ± 0.0065	56.5	.2067	0.0180 ± 0.0016	38.5	.3445
CHAOBOURS PUNCTIPENNIS												
EPHEMEROPTERA												
TRICHOPTERA												
ODONATA												
COLEOPTERA												
PLECOPTERA										Amendment 2 (New)		
TOTAL			0			19 0.4689			526 0.3656			1646 0.8957

ER Table 2.7.2-15g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar '74

CHEROKEE

TAXA	STATION 2-E9 11			STATION 2-E9 12			STATION 2-E9 13			STATION 6-E9 14		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
MOLLUSCA												
OLIGOCHAETA							1.0 ± 0.0000	6.9	19	5.1 ± 4.7081	19.3	99
							0.0008 ± 0.0002	8.8	.0153	0.0084 ± 0.0083	11.8	.1608
CRUSTACEA												
DIPTERA	3.5 ± 4.9497	100.0	67	149.0 ± 31.1127	100.0	2852	13.5 ± 9.1924	93.1	258	21.5 ± 12.6293	79.6	409
	0.0010 ± 0.0013	100.0	.0191	0.1187 ± 0.0199	100.0	2.2719	0.0083 ± 0.0029	91.2	.1589	0.0450 ± 0.0446	63.4	.8613
CHIRONOMIDAE	3.5 ± 4.9497	100.0	67	41.5 ± 26.1630	289	823	10.5 ± 4.9497	72.6	201	17.3 ± 0.0446	64.6	332
	0.0010 ± 0.0013	100.0	.09191	0.0484 ± 0.0268	40.9	.9264	0.0062 ± 0.0000	68.1	.1187	0.0328 ± 0.0442	46.2	0.6278
CHAOBORUS				106 ± 5.6569	71.1	2029	3.0 ± 4.2426	20.6	57	4.4 ± 5.7912	15.0	77
PUNCTIPENNIS				0.0664 ± 0.0003	59.1	1.2709	0.0021 ± 0.0029	23.1	.0402	0.0020 ± 0.0036	2.8	.0383
EPHEMEROPTERA												
TRICHOPTERA												
ODONATA										0.3 ± 0.5164	1.2	6
										0.0176 ± 0.0419	24.8	.3369
COLEOPTERA												
PLECOPTERA												
										Amendment 2 (New)		
TOTAL			67			2852			277			514
			0.0191			2.2719			0.1742			1.3590

ER Table 2.7.2-15g
Cherokee Nuclear Station
Sampling Period 7: 25-30 Mar '74

CHEROKEE

TAXA	STATION 1-E9 15			STATION 3-S 21			STATION 3-S 23			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
MOLLUSCA				0.3 ± 0.5774 0.2630 ± 0.4555	3.3 62.2	18 2.8299						
OLIGOCHAETA		91.0 88.9	383 0.3483	9.0 ± 13.8924 0.062 ± 0.1066	11.3 14.7	61 .6671	1.6 ± 2.0817 0.1555 ± 0.2107	8.8 22.1	61 1.6732			
CRUSTACEA				1.3 ± 1.1547 0.0810 ± 0.1402	1.3 19.2	7 .8716						
DIPTERA				39.3 ± 68.1273 0.0038 ± 0.0006	78.0 0.9	423 .0409	7.6 ± 6.6583 0.1767 ± 0.0908	35.5 25.1	245 1.9013			
CHIRONOMIDAE		9.0 11.1	38 0.0440	39.3 ± 68.1273 0.0038 ± 68.1273	78.0 0.9	423 .0409	6.3 ± 6.8069 0.0008 ± 0.0008	31.7 0.1	219 .0086			
CHOABORUS PUNCTIPENNIS												
EPHEMEROPTERA				0.3 ± 0.5774 0.0061 ± 0.0106	1.5 1.4	8 .0656	76 ± 6.0217 0.22720 ± 0.2379	15.2 38.6	105 2.9267			
TRICHOPTERA												
ODONATA										Amendment 2 (New)		
COLEOPTERA				2.0 ± 1.000 0.0069 ± 0.0066	3.9 1.6	21 .0742	0.6 ± 1.1547 0.0062 ± 0.0017	1.0 0.9	7 .0667			
PLECOPTERA				0.3 ± 0.5774 0.0001 ± 0.0001	0.7 0.02	4 .0011	14.3 ± 6.0277 0.0812 ± 0.0692	34.9 11.5	241 .8737			
TOTAL			421 0.3923			542 4.5504			691 7.5879			

ER Table 2.7.2-15h
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Benthic Taxa at Stations
On The Broad River System
Sampling Period 8: 22-27 Apr '74

CHEROKEE

TAXA	1-S STATION 03			2-S STATION 05			3-S STATION 06			2-P9'' STATION 07		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca				2.5±0.7071	3.8	21	21.3±24.3790	11.4	229	1.5±21213	50.0	29
Oligochaeta				0.0005±0.0001	0.7	0.0054	0.0317±0.0524	48.2	0.3411	0.0001±0.0001	33.4	0.0019
Crustacea												
Diptera		88.6	753	27.0±32.5269	40.9	290	163.0±61.6117	87.0	1751	1.5±0.7071	50.0	29
		6.5	0.0280	0.0026±0.0018	3.6	0.0280	0.0295±0.0196	44.8	0.3174	0.0002±0.0001	66.6	0.0038
Chironomidae		87.3	742	24.0±32.5269	36.4	285	163.0±61.6117	87.0	1751	1.0±0.0000	32.8	19
		4.5	0.0215	0.0019±0.0024	2.6	0.0204	0.0295±0.0190	44.8	0.3174	0.0001±0.0000	33.3	0.0019
Chaoborus punctipennis										0.5±0.7071	17.2	10
										0.0001±0.0001	33.3	0.0019
Ephemeroptera		10.1	8.6	12.0±4.2426	18.2	129	3.0±2.6458	1.6	32			
		91.5	0.3960	0.0696±0.0463	95.5	0.7489	0.0046±0.0040	6.7	0.0495			
Trichoptera		1.3	11	0.5±0.7071	0.7	5						
		2.0	0.0086	0.0002±0.0003	0.3	0.0022						
Coleoptera												
Plecoptera												
Megaloptera												
Total			850			709			2012			58
			0.4362			0.7845			0.7080			0.0057

Amendment 2
(New)

ER Table 2.7.2-15h
Cherokee Nuclear Station
Sampling Period 8: 22-27 Apr '74

CHEROKEE

TAXA	STATION 08 (2-P9)			STATION 09 (2-E9)			STATION 10 (2-E9)			STATION 11 (2-P9)		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
MOLLUSCA												
OLIGOCHAETA				5.0 ± 0.0000 0.0014 ± 0.0000	5.6 5.2	96 0.0268	2.0 ± 0.0000 0.0004 ± 0.0000	1.4 0.6	38 0.0077			
CRUSTACEA												
DIPTERA	5.0 ± 7.0711 0.0003 ± 0.0004	100.0 100.0	96 0.0057	85.0 ± 8.4853 0.256 ± 0.0049	94.4 94.8	1627 0.4900	138.5 ± 4.9497 0.0661 ± 0.900	98.6 99.4	2650 1.2652	11.0 ± 6569 0.0052 ± 0.0034	95.5 57.8	211 0.0995
CHIRONOMIDAE	5.0 ± 7.0711 0.0003 ± 0.0004	100.0 100.0	96 0.0057	73.0 ± 1.4142 0.0191 ± 0.0009	81.1 70.7	1397 0.3656	46.0 ± 4.2426 0.0214 ± 0.0129	32.7 32.2	880 0.4096	11.0 ± 5.6569 0.0052 ± 0.0034	95.5 57.8	211 0.0995
CHAOBORUS PUNCTIPENNIS				120 ± 9.8995 0.0065 ± 0.00040	13.3 24.1	230 0.1244	92.5 ± 9.9124 0.0447 ± 0.0170	65.8 67.2	1770 0.8556			
EPHEMEROPTERA										0.5 ± 0.7071 0.0038 ± 0.0054	4.5 42.3	10 0.0727
TRICHOPTERA												
COLEOPTERA												
PLECOPTERA												
MEGALOPTERA												
TOTAL			96 0.0057			1723 0.5168			2688 1.2729			221 0.1722

Amendment 2
(New)

ER Table 2.7.2-15h
Cherokee Nuclear Station
Sampling Period 8: 22-27 Apr '74

CHEROKEE

TAXA	STATION 2-P9 12			STATION 2-E9 13			STATION 6-E9 14			STATION 3-S 16		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
MOLLUSCA												
OLIGOCHAETA	3.0 ± 4.2426 0.0002 ± 0.0002	1.6 0.3	57 0.0038	25.5 ± 24.7487 0.0236 ± 0.0298	27.1 56.6	488 0.4517	17.2 ± 8.2805 0.0504 ± 0.0301	81.2 97.9	329 0.9647			
CRUSTACEA												
DIPTERA	183.0 ± 83.4386 0.0712 ± 0.0016	98.4 99.7	3503 1.3628	68.5 ± 43.1335 0.0181 ± 0.0040	72.9 43.4	1311 0.3464	4.0 ± 3.8471 0.011 ± 0.0012	18.8 2.1	76 0.211	28.6 ± 41.8609 0.015 ± 0.0020	97.5 65.2	.308 0.0161
CHIRONOMIDAE	74.5 ± 43.1335 0.0204 ± 0.0053	40.1 28.6	1426 0.3905	62.5 ± 38.8909 0.0163 ± 0.0035	66.5 39.1	1196 0.3120	3.8 ± 3.7693 0.0011 ± 0.0012	18.0 2.1	73 0.0211	27.6 ± 40.9919 0.0013 ± 0.0018	94.0 56.7	297 0.0140
CHAOBORUS PUNCTIPENNIS	108.5 ± 40.3051 0.0509 ± 0.0069	58.3 71.1	2077 0.9742	5.0+ 4.2426 0.0016 ± 0.0006	5.3 3.8	96 0.0306						
EPHEMEROPTERA										0.3 ± 0.5774 0.0004 ± 0.0006	1.3 17.4	4 0.0043
TRICHOPTERA												
COLEOPTERA												
PLECOPTERA										0.3 ± 0.5774 0.0004 ± 0.0008	1.3 17.4	4 0.0045
MEGALOPTERA												
										Amendment 2 (New)		
TOTAL			3560 1.366			1799 0.7981			405 0.9858			316 0.0247

ER Table 2.7.2-15h
Cherokee Nuclear Station
Sampling Period 8: 22-27 Apr '74

CHEROKEE

TAXA	STATION 3-S 21			STATION 3-S 23			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca	12.3±9.2916 1.3518±1.1227	31.4 84.7	132 14.5454	2.3±2.3094 0.5673±0.5332	8.3 98.2	25 6.1041						
Oligochaeta	2.6±4.6188 0.0079±0.0135	6.9 0.5	29 0.0850									
Crustacea	0.3±0.5774 0.0402±0.0696	1.0 2.5	4 0.4326									
Diptera	5.6±3.5119 0.1184±0.2045	14.7	62 1.2740	22.6±10.9697 0.0034±0.0035	79.2 0.6	240 0.0366						
Chironomidae	5.0±3.0000 0.0006±0.0005	12.8 7.4	54 0.0065	22.0±11.3578 0.0032±0.0036	77.9 0.6	236 0.0344						
Chaoborus punctipennis												
Ephemeroptera	1.3±0.5774 0.0016±0.0016	3.3 0.1	14 0.0172	0.6±0.5774 0.0009±0.0013	2.6 00.2	8 0.0097						
Trichoptera	3.0±5.1962 0.0084±0.0145	7.8 0.5	33 0.0904	2.0±2.0000 0.0050±0.0046	7.3 0.9	22 0.0538						
Coleoptera	12.6±5.7735 0.0284±0.0147	32.3 1.8	136 0.3056	0.3±0.5774 0.0008±0.0014	1.3 0.1	4 0.0086						
Plecoptera	0.6±1.1547 0.0361±0.0625	1.7 2.3	7 0.3884	0.3±0.5774 0.0001±0.0002	1.3 0.02	4 0.0011						
Megaloptera	0.3±0.5774 0.0036±0.0062	1.0 0.2	4 0.0387									
Total			421 17.1773			303 6.2139						

Amendment 2
(New)

ER Table 2.7.2-15i
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Benthic Taxa at Stations
On The Broad River System
Sampling Period 9: 20-25 May '74

CHEROKEE

TAXA	2P9'' STATION 08			2E9'' STATION 09			1E9'' STATION 10			1P9'' STATION 11		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca												
Platyhelminthes												
Oligochaeta							NO REPLICATES TAKEN			NO REPLICATES TAKEN		
Diptera	7.5 ± 10.6066	100.0	144	10.0 ± 0.0000	100.0	191		100.0	77		100.0	10
	0.0005 ± 0.0007	100.0	0.0096	0.0056 ± 0.0015	100.0	0.1072		100.0	0.0574		100.0	0.0077
Chironomids	7.5 ± 10.6066	100.0	144	5.5 ± 3.5355	54.97	105					100.0	10
	0.0005 ± 0.0007	100.0	0.0096	0.0019 ± 0.0013	33.96	0.0364					100.0	0.0077
Chaoborus punctipennis				4.5 ± 3.5355	45.03	86		100.0	77			
				0.0037 ± 0.0028	66.04	0.0708		100.0	0.0574			
Ephemeroptera												
Trichoptera												
Odonata												
Coleoptera												
Plecoptera												
Megaloptera												
Total			144			191			77			10
			0.0096			0.1072			0.0574			0.0077

Amendment 2
(New)

ER Table 2.7.2-15i
Cherokee Nuclear Station
Sampling Period 9: 20-25 May '74

CHEROKEE

TAXA	2E9'' STATION 12			2E9'' STATION 13			6E9'' STATION 14			3P9'' STATION 15		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca												
Platyhelminthes												
Oligochaeta	0.5 ± 0.7071	8.7	10	13.5 ± 16.2635	50.0	258	18.1 ± 12.7030	76.8	348	NO REPLICATES TAKEN		
	0.0003 ± 0.0004	11.9	0.0057	0.0201 ± 0.0263	70.2	0.3847	0.0396 ± 0.0285	47.8	0.7579			
Diptera	5.5 ± 2.1213	91.3	105	13.5 ± 16.2635	50.0	258	4.5 ± 2.4290	18.9	86			
	0.0022 ± 0.0001	88.0	0.0421	0.0085 ± 0.0103	29.7	0.1627	0.0030 ± 0.0027	3.6	0.0574			
Chironomids	2.0 ± 1.4142	33.0	38	9.0 ± 9.8995	33.3	172	3.8 ± 2.6394	16.1	73			
	0.0005 ± 0.0005	20.0	0.0096	0.0038 ± 0.0037	13.2	0.0727	0.0028 ± 0.0028	3.4	0.0536			
Chaoborus punctipennis	3.5 ± 0.7071	58.2	67	4.5 ± 6.3640	16.6	86	0.6 ± 1.2111	2.9	13			
	0.0017 ± 0.0014	67.9	0.0325	0.0047 ± 0.0066	16.4	0.0900	0.0002 ± 0.0004	0.22	0.0038			
Ephemeroptera												
Trichoptera												
Odonata												
Coleoptera												
Plecoptera												
Megaloptera												
Total			115			516			453			
			0.0478			0.5474			1.5828			

Amendment 2
(New)

ER Table 2.7.2-15i
Cherokee Nuclear Station
Sampling Period 9: 20-25 May '74

CHEROKEE

TAXA	3S STATION 21			3S STATION 23			3P9'' STATION 15L			3P9'' STATION 24L		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca	3.667 ± 5.5076 0.480 ± .6553	4.2 54.76	39 5.1648									
Platyhelminthes	0.6667 ± 1.1547 0.0003 ± 0.0005	2.7 0.03	25 0.0032									
Oligochaeta	2.0 ± 1.7321 0.0034 ± 0.0030	2.4 0.39	22 0.0366				0.6667 ± 1.1547 0.0003 ± 0.0005	68.4 75.0	13 0.0057	1.67 ± 1.15 0.0051 ± 0.0054	15.2 79.67	32 0.0976
Diptera	13.333±19.6554 0.2753±0.4765	15.4 31.41	144 2.9622	4.333±4.1633 0.0004 ± 0.0006	26.0 1.1	47 0.0043	0.333 ± 0.5774 0.0001 ± 0.0001	31.6 25.0	6 0.0019	9.33 ± 9.71 0.0013 ± 0.0008	84.8 20.33	179 0.0249
Chironomids	12.0 ± 17.3494 0.0006 ± 0.0006	13.8 0.07	129 0.0065	4.333 ± 4.1633 0.0004 ± 0.0006	26.0 1.1	47 0.0043	0.333 ± 0.5774 0.0001 ± 0.0001	31.6 25.0	6 0.0019	9.33 ± 9.71 0.0013 ± 0.0008	84.8 20.33	179 0.0249
Chaoborus punctipennis												
Ephemeroptera	3.6667 ± 4.7258 0.0042 ± 0.0058	4.3 0.48	40 0.0452	2.333 ± 0.5774 0.0334 ± 0.0564	14.4 88.4	26 0.3594						
Trichoptera	20.6667±34.933 0.0896 ±0.1548	23.9 10.22	224 0.9641	10.0 ± 14.7986 0.0040 ± 0.0037	59.7 10.6	108 0.0430						
Odonata												
Coleoptera	12.33 ± 20.5020 0.0199 ± 0.0284	15.4 2.27	144 0.2141									
Plecoptera	27.333 ± 46.4794 0.0034 ± 0.0058	31.4 0.39	294 0.0366									

Amendment 2
(New)

ER Table 2.7.2-15i
Cherokee Nuclear Station
Sampling Period 9: 20-25 May '74

CHEROKEE

TAXA	3S STATION 21			3S STATION 23			3P9'' STATION 15L			3P9'' STATION 24L		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Megaloptera	0.333 ± 0.5774 0.0004 ± 0.0007	.4 0.05	4 0.0043									
Total			936 9.4311			181 0.4067			19 0.0076			211 0.1225

Amendment 2
(New)

ER Table 2.7.2-15i
Cherokee Nuclear Station
Sampling Period 9: 20-25 May '74

CHEROKEE

TAXA	3P9'' STATION 24R			STATION			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca												
Platyhelminthes												
Oligochaeta	3.6667 ± 3.7859 0.0045 ± 0.0026	100.0 100.0	70 0.0861									
Diptera Chironomids Chaoborus punctipennis												
Ephemeroptera												
Trichoptera												
Odonata												
Coleoptera												
Plecoptera												
Megaloptera												
Total			70 0.0861									

Amendment 2
(New)

ER Table 2.7.2-15j
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Benthic Taxa at Stations
On The Broad River System
Sampling Period 10: 17-22 Jun '74

CHEROKEE

TAXA	2P STATION 08			2EK STATION 09			2EK STATION 10			2EK STATION 11		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca												
Oligochaeta				2.5 ± .7071	13.2	48	10.0 ± 1.4142	32.2	191			
				.0007 ± .0004	10.61	0.0134	0.0048 ± 0.0014	24.37	0.0919			
Crustacea												
Diptera	4.5 ± 2.1213	100	86	16.5 ± 2.1213	86.8	316	21.0 ± 2.8284	67.8	402	4.5 ± 3.5455	100	86
	0.0002 ± 0.0001	100	0.0029	.0059 ± .0013	89.39	0.1129	0.0149 ± 0.0007	75.63	0.2852	0.0007 ± 0.0006	100	0.0134
Chironomids	4.5 ± 2.1213	100	86	8.0 ± 4.2426	42.0	153				4.5 ± 3.5355	100	86
	0.0002 ± 0.0001	100	0.0029	.0010 ± .0007	15.12	0.0191				0.0007 ± 0.0006	100	0.0134
Chaoborus punctipennis				8.5 ± 2.1213	44.8	163	21.0 ± 2.8284	67.8	402			
				.0049 ± .0006	14.27	0.0938	0.0149 ± 0.0007	75.63	0.2852			
Ephemeroptera												
Trichoptera												
Odonata												
Plecoptera												
Total			86			364			593			86
			0.0029			.1263			.3771			0.0134

Amendment 2
(New)

ER Table 2.7.2-15j
Cherokee Nuclear Station
Sampling Period 10: 17-22 Jun '74

CHEROKEE

TAXA	2EK STATION 12			2EK STATION 13			6EK STATION 14			3Sr STATION 21		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca										1.667 ± 0.5774 0.05897±0.0039	24.7 86.178	18 0.6354
Oligochaeta	0.5 ± 0.7071 0.0010 ± 0.0013	50.0 93.2	10 0.0191	14.0 ± 5.65 0.00565±0.00403	39.4 14.23	268 0.10814	3.83 ± 3.71 0.0129 ± 0.00835	8.8 18.888	102 0.24691			
Crustacea												
Diptera	0.5 ± 0.7071 0.0001±0.0001	50.0 6.8	10 0.0014	21.5 ± 2.12 0.03405±0.00361	60.6 85.77	412 0.65172	54.5 ± 27.25 0.0533±0.02547	90.4 78.042	1043 1.02016	1.667 ± 0.5774 0.00133±0.0172	30.1 1.941	22 0.01431
Chironomids	0.5 ± 0.7071 0.0001 ± 0.0001	50.0 6.8	10 0.0014	21.0 ± 1.41 0.03390±0.00382	59.1 85.39	402 0.64885	54.5 ± 27.25 0.0533±0.02547	90.4 78.042	1043 1.02016	1.667 ± 0.5774 0.00133±0.00172	30.1 1.941	22 0.01431
Chaobrous punctipennis				0.5 ± 0.707 0.00015±0.00021	1.5 0.38	10 0.00287						
Ephemeroptera							0.1667 ± 0.408 0.00113±0.00278	0.3 1.655	3 0.02163	0.333 ± 0.5774 0.00023±0.0004	5.5 0.335	4 0.00247
Trichoptera										1.667 ± 2.0817 0.00737±0.0125	24.7 10.755	18 0.07930
Odonata							0.333 ± 0.5164 0.00097±0.00153	0.5 1.415	6 0.01850			
Plecoptera										1.0 ± 0.00 0.00057±0.00046	15.1 0.831	11 0.00613
Total			20 0.0205			680 0.75986			1154 1.3072	Amendment 2 (New)		73 0.73731

ER Table 2.7.2-15j
Cherokee Nuclear Station
Sampling Period 10: 17-22 Jun '74

CHEROKEE

TAXA	3Sr STATION 23			3P STATION 15L			3P STATION 21L			3P STATION 24R		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca	0.667 ± 0.5774 0.0924 ± 0.1064	7.7 75.945	7 0.9942									
Oligochaeta	0.667 ± 1.1547 0.00017 ± 0.00029	7.7 0.140	7 0.00183							4.0 ± 60828 0.00193±0.00276	34.4 23.169	77 0.03694
Crustacea	0.3333 ± 0.5774 0.0286 ± 0.04959	4.4 23.508	4 0.30774									
Diptera	2.0 ± 2.0 0.00017±0.00015	24.2 0.140	22 0.00183	4.333±2.5166 0.00107±0.00078	100.0 100.0	83 0.02048	2.0 ± 2.0 0.0005±0.00044	100.0 100.0	38 0.00957	7.6667±2.5166 0.0064±0.00269	65.6 76.833	147 0.12250
Chironomids	2.0 ± 2.0 0.00017 ± 0.00015	24.2 0.140	22 0.00183	4.333 ± 2.5166 0.00107±0.00078	100.0 100.0	83 0.02048	2.0 ± 2.0 0.0005±0.00044	100.0 100.0	38 0.00957	7.6667 ± 2.5166 0.0064±0.00269	65.6 76.833	147 0.12250
Chaoborus punctipennis												
Ephemeroptera												
Trichoptera	4.333 ± 7.506 0.00423 ± 0.00733	51.6 0.238	47 0.00312									
Odonata												
Plecoptera	0.333 ± 0.5774 0.00053 ± 0.00092	4.4 0.030	4 0.00039									
Total			91 1.30911			83 0.02048			38 0.00957	Amendment 2 (New)		224 0.15944

ER Table 2.7.2-15k
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Benthic Taxa at Stations
On The Broad River System
Sampling Period 11: 15-20 Jul 74 (page 1 of 3)

CHEROKEE

TAXA	2-P9'' STATION 08			2-E9'' STATION 09			2-E9'' STATION 10			2-P9'' STATION 11		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca												
Oligochaeta	0.5 ± 0.7	12.8	10	0.5 ± 0.7	1.2	10	0.5 ± 0.7	1.7	10	0.5 ± 0.7	10.4	10
	0.00035±0.00049	50.0	0.00035	0.0001±0.00014	0.8	0.0001		< 0.01	T			T
Diptera	3.0 ± 4.2	74.4	58	42.0 ± 5.7	98.8	803	29.5 ± 9.2	98.3	575	4.5 ± 2.1	89.6	86
	0.00035±0.00049	50.0	0.00035	0.012±0.00028	99.1	0.012	0.0129±0.0136	100	0.0129			T
Chironomidae	2.5 ± 3.5	61.5	48	13.5 ± 3.5	31.7	258	0.5 ± 0.7	1.7	10	4.5 ± 2.1	89.6	86
	0.00035±0.00049	50.0	0.00035	0.0025±0.0015	20.7	0.0025		< 0.01	T			T
Chaoborus	0.5 ± 0.7	12.8	10	28.5 ± 2.1	67.1	545	29.5±9.2	96.6	565			
puntipennis		< 0.01	T	0.0094±0.0043	77.7	0.0094	0.0129±0.0136	100	0.0129			
Ephemeroptera												
Odonata												
Coleoptera	0.5 ± 0.7	12.8	10									
		<0.01	T									
Nematoda												
Decapoda												
			78			813			585			96
			0.0007			0.0121			0.0129			T

Amendment 2
(New)

ER Table 2.7.2-15k
Cherokee Nuclear Station
Sampling Period II: 15-20 Jul 74

CHEROKEE

TAXA	2-E9'' STATION 12			2-E9'' STATION 13			6-E9'' STATION 14			3-S STATION 21		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca												
Oligochaeta				7.5 ± 2.1	24.7	144	7.5±3.1	21.3	144	0.67 ± 1.15	24.2	8
				0.0272 ± 0.036	53.5	0.0272	0.0097±0.0078	23.1	0.0097	0.0046±0.008	100	0.0046
Diptera	19.5 ± 2.1	100	474	23.0 ± 4.2	75.3	440	27.3 ± 12.9	77.5	523	2.0 ± 1.7	66.7	22
	0.0142±0.0035	100	0.0142	0.0236±0.019	46.5	0.0236	0.0296±0.0176	70.5	0.0296		<0.01	T
Chironomidae	1.5 ± 0.7	6.1	29	22.0 ± 2.8	72.1	421	27.3 ± 12.9	77.5	523		66.7	22
	0.0003±0.0004	2.1	0.0003	0.0236±0.019	46.5	0.0236	0.0296±0.0176	70.5	0.0296		<0.01	T
Chaoborus punctipennis	18.0 ± 2.8	93.9	345	1.0 ± 1.4	3.2	19						
	0.0139 ± 0.004	97.9	0.0139		<0.01	T						
Ephemeroptera										0.5 ± 0.7	9.1	3
											<0.01	T
Odonata							0.167 ± 0.4	0.6	4			
							0.0027±0.006	6.4	0.0027			
Coleoptera												
Nematoda							0.167 ± 0.4	0.6	4			
								<0.01	T			
Decapoda												
			474			584			675	Amendment 2 (New)		33
			0.0142			0.0508			0.042			0.0046

ER Table 2.7.2-15k
Cherokee Nuclear Station
Sampling Period 11: 15-20 Jul 74 (Page 3 of 3)

CHEROKEE

TAXA	STATION 3-S 23			STATION 3-P9'' 24L			STATION 3-P9'' 24R			STATION 3-P9'' 25L		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca	0.3 ± 0.6 0.055 ± 0.096	13.6 63.7	3 0.055									
Oligochaeta	0.3 ± 0.6 0.026 ± 0.044	13.6 30.1	3 0.026							1.3 ± 1.5 0.0002±0.0003	28.4 23.5	25 0.0002
Diptera	0.7 ± 0.6	36.4 <0.01	8 T	16.0 ± 7.0 0.00067±0.0006	100 100	306 0.00067	1.67 ± 17.15 0.00056 ±0.0002	100 100	33 0.000567	3.3 ± 2.5 0.00063±0.0003	71.6 76.5	63 0.00063
Chironomidae	0.7 ± 0.6	<0.01	8 T	16.0 ± 7.0 0.00067±0.0006	100 100	306 0.00067	1.67±1.15	100 100	33 0.000567	3.3 ± 2.5 0.00063±0.0003	71.6 76.5	63 0.00063
Ephemeroptera												
Odonata												
Coleoptera												
Nematoda												
Decapoda	0.7 ± 0.6 0.0054 ± 0.009	36.4 6.3	8 0.0054									
			22 0.0864			306 0.00067			33 0.000567			88 0.00083

Amendment 2
(New)

ER Table 2.7.2-15 1
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Benthic Taxa at Stations
On The Broad River System
Sampling Period 12: 12-17 Aug '74 (Page 1 of 3)

CHEROKEE

TAXA	2-P9" STATION 08			2-E9" STATION 09			2-E9" STATION 10			2-P9" STATION 11		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Oligochaeta	0.5±0.7	3.9 <.01	10 T	0.5±0.7	2.6 <.01	10 T	1.5±2.1	<01	29 T			
Diptera	13.0±14.1 0.0007±0.0	96.1 100	249 0.0007	19.5±3.5 0.013±0.0068	97.4 100	373 0.013	40.5±14.8 0.033±0.012	100	775 0.033	22.0±12.7 0.0001±0.0001	100 100	421 0.0001
Chironomidae	13.0±14.1 0.0007±0.0	96.1 100	249 0.0007	6.0±0.0 0.0034±0.0023	30.0 26.9	115 0.0034	3.0±4.2	<.01	57 T	22.0±12.7 0.0001±0.0001	100 100	421 0.0001
Chaoborus punctipennis				13.5±3.5 0.0095±0.0045	67.4 73.1	258 0.0095	37.5±10.6 0.033±0.012	100	718 0.033			
Ephemeroptera												
Trichoptera												
Odonata												
Coleoptera												
Plectoptera												
Hemiptera												
Mollusca												
Decapoda												
Pectinatella spp					<.01 <.01	+ T		<.01 <.01	+ T			
Total			259 0.0007			383 0.013			804 0.033			421 0.0001

Amendment 2
(New)

ER Table 2.7.2-15 1
Cherokee Nuclear Station
Sampling Period 12: 12-17 Aug 74

CHEROKEE

TAXA	2-P9" STATION 12			2-E9" STATION 13			6-E9" STATION 14			3-P9" STATION 15L		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Oligochaeta	0.5±0.7	8.0	10	0.5±0.7	3.1	10	23.3±16.5	70.1	446			
	0.00045±0.0006	8.9	0.00045	0.0002±0.0003	5.1	0.0002	0.046±0.036	68.6	0.046			
Diptera	6.0±7.0	92.0	115	16.5±6.4	96.9	317	7.2±4.2	21.7	138	2.67±3.78	100	50
	0.0046±0.0064	91.1	0.0046	0.0037±0.0011	94.9	0.0037	0.0066±0.0045	9.8	0.0066	0.00047±0.0005	100	0.00047
Chironomidae	0.5±0.7	8.0	10	14.5±4.9	85.0	278	7.2±4.2	21.7	138	2.33±3.21	88.0	44
		< .01	T	0.0032±0.0004	82.1	0.0032	0.0066±0.0045	9.8	0.0066	0.00047±0.0005	100	0.00047
Chaoborus	5.5±7.7	84.0	105	1.5±0.7	1.9	29						
	0.0046±0.0064	91.1	0.0046	0.0005±0.0007	12.8	0.0005						
Ephemeroptera							1.3±1.5	5.2	33			
							0.0015±0.002	2.2	0.0015			
Trichoptera												
Odonata							1.0±1.1	3.0	19			
							0.013±0.026	19.4	0.013			
Coleoptera												
Plectoptera												
Hemiptera												
Mollusca												
Decapoda												
Pectinatella					< 01	+						
					< 01	T						
Total			125			327			636			50
			0.00505			0.0039			0.0671			0.00047

Amendment 2
(New)

ER Table 2.7.2-15 1
Cherokee Nuclear Station
Sampling Period 12: 12-17 Aug 74

CHEROKEE

TAXA	3-S STATION 21			3-S STATION 23			2-P9'' STATION 24L			2-P9'' STATION 24R		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Oligochaeta	1.0±1.0 0.00087±0.0011	3.4 0.01	11 0.00087									
Diptera	0.67±1.15 0.023±0.04	2.5 0.9	8 0.023	1.0±1.0 0.0003±0.0003	22.0 0.2	11 0.0003	1.0±0.0	100 100	19 T	0.5±0.7	100 100	10 T
Chironomidae				1.0±1.0 0.0003±0.0003	22.0 0.2	11 0.0003	1.0±0.0	100 100	19 T	0.5±0.7	100 100	10 T
Ephemeroptera	0.33±0.57 0.0012±0.0021	0.9 0.05	3 0.0012	0.33±0.57 0.0028±0.0049	6.0 1.4	3 0.0028						
Trichoptera	0.33±0.57 0.0029±0.005	0.9 0.1	3 0.0029	0.67±1.15 0.0013±0.0023	16.0 0.7	8 0.0013						
Odonata												
Coleoptera	8.67±3.06 0.034±0.012	29.1 1.3	93 0.034	0.67±0.57 0.0017±0.0022	12.0 0.9	6 0.0017						
Plectoptera	3.0±2.64 0.005±0.0045	7.2 0.2	23 0.005	0.67±0.57 0.0019±0.0017	16.0 1.0	8 0.0019						
Hemiptera	0.67±1.15 0.022±0.038	1.9 0.9	6 0.022									
Mollusca	15.33±9.07 1.58±0.93	51.6 61.5	165 1.58	1.0±1.0 0.026±0.025	22.0 13.3	11 0.026						
Decapoda	0.67±1.15 0.90±1.56	2.5 35.0	8 0.90	0.33±0.57 0.162±0.281	6.0 82.7	3 0.162						Amendment 2 (New)
Pectinatella												
Total			320 2.56897			50 0.196						10 T

ER Table 2.7.2-15m
Cherokee Nuclear Station
Relative Abundance and Biomass of Major Benthic Taxa at Stations
On The Broad River System
Sampling Period 13: 9-14 Sept '74 (Page 1 of 4)

CHEROKEE

TAXA	STATION 08			STATION 09			STATION 10			STATION 11		
	2P9 $\bar{X} \pm$ S.D.	%N	D	2E9 $\bar{X} \pm$ S.D.	%N	D	2E9 $\bar{X} \pm$ S.D.	%N	D	2E9 $\bar{X} \pm$ S.D.	%N	D
Mollusca												
Decapoda												
Diptera	40.5 ± 29.0	100	775	25.0±7.07	94.3	478	105.0±63.7	95.4	2010	6.0±0.0	58.5	230
	0.00075±0.00078	100	0.00075	0.012±0.0057	94.9	0.012	0.106±0.031	96.8	0.106	0.00065±0.0002	76.5	0.00065
Chironomidae	39.0±31.1	96.3	746	5.5±2.12	20.7	105				7.5±2.12	36.6	144
	0.0005±0.00042	66.7	0.0005	0.0032±0.0021	25.3	0.0032				0.00035±0.00007	41.2	0.00035
Chaoborus punctipennis				19.5±4.95	73.6	373	105.0±63.7	95.4	2010			
				0.0088±0.0037	69.6	0.0088	0.106±0.031	96.8	0.106			
Ephemeroptera												
Trichoptera												
Odonata												
Coleoptera												
Neuroptera												
Arachnoidea												
Pectinatella spp								<0.01	t			
							0.0006±0.00014	0.5	0.0006			
Paludicella											< 0.01	t
											< 0.01	T
Oligochaeta				1.5 ± 0.7	5.7	29	5.0 ± 7.07	4.6	96	8.5 ± 3.5	41.5	163
				0.00065±0.00035	5.1	0.00065	0.0029±0.004	2.6	0.0029	0.0002±0.00014	23.5	0.0002
Total			775			507			2106			393
			0.00075			0.01265			0.1095			0.00085

Amendment 2 (New)

ER Table 2.7.2-15m
Cherokee Nuclear Station
Sampling Period 13: 9-14 Sept 74 (Page 2 of 4)

