

TENNESSEE VALLEY AUTHORITY

(A CORPORATION WHOLLY OWNED BY THE UNITED STATES OF AMERICA)

FINANCIAL STATEMENTS

FOR THE

FISCAL YEAR ENDED SEPTEMBER 30, 1978

930033

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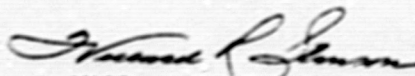
Mr. H. N. Stroud, Jr., Acting General Manager
Tennessee Valley Authority
Knoxville, Tennessee

Dear Mr. Stroud:

The financial statements of the Tennessee Valley Authority for the years ended September 30, 1978 and 1977, are presented on the following pages. They are accompanied by a report thereon by Coopers & Lybrand, independent certified public accountants, and by related schedules of details for the year ended September 30, 1978, as shown in the index below.

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Very truly yours,


Willard R. Stinson
Comptroller

November 22, 1978

930034

TENNESSEE VALLEY AUTHORITY

(A CORPORATION WHOLLY OWNED BY THE UNITED STATES OF AMERICA)

BALANCE SHEETS SEPTEMBER 30, 1978 AND 1977

ASSETS

	Power program		All programs	
	1978	1977	1978	1977
	(Thousands)			
PROPERTY, PLANT, AND EQUIPMENT,				
substantially all at original cost				
Completed plant; schedule A				
Multipurpose dams; note 1	\$ 495,407	\$ 494,264	\$ 1,092,715	\$1,075,850
Single-purpose dams	72,869	72,809	72,869	72,809
Steam production plants	2,534,622	2,428,760	2,534,622	2,428,760
Nuclear production plants	885,991	853,325	885,991	853,325
Other electric plant	1,876,347	1,765,136	1,876,347	1,765,136
Other plant	-	-	181,715	175,166
	<u>5,865,236</u>	<u>5,614,294</u>	<u>6,644,259</u>	<u>6,371,046</u>
Less accumulated depreciation and depletion; note 2	1,746,118	1,609,282	1,909,207	1,763,160
Completed plant, net	<u>4,119,118</u>	<u>4,005,012</u>	<u>4,735,052</u>	<u>4,607,886</u>
Construction and investigations in progress; schedule B and note 3	4,586,550	3,280,203	4,798,879	3,449,464
Nuclear fuel; schedule B	485,863	354,164	485,863	354,164
Less accumulated amortization; note 2	92,817	54,614	92,817	54,614
Nuclear fuel, net	<u>393,046</u>	<u>299,550</u>	<u>393,046</u>	<u>299,550</u>
 Total property, plant, and equipment	 <u>9,098,714</u>	 <u>7,584,765</u>	 <u>9,926,977</u>	 <u>8,356,900</u>
 CURRENT ASSETS				
Cash	38,249	65,170	128,432	143,913
Accounts receivable	328,034	218,581	336,522	226,382
Inventories, principally at average cost	359,502	372,997	374,087	386,281
	<u>725,785</u>	<u>656,748</u>	<u>839,041</u>	<u>756,576</u>
 DEFERRED CHARGES				
Unamortized debt issue and reacquisition expense; note 2	9,338	9,905	9,338	9,905
Mine and mill development costs; schedule B	76,486	37,093	76,488	37,093
	<u>85,826</u>	<u>46,998</u>	<u>85,826</u>	<u>46,998</u>
 Total deferred charges	 <u>85,826</u>	 <u>46,998</u>	 <u>85,826</u>	 <u>46,998</u>
 Total assets	 <u>\$9,910,325</u>	 <u>\$8,288,511</u>	 <u>\$10,851,844</u>	 <u>\$9,160,474</u>

Notes 1 through 8 following the exhibits are an integral part of the financial statements.

*Deduct

LIABILITIES AND CAPITALIZATION

	Power program		All programs	
	1978	1977	1978	1977
	(Thousands)			
PROPRIETARY CAPITAL				
Appropriation investment; note 4				
Congressional appropriations	\$1,383,721	\$1,384,140	\$ 3,155,915	\$3,017,405
Transfers of property from other Federal agencies	<u>23,470</u>	<u>23,209</u>	<u>56,587</u>	<u>56,059</u>
	1,407,191	1,407,349	3,212,502	3,073,464
Less repayments to General Fund of the U.S. Treasury; note 5				
Appropriation investment	<u>475,059</u>	<u>455,059</u>	<u>516,769</u>	<u>496,755</u>
Retained earnings reinvested in the power program; exhibit II	<u>932,132</u>	<u>952,290</u>	<u>2,695,733</u>	<u>2,576,709</u>
Accumulated net expense of nonpower programs; exhibit III	1,227,762	1,072,910	1,227,762	1,072,910
	-	-	867,375*	794,960*
Total proprietary capital	<u>2,159,894</u>	<u>2,025,200</u>	<u>3,056,120</u>	<u>2,854,659</u>
LONG-TERM DEBT				
Principal; note 6	5,425,000	4,725,000	5,425,000	4,725,000
Unamortized discount* and premium, net; note 2	<u>6,465*</u>	<u>6,918*</u>	<u>6,465*</u>	<u>6,918*</u>
Total long-term debt	<u>5,418,535</u>	<u>4,718,082</u>	<u>5,418,535</u>	<u>4,718,082</u>
CURRENT LIABILITIES				
Short-term debt; note 6				
U.S. Treasury	150,000	150,000	150,000	150,000
Federal Financing Bank	1,520,000	980,000	1,520,000	980,000
Long-term debt due April 1, 1979	<u>100,000</u>	<u>-</u>	<u>100,000</u>	<u>-</u>
Short-term debt	1,770,000	1,130,000	1,770,000	1,130,000
Accounts payable	404,454	292,280	430,358	316,721
Employees' accrued leave	20,928	18,580	35,888	33,087
Payrolls accrued	22,095	15,447	26,524	19,003
Interest accrued	<u>114,419</u>	<u>88,922</u>	<u>114,419</u>	<u>88,922</u>
Total current liabilities	<u>2,331,896</u>	<u>1,545,229</u>	<u>2,377,189</u>	<u>1,587,733</u>
COMMITMENTS; note 3				
Total liabilities and capitalization	<u>\$9,910,325</u>	<u>\$8,288,511</u>	<u>\$10,851,844</u>	<u>\$9,160,474</u>

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TENNESSEE VALLEY AUTHORITY
POWER PROGRAM
NET INCOME AND RETAINED EARNINGS
FOR THE YEARS ENDED SEPTEMBER 30, 1978 AND 1977

EXHIBIT II

	1978		1977	
	kWh	Amount	kWh	Amount
	(Thousands)			
OPERATING REVENUES				
Sales of electric energy				
Municipalities and cooperatives	77,875,252	\$1,540,126	76,505,019	\$1,238,326
Federal agencies	16,722,347	305,805	22,268,048	322,615
Industries	22,877,485	455,957	22,738,679	355,713
Electric utilities	175,486	3,897	161,688	2,911
Total outside sales	117,650,570	2,305,785	121,673,434	1,919,565
Interdivisional	295,320	6,523	313,570	5,622
Total sales of electric energy	<u>117,945,890</u>	<u>2,312,308</u>	<u>121,987,004</u>	<u>1,925,187</u>
Rents		37,023		40,847
Discounts and penalties		100		76
Other miscellaneous revenues		703		579
Total operating revenues		<u>2,350,134</u>		<u>1,966,689</u>
OPERATING EXPENSES; schedule C				
Production				
Fuel		1,035,056		909,192
Power purchased and interchanged, net		166,714		106,581
Other		338,154		293,429
Transmission		27,491		27,624
Customer accounts		706		658
Demonstration of power use		4,261		2,109
Administrative and general		81,559		59,939
Payments in lieu of taxes		79,872		68,179
Social security taxes		11,727		8,748
Provision for depreciation		150,447		138,398
Total operating expenses		<u>1,895,987</u>		<u>1,614,857</u>
Operating income		<u>454,147</u>		<u>351,832</u>
OTHER INCOME AND DEDUCTIONS				
Interest income		428		244
Other, net		127*		1,625*
Total other income and deductions		<u>301</u>		<u>1,381*</u>
Income before interest charges		<u>454,448</u>		<u>350,451</u>
INTEREST CHARGES				
Interest on long-term debt		419,434		336,414
Other interest expense		66,377		41,915
Allowance for borrowed funds used (construction and nuclear fuel); note 2		248,967*		178,621*
Amortization of long-term debt discount, expense, and premium, net; note 2		1,036		928
Net interest charges		<u>237,880</u>		<u>200,636</u>
NET INCOME		<u>216,568</u>		<u>149,815</u>
Return on appropriation investment; note 5		61,716		64,017
Increase in retained earnings reinvested		154,852		85,798
Retained earnings reinvested at beginning of period		<u>1,072,910</u>		<u>987,112</u>
Retained earnings reinvested at end of period		<u>\$1,227,762</u>		<u>\$1,072,910</u>

Notes 1 through 8 following the exhibits are an integral part of the financial statements.