CHEROKEE

TAXA	STATION 12			STATION 13			STATION 14			STATION 15		
	2E9 $\bar{X} \pm$ S.D.	%N	D	2E9 $\bar{X} \pm$ S.D.	%N	D	6E9 $\bar{X} \pm$ S.D.	%N	D	3P9 $\bar{X} \pm$ S.D.	%N	D
Mollusca										0.33±0.57 0.00067±0.001	1.3 3.2	6 0.00067
Decapoda												
Diptera	22.0 ± 1.4 0.023 ± 0.0002	95.9 98.7	231 0.023	12.5 ± 7.8 0.0072±0.003	58.2 17.1	239 0.0072	31.7 ± 8.5 0.054±0.023	69.3 52.0	606 0.054	21.7 ± 17.0 0.004±0.003	89.4 19.3	415 0.004
Chironomidae	0.5 ± 0.71 0.00005±0.00007	4.1 0.2	10 0.00005	10.5±7.8 0.006±0.003	48.9 14.2	201 0.006	30.5±8.3 0.053±0.026	66.8 51.0	584 0.053	20.7±16.6 0.004±0.0029	89.4 19.3	396 0.004
Chaoborus	21.5 ± 0.71 0.023±0.0000 7	89.6 98.7	211 0.023	2.0 ± 0.0 0.012 ± 0.0	9.2 28.4	38 0.012	1.0 ± 2.0 0.00083±0.0019	2.2 0.8	19 0.00083			
Ephemeroptera							0.5 ± 0.8 0.0016±0.0026	1.1 1.5	10 0.0016	0.33 ± 0.57 0.014±0.024	1.3 67.6	6 0.014
Trichoptera												
Odonata							0.8 ± 0.9 0.0063±0.0084	1.8 6.1	16 0.0063	0.7 ± 0.57 0.0019±0.0033	2.6 9.2	12 0.0019
Coleoptera	0.5 ± 0.71 0.0003±0.0004	4.1 1.3	10 0.0003									
Neuroptera												
Arachnoidea										0.33 ± 0.57 0.000067±0.0001	1.3 0.3	6 0.000067
Pectinatella												
Paludicella										Amendment 2 (New)		
Oligochaeta				9.0 ± 8.5 0.023±0.01	41.7 82.9	172 0.023	12.7 ± 5.4 0.042±0.037	27.7 40.4	242 0.042	1.0 ± 1.7 0.000067±0.0001	4.1 0.3	19 0.000067
Total			241 0.0233			411 0.0422			874 0.1039			464 0.020704

ER Table 2.7.2-51m
Cherokee Nuclear Station
Sampling Period 13: 9-14 Sept 74 (Page 3 of 4)

CHEROKEE

TAXA	STATION 3Sr 16			STATION 3Sr 21			STATION 2Sr 23			STATION 3P9 24L		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca	0.33 ± 0.57 0.058±0.099	1.6 90.8	4 0.058	2.0 ± 2.6 0.278±0.305	51.2 85.9	22 0.278	1.0 ± 1.7 0.169±0.238	38.1 26.0	16 0.169	0.33 ± 0.57 0.0015±0.0025	1.0 7.8	6 0.0015
Decapoda				0.67 ± 1.15 0.0451±0.078	16.3 13.9	7 0.045	1.0 ± 1.7 0.283±0.399	38.1 44.9	16 0.283			
Diptera	10.67±7.6 0.0026±0.0032	46.9 4.1	115 0.0026	1.3 ± 1.2 0.00051±0.00044	32.6 0.2	14 0.00051	0.33 ± 0.57	11.9 <0.01	5 T	29.3 ± 19.1 0.0107±0.0104	90.8 55.7	561 0.0107
Chironomidae	9.3 ± 8.5 0.0025±0.003	40.8 4.0	100 0.0025	1.3 ± 1.2 0.00051±0.00044	32.6 0.2	14 0.00051				26.3 ± 19.2 0.0105±0.0104	81.6 54.7	504 0.0105
Ephemeroptera										1.67±2.08 0.0059±0.01	5.2 30.7	32 0.0059
Trichoptera	2.0 ± 3.5 0.0015±0.0027	9.0 2.3	22 0.0015									
Odonata												
Coleoptera							0.33 ± 0.57 0.092 ± 0.13	11.9 14.6	5 0.092	1.0 ± 1.73 0.0011±0.002	3.1 5.7	19 0.0011
Neuroptera												
Arachnoidea												
Pectinatella												
Oligochaeta	0.33 ± 0.57 0.0018±0.0032	1.6 2.8	4 0.0018									
Total			245 0.0639			43 0.3235			42 0.6306	Amendment 2 (New)		618 0.0192

ER Table 2.7.2-15m
Cherokee Nuclear Station
Sampling Period 13: 9-14 Sept 74

CHEROKEE

TAXA	STATION 3P9 24R			STATION			STATION			STATION		
	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D	$\bar{X} \pm$ S.D.	%N	D
Mollusca												
Decapoda												
Diptera	2.33 ± 1.52	88.2	45									
	0.0013±0.0012	81.3	0.0013									
Chironomidae	1.67 ± 2.08	62.7	32									
	0.00067±0.0012	40.6	0.00067									
Chaoborus	0.67 ± 1.15	25.5	13									
	0.00067±0.0012	40.6	0.00067									
Ephemeroptera												
Trichoptera												
Odonata												
Coleoptera												
Neuroptera	8.33 ± 0.57	11.8	6									
	0.0003±0.0005	18.7	0.0003									
Arachnoidea												
Pectinatella												
Paludicella												
Oligochaeta												
Total			51									
			0.0016									

Amendment 2
(New)

ER Table 2.7.2-16
Cherokee Nuclear Station
Master Species List of Fish Collected from the Broad River System

Group Nekton
Phylum Cordata
Class Teleostomi

Order Clupeiformes	
Family Clupeidae	
Genus & Species	*Dorosoma cepedianum*
	Dorosoma petenense
Order Cypriniformes	
Family Cyprinidae	
Genus & Species	*Clinostomus funduloides*
	Cyprinus carpio
	Hybognathus nuchalis
	Hybopsis hypsinota
	Hybopsis n. sp.
	Nocomis leptocephalus
	Notemigonus crysoleucas
	Notropis altipinnis
	Notropis chloristius
	Notropis hudsonius
	Notropis lutipinnis
	Notropis niveus
	Notropis procne
	Notropis scepticus
	Semotilus atromaculatus
Family Catostomidae	
Genus & Species	*Carpiodes cyprinus*
	Catostomus commersoni
	Moxostoma anisurum
	Moxostoma robustum
	Moxostoma rupiscartes
Family Ictaluridae	
Genus & Species	*Ictalurus brunneus*
	Ictalurus catus
	Ictalurus nebulosus
	Ictalurus platycephalus
	Noturus insignis
Order Cyprinodontiformes	
Family Poeciliidae	
Genus & Species	*Gambusia affinis*

ER Table 2.7.2-16
Cherokee Nuclear Station

Family Centrarchidae Genus & Species	*Lepomis auritus* *Lepomis gibbosus* *Lepomis gulosus* *Lepomis hybrids* *Lepomis macrochirus* *Lepomis microlophus* *Micropterus salmoides* *Pomoxis annularis* *Pomoxis nigromaculatus*
Family Percidae Genus & Species	*Etheostoma flabellare* *Etheostoma olmstedi* *Etheostoma thallasinum*

ER Table 2.7.2-17a
Cherokee Nuclear Station
Numbers of Fish Collected at Selected Stations In The Broad River System. (Gear and Sampling Effort Indicated at The Bottom of Each Table)
Sampling Period 1: 8-12 Oct '73

Species	Station 2	3	5	6	7	8	12	16	1-1
Dorosoma cepedianum	3					4			
Clinostomus funduloides								3	
Cyprinus carpio							28		
Hybognathus nuchalis									3
Hybopsis hypsinota									2
Nocomis leptocephalus			6	1				12	22
Notemigonus crysoleucas		2	2	15		1			21
Notropis altipinnis			2						
Notropis chloristius		1	5	1	7	145		7	6
Notropis hudsonius					1				
Notropis lutipinnis									1
Notropis niveus				1	11	1			
Notropis procne								1	
Notropis scepticus		1						115	

Amendment 2
(New)

ER Table 2.7.2-17a
Cherokee Nuclear Station

Species	2	3	5	6	7	8	12	16	1-1
Moxostoma rupiscartes								1	
Noturus insignis								1	
Gambusia affinis				1		28			29
Lepomis auritus				1					
Lepomis macrochirus		1	2	4		12			5
Micropterus salmoides	1		1						2
Pomoxis nigromaculatus									1
Etheostoma olmstedi								1	
Etheostoma thallasinum								10	
Effort	50m	50m	100m	100m	25m	50m	24hr	100m	100m
Gear	N	N	N	N	N	N	T/F	N	N

Amendment 2
(New)

ER Table 2.7.2-17b
Cherokee Nuclear Station
Numbers of Fish Collected at Selected Stations In The Broad River System. (Gear And Sampling Effort Indicated at The Bottom of Each Table)
Sampling Period 2: 5-10 Nov '73

Species	Station 2	5	6	7	8	10	12	16	(1-2) 21	1-1
Clinostomus funduloides								1		1
Cyprinus carpio			1							
Hybognathus nuchalis										2
Hybopsis hypsinota	2							1		4
Hybopsis n. sp.	1									
Nocomis leptocephalus								87		37
Notemigonus crysoleucas					1					2
Notropis chloristius				2						
Notropis hudsonius							1		1	
Notropis lutipinnis								5		3
Notropis niveus	38			35	10			1		
Notropis scepticus	15							6		1
Semotilus atromaculatus									17	
Carpiodes cyprinus						3	40			

No Organisms Collected

Amendment 2
(New)

ER Table 2.7.2-17b
Cherokee Nuclear Station

Species	Station 2	5	6	7	8	10	12	16	(1-2) 21	1-1
Catostomus commersoni		NO ORGANISMS COLLECTED								1
Moxostoma rupiscartes								1		
Ictalurus catus			2							
Ictalurus platycephalus				1						1
Noturus insignis								5		
Gambusia affinis					3	44				2
Lepomis auritus			4	1				4		6
Lepomis gulosus										1
Lepomis macrochirus			6	1	8	48	19			
Micropterus salmoides			1		1					2
Pomoxis annularis						2	2			
Pomoxis nigromaculatus						3	4			
Etheostoma flabellare								1		
Etheostoma thallasinum								9		
Effort	50m	100m	100m	25m	50m	72hr 100m	72hr 100m	100m	100m	100m
Gear	N	ES/N	ES/N	N	N	T/F + ES	T/F + ES	ES/N	ES/N	ES/N

Amendment 2
(New)

ER Table 2.7.2-17c
Cherokee Nuclear Station
Numbers of Fish Collected at Selected Stations In The Broad River System. (Gear And Sampling Effort Indicated at The Bottom of Each Table)
Sampling Period 3: 3-7 Dec '73

Species	Station 1	2	3	4	5	6	7	8	12	15	16	I-1
Clinostomus funduloides											1	
Cyprinus carpio						1			2			
Hybognathus nuchalis												1
Hybopsis hypsinota											1	3
Hybopsis n. sp.								1				
Nocomis leptocephalus	3		2	2		2					83	24
Notemigonus crysoleucas			35			16						1
Notropis chloristius			4	3				16			5	15
Notropis lutipinnis											6	2
Notropis niveus	8						23	1			5	
Notropis procne											1	
Notropis scepticus			9								77	1
Notropis hudsonius											1	
Carpiodes cyprinus									22			
Catostomus commersoni												1
Moxostoma rupiscartes											1	
Ictalurus nebulosus											1	

NO ORGANISMS COLLECTED

Amendment 2
(New)

ER Table 2.7.2-17c
Cherokee Nuclear Station

Species	Station 1	2	3	4	5	6	7	8	12	15	16	21	1-1
Ictalurus platycephalus					1								1
Noturus insignis											2		
Gambusia affinis								2					2
Lepomis auritus				1	16						2		4
Lepomis macrochirus			1			6		9		3			3
Micropterus salmoides													2
Pomoxis annularis									4				
Pomoxis nigromaculatus								1					
Etheostoma flabellare											1		
Etheostoma olmstedi											4		
Etheostoma thallasinum											22		
Effort	25m	50m	50m	25m	100m	100m	25m	50m	72hr	25m	100m	100m	100m
Gear	N	N	N	N	ES	N	N	N	T/F	N	ES/N	ES	ES

No Organisms Collected

No Organisms Collected

Amendment 2
(new)

ER Table 2.7.2-17d
Cherokee Nuclear Station
Numbers of Fish Collected at Selected Stations In The Broad River System. (Gear And Sampling Effort Indicated at The Bottom of Each Table)
Sampling Period 4: 31 Dec '73 - 4 Jan '74

Species	Station 5	6	10	12	16	21	23	I-1
Dorosoma cepedianum			1					
Clinostomus funduloides								6
Cyprinus carpio			11					
Hybopsis hypsinota								2
Nocomis leptocephalus					51			12
Notemigonus crysoleucas		5						22
Notropis chloristius					11			21
Notropis hudsonius					1			
Notropis lutipinnis								2
Notropis niveus		5			2			
Notropis scepticus					68			2
Semotilus atromaculatus						4		
Carpiodes cyprinus			2	13				
Moxostoma rupiscartes					1			

No organisms collected

No organisms collected

Amendment 2
(New)

ER Table 2.7.2-17d
Cherokee Nuclear Station

Species	Station 5	6	10	12	16	21	23	I-1
Ictalurus catus			2					
Gambusia affinis	No organisms collected	1					No organisms collected	
Lepomis auritus								1
Lepomis gulosus								1
Lepomis macrochirus					1			20
Micropterus salmoides				2	1			2
Etheostoma flabellare					4			
Etheostoma olmstedi					6			
Etheostoma thallasinum					14			
Effort	100m	100m	72hr	72hr	100m	100m	100m	100m
Gear	ES	N	T/F	T/F	ES/N	ES	ES	ES/N

Amendment 2
(New)

ER Table 2.7.2-17e
Cherokee Nuclear Station
Numbers of Fish Collected at Selected Stations In The Broad River System, (Gear And Sampling Effort Indicated at The Bottom of Each Table)
Sampling Period 5: 28 Jan - 1 Feb '74

Species	Station 2	3	5	6	8	9	10	12	16	21	23	1-1
Dorosoma cepedianum						14	35	19				
Dorosoma petenense						3	6	1				
Clinostomus funduloides	No Organisms Collected			No Organisms Collected								4
Cyprinus carpio						3	5					
Hybognathus nuchalis			1									
Hybopsis n. sp.					2							
Nocomis leptocephalus			1						11			6
Notemigonus crysoleucas			40			2	1	1				15
Notropis chloristius			15						8			
Notropis hudsonius					2							
Notropis niveus					146				6			13
Notropis scepticus		1	11						23			
Semotilus atromaculatus										2	8	
Carpiodes cyprinus							1	1				

Amendment 2
(New)

ER Table 2.7.2-17e
Cherokee Nuclear Station

Species	Station 2	3	5	6	8	9	10	12	16	21	23	1-1
Moxostoma anisurum							1					
Ictalurus catus							2	1				
Ictalurus nebulosus	No Organisms Collected			No Organisms Collected		1						
Gambusia affinis												2
Lepomis auritus			2									
Lepomis gibbosus						3	7	1				1
Lepomis gulosus							3					
Lepomis macrochirus			2			75	167	50				8
Micropterus salmoides						3	4	1				1
Pomoxis annularis							2	3				
Pomoxis nigromaculatus						2	16	3				
Etheostoma olmstedi									1			
Etheostoma thallasinum									9			
Effort	50m	50m	100m	100m	50m	2400'	3600'	3600'	100m	100m	100m	100m
Gear	N	N	N	ES/N	N	EB	EB	EB	N	ES	ES	N

Amendment 2
(new)

ER Table 2.7.2-17f
Cherokee Nuclear Station
Numbers of Fish Collected at Selected Stations In The Broad River System. (Gear And Sampling Effort Indicated at The Bottom of Each Table)
Sampling Period 6: 25 Feb - 1 Mar '74

	Station								
Species	3	5	6	8	10	12	15	16	1-1
Dorosoma cepedianum					6		35		
Dorosoma petenense					6				
Cyprinus carpio					6	11	6		
Hybognathus nuchalis		3							
Hybopsis hypsinota								9	
Nocomis leptocephalus								28	
Notemigonus crysoleucas		22			7	3			2
Notropis chloristius	5	20						10	3
Notropis hudsonius	1	1							
Notropis niveus		1	3	163				2	
Notropis scepticus	8	2						38	
Moxostoma anisurum							2		
Moxostoma robustum							3		
Ictalurus catus					4	8			

Amendment 2
(New)

ER Table 2.7.2-17f
Cherokee Nuclear Station

	Station								
Species	3	5	6	8	10	12	15	16	1-1
Ictalurus nebulosus						1			
Lepomis gibbosus					2	5	1		
Lepomis gulosus						2			
Lepomis macrochirus		2		2	110	191	8	1	
Micropterus salmoides					7	13	2		
Pomoxis annularis					3	3			
Pomoxis nigromaculatus					2				
Etheostoma olmstedi								1	
Etheostoma thallasinum								2	
Effort	50m	100m	100m	50m	3600'	3600'	2000'	100m	100m
Gear	N	N	N	ES/N	EB	EB	EB	N	N

Amendment 2
(New)

ER Table 2.7.2-17g
Cherokee Nuclear Station
Numbers of Fish Collected at Selected Stations In The Broad River System. (Gear And Sampling Effort Indicated at The Bottom of Each Table)
Sampling Period 7: 26 Mar - 11 Apr '74

Species	Stations 2	3	4	5	6	8	10	12	15	16	21	23	1-1
Dorosoma cepedianum							13	30	35				
Cyprinus carpio							4	4	1				
Nocomis leptocephalus		3				1				25			4
Notemigonus crysoleucas		7			1			1	1				1
Notropis chloristius				3		26			8	9			1
Notropis hudsonius		4											
Notropis niveus		1			1	2			1	2			
Notropis scepticus		6								47			
Semotilus atromaculatus											3	3	
Carpiodes cyprinus								1					
Moxostoma anisurum							1		4				
Moxostoma robustum									2				
Ictalurus catus		1		1	1			2					
Ictalurus brunneus									4				
Ictalurus nebulosus								1					
Ictalurus platycephalus					1								1

Amendment 2
(New)

ER Table 2.7.2-17g
Cherokee Nuclear Station

Species	Stations												
	2	3	4	5	6	8	10	12	15	16	21	23	I-1
Gambusia affinis													1
Lepomis gibbosus							2	1	1				
Lepomis macrochirus		1		9	5		19	40	3				2
Lepomis auritus									1				
Micropterus salmoides		1					2	7	1				
Pomoxis annularis								2					
Pomoxis nigromaculatus							2	1					
Etheostoma olmstedi										2			
Etheostoma thallasinum										11			
Etheostoma flabellare										12			
Effort	20m	50m	50m	100m	100m	50m	3600'	3600'	2000'	100m	100m	100m	100m
Gear	N	N	N	N	ES	N	EB	EB	EB	ES N	ES	ES	N

Amendment 2
(New)

ER Table 2.7.2-17h
Cherokee Nuclear Station
Numbers of Fish Collected at Selected Stations In The Broad River System. (Gear And Sampling Effort Indicated at The Bottom of Each Table)
Sampling Period 8: 22 Apr - 8 May '74

Species	Station Numbers 2	3	5	6	8	9	10	12	15	16	21	23	I-1
Dorosoma cepedianum	NO ORGANISMS COLLECTED			NO ORGANISMS COLLECTED		2	4	3	15			NO ORGANISMS COLLECTED	
Clinostomus funduloides										1			
Cyprinus carpio						6	2	4	1				4
Hybognathus nuchalis										9			
Hybopsis hypsinota										27			
Nocomis leptocephalus			1					1					16
Notemigonus crysoleucas			4							27			
Notropis chloristius					2					3			
Notropis niveus										81			
Notropis scepticus											1		
Semotilus atromaculatus								4					
Ictalurus catus							1	2					
Ictalurus nebulosus					1								1
Ictalurus platycephalus			2			1							
Lepomis auritus													1
Lepomis macrochirus		1	6			25	19	24	14				13
Micropterus salmoides						2	7	7					
Pomoxis annularis							2	1					
Pomoxis nigromaculatus								2					
Etheostoma olmstedi										2			
Etheostoma thallasinum										8			
Effort	20m	50m	100m	100m	50m	3600'	2400'	3600'	2000'	100m	100m	100m	100m
Gear	N	N	N	N	N	EB	EB	EB	EB	ES N	ES	ES	N

Amendment 2
(New)

ER Table 2.7.2-17i
Cherokee Nuclear Station
Numbers of Fish Collected at Selected Stations In The Broad River System. (Gear And Sampling Effort Indicated at The Bottom of Each Table)
Sampling Period 9: 20-25 May '74

Species	Station 4	8	10	12	15	16	21	23	I-1
Dorosoma cepedianum			13	27	20				
Dorosoma petenense			2						
Clinostomus funduloides						5			4
Cyprinus carpio			3		8				
Hybopsis hypsinota						5			1
Nocomis leptocephalus						84			3
Notemigonus crysoleucas	1								1
Notropis chloristius	38	1				10			1
Notropis hudsonius						1			
Notropis lutipinnis						3			1
Notropis niveus		15							
Notropis scepticus	3					147			
Semotilus atromaculatus							3	14	
Carpiodes cyprinus				34					
Moxostoma anisurum					6				
Moxostoma robustum					1				

Amendment 2
(New)

ER Table 2.7.2-17i
Cherokee Nuclear Station

	Station								
Species	4	8	10	12	15	16	21	23	I-1
Ictalurus brunneus					3				
Ictalurus catus	1			6					
Noturus insignis						1			
Gambusia affinis									17
Lepomis auritus									1
Lepomis gibbosus			2	3	1				
Lepomis gulosus									1
Lepomis macrochirus	3		22	19	7	3			5
Micropterus salmoides			11	9	3				
Pomoxis annularis			1	1					
Pomoxis nigromaculatus			1	3					
Etheostoma olmstedi						3			
Etheostoma thallasinum						15			
Effort	50m	20m	3600'	3600'64hr	2000'	100m	100m	100m	100m
Gear	N	N	EB	EB T	EB	ES/N	ES	ES	N

Amendment 2
(New)

ER Table 2.7.2-17j
Cherokee Nuclear Station
Numbers of Fish Collected at Selected Stations In The Broad River System. (Gear And Sampling Effort INdicated at The Bottom of Each Table)
Sampling Period 10: 17-22 Jun '74

	Station							
Species	4	10	12	15	16	21	23	I-1
Dorosoma cepedianum		7	3	18				
Cyprinus carpio		1	2	2				
Hybognathus nuchalis	3							
Hybopsis hypsinota					9			
Nocomis leptocephalus					28			5
Notemigonus crysoleucas								2
Notropis chloristius	19				13			
Notropis lutipinnis					1			
Notropis niveus	1				1			
Notropis procne					1			
Notropis scepticus					46			
Semotilus atromaculatus						5	23	
Catostomus commersoni					1			
Moxostoma anisurum				2	1			
Moxostoma robustum				1				

Amendment 2
(New)

ER Table 2.7.2-17J
Cherokee Nuclear Station

Species	Station 4	10	12	15	16	21	23	I-1
Moxostoma rupiscartes					5			
Ictalurus brunneus	1							
Ictalurus catus		1	2					
Ictalurus nebulosus			1					
Lepomis gibbosus					1			
Lepomis hybrids		1						
Lepomis macrochirus		9	9	4	5			3
Micropterus salmoides		5	5	1				
Pomoxis annularis			3					
Etheostoma flabellare					1			
Etheostoma olmstedi					1			1
Etheostoma thallasinum					4			
Effort	50m	3600'	3600'	2000'	100m	100m	100m	100m
Gear	N	EB	EB	EB	ES/N	ES	ES	ES/N

Amendment 2
(New)

ER Table 2.7.2-17k
Cherokee Nuclear Station
Numbers of Fish Collected at Selected Stations In The Broad River System. (Gear And Sampling Effort Indicated at The Bottom of Each Table)
Sampling Period 11: 15-16 Jul '74

	Station							
Species	I-1	4	10	12	15	16	21	23
Hybognathus nuchalis	24							
Nocomis leptocephalus	32	4	NO ORGANISMS COLLECTED	NO ORGANISMS COLLECTED	NO ORGANISMS COLLECTED	39		
Notemigonus crysoleucas	7	1						
Notropis chloristius		10				11		
Notropis niveus		2				8		
Notropis procne						2		
Notropis scepticus						76		
Semotilus atromaculatus	5						2	7
Moxostoma rupiscartes						2		
Ictalurus catus		1						
Gambusia affinis	1							
Lepomis auritus	9	1						

Amendment 2
(New)

ER Table 2.7.2-17k
Cherokee Nuclear Station

	Station							
Species	I-1	4	10	12	15	16	21	23
Lepomis macrochirus	4	1	NO ORGANISMS COLLECTED	NO ORGANISMS COLLECTED	NO ORGANISMS COLLECTED	1		
Micropterus salmoides	2					1		
Etheostoma flabellare						1		
Etheostoma olmstedi						10		
Etheostoma thallasinum						20		
Effort	100m	50m	3600' EB	3600' EB	2000' EB	100m	100m	100m
Gear	ES/N	N				N	ES	ES

Amendment 2
(New)

ER Table 2.7.2-17 1
Cherokee Nuclear Station
Numbers of Fish Collected at Selected Stations In The Broad River System. (Gear And Sampling Effort Indicated at The Bottom of Each Table)
Sampling Period 12: 14 Aug '74

	Station							
Species	4	8	10	12	15	16	21	23
Hybognathus nuchalis	5	NO ORGANISMS	NO ORGANISMS	NO ORGANISMS	NO ORGANISMS			
Nocomis leptocephalus	33					3		
Notemigonus crysoleucas	6							
Notropis chloristius	2							
Notropis scepticus						23		
Semotilus atromaculatus							5	17
Gambusia affinis	8							
Lepomis auritus	2							
Lepomis macrochirus	3							
Etheostoma olmstedi						1		
Effort	50m	*	3600'	3600'	2000'	100m	100m	100m
Gear	N	EB	EB	EB	EB	ES/N	ES	ES

* not recorded

Amendment 2
(New)

ER Table 2.7.2-17m
Cherokee Nuclear Station
Numbers of Fish Collected at Selected Stations In The Broad River System. (Gear And Sampling Effort Indicated at The Bottom of Each Table)
Sampling Period 13: 9-11 Sept '74

	Station						
Species	4	8	10	12	16	21	23
Dorosoma cepedianum				2			
Dorosoma petenense			1			NO	NO
Cyprinus carpio		2	1	5	1	ORGANISMS	ORGANISMS
Hybopsis hypsinota					2		
Nocomis leptocephalus	1				11		
Notemigonus crysoleucas	3	2		1			
Notropis chloristius	6						
Notropis niveus					4		
Notropis scepticus					32		
Ictalurus catus				2			
Ictalurus nebulosus			1	1			
Gambusia affinis	1						

Amendment 2
(New)

ER Table 2.7.2-17m
Cherokee Nuclear Station

	Station						
Species	4	8	10	12	16	21	23
Lepomis auritus					1		
Lepomis macrochirus		1	2	13	5		
Lepomis microlophus				1	2		
Micropterus salmoides		1	3		2		
Etheostoma thallasinum					4		
Etheostoma olmstedi					1		
						NOORGANISMS	NOORGANISMS
Effort	50m	*	3600'	3600'	100m	100m	100m
Gear	N	EB	EB	EB	ES/N	ES	ES

* not recorded

Amendment 2
(New)

ER Table 2.7.2-18
Cherokee Nuclear Station
Status of Fish Know To Occur In The Broad River.
(from Menheneck et al., in Press)

Cherokee Nuclear Station

SCIENTIFIC NAME	COMMON NAME	COLLECTED	STATUS
CLUPEIDAE	Herrings		
Dorosoma cepedianum	Gizzard shad	*	Introduced
Dorosoma petenense	Threadfin shad	*	Introduced
ESOCIDAE	Pickerels		
Esox niger	Chain pickerel		
CYPRINIDAE	Minnows		
Campostoma anomalum	Stoneroller		
Carassius auratus	Goldfish		Introduced
Clinostomus funduloides	Rosyside dace	*	
Cyprinus carpio	Carp	*	Introduced
Hybognathus nuchalis	Silvery minnow	*	
Hybopsis hypsinotus	Highback chub	*	
Hybopsis labrosa	Thicklip chub		
Hybopsis n. sp.		*	
Nocomis leptocephalus	Bluehead chub	*	
Notemigonus crysoleucas	Golden shiner	*	
Notropis alborus	Whitemouth shiner		
Notropis altipinnis	Highfin shiner	*	
Notropis chloristius	Greenfin shiner	*	
Notropis hudsonius	Spottail shiner	*	
Notropis lutipinnis	Yellowfin shiner	*	
Notropis niveus	Whitefin shiner	*	
Notropis procne	Swallowtail shiner	*	
Notropis pyrrhomelas	Fireyback shiner		
Notropis scepticus	Sandbar shiner	*	
Semotilus atromaculatus	Creek chub	*	
CATOSTOMIDAE	Suckers		
Carpiodes cyprinus	Quillback	*	
Catostomus commersoni	White sucker	*	
Erimyzon oblongus	Creek chubsucker	*	
Hypentelium nigricans	Northern hog sucker	*	
Moxostoma anisurum	Silver redhorse	*	
Moxostoma rupiscartes	Striped jumprock	*	
ICTALURIDAE	Freshwater catfishes		
Ictalurus brunneus	Snail bullhead	*	
Ictalurus catus	White catfish	*	
Ictalurus natalis	Yellow bullhead		
Ictalurus nebulosus	Brown bullhead	*	
Ictalurus platycephalus	Flat bullhead	*	
Ictalurus punctatus	Channel catfish		Introduced

ER Table 2.7.2-18
Cherokee Nuclear Station

SCIENTIFIC NAME	COMMON NAME	COLLECTED	STATUS
Noturus insignis	Margined madtom	*	Introduced
Pylodictis olivaris	Flathead (Yellow) catfish		Introduced
APHREDODERIDAE	Pirate perches		
Aphredoderus sayanus	Pirate perch		
POECILIIDAE	Live bearers		
Gambusia affinis	Mosquito fish	*	
PERCICHTHYIDAE	Temperate basses		
Morone chrysops	White bass		Introduced
Morone saxatilis	Striped bass		Introduced
CENTRARCHIDAE	Sunfishes and black basses		
Lepomis auritus	Redbreast sunfish	*	
Lepomis cyanellus	Green sunfish		Introduced
Lepomis gibbosus	Pumpkinseed	*	
Lepomis gulosus	Warmouth	*	
Lepomis macrochirus	Bluegill	*	
Micropterus dolomieui	Smallmouth bass		Introduced
Micropterus salmoides	Largemouth bass	*	
Pomoxis annularis	White crappie	*	Introduced
Pomoxis nigromaculatum	Black crappie	*	
PERCIDAE	Perches		
Etheostoma flabellare	Fantail darter	*	
Etheostoma olmstedi	Tessellated darter	*	
Etheostoma thallasinum	Seagreen darter	*	Rare
Percina crassa	Piedmont darter		
Stizostedion vitreum	Walleye		Introduced

ER Table 2.7.2-19
Cherokee Nuclear Station
Summary of Fish Stomach Contents. Numbers Represent The Number Of Stomachs Examined Which Contained Each Food Item

Species	Number of stomachs	Detritus	Algae	Vascular plant material	Chaobrus	Chironomids	Adult Diptera	Tricoptera larvae	Syrphid larvae	Damselfly adult	Grasshopper	Unidentified insect larvae	Oligochaeta	Crayfish	Ictalurid fish	Shad	Minnows	Sunfish	Unidentified fish	Other or undetermined	Empty
Micropterus salmoides 500 mm	6														1	1		1		1	
Micropterus salmoides 300 mm	3						1			1				1							
Ictalurus punctatus	3																	2			1
Ictalurus platycephalus	1																				1
Pomoxis annularis	3															1	1		2		
Pomoxis nigromaculatus	10			4	1	1							1				10		7	1	
Cyprinus carpio	2	2		1																	
Lepomis gibbosus	3					1			1			1								eggs	
Lepomis gulosus	3								1												1
Lepomis microlophus	1								1												
Lepomis auritus	1					1				1											
Lepomis cyanellus	2			1			1					1									
Lepomis macrochirus	4					1	1	1				2									1
Somotilus atromaculatus	3						1	2				1		1							1
Notropis scepticus	2						1					1									
Notemigonus crysoleucas	3		1	1			1													spines	
Nocomis leptocephalus	6							1			1									spines	3
Etheostoma thalassinum	3					3															
Dorosoma cepedianum	2	1	1																	1	

Amendment 2
(New)

ER Table 2.7.2-20
Cherokee Nuclear Station
Rare or Endangered Fish Species on The Broad River System

Hybopsis n. sp.	An undescribed species of chub related to H. labrosa is apparently common in the Yadkin and Broad Rivers; however, its current status must be regarded as undetermined.
Etheostoma collis	Endangered; little else apparently is known of this fish.

ER Table 2.7.2-21
Cherokee Nuclear Station
Average percent of Sedgwick-Rafter field covered by organic material and percent of total of each category of material observed, Station 8, August 1974.

Category	Average % of field coverage	% of total organic matter
Diatoms	0.20	0.6
Other algae and aquatic plants	1.95	5.7
Twigs and stems (terrestrial)	15.00	43.7
Leaf parts (terrestrial)	11.90	34.7
Aquatic invertebrates	1.05	3.1
Terrestrial invertebrates	2.95	8.6
Unidentifiable organic fragments	1.25	3.6
Total organic matter	34.30	100.0
Inorganic matter	65.70	-

Amendment 2
(New)

ER Table 2.7.2-22
Cherokee Nuclear Station
Mean Age, Length and Weight for Both Sexes of Selected Fish Species in the Broad River for which Age Classes could be Determined

Species	No. of fish	Mean Age (yrs)	Mean Total Length (cm)	Mean Weight (gm)
Dorosoma cepedianum (female)	6	>3	34.8	377.5
Dorosoma cepedianum (male)	3	>3	30.7	438.0
Carpiodes cyprinus (female)	38	3.8	42.8	982.9
Carpiodes cyprinus (male)	2	4.0	40.0	926.0
Cyprinus carpio (female)	31	9.4	48.2	1711.9
Cyprinus carpio (male)	30	8.4	44.4	1087.6
Nocomis leptocephalus (female)	7	1.0	8.0	8.1
Nocomis leptocephalus (male)	4	1.8	11.1	26.7
Semotilus atromaculatus (female)	9	1.2	6.5	6.9
Semotilus atromaculatus (male)	8	1.3	6.7	7.5
Lepomis auritus (female)	2	>3	12.4	48.5
Lepomis auritus (male)	1	>3	13.0	65.0
Micropterus salmoides (female)	22	4.6	44.2	1698.0
Micropterus salmoides (male)	8	3.4	44.3	1271.5
Pomoxis annularis (female)	5	>5	29.4	353.2
Pomoxis annularis (male)	2	>5	27.5	276.5
Pomoxis nigromaculatus (female)	3	5.3	26.6	441.0
Pomoxis nigromaculatus (male)	2	5.0	25.5	245.5

ER Table 2.7.2-23
Cherokee Nuclear Station
A Summary of Spawning Behavior of Several Fish Species
Found in the Broad River System, Including a List of References (Page 1 of 4)

Species	Common Name	Observed Spawning Temperatures	Observed Spawning Sites
Esocidae			
Esox niger	chain pickerel	5.8-18.3C[3]	Flooded lowlands, swamp areas[6]
Clupeidae			
Dorosoma cepedianum	gizzard shad	10-23 C[3]	Sloughs, still water[2]
Dorosoma petenense	threadfin shad	21.1 C[4]	Shallow open water[1]
Cyprinidae			
Cyprinus carpio	carp	10-30 C[3]	Flooded shallows[1]
Hybognathus nuchalis	silvery minnow	13.0-20.5 C[1]	Coves, still waters[1]
Notemigonus crysoleucas	golden shiner	15.6-26.7 C[1]	Bays and shoals, weeds[1]
Notropis analostanous	satinfin shiner	18.3-30.0 C[5]	Submerged structures[5]
Semotilus atromaculatus	creek chub	12.8-26.7 C[7]	
Catostomidae			
Carpiodes cyprinus	quillback	15.6 C[8]	Over sand, silt, mud in streams[3]
Erimyzon oblongus	creek chubsucker	11.0 C (minimum)[9]	Headwaters of small streams[9]
Moxostoma anisurum	silver redhorse	13.3-15.6 C[10]	Gravel rubble bottom[10]
Ictaluridae			
Ictalurus catus	white catfish	21.1 C[11]	Sand, gravel bars[1]
Ictalurus nebulosus	brown bullhead	21-25 C[12]	Shallows, weeds[1], cavities[3]
Ictalurus punctatus	channel catfish	21.1-29.4 C[13]	Bank cavity[1]
Noturus insignis	margined madton	19.8-25.7 C[4]	Excavations above or below riffles[14]
Poeciliidae			
Gambusia affinis	mosquitofish	15.6 C[15]	
Percichthyidae			
Morone chrysops	white bass	11.7 C[3] 14.4-23.9 C[16]	Sand, rock shores[1]
Morone americana	white perch	5-16 C[17]	

Amendment 2
(New)

Species	Common Name	Observed Spawning Temperatures	Observed Spawning Sites
Centrarchidae			
Lepomis auritus	redbreast sunfish	20.0-27.8 C[8]	
Lepomis cyanellus	green sunfish	15.6 C[19]	Bank shallows[1]
Lepomis gibbosus	pumpkinseed	20.0 C[20]	Bank shallows[1]
Lepomis gulosus	warmouth	21.1 C[21]	Bank shallows[1]
Lepomis macrochirus	bluegill	25-26 C[22]	Weeds, shallows[1]
Lepomis microlophus	redear sunfish	21.1 C[23]	
Micropterus salmoides	largemouth bass	15.6 , 21.1 C[23]	Shallows near bank[1]
Pomoxis annularis	white crappie	14.0-16.0 C[1] 17.8-20.0 C[24]	Submerged structures, shallows[2]
Pomoxis nigromaculatus	black crappie	20 C[25]	
Percidae			
Perca flavescens	yellow perch	6.7-12.2 C[26]	Aquatic plants, brush[26]

Amendment 2
(New)

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APPENDIX I

WATER QUALITY STANDARDS

WATER CLASSIFICATION STANDARDS SYSTEM

FOR THE STATE OF SOUTH CAROLINA

South Carolina

Pollution Control Authority

1972

SOUTH CAROLINA
POLLUTION CONTROL AUTHORITY
Owen Building
Columbia, South Carolina 29211

Adopted by the PCA—September 8, 1971
Filed with the Secretary of State—September 10, 1971
Approved by U. S. Environmental Protection Agency—December 23, 1971

This Supercedes All Previous Versions

WATER CLASSIFICATION-STANDARDS SYSTEM FOR THE STATE OF SOUTH CAROLINA

Promulgated under authority of Act Number 1154, 1970 Acts and Joint Resolutions of The South Carolina General Assembly, signed by The Governor on the 29th day of April. 1970.

SECTION 1
DEFINITIONS

The definition of any word or pharse employed in Section II, III, or IV shall be the same as given in the South Carolina Pollution Control Law. The following words or phrases which are not defined in said law shall be defined or have meanings as follows:

Source of water supply for drinking, culinary or food processing purposes shall mean any source, either public or private, the waters from which are used for domestic consumption, or used in connection with the processing of milk, beverages, food or for other purposes which require finished water meeting U. S. Public Health Service Drinking Water Standards.

Approved treatment as applying to water supplies means treatment accepted as satisfactory by the authorities responsible for exercising supervision over the sanitary quality of water supplies.

Bathing shall include swimming but shall be regarded as a best usage only for waters in which bathing is or may be expected to be subject to effective supervision and control.

Fishing shall include the propagation of fish and other aquatic life.

Agricultural shall include use of water for stock watering, irrigation, and other farm purposes.

Tidal Waters shall mean all waters whose elevation is subject to periodic changes under the influence of oceanic tides.

Tidal salt waters shall mean those tidal waters which have a chloride ion content in excess of 250 milligrams per liter (mg/L).

Underground disposal shall mean the disposal of wastes by pumping or allowing to flow by gravity into the ground in such a manner as to enter the subsurface strata of the earth. Such disposal is not to be permitted without the most careful justification. This definition does not cover the use of tile fields in connection with septic tanks, or any other type of ground waste disposal permitted under State regulatory supervision.

Controlled Discharge of wastes shall refer to the practice of holding industrial wastes, domestic sewage, or mixtures of the two, in lagoons, tanks, or other suitable containers for discharge at appropriate times. Such lagoons, tanks, or containers shall be considered waste treatment plants to be operated on permit of the Authority as specified by the Pollution Control Law and shall be operated in the manner specifed by the permit.

Point of Discharge shall mean that location in or adjacent to a body of water at which any liquid, solid or gaseous substances are discharged or deposited.

Propagation shall mean the continuance of species by generation or successive production in the natural environment, as opposed to the maintenance of species by artificial culture and stocking.

Natural or Naturally Occurring Values shall mean for all of the waters of the state:

a. those water quality values which exist unaffected by—or unaffected as a consequence of —any water use by any person; or

b. those water quality values which exist unaffected by the discharge, or direct or indirect deposit of, any solid, liquid, or gaseous substance by any person.

Swamp Waters shall refer to those waters having those color and chemical characteristics found in waters which have been exposed for a substantial time to decaying vegetable matter under natural conditions. Under appropriate conditions this designation shall be applied without regard to velocity of the flow of the water.

Impoundment shall mean a manmade lake, pond or facility designed for the purpose of treating, stabilizing, neutralizing, or otherwise rendering innocuous sewage, industrial waste, or other wastes as defined in Section I of the Pollution Control Act of 1970.

SECTION II

Waters whose existing quality is better than the established standards will not be lowered in quality unless and until it has been affirmatively demonstrated to the South Carolina Pollution Control Authority that such change is justifiable as a result of necessary economic or social development and will not interfere with or become injurious to any assigned uses made of such waters. Any industrial, public or private project or development which could constitute a new source of pollution or an increased source of pollution to high quality waters will be required by the South Carolina Pollution Control Authority as part of the initial project design to provide the highest and best degree of waste treatment practical under existing technology. In implementing the policy of this paragraph as it relates to interstate streams, the Administrator of the Environmental Protection Agency will be advised and provided with such information as he will need from time to time to protect the interests of the United States and the authority of the Administrator in maintaining high quality of interstate waters.

SECTION III

RULES APPLICABLE TO ALL CLASSES AND STANDARDS

The General Assembly of South Carolina in the 1970 Pollution Control Act of South Carolina has declared the following policy:

> *"It is declared to be the public policy of the State to maintain reasonable standards of purity of the water resources of the State, consistent with the public health, safety and welfare of its citizens, maximum employment, the industrial development of the State, the propagation and protection of terrestrial and marine flora and fauna, and the protection of physical property and other resources. It is further declared that to secure these purposes and the enforcement of the provisions of this act, the Pollution Control Authority shall have authority to abate, control and prevent pollution."*

Consistent with this policy, the Pollution Control Authority of South Carolina does adopt general rules for the waters of South Carolina as follows:

1. The classes and standards set forth in Section IV are intended to protect public health and welfare by providing criteria for the streams of South Carolina which will stabilize and improve water quality in step with changes in the economy of the State and new technical developments. No permit issued hereunder, therefore, shall be interpreted as creating any vested right in any person.

2. No waters of this State shall be used for the sole or principal purpose of transporting wastes.

3. No wastes amenable to treatment or control shall be discharged into any State waters without treatment or control. All bio-degradable waste, prior to discharge into any State waters, shall receive a minimum of secondary treatment and all other wastes an equivalent degree of treatment, unless it can be demonstrated that a lesser degree of treatment or control will provide for water quality improvement consistent with present and anticipated future water uses.

4. In any case where a body of water is tributary to another body of water which is classified in a higher class, the quality of the water in the tributary shall be maintained at a level which will not cause a contravention of the higher standards of the downstream body.

5. Tests or analytical determinations to determine compliance or non-compliance with standards shall be made in accordance with methods and procedures approved by the Pollution Control Authority. (In approving methods, so far as practical and applicable, the Authority will be guided by the latest edition of "Standard Methods for the Examination of Water, Sewage, and Industrial Waste" published by the American Public Health Association, the American Water Works Association, and the Water Pollution Control Federation.)

6. In making any tests or analytical determinations on classified waters to determine compliance or non-compliance with water quality standards, representative samples shall be collected at locations approved by the Pollution Control Authority.

   a. Samples shall be taken from points so distributed over the area and depth of the waters being studied as to permit a realistic appraisal of such actual or potential damage to water use or aquatic life as may exist.

b. Bioassay methods may be employed in appropriate situations to determine medium tolerance limits (TLm) and/or concentration of toxic substances.

c. Temporal distribution of samples in tidal waters shall be such as to cover the full range of tidal conditions.

d. The criteria are applicable to any fresh water stream when the flow rate is equal to or greater than the minimum seven-day average flow rate that occurs with an average frequency of once in ten years.

7. General water quality criteria are established to maintain in the waters of the State a water quality sufficient for the survival and general well-being of fish and other aquatic life during period of migration and passage.

a. The waters of the State shall at all times be free from:

(1) Substances attributable to sewage, industrial waste, or other waste that will settle to form sludge deposits that are unsightly, putrescent or odorous to such degree as to create a nuisance, or that interfere directly or indirectly with water uses;

(2) Floating debris, oil, grease, scum and other floating materials attributable to sewage, industrial waste, or other waste in amounts sufficient to be unsightly to such a degree as to create a nuisance or that interfere directly or indirectly with water uses;

(3) Materials attributable to sewage, industrial waste, or other waste which produce taste, odor, or change the existing color or other physical and chemical conditions in the receiving stream to such degree as to create a nuisance, or that interfere directly or indirectly with water uses; and

(4) High-temperature, toxic, corrosive or other deleterious substances attributable to sewage, industrial waste, or other waste in concentrations or combinations which interfere directly or indirectly with water uses, or which are harmful to human, animal, plant or aquatic life.

b. These general criteria establish basic water quality requirements for all South Carolina waters and are to be implemented and enforced:

(1) For all waters for which no specific water quality standards are established;

(2) Wherever and whenever specific water quality standards are not applicable because natural flow conditions are lower than those which occur at the minimum seven-day average flow that occurs with a frequency of once in ten years;

(3) In addition to specific water quality standards as established in Section IV of these standards.

8. In any case where streams are not otherwise classified and are tributaries to a classified stream they shall meet the quality standards of the classified stream.

9. Natural waters may on occasion have characteristics outside of the limits established by the standards. The standards adopted herein relate to the condition of waters as affected by the discharge of sewage, industrial wastes or other wastes. The specified standards will not be considered violated when values outside the established limits are caused by natural conditions. Where wastes are discharged to such waters, the discharger shall not be considered a contributor to substandard conditions provided maximum treatment in compliance with permit requirements is maintained and, therefore, meeting the established limits is beyond his control.

10a. The streams or portions of streams specified below shall be considered to be upper Piedmont streams and shall not exceed a temperature of 84°F at any time, after adequate mixing of heated and normal water, as the result of the discharge of heated liquids, nor shall the water temperature after passing through an adequate zone of mixing be more than 5°F greater than that of water unaffected by the heated discharge. Provided: That the zone for mixing shall be limited to not more than 25 percent of the cross sectional area and/or volume of the flow of the stream and shall not include more than one-third of the surface area measured from shore to shore.

1. Chatooga River and tributaries.

2. That portion of Chauga River above the Hartwell Reservoir.

3. That portion of Keowee River and tributaries above Keowee Reservoir.

4. That portion of Saluda River and tributaries above Saluda Lake.

5. Those portions of South Tyger, North Tyger and Enoree Rivers and tributaries above the Southern Railroad.

6. That portion of the South Pacolet River and tributaries above Lake Bowen.

7. Those portions of Broad River and Kings Creek that are above the junction of these two streams.

b. All fresh waters of the State other than upper Piedmont waters shall not exceed a temperature of 90°F at any time, after adequate mixing of heated and normal waters as a result of heated liquids, nor shall the water temperature after passing through an adequate zone for mixing be more than 5°F greater than that of water unaffected by the heated discharge. Provided: That the zone for mixing shall be limited to not more than 25 percent of the cross sectional area and/or volume of the flow of the stream and shall not include more than one-third of the surface area measured from shore to shore.

c. The temperature of tidal waters shall not exceed 4°F above the natural temperature during the fall, winter or spring and shall not exceed 1.5°F above the natural temperature during the summer months.

d. All waters of the lakes and reservoirs of the State located on streams specified in 10a. above shall not exceed a monthly average temperature of 84°F at any time, after adequate mixing of heated and normal water, as the result of the discharge of heated liquids, nor shall the monthly average water temperature after passing through an adequate zone of mixing be more than 3°F greater than that of the water unaffected by heated discharge. The size of the mixing zone will be determined on an individual project basis and will be based on normal engineering considerations and the area affected shall be kept at a minimum. The mixing zone shall not prevent free passage of fish or cause fish casualty.

e. All waters of lakes and reservoirs of the State located on streams other than upper Piedmont waters shall not exceed a monthly average temperature of 90°F at any time, after adequate mixing of heated and normal waters as a result of heated liquids, nor shall the monthly average water temperature after passing through an adequate zone for mixing be more than 3°F greater than that of water unaffected by the heated discharge. The size of the mixing zone will be de-

termined on an individual project basis and will be based on normal engineering considerations and the area affected shall be kept to a minimum. The mixing zone shall not prevent free passage of fish or cause fish casualty.

f. Compliance with temperature standards (as specified in 10a., b., and c.) in streams below impoundments to include those which are used for cooling purposes (as judged by the PCA to be in the public interest) shall be based on measurements in the receiving waters below the impoundment.

SECTION IV

ESTABLISHED CLASSES FOR FRESH SURFACE WATERS AND THE STANDARDS OF QUALITY AND PURITY WHICH SHALL BE APPLIED THERETO:

CLASS AA

Water suitable for use for domestic and food processing purposes with disinfection and pH adjustments as the only treatment required. Suitable also for trout survival where so specified and for uses requiring water of lesser quality.

QUALITY STANDARDS FOR CLASS AA WATERS

ITEMS	SPECIFICATIONS
1. Sewage, treated waste, thermal discharges, or other waste effluents.	None
2. Dissolved Oxygen	Not less than 6 mg/l with a daily average of 7 mg/l.
3. Toxic wastes, deleterious substances, colored or other wastes.	None in amounts to exceed limitations set forth in the latest edition of U. S. Public Health Service Drinking Water Standards.
4. Fecal coliform.	Not to exceed 20/100 ml as a monthly arithmetic average.

CLASS A

Waters suitable for use as swimming waters. Suitable also for other uses requiring waters of lesser quality.

QUALITY STANDARDS FOR CLASS A WATERS

ITEMS	SPECIFICATIONS
1. Fecal coliform.	Not to exceed a geometric mean of 200/100 ml; nor shall more than 10% of the total samples during any 30 day period exceed 400/100 ml.
2. Phenolic compounds.	Not greater than 1 microgram per liter, unless caused by natural conditions.
3. pH.	Range between 6.0 and 8.0, except that swamp waters may range from pH 5.0 to pH 8.0.
4. Dissolved Oxygen.	Not less than 5 mg/l, except that swamp waters may have an average of 4 mg/l.

CLASS B

Waters suitable for domestic supply after complete treatment in accordance with requirements of the South Carolina State Board of Health. Suitable also for propagation of fish, industrial and agricultural uses and other uses requiring water of lesser quality.

QUALITY STANDARDS FOR CLASS B WATERS

ITEMS	SPECIFICATIONS
1. Fecal coliform.	Not to exceed a log mean of 1000/100 ml based on five consecutive samples during any 30 day period; nor to exceed 2000/100 ml in more than 20% of the samples examined during such period (not applicable during or following periods of rainfall).
2. pH.	Range between 6.0 and 8.5, except that swamp waters may range from pH 5.0 to pH 8.5.
3. Dissolved Oxygen	Daily average not less than 5 mg/l with a low of 4 mg/l, except that swamp waters may have an average of 4 mg/l.
4. Phenolic compounds.	Not greater than 1 microgram per liter unless caused by natural conditions.

CLASS C[1]

Waters suitable for fish survival*, industrial and agricultural uses and other uses requiring water of lesser quality.

QUALITY STANDARDS FOR CLASS C WATERS

ITEMS	SPECIFICATIONS
1. pH.	Range between 6.0 and 8.5, except that swamp waters may range between 5.0 and 8.5.
2. Dissolved Oxygen.	Not less than 3 mg/l, except that swamp waters may have a low of 2.5 mg/l.
3. Fecal coliform	Not to exceed a log mean of 1000/100 ml based on five consecutive samples during any 30 day period; nor to exceed 2000/100 ml in more than 20% of the samples examined during such period (not applicable during or immediately following periods of rainfall).

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[1]*To apply only to streams receiving waste prior to May 4, 1950, and not be applied to streams with a seven-day once in ten years occurrence flow of more than 22.5 mgd nor shall this classification be assigned to interstate streams.*

**"Fish Survival" as used in this standard means the continued existence of individual fish normally indigenous to water of this type.*

CLASSES AND STANDARDS FOR TIDAL SALT WATERS

CLASS SA

Waters suitable for shellfishing for market purposes and any other usages. Suitable also for uses requiring water of lesser quality.

QUALITY STANDARDS FOR CLASS SA WATERS

ITEMS	SPECIFICATIONS
1. Garbage, cinders, ashes, oils, sludge or other refuse.	None.
2. Sewage or waste effluents.	None which are not effectively disinfected.
3. Dissolved Oxygen.	Not less than 5 mg/l.
4. Toxic wastes, deleterious substances, colored or other wastes.	None alone or in combination with other substances or wastes in sufficient amounts as to be injurious to edible fish or shellfish or the culture or propagation thereof, or which in any manner shall adversely affect the flavor, color, odor, or sanitary condition thereof or impair the waters for any other best usage as determined for the specific waters which are assigned to this class.
5. Organisms of coliform group.	Shall meet U. S. Public Health Service Standards. (1965 Revision)
6. pH.	Shall not vary more than 3/10 of a pH unit above or below that of effluent-free waters in the same geographical area having a similar total salinity, alkalinity and temperature.

CLASS SB

Waters suitable for bathing and any other usages except shellfishing for market purposes. Suitable also for uses requiring water of lesser quality.

QUALITY STANDARDS FOR CLASS SB WATERS

ITEMS	SPECIFICATIONS
1. Garbage, cinders, ashes, oils, sludge or other refuse.	None.
2. Sewage or waste effluents.	None which are not effectively disinfected.
3. Dissolved Oxygen.	Not less than 5 mg/l.

4. Toxic wastes, deleterious substances, colored or other wastes.	None alone or in combination with other substances or wastes in sufficient amounts as to be injurious to edible fish or the culture or propagation thereof, or which in any manner shall adversely affect the flavor, color, odor, or sanitary condition thereof; to make the waters unsafe or unsuitable for bathing or impair the waters for any other best usage as determined for the specific waters which are assigned to this class.
5. Fecal coliform.	Not to exceed a geometric mean of 200/100 ml; nor shall more than 10% of the samples in any 30 day period exceed 400/100 ml.
6. pH.	Shall not vary more than one-half of a pH unit above or below that of effluent-free waters in the same geographical area having a similar total salinity, alkalinity and temperature, but not lower than 6.75 or above 8.5.

CLASS SC

Waters suitable for crabbing, commercial fishing and any other usages except bathing or other shellfishing for market purposes. Suitable also for uses requiring water of lesser quality.

QUALITY STANDARDS FOR CLASS SC WATERS

ITEMS	SPECIFICATIONS
1. Fecal coliform.	Not to exceed a log mean of 1000/100 ml based on five consecutive samples during any 30 day period; nor exceed 2000/100 ml in more than 20% of the samples examined during such period (not applicable during or immediately following period of rainfall).
2. Garbage, cinders, ashes, oils, sludge or other refuse.	None.
3. Dissolved Oxygen.	Not less than 4 mg/l.
4. Toxic wastes, oils, deleterious substances, colored or other wastes.	None alone or in combination with other substances or wastes in sufficient amounts as to be injurious to edible fish or the culture or propagation thereof, or which in any manner shall adversely affect the flavor, color, odor, or sanitary condition of fish or impair the waters for any other best usage as determined for the specific waters which are assigned to this class.

5. pH.	Shall not vary more than one pH unit above or below that of effluent-free waters in the same geographical area having a similar total salinity, alkalinity and temperature but not lower than 6.75 or above 8.5.

I certify that the foregoing action was approved as indicated by the South Carolina Pollution Control Authority in regular session on September 8, 1971, and further that said action is hereby filed with the Secretary of State and the Code Commission of South Carolina on the 10th day of September, 1971, under the authority of South Carolina Law, Section 70-101 through 70-139, as recorded in Vol. 14, Code of Laws of South Carolina, 1962, and supplement thereto.

HUBERT J. WEBB

Hubert J. Webb

Executive Director
Pollution Control Authority

CERTIFIED IN ACCORDANCE
WITH ACT NO. 716 OF 1964
Code Commissioner

In addition to the approval of PCA, Mr. William D. Ruckelshaus, Administrator of the United States Environmental Protection Agency, by letter dated December 23, 1971, to the Honorable John C. West, Governor of South Carolina, approved this Water Classification-Standards System. With this Federal approval these water quality standards fulfill the requirements of the Federal Water Pollution Control Act as well as the State Pollution Control Law. Excerpts from this letter follow:

Honorable John C. West
Governor of South Carolina
Columbia, South Carolina 29211

Dear Governor West:

I am pleased to inform you that I am now approving South Carolina's water quality standards in their entirety, based upon my determination that they are consistent with the protection of the public health and welfare, the enhancement of the quality of the water and the purposes of the Federal Water Pollution Control Act, as provided by Section 10 (c) (3) of the Act. The standards consist of the South Carolina Pollution Control Authority Water Classification-Standards System for the State of South Carolina, adopted September 8, 1971; the use classifications previously approved with the addition of the designation of Upper Piedmont streams contained in paragraph 10-a of the standards which I am now approving; and the previously approved implementation plan. The standards as approved are those applicable under the Federal Water Pollution Control Act, as amended, to the interstate waters of South Carolina . . .

. . . Finally, we are all aware that water quality standards may be subject to change as we acquire new knowledge and understanding of the factors that affect water quality and as existing conditions are improved. The Office of Water Programs looks forward to continuing its cooperation with the Pollution Control Authority for the preservation and enhancement of water quality in South Carolina.

Sincerely yours,

William D. Ruckelshaus
Administrator

APPENDIX II

COMPUTER PRINTOUT

APPENDIX II - COMPUTER PRINTOUT

This Appendix II is reserved for such additional supporting data, if any, as may be appropriate to Sections 2.5 and 2.7.

APPENDIX III

Thermal Tolerances of Selected Fish Species from the Piedmont Carolinas

A Preliminary Draft of a Report in Preparation
by Industrial Biotest Inc. for Duke Power Company
in Connection with the Catawba Nuclear Station
on Lake Wylie, South Carolina

CHAPTER 10

LABORATORY FISH STUDIES

by

John O'H. Rice and J. Fred Krueger

LIST OF TABLES

LIST OF FIGURES

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I. Introduction

The operation of a power plant may affect fish in the plant's intake and discharge areas in several ways. Certain species or life stages of species may be damaged or killed by being washed against the traveling screens of the intake structure. This impingement may be seasonal, depending on water temperature and water velocity at the screens. Differences in temperature between a thermal discharge and the receiving water body may have behavioral effects by attracting or repelling resident fish at different times. The discharge of heated water may ultimately affect the survival of resident fish seasonally by exceeding their upper or lower thermal limits or by gas supersaturation of the discharge water as a result of heating ambient lake water already saturated with gases.

Laboratory physiology studies were designed to augment field fisheries studies by concentrating on the thermal requirements of fish. Field studies yield valuable information concerning fish communities, populations, growth and reproduction, seasonal movements, etc.. Laboratory studies are needed to acquire information impractical or impossible to obtain in the field or which can be obtained in the field only under the most fortuitous circumstances. In the laboratory, each facet of a species' response to temperature can be isolated and tested under controlled conditions. Responses to temperature can be tested under the same controlled conditions at different times to determine changes with season. Also, some thermal requirements of fishes may be outside the range of thermal alteration of the environment, and the safety factor is only

definable in the laboratory. Laboratory and field data combined can be used in the assessment of the effect of an existing power plant but laboratory data are of especial predictive value in the case of a power plant under construction where no direct data are available.

The laboratory studies reported here have two main objectives. The first is to predict whether the use of Lake Wylie water by the Catawba Nuclear Station will affect the survival of fish in the immediate vicinity of the intake and discharge structures. The second is to predict whether the resulting thermal discharge will influence the distribution of fish in the vicinity of the discharge.

II. Summary and Conclusions

This is a laboratory study dealing with the effects of fluctuations in water temperature on various Lake Wylie fishes. Responses considered included swimming performance, survival capabilities (heat shock, cold shock and gas bubble disease) and behavioral (avoidance/preference) responses. The study is intended to provide data for an assessment of fish response to the heated discharge from a proposed Duke Power Company generating facility into Lake Wylie.

Burst and critical swim speeds for seven species of fish were determined at least quarterly. Performance varied with species and temperature. Threadfin shad in the proposed Catawba intake area would be impinged on the traveling screens during the winter months. The predicted intake velocity can be overcome by all species at other times during the year.

Critical thermal maxima (CTMs) were determined for fourteen species. CTMs were lowest in winter, highest in summer, and varied with species. All were found to be above predicted Catawba Station maximum discharge temperatures, indicating that heat shock will not occur.

Cold shock studies and a literature survey indicate that the only species susceptible to cold shock during winter plant shutdown would be the threadfin shad. That threadfin shad are able to overwinter in Lake Wylie has been attributed to the heated effluent of Allen Plant. Winter lake temperatures would otherwise be below their lower lethal limit.

The effects of gas supersaturation on survival were determined for satinfin

shiners, bluegills and largemouth bass. Satinfin shiners were unaffected by oxygen saturation levels of 111%. Bluegills and bass were unaffected at 109% levels. The 5-day median lethal saturation levels were estimated to be 117, 115 and 116% oxygen saturation for the three species, respectively.

Modal preferred temperatures were determined for each of eight species quarterly. Temperature preference varied with acclimation temperature but not in direct proportion. Four species preferred temperatures at or below acclimation during summer months; all other preferred temperatures were above ambient levels. All species tested would be attracted to the proposed Catawba Nuclear Station discharge, especially during winter months.

Upper avoidance temperatures were determined for the same eight species. Except for three experiments, avoidance temperatures were below survival limits. Avoidance temperatures were seen to be directly related to acclimation. Three species had higher avoidance temperatures in the fall than in the spring when acclimation temperatures were similar. Golden shiners during summer months would be repelled by predicted discharge temperatures at the proposed Catawba Nuclear Station.

III. Field and Analytical Procedures

A. Experimental Fish

All experimental fish were collected from Lake Wylie by seining, electroshocking or trapping. A 35 foot long, 1/4 inch mesh seine was used to capture most individuals of 12 of the 14 species tested. The shoreline was seined at several of 15 different locations at approximately weekly intervals. Hauls were made in late afternoon or early evening in the Beaver Dam Creek and Catawba Station intake site embayments as well as in the area of the Upper Armstrong Bridge. Electroshocking was the primary capture method for several species and was used to supplement collections of seined fish with larger individuals. Collections were made as needed during daylight hours in the Catawba Station intake and discharge site areas. Traps were set at several sites but generally failed to yield usable numbers or sizes of fish.

Captured fish were placed in a cooler of water from the collection site and taken to the laboratory where both field and constant temperature acclimation systems were available. For field acclimation, fish were held in 1/4 inch mesh net live boxes measuring 4 feet x 4 feet x 4 feet suspended from a dock in Lake Wylie. Threadfin shad and white catfish, two species unable to adapt to the live boxes, were maintained in a 250 gallon circular fiberglass tank supplied with running lake water. Recovery times allowed before testing of seined fish ranged from 12 hours to 4 days. At least three days recovery time was allowed for fish collected by electroshocking.

Temperatures in the live boxes were continuously recorded using a

Honeywell Electronik 16 strip chart recorder with a sensor placed in one of the live boxes. Acclimation temperature ranges were noted daily and the previous 5 days acclimation temperature ranges used to define the acclimation of each test group. Field acclimated fish were used in heat shock, temperature preference, temperature avoidance and swim speed studies.

Fish to be acclimated to constant temperatures were placed in a 40 gallon rectangular fiberglass tank receiving a constantly circulating supply of lake water from a larger reservoir. Temperature was controlled by cooling the larger reservoir with a 1/3 or 1 horsepower refrigeration unit. Fish acclimated in this way were used in cold shock and gas bubble disease studies.

B. Performance Studies

A performance tunnel similar to that described by Griffith (1968) was used to obtain swimming speed data (Figure 10-1). The apparatus is an open loop of some 299 gallons capacity. Water is pumped into a fiberglass pipe from a header box by a propeller driven by a variable speed D. C. motor of 3/4 horsepower. The water is forced through a set of screens into a 5 inch diameter clear plexiglass swimming chamber 18 inches in length. At the rear of the chamber are three graphite rings connected to a source of low-voltage A. C. to provide an electroshock stimulus to the fish.

Behind the rings, where the tunnel empties into the header box, either a screen or a chute may be fitted over the end of the tunnel. The header box contains three 4000 watt, 240 volt heaters, which when operated in unison are capable of raising the water temperature of the tunnel 1.0 C (1.8 F) each

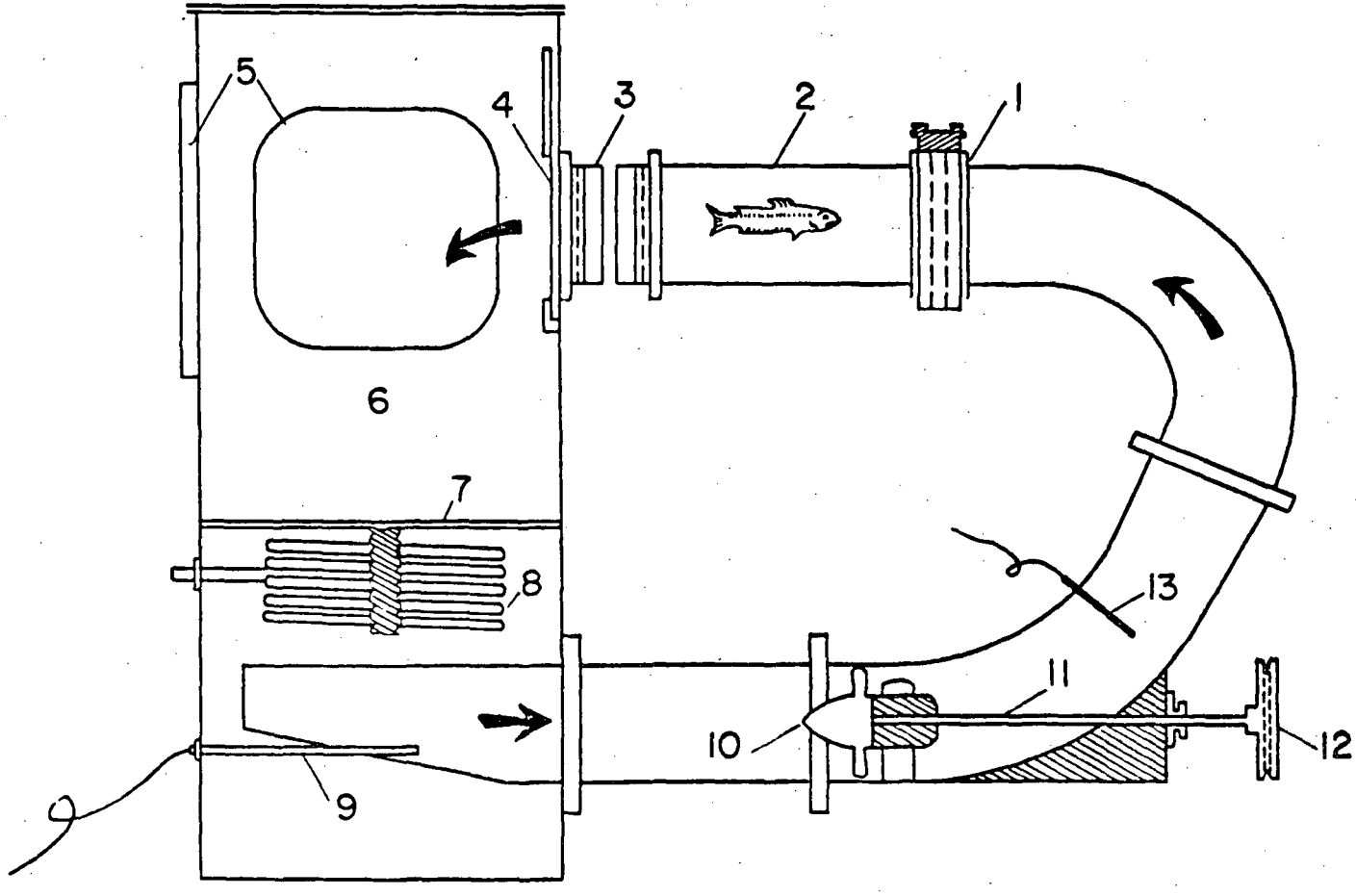

Figure 10-1. Performance tunnel; (1) screen box, (2) test chamber, (3) shocking electrodes, (4) screen, (5) windows, (6) head tank, (7) screen, (8) chilling coil, (9) heater, (10) propeller, (11) drive shaft, (12) drive pulley, (13) thermistor.

2 1/2 minutes. One of these heaters may be operated independently with a thermostat to provide precise temperature control. Speeds up to a maximum of 100 cm/sec are obtainable. Speed calibration is obtained with a pitot-tube manometer system. Speeds in cm/sec may also be read directly from an electric tachometer.

A method similar to that described by Brett (1965) was employed to determine critical swimming speeds. This is the greatest speed which a fish can maintain for a period of moderate length (45 minutes or less) as contrasted with burst speed, which is the maximum velocity a fish can achieve.

From one to ten fish, depending on size, were placed in the swimming chamber at their acclimation temperature for approximately 30 minutes. An introductory water velocity of from 1/2 to 1 body length/sec was maintained. At the end of the introductory period, speed was increased by approximately 5 cm/sec. Similar velocity increases were imposed each 45 minutes. As individual fish fatigued and were washed against the screen, they were removed. The test was continued until all fish had fatigued. Critical swimming speeds were then calculated for each fish according to the following formula:

$$\text{Critical speed} = \text{Last recorded speed} + \frac{\text{time at new increment}}{\text{increment of speed}} \times$$

That is to say, if a fish fatigued after swimming at 60 cm/sec for 15 minutes, and if the speed increments were 10 cm/sec, the critical speed would equal 50 cm/sec + (15 min/45 min x 10 cm/sec) = 53.3 cm/sec. The data were then averaged for each test.

A series of similar tests was conducted employing time increments of 2 minutes between velocity increases to permit a graphic estimate of burst speed.

C. Survival Studies

1. Heat Shock Studies

Heat shock tests were conducted in 22 or 150 liter fiberglass tanks (Figure 10-2), depending on the size of the fish.

Heat tolerance was evaluated on the basis of the critical thermal maximum (CTM). The general procedure for determination of the CTM as developed by Huntsman and Sparks (1924) was followed. Groups of five fish selected at random from the appropriate acclimation tank were transferred to test tanks containing water at the acclimation temperature. Water temperature was then increased at a rate of 0.3 C/minute. The temperature at which each fish lost equilibrium was recorded, the mean of these observations being the CTM.

2. Cold Shock Studies

The effects of a sudden plant shutdown on survival were evaluated by first acclimating fish to the maximum winter temperature predicted for the Catawba Station discharge plume. Groups of 10 fish were then transferred abruptly to temperatures corresponding to the annual lake minimum (Dr. Arnold Gnilka, Biologist, Duke Power Company, personal communication). Each group was inspected daily and the dead fish removed. Percent survival was calculated at the end of 14 days on the basis of those fish which had exhibited complete recovery from the effects of cold shock.

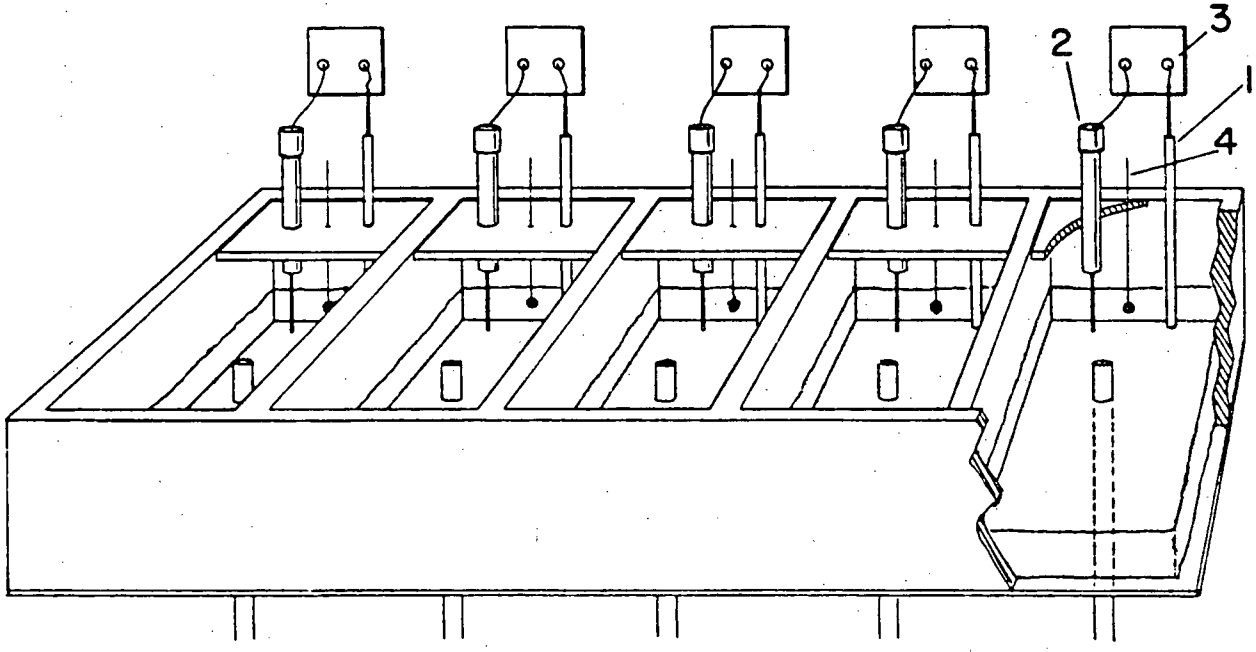

Figure 10-2. Temperature tolerance apparatus; (1) quartz heater, (2) mercury thermoregulator, (3) relay, (4) airstone.