*Deduct

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TENNESSEE VALLEY AUTHORITY
NONPOWER PROGRAMS
NET EXPENSE AND ACCUMULATED NET EXPENSE
FOR THE YEARS ENDED SEPTEMBER 30, 1978 AND 1977

EXHIBIT III

	1978	1977
	(Thousands)	
REGIONAL RESOURCES DEVELOPMENT		
Navigation operations	\$ 7,306	\$ 7,104
System flood control operations	5,670	5,102
Recreation development	4,531	3,335
Tributary area development	2,925	6,698
Regional water quality management	1,290	1,226
Fisheries and waterfowl resources development	1,136	789
Preliminary surveys and engineering	306	213
Environmental education	374	280
Valley agricultural development	2,014	1,844
Waste heat utilization	503	370
Forest and wild land resources development	2,334	1,688
Strip mine reclamation demonstrations	3,677	1,410
Interagency health services demonstrations	324	214
Regional economic studies	726	730
Townlift community improvement	793	721
Human resources development	679	660
Mass transportation demonstration	106	499
Minerals resources projects	327	276
Special opportunities counties program	1,250	-
Minority economic development	111	-
Local flood damage prevention operations	7,014	2,919
Environmental quality projects	480	456
Net expense of regional resources development	<u>43,876</u>	<u>36,534</u>
FERTILIZER DEVELOPMENT; note 2		
Research and development	10,893	8,877
Fertilizer introduction		
Fertilizer industry demonstrations	2,845	2,648
Farm test demonstrations outside the Valley	1,155	987
Net expense of fertilizer introduction	<u>4,000</u>	<u>3,635</u>
Developmental production		
Cost of products distributed	26,663	24,061
General expenses		
Loss on retirements of manufacturing plant and equipment, net	139	5,650
Gain on sale of phosphate reserves, net	107*	224*
Writeoff of retired phosphate plant inventories	-	1,893
Administrative and general	582	555
Other	430	351
Total general expenses	<u>1,044</u>	<u>8,225</u>
Total production expense	<u>27,707</u>	<u>32,286</u>
Less transfers and sales of products		
Transfers to other TVA programs, at market prices	20,978	20,404
Direct sales	335	848
Total transfers and sales	<u>21,313</u>	<u>21,252</u>
Net expense of developmental production	<u>6,394</u>	<u>11,034</u>
Net expense of fertilizer development	<u>21,287</u>	<u>23,539</u>
LAND BETWEEN THE LAKES OPERATIONS	5,509	4,251
VALLEY MAPPING AND REMOTE SENSING	771	557
OTHER EXPENSE, NET	972	521
NET EXPENSE; schedule D	72,415	65,402
Accumulated net expense beginning of period	794,960	729,558
Accumulated net expense at end of period	<u>\$867,375</u>	<u>\$794,960</u>

Notes 1 through 8 following the exhibits are an integral part of the financial statements.

*Deduct

TENNESSEE VALLEY AUTHORITY
CHANGES IN FINANCIAL POSITION
FOR THE YEARS ENDED SEPTEMBER 30, 1978 AND 1977

EXHIBIT IV
PAGE 1

	<u>Power program</u>		<u>All programs</u>	
	<u>1978</u>	<u>1977</u>	<u>1978</u>	<u>1977</u>
	(Thousands)			
SOURCE OF FUNDS				
Program sources				
Net power income; exhibit II	\$ 216,568	\$ 149,815	\$ 216,568	\$ 149,815
Items not requiring funds; note a	58,821*	5,555*	53,821*	5,555*
Funds from power operations	157,747	144,260	157,747	144,260
Sale of power facilities	2,171	1,290	2,171	1,290
Funds from power program; note b	<u>159,918</u>	<u>145,550</u>	<u>159,918</u>	<u>145,550</u>
Net expense of nonpower programs; exhibit III			72,415*	65,402*
Add items not requiring funds; note a			8,232	13,145
Funds used in nonpower operations			64,183*	52,257*
Sale of nonpower facilities			242	899
Funds used in nonpower programs			<u>63,841*</u>	<u>51,358*</u>
Debt sources				
Long-term bonds				
Issues	800,000	900,000	800,000	900,000
Redemptions	-	150,000*	-	150,000*
Short-term notes				
Issues	4,280,000	3,815,000	4,280,000	3,815,000
Redemptions	3,740,000*	3,570,000*	3,740,000*	3,570,000*
Total debt sources	<u>1,340,000</u>	<u>995,000</u>	<u>1,340,000</u>	<u>995,000</u>
Other sources				
Congressional appropriations	320	204	138,510	125,930
Property transfers	261	621	528	744
Total other sources	<u>581</u>	<u>825</u>	<u>139,038</u>	<u>126,674</u>
Total source of funds	<u>\$1,500,499</u>	<u>\$1,141,375</u>	<u>\$1,575,115</u>	<u>\$1,215,866</u>
DISPOSITION OF FUNDS				
Expended for plant and equipment, excluding allowance for borrowed funds used	\$1,460,951	\$1,108,767	\$1,527,033	\$1,161,692
Less:				
Depreciation and amortization of nuclear fuel charged to construction and clearing accounts	3,620	10,407	5,766	12,370
Cost of removing retired facilities and salvage from retained materials	329	895*	302	965*
	<u>1,457,002</u>	<u>1,099,255</u>	<u>1,520,965</u>	<u>1,150,287</u>
Payments to U.S. Treasury; note 5				
Return on appropriation investment	61,716	64,017	61,716	64,017
Repayment of appropriation investment	20,000	20,000	20,014	20,029
	<u>81,716</u>	<u>84,017</u>	<u>81,730</u>	<u>84,046</u>
Unamortized debt discount and expense and other deferred charges				
Mine and mill development cost	39,395	25,074	39,395	25,074
Debt issue and reacquisition expense	16	9,468	16	9,468
	<u>39,411</u>	<u>34,542</u>	<u>39,411</u>	<u>34,542</u>
Changes in working capital (increase or decrease*)				
Cash	26,921*	92,268*	15,481*	62,711*
Accounts receivable	109,453	53,792	110,140	47,990
Inventories	13,495*	14,930	12,104*	17,740
	<u>69,037</u>	<u>23,546*</u>	<u>82,465</u>	<u>3,019</u>
Less other current liabilities (excluding short-term debt)	146,667	52,893	149,456	56,028
	<u>77,630*</u>	<u>76,439*</u>	<u>66,991*</u>	<u>53,009*</u>
Total disposition of funds	<u>\$1,500,499</u>	<u>\$1,141,375</u>	<u>\$1,575,115</u>	<u>\$1,215,866</u>

*Deduct

TENNESSEE VALLEY AUTHORITY
 CHANGES IN FINANCIAL POSITION
 FOR THE YEARS ENDED SEPTEMBER 30, 1978 AND 1977

EXHIBIT IV
 PAGE 2

NOTES:

a. Items not requiring funds:

	Power		Nonpower	
	1978	1977	1978	1977
	(Thousands)			
Provision for depreciation	\$150,447	\$138,398	\$8,200	\$ 7,719
Provision for depletion	333	184	-	-
Amortization of nuclear fuel charged to operations	38,203	31,931	-	-
Net loss on retirements and disposals of property, plant, and equipment	127	1,625	32	5,426
Amortization of long-term debt discount, premium, and expense; and deferred charges	1,036	928	-	-
Allowance for borrowed funds used (construction and nuclear fuel)	<u>248,967*</u>	<u>178,621*</u>	<u>-</u>	<u>-</u>
	<u>\$ 58,821*</u>	<u>\$ 5,555*</u>	<u>\$8,232</u>	<u>\$13,145</u>

b. Net power proceeds (see note 6) may be derived as follows:

	Year ended September 30	
	1978	1977
	(Thousands)	
Funds from power program	\$159,918	\$145,550
Add back interest charges	<u>485,811</u>	<u>378,329</u>
Net power proceeds	<u>\$645,729</u>	<u>\$523,879</u>

Notes 1 through 8 following the exhibits are an integral part of the financial statements.

*Deduct

930040

TENNESSEE VALLEY AUTHORITY
NOTES TO FINANCIAL STATEMENTS

1. Allocation of cost of multipurpose projects--Section 14 of the TVA Act requires TVA's Board of Directors to allocate the cost of completed multipurpose projects, subject to the approval of the President of the United States. The cost of facilities installed exclusively for a single purpose is assigned directly to that purpose; the cost of multiple-use facilities is allocated among the various purposes served.

The total investment of \$1,092,715,000 in completed multipurpose dams at September 30, 1978, is classified as follows:

	Investment		Total
	Direct	Multiple-use (Thousands)	
Power	\$317,992	\$177,415	\$ 495,407
Navigation	152,954	137,447	290,401
Flood Control	61,608	151,782	213,390
Recreation	1,319	45,856	47,175
Tributary area development	19	46,323	46,342
Total	<u>\$533,892</u>	<u>\$558,823</u>	<u>\$1,092,715</u>

2. Summary of significant accounting policies--Power accounts are kept in accordance with the uniform system prescribed by the Federal Energy Regulatory Commission.

Plant additions and retirements--Additions to plant are recorded at cost, which includes material, labor, overhead, and allowance for funds used. The costs of generation including amortization of nuclear fuel, less credit for the fair value of energy generated during preliminary operations prior to commercial acceptance, are also included in the recorded cost of steam and nuclear generating plants. Except for chemical plant, plant retirements (including original cost and removal cost less salvage) are charged against appropriate accumulated depreciation accounts. Because of the experimental nature of fertilizer development, losses on early retirement of chemical plant are included in current year operations.

Depreciation and depletion--Straight-line depreciation is provided for substantially on a composite basis. Rates of depreciation are derived from engineering studies of useful life and are reviewed each year. Depletion of coal land and land rights and phosphate land and mineral rights is provided on a unit of production basis.

Allowance for funds used--The practice of capitalizing an allowance for funds used during construction and during the fabrication of nuclear fuels is followed in the power program. The method used is to calculate each month the interest on the most recent debt issues that is equivalent to the average construction work in progress and nuclear fuel in fabrication base. The equivalent average capitalization rate for fiscal years 1978 and 1977 was 7.57 percent and 7.09 percent, respectively.

Repairs and maintenance--The cost of current repairs and minor replacements is charged to appropriate operating expense and clearing accounts, and the cost of renewals and betterments is capitalized.

Nuclear fuel amortization--The amortization of nuclear fuel is provided on a unit of production basis. Rates are established to amortize the costs over the useful life.

Operating revenues and energy costs--Revenues from the sale of electric energy, including amounts resulting from the application of an adjustment addendum providing for monthly billing charges to reflect increases or decreases in fuel and purchased power costs, are recorded only when billed. Costs of fuel consumed and of purchased power are reflected in operating expenses as incurred. About \$49.7 million of these costs recorded in fiscal year 1977 were used in calculating the adjustment to power billings for October and November 1977; and about \$80.2 million of these costs recorded in fiscal year 1978 were used in calculating the adjustment to power billings for October and November 1978.

Borrowing expenses--Issue and reacquisition expenses, discounts, and premiums on power borrowings from the public are amortized on a straight-line basis over the term of the related securities. Issue expenses on power borrowings from Federal Financing Bank are amortized over a five-year period except that amounts under \$6,000 are expensed.

Research and development--Research and development costs are expensed as incurred (approximately \$31,868,000 in 1978 and \$25,224,000 in 1977) except for those costs which relate to specific power program capital projects.

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TENNESSEE VALLEY AUTHORITY
NOTES TO FINANCIAL STATEMENTS--CONTINUED

Sales of fertilizer--Sales of fertilizer materials are not made on a commercial basis, but are made to organizations collaborating in an experimental and educational program aimed at improving the manufacture, distribution, and use of fertilizers.

3. Construction projects, commitments, and rental expenses--The construction budgets for fiscal year 1979 are \$1,655,498,000 for power projects and \$95,189,000 for multipurpose and nonpower projects. Substantial commitments have been incurred for these projects.

The total rentals charged to power operating expenses and other operating clearing accounts for the years ending September 30, 1978 and 1977, amounted to approximately \$20,484,021 and \$17,990,000, respectively. At September 30, 1978, the aggregate minimum gross rental commitments of TVA under all noncancelable leases for the periods shown are as follows:

<u>Year</u>	<u>Amount</u> (Thousands)	<u>Years</u>	<u>Amount</u> (Thousands)
1979	\$14,357	1984-88	\$28,265
1980	13,990	1989-93	15,171
1981	12,865	1994-98	8,358
1982	11,774	Thereafter	282
1983	11,191		

Minimum gross rental commitments include rentals paid under agreements with the City of Memphis, Tennessee, which provide that (1) TVA sells to the City all the power and energy requirements of its electric distribution system, and (2) the City leases to TVA the Thomas H. Allen steam-electric generating plant with an installed capacity of 990,000 kilowatts. Each agreement is for a term of 20 years, beginning January 1, 1965. The lease agreement provides for annual rental payments of \$6,900,000 and grants TVA an option to buy the plant for \$2,000,000 at the end of the lease term.

4. Appropriation investment--Changes in appropriation investment during the years ended September 30, 1978 and 1977, were as follows:

	<u>Power program</u>		<u>All programs</u>	
	<u>1978</u>	<u>1977</u>	<u>1978</u>	<u>1977</u>
	(Thousands)			
Congressional appropriations, net	\$ 419*	\$ 394	\$ 138,510	\$ 125,930
Transfers of property from other Federal agencies	261	621	528	744
	<u>158*</u>	<u>1,015</u>	<u>139,038</u>	<u>126,674</u>
Less repayments to General Fund of the U.S. Treasury	20,000	20,000	20,014	20,029
Increase or decrease* for the period	20,158*	18,985*	119,024	106,645
Balance, beginning of period	952,290	971,275	2,576,709	2,470,064
Balance, end of period	<u>\$932,132</u>	<u>\$952,290</u>	<u>\$2,695,733</u>	<u>\$2,576,709</u>

*Deduct

An appropriation of \$154,531,000 was made by Public Law No. 95-482, approved October 18, 1978, for the fiscal year beginning October 1, 1978.

5. Payments to the U.S. Treasury--Section 15d of the TVA Act requires the payment from net power proceeds of a return on the net appropriation investment in power facilities plus repayments of such investment, beginning with fiscal year 1961. The amount of return payable during each year is based on the appropriation investment as of the beginning of that year and the computed average interest rate payable by the U.S. Treasury on its total marketable public obligations as of the same date. The repayment schedule calls for payment of not less than \$10 million for each of the first five years (1961-1965), \$15 million for each of the next five years (1966-1970), and \$20 million for each year thereafter until a total of \$1 billion shall have been repaid. The payments required by Section 15d may be deferred under certain circumstances for not more than two years.

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TENNESSEE VALLEY AUTHORITY
NOTES TO FINANCIAL STATEMENTS—CONTINUED

Required payments have been made as follows:

	<u>Return</u>	<u>Repayment</u> (Thousands)	<u>Total</u>
Total to September 30, 1977	\$903,188	\$270,000	\$1,173,188
Year ended September 30, 1978	<u>61,716</u>	<u>20,000</u>	<u>81,716</u>
	<u>\$964,904</u>	<u>\$290,000</u>	<u>\$1,254,904</u>

For fiscal year 1979 the required payments will be \$68,868,000 as a return on the appropriation investment at the computed average interest rate of 7.3882 percent and \$20,000,000 as a repayment, a total of \$88,868,000.

In addition to the payments from net power proceeds, \$14,000 of nonpower proceeds was paid to the U.S. Treasury in fiscal year 1978 under the provisions of Section 26 of the TVA Act. This brought the total payments from nonpower proceeds to \$41,710,000.