3. Gas Bubble Disease Studies

The potential occurrence of gas bubble disease and its effect on fishes resident to a heated effluent were studied during the winter and early spring months (December through April). Gas supersaturation levels which might occur in the Catawba Nuclear Station discharge were predicted from plume models supplied by Duke Power Company.

The susceptibility to gas bubble disease of species anticipated to reside in the discharge area during winter months was determined in the laboratory following standard bioassay procedures. The test apparatus is diagrammed in Figure 10-3. Controlled levels of gas supersaturation were achieved by utilizing the differential solubility of gases in waters of various temperatures. The method employed in this study duplicates those physical processes which cause gas supersaturation in a steam generating facility.

Lake water contained in a reservoir was saturated with gases at constant temperature by refrigeration. The water was then circulated through two coils immersed in heated baths, raising the temperature and decreasing the carrying capacity for dissolved gases accordingly. This heated water, super-saturated with gas, was then delivered to three 22-liter test tanks.

Dissolved gas concentrations ranging from 105 to 130% supersaturation were employed. The apparatus was first adjusted to deliver water at the desired level of saturation. Groups of 10 fish of the test species were selected at random and constant temperature acclimated to 5C. Fish transferred from ambient lake water to gas supersaturated water experienced an increase in

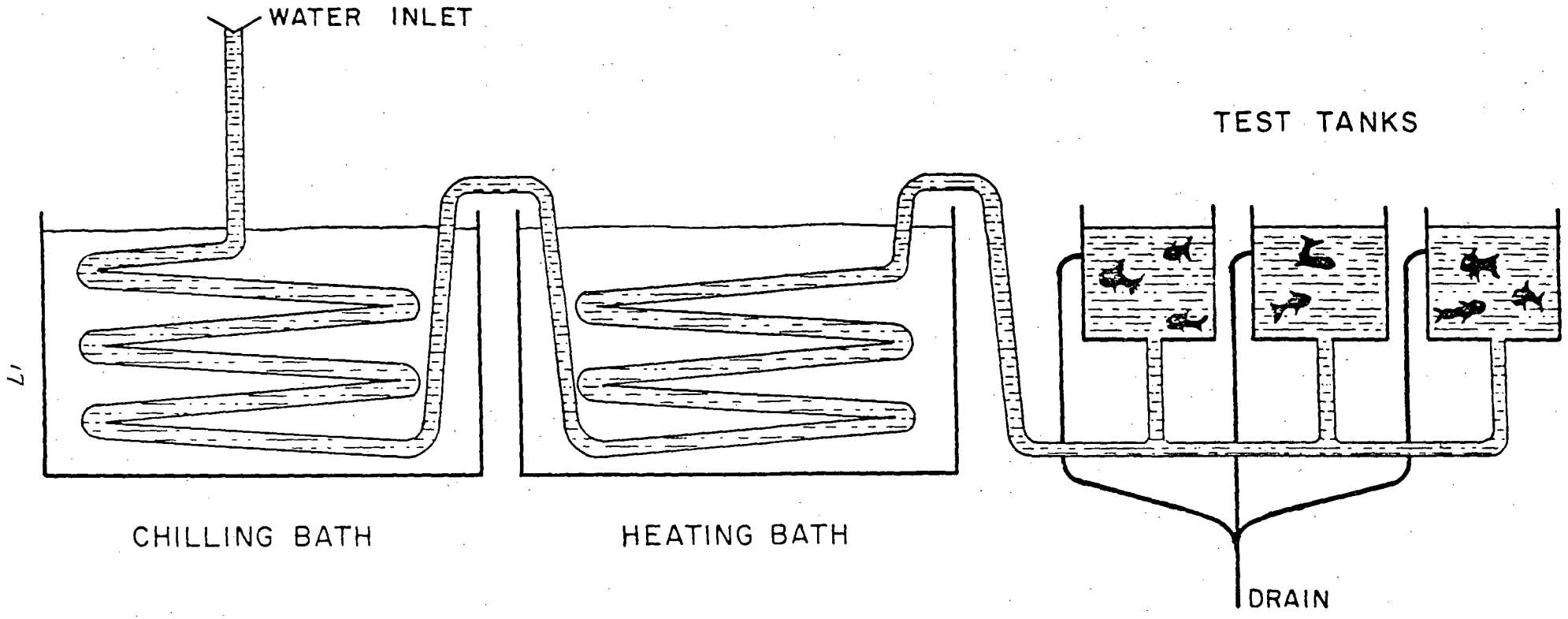

Figure 10-3. Gas supersaturation apparatus.

temperature similar to that which a fish in the natural environment would experience when moving from ambient lake conditions to a comparable level of gas supersaturation in a thermal plume.

The fish were observed for five days. Onset of any external symptoms of gas bubble disease including bubbles in the fins and gills, exophthalmus or popeye, and hemorrhaging around eyes, jaw and gills was noted. Levels of dissolved oxygen were measured at regular intervals using the modified Winkler method. In computing results, all mortality data were reduced to 24 hour increments in accord with standard bioassay procedure (A. P. H. A. et al. 1960).

D. Behavioral Studies

1. Temperature Preference

The preferred temperatures of fish were determined using a vertical temperature gradient. Fish responses were evaluated in a 200 gallon cylindrical tank having a height of 36" and a diameter of 48" (Figure 10-4). A glass pane (30" x 24") was set into the side of the tank. Horizontal lines on the pane at 3" intervals divided the tank into nine compartments for observational purposes. Two coils of aluminum tubing (1/4" I. D.) were suspended at the inside periphery of the tank. The top coil received water from a water heater; water entering the top of the coil and passing to the drain from the bottom. The lower coil received water from a refrigerated bath; water entering the coil at the bottom and passing to the drain from the top. Lighting was supplied by a 200 watt incandescent bulb suspended over the tank center and wired to a dimmer

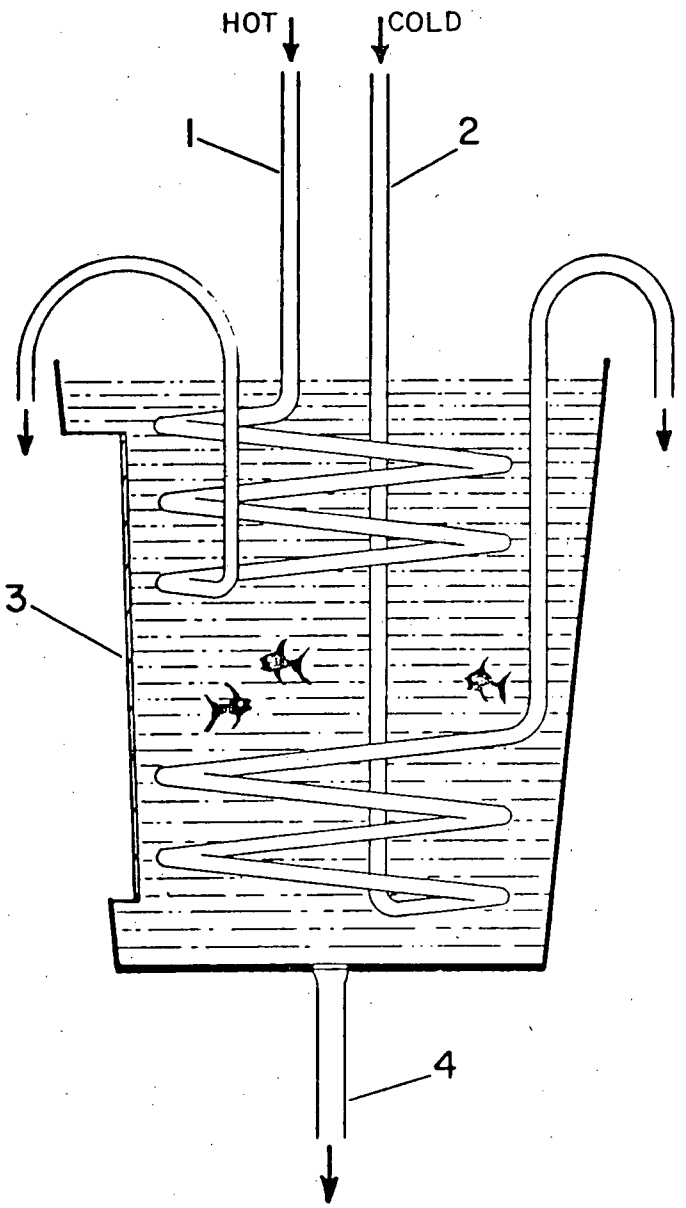

Figure 10-4. Vertical temperature gradient apparatus; (1) hot water input, (2) cold water input, (3) window, (4) drain.

switch. Vertical water temperature profiles were measured with a series of eight thermistors suspended at four inch intervals at the tank center. The entire apparatus was enclosed in a light-proof room.

The tank was filled with water drawn directly from Lake Wylie. During periods of high turbidity, water was first passed through a cellulose filter. Water temperature was adjusted to correspond with the acclimation state of the particular test group. The light was dimmed until the thermistor probes were barely visible at the tank center. A group of five fish were selected from the acclimation tank and introduced to the gradient tank. Temperature differences between acclimation and test tanks were held to less than 1.0C (1.8F) to the greatest extent possible.

Fish were held in the test tank (isothermal at the acclimation temperature) for 2 to 16 hours prior to establishing a temperature gradient. The duration of this period varied with the test species. The light was gradually turned up during this adjustment period until the aluminum coils at the rear of the tank were barely visible.

A set of control observations were made to evaluate fish response to a neutral (no temperature gradient) situation. Vertical position of each fish was recorded at 30 second intervals for ten minutes (100 total observations). A temperature gradient was then established by circulating heated and chilled water through the two aluminum coils. In general, gradient dimensions extending from the acclimation temperature of the test fish to the approximate upper incipient lethal temperature were employed.

Five sets of observations were made to evaluate response to a thermal gradient. The position of each fish was recorded at 30 second intervals for ten minutes in each set. Gradient dimensions were altered periodically to insure that the vertical distribution of fish related to the temperature gradient rather than some extraneous factor.

Data collected for each group of five fish consisted of 100 observations under control (isothermal at the acclimation temperature) conditions and five sets of observations (500 total) taken under test (gradient) conditions. Observations on two groups of five fish (two controls, ten test gradients) were considered a test series.

A histogram of fish distribution by compartment was prepared for each set of observations and transformed by eye to a continuous distribution (Figure 10-5). This continuous distribution of fish position was then compared to the temperature gradient to determine the modal preferred temperature (temperature or position in the gradient most frequented by the fish). Means were calculated for each test series, considering each set of observations to be independent.

2. Temperature Avoidance

The avoidance response of fish exposed to high temperatures was evaluated in a +/- choice apparatus (Figure 10-6), a rectangular tank 6 feet long, 1 foot wide and 1 foot deep divided into two compartments by a drain at the center. Water entered the tank through pipes at each end and flowed toward

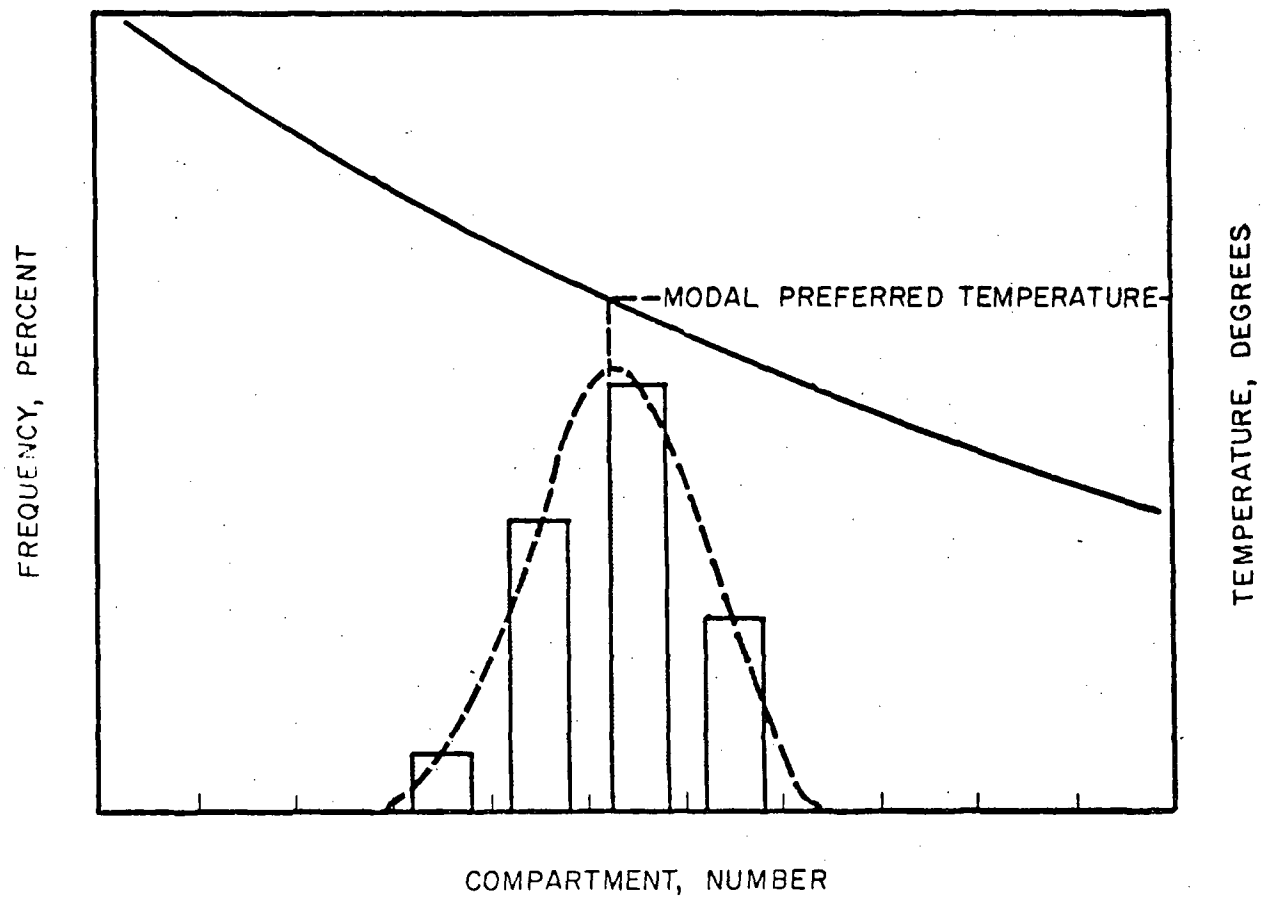

Figure 10-5. Diagnostic interpretation of fish distribution in a temperature gradient.

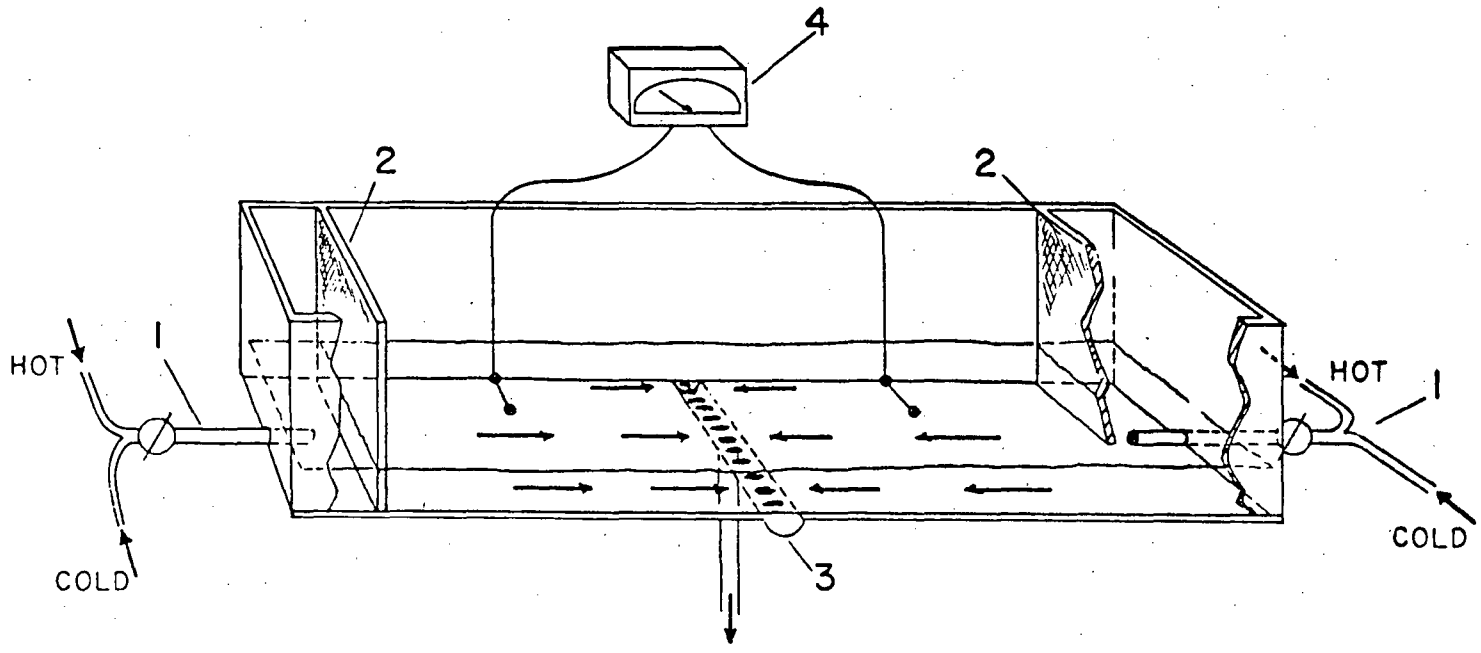

Figure 10-6. +/- choice apparatus; (1) water inputs, (2) screen, (3) drain, (4) thermistor-thermometer.

the center drain. Depth was controlled by varying the height of an external overflow device. During testing, temperatures in each compartment were regulated by heating and/or chilling Lake Wylie water. Thermistors were located in each compartment to monitor water temperatures. Lighting was supplied by fluorescent tubes mounted overhead. The apparatus was housed in a black plastic enclosure with fish viewed through peepholes located in the end of the enclosure.

The apparatus was filled with water at a temperature corresponding to the acclimation state of the test fish. Flow rates in each compartment were maintained at 0.5 to 1.5 gpm. Five fish were selected from the acclimation tank and transferred to the +/- choice apparatus. Fish were allowed 30 minutes to adjust to the new surroundings. Temperature in one compartment was then raised by 2.0 to 4.0 C (3.6 to 7.2 F). A 15 minute period was allowed for the fish to explore the new situation. The position of each fish was then recorded continuously (by compartment) for a period of 5 minutes followed by a short period and another 5 minute observation period.

Temperatures in both compartments were then increased by 2.0 to 4.0 C. This sequence (temperature increase - adjustment period - observation) was continued until the fish no longer entered the warmer compartment.

IV. Results and Discussion

A. Intake and Discharge Characteristics of the Proposed Catawba Nuclear Station

The station intake structure will be located at the end of a cove off Beaver Dam Creek. It will consist of a platform supporting intake pumps and pipes protected by traveling screens with 3/8 inch square openings and vertical trash racks. A predicted maximum of 358 cfs water will be drawn from Lake Wylie for station service water and cooling tower makeup. The predicted maximum intake velocity at the trash racks will be 15.3 cm/sec. The predicted maximum velocity in the intake cove itself will be 3.1 cm/sec (Dr. Arnold Gnilka, Bilogist, Duke Power Company, personal communication).

The discharge structure will be located at the end of a cove off Big Allison Creek, 5-6 miles around the peninsula from the intake. Discharge will consist of service water and cooling tower blowdown at a rate of approximately 290 cfs in summer and 145 cfs in winter. The temperature increase due to station use will be 4.7 C from April to September and 8.6 C from October to March (Duke Power Company, 1973). Water velocities in the area of the discharge are unknown, but irregularities in the shoreline of the discharge cove should reduce flows enough so that any fish attempting to enter the cove would not be deterred by water velocity.

B. Annual Water Temperature Cycle

Laboratory acclimation temperatures (Table 10.1) were generally slightly warmer than the mean temperatures at the intake of the Allen Station

Table 10.1. Acclimation temperature ranges at fish physiology laboratory, September 1973 to August 1974.

Month Year	Sep 1973	Oct 1973	Nov 1973	Dec 1973	Jan 1974	Feb 1974
Estimate Mean Temperature, °C	26.5[a]	23.1	15.6	9.5	9.5	10.7
Observed Minimum, Maximum, °C	25.5 28.0	18.0 29.0	13.0 20.0	5.5 10.5	7.0 13.0	7.0 14.0

Table 10.1. (continued)

Month Year	Mar 1974	Apr 1974	May 1974	Jun 1974	Jul 1974	Aug 1974
Estimated Mean Temperature, °C	15.2	18.1	24.2	26.9	28.3	28.8
Observed Minimum,	9.5	14.5	19.5	24.5	25.0	26.5
Maximum, °C	19.5	25.0	30.5	30.5	32.0	32.0

[a] Last ten days of month only.

(Figure 10-7). From October to December 1973, lake temperatures declined from 27-29 C to a winter low of 5-7 C. Daily temperature ranges were narrow, typically 2-3 C per day, and were stable at approximately 15 C for a 20 day period in November 1973. Temperatures during January and February 1974 were all between 7 C and 14 C; estimated means were close to 10 C. Slow warming took place through March, April and May 1974 and water temperatures approximated 25 C at the end of May. Daily temperature ranges were wide, typically 4-5 C per day, and were subject to rapid change due to weather. Temperatures during June through August 1974 were in the range of 25-30 C, with summer highs of 32 C.

C. Lake Wylie Fish Populations

As part of the Field Fisheries Study (Chapter 2), thirty-eight fish species were collected in Lake Wylie (Table 10.2). Fourteen of the common to abundant species were used in the laboratory studies (Table 10.3). The centrarchids (bass and sunfish) and white catfish are members of the Lake Wylie sport fishery. Shad and minnows are representatives of the forage fish communities in Lake Wylie.

The threadfin shad is a forage fish species not indigenous to Lake Wylie. Threadfins were introduced in 1961 and are considered to be successfully established in spite of extensive mortality due to low temperatures during winter months (McNaughton 1967; Miller and DeMont, 1972; Parsons and Kimsey, 1954; Strawn 1965). McNaughton (1967) attributed the prevention of total

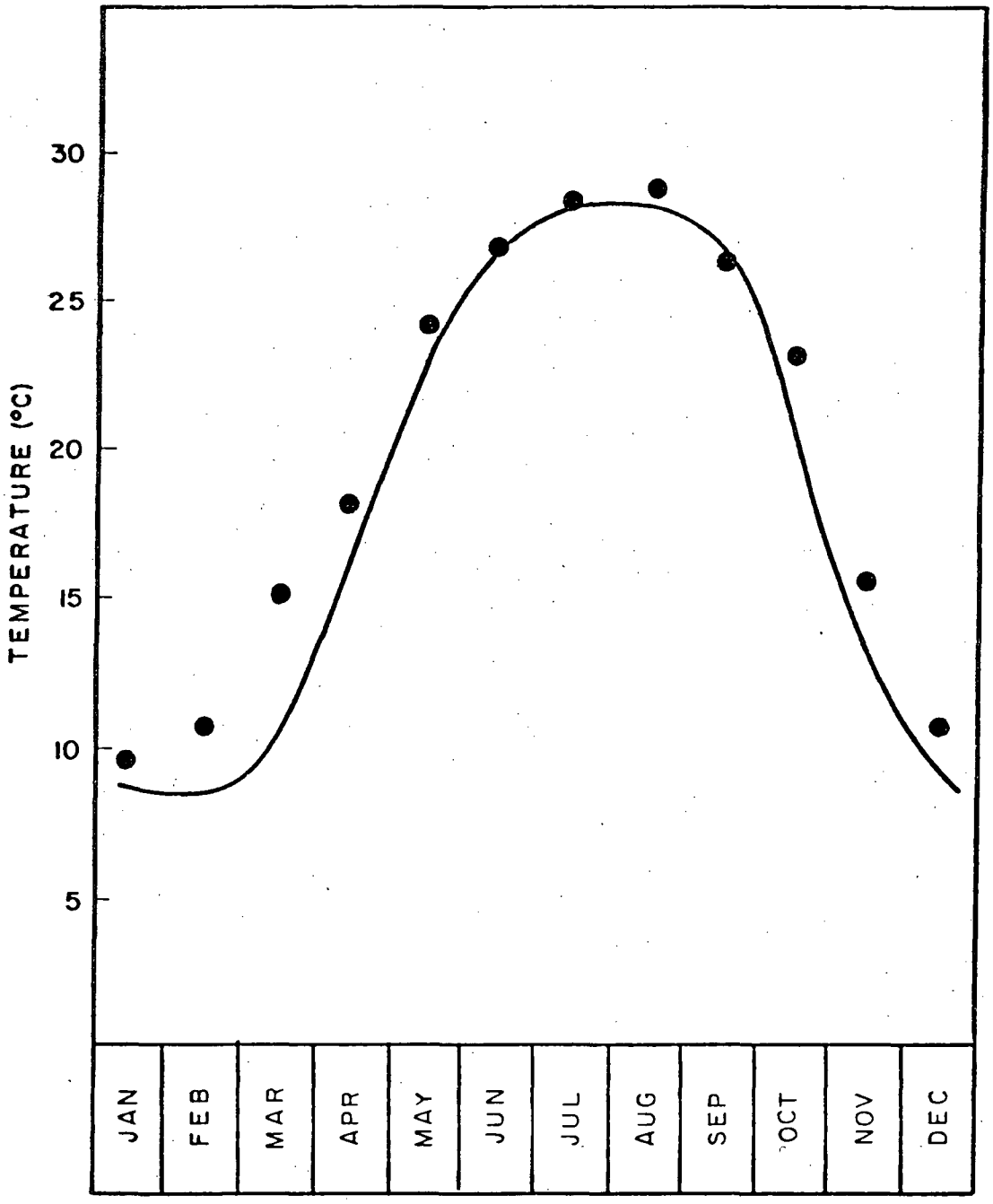

Figure 10-7. Annual temperature cycle at Allen Plant (Duke Power Company, 1973) intake (line) and estimated mean temperatures in fish physiology live boxes (dots).

Table 10.2. List of fish species inhabiting Lake Wylie.

Common Name	Scientific Name	Relative Abundance
Longnose gar	Lepisosteus osseus	Common
Bowfin	Amia calva	Rare
Gizzard shad	Dorosoma cepedianum	Abundant
Threadfin shad	Dorosoma petenense	Abundant
River carpsucker	Carpiodes carpio	Rare
Quillback	Carpiodes cyprinus	Common
White sucker	Catostomus commersoni	Uncommon
Creek chubsucker	Erimyzon oblongus	Rare
Smallmouth buffalo	Ictiobus bubalus	Uncommon
Bigmouth buffalo	Ictiobus cyprinellus	Rare
Shorthead redhorse	Moxostoma macrolepidotum	Common
Suckermouth redhorse	Moxostoma pappillosum	Rare
Smallfin redhorse	Moxostoma robustum	Rare
Goldfish	Carassius auratus	Rare
Carp	Cyprinus carpio	Uncommon
Silvery minnow	Hybognathos nuchalis	Uncommon
Golden shiner	Notemigonus crysoleucas	Common
Satinfin shiner	Notropis analostanus	Common
Spottail shiner	Notropis hudsonius	Uncommon
Bluehead chub	Nocomis leptocephalus	Rare
White catfish	Ictalurus catus	Abundant
Yellow bullhead	Ictalurus natalis	Rare
Brown bullhead	Ictalurus nebulosus	Common
Flat bullhead	Ictalurus platycephalus	Uncommon
Channel catfish	Ictalurus punctatus	Common
Mosquitofish	Gambusia affinis	Common
White bass	Marone chrysops	Uncommon
Rock bass	Ambloplites rupestris	Rare
Redbreast sunfish	Lepomis auritus	Common
Pumpkinseed	Lepomis gibbosus	Common
Warmouth	Lepomis gulosus	Uncommon
Bluegill	Lepomis macrochirus	Abundant
Redear sunfish	Lepomis microlophus	Uncommon
Largemouth bass	Micropterus salmoides	Common
White crappie	Pomoxis annularis	Uncommon
Black crappie	Pomoxis nigromaculatus	Uncommon
Johnny darter	Etheostoma nigrum	Uncommon
Yellow perch	Perca flavescens	Common

Taxonomic order after American Fisheries Society, 1970.

Table 10.3. Summary of data collected during the four quarters September-November 1973, December 1973-February 1974, March-May 1974 and June-August 1974.

Species	Test: / Quarter:	CTM 1 2 3 4	Preference 1 2 3 4	Avoidance 1 2 3 4	Swim Speed 1 2 3 4
Largemouth bass		X X X X	X X X X	X X X X	X X X X
Bluegill sunfish		X X X X	X X X X	X X X X	X X X X
Pumpkinseed		X X X X	X X X X	X X X X	X X X X
Redbreast sunfish		X X X X	X X X X	X X X X	
Warmouth		X X X X			
Redear sunfish		X			
Gizzard shad		X X X X	X		
Threadfin shad		X X X X	X X X X	X X X X	X X X X
Golden shiner		X X X X	X X X X	X X X X	X X X X
Satinfin shiner		X X X X	X X X X	X X X X	X X X X
Silvery minnow		X X X X			
Yellow perch		X X X X	X X X X	X X X X	X X X X
Mosquitofish		X X X			
White catfish		X X			

X = sufficient numbers collected to permit testing.

threadfin winter mortality in Lake Wylie to availability of the heated discharge from the Allen Station.

Ingress and egress of all species in Lake Wylie is restricted by dams so that all species are present throughout the year. Spatial distributions of various species within the lake vary daily and seasonally with regard to feeding, spawning and other activities. During spring and early summer, inshore spawning may bring large numbers of a particular species close to the intake and discharge zones of influence of a power plant. At other times, the same species may be found in deep water, unaffected by plant activities. Thus, the effects of a power plant may be experienced intermittantly, and need not be applied to all species at all times.

D. Performance Studies

General considerations: Performance studies were conducted for two reasons. First, any use of lake water in a power plant produces a current at the intake structure. Fish will be in the intake area for various reasons and their ability to escape impingement on the intake screens is governed, at least in part, by their ability to overcome the intake water velocity. Secondly, the discharge of a heated effluent produces currents at the discharge point. If fish are attracted to the discharge, their ability to maintain themselves in the current governs the extent to which they may make use of the plume. The objective of performance studies was to determine the burst and critical swim speed of representative fish as affected by water temperature (season).

Observations: Swim speed studies were performed with seven species (Table 10.4, Figures 10-8 to 10-15). Curves for the critical and burst speeds determined were similar to the results of others (Griffith and Alderdice, 1972; Fry, 1967; Johnson and Charlton, 1960; Graham, 1949). Typically, swim speed increases with acclimation temperature until a temperature is reached at which the highest speeds are attained. At acclimation temperatures above this temperature, performance declines. The temperature at which peak performance occurs varies with species. In some cold water species, the peak in performance occurs at 15 to 20 C (Brett, Hollands and Alderdice, 1958; Gibson and Fry, 1954). In several warm water species, the peak occurs between 20 and 30 C; (Larimore and Duever, 1968; Fry, 1967; Johnson and Charlton, 1960). Since this study deals with warm water species and Lake Wylie acclimation temperatures in the 10 to 30 C range, the full performance curve for each species was not expected. Peaks in performance are suggested for several species by swim speeds equal to or slightly less than the preceding test at a lower acclimation temperature. This was observed (Figures 10-9, 10-10, 10-12, 10-15) for golden shiners, satinfin shiners, bluegills and perch.

Performance is, of course, affected by the size of the fish as well. Figure 10-16 shows the results of a size effect study with bluegills. A total of 27 fish were tested at the same acclimation and test temperatures and the data grouped in 1 cm size classes. The critical swim speed or absolute performance increased with length of the fish. The speed in body lengths per second, or relative performance, decreased as length increased. This same

Table 10.4. Summary of swim speed data for field acclimated Lake Wylie fish. All swim speeds are in centimeters per second.

Species	Swim Speed	Month											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Threadfin shad	Burst		14.9		44.0								
	Critical		12.4		36.5			44.9			47.4		
Golden shiner	Burst		31.5		37.5		44.0				44.0	44.0	
	Critical		20.6		28.9		37.6	36.9			35.1	32.1	
Satinfin shiner	Burst	36.0		42.0		60.0	55.0					55.0	
	Critical	20.4		36.4		48.4	47.0					37.9	
Largemouth bass	Burst		32.0		50.0				44.5		28.8		
	Critical	23.9	15.6		37.5				26.7	27.1			
Bluegill	Burst	32.0		33.0			35.5				26.2		
	Critical	15.2		19.0		25.8	23.6				18.6		
Pumpkinseed	Critical		12.5	18.6		25.0		27.5			18.3		
Yellow perch	Burst	23.5										36.0	
	Critical	19.7				29.0			23.7			21.5	
Estimated Mean Temperature, °C		9.5	10.7	15.2	18.1	24.2	26.9	28.3	28.8	26.5	23.1	15.6	9.5
Observed minimum,		7.0	7.0	9.5	14.5	19.5	24.5	25.0	20.5	25.5	18.0	13.0	5.5
maximum, °C		13.0	14.0	22.5	25.0	30.5	30.5	32.0	32.0	28.0	29.0	20.0	10.5

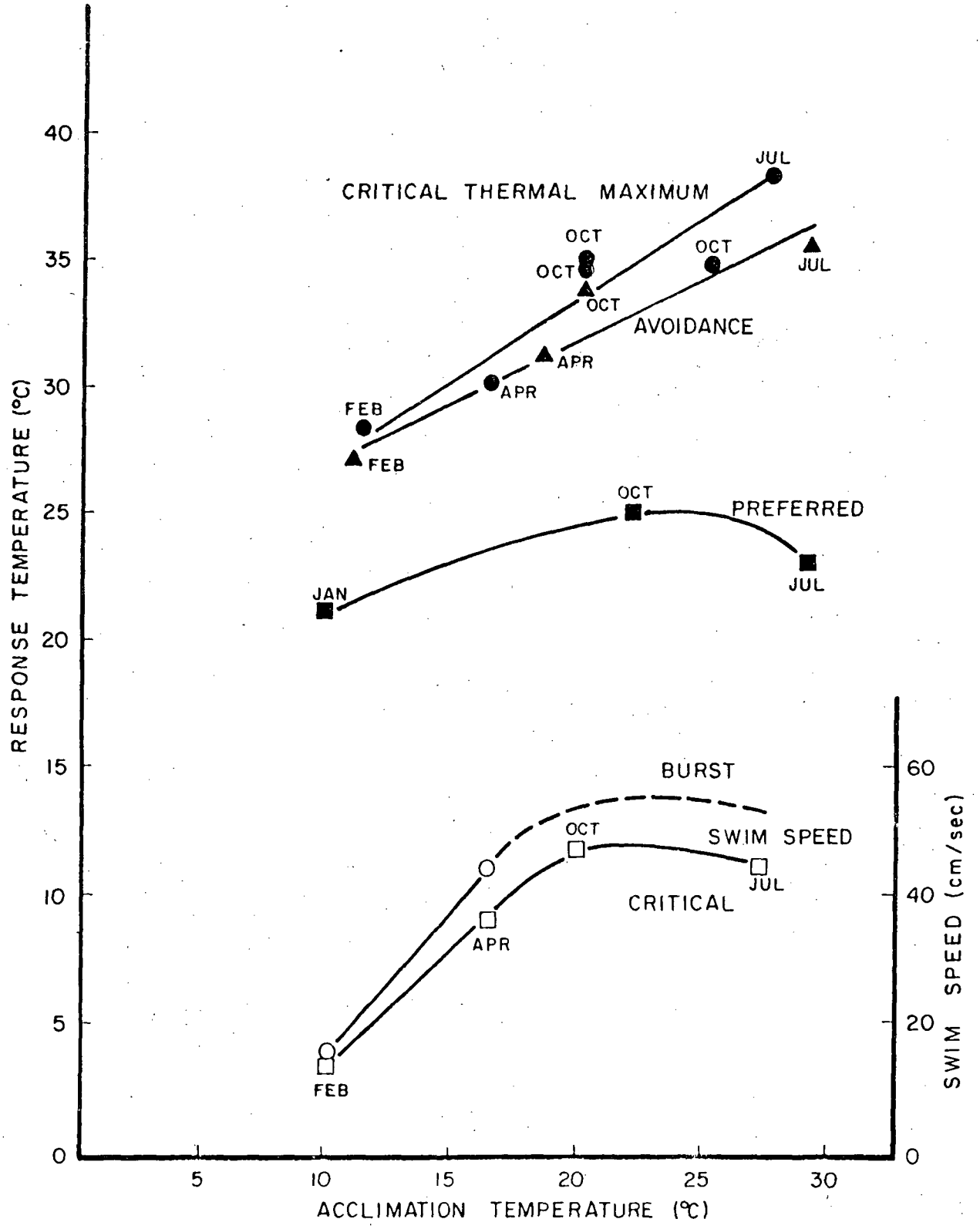

Figure 10-8. Effects of acclimation temperature on threadfin shad.

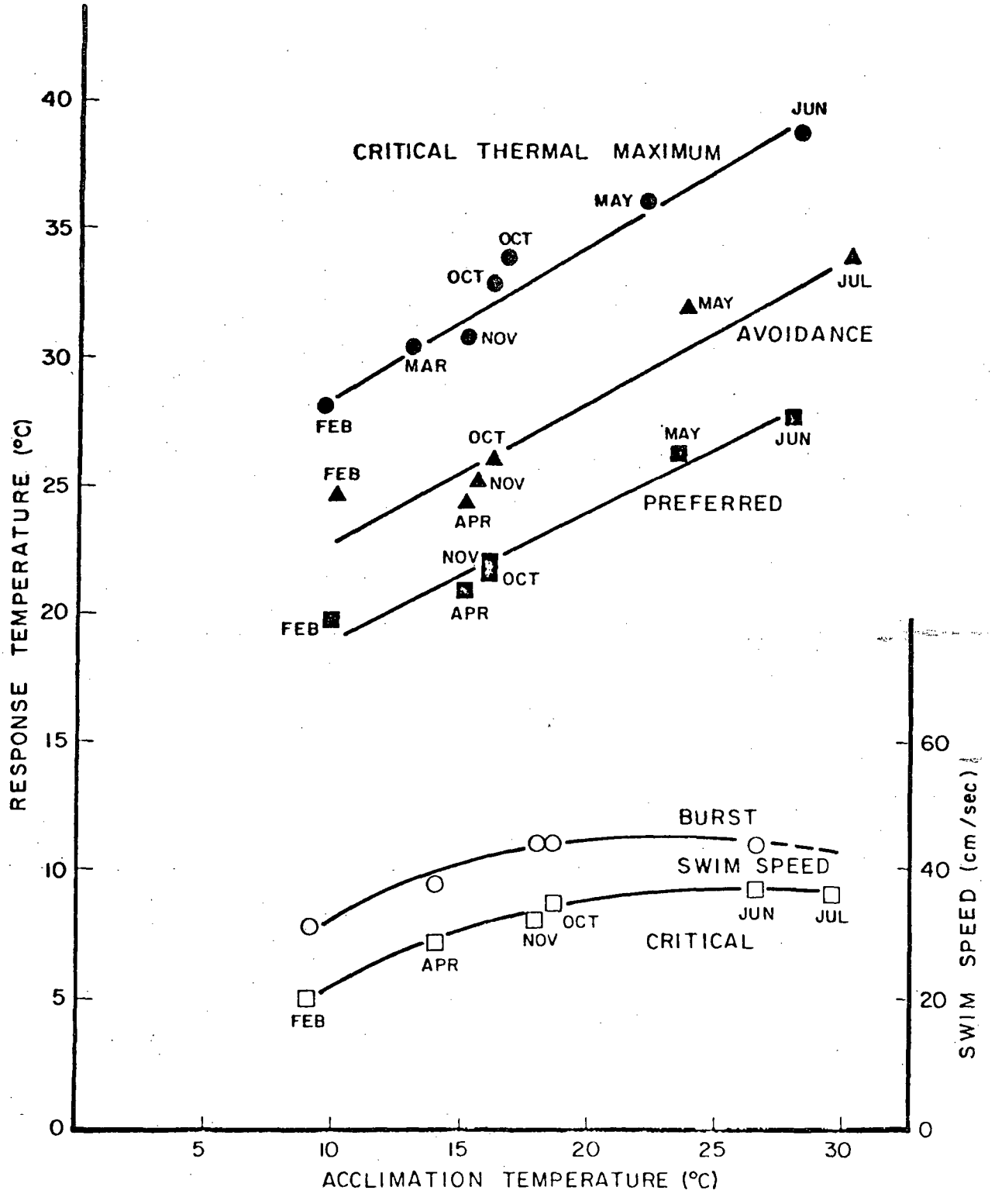

Figure 10-9. Effects of acclimation temperature on golden shiners.

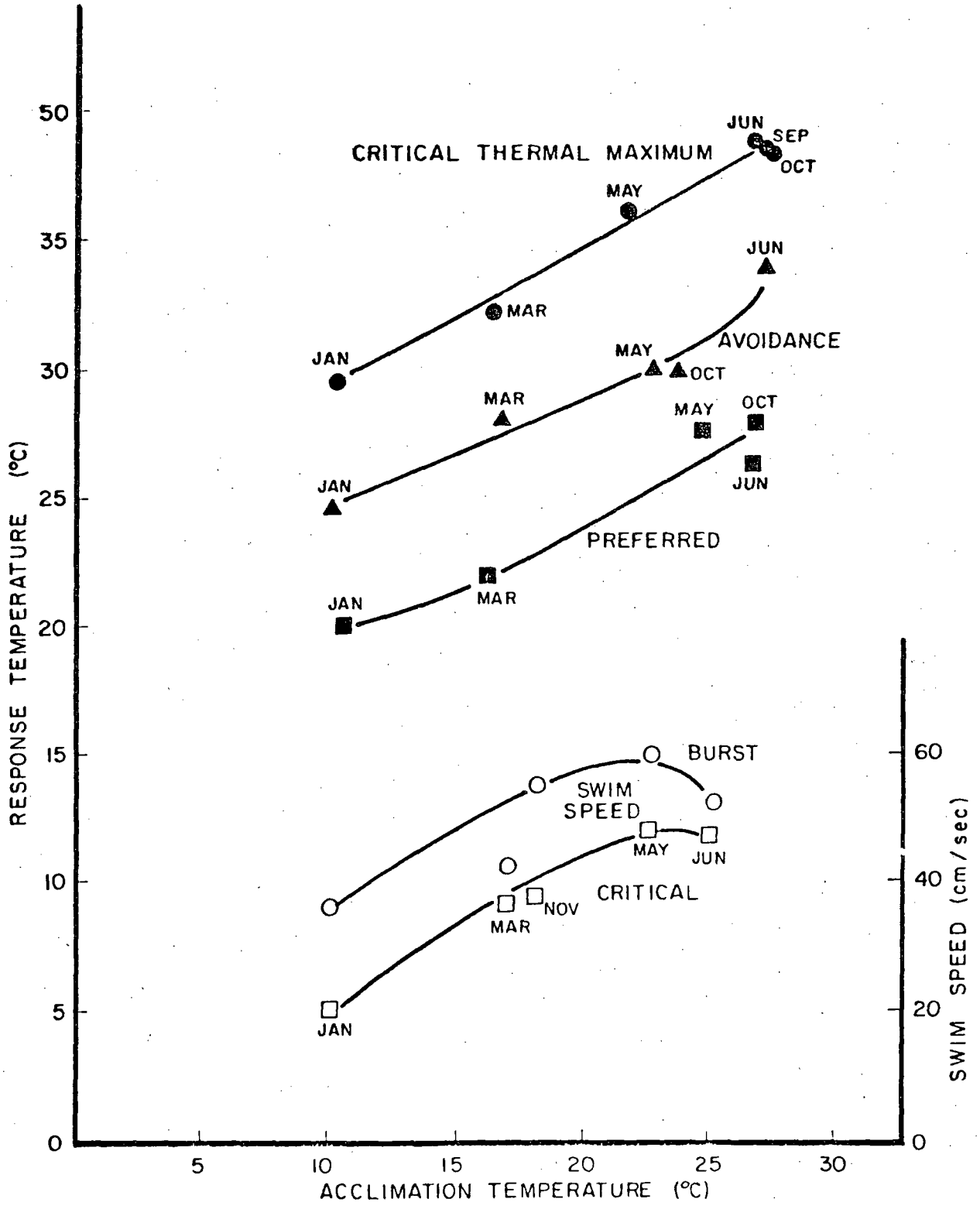

Figure 10-10. Effects of acclimation temperature on satinfin shiners.

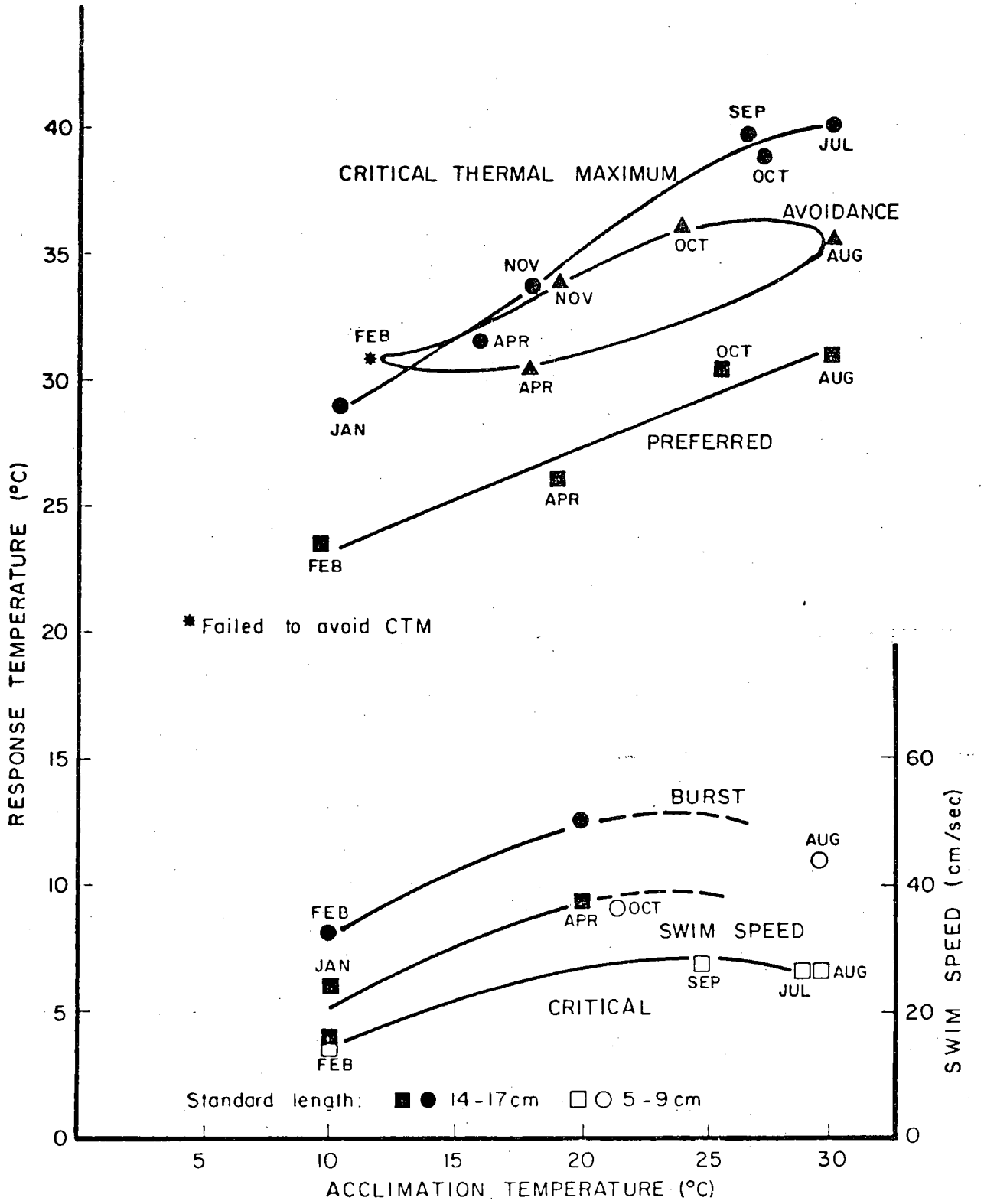

Figure 10-11. Effects of acclimation temperature on largemouth bass.

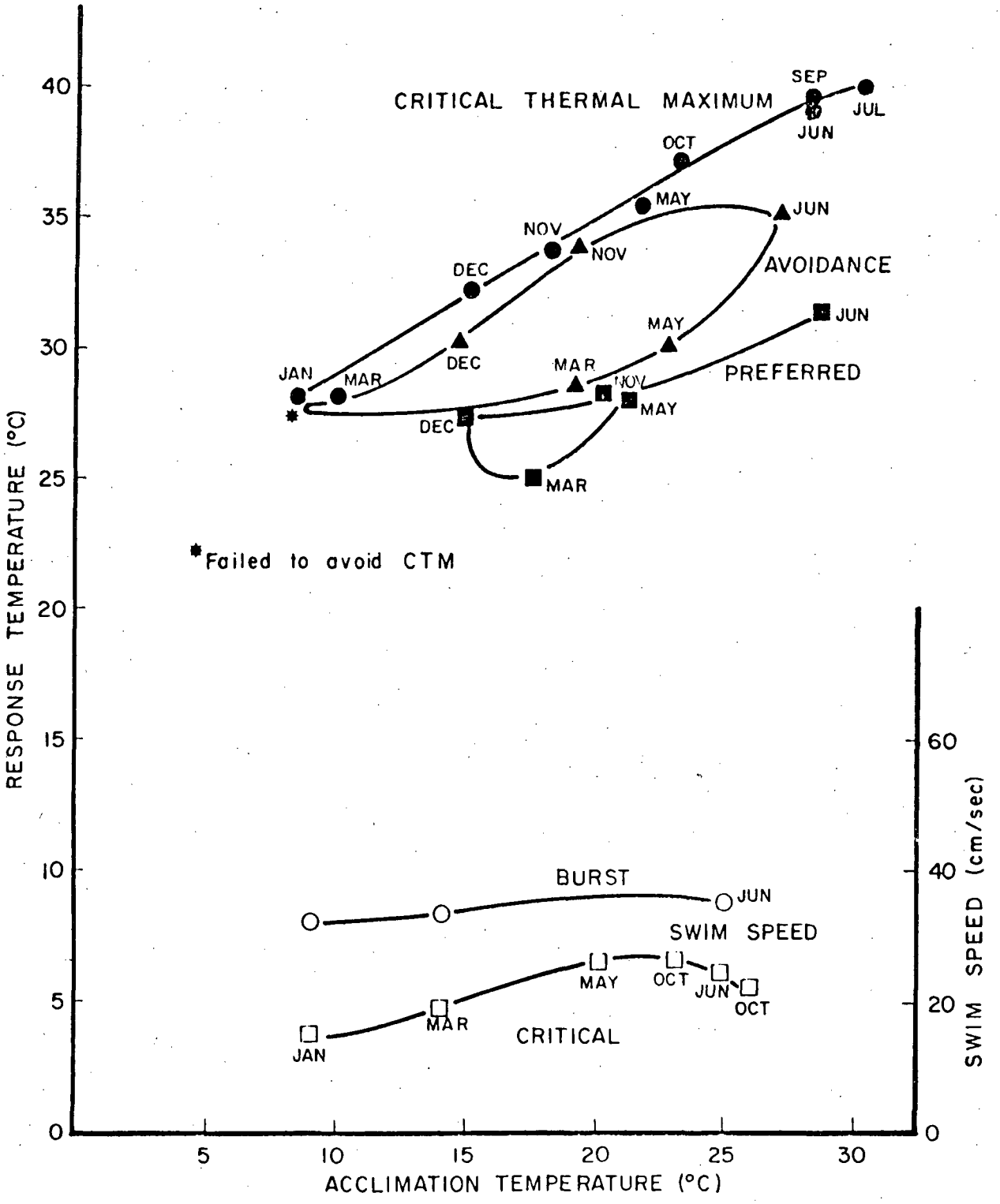

Figure 10-12. Effects of acclimation temperature on bluegill.

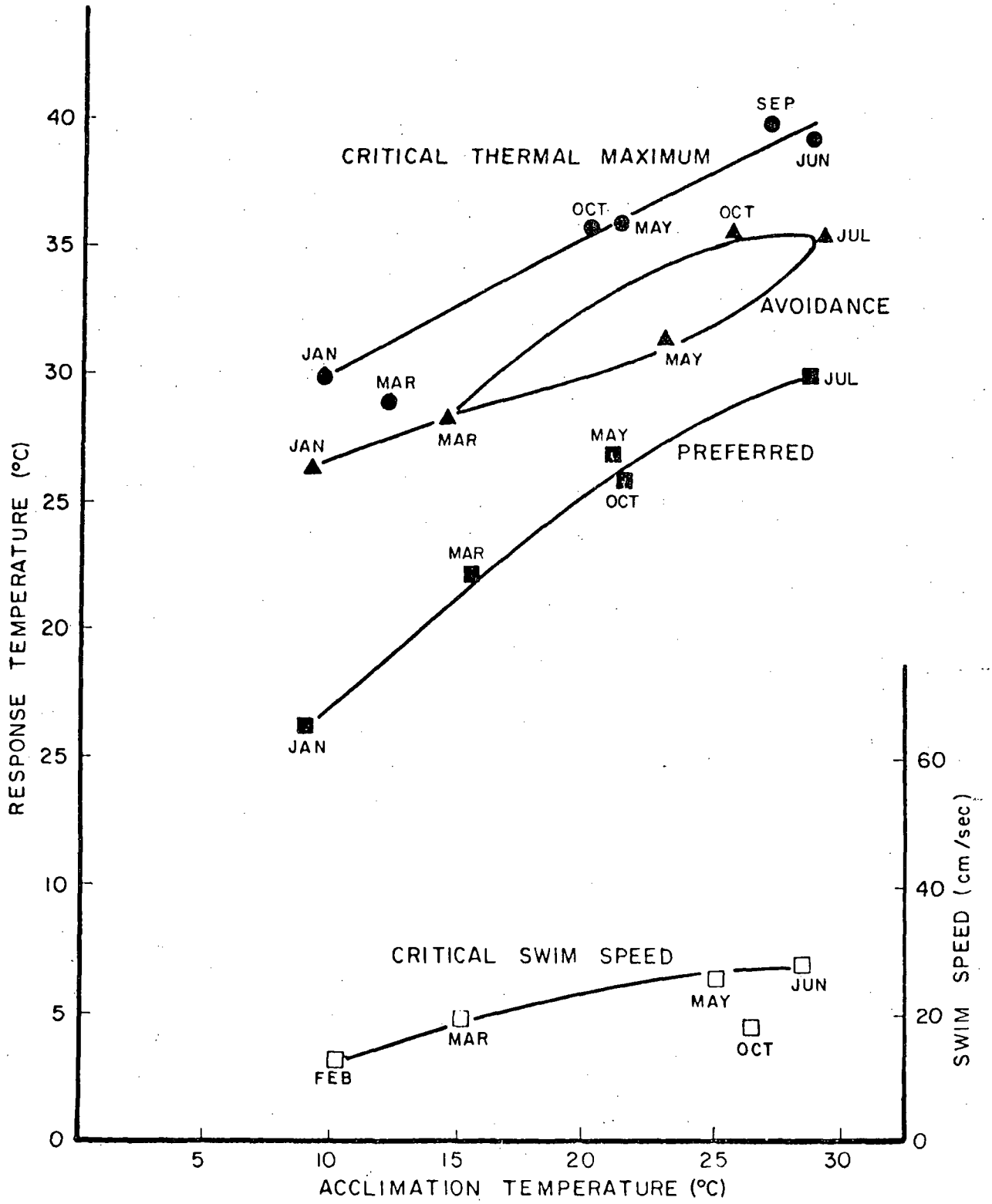

Figure 10-13. Effects of acclimation temperature on pumpkinseed.

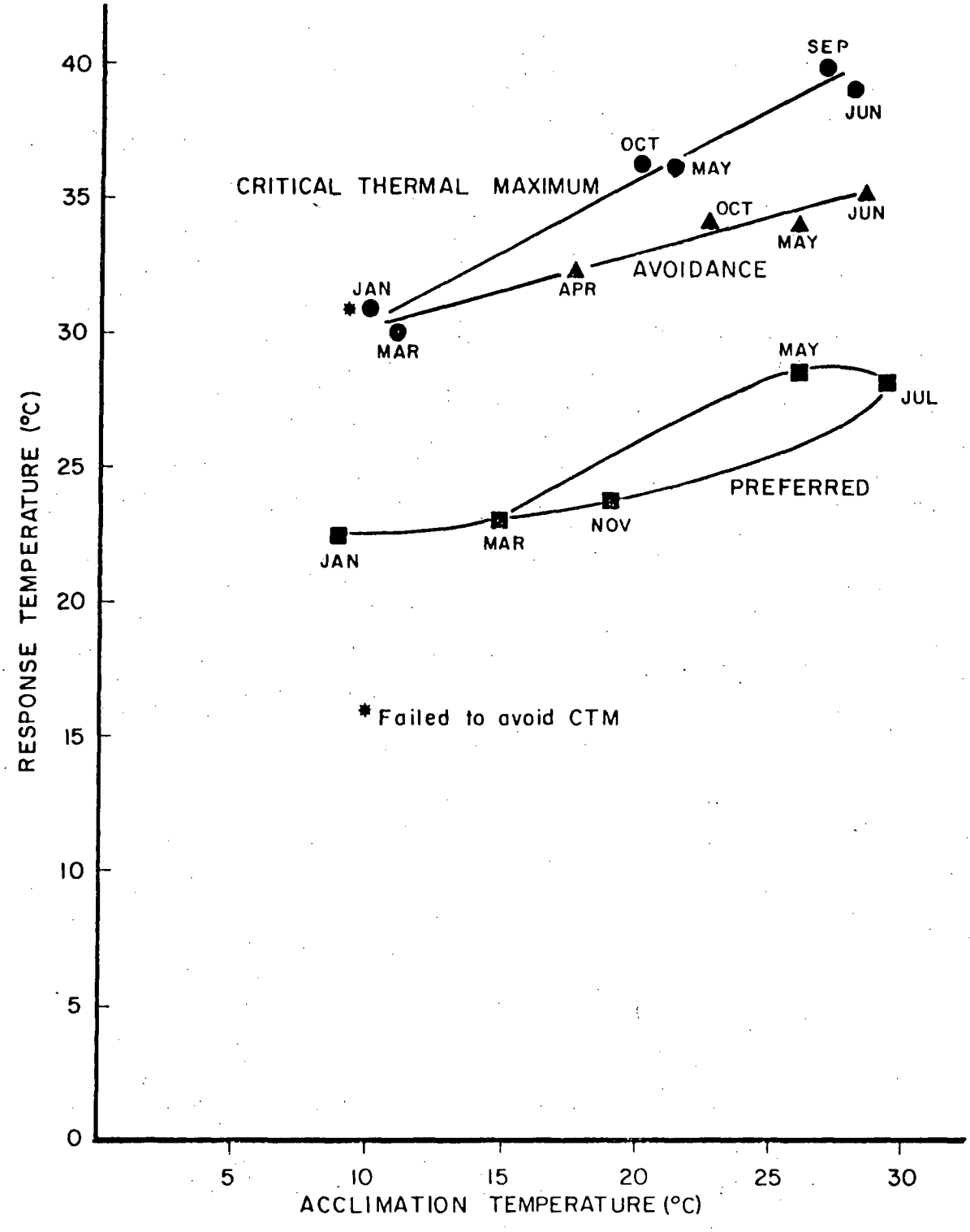

Figure 10-14. Effects of acclimation temperature on redbreast sunfish.

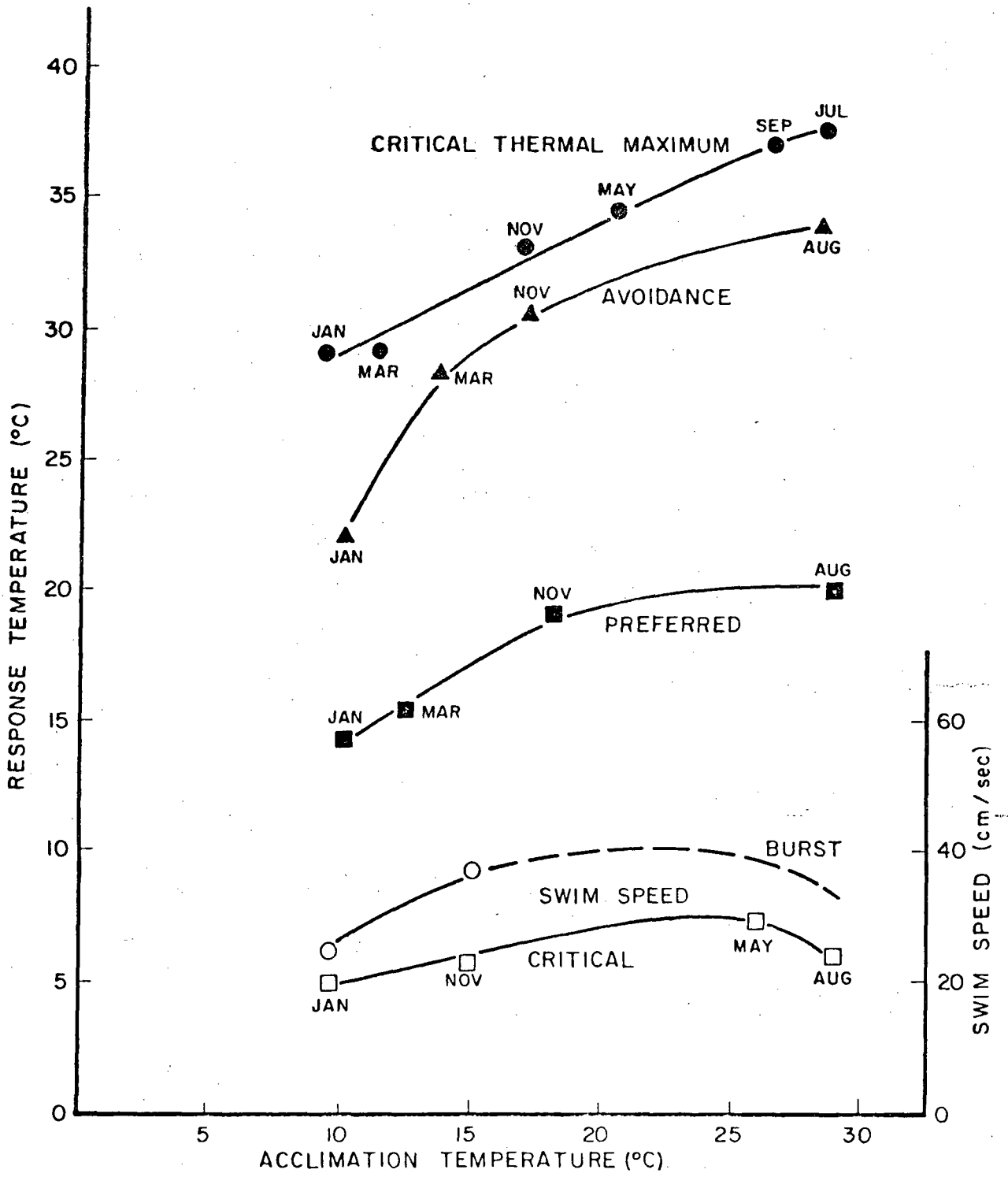

Figure 10-15. The effects of acclimation temperature on yellow perch.

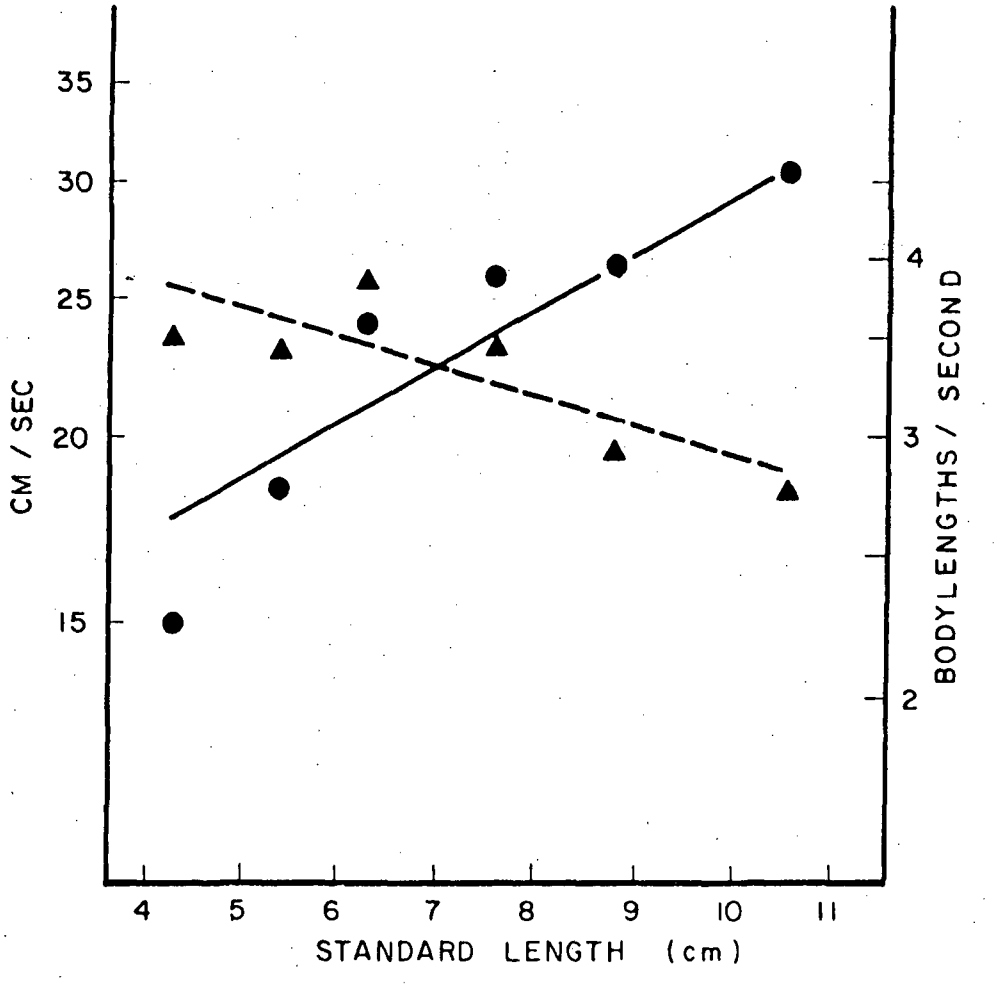

Figure 10-16. Effect of body length on swimming performance of bluegill.

relationship has been described by others (King, 1969; Brett, 1965) and is the reason why fish used in this study were the smaller sizes available in inshore waters. Having lower absolute performance makes them most likely to be impinged. If they are not, neither will larger ones with higher performance capabilities. Figure 10-17 shows the relative performance or speed in body lengths per second of the seven species tested. Two distinct groups are found, the predators and sunfish with low performance values and little increase with temperature, and the forage fish with higher performance values and much larger increases with temperature. Swimming ability in all species except the threadfin shad reached maximum between 25 and 30 C.

The threadfin shad is a commonly stocked forage fish in the South and West (Burns, 1966). It is the most stenothermal fish studied, being least tolerant of heat and cold shock as later discussed. Performance data also indicate stenothermy. The performance curve peaks at about 20 C with dramatic decreases at both higher and lower temperatures.

With a predicted Catawba Station trash rack water velocity of 15.3 cm/sec, threadfin shad would probably be impinged on the traveling screens during the winter months. The fate of many of these fish, however, is already determined by the natural cold winter temperatures and the intake may just serve as a collection point for dead and dying fish. There is a possibility that bluegills and pumpkinseeds would be impinged during winter also. However, the high burst speed of bluegills at this time makes escape likely. At other times (temperatures) during the year all species are able to exceed anticipated intake velocities.

Due to irregular discharge cove topographic features which disrupt currents, all fish attracted to the plume will be able to utilize it to some extent. Water velocities at the proposed discharge structure are unavailable at this time. Therefore predictions concerning those species able to utilize the full Δt cannot be made.

E. Survival Studies

1. Heat Shock Studies

General Considerations: When fishes are exposed to an increase in water temperature a variety of responses may occur. If the increase is sufficiently small that no survival boundary is exceeded, the response may be limited to acclimation to the temperature increase without harmful effect. A larger increase coupled with the lack of a suitable escape route may still have no immediate observable effect. However, if the upper incipient lethal temperature is exceeded the fish will eventually die. Finally, a temperature increase may be of sufficient magnitude to shock the fish, causing a loss of equilibrium and reducing any chance for escape. Thus, the first question to be addressed in the survival studies was: will the anticipated temperature increases at the proposed Catawba Station discharge be sufficient to cause heat shock and death among fishes resident in the discharge area?

Species Characteristics: Critical thermal maxima (CTMs) were determined for fourteen common species (Table 10.5). All CTMs are above predicted Catawba Station discharge temperatures (acclimation temperature plus predicted Δt).

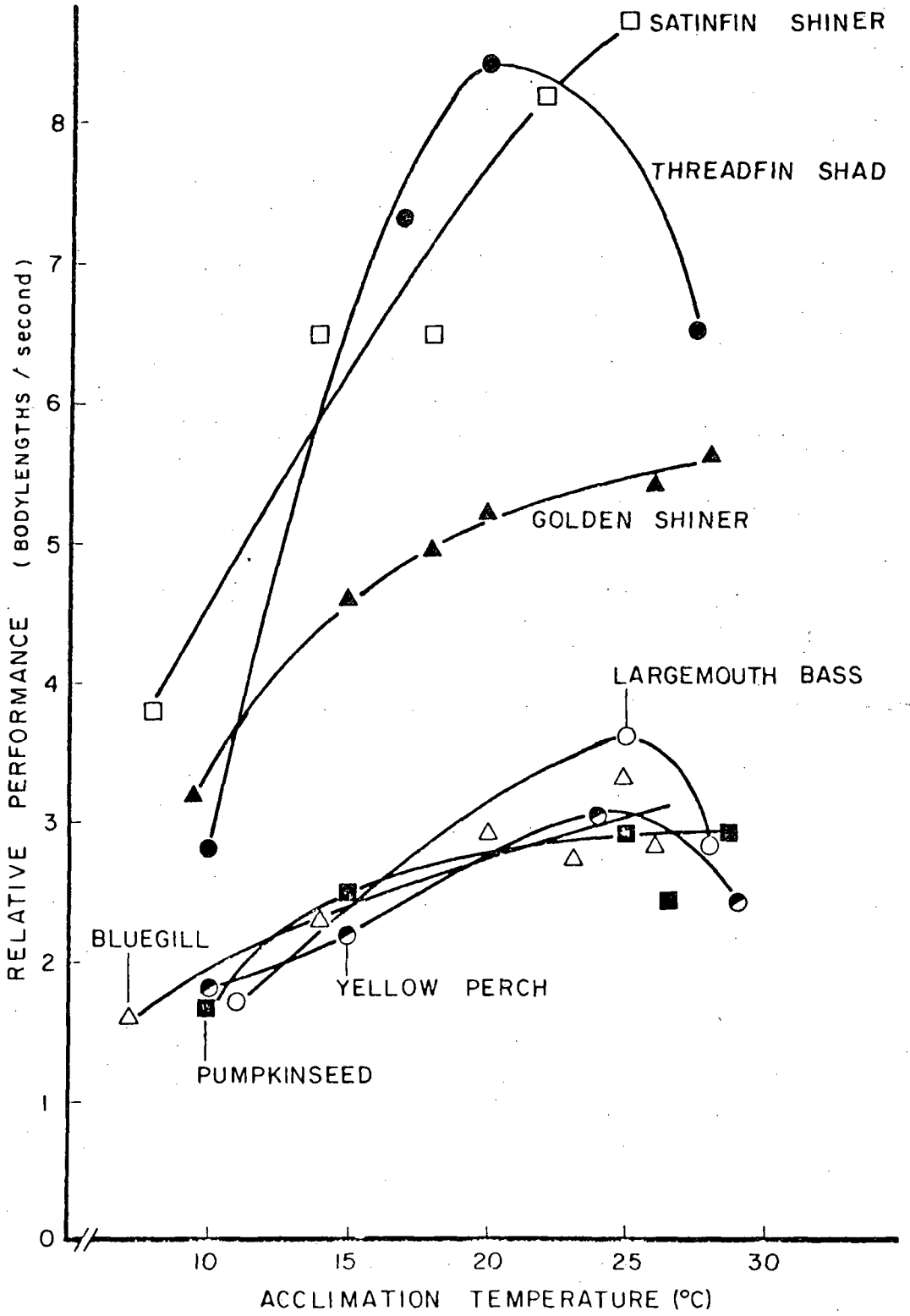

Figure 10-17. Relative swimming performance of Lake Wylie fish.

Table 10.5. Summary of CTMs (°C) of field acclimated Lake Wylie fish.