Prior to 1961, under then existing legislation, TVA paid to the Treasury \$185,059,000 of power proceeds. In addition to the repayments indicated in Exhibit I, \$65,072,000 of bonds sold to the Treasury and Reconstruction Finance Corporation in fiscal years 1939-1941 have been fully repaid from power proceeds. Section 26 of the TVA Act provides for annual payments to the Treasury of any power or nonpower proceeds not needed for the operation of dams and reservoirs, the conduct of the power program, and the manufacture and distribution of fertilizers.

6. Borrowing authority--Section 15d of the TVA Act authorizes TVA to issue bonds, notes, and other evidences of indebtedness up to a total of \$15 billion outstanding at any one time to assist in financing its power program. Debt service on these obligations, which is payable solely from TVA's net power proceeds, has precedence over the payment to the U.S. Treasury described in note 5. Issues outstanding on September 30, 1978, consist of the following:

	(Thousands)
Long-term debt	
4.40% 1960 Series A, due November 15, 1983	\$ 50,000
4-5/8% 1961 Series A, due July 1, 1986	50,000
4-1/2% 1962 Series A, due February 1, 1987	45,000
5.70% 1967 Series A, due May 15, 1992	70,000
6-3/8% 1967 Series B, due November 1, 1992	60,000
8-1/4% 1969 Series B, due October 15, 1994	100,000
7.30% 1971 Series B, due October 1, 1996	150,000
7% 1972 Series A, due January 1, 1997	50,000
7.35% 1972 Series B, due May 1, 1997	150,000
7.35% 1972 Series C, due July 1, 1997	150,000
7.40% 1972 Series D, due October 1, 1997	150,000
7.35% 1973 Series A, due January 1, 1998	100,000
7.35% 1973 Series B, due April 1, 1998	150,000
7-3/4% 1973 Series C, due July 1, 1998	150,000
7.70% 1973 Series D, due October 1, 1998	100,000
8.05% 1974 Series A, due January 1, 1999	100,000
8.50% 1974 Series C, due October 31, 1979 (FFB)	300,000
8.05% 1975 Series A, due January 31, 1990 (FFB)	200,000
8.70% 1975 Series B, due March 31, 2000 (FFB)	100,000
8.35% 1975 Series C, due May 31, 1988 (FFB)	200,000
8.47% 1975 Series D, due July 31, 2000 (FFB)	200,000
8.485% 1975 Series E, due October 31, 2000 (FFB)	300,000
8.175% 1976 Series A, due February 28, 2001 (FFB)	300,000
7.97% 1976 Series B, due November 30, 2001 (FFB)	400,000
7.625% 1976 Series C, due January 31, 2002 (FFB)	200,000
7.975% 1977 Series A, due February 28, 2002 (FFB)	300,000
7.935% 1977 Series B, due May 31, 2002 (FFB)	400,000
8% 1977 Series C, due October 31, 2002 (FFB)	400,000
8.375% 1978 Series A, due January 31, 2003 (FFB)	400,000
Total long-term debt	<u>5,425,000</u>
Short-term debt	
U.S. Treasury	150,000
Federal Financing Bank (FFB)	1,520,000
Long-term debt due April 1, 1979	100,000
Total short-term debt	<u>1,770,000</u>
	<u>\$7,195,000</u>

930043

TENNESSEE VALLEY AUTHORITY
NOTES TO FINANCIAL STATEMENTS--CONTINUED

7. Retirement plan--TVA has a contributory retirement plan which covers substantially all of its salaried employees. The cost of currently accruing benefits is funded currently. The cost of the plan to TVA was \$38,060,000 in 1978 and \$30,426,000 in 1977, including amortization of unfunded prior service costs over the average future careers of active members. The actuarially computed pension fund assets as of September 30, 1977, the latest actuarial valuation date, exceeded the actuarially computed value of vested benefits of the plan.

8. Litigation--Six citizens' suits have been filed in six different district courts under the Clean Air Act, alleging that the sulfur dioxide emissions from 10 of TVA's coal-fired steam plants and the particulate emissions from one unit at Widows Creek Steam Plant violate the emission standards set by the states. Plaintiffs include the States of Kentucky and Alabama and the United States of America at the request of the Environmental Protection Agency. Five of the cases have been consolidated in the United States District Court for the Middle District of Tennessee and one is pending in the United States District Court for the Northern District of Alabama. Plaintiffs are asking that the courts order TVA to comply with the applicable emission standards as expeditiously as possible. In addition, the State of Alabama is specifically asking the court to restrict operation of Widows Creek and Colbert Steam Plants until final compliance is achieved and assess a State penalty of \$10,000 per day per violation. A proposed settlement agreement has been drafted by all the parties and awaits approval by the TVA Board of Directors. This proposed agreement specifies compliance schedules to control both sulfur dioxide and particulate emissions at TVA steam plants and provides for stipulated daily penalties if TVA does not meet these schedules. In addition, TVA acknowledges in the proposed agreement that the economic benefit of noncompliance for the entire TVA power system for the period August 7, 1977, to August 7, 1979, is \$260 million; and in lieu of penalties based on such amount, TVA agrees to install scrubbers to treat 600 megawatts of flue gas at the Cumberland Steam Plant. The proposed agreement is in full satisfaction of all State or Federal civil penalties, with the exception that TVA will still be subject to the mandatory noncompliance penalties under section 120 of the Clean Air Act Amendments of 1977 which will be levied separate and apart from this action on all sources not in compliance after July 1, 1979. Several of TVA's steam plants will not be in compliance until after July 1979. The amount of these mandatory noncompliance penalties is based on the economic value of noncompliance to the owner, less any amounts actually expended by the source toward achieving compliance. The amount of these payments cannot be determined until EPA issues guidelines and regulations.

A residential electric consumer of the Memphis Light, Gas, and Water Division (Memphis) filed a class action suit against it and its governing Board in the Chancery Court of Shelby County, Tenn. see, on June 9, 1978. Plaintiff claims that the fuel cost and purchased power automatic adjustment formula contained in the TVA resale rate schedule applied to him and his class violates the Fourteenth Amendment's due process clause and the Tennessee statutes which require rate changes by Memphis to receive prior approval by the Memphis City Council. In addition to declaratory and injunctive relief, plaintiff seeks a judgment for over \$110 million allegedly collected by Memphis under the automatic adjustment formula since 1974. The case has been removed to Federal court, and the court has joined TVA as a party and upheld its jurisdiction on removal. TVA and Memphis have answered and moved for judgment on the pleadings. In TVA's opinion there is little likelihood of a recovery against it.

The judgment of the United States Court of Appeals for the Sixth Circuit, ordering an injunction against the Tellico project, was affirmed by the United States Supreme Court. Congress subsequently amended the Endangered Species Act to provide for a review of the Tellico project by a special 7-member committee, with the project being automatically exempted from the act if the committee takes no action by February 8, 1979. Under the statute, such review is automatic and requires no request for exemption by TVA.

On October 20, 1975, TVA filed a suit against Westinghouse Electric Corporation in the United States District Court for the Eastern District of Tennessee based on Westinghouse's repudiating in major part certain contracts for the sale of nuclear fuel to TVA for the Sequoyah and Watts Bar Nuclear Plants. Westinghouse based its repudiation on the doctrine of "commercial impracticability" found in Uniform Commercial Code § 2-615. TVA brought the action seeking, in addition to injunctive relief, a declaratory judgment as to the continuing validity, effectiveness, and enforceability of these contracts; in the alternative the action requests the court to adopt an allocation plan for the nuclear fuel presently under Westinghouse's control which is fair and reasonable to all Westinghouse customers as of September 8, 1975, the date of the repudiation. The case was transferred and consolidated for discovery with similar cases brought by other utilities to the Eastern District of Virginia under 28 U.S.C. § 1407. The evidentiary trial of the case began on September 12, 1977, and ended on March 9, 1978. On October 27, 1978, the court rendered an oral opinion finding that Westinghouse had not carried its burden of proof on its defense under UCC § 2-615 or the contracts' force majeure clauses. No written decision has been entered, and certain "special issues" as to liability, as well as the question of damages, remain to be tried. Westinghouse has also raised in the case a subsequently arising dispute over the scheduled delivery date for the uranium, contending that it has been released from liability by slippages in the date. It is TVA's position that this controversy is subject to the contractual disputes mechanism and is not within the district court's jurisdiction at this time. The court disagreed, holding that TVA had waived the disputes mechanism as to this later arising issue by originally filing the lawsuit in 1975. An injunction against the dispute proceeding was issued. TVA has appealed the matter to the United States Court of Appeals for the Fourth Circuit, where the case has been fully briefed and is set for oral argument on December 6, 1978.