Species	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Threadfin shad	28.1			30.0			38.1			34.8		
Gizzard shad		23.3		30.5				38.5		34.3		30.7
Golden shiner		28.2	30.5		35.8	38.6				33.5	31.6	
Satinfin shiner	29.5		32.2		35.2	38.9			38.8	38.6		
Silvery minnow	30.9		30.9					38.6			32.4	
White catfish	30.5						40.2					
Mosquitofish			34.0			40.4					35.0	
Largemouth bass	29.3			32.3			39.8		39.9	39.0	33.9	
Bluegill	27.8		27.6		35.3	39.0	39.7		39.6	36.9	33.5	32.0
Pumpkinseed	30.1		29.1		35.7	39.2			39.9	36.2		
Redbreast sunfish	30.9		30.0		36.0	39.0			40.0	36.3		
Warmouth	30.0			33.7			40.0				35.5	
Redear sunfish		28.6										
Yellow perch	29.0		29.0		34.1		37.5		37.2		33.2	
Estimated Mean Temperature, °C	9.5	10.7	15.2	18.1	24.2	26.9	28.3	28.8	26.5	23.1	15.6	9.5
Observed minimum,	7.0	7.0	9.5	14.5	19.5	24.5	25.0	28.8	25.5	18.0	13.0	5.5
maximum, °C	13.0	14.0	22.5	25.0	30.5	30.5	32.0	32.0	28.0	29.0	20.0	10.5

Five centrarchid species were tested (Figure 10-18). The data can be resolved into one line. CTMs for each species increase with acclimation temperature from winter lows in the 27.5 to 30 C range to summer highs of 39 to 40 C. However, the increase in CTM is not proportional to the increase in acclimation temperature and this leads to a greater difference between winter temperatures and CTMs than is found between summer temperatures and CTM. These differences are on the order of 18 to 20 C in winter and 9 to 10 C in summer. Since all CTMs are above predicted Catawba discharge temperatures, this amounts to a safety factor, greater in the winter despite the higher Δt.

In addition to the centrarchids, eight other species were tested (Figures 10-19 and 10-20) and show the same general patterns discussed above. The mosquitofish was the most thermally tolerant fish tested. The minnows in Figure 10-19 are very similar in response to the sunfish, but are slightly less tolerant at high acclimation temperatures. The gizzard and threadfin shad and yellow perch (Figure 10-20) constitute the least tolerant group at high acclimation temperatures. However, even these species have CTMs well above the anticipated summer discharge temperatures.

Age and Size Differences: Age/size relationships of Lake Wylie fish were found to be highly variable. Some species could not be aged at all while others showed high variability of size with age. Therefore, after the initial trial in the fall, testing was limited to spawning periods when known young-of-year fish could be compared with yearlings or older fish. Results are

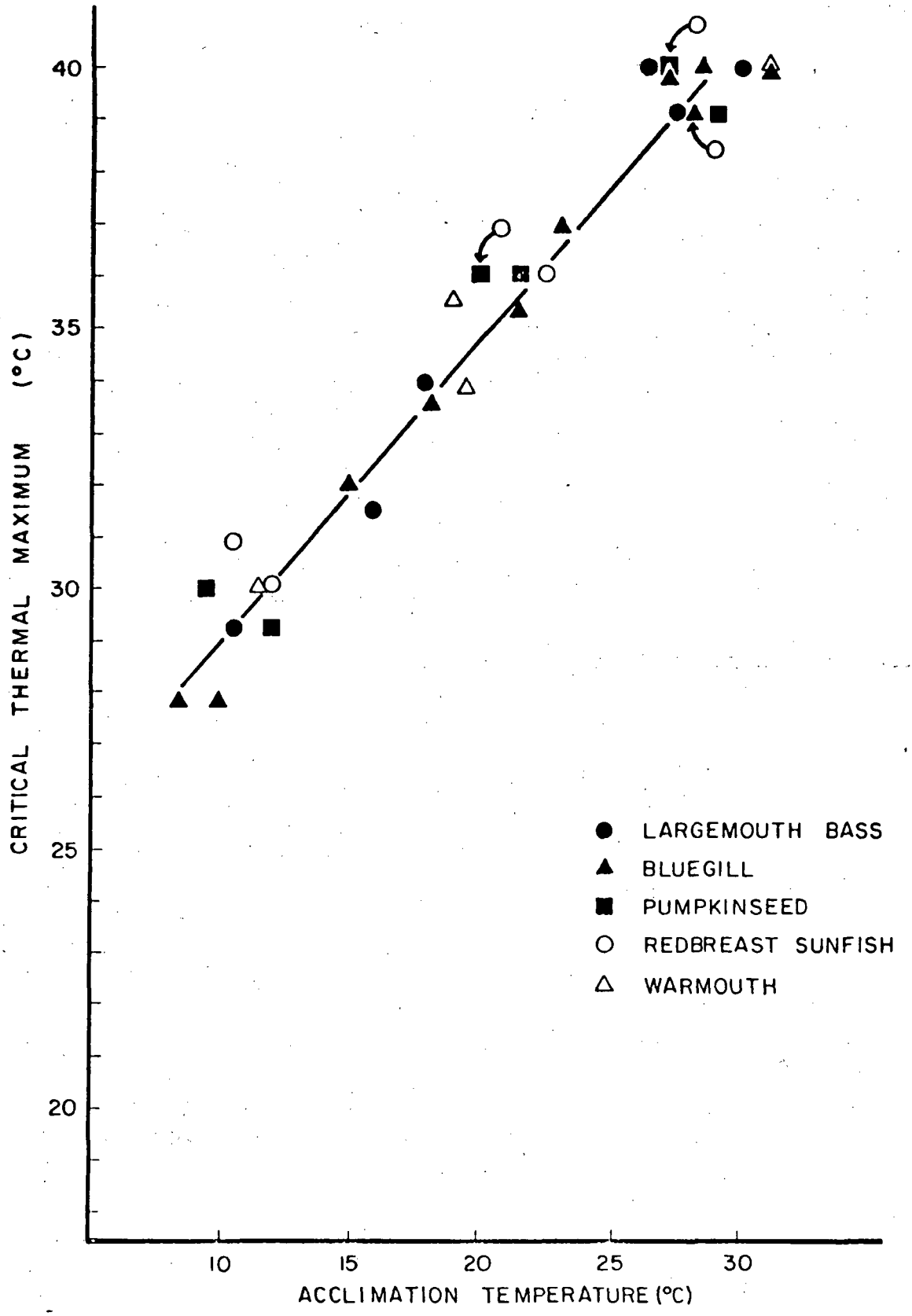

Figure 10-18. Critical thermal maxima of Lake Wylie fish.

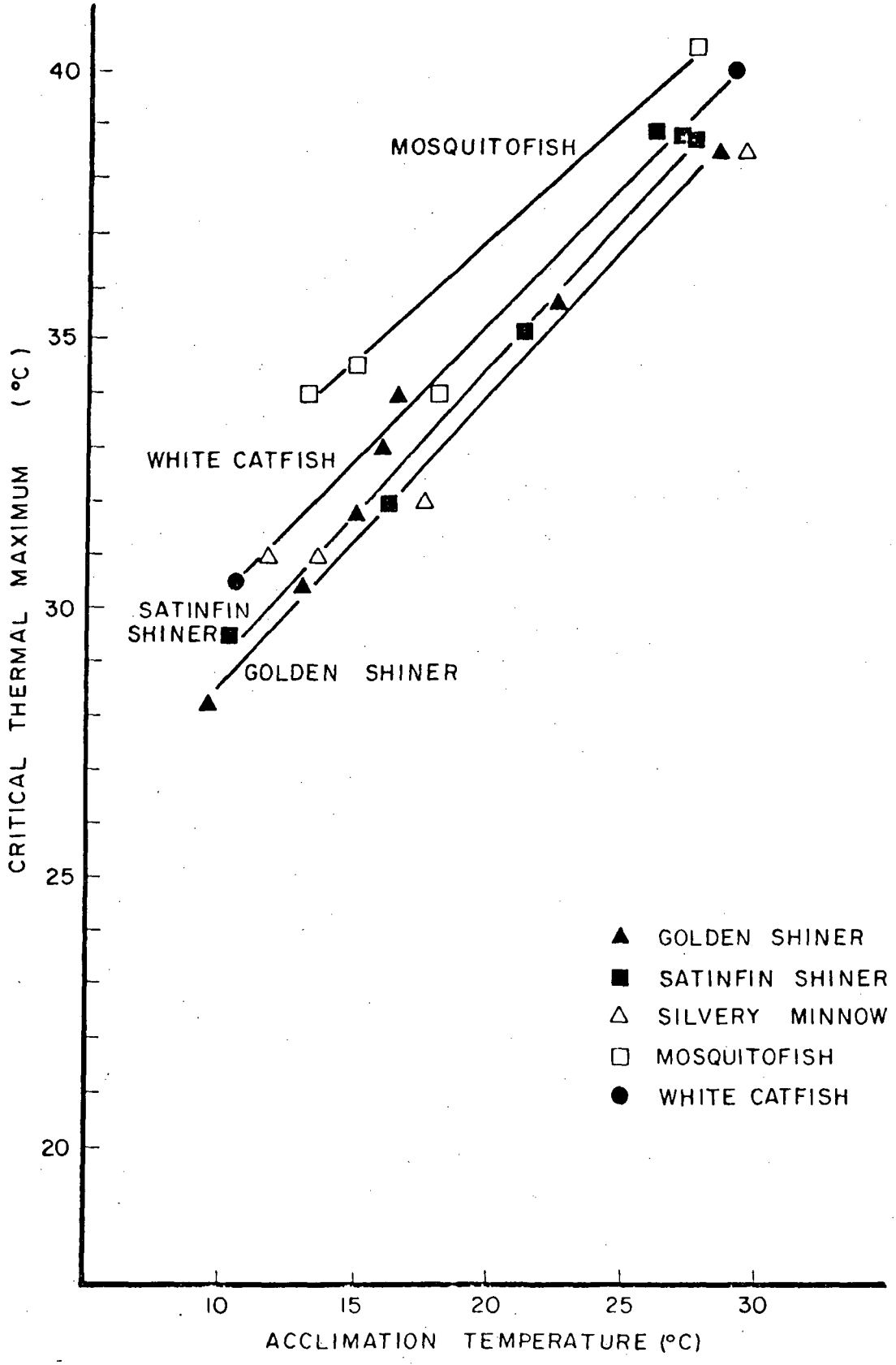

Figure 10-19. Critical thermal maxima of Lake Wylie fish.

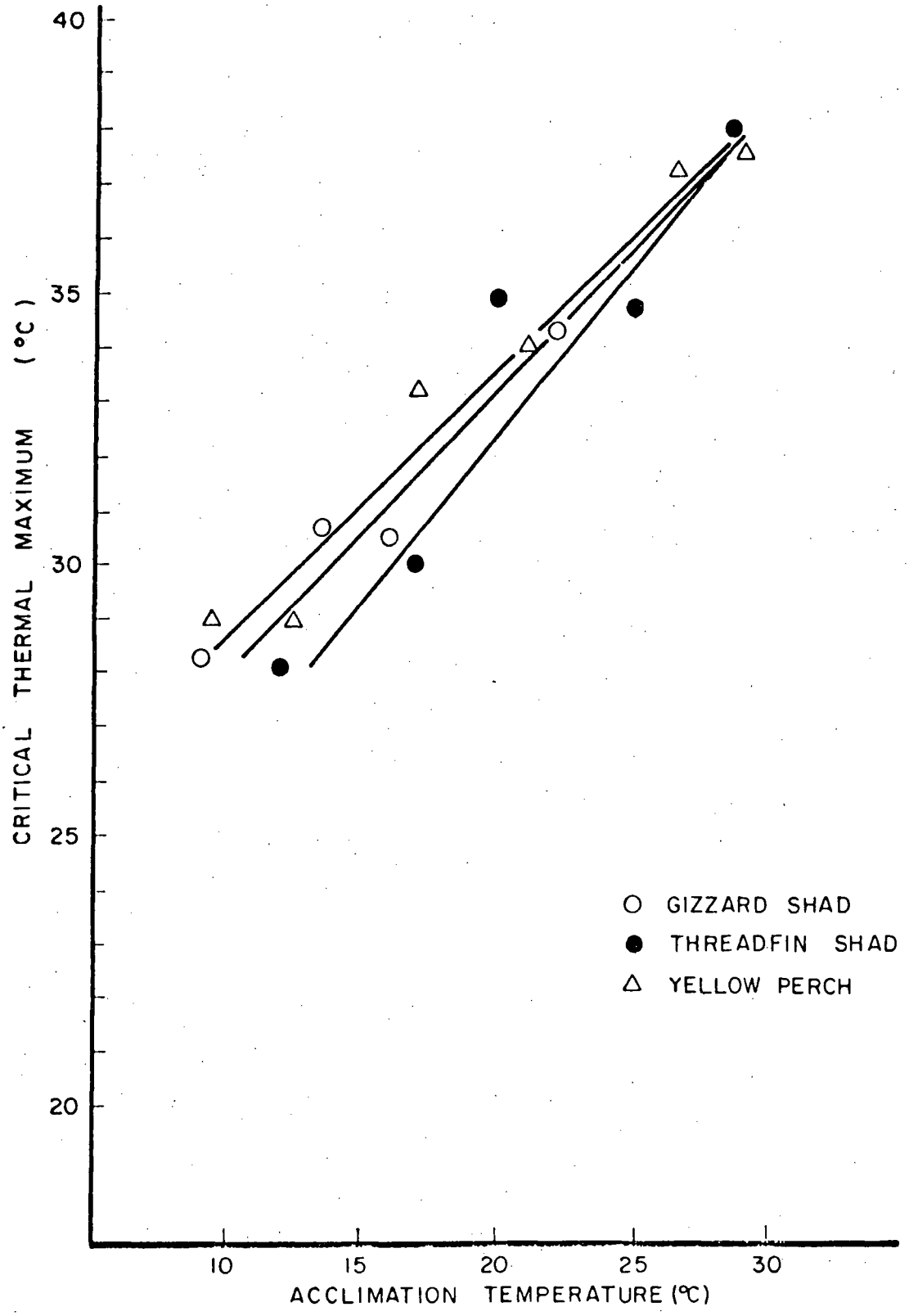

Figure 10-20. Critical thermal maxima of Lake Wylie fish.

presented in Table 10-6. Young-of-year bluegills tested during the summer were found to be slightly less tolerant than older fish, but this difference was not found in testing a series of sizes the previous fall. Young-of-year mosquitofish were found to be more tolerant than older fish in June.

2. Cold Shock Studies

General Considerations: The operation of a power plant using lake water for cooling and service water will produce a winter discharge which is warmer than the surrounding waters. Fish residing in the thermally affected area could become acclimated to plume temperatures. In the event of a plant shutdown, resident fish could be subjected to an abrupt temperature decrease. This cold shock may not affect the fish, or it may kill some or all of those present. The objective of this study was to investigate the effect of a potential Catawba Nuclear Station winter shutdown on fish acclimated to the plume temperature.

Observations: The lowest annual lake temperatures, approximately 5 C, occur in January. This temperature, plus the Catawba Station's predicted winter Δt gives a discharge temperature of 13.5 C. Thus, for cold shock testing, six Lake Wylie fish species were acclimated to 13.5 C and, to simulate plant shutdown, were transferred to a test tank held at 5 C (Table 10.7). Mortality ranged from zero percent in redbreast sunfish to thirty percent in gizzard shad. No major fish kills are expected in the species tested.

A different kind of information is presented with literature-derived lower lethal temperatures (Table 10.8). A lower lethal temperature is

Table 10.6. Effects of age and size on the critical thermal maximum of Lake Wylie fish.

Species	Month	Acclimation Temperature Range, °C	Standard Length (cm)	CTM
Largemouth bass	July	27.0-30.5	9.3	39.8
Largemouth bass (YOY)	July	27.5-32.0	4.5	40.2
Bluegill	July	27.5-32.0	7.2	39.7
Bluegill (YOY)	July	27.5-32.0	2.6	38.1
Bluegill	September	28.0	6.3	39.5
Bluegill	September	28.0	5.4	39.9
Bluegill (YOY)	September	27.0	3.8	39.5
Mosquitofish (YOY)	June	25.0-28.5	2.4	40.4
Mosquitofish (YOY)	June	25.0-28.5	0.9	43.0
Satinfin shiner	June	25.0-28.0	6.5[a]	38.9
Satinfin shiner (YOY)	June	25.0-28.5	2.5[a]	37.6

[a] Total length.

Table 10.7. Summary of cold shock experiments with Lake Wylie fish acclimated to 13-14C and tested at 4.5-5.5 C. Test duration 14 days.

Species	Number Tested	Standard Length (cm)	Total Mortality	% Mortality
Largemouth bass	7	4-6	1	14
Bluegill	10	6-8	2	20
Redbreast sunfish	10	8-10	0	0
Golden shiner	10	5-6	1	10
Satinfin shiner	10	5-6	2	20
Gizzard shad	10	9-11	3	30

Table 10-8. Lower lethal temperatures of fish found in Lake Wylie.

Species	Acclimation Temperature, °C				Reference
	10	15	20	25	
Channel catfish	-	0.0	-	-	1
Brown bullhead	-	-	0.5	-	1
Mosquitofish	-	1.5	5.5	-	1
Golden shiner	-	1.5	4.0	-	1
Largemouth bass	-	-	5.5	-	1
Bluegill	-	2.5	5.0	-	1
Yellow perch	1.1	-	-	3.7	2
Carp	-	-	2.0	-	2
Gizzard shad	-	-	-	10.8	1

1. Hart, 1952

2. Brett, 1956

the temperature at which fifty percent of the test animals died at each acclimation temperature. Geographic variations in lethal temperatures have been demonstrated for largemouth bass, mosquitofish and bluegills by Hart (1952), so the data presented in Table 10.8 should then be conservatively interpreted. Considering the cold tolerance test criteria for this study, any species with a lower lethal temperature below 5 C when acclimated to 15 C or higher would not be harmed by a plant shutdown. These species include channel catfish, brown bullhead, mosquitofish, golden shiner, bluegill, yellow perch and carp. Laboratory testing confirmed that largemouth bass would not be harmed either. The acclimation temperature for gizzard shad is very high, thus providing little useful information for this study other than showing it to be relatively intolerant.

Strawn (1965) established lower lethal temperatures for threadfin shad by lowering the acclimation temperature in tanks 1° C/week. Temperatures below 9 C were found to be detrimental with 5 C the ultimate lower lethal. Both annual low temperatures and plant shutdown would cause heavy mortality in threadfin shad. Heated discharges are apparently necessary for threadfin survival. Power plant discharges are credited with the successful overwintering of shad in Lakes Wylie, Norman and elsewhere (Miller and Demont, 1972; McNaughton, 1966).

3. Gas Bubble Disease Studies

General Considerations: The solubility of gases in water is inversely related to temperature and therefore maximized during winter months. Ambient dissolved gas concentrations in Lake Wylie during the winter season

approximate air saturation but the temperature elevation due to condenser cooling may result in supersaturation of dissolved gases, a condition which may have detrimental effects on fishes resident to a discharge area. Such detrimental effects, if any, are anticipated to take the form of gas bubble disease, an affliction of fishes commonly attributed to excessive levels of dissolved nitrogen and/or oxygen.

This study was intended to determine what levels of gas supersaturation will induce gas bubble disease in three fish species representative of Lake Wylie populations. Field examinations were intended to reveal the occurrence, if any, of gas bubble disease symptoms among fish dwelling in the discharge area of the Allen Station.

Observations: Table 10.9 summarizes gas bubble disease studies with largemouth bass, bluegills and satinfin shiners. No mortalities or symptoms of gas bubble disease were observed at 109 to 111% oxygen saturation. Fifty percent mortality would occur in five days at approximately 116% oxygen saturation in largemouth bass, approximately 115% in bluegills and approximately 117% in satinfin shiners.

Symptoms of gas bubble disease most commonly observed were gas bubbles in the fins and on the body. Popeye was rare and observed only in satinfin shiners. At low levels of supersaturation (109 to 111%), no symptoms were observed. At higher levels of supersaturation, gas bubbles appeared in the test tanks almost immediately and in the fins of the fish within twenty-four hours.

Table 10.9. *Effects of gas supersaturation on the survival of three Lake Wylie fish.*

Species	Dissolved Oxygen % Saturation		Number Tested	Exposure Time (Hours)					Total Mortality (%)
	Mean	Range		24	48	72	96	120	
				Percent Survival					
Largemouth bass	109	106-111	8	100	100	100	100	100	0
	113	110-114	8	88	62	62	62	62	38
	120	116-122	8	100	75	50	25	12	88
	119	118-120	8	75	38	25	12	0	100
	126	120-130	8	75	38	12	0	0	100
Bluegill	109	106-112	10	100	100	100	100	100	0
	115	110-117	10	80	70	50	50	50	50
	120	120-120	10	100	80	50	40	30	70
	127	120-130	9	100	33	33	11	0	100
Satinfin shiner	111	106-115	10	100	100	100	100	100	0
	113	110-116	10	100	100	90	80	80	20
	120	116-122	11	82	73	45	27	27	73
	119	119-120	10	80	30	20	10	10	90
	127	121-130	10	80	50	30	20	10	90

Survival times at various levels of supersaturation, as indicated by percent survival after each 24 hour period, decreased as the percent saturation increased.

No fish suffering from gas bubble disease were found in collections made near the Allen Station during the winter of 1973-74. This may have been due to pressure effects or a suspected avoidance reaction which was observed in the laboratory. There is, however, a documented incident of gas bubble disease reported by DeMont and Miller (1971). Bluegills, among other species, were found with symptoms of gas bubble disease in the discharge area of Marshall Steam Station, Lake Norman (Duke Power Company). At the proposed Catawba Nuclear Station, supersaturation conditions may occur. However, the conclusion that fish would necessarily develop symptoms of gas bubble disease is unwarranted. Allen Station investigations were negative, and Otto (1972) found that fishes collected under supersaturation conditions elsewhere showed no apparent symptoms of gas bubble disease. Otto (1972) concluded that fish did not remain in the discharge long enough to develop the disease.

F. Behavioral Studies

1. General Considerations

Fish may respond behaviorally to the presence of a heated effluent in a variety of ways: they may be attracted to the maximum temperature available; they may be repelled by maximum temperatures but attracted by intermediate levels; they may avoid any increase in temperature or; they may exhibit no clear response at all. The emphasis in the present study is on the

question of what temperatures various Lake Wylie species will avoid or select when presented with a choice. The application of laboratory behavioral studies to the prediction of fish response in the natural environment is a perilous undertaking. There are, however, generalizations which can be drawn based on laboratory studies which identify anticipated trends in response to a natural gradient of temperatures. We assume that fish will be guided by temperature to respond as indicated by laboratory results and that these trends in response are subject to various degrees of modification related to the action of other environmental factors.

2. Temperature Preference

Modal preferred temperatures were determined for eight Lake Wylie fish species (Table 10.10, Figures 10-8 through 10-15). The figures include related data for comparison. Preferred temperatures increased with acclimation temperatures, but the changes were not in direct proportion. Bluegill and redbreast sunfish preferred temperatures related not only to acclimation temperatures but to some other factor as well. Modal preferred temperatures higher than anticipated occurred in May for these two species (Figures 10-12 and 10-14). This corresponded temporally with early inshore abundance peaks (see Chapter 8) and would seem to coincide with the initial portions of the spawning periods. Golden and satinfin shiners and pumpkinseeds showed similar, although less pronounced, preference peaks in May determinations (Figures 10-9, 10-10 and 10-13).

Preferred temperatures were always well below avoidance and

Table 10.10. Summary of modal preferred temperatures of field acclimated Lake Wylie fish.

Species	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Threadfin shad		21.2		*			23.2			25.1		
Golden shiner		20.3		21.2	26.7	28.2				22.0	21.9	
Satinfin shiner	20.0		21.7		27.7	26.6				28.0		
Largemouth bass		23.6		26.0				31.8		30.4		
Bluegill			24.9		27.6	31.3					28.5	27.8
Pumpkinseed	16.4		22.4		27.0		30.0			26.2		
Redbreast sunfish	22.7		23.2		28.6		28.1				23.6	
Yellow perch	14.0		15.3					20.3			19.4	
* No reaction to gradient.												
Estimated Mean Temperature, °C	9.5	10.7	15.2	18.1	24.2	26.9	28.3	28.8	26.5	23.1	15.6	9.5
Observed minimum, °C	7.0	7.0	9.5	14.5	19.5	24.5	25.0	26.5	25.5	18.0	13.0	5.5
Observed maximum, °C	13.0	14.0	22.5	25.0	30.5	30.5	32.0	32.0	28.0	29.0	20.0	10.5
Observed maximum plus Catawba t, °C	21.6	22.6	31.1	29.7	35.2	35.2	40.6	40.6		37.6	28.6	19.3

survival limits. Bluegills, pumpkinseeds, largemouth bass and satinfin shiners preferred temperatures above lake ambient throughout the year. Threadfin shad, golden shiners, redbreast sunfish and yellow perch preferred above ambient for most of the year. However, these four species preferred temperatures at or below lake ambient temperatures during summer months. Thus, these species could be expected to prefer deep-water lake conditions to thermal conditions anticipated to occur in the Catawba Nuclear Station discharge area during warm summer months. All species tested would appear to be attracted to the discharge area at all other times, with attraction strongest during the colder periods of the year.

3. Avoidance of Elevated Temperatures

When fish are presented with a choice of two temperatures which approximate their acclimation level they will generally spend the majority of their time in one of the two. This is an expression of temperature selection or preference in that the fish will move freely between the two levels but tend to frequent the preferred temperature area to the greatest extent. However, as the two choice temperatures are increased, a level is eventually reached where the fish will no longer enter the warmer of the two areas. This is the avoidance temperature. The shift in response from temperature selection or preference to avoidance is readily apparent to the observer and the avoidance temperature can be determined with considerable precision.

Trends in upper avoidance temperatures as related to seasonal acclimation temperatures were sought among eight representative fish species

(Table 10.11, Figure 10-8 through 10-15). Curves representing related data are included in the figures.

Values varied with both species and acclimation temperature as expected. As with preference, changes in avoidance temperatures within species were related to changes in acclimation levels but were not in direct proportion. For example, an increase in acclimation temperature from February to April of 7-9 C resulted in only a 1.5 C increase in the avoidance level recorded for golden shiners.

Among bluegills, pumpkinseeds and largemouth bass, avoidance levels were influenced not only by acclimation temperature, per se, but also by the rate of change in acclimation. For example, Figure 10-12 shows that for bluegills avoidance levels were low during spring (ascending acclimation) and were higher during fall with similar (but descending) acclimation temperatures.

A comparison of avoidance temperatures with heat shock temperatures (CTMs) is of greatest importance. CTMs generally exceeded avoidance temperature by a considerable margin. Bluegills, largemouth bass and redbreast sunfish, however, were seen to suffer heat shock before avoidance occurred at winter acclimation temperatures (Table 10.11). With the exception of golden shiners (Figure 10-9) all species tested had avoidance levels in excess of anticipated temperatures at Catawba Nuclear Station. Golden shiners can be expected to avoid the area, but only during summer months.

Table 10.11. Summary of upper avoidance temperatures of field acclimated Lake Wylie fish.

Species	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Threadfin shad		27.3		31.0			36.0			33.5		
Golden shiner		23.0		24.5	32.0		34.0			26.3	23.5	
Satinfin shiner	24.5		27.8		30.0	34.0				30.3		
Largemouth bass		*		30.3				35.0		36.0	34.0	
Bluegill	*		28.8		30.0	35.0					34.0	30.0
Pumpkinseed	26.5		28.5		31.5		35.5			35.8		
Redbreast sunfish	*			32.3	34.0	35.5				34.0		*
Yellow perch	22.0		28.3					33.5			30.5	

* Failed to avoid CTM temperatures.

Estimated Mean Temperature, °C	9.5	10.7	15.2	18.1	24.2	26.9	28.3	28.8	26.5	23.1	15.6	9.5
Observed minimum, maximum (°C)	7.0 13.0	7.0 14.0	9.5 22.5	14.5 25.0	19.5 30.5	24.5 30.5	25.0 32.0	26.5 32.0	25.5 28.0	18.0 29.0	13.0 20.0	5.5 10.5
Observed maximum plus Catawba t, °C	21.6	22.6	31.1	29.7	35.2	35.2	32.7			37.6	28.6	19.3

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REFERENCE LIST OF QUESTIONS
IN RESPONSE TO
NUCLEAR REGULATORY COMMISSION'S LETTER OF SEPTEMBER 12, 1975

PROJECT 81
CHEROKEE NUCLEAR STATION
ENVIRONMENTAL REPORT

Enclosure No. 3
Cherokee Station Environmental Report
Project 81
List of Deficiencies and Comments

General

Reference

There are at least four transpositions of data between the Cherokee and Perkins ERs. Maps labeled "Cherokee" actually show the Perkins site and maps labeled "Perkins" actually show the Cherokee site. (Figures 3.9.4-4, 5.1.4-2, 10.1.2-1, 10.1.3-1). Since it is evident that the Cherokee and Perkins ERs were produced in close parallel to one another, the existing transpositions of data introduce doubt as to the reliability of either document because of the possibility of other transfers of data. It is recommended that all data be reviewed in both ERs to determine whether there has been other transposition between reports and that all necessary corrections are made in both reports.

Figure 3.9.4-4
Figure 5.1.4-2
Figure 10.1.2-1
Figure 10.1.3-1

1.0 PURPOSE OF THE PROPOSED FACILITY

.1 Section 1.0 states: 1) power demand for the past ten years indicates a doubling rate every seven years, and 2) more recently, the doubling rate is every ten years. It further states that "there is no indication at present that the long range trend is going to change materially from that experienced in the past." The latter statement seems inconsistent with the former two points. Please explain and quantify.

.2 The second paragraph mentions "increasing unavailability of fossil fuels" and a "shift to electrical energy from other energy sources." Discuss these two points with regard to Duke Power Company's service area.

Reference

1.1 NEED FOR POWER

.1 Conservation of energy should be discussed in this section.

a. Describe the duration and intensity of the advertising programs conducted during the last three years.

b. If promotional advertising has been terminated, when was this type advertising terminated.

c. Identify the regulatory commissions or bodies that regulate the retail price of electricity in the Duke Power service area.

d. Describe the various types of interruptible sale contracts that the Company has.

e. Provide the size (MWe) of interruptible sale for each type described in 1.1.1.d.

f. Describe the Company's record of load shedding and load curtailment methods used in the last five years. Information should be supplied as cumulative duration of time by month and by methods. This information should include 3% voltage reduction, 5% voltage reductions, curtailment of electric power usage, voluntary curtailment by large commercial and industrial customers, and discontinuing service to contractually interruptible loads.

g. Describe any impact on demand resulting from the recent conservation activities in the Duke Power service area.

.2 In subsection 1.1, the projected loads and capacities should be updated to correspond with the report to the Federal Power Commission of April 1, 1974, on "Coordinated Bulk Power Supply Program" by the Southeastern Electric Reliability Council. For example, in Table 1.1.1-1 and 1.1.2-3, the peak loads for the Virginia-Carolinas (VACAR) Subregion are given for the years 1983, 1984, and 1985 (when the Cherokee units are projected to begin operation) as 57,071 megawatts, 61,622 megawatts, and 66,366 megawatts, respectively, whereas the report to the FPC of April 1, 1974, gives these peak loads as 55,306 megawatts, 59,505 megawatts and 64,159 megawatts.

.3 Section 1.1.1 and 1.1.4: Describe VACAR and SERC, including membership of both organizations, the purposes of these organizations, and the length that they have been in existence. Provide map(s) showing the extent of these regions.

Reference

.4 With reference to Table 1.1.1-1:

a. The table indicates variations in MW purchases but long-term yearly constancy in MWhr purchases. Please explain.

b. Describe in general terms the arrangements for the purchase and sale of power between Duke Power Company and other public or private generators of electrical power, indicating power sales (MW and MWhr) for the years 1964 - 1986. Indicate purchasers and sellers of this power, and the amounts, for these years and the purchase and sale prices of this electric power.

c. Provide monthly peak loads (MW and MWhr) for 1965, 1970, and 1973. Discuss any trends in these values.

.5 List the fossil units that will be retired in 1974 and 1975 (Table 1.1.2-2).

.6 Describe the way in which Duke Power Company establishes its minimum reserve requirements, including in the discussion the Federal Power Commission's policies with regard to reserve requirements. If percentage reserve requirements change significantly for the period 1974 - 1986, discuss the reasons for this change. Include other aspects as required by Section 1.1.3 of USAEC Regulatory Guide 4.2.

.7 Provide copies of reports on area power requirements as outlined in Section 1.1.4 of the USAEC's Regulatory Guide 4.3.

.8 Provide a copy of Duke Power Company's latest Uniform Statistical Report (to American Gas Association, Edison Electric Institute and Financial Analysts).

.9 Provide a map showing the Duke Power Company's service area, the expected transmission system, and the location of all plants of all types as of December 31, 1985.

.10 Furnish the dates that Duke Power Company acquired the entire 1567-acres site.

.11 If eminent domain proceedings were required to acquire any portion of this site state the number of acres that were acquired in this matter and the number of individual legal actions that were required.

2.1

Reference

.12 State the number of families that have been (will be) displaced as a result of Duke Power Company acquiring the site. 2.1

.13 Section 1.3 stated that a reserve margin of 19.0 percent for 1983 would be below the minimum acceptable level. Table 1.1.2-2 gives an average reserve level of about 8.4 percent for the period 1969 - 1973, which is considerably less than 19.0 percent. Discuss the adverse effects observed in the Duke Power Company service area as a consequence of this low reserve margin during the period 1969 - 1973 and correlate these effects, in semi-quantitative terms, to elaborate on predicted consequences of a 19.0 percent reserve level for 1983.

.14 Section 1.3 mentions that if Cherokee is delayed by a year, VACAR reserves would decline from about 24.9 percent to 22.2 percent, and concludes that a delay of another unit (presumably descreasing the reserve to about 19.5 percent) would result in the VACAR subregion being severely short of reserves. During the period 1969 - 1973 the VACAR region reserves averaged about 15.0 percent (Table 1.1.2-3). Discuss the consequences observed during that period as a consequence of this 15 percent reserve margin, indicating the adverse effects suffered by the VACAR region as a consequence of this "low" margin, and project these consequences to 1985 to justify the statement concerning severe shortage of reserves.

.15 Discuss arrangements between Duke Power Company and other neighboring utilities that have been made to minimize reserve requirements within each of the utilities (that is, discuss the extent to which Duke Power Company is part of a region-wide power pool.)

2.0 THE SITE

2.2 REGIONAL DEMOGRAPHY, LAND AND WATER USE

.1 Provide the locations of animals (cows or goats) producing milk for human consumption. 2.2.2

.2 Provide an estimate of the population served by the Union Water Dept. intake. 2.2.2.5

.3 Provide estimates of the average transit time to downstream water users and the average river flow at the plant discharge. 2.2.2.5

.4 Provide data concerning groundwater drawdown caused by withdrawals from nearby wells.

Reference

.5 Provide bases and state under what conditions these drawdowns could result in transport of pollutants from the site to the neighboring wells.

.6 Note on or cross reference to map similar to Fig. 2.2.2-6, the locations of industrial facilities, including power plants which could release effluents to the waterways that could interact with the proposed plant or its effluents (Section 2.2.2.5)

2.5 HYDROLOGY

.1 Provide the lowest average flow for seven days that occurs on the average once every 10 years at the Gaffney gage on the Broad River near the plant site (Section 2.5.1).

.2 Provide the surface area 5 (maximum, minimum and average) and corresponding volumes of the Ninety Nine Islands Reservoir, and describe how these areas and volumes change with expected seasonal and other fluctuations (Section 2.5.2).

.3 Provide or cross-reference expected maximum, minimum, and average inflow and outflow rates to and from the Nuclear Service Water Pond, the intake sedimentation Pond, and the Waste Water Collection Basin. Also provide or cross-reference area-capacity curves for these ponds (Section 2.5.3).

.4 Provide the dates of and expected seasonal and other variations of the groundwater table elevations at the offsite observation wells, Table 2.5.4-5, and of the groundwater contours in Figs. 2.5.4-1 and 2.5.4-2 (Section 2.5.4).

.5 The water quality standards or requirements applicable to any waters that may be affected by plant construction and operation should be cited in Section 2.5.5; whereas, the relevant texts of these laws and regulations should be included in Appendix 1.