On November 18, 1977, TVA filed antitrust suits against 10 foreign uranium producers and 3 domestic firms. The complaints were filed in United States District Courts in Chattanooga, Denver, and New York City, and alleged unlawful agreements among the defendants to fix uranium price and allocate world uranium markets, which resulted in damages to TVA in an amount which cannot yet be determined. The cases were consolidated in Chicago for pretrial purposes by the Judicial Panel on Multidistrict Litigation. The consolidated proceeding is being coordinated with the Westinghouse v. Rio Algom Ltd., et al. antitrust litigation currently pending in Chicago. Discovery is now underway.

COOPERS & LYBRAND

CERTIFIED PUBLIC ACCOUNTANTS

IN PRINCIPAL AREAS
OF THE WORLD

To the Board of Directors of
Tennessee Valley Authority:

We have examined the financial statements of TENNESSEE VALLEY AUTHORITY at September 30, 1978 and 1977 and for the years then ended which are indexed on page 1 herein. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, Exhibits I, II, III and IV present fairly:

- (1) the financial position of the Authority at September 30, 1978 and 1977, and the results of operations and changes in financial position of its several programs for the years then ended; and
- (2) the financial position of the power program of the Authority at September 30, 1978 and 1977, and the results of operations and changes in financial position of that program for the years then ended,

all in conformity with generally accepted accounting principles applied on a consistent basis.

The supplemental information appearing in Schedules A to F, inclusive, which has been subjected to audit procedures applied in the examination of the basic financial statements, is, in our opinion, fairly stated in all material respects in relation to the basic financial statements taken as a whole.

COOPERS & LYBRAND

New York, November 22, 1978.

930045

SCHEDULES

930046

TENNESSEE VALLEY AUTHORITY
COMPLETED PLANT
 SEPTEMBER 30, 1978

SCHEDULE A
PAGE 1

	<u>Assets</u>	<u>Accumulated depreciation and depletion</u>
Power		
Multipurpose dams		
System allocation; page 23	\$ 435,298,449	\$ 182,292,571
Project allocations; page 25	60,107,963	10,312,295
Single-purpose dams; page 27	72,868,722	28,461,288
Steam production plants; page 27	2,534,621,967	945,543,581
Nuclear production plants; page 28	885,990,909	79,334,340
Other electric plant; page 28	1,876,347,584	500,173,479
Total power	<u>5,865,235,594</u>	<u>1,746,117,554</u>
Navigation		
Multipurpose dams		
System allocation; page 23	229,582,379	59,234,532
Project allocations; page 25	60,819,230	6,654,981
Single-purpose navigation plant; page 29	7,096,629	759,512
Total navigation	<u>297,498,238</u>	<u>66,649,025</u>
Flood control		
Multipurpose dams		
System allocation; page 23	180,271,828	40,760,440
Project allocations; page 25	33,117,553	1,205,801
Single-purpose flood control plant; page 29	2,065,742	177,133
Total flood control	<u>215,455,123</u>	<u>42,143,374</u>
Recreation and environmental education		
Multipurpose dams		
Project allocations; page 25	47,174,952	1,387,654
Land Between The Lakes; page 29	59,282,529	4,431,482
Other recreation plant; page 29	3,015,496	288,060
Total recreation and environmental education	<u>109,472,977</u>	<u>6,107,196</u>
Tributary area development		
Multipurpose dams		
Project allocations; page 25	46,342,289	1,269,344
Chemical; page 29	60,707,843	23,186,309
General; page 29	49,546,938	23,734,623
Total	<u>\$6,644,259,002</u>	<u>\$1,909,207,425</u>
Total completed plant		
Multipurpose dams		
System allocation	\$ 845,152,656	\$ 282,287,543
Project allocations	247,561,987	20,830,075
Single-purpose dams	1,092,714,643	303,117,618
Steam production plants	72,868,722	28,461,288
Nuclear production plants	2,534,621,967	945,543,581
Other electric plant	885,990,909	79,334,340
Other plant	1,876,347,584	500,173,479
Total	181,715,177	52,577,119
Total	<u>\$6,644,259,002</u>	<u>\$1,909,207,425</u>

930047

TENNESSEE VALLEY AUTHORITY
MULTIPURPOSE DAMS
SYSTEM ALLOCATION
SEPTEMBER 30, 1978

	Assets			
	Kentucky	Pickwick	Wilson	Wheeler
Multiple-use facilities				
Reservoir land and landrights	\$ 14,868,720	\$ 3,000,536	\$ 675,926	\$ 4,348,186
Highway, railroad, and other relocations and removals	27,434,261	1,915,648	136,355	2,113,711
Reservoir clearing	6,915,483	1,509,836	951,436	3,613,759
Dam structure, excluding power intake section	27,547,610	6,006,797	12,613,760	8,384,889
Roadways	276,832	33,933	2,116,796	901,410
Village and reservoir facilities	3,048,015	193,063	150,366	1,341,601
Other structures and improvements	1,616,232	614,889	803,549	447,008
Total	<u>81,707,153</u>	<u>13,274,702</u>	<u>17,448,188</u>	<u>21,150,564</u>
Deduct direct flood control investment, contra below	16,532,000	788,000	-	-
Add nonoverflow sections to replace other sections, contra below				
Power intake section	2,890,000	550,000	3,900,000	830,000
Lock section	210,000	380,000	125,000	200,000
Total multiple-use facilities, allocated below; note 1, page 10	<u>68,275,153</u>	<u>13,416,702</u>	<u>21,473,188</u>	<u>22,180,564</u>
Navigation facilities				
Lock and appurtenances	10,082,252	6,010,874	28,683,900	21,727,975
Channel improvements	-	-	-	-
Deduct nonoverflow section to replace lock section, contra above	210,000	380,000	125,000	200,000
Total before allocation of multiple-use facilities	<u>9,872,252</u>	<u>5,630,874</u>	<u>28,558,900</u>	<u>21,527,975</u>
Add allocation of total multiple-use facilities shown above; note 1, page 10				
Total navigation facilities after allocation				
Flood control facilities				
Reservoir land and landrights	-	-	-	-
Add direct flood control investment, contra above	16,532,000	788,000	-	-
Total before allocation of multiple-use facilities	<u>16,532,000</u>	<u>788,000</u>	<u>-</u>	<u>-</u>
Add allocation of total multiple-use facilities shown above; note 1, page 10				
Total flood control facilities after allocation				
Power facilities				
Powerhouse, including intake section	10,752,571	9,444,110	21,360,779	18,018,614
Turbines and generators	10,041,996	11,957,581	27,931,263	21,036,083
Accessory electric equipment	1,024,434	1,677,179	5,109,762	2,527,691
Other power plant equipment	944,791	420,041	1,712,767	449,410
Total	<u>22,763,792</u>	<u>23,498,911</u>	<u>56,114,571</u>	<u>42,031,798</u>
Deduct nonoverflow section to replace power intake section; contra above	2,890,000	550,000	3,900,000	830,000
Total before allocation of multiple-use facilities	<u>19,873,792</u>	<u>22,948,911</u>	<u>52,214,571</u>	<u>41,201,798</u>
Add allocation of total multiple-use facilities shown above; note 1, page 10				
Total power facilities after allocation				
Total	<u>\$114,553,197</u>	<u>\$42,784,487</u>	<u>\$102,246,659</u>	<u>\$84,910,337</u>
Accumulated depreciation	<u>\$ 30,304,594</u>	<u>\$20,717,619</u>	<u>\$ 43,260,320</u>	<u>\$28,648,056</u>

930048

<u>Guntersville</u>	<u>Chickamauga</u>	<u>Watts Bar</u>	<u>Fort Loudoun</u>
\$ 3,711,612	\$ 4,490,944	\$ 5,012,991	\$ 4,124,407
3,867,304	2,704,136	4,977,205	5,111,630
2,436,597	971,651	953,785	560,341
5,146,272	8,242,856	3,963,969	8,831,365
366,029	155,767	70,280	259,733
1,068,623	323,508	169,386	107,512
809,194	986,479	974,683	765,559
<u>17,405,631</u>	<u>17,885,341</u>	<u>16,122,299</u>	<u>19,760,547</u>
-	1,107,000	1,952,000	786,000

780,000	1,470,000	614,000	1,610,000
<u>440,000</u>	<u>790,000</u>	<u>565,000</u>	<u>940,000</u>
<u>18,625,631</u>	<u>19,038,341</u>	<u>15,345,299</u>	<u>21,524,547</u>

17,518,722	4,735,830	3,161,200	5,709,247
-	-	-	-
440,000	790,000	565,000	940,000
<u>17,078,722</u>	<u>3,945,830</u>	<u>2,596,200</u>	<u>4,769,247</u>

-	-	-	-
-	1,107,000	1,952,000	786,000
-	<u>1,107,000</u>	<u>1,952,000</u>	<u>786,000</u>

5,639,162	6,297,853	4,961,629	6,266,978
7,307,727	7,558,099	7,482,282	6,729,767
750,931	1,487,634	1,065,470	1,110,574
291,234	398,802	505,461	577,378
<u>13,989,054</u>	<u>15,742,388</u>	<u>14,014,842</u>	<u>14,684,697</u>
780,000	1,470,000	614,000	1,610,000
<u>13,209,054</u>	<u>14,272,388</u>	<u>13,400,842</u>	<u>13,074,697</u>

\$48,913,407 \$38,363,559 \$33,298,341 \$40,154,491

\$15,332,912 \$15,232,140 \$13,199,195 \$14,378,483

930049

Norris	Hivussee	Cherokee	Chatuge
\$ 6,800,700	\$ 1,678,482	\$ 4,498,971	\$ 964,911
4,308,463	1,191,433	5,513,525	2,691,229
1,561,428	394,601	575,359	194,229
10,835,876	9,376,952	13,205,027	3,088,682
266,690	246,236	31,728	38,234
84,508	150,496	179,290	2,499
525,046	245,428	928,049	149,359
<u>24,382,741</u>	<u>13,283,628</u>	<u>24,937,949</u>	<u>7,131,128</u>
5,506,000	1,356,000	3,467,000	537,000

-	-	-	-
-	-	-	-
<u>18,876,741</u>	<u>11,927,628</u>	<u>21,470,949</u>	<u>6,594,128</u>

-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

1,318,285	-	-	-
<u>5,506,000</u>	<u>1,356,000</u>	<u>3,467,000</u>	<u>537,000</u>
<u>6,824,285</u>	<u>1,356,000</u>	<u>3,467,000</u>	<u>537,000</u>

2,221,751	2,573,941	3,177,445	511,634
2,118,741	5,315,925	5,845,681	1,020,530
486,468	670,392	697,799	176,293
246,202	427,524	480,867	135,546
<u>5,073,162</u>	<u>8,987,782</u>	<u>10,201,792</u>	<u>1,844,003</u>
-	-	-	-
<u>5,073,162</u>	<u>8,987,782</u>	<u>10,201,792</u>	<u>1,844,003</u>

<u>\$30,774,188</u>	<u>\$22,271,410</u>	<u>\$35,139,741</u>	<u>\$8,975,131</u>
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<u>\$ 9,464,162</u>	<u>\$ 9,270,171</u>	<u>\$10,938,682</u>	<u>\$2,216,177</u>
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930050

Assets

Nottely	Fontana	South Holston	Watauga	Douglas	Boone	Channel improvements	Total system allocation dams	Accumulated depreciation
\$ 413,407	\$ 1,625,350	\$ 2,424,639	\$ 4,598,632	\$ 6,788,330	\$ 2,118,605	\$ -	\$ 72,145,271	\$ -
1,344,853	9,017,018	3,745,948	6,369,316	8,107,311	2,724,632	-	93,281,941	-
232,108	1,033,436	892,864	385,808	574,899	575,423	-	24,333,173	-
3,205,913	45,779,373	17,411,137	10,757,436	16,912,546	6,585,430	-	217,895,890	85,699,555
197,851	606,244	211,319	341,593	32,470	24,164	-	6,237,309	2,865,090
2,822	51,290	36,987	120,562	112,808	74,593	-	7,217,929	3,360,913
95,765	3,266,985	896,095	889,440	904,363	389,375	-	15,307,498	7,781,845
5,492,719	61,379,696	25,618,989	23,462,787	33,482,727	12,492,222	-	436,419,011	99,707,403
623,000	7,623,000	4,950,000	3,045,000	7,057,000	110,000	-	55,439,000	11,076,743
-	-	-	-	-	1,160,000	-	13,804,000	5,692,415
-	-	-	-	-	-	-	3,650,000	1,430,785
<u>4,869,719</u>	<u>53,756,696</u>	<u>20,668,989</u>	<u>20,417,787</u>	<u>26,425,727</u>	<u>13,542,222</u>	-	<u>\$398,434,011</u>	<u>\$ 95,753,860</u>
-	-	-	-	-	-	-	\$ 97,630,000	\$ 29,122,578
-	-	-	-	-	-	28,025,196	28,025,196	5,689,197
-	-	-	-	-	-	-	3,650,000	1,430,785
-	-	-	-	-	-	28,025,196	122,005,196	33,380,990
-	-	-	-	-	-	-	107,577,183	25,853,542
-	-	-	-	-	-	-	229,582,379	59,234,532
-	-	-	-	-	-	-	1,318,285	-
623,000	7,623,000	4,950,000	3,045,000	7,057,000	110,000	-	55,439,000	11,076,743
623,000	7,623,000	4,950,000	3,045,000	7,057,000	110,000	-	56,757,285	11,076,743
-	-	-	-	-	-	-	123,514,543	29,683,697
-	-	-	-	-	-	-	180,271,828	40,760,440
607,075	5,672,728	2,779,412	4,922,424	4,734,010	4,742,968	-	114,685,084	44,480,284
1,233,030	6,704,930	1,791,814	2,328,905	5,887,167	4,961,615	-	137,253,136	80,755,126
185,800	1,141,937	352,803	764,186	689,623	906,664	-	20,829,640	16,516,393
133,243	542,626	254,757	373,367	511,223	590,925	-	8,996,304	6,016,562
2,159,248	14,062,221	5,178,826	8,388,882	11,822,023	11,202,172	-	281,760,164	147,768,365
-	-	-	-	-	1,160,000	-	13,804,000	5,692,415
2,159,248	14,062,221	5,178,826	8,388,882	11,822,023	10,042,172	-	267,956,164	142,075,950
-	-	-	-	-	-	-	167,342,285	40,216,621
-	-	-	-	-	-	-	435,298,449	182,292,571
<u>\$7,651,967</u>	<u>\$75,441,917</u>	<u>\$30,797,815</u>	<u>\$31,851,669</u>	<u>\$45,304,750</u>	<u>\$23,694,394</u>	<u>\$ 28,025,196</u>	<u>\$845,152,656</u>	
<u>\$2,338,308</u>	<u>\$21,670,739</u>	<u>\$ 8,131,572</u>	<u>\$ 8,051,315</u>	<u>\$13,048,427</u>	<u>\$ 7,395,475</u>	<u>\$ 5,689,196</u>		<u>\$282,287,543</u>