2.6 METEOROLOGY

.1 Provide an adequate discussion of the climatology of the site region. Discuss how climatological data from Greenville-Spartansburg are representatives of long term conditions at the site. 2.6.1 2.6.3.2

.2 For Table 2.6.0-1:

a. Identify the stations, and their geographic relationship to the site, from which data in this table are derived. Table 2.6.0-1

		Reference
	b. Provide the period of record for each station.	
	c. Indicate the date and place of occurrence for the record maximum and record minimum values presented in this table.	
.3	Provide an adequate discussion of the local meteorology of the site area. Describe monthly wind characteristics at all heights at which wind characteristics are applicable, i.e., 10 meters, height of release of radioactive material (plant vent height), and a height representative of conditions at the height of cooling tower effluent release.	2.6.3.2
.4	Describe the instrumentation used at Greenville-Spartanburg to develop Table 2.6.0-2.	2.6.2.2
.5	Provide the definition of calms as used in Table 2.6.0-2, and discuss how the first wind speed interval (0-3 Kts) was developed separately.	2.6.2.2
.6	Provide the number and frequency of observations at Greenville-Spartanburg used to develop Table 2.6.0-2.	2.6.2.2
.7	Compare available onsite joint frequency distributions of wind speed and direction by atmospheric stability (defined by vertical temperature gradient) with concurrent and long-term distributions of wind speed and direction by atmospheric stability (determined by the STAR program) from Greenville-Spartanburg.	2.6.3.2
.8	Document in this section all meteorological conditions used for design bases considerations in the ER. Include appropriate cross- references.	2.6.1
.9	Provide the number of hurricanes, tropical storms and tropical depressions that have passed within 50 miles of the plant site.	
.10	Provide the frequency of occurrence and severity of ice storms in the site area.	
.11	Provide the frequency of thunderstorms observed in the site area.	
.12	Provide the frequency of days with high air pollution potential expected in the site area.	2.6.1

		Reference
2.7	ECOLOGY	
.1	Provide at least six months of aquatic and terrestial baseline data.	2.5.1, 2.7.1.1.2
.2	Include a schedule for furnishing the additional six months of data.	2.5.1, 2.7.2.1.4
.3	Based on this data and other available information, provide the best possible projection of seasonal variations.	2.5.2.3, 2.7.1.1.2

Reference

3.0 THE PLANT

3.3 STATION WATER USE

.1 Provide bases, including calculations, to substantiate the note in Fig. 3.30-1 that the combined effects of rainfall, runoff, evaporation, and seepage on the intake sedimentation basin is negligible. In addition, these effects on the nuclear service water pond, the waste water collection basin, and the liquid waste dilution canal should be included in Fig. 3.3.0-1. Furthermore, Table 3.30-1 should be incorporated in Fig. 3.3.0-1, such that average and maximum water use values are indicated at each location.

3.4 HEAT DISSIPATION SYSTEM

.1 Provide a detailed diagram of the intake and discharge structures to the rivers for the plant. Include location, angle of discharge, dimensions, depth of submergence, intake and discharge velocity. Monthly average of blowdown temperature. Monthly average of blowdown volume.

.2 Discuss the reasons for creating a Nuclear Service Water pond at the site.

.3 Provide the size and number of vertical traveling screens at the river intake structure, and provide the maximum approach velocity, and bases therefore, directly in front of the screens (Section 3.4.4).

3.5 RADWASTE SYSTEM

.1 Since Fig. 3.1.0-4 does not show the relative height of the stack with respect to the surrounding buildings as stated on page 3.5-3, provide this information. 3.1, 3.5.2

3.6 CHEMICAL AND BIOCIDE WASTES

.1 Ground deposition of chemicals and solids entrained in spray fallout from the cooling towers should be estimated and the methods and bases for the estimates stated (Section 3.6.2). 5.1.4

ENVIRONMENTAL EFFECTS OF SITE PREPARATION, PLANT AND TRANSMISSION FACILITIES CONSTRUCTION

4.1 SITE PREPARATION AND PLANT CONSTRUCTION

.1 The potential radiological impact of Unit 1 operation on the construction workers of Unit 2 and 3 should also be discussed. Based on estimates of the size of the construction work force, the construction schedule, the location of the construction personnel with respect to major sources of radioactivity and occupancy factors, provide the following information:

a. Estimates, at the location of personnel, of the total body dose rates from waste storage tanks, gaseous plume, and the turbine and associated equipment,

b. Estimates of radiation exposure to construction personnel over the period of construction,

c. Estimates of integrated dose to the construction population in average man-rem for each year of construction and the total man-rem for the construction period.

.2 Section 4.1.1.5 indicates that "wastes, such as chemicals, fuels, lubricants, bitumens, and raw sewage, are not deposited onto the natural watershed ..." Discuss where they will be deposited and the consequences of depositing them there.

.3 Discuss how combustible debris generated by station and transmission-line construction will be disposed of.

.4 Section 4.1.1.5 contains a statement that Duke "abides by the dictates of good citizenship" in construction practices. Please describe these "good citizenship" practices. Please state if these practices are legally required, or only at the option of the company.

.5 a. Please state whether or not any families will be required to move their residences as a consequence of railroad spur construction.

b. If eminent domain proceedings were(will be) required to obtain any of the railroad spur right-of-way, state how many acres are so affected.

Reference

c. State the number of individual legal actions required, if any.

.6 Section 4.1.2, the effects of construction on human activities, is very inadequate. Section 8.2 ("Examples of temporary external costs") of USAEC Regulatory Guide 4.2 (March, 1973) indicates examples of construction effects which should be presented in a semi-quantitative manner.

.7 Discuss the effects of constructing intake and discharge structures on Broad River water quality and water supply. (Section 4.1.4.1). 4.1.4.1

.8 Provide bases, including computation methods and coefficients, to substantiate the statement that dewatering for excavations will not lower the groundwater table beyond the site area. (Section 4.14.2)

.3 RESOURCES COMMITTED

.1 Discuss or cross-reference commitments of water resources during site preparation and plant construction.

.0 ENVIRONMENTAL EFFECTS OF PLANT OPERATION

.1 EFFECTS OF OPERATION OF HEAT DISSIPATION SYSTEM

.1 Discuss reasonably anticipated environmental impacts of the Nuclear Service Water pond.

.2 Provide a discussion of the effects of consumptive use of water by evaporation and drift from the plant cooling towers.

.3 Discuss the synergistic effects of consumptive water use by the plant and other water users on the Broad River.

.4 In Section 10.1.1.2 it is stated that the plant will limit its withdrawal of water from the Broad River when the river flow is less than the 7-day 10-year low flow value (490 cfs). Describe the withdrawal limitations under such conditions and how these limitations will affect plant operation. 5.1.2.4

.5 Describe plant operation as it would have occurred during the drought of record under both present and future expected water usage on the Broad River. 5.1.2.4

.6 Provide a detailed estimate, including bases and calculations, of the amount of time during plant life that station operation will be limited because of withdrawal limitations of water from the Broad River (Section 5.1.2). 5.1.2.4

		Reference
.7	Provide bases for the statement that the quantity of salts from the cooling towers that reach the ground water will be negligible.	
.8	Provide a discussion and bases therefore of the effects on ground-water by the presence of the proposed Nuclear Service Water Pond, the Waste Water Collection Basin, and the Intake Sedimentation Basin (Section 5.1.3).	
.9	Describe the plume parameters measured at the Cliffside Plant, and the instrumentation employed for these measurements.	
.10	Provide further information on the application of the empirical data from Cliffside to represent expected results from the operation of mechanical draft cooling towers at Cherokee, including a comparison of the amount of heat being dissipated.	
.11	Provide substantiation of the statement that the mechanical draft cooling towers at Cherokee would have no effect on ground transportation on SC 13, 3000 feet from the cooling tower yard.	

5.2 RADIOLOGICAL IMPACT ON BIOTA OTHER THAN MAN

.1	The text states, with reference to Fig. 5.2.1-1, "in the case of the Cherokee Nuclear Station, many potential significant pathways are not available because of water and land usage, and the nature of the releases." Identify the potential significant pathways to biota which are not available due to water and land usage.	
.2	What atmospheric dispersion factor (X/Q) and location was considered in the computed cow's thyroid dose on Table 5.2.3-1.	5.2.3

5.3 RADIOLOGICAL IMPACT ON MAN

.1	What is the river location to which Table 5.3.2-1 applies?	Table 5.3.2-1
.2	In comparing the Cs-137 and H-3 releases of Table 3.5.1-3, and the concentrations of Table 5.3.2-1, a three order of magnitude difference in dilution factor appears to exist. What dilution factor was used to develop Table 5.3.2-1?	5.3.2-1
.3	Provide an estimate of the <u>average</u> dilution flow.	2.2.2.4
.4	The ICRP maximum permissible dose rates (MPD) for bone appear to be incorrectly quoted. For bone, the MPD is 0.56 rem/week for beta and gamma emitters and 0.3 rem/week for X or gamma emitters, i.e., the soft tissue MPD. Provide a corrected Table 5.3.2-1, if this misunderstanding of the MPD extended into the dose models.	5.3.2.2

Reference

.5 Provide the data base for the meteorological information used in the dose calculations in this section. 5.3.3

.6 Provide the locations at which the milk and vegetable pathways were evaluated for presentation in Table 5.3.3-1.

.7 Indicate the location (direction and distance) of the nearest residence for which the direct radiation dose is calculated, and indicate on a suitable plot plan the location of the refueling water tank, holdup tank, and reactor makeup water tank. Also indicate the dimensions of these tanks, and their presumed radionuclide inventories upon which the direct radiation calculations were based. 5.3.4.1

.8 Provide the rationale for the procedure used to determine the population using the Broad River as a source of drinking water.

.9 The population doses of Table 5.3.5-1 appear to be based only on two pathways (drinking water and air submersion). Provide population doses estimates and population use factors for other exposure pathways described in Section 5.3.1.

.10 If there is to be a visitors' center, indicate its locations and presumed occupancy.

5.4 EFFECTS OF CHEMICAL AND BIOCIDE DISCHARGES

.1 Discuss the potential for accidental chemical waste spills and the resulting effects on both surface waters and groundwaters. Include bases for the estimate stated (Section 5.4.2).

.2 The amounts of drift anticipated from the cooling towers seem exceptionally high. Verify that the computations are correct and prepare a map centered on the cooling towers which shows isopleths of drift deposition on an annual basis around the towers. Include on the map vegetation which occurs in the drift field or plot drift isopleths on existing vegetation maps.

5.6 EFFECTS OF OPERATION AND MAINTENANCE OF THE TRANSMISSION SYSTEM

.1 Discuss the question of induced currents in metal structures adjacent to transmission line corridors. Include in the discussion reasonable estimates of the number of structures such as fences, metal buildings, etc. which could be affected for all lines.

		Reference
6.0	**EFFLUENT AND ENVIRONMENTAL MEASUREMENTS AND MONITORING PROGRAM**	
6.1	**APPLICANT'S PRE-OPERATIONAL ENVIRONMENTAL PROGRAMS**	
.1	**Provide the date when the onsite towers became operational.**	2.6.2.1
.2	**Provide further information on the permanent meteorological facility, including proposed location, tower height, instrumentation, and anticipated date for initiation of operation.**	
.3	**Discuss plans for the correlation of data from the present towers with data from the permanent facility.**	
.4	**Clarify the levels at which meteorological measurements are being made on the present towers.**	Figure 6.1.3-3
.5	**The accuracy of the delta-T measurement recommended in Regulatory Guide 1.23 is** $\pm$**0.1 °C for the entire sensor-recorder system. The recorder accuracy for this parameter, as presented on page 6.1-26, is** $\pm$**0.5 °F. Discuss the measurement and recording of delta-T in further detail and include plans to upgrade the measurement, if necessary, to meet the recommendation of Regulatory Guide 1.23.**	6.1.3.1
.6	**Discuss plans to monitor pertinent meteorological parameters at a height representative of the height of release of cooling tower effluent.**	6.1.3.1
.7	**Provide the averaging times used to obtain hourly values of meteorological parameters.**	6.1.3.1
.8	**Explain the rationale for combining of B and C stability classes as indicated on page 6.1-27.**	6.1.3.2
.9	**Clarify the use of equation on page 6.1-28, and indicate over what time periods it is applied.**	6.1.3.2
.10	**Present annual average relative concentration values by direction and distance. Refer to Appendix B of Regulatory Guide 1.42 for the procedures for these calculations.**	6.1.3.2, 2.6.3.2
.11	**Include the bases for the prediction of the alteration of the local climate, as indicated in Regulatory Guide 4.2.**	6.1.3.1

Reference

7.0 ENVIRONMENTAL EFFECTS OF ACCIDENTS

.1 Provide estimates of the impact on the projected population around the site (to a distance of 50 miles) for each postulated accident discussed in Section 7.0.

.2 Provide the detailed assumptions used in calculating the consequences of each class of accident. Include a description of how each accident could occur at your facility, and provide the source terms used to calculate the dose consequences. (The data presented in Table 7.0.0-1 are responsive to direction given in Section 3.5, "Radwaste Systems," of the Regulatory Guide 4.2 and may not be applicable to the accident source terms.) 7.1

8.0 ECONOMIC AND SOCIAL EFFECTS OF PLANT CONSTRUCTION AND OPERATION

8.1 BENEFITS

.1 In the first paragraph of subsection 8.1.1, the basis for the assumption of a load factor of 76% should be given.

.2 Section 8.1.2.1 indicates that without the Cherokee units, "retirement of older, less efficient units on the Duke system would have to be delayed." Table 1.1.1-2 indicates that the only retirements planned between 1974 and 1986 are fossil units (in 1974-75) totalling 173 MW. Please justify the statement referred to in Section 8.1.2.1.

.3 Section 8.1.2.1 indicates that absence of the Cherokee units would result in higher costs to the consumer. If it is assumed that power demand projections are in error, and that there is a delay in the actual need for the power produced from the Cherokee units, then one would expect that the consumer's costs would be higher than would be the case if the system was operating at optimum capacity. Please quantify these extra costs to the consumer for the following two cases: (1) assume that the Cherokee units are completed one year prior to the actual need (essentially three units not needed for one year each); (2) assume that the Cherokee units are completed two years prior to the actual need (essentially three units not needed for two years each).

.4 Describe the factors that are important when the North Carolina and the South Carolina public utility commissions (or their equivalents) determine the validity of electrical rate increases requested by Duke Power Company. Detail differences in these factors, and in the procedures used, by the North Carolina and South Carolina regulatory bodies.

.5 Section 8.1.2.2 refers to a formula for tax revenues which is used by the Federal Power Commission. Please give this formula (and references) and justify its applicability to the Cherokee station.

.6 Assuming that 1972 procedures, regulations, and rates are in effect, state the assessed valuation of Cherokee Nuclear Station.

.7 State what the total annual taxes on Cherokee station would be at that rate.

.8 If all of these taxes do not go to the county give a breakdown of their allocation.

.9 In Table 8.1.2-2, the first six cost figures given do not quite add up to the total given for nuclear production plant with substation. Furthermore, there is no entry for "Property Taxes During Construction," which is included in Table 8.1.2-3 of the Environmental Report for the Perkins Nuclear Station.

.10 Section 8.1.2.3 does not adequately discuss the social impacts of permanent employees on the communities in which they will live. This section should be enlarged according to the suggestions listed previously for construction employment and also as indicated by Section 8.2("Examples of long-term external costs") of USAEC Regulatory Guide 4.2

.11 In Section 8.1.2.4, quantify the construction expenditures (by year, if possible) for regional and local materials, services, and supplies.

.12 Section 8.1.2.5 seems to indicate that about 1,600 construction employees will relocate within a ten-mile radius of the station. The effects of this relocation should be discussed fully as indicated earlier.

.13 Section 8.1.2.5 indicates that benefits to be derived from construction of Cherokee may include the speedup of the building of electric powered mass transit systems. If there are plans within Duke's service area to construct such systems state the fraction of Duke's total power output that is expected to be consumed by such systems in 1985.

.14 Section 8.1.2.5 indicates that a social benefit of the power from the Cherokee units will be power for services such as schools, police, and radio. Provide the fraction of Duke Power productions that is utilized by these categories. State whether or not use by schools generally coincide with periods of peak power use in Duke's service area. State whether or not most radio and police stations in the area have emergency power supplies for their essential equipment.

Reference

.15 In Section 8.1.2.5 part (b) indicates that as a consequence of the construction of Cherokee, heating with electrical units will become increasingly attractive. Please justify that statement.

.16 Part (d) of Section 8.1.2.5 indicates that the operation of Cherokee will permit the retirement of older, less environmentally pleasing fossil-fired generating units. State how many will be retired as a consequence of the construction of Cherokee, give their location and their total capacity.

9.0 ALTERNATIVE ENERGY SOURCES AND SITES

.1 Provide a rewritten analysis of site alternatives such that all alternatives presented are viable. 9.2.2, 9.3.5

.2 With regard to Sections 9 and 10, it may be noted that the cost comparisons do not make use of the concept of present worth.

9.2 ALTERNATIVES REQUIRING THE CREATION OF NEW ENGINEERING CAPACITY

.1 Section 9.2.1 mentions four candidate areas. State the approximate 1973 and 1985 power requirements for each of these areas.

9.3 COST EFFECTIVENESS COMPARISON OF CANDIDATE SITE-PLANT ALTERNATIVES

.1 The rejection of fuel oil as an alternate energy source, in Section 9.3.2, should be done in a quantitative manner.

.2 Section 9.3.2 should indicate the anticipated costs for coal on a per ton basis, as well as the likely source of this coal.

10.0 PLANT DESIGN ALTERNATIVES

10.1 COOLING SYSTEM

.1 A cooling pond should be considered as an alternative cooling system. 10.1

.2 In subsection 10.1 on "Cooling Systems," there should be a discussion of the onsite effects of fogging, icing, and drift on the operation of the plant, particularly the electrical equipment, and the effects of noise on the operating staff.

.3 In Table 10.1.0-1, the penalties associated with different cooling systems should be given in terms of megawatts of lost capacity and kilowatt-hours of lost energy and the method of converting these losses to dollars should be given.

	Reference
10.2 INTAKE SYSTEMS	
.1 Infiltration beds underlain by perforated pipes, perforated piped installed above the river bed and an off-river intake structure on an openended canal should be considered as viable alternative intake systems (Section 10.2.2).	10.2
10.3 DISCHARGE SYSTEM	
.1 Submerged single-port and submerged multiple-port diffusers should be considered as viable alternative discharge systems.	10.3
12.0 ENVIRONMENTAL APPROVALS AND CONSULTATIONS	
.1 Water use permits and anticipated submittal and required dates therefore should be provided.	

Reference List of Questions
in Response to
Atomic Energy Commission's Letter of August 28, 1974

Project 81
Cherokee Nuclear Station
Environmental Report

REQUEST FOR ADDITIONAL INFORMATION
FOR
CHEROKEE NUCLEAR STATION UNITS 1, 2 AND 3
DOCKET NOS. STN 50-491, 492 and 493

1.0 PURPOSE OF THE PROPOSED FACILITY — References

.1 Section 1.0 states: 1) power demand for the past ten years indicates a doubling rate every seven years, and 2) more recently, the doubling rate is every ten years. It further states that "there is no indication at present that the long range trend is going to change materially from that experienced in the past." The latter statement seems inconsistent with the former two points. Please explain and quantify. — 1.1.1

.2 The second paragraph mentions "increasing unavailability of fossil fuels" and a "shift to electrical energy from other energy sources." Discuss these two points with regard to Duke Power Company's service area. — 1.1.1

1.1 NEED FOR POWER

.1 Conservation of energy should be discussed in this section.

a. Describe the duration and intensity of the advertising programs conducted during the last three years. — 1.1.1

b. If promotional advertising has been terminated, when was this type advertising terminated. — 1.1.1

c. Identify the regulatory commissions or bodies that regulate the retail price of electricity in the Duke Power service area. — 1.1.1

d. Describe the various types of interruptible sale contracts that the Company has. — 1.1.1

e. Provide the size (MWe) of interruptible sale for each type described in 1.1.1.d. — 1.1.1

f. Describe the Company's record of load shedding and load curtailment methods used in the last five years. Information should be supplied as cumulative duration of time by month and by methods. This information should include 3% voltage reduction, 5% voltage reductions, curtailment of electric power usage, voluntary curtailment by large commercial and industrial customers, and discontinuing service to contractually interruptible loads. — 1.1.1

References

g. Describe any impact on demand resulting from the recent conservation activities in the Duke Power service area. 1.1.1

.2 In Subsection 1.1, the projected loads and capacities should be updated to correspond with the report to the Federal Power Commission of April 1, 1974, on "Coordinated Bulk Power Supply Program" by the Southeastern Electric Reliability Council. For example, in Table 1.1.1-1 and 1.1.2-3, the peak loads for the Virginia-Carolinas (VACAR) Subregion are given for the years 1983, 1984, and 1985 (when the Cherokee units are projected to begin operation) as 57,071 megawatts, 61,622 megawatts, and 66,366 megawatts, respectively, whereas the report to the FPC of April 1, 1974, gives these peak loads as 55,306 megawatts, 59,505 megawatts and 64,159 megawatts. 1.1.1

.3 Section 1.1.1 and 1.1.4: Describe VACAR AND SERC, including membership of both organizations, the purposes of these organizations, and the length that they have been in existence. 1.1.1

.4 With reference to Table 1.1.1-1:

a. The table indicates variations in MW purchases but long-term yearly constancy in MWhr purchases. Please explain. 1.1.1

b. Describe in general terms the arrangments for the purchase and sale of power between Duke Power Company and other public or private generators of electrical power, indicating power sales (MW and MWhr) for the years 1964 - 1986. Indicate purchasers and sellers of this power, and the amounts, for these years and the purchase and sale prices of this electric power. 1.1.1

c. Provide monthly peak loads (MW and MWhr) for 1965, 1970, and 1973. Discuss any trends in these values. 1.1.1

d. Provide the month and year of the nuclear steam supply system purchase. 9.3.4

e. Provide the estimated (assumed) interest rate during station construction and indicate whether it is simple or compound. 9.3.4

f. Furnish the length of the construction labor force work week in hours. 9.3.4

Provide the following information that is convenient to supply:

g. Cost of site land, dollars 9.3.4

h. Estimates site labor requirements, man hours/kW (e) 9.3.4

References

i. Average site labor pay rate (including fringe benefits) effective at month and year of NSSS purchase, $/hour — 9.3.4

j. Average escalation rates projected for site labor, %/year — 9.3.4

k. Average escalation rate projected for site materials (e.g., structural steel, rebars, concrete, lumber), %/year. — 9.3.4

.5 List the fossil units that will be retired in 1974 and 1975 (Table 1.1.2-2). — 1.1.2

.6 Describe the way in which Duke Power Company establishes its minimum reserve requirements, including in the discussion the Federal Power Commission's policies with regard to reserve requirements. If percentage reserve requirements change significantly for the period 1974 - 1986, discuss the reasons for this change. Include other aspects as required by Section 1.1.3 of USAEC Regulatory Guide 4.2. — 1.1.2, 1.1.3

.7 Provide a map showing the Duke Power Company's service area, the expected transmission system, and the location of all plants of all types as of December 31, 1985. — 1.1.4

.8 If eminent domain proceedings will be required to acquire any portion of this site, state the number of acres that will be acquired in this matter. — 2.1

.9 State the number of families that have been (will be) displaced as a result of Duke Power Company acquiring the site. — 1.1.4

.10 Section 1.3 stated that a reserve margin of 19.0 percent for 1983 would be below the minimum acceptable level. Table 1.1.2-2 gives an average reserve level of about 8.4 percent for the period 1969 - 1973, which is considerably less than 19.0 percent. Discuss the adverse effects observed in the Duke Power Company service area as a consequence of this low reserve margin during the period 1969 - 1973 and correlate these effects, in semi-quantitative terms, to elaborate on predicted consequences of a 19.0 percent reserve level for 1983. — 1.1.3, 1.3

.11 Section 1.3 mentions that if Cherokee is delayed by a year, VACAR reserves would decline from about 24.9 percent to 22.2 percent, and concludes that a delay of another unit (presumably decreasing the reserve to about 19.5 percent) would result in the VACAR subregion being severely short of reserves. During the period 1969 - 1973, the VACAR region reserves averaged about 15.0 percent (Table 1.1.2-3). Discuss the consequences observed during that period as a consequence of this 15 percent reserve margin, indicating the adverse effects suffered by the VACAR region as a consequence of this "low" margin, and project these consequences to 1985 to justify the statement concerning severe shortage of reserves. — 1.3

		References
.12	Discuss arrangements between Duke Power Company and other neighboring utilities that have been made to minimize reserve requirements within each of the utilities (that is, discuss the extent to which Duke Power Company is part of a region-wide power pool.)	1.3
.13	Figure 1.1.1-1 does not show power from approximately 3320 MW of fossil fuel capacity in 1985. Explain why not when Section 9.1.2 indicates that Marshall (2025 MW) is committed to base-load operation for the foreseeable future.	1.1.1

2.0 THE SITE

.1	Provide a map clearly showing the closest schools, church, hospital, dairy farms and residences within 5 miles of station.	2.2.2
.2	Provide data on poultry production within 5 miles of station.	2.2.2

2.2 REGIONAL DEMOGRAPHY, LAND AND WATER USE

.3	Provide a table listing the locations (distance and direction) of animals (cows or goats) producing milk for human consumption within five miles of station, also indicate the size of herd.	2.2.2
.4	Provide an estimate of the population served by the Union Water Dept. intake.	2.2.2.5
.5	Provide estimates of the average transit time to downstream water users and the average river low at the plant discharge.	2.2.2.5
.6	Clarify the distance in river miles from discharge to the nearest downstream municipal surface water intake.	2.2.2.5
.7	Provide data concerning groundwater drawdown caused by withdrawals from nearby wells.	2.2.2.5
.8	Provide bases and state under what conditions these drawdowns could result in transport of pollutants from the site to the neighboring wells.	2.2.2.5
.9	Note on or cross reference to map similar to Fig. 2.2.2-6, the locations of industrial facilities, including power plants which could release effluents to the waterways that could interact with the proposed plant or its effluents (Section 2.2.2.5).	2.2.2.5
.10	Provide mean monthly intake flow data for all major (71 cfs) water users on the Broad River for 50 miles above and below 99 Islands Reservoir.	2.2.2.5

References

.11 Provide information on the water supply for farms and residences on the Broad River downstream from 99 Island Dam. 2.2.2.5

.12 Provide a figure illustrating the planned Cherokee Site boundary. For the purposes of this question, the "site" can be defined as all property that Duke Power will purchase, lease or rent, etc., for the purpose of construction and operation of the station. Indicate the nature and size of site areas that will be "permanently" removed from timber, agricultural, or other productive land use. Also indicate what site areas will be available for some land use, and what land uses Duke would anticipate for these areas. 2.2.2

.13 Provide copies of Figure 2.2.2-2 which is said (Section 2.2.2.1) to provide the concentrations of major farm products. 2.2.2.1

.14 Discuss the effects of current Cherokee site excavation and grading activities on erosion and sediment transport into the 99 Islands Reservoir. 4.1.4.1

.15 Supply information on the nature of the State Game Lands that occur close to the Cherokee Site (ER Fig. 2.2.2-4). Describe the public use of these lands. List the game species recorded for these lands. 2.2.2.3

.16 Section 2.2.2 discusses the decline in farming in the site area. Elaborate on reasons for this decline. 2.2.2

.17 Provide a map showing those residences which will be removed prior to operation of the station. 2.1

2.5 HYDROLOGY

.1 Provide the lowest average flow for seven days that occurs on the average once every 10 years at the Gaffney gage on the Broad River near the plant site (Section 2.5.1). 2.5.1

.2 Provide the surface area (maximum, minimum and average) and corresponding volumes of the 99 Islands Reservoir, and describe how these areas and volumes change with expected seasonal and other fluctuations (Section 2.5.2). 2.5.2

.3 Provide or cross-reference expected maximum, minimum, and average inflow and outflow rates to and from the Nuclear Service Water Pond, the intake sedimentation Pond, and the Waste Water Collection Basin. Also provide or cross-reference area-capacity curves for these ponds (Section 2.5.3). 2.5.3

.4 Provide the dates of and expected seasonal and other variations of the groundwater table elevations at the offsite observation wells, Table 2.5.4-4, and of the groundwater contours in Figs. 2.5.4-1 and 2.5.4-2 (Section 2.5.4). 2.5.4.3

References

.5 The water quality standards or requirements applicable to any waters that may be affected by plant construction and operation should be cited in Section 2.5.5; whereas, the relevant text of these laws and regulations should be included in Appendix 1. 2.5.5

.6 Provide estimates on mean monthly flows at all site creeks. 2.5.3

.7 State the average transit time for water flowing through 99 Islands Reservoir. 2.5.2

.8 Provide data on stratification in 99 Islands Reservoir. 2.5.2.2

2.6 METEOROLOGY

.1 Provide an adequate discussion on the climatology of the site region. Discuss how climatological data from Greenville-Spartansburg are representatives of long term conditions at the site. 2.6.1

.2 For Table 2.6.0-1: 2.6.1

a. Identify the stations, and their geographic relationship to the site, from which data in this table are derived.

b. Provide the period of record for each station.

c. Indicate the date and place of occurrence for the record maximum and record minimum values presented in this table.

.3 Provide an adequate discussion of the local meteorology of the site area. Describe monthly wind characteristics at all heights at which wind characteristics are applicable, i.e., 10 meters, height of release of radioactive material (plant vent height), and a height representative of conditions at the height of cooling tower effluent release. 2.6.1

.4 Describe the instrumentation used at Greenville-Spartanburg to develop Table 2.6.0-2. 2.6.3.2

.5 Provide the definition of calms as used in Table 2.6.0-2, and discuss how the first wind speed interval (0-3 Kts) was developed separately. 2.6.3.2

.6 Provide the number and frequency of observations at Greenville-Spartanburg used to develop Table 2.6.0-2. 2.6.3.2

.7 Compare available onsite joint frequency distributions of wind speed and direction by atmospheric stability (defined by vertical temperature gradient) with concurrent and long-term 2.6.3.2

References

distributions of wind speed and direction by atmospheric stability (determined by the STAR program) from Greenville-Spartanburg.

.8 Document in this section all meteorological conditions used for design bases considerations in the ER. Include appropriate cross-references. 2.6.1

.9 Provide the number of hurricanes, tropical storms and tropical depressions that have passed within 50 miles of the plant site. 2.6.1

.10 Provide the frequency of occurrence and severity of ice storms in the site area. 2.6.1

.11 Provide the frequency of thunderstorms observed in the site area. 2.6.1

.12 Provide the frequency of days with high air pollution potential expected in the site area. 2.6.1

.13 Drainage flow under certain synoptic conditions affects the wind speed and direction measurements at the low-level (10m) onsite tower. Discuss how representative measurements at this level are of 10m wind conditions expected to be experienced by the reactor structures after construction. Include a discussion of the orientation of the plant structures with respect to present drainage flow conditions. Indicate finished plant grade and any alteration of local topography that may affect drainage flow. 2.6.3.2

.14 Regarding Table 2.6.3-4 2.6.3.2

a. Identify the period of record on the Table

b. Include the month of April, 1974, in this table so that the data from Greenville-Spartanburg correspond to the period of record available from the onsite program

c. Provide a summary column that expresses the percent of wind in each sector for the entire (9/11/74-4/30/74) period of record.

d. Explain the rationale for the presentation of wind direction in 10^{o} sectors instead of the recommended 22 $1/2^{o}$ sectors. (Regulatory Guide 1.23)

.15 Table 2.6.3-5 indicates some significant differences in wind directions as measured at Greenville-Spartanburg and the Cherokee site. Amend Table 2.6.3-5 to identify, by each of 16 direction sectors, the differences between wind directions measured at Greenville-Spartanburg and the Cherokee site by month (9/73-4/74) 2.6.3.2

References

.16 Provide monthly wind data (similar to the data presented in Table 2.6.3.3) from the high-level (135-feet) onsite tower. 2.6.3.2

2.7 ECOLOGY

.1 Include a schedule for furnishing the second six months of data. 2.7

.2 Based on this data and other available information, provide the best possible projection of seasonal variations. 2.7

.3 Provide an analysis of all ecological data collected through June, 1974. The analysis should be made for each sampling period for (1) each sampling station (1-23) and for (2) the total data collected in each of the five station groups (upstream, main lake, backwaters, downstream and tributaries). The analysis should include computations of 2.7.2.1.2 2.7.2.2.3 2.7.2.5

a. mean density of organisms (by number and biomass)
b. the standard deviation of the mean
c. the percentage composition of the mean of the total community sampled.

These computations should be made for:

(1) The total number of organisms sampled within each community (i.e., phytoplankton, periphyton, zooplankton, benthos, fish and ichthyoplankton).

(2) the total number of organisms within each of the following taxomonic divisions within each community:

(a) each <u>class</u> of phytoplankton and periphyton
(b) each <u>order</u> of zooplankton and benthos
(c) each <u>family</u> of fish (including ichthyoplankton)

Data should be provided on ichthyoplankton densities on at least a biweekly sampling basis for the period February through June, 1974.

.4 Provide data, analyzed as above, for the benthic drift organisms in the Broad River. 2.7.2.5.6

.5 Provide the following information for each species found in the Broad River: 2.7.2.6.3 2.7.2.6.8

a. Spawning period in the Broad River.
b. Water temperature at spawning.
c. Whether or not planktonic eggs and/or larvae are produced.
d. When planktonic forms are present.
e. Preferred spawning sites.

.6 Provide information on the use of the Broad River and 99 Islands 2.7.2.6.10

References

a. number of fishermen annually.
b. number of fishing trips to the area annually and total time spent fishing.
c. principal fishing areas.
d. catch statistics for each species.
e. economic value of the fishery.

.7 Predict what types of aquatic communities will become established in the site ponds. 5.1.4

.8 Provide data, such as presented in Tables 2.7.2-16 and 2.7.2-17 for all communities studied, except fish, and in addition provide the data on all individual sampling stations. 2.7.2.2.2 2.7.2.5

.9 Provide data on swim speeds, broken down into size classes, for all fish species known to be present in the Broad River, for which data is available. 5.1.2.3

.10 Provide data to substantiate whether the periphyton community found on natural substrates in the Broad River is similar to the periphyton community described by the applicant from sampling artificial substrates. 2.7.2.3.1

.11 Provide information from the appropriate State agencies on all major fish kills which have occurred in the Broad River during the last 10 years including: 2.7.2.6.10

a. extent of river affected.
b. dates
c. river characteristics at times of kills
d. species composition of kill
e. numbers and weights of each species killed
f. cause of kills

.12 Provide data or estimates on river velocities past the proposed intake structure during hydroelectric power generation and with no power generation at: 5.1.2.3

a. mean monthly river flows
b. 7Q10 flow
c. minimum daily flows

.13 Describe any fish sampling that has been done in the immediate area of the proposed intake and discharge structures in the Broad River. 6.1.1.1

.14 Discuss the relative importance of detritus as an energy source in the trophic structure of the Broad River. 2.7.2.1.1

.15 Provide data on the species composition and extent of the communities of aquatic macrophytes present in 99 Islands Reservoir. 2.7.2.4

References

.16 Provide information on the status and distribution of endangered fish species found in the Broad River. 2.7.2.6.9

.17 Predict the extent of hypolimnetic oxygen depletion which occurs in 99 Islands Reservoir during the summer. 2.5.2.2

.18 Explain why a large percentage of the aquatic organisms collected were not identified to the species level. Describe the effect this will have on the reliability of the calculations of species diversity. 2.7.2.5 2.7.2.2.2

.19 Provide a more detailed site vegetation map. 2.7.1.1.2

.20 Provide soil data for the Cherokee Site. 2.4.1

.21 Discuss the erosion potential for soils on the Cherokee Site. 2.4.1

.22 Section 2.7.1.1.5, line 15, states that logging by local land owners is being conducted on the proposed Cherokee Site. 4.3.1

a. Specify in what capacity local land owners are conducting this logging.

b. State the percentage of forested acres purchased by Duke where the sellers retained the timber rights.

c. Provide an estimate of the per acre value of timber rights on the site. Support this estimate with references.

d. Discuss the manner in which Duke restricts or encourages specific logging practices on the site.

e. Describe the manner in which Duke is responsible for erosion that may result from logging operations.

f. Describe the environmental effects on wildlife, erosion, and unique habitat destruction resulting from logging.

g. What percent of the logging operations involved the selective harvesting of pines as detailed in Section 2.7.1.1.5.

h. Specify on a site vegetation map the forest areas that have been logged since Duke began to negotiate for purchase of site properties.

i. Specify the areas that will be logged prior to construction.