930051

TENNESSEE VALLEY AUTHORITY
MULTIPURPOSE DAMS
PROJECT ALLOCATIONS
SEPTEMBER 30, 1978

	<u>Melton Hill</u>	<u>Nickajack</u>
Multiple-use facilities		
Reservoir land and landrights; note a	\$ 3,433,958	\$ 3,285,833
Highway, railroad, and other relocations and removals	2,667,365	9,106,970
Reservoir clearing	904,169	736,361
Dam structure, excluding power intake section	2,825,723	9,998,809
Roadways	419,617	499,660
Village and reservoir facilities	133,591	358,535
Other structures and improvements	<u>1,174,785</u>	<u>1,073,952</u>
Total	11,559,208	25,060,120
Deduct direct power investment, contra below; note b	2,138,725	-
Add nonoverflow sections to replace other sections, contra below		
Power intake section	1,120,000	700,000
Lock section	480,000	950,000
Add sluiceway to replace power intake and water conductor, contra below	-	-
Total multiple-use facilities, allocated below; note 1, page 10	<u>\$11,020,483</u>	<u>\$26,710,120</u>
Navigation facilities		
Lock and appurtenances	\$ 9,315,484	\$21,361,961
Channel improvements	-	-
Deduct nonoverflow section to replace lock section, contra above	480,000	950,000
Total before allocation of multiple-use facilities	8,835,484	20,411,961
Add allocation of total multiple-use facilities shown above; note 1, page 10	<u>7,163,314</u>	<u>22,706,752</u>
Total navigation facilities after allocation	<u>15,998,798</u>	<u>43,118,713</u>
Flood control facilities		
Reservoir land and landrights	-	-
Structures and improvements	-	-
Dam structures and waterways	-	-
Reservoir facilities	-	-
Channel improvements	-	-
Total before allocation of multiple-use facilities	-	-
Add allocation of total multiple-use facilities shown above; note 1, page 10	-	405,619
Total flood control facilities after allocation	-	<u>405,619</u>
Tributary area development facilities		
Intake for municipal water supply	-	-
Add allocation of total multiple-use facilities shown above; note 1, page 10	-	-
Less reimbursement by Beech River Watershed Development Authority	-	-
Total tributary area development facilities after allocation and reimbursements	-	-
Recreation facilities		
Public-use areas	-	-
Add allocation of total multiple-use facilities shown above; note 1, page 10	-	-
Total recreation facilities after allocation	-	-
Power facilities		
Land and landrights	-	-
Powerhouse, including intake section	6,243,191	11,978,693
Turbines and generators	6,715,354	12,817,217
Accessory electrical equipment	753,983	1,300,569
Other power plant equipment	553,286	768,664
Total	<u>14,265,814</u>	<u>26,865,143</u>
Add direct power investment, contra above; note b	2,138,725	-
Deduct nonoverflow section to replace power intake section, contra above	1,120,000	700,000
Deduct sluiceway to replace power intake and water conductor, contra above	-	-
Total before allocation of multiple-use facilities	15,284,539	26,165,143
Add allocation of total multiple-use facilities shown above; note 1, page 10	<u>3,857,169</u>	<u>3,597,749</u>
Total power facilities after allocation	<u>19,141,708</u>	<u>29,762,892</u>
Total	<u>\$35,140,506</u>	<u>\$73,287,224</u>
Accumulated depreciation	<u>\$ 5,930,749</u>	<u>\$ 9,550,171</u>

Notes:

- Nickajack includes land and landrights in the amount of \$1,308,447 acquired for retired Hales Bar project which is allocated on system basis.
- Estimated investment for increased reservoir elevation to serve a single purpose.

Assets

Tins Ford	Bear Creek	Duck River	Beech River	Channel Improvements	Total project allocations dams	Accumulated depreciation
\$ 8,131,142	\$ 6,027,124	\$ 5,561,380	\$2,089,255	\$ -	\$ 28,528,692	\$ -
12,363,625	4,865,836	11,140,707	222,931	-	40,367,434	-
3,057,250	2,902,611	512,541	953,368	-	9,066,300	-
14,167,952	20,091,171	18,519,264	2,943,715	-	68,546,634	4,289,559
352,346	1,617,702	-	80,600	-	2,969,925	274,109
83,127	551,352	448,710	221,958	-	1,797,273	306,150
1,192,083	231,900	171,103	66,599	-	3,910,419	616,710
39,347,525	36,287,696	36,353,705	6,578,423	-	155,156,677	5,486,528
-	-	-	-	-	2,138,725	143,711
-	-	-	-	-	1,820,000	233,682
-	-	-	-	-	1,430,000	168,942
4,273,000	-	-	-	-	4,273,000	351,532
<u>\$43,620,525</u>	<u>\$36,287,696</u>	<u>\$36,353,705</u>	<u>\$6,578,423</u>	<u>\$ -</u>	<u>\$160,570,952</u>	<u>\$ 6,096,973</u>
\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,677,445	\$ 4,319,396
-	-	-	-	1,701,719	1,701,719	402,972
-	-	-	-	-	1,430,000	168,942
-	-	-	-	1,701,719	30,949,164	4,553,425
-	-	-	-	-	29,870,066	2,101,555
-	-	-	-	1,701,719	60,819,230	6,654,981
-	-	-	386,655	-	386,655	-
-	-	-	10,022	-	10,022	2,957
-	-	-	114,479	-	114,479	15,276
-	-	-	1,839	-	1,839	243
-	1,950,812	-	2,386,478	-	4,337,290	377,206
-	1,950,812	-	2,899,473	-	4,850,285	395,682
6,979,284	16,329,463	2,908,296	1,644,606	-	28,267,268	810,119
6,979,284	16,280,275	2,908,296	4,544,072	-	33,117,553	1,205,301
-	-	-	19,445	-	19,445	2,576
9,596,516	9,071,924	22,902,834	4,933,817	-	46,505,091	1,266,768
-	-	-	182,247	-	182,247	-
9,596,516	9,071,924	22,902,834	4,771,015	-	46,342,289	1,269,344
267,034	-	1,051,540	-	-	1,318,574	101,147
24,427,494	10,886,309	10,542,575	-	-	45,856,378	1,286,507
24,694,528	10,886,309	11,594,115	-	-	47,174,952	1,387,654
607,860	-	-	-	-	607,860	-
7,247,407	-	-	-	-	25,469,291	3,229,378
3,477,696	-	-	-	-	23,010,267	5,643,374
784,716	-	-	-	-	2,839,268	790,384
741,453	-	-	-	-	2,063,403	458,638
12,859,132	-	-	-	-	53,990,089	10,121,774
-	-	-	-	-	2,138,725	143,711
-	-	-	-	-	1,820,000	233,682
4,273,000	-	-	-	-	4,273,000	351,532
8,586,132	-	-	-	-	50,035,814	9,580,271
2,617,231	-	-	-	-	10,072,149	632,024
11,203,363	-	-	-	-	60,107,963	10,312,295
<u>\$52,473,691</u>	<u>\$38,238,508</u>	<u>\$37,405,245</u>	<u>\$9,315,094</u>	<u>\$1,701,719</u>	<u>\$247,561,987</u>	
<u>\$ 2,552,350</u>	<u>\$ 964,478</u>	<u>\$ 631,369</u>	<u>\$ 797,985</u>	<u>\$ 402,973</u>		<u>\$20,330,075</u>

930053

TENNESSEE VALLEY AUTHORITY
SINGLE-PURPOSE POWER DAMS AND STEAM PRODUCTION PLANTS
 SEPTEMBER 30, 1978

	<u>Apalachia</u>	<u>Fort Patrick Henry</u>	<u>Great Falls</u>	<u>Ocoee No. 1</u>	<u>Ocoee No. 2</u>
Single-purpose dams					
Assets					
Reservoir land and landrights, including relocations	\$ 775,306	\$ 1,207,743	\$ 702,114	\$ 237,226	\$ 20,252
Reservoir clearing	72,152	126,855	216,056	28,702	-
Structures and improvements	1,310,940	1,885,563	322,627	674,043	196,019
Dams and waterways	17,149,030	4,565,201	2,326,337	5,591,966	1,811,606
Turbines and generators	2,400,395	2,979,116	740,446	969,195	424,726
Accessory electric equipment	509,779	542,014	391,502	233,558	158,266
Other power plant equipment	283,330	269,635	129,330	177,836	93,219
Roads, railroads, and bridges	371,308	20,462	22,431	377,029	13,387
Village and reservoir facilities	6,705	17,043	5,877,732	-	-
Total single-purpose power dams	\$ 22,879,445	\$ 11,613,634	\$ 10,788,575	\$ 8,289,555	\$ 2,717,475
Accumulated depreciation	\$ 9,544,674	\$ 4,160,995	\$ 3,501,845	\$ 3,617,787	\$ 2,549,578

	<u>Cumberland</u>	<u>Paradise</u>	<u>Widows Creek</u>	<u>Shawnee</u>	<u>Kingston</u>
Steam production plants					
Assets					
Land and landrights	\$ 2,081,593	\$ 716,336	\$ 198,954	\$ 504,507	\$ 1,144,226
Structures and improvements	80,399,778	56,196,950	44,314,929	48,071,453	34,707,634
Boiler plant equipment	265,256,782	197,226,777	189,381,970	123,842,063	151,869,947
Turbogenerators	64,749,955	94,128,159	67,302,342	65,690,742	63,142,311
Accessory electric equipment	25,433,083	17,937,220	23,344,098	14,198,202	12,747,955
Other power plant equipment	7,528,094	6,015,127	5,098,288	3,904,384	4,297,195
Total steam production plants	\$445,449,285	\$372,220,569	\$329,640,581	\$256,211,351	\$267,909,268
Accumulated depreciation	\$ 60,380,356	\$110,806,944	\$117,741,140	\$138,505,852	\$122,736,879