.23 Tables 2.7.1-4 through -11. Provide a map indicating the numbers and location of sampling stations used to calculate constancy and dominance values in these tables. Also specify the number of replicates used for each sampling station. 6.1.4.3 6.1.4.3.1.2

References

.24 Provide data on the relative seasonal abundances of duck species on the Broad River in the vicinity of the Cherokee Site. 2.7.1.4

.25 Provide an indication of the duck hunting pressures on the Broad River. 2.7.1.4

.26 The reference to Vallentyne (ER 2.7-12) reports an annual productivity of 10^{17} grams. State the unit area for this figure. 2.7.1.1.4

3.0 THE PLANT

3.3 STATION WATER USE

.1 Provide bases, including calculations, to substantiate the note in Fig. 3.3.0-1 that the combined effects of rainfall, runoff, evaporation, and seepage on the intake sedimentation basin is negligible. In addition, these effects on the nuclear service water pond, the waste water collection basin and the liquid waste dilution canal should be included in Figure 3.3.0-1. Average and maximum water use values should be indicated at each location. 3.3

3.4 HEAT DISSIPATION SYSTEM

.1 Provide a simplified flow diagram showing the path of the tower blowdown from the point of intake to the point of discharge into the river, for both summer and winter conditions, including dilution, flow rates, temperatures, and frequency of flows. Do the same for each of the other water systems. 3.4.1

.2 Describe the discharge structure or outfall arrangement for discharge of blowdown water into the river, showing locations, dimensions, elevations (submergence), discharge flows and velocities, direction of discharge, any special provisions to prevent bottom scouring, and river cross-section profile at the discharge structure. 3.4.1 10.3.1

.3 Provide corrected and revised Tables 3.3.0-1 (station water use) and Table 3.4.0-1 (heat dissipation system). 3.4

.4 Provide design and performance data for both summer and winter conditions for the cooling towers proposed for the Cherokee Station, including the following and correcting the discrepancies between Tables 3.4.0-1 (amended 8-14-74) and Table 3.4.8-1 (amended 8-14-74): 3.4.1

Number of towers
Height of towers
Layout of towers

References

Capacity (gpm water cooled)
Range
Approach
Design wbt/dbt
Makeup and blowdown rates
Efflux air: speed, cfm, exit temperature
Drift rate
Particle-size distribution
Noise level

.5 Provide a conceptual drawing of the intake structure, showing size and number of traveling screens, location of trash racks, skimmer walls (if any), normal and low water levels, relationship to existing shoreline, and river cross-section profile at the intake structure. Include data on flowrates and face velocities at each screen. — 3.4.4, 3.4.5

.5 RADWASTE SYSTEM

.1 Since Fig. 3.1.0-4 does not show the relative height of the stack with respect to the surrounding buildings as stated on page 3.5-3, provide this information. — 3.1, 3.5.2

.2 Furnish the frequency, rate of flow and route from intake to discharge of the radwaste dilution water. — 3.5

6 CHEMICAL AND BIOCIDE WASTES

.1 Ground deposition of chemicals and solids entrained in spray fallout from the cooling towers should be estimated and the methods and bases for the estimates stated (Section 3.6.2). — 5.4.4

.2 Furnish the concentrations of total residual chlorine and the alternative biocide in the blowdown. — 3.6.1.1

.3 Provide data and references on the toxicity to fish of the alternative biocide. — 5.4.3

TRANSMISSION FACILITIES

.1 Provide a discussion of duck populations in the area and of how construction and operation of the station and the transmission facilities may affect migratory and non-migratory ducks and other waterfowl. — 4.2.1

.2 Furnish the maximum distance that the actual corridor location may vary from the selected routes shown in the ER. — 3.9.1

.3 Provide a figure showing the location, size, boundaries, and nature of any natural or scenic areas, gamelands, state parks, etc. within one mile either side of the transmission line rights-of-way. — 4.2.1

References

.4 Describe any changes in existing transmission corridors and/or structures that will be required because of fold-ins to the Cherokee Station. Specify the number of towers that will be replaced, modified, or otherwise upgraded and the number of miles of transmission line involved. 4.2.2

.5 Please give a discussion of the forest and land use types that will be traversed by the proposed transmission corridor. 3.9.2

.6 Describe the manner in which Duke restricts the owners of transmission line rights-of-way from engaging in or allowing activities that cause or accelerate erosion or in other ways damage the ecology and land use in the corridors. 5.6

.7 List the number of non-spanable slopes (34% or above) that are encountered along each selected and alternate transmission line route. 10.9

.8 Provide aerial photos of the selected and alternate transmission corridor routes which at least encompass a transect extending one mile on either side of the routes. 3.9.1

.9 Specify the logistics, costs, and environmental factors (i.e., wildlife, erosion, etc.) that Duke considers important in its decision to use bush-hogging for maintaining a portion of corridor as opposed to selecting removal of only tall growing tree and shrub species. 5.6

4.0 ENVIRONMENTAL EFFECTS OF SITE PREPARATION, PLANT AND TRANSMISSION FACILITIES CONSTRUCTION

4.1 SITE PREPARATION AND PLANT CONSTRUCTION

.1 The potential radiological impact of Unit 1 operation on the construction workers of Unit 2 and 3 should also be discussed. Based on estimates of the size of the construction work force, the construction schedule, the location of the construction personnel with respect to major sources of radioactivity and occupancy factors, provide the following information: 4.1.1.5

a. Estimates, at the location of personnel, of the total body dose rates from waste storage tanks, gaseous plume, and the turbine and associated equipment.

b. Estimates of radiation exposure to construction personnel over the period of construction.

c. Estimates of integrated dose to the construction population in average man-rem for each year of construction and the total man-rem for the construction period.

References

.2 Section 4.1.1.5 indicates that "wastes, such as chemical, fuels, lubricants, bitumens, and raw sewage, are not deposited onto the natural watershed..." Discuss where they will be deposited and the consequences of depositing them there. 4.1.1.5

.3 Discuss how combustible debris generated by station and transmission-line construction will be disposed of. 4.1.1.5

.4 Section 4.1.1.5 contains a statement that Duke "abides by the dictates of good citizenship" in construction practices. Please describe these "good citizenship" practices. Please state if these practices are legally required, or only at the option of the company. 4.1.1.5

.5 a. Please state whether or not any families will be required to move their residences as a consequence of railroad spur construction. 4.1.1.4

b. If eminent domain proceedings were (will be) required to obtain any of the railroad spur right-of-way, state how many acres are so affected.

c. State the number of individual legal actions required, if any.

.6 Section 4.1.2, the effects of construction on human activities, is very inadequate. Section 8.2 ("Examples of temporary external costs") of USAEC Regulatory Guide 4.2 (March, 1973) indicates examples of construction effects which should be presented in a semi-quantitative manner. 4.1.2

.7 Discuss the effects of constructing intake and discharge structures and discharge canals on Broad River aquatic biota. 4.1.4.1 4.1.4.2

.8 Provide bases, including computation methods and coefficients, to substantiate the statement that dewatering for excavations will not lower the groundwater table beyond the site area. (Section 4.14.2) 4.1.4.2

.9 No discussion of the effect of heavy traffic on SC Route 13 is provided. Discuss what arrangements are expected to be made with the State concerning upgrading and maintenance of this artery. 4.1.1.3

.10 Furnish the expected volume and turbidity of dewatering effluents from all construction activities. 4.1.4.1

.11 Provide a detailed plan of the procedures that will be used to control erosion and runoff to the Broad River. 4.1.4.1

References

.12 Explain what disposition will be made of the approximately 1.5×10^6 cubic yards of excavated material which will be in excess of that required for fill (ER Table 4.1.3-1). 4.1.3.1

.13 Provide a map showing the area and location of all impoundments that will be created on the Cherokee site for construction and operation of the station. Quantify and describe existing land use and forest types in each area to be inundated. 4.1.3.1

.14 Provide a discussion of the land uses and forest types that will be interrupted by construction of the access railroad. 4.1.1.4

.15 Indicate the number of bridges that will be constructed along the railroad right-of-way. 4.1.1.4

.16 Identify the size and location of the concrete batch plant. Discuss the measure that will be implemented to control dust, noise, and liquid effluents resulting from plant operation. 4.1.1.5

4.3 RESOURCES COMMITTED

.1 Discuss or cross-reference commitments of water resources during site preparation and plant construction. 4.3.1

5.0 ENVIRONMENTAL EFFECTS OF PLANT OPERATION

5.1 EFFECTS OF OPERATION OF HEAT DISSIPATION SYSTEM

.1 Discuss reasonably anticipated environmental impacts of the Nuclear Service Water pond. 5.1.4

.2 Provide a discussion of the effects of consumptive use of water by evaporation and drift from the plant cooling towers. 5.1.2.4

.3 Discuss the synergistic effects of consumptive water use by the plant and other water users on the Broad River. 5.1.2.4

.4 Describe plant operation as it would have occurred during the drought of record under both present and future expected water usage on the Broad River. 5.1.2.4

.5 Provide a detailed estimate, including bases and calculations, of the amount of time during plant life that station operation will be limited because of withdrawal limitations of water from the Broad River (Section 5.1.2). 5.1.2.4

.6 Provide bases for the statement that the quantity of salt from the cooling towers that reach the ground water will be negligible. 5.1.3

.7 Provide a discussion and bases therefore of the effects on ground-water by the presence of the proposed Nuclear Service Water 5.1.3

References

Pond, the Waste Water Collection Basin, and the Intake Sedimentation Basin (Section 5.1.3).

.8 Describe the plume parameters measured at the Cliffside Plant, and the instrumentation employed for these measurements. 5.1.4

.9 Provide further information on the application of the empirical data from Cliffside to represent expected results from the operation of mechanical draft cooling towers at Cherokee, including a comparison of the amount of heat being dissipated. 5.1.4

.10 Provide substantiation of the statement that the mechanical draft cooling towers at Cherokee would have no effect on ground transportation on SC 13, 3000 feet from the cooling tower yard. 5.1.4

.11 Provide results of calculations of fogging frequency, plume visibility and solids deposition, based on the revised cooling tower of Table 3.4.8-1. Provide revised Table 5.1.4-2 and revised Figures 5.1.2-1, 5.1.2-2, 5.1.4-1, 5.1.4-2. 5.1.4

.12 Discuss effects of revised fogging frequency estimates on ground-level transportation. Discuss effects of revised drift deposition estimates on vegetation in the surrounding area. 5.1.4

.13 Provide further information on the data from the Cliffside Plant used to compare the performance of the Cherokee Station cooling towers and discuss the applicability of this data to the Cherokee Station. 5.1.4

.14 State whether the discharge of heated water from the cooling tower blowdowns into the Broad River will meet the applicable portions of the State of South Carolina water quality standards at river low-flow conditions and the basis for this conclusion. 5.1.5

.15 State whether the cooling tower emissions will meet the State of South Carolina ambient air quality standards and the basis for the conclusion. 5.1.5

.16 The estimates of potential entrainment in Sec. 5.1.2.3, appear to be wrong. Please review these calculations. 5.1.2.3

.17 Predict the effects of plant operation on dissolved oxygen concentrations in the Broad River. 5.4.2

.18 Assess the potential of increased fish impingement during low river flows. 5.1.2.4

References

.19 Discuss how impingement on the traveling screens will be monitored. Describe provisions made for returning impinged fish to the river. 5.1.2.3

.20 Provide data or references to support assertion that the proposed intake structure will not produce substantial fish impingement. 5.1.2.3

.21 Section 5.1.2.2 states that fish densities are low in the vicinity of the proposed discharge structure, at stations 15 and 16, yet station 15 is located 1,000 to 2,000 feet below the discharge and station 16 is located 3,000 to 4,000 feet up a tributary of the Broad River. Furnish the data this estimate is based on. 5.1.2.2

.22 State the minimum river flow at which it will be deemed necessary to utilize water from the NSW pond to supplement makeup water from the river: Section 5.1.2.4 states that this will be at the minimum flow of record (224 cfs) while Section 5.8.2 states that this will be at the 7Q10 flow (470 cfs). 5.1.2.4

5.2 RADIOLOGICAL IMPACT ON BIOTA OTHER THAN MAN

.1 The text states, with reference to Fig. 5.2.1-1, "in the case of the Cherokee Nuclear Station, many potential significant pathways are not available because of water and land usage, and the nature of the releases." Identify the potential significant pathways to biota which are not available due to water and land usage. 5.2.1

.2 What atmospheric dispersion factor (X/Q) and location was considered in the computed cow's thyroid dose on Table 5.2.3-1. 5.2.3

.3 Provide the proper reference for the bioaccumulation factors listed in Table 5.2.3-2. 13.5.2

.4 Provide the models and assumptions used in calculating the doses to biota. 5.2.3

5.3 RADIOLOGICAL IMPACT ON MAN

.1 What is the river location to which Table 5.3.2-1 applies? 5.2.2

.2 In comparing the CS-137 and H-3 releases of Table 3.5.1-3, and the concentrations of Table 5.3.2-1, a three order of magnitude difference in dilution factor appears to exist. What dilution factor was used to develop Table 5.3.2-1? 5.2.2

.3 Provide an estimate of the average dilution flow. 5.2.2

References

.4 The ICRP maximum permissible dose rates (MPD) for bone appear to be incorrectly quoted. For bone, the MPD is 0.56 rem/week for beta and gamma emitters and 0.3 rem/week for X or gamma emitters, i.e., the soft tissue MPD. Provide a corrected Table 5.3.2-1, if this misunderstanding of the MPD extended into the dose models. 5.3.2.2

.5 Provide the data base for the meteorological information used in the dose calculations in this section. 5.3.3

.6 Provide the locations at which the milk and vegetable pathways were evaluated for presentation in Table 5.3.3-1. 5.3.3

.7 Indicate the location (direction and distance) of the nearest residence for which the direct radiation dose is calculated, and indicate on a suitable plot plan the location of the refueling water tank, holdup tank, and reactor makeup water tank. Also indicate the dimension of these tanks, and their presumed radionuclide inventories upon which the direct radiation calculations were based. 5.3.4.1

.8 Provide the rationale for the procedure used to determine the population using the Broad River as a source of drinking water. 5.3.5

.9 The population doses of Table 5.3.5-1 appear to be based only on two pathways (drinking water and air submersion). Provide population doses estimates and population use factors for other exposure pathways described in Section 5.3.1. 5.3.5

.10 Provide the models used to determine the doses received by an individual from water-related exposures. 5.3.2.2

.11 If there is to be a visitors' center, indicate its location and presumed occupancy. 5.3.4.1

.12 Justify the use of a 9 month grazing period in the calculation of doses from gaseous releases. 5.3.3

5.4 EFFECTS OF CHEMICAL AND BIOCIDE DISCHARGES

.1 Discuss the potential for accidential chemical waste spills and the resulting effects on both surface waters and ground-waters. Include bases for the estimate stated (Section 5.4.2). 5.4.2

.2 The amounts of drift anticipated from the cooling towers seem exceptionally high. Verify that the computations are correct and prepare a map centered on the cooling towers which shows isopleths of drift deposition on an annual basis around the towers. Include on the map vegetation which occurs in the drift field or plot drift isopleths on existing vegetation maps. 5.1.4

		References
5.6	EFFECTS OF OPERATION AND MAINTENANCE OF THE TRANSMISSION SYSTEM	
.1	Discuss the questions of induced currents in metal structures adjacent to transmission line corridors. Include in the discussion reasonable estimates of the number of structures such as fences, metal buildings, etc. which could be affected for all lines.	5.6
5.7	OTHER EFFECTS	
.1	Discuss the recreational land uses that will be allowed on the site during operation of the station.	5.7
6.0	EFFLUENT AND ENVIRONMENTAL MEASUREMENTS AND MONITORING PROGRAM	
6.1	APPLICANT'S PRE-OPERATIONAL ENVIRONMENTAL PROGRAMS	
.1	Provide the date when the onsite towers become operational.	6.1.3.1
.2	Provide further information on the permanent meteorological facility, including proposed location, tower height, instrumentation, and anticipated date for initiation of operation.	6.1.3.1
.3	Discuss plans for the correlation of data from the present towers with data from the permanent facility.	6.1.3.1
.4	Clarify the levels at which meteorological measurements are being made on the present towers.	6.1.3.1
.5	From the response to Acceptance Review Questions 6.1.5, it is still not clear whether the present Delta - T measurements system meets the accuracy recommendations of Regulatory Guide 1.23. Also, the response to Question 6.1.5 on p.6.1-2 inplies that the system will not be upgraded until just prior to plant operation. Therefore:	6.1.3.1
	a. Provide the accuracy for the hourly average value of Delta - T	
	b. If this accuracy does not conform to Regulatory Guide 1.23, (1) Provide adequate justification for the present system accuracy to suffice, or (2) Provide a commitment to upgrade the system immediately to conform to Regulatory Guide 1.23 recommendations and provide a comparison of relative concentration (X/Q) values calculated using both systems of measurement.	
.6	Discuss plans to monitor pertinent meteorological parameters at a height representative of the height of release of cooling tower effluent.	6.1.3.1

		References
.7	Provide the averaging times used to obtain hourly values of meteorological parameters.	6.1.3.1
.8	Explain the rationale for combining of B and C stability classes as indicated on page 6.1-27.	6.1.3.2.1
.9	Clarify the use of equation on page 6.1-28, and indicate over what time periods it is applied.	6.1.3.2.1
.10	Present annual average relative concentration values by direction and distance. Refer to Appendix B of Regulatory Guide 1.42 for the procedures for these calculations.	6.1.3.2.1
.11	Include the bases for the prediction of the alteration of the local climate, as indicated in Regulatory Guide 4.2.	6.1.3.1
.12	Provide a table indicating the dates and duration of the sampling periods when woody vegetation, herbaceous vegetation, mammals, birds and amphibians were collected or observed. Discuss and justify the sampling methodology if it is different from that in the ER. Identify the locations of sampling plots or transects on a site map.	6.1.4.3 6.1.4.3.1 6.4.4.3.5
.13	The staff recommends the inclusion in the proposed environmental radiological monitoring program the following additions and modifications.	6.2.1
	a. The expansion of the air particulate sampling program to include two (2) control stations, Gaffney, Blacksburg, Hickory Grove, the residence having the highest X/Q as well as three (3) locations in different sectors which are predicted to have the highest ground level concentration.	6.2.1
	b. Any particulate samples should be collected weekly.	6.1.5 6.2.1
	c. Soil should be sampled once every three years and analyzed for γ and ^{90}Sr.	6.2.1
	d. Control dairy should be added.	6.1.5
	e. The analysis of ^{90}Sr concentrations in bottom sediments.	6.2.1
	f. The analysis of $^{89,90}Sr$ concentrations in aquatic vegetation.	6.2.1
	g. The analysis of ^{140}Ba in milk.	6.2.1
	h. The sensitivity for ^{131}I in milk should be 0.5 pCi/l at the time of collection.	6.1.5 6.2.1

References

.14 Provide the rationale for the intensive sampling of precipitation and fallout. 6.1.5, 6.2.1

.15 Provide a map showing the locations where ground water will be sampled, the nearest dairy and the discharge point on the Broad River. List in a separate table, the distance and direction of all sampling points from the station, keyed to Figure 6.1.5-1. 6.1.5, 6.2.1

.16 Provide the level of gross activity and the rationale for deciding when to perform a gamma scan on water and air samples. 6.1.5

.17 Provide a description of the instrumentation to be used in analyzing the samples for radioactivity. 6.1.5, 6.2.1

.18 Discuss the schedule and format for reporting analytical results from the monitoring program. 6.1.5, 6.2.1

7.0 ENVIRONMENTAL EFFECTS OF ACCIDENTS

.1 Provide estimates of the impact on the projected population around the site (to a distance of 50 miles) for each postulated accident discussed in Section 7.0. 7.0

.2 Provide the detailed assumptions used in calculating the consequences of each class of accident. Include a description of how each accident could occur at your facility, and provide the source terms used to calculate the dose consequences. (The data presented in Table 7.0.0-1 are responsive to direction given in Section 3.5, "Radwaste Systems," of the Regulatory Guide 4.- and may not be applicable to the accident source terms.) 7.1

8.0 ECONOMIC AND SOCIAL EFFECTS OF PLANT CONSTRUCTION AND OPERATION

8.1 BENEFITS

.1 In the first paragraph of Subsection 8.1.1, the basis for the assumption of a load factor of 76% should be given. 8.1.1

.2 Section 8.1.2.1 indicates that without the Cherokee units, "retirement of older, less efficient units on the Duke system would have to be delayed." Table 1.1.1-2 indicates that the only retirements planned between 1974 and 1986 are fossil units (in 1974-75) totalling 173 MW. Please justify the statement referred to in Section 8.1.2.1. 8.1.2.1

.3 Section 8.1.2.1 indicates that absence of the Cherokee units would result in higher costs to the consumer. If it is assumed that power demand projections are in error, and that there is 8.1.2.1

References

a delay in the actual need for the power produced from the Cherokee units, then one would expect that the consumer's cost would be higher than would be the case if the system was operating at optimum capcity. Please quantify these extra costs to the consumer for the following two cases: (1) assume that the Cherokee units are completed one year prior to the actual need (essentially three units not needed for one year each); (2) assume that the Cherokee units are completed two years prior to the actual need (essentially three units not needed for two years each).

.4 Describe the factors that are important when the North Carolina and the South Carolina public utility commissions (or their equivalents) determine the validity of electrical rate increases requested by Duke Power Company. Detail differences in these factors, and in the procedures used, by the North Carolina and South Carolina regulatory bodies. 8.1.1

.5 Section 8.1.2.2 refers to a formula for tax revenues which is used by the Federal Power Commission. Please give this formula (and references) and justify its applicability to the Cherokee station. 8.1.2.2

.6 Indicate all other tax liability incurred by Duke Power Company as a result of Cherokee and its estimated allocation among governmental units. 8.1.2.2

.7 Assuming that 1972 procedures, regulations, and rates are in effect, state the assessed valuation of Cherokee Nuclear Station. 8.1.2.2

.8 State what the total annual property taxes on Cherokee station would be at that rate. 8.1.2.2

.9 If all of these taxes do not go to the county, give a breakdown of their allocation among governmental units. 8.1.2.2

.10 In Table 8.1.2-2, the first six cost figures given do not quite add up to the total given for nuclear production plant with substation. Furthermore, there is no entry for "Property Taxes During Construction," which is included in Table 8.1.2-3 of the Environmental Report for the Perkins Nuclear Station. 8.1.2.2

.11 Section 8.1.2.3 does not adequately discuss the social impacts of permanent employees on the communities in which they will live. This section should be enlarged according to the suggestions listed previously for construction employment and also as indicated by Section 8.2 ("Examples of long-term external costs") of USAEC Regulatory Guide 4.2. 8.1.2.5

References

.12 In Section 8.1.2.4, quantify the construction expenditures (by year, if possible) for regional and local materials, services, and supplies. 8.1.2.4

.13 Section 8.1.2.5 seems to indicate that about 1,600 construction employees will relocate within a ten-mile radius of the station. The effects of this relocation should be discussed fully as indicated earlier. 8.1.2.5

.14 Section 8.1.2.5 indicates that benefits to be derived from construction of Cherokee may include the speedup of the building of electric powered mass transit systems. If there are plans within Duke's service area to construct such systems, state the fraction of Duke's total power output that is expected to be consumed by such systems in 1985. 8.1.2.5

.15 Section 8.1.2.5 indicates that a social benefit of the power from the Cherokee units will be power for services such as schools, police, and radio. Provide the fraction of Duke Power productions that is utilized by these categories. State whether or not use by schools generally coincide with periods of peak power use in Duke's service area. State whether or not most radio and police stations in the area have emergency power supplies for their essential equipment. 8.1.2.5

.16 In Section 8.1.2.5 part (b) indicates that as a consequence of the construction of Cherokee, heating with electrical units will become increasingly attractive. Please justify that statement. 8.1.2.5

.17 Part (d) of Section 8.1.2.5 indicates that the operation of Cherokee will permit the retirement of older, less environmentally pleasing fossil-fired generating units. State how many will be retired as a consequence of the construction of Cherokee, give their location and their total capacity. Discuss the environmental benefits to be gained. 8.1.2.5

9.0 ALTERNATIVE ENERGY SOURCES AND SITES

.1 Provide a rewritten analysis of site alternatives such that all alternatives presented are viable. 9.0

.2 With regard to Sections 9 and 10, it may be noted that the cost comparisons do not make use of the concept of present worth. 9.3.4

9.1 ALTERNATIVES REQUIRING THE CREATION OF NEW GENERATING CAPACITY

.1 Section 9.1.1, part (2) - Discuss quantitatively the costs of building additional transmission lines within SERC for wheeling 9.1.1

References

large blocks of energy from one power system to another. What is the largest block of power wheeled to date by Duke Power Company? What will the capacity be, in 1983, for wheeling power through Duke's transmission lines?

.2 Section 9.1.3 - Discuss costs of operating peaking facilities as baseload plants as compared with normal baseload plant costs. Give a quantitative comparison. 9.1.3

.3 Discuss quantitatively the hydroelectric power generating potential in Duke's service area. 9.2.1

.4 Discuss potential development of geothermal resources in the area in terms of known hot springs in Duke's service area. 9.2.1

.5 Provide a figure showing peak demand over a 24-hour period of maximum demand day (maximum demand for the year) which is typical for recent years. Provide a similar figure estimated in 1983. Provide these for both winter and summer peaks. 9.2

.6 Section 9.2.1 mentions four candidate areas. Discuss the long-term relationship between power produced and consumed within each of these areas. 9.1.6

.7 The rejection of fuel oil as an alternate energy source, in Section 9.3.2, should be done in a quantitative manner. 9.2.1

.8 Section 9.3.2 should indicate the anticipated costs for coal on a per ton basis, as well as the likely source of this coal. 9.2.1

9.2 ALTERNATIVES REQUIRING THE CREATION OF NEW ENGINEERING CAPACITY

.1 Section 9.2.1 mentions four candidate areas. State the approximate 1973 and 1985 power requirements for each of these areas. 9.2.1

9.3 COST EFFECTIVENESS COMPARISON OF CANDIDATE SITE-PLANT ALTERNATIVES

.1 The rejection of fuel oil as an alternate energy source, in Section 9.3.2, should be done in a quantitative manner. 9.2.1

.2 Section 9.3.2 should indicate the anticipated costs for coal on a per ton basis, as well as the likely source of this coal. 9.2.1

10.0 PLANT DESIGN ALTERNATIVES

10.1 COOLING SYSTEM

.1 A cooling pond should be considered as an alternative cooling system. 10.1

References

.2 In Subsection 10.1 on "Cooling Systems," there should be a discussion of the onsite effects of fogging, icing, and drift on the operation of the plant, particularly the electrical equipment, and the effects of noise on the operating staff. 10.1.1.2

.3 In Table 10.1.0-1, the penalties associated with different cooling systems should be given in terms of megawatts of lost capacity and kilowatt-hours of lost energy and the method of converting these losses to dollars should be given. 10.1

.4 Provide revised and corrected Table 10.1.0-1 explaining estimated costs of rectangular and circular mechanical-draft cooling towers. 10.1

10.2 INTAKE SYSTEMS

.1 Infiltration beds underlain by perforated pipes, perforated piped installed above the river bed and an off-river intake structure on an openended canal should be considered as viable alternative intake systems (Section 10.2.2). 10.2

10.3 DISCHARGE SYSTEM

.1 Submerged single-port and submerged multiple-port diffusers should be considered as viable alternative discharge systems. 10.3

12.0 ENVIRONMENTAL APPROVALS AND CONSULTATIONS

.1 Water use permits and anticipated submittal and required dates therefore should be provided. 12.1

.2 State whether Duke Power is required to submit a construction-erosion plan to the State prior to the start of construction at the site. 12.1.2

.3 Describe the requirements of the State, if any, that regulate sedimentation-pollution resulting from construction activities. 12.1.2

Reference List of Questions
in Response to
Atomic Energy Commission's Letter of December 27, 1975

Project 81
Cherokee Nuclear Station
Environmental Report

ENCLOSURE 1
Additional Information Required
Cherokee Nuclear Station

Reference

A. RESERVE REQUIREMENTS

1. Duke PowerCompany (DPC) assumes that a reserve of capability of 1,180 MWe is needed to replace the output of nuclear units down for refueling in 1983. (ER (Environmental Report), Section 1.1.3, p. 1.1-10, Sept. 20, 1974). The average size of DPC's nuclear units which would probably be refueled in 1983 (not including Perkins 1 which will become operational in 1983 and presumably would not need to be refueled then) is 1042 MWe. The average size of all DPC units in 1988, including all Perkins and Cherokee units, is 1152 MWe. Please explain why the figure 1180 MWe (which will be the size of the biggest nuclear plant on DPC's system in 1983, excluding Perkins 1) was used in these reserve requirement calculations, rather than the average (1042 MWe). 1.1.3

2. The reserve calculations presented in Section 1.1.3 of the ER assume that in 1983 one nuclear unit will be down for refueling on the summer peak load day, at which time there will be an extreme temperature. Since refueling a nuclear plant takes only approximately four weeks, and there are only 7 units to be refueled in 1983, making a total of 28 weeks of refueling time if only one unit is refueled at one time, and since there are 52 weeks per year, then it would seem easily possible to schedule nuclear refueling for the portions of the year in which peak load is extremely unlikely. Please explain why this was not done in the calculations of required reserve margin. 1.1.3

3. When DPC has 13 nuclear units operating in its system, why could not more than one unit be scheduled for refueling at the same time at a time other than expected peak load periods so that there would be no planned nuclear shutdowns during the probable peak load periods. Include in this discussion the cost comparisons with regard to having more than one refueling crew as opposed to the costs of having a nuclear plant constructed as a standby to replace those down for refueling during probable peak load periods of the year. 1.1.3

4. The reserve requirement calculation included back-up base-load power to replace unexpected loss of thelargest unit on the system. For unexpected loss-of-load, what is the utility experience with regard to the average length of these outages? Why could not intermediate or peaking units be constructed for the purpose of supplying power during unexpected outages? Supply cost calculations to justify your decision. 1.1.3

5. Since extreme temperatures are expected to occur only rarely on the otherwise probable peak day of the year, why not install peaking units to accomodate demand for extreme temperature requirements. 1.1.3

Reference

6. Section 1.1.3 of the ER (p. 1.1-11, Sept. 20, 1974) states that the loss-of-load probability technique is commonly used to establish reserve margins. It also indicates three reasons why DPC does not use this method:

   a. No operating experience relative to the size and types of DPC's nuclear units.

   b. Such calculations must consider interconnection of transmission systems which would require an unreasonable amount of input data.

   c. The loss-of-load probability of one day in ten years is arbitrary and so the resulting calculations are unreliable.

   Since, as mentioned by DPC, other utility systems utilize the loss-of-load probability method for calculating desirable reserve levels, please discuss (giving references for these conclusions):

   a. Why the industry's extensive experience with large fossil units or smaller nuclear units could not furnish reasonable estimates for the necessary factors for these calculations for 1984-1988. 1.1.3

   b. Whether or not other utilities using this method consider transmission interconnections and how much effort would be required to get the input data for an evaluation of DPC's system. 1.1.3

   c. Why, since the loss-of-load probability of one day in ten years is used widely throughout the industry, DPC does not think this to be a reasonable number, DPC's estimate of the probable range of values for this number, and the consequences of using some number otherthan 1 day in 10 years within this range of estimated values. 1.1.3

7. Since the DPC calculated reserve requirement for 1983 is 23.5%, and since the planned DPC reserve level is 11.64% for 1983 (ER, Table 1.1.2-2) it appears as if there has been an evaluation by DPC that the costs of providing the additional 11.9% reserve margin outweigh the benefits to be ascribed to this margin. Please discuss this analysis, in quantitative terms, including the possibility of using peaking power for the reserve margin rather than base-load nuclear power. 1.1.3

B. DPC'S OPERATING PLANS FOR ITS SYSTEM AND REQUIREMENT FOR BASE-LOAD CAPACITY.

1. The DPC projected system load factor for 1988 is 61% (From the projected MWhrs required in 1988 and the system capacity of 23,010 MWe as given in Table 1.1.1-1, Sept. 20, 1974). This is significantly less than the average historical value for the period 1964-1973 (67%). Please discuss the reasons for this difference. Does this indicate a change in the annual load duration curve between the period 1964-1973 as compared to 1988 (ER, Fig. 1.1.1-1)? Or in relative monthly energy or demand requirements? 1.1.1

	Reference
2. Since there are no planned retirements of the DPC fossil-fueled units between 1975 and 1988 (ER, Response to Question 8.1.2), and since the Marshall and Bellews Creek coal-fired stations (and presumably also themore recent Cliffside Unit 5) will operate as base-load stations indefinitely since their supercritical design is not conducive to load-following operation (ER, Section 9.1.2), then if the DPC constructs all units as scheduled it will have a base-load capacity of 77 percent of its total capacity in 1988. This appears to be somewhat large in view of the planned base-load capacity of 69% of the system total in 1975 and values of 56% for 1973 and 1974 and lesser precentages in earlier years. Discuss quantitatevly why it is necessary or desirable to have such a large portion of an electrical generating system in base-load capacity (why not higher percentages in intermediate and peaking capacities?)? Be sure to supply comparative cost calculations to support your conclusions.	1.1.3
3. Table 1.1.1-4 of the ER indicates the DPC expected energy dispatch for 1988. This table indicates an expected plant factor of 0.81 for Cherokee Unit 3 for its first full year of operation. Please justify using such a high load factor during this nuclear unit's first year of operation, including a comparison of this figure with currently-available data for operating experience with nuclear reactors during their first year of commercial operation.	1.1.3
4. The load factors for nuclear units as calculated from the data presented in ER Table 1.1.1-4 do not seem to be a function of length of time in service. Discuss why it was not expected that these nuclear plants would have low operating factors during their first years of operation. Discuss whether or not the nuclear plant factors would generally be expected to increase over the first few years of operation, and if so, is a maximum reached which declines gradually over theplant's lifetime or alternatively is a plateau reached indicating that the plant factor remains relatively constant for the rest of the plant's lifetime. Include in this discussion recent operating histories of nuclear and large fossil fueled units.	1.1.3
5. The response to Question 8.1.3 indicated thatif Cherokee is completed one year before its actual need it will result in a penalty cost in energy production of about $40 million per year but that if it is completed two years before it is needed thatit will save about $37 million per year in energy production costs. One might expect that the earlier Cherokee is completed before it is necessary the more expensive would be the energy production costs since more idle capacity would be on the system. Please clarify this matter in a quantitative discussion.	8.1.2.1
6. The Response to Question 8.1.3 was in terms of energy production costs (including capital costs as well as fuel costs). Since the rate of return (profit) to DPC is based on capital investment (including stations under construction) please discuss the cost to the consumers of having Cherokee completed 1 and 2 years earlier than needed in terms of the consumers having to pay a rate of return on a capital-intensive investment which is not needed for the generating system.	1.1.3

Reference
1.1.3

7. Discuss the economics of using nuclear stations for intermediate or peaking purposes rather than as base-load stations. Compare with costs of coal-fired intermediate and peaking units and with costs of otherintermediate and peaking types (utilizing fuels other than uranium or coal) of electrical power generation if these other types would be more economical. This discussion should encompass DPC's system's needs for the period 1983-1988. Include in the discussion not only capital, operating and maintenance, and fuel costs, but also the ultimate costs to the consumer in having to pay for a rate of return on a large investment in a capital-intensive nuclear station as compared to a smaller cost for lesser capital investment in a gas-fired, oil-fired, or coal-fired station.

ENCLOSURE 1

ADDITIONAL INFORMATION NEEDED FROM APPLICANTS FOLLOWING OPTION PROVIDED IN THE SEPTEMBER 4, 1975, AMENDMENT TO SECTION II.D. OF APPENDIX I

	Reference
1. For each building housing systems containing radioactive materials:	
a. Provide a description of the provisions incorporated to reduce radioactive releases (iodine and particulates) from ventilation exhaust systems.	3.5.2.1
b. Provide the location, height of release, inside dimensions of release point exit, effluent temperature and exit velocity.	3.5.2
c. For the containment building indicate the expected purge and venting frequencies and duration, and the continuous purge rate (if used).	3.5.2
2. For a pressurized water reactor having recirculating U-tube steam generators and employing all volatile treatment (AVT) to main secondary coolant chemistry, provide the following information:	
a. Expected blowdown rate (lb/hr) and method of processing blowdown.	3.5.1.1.3
b. Number and type of condensate demineralizers (if applicable) and flow rate of condensate through polishing demineralizers (lb/hr).	3.6.1.5
c. Expected frequency of resin regeneration or replacement, volumes and radioactivity of regenerant and rinse solutions, sluice water, or backwash water per batch of resin regenerated or replaced.	3.6.1.5
d. Method of collection, processing and disposal of liquid wastes, including decontamination factors assumed for process operations.	3.6.1.5
e. P&ID's and process flow diagrams for the steam generator blowdown system and condensate polishing system.	3.5.4 3.6.1.5
3. Provide a map showing the detailed topographical features (as modified by the plant) on a large scale within a 10-mile radius of the plant and a plot of the maximum topographic elevation versus distance from the center of the plant in each of the sixteen 22-1/2 degree cardinal compass point sectors (centered on true north), radiating from the center of the plant, to a distance of 10 miles.	2.1

	Reference
4. Provide representative annual and, if available, monthly summaries of wind speed and direction by atmospheric stability class, in joint frequency form from onsite data. If available, describe airflow trajectory regimes of importance in transporting effluents to a distance of 5 miles from the plant, including airflow reversals.	2.6.2.2
5. Tabulate, for each compass point sector radiating from the center of the plant, the location of the nearest existing milk producing animals (cows and goats) within 5 miles of the site.	2.2.2

NOTE: If you choose to provide site specific data in less detail than requested above, it will be necessary to use a less complex calculational procedure comparable in conservatism to that used in the past, to demonstrate compliance with the Appendix I guidelines. Thus, the depth and scope of the information you wish to provid will dictate the calculational procedures to be used to demonstrate compliance with the Appendix I design objectives, but the information provided should, as a minimum, be sufficient to support the analyses used in your assessments. In any event, the calculational procedures utilized to demonstrate compliance with Appendix I and the data to be used in those models must be such that the actual exposure of an individual is unlikely to be substantially underestimated.