930054

<u>Blue Ridge</u>	<u>Cooper No. 1</u>	<u>Wilbur</u>	<u>Total</u>
\$ 877,086	\$ 232,659	\$ 33,717	\$ 4,086,103
125,636	29,686	2,610	601,697
259,337	243,114	402,015	5,293,658
3,069,257	7,934,135	961,667	43,469,199
511,980	316,395	683,522	9,025,775
204,907	193,473	163,810	2,397,329
61,262	5,258	82,501	1,190,371
46,895	6,550	1,912	860,474
32,526	10,110	-	5,944,116
<u>\$ 5,188,906</u>	<u>\$ 9,059,380</u>	<u>\$ 2,331,754</u>	<u>\$ 72,468,722</u>
<u>\$ 2,772,200</u>	<u>\$ 1,343,849</u>	<u>\$ 1,170,760</u>	<u>\$ 28,462,288</u>

<u>Johnsonville</u>	<u>Colbert</u>	<u>Gallatin</u>	<u>Bull Run</u>	<u>John Sevier</u>	<u>Watts Bar</u>	<u>Thomas H. Allen (note 3, page 11)</u>	<u>Total</u>
\$ 108,467	\$ 279,029	\$ 690,832	\$ 2,082,768	\$ 1,491,572	\$ 11,996	\$ -	\$ 9,310,250
35,646,429	30,477,920	24,947,082	26,923,533	19,735,033	4,091,136	865,095	406,376,972
88,442,512	92,933,883	76,269,586	105,043,976	53,361,633	10,468,364	12,717,609	1,366,315,102
56,676,158	49,603,534	38,175,872	26,954,810	30,313,928	6,274,643	242,111	563,254,565
12,134,778	10,753,913	8,249,252	8,636,530	6,733,467	1,559,920	780,298	142,508,716
4,018,443	3,857,919	3,423,150	3,337,391	2,482,945	706,417	1,686,979	46,356,332
<u>\$197,026,787</u>	<u>\$187,906,198</u>	<u>\$151,755,774</u>	<u>\$172,979,008</u>	<u>\$114,118,578</u>	<u>\$23,112,476</u>	<u>\$16,292,092</u>	<u>\$2,534,621,967</u>
<u>\$108,252,306</u>	<u>\$ 85,614,649</u>	<u>\$ 69,754,357</u>	<u>\$ 42,722,211</u>	<u>\$ 62,584,484</u>	<u>\$19,011,249</u>	<u>\$ 6,603,150</u>	<u>\$ 945,543,581</u>

930055

TENNESSEE VALLEY AUTHORITY
 NUCLEAR PRODUCTION AND OTHER ELECTRIC PLANT
 SEPTEMBER 30, 1978

SCHEDULE A
 PAGE 5

	Assets	Accumulated depreciation and depletion
Nuclear production plants		
Browns Ferry		
Land and landrights	\$ 887,951	
Structures and improvements	187,672,399	
Reactor plant equipment	315,290,764	
Turbogenerators	261,779,414	
Accessory electric equipment	103,998,632	
Other power plant equipment	16,361,749	
Total nuclear production plants	\$ 885,990,909	\$ 79,334,340
Other electric plant		
Other production plant		
William gas turbines	\$ 30,453,307	
Thomas H. Allen gas turbines	51,731,584	
Colbert gas turbines	41,166,873	
Johnsonville gas turbines	86,412,764	
	209,764,628	\$ 33,045,839
System control center	29,244,845	2,201,953
Total other production plant	239,009,473	35,247,792
Transmission plant, including substations serving wholesale and industrial customers		
Land and landrights	66,168,185	
Structures and improvements	135,431,865	
Station equipment	583,260,405	
Towers and fixtures	225,044,142	
Poles and fixtures	67,597,968	
Overhead conductors and devices	293,666,951	
Roads and trails	271,305	
Total transmission plant	1,371,440,821	390,210,224
General plant		
Communication equipment	38,914,569	13,200,655
Coal land and landrights	16,965,463	1,604,792
Office and transportation equipment	42,767,507	11,514,189
Other, including land and landrights of \$711,283	47,615,148	9,955,033
Total general plant	146,262,687	36,274,669
Plant leased to others, including land and landrights of \$1,831,812		
	72,257,443	25,172,043
Plant held for future use		
Uranium land and landrights	25,773,728	
Coal land and landrights	764,087	
Other, including land and landrights of \$4,718,400	17,459,844	
Total plant held for future use	43,997,659	10,967,186
Other physical property, including land and landrights of \$1,073,436		
	3,379,501	2,301,565
Total other electric plant	\$1,876,347,584	\$500,173,479

TENNESSEE VALLEY AUTHORITY

OTHER PLANT

SEPTEMBER 30, 1978

SCHEDULE A

PAGE 6

	<u>Assets</u>	<u>Accumulated depreciation and depletion</u>
Single-purpose flood control plant, including land of \$726,828	\$ 2,065,742	\$ 177,133
Single-purpose navigation plant	7,096,629	759,512
Recreation and environmental education plant		
Land Between The Lakes plant, including land of \$33,827,421	59,282,529	4,431,482
Other recreation plant, including land of \$173,719	3,015,496	288,060
Total recreation and environmental education plant	62,298,025	4,719,542
Chemical plant		
Land		
Phosphate land and mineral rights	1,531,857	
Other land and landrights	3,057	
Total land	1,534,914	199,280
Buildings and equipment		
Manufacturing plant and equipment		
Phosphate facilities	14,436	
Nitrogen facilities	34,939,490	
	34,953,926	10,701,467
General service facilities		
Utility systems	14,724,419	
Other general facilities	9,494,584	
	24,219,003	12,285,562
Total buildings and equipment	59,172,929	22,987,029
Total chemical plant	60,707,843	23,186,309
General plant		
Land and landrights	856,759	
Land improvements	1,297,331	
Structures	16,885,370	
General utility systems	339,076	
Data processing equipment	826,841	
Engineering equipment	677,653	
Photographic and reproduction equipment	1,234,275	
Medical equipment	1,153,351	
Office furniture and equipment	4,225,652	
Transportation equipment	16,573,799	
Alterations to leased plant	566,040	
Environmental quality equipment	1,469,342	
Miscellaneous equipment	3,441,449	
Total general plant	49,546,938	23,734,623
Total other plant	\$181,715,177	\$52,577,119

TENNESSEE VALLEY AUTHORITY
CONSTRUCTION AND INVESTIGATIONS IN PROGRESS,
NUCLEAR FUEL, AND MINE AND MILL DEVELOPMENT COSTS

SCHEDULE B

SEPTEMBER 30, 1978

	<u>Power program</u>	<u>All programs</u>
CONSTRUCTION AND INVESTIGATIONS IN PROGRESS		
Construction in progress		
Generating facilities		
Sequoyah Nuclear Plant	11,066,553,290	11,066,553,290
Watts Bar Nuclear Plant	947,386,414	947,386,414
Bellefonte Nuclear Plant	889,488,805	889,488,805
Hartsville Nuclear Plant	611,252,059	611,252,059
Phipps Bend Nuclear Plant	152,116,443	152,116,443
Yellow Creek Nuclear Plant	150,581,989	150,581,989
Raccoon Mountain pumped storage project	294,681,583	294,681,583
Total generating facilities	<u>4,112,060,583</u>	<u>4,112,060,583</u>
Transmission lines, substations, and other additions to power facilities	<u>464,449,083</u>	<u>464,449,083</u>
Pickwick new lock		<u>7,372,851</u>
Other navigation facilities		<u>7,784,120</u>
Flood control facilities		<u>1,124,598</u>
Multipurpose facilities		
Tellico Dam and Reservoir	-	111,144,368
Columbia Dam and Reservoir	-	37,678,791
Bear Creek water control system	-	22,719,796
Other	476,096	1,145,161
Total multipurpose facilities	<u>476,096</u>	<u>172,668,116</u>
Chemical plant		<u>9,709,133</u>
Recreation and environmental education facilities		
Land Between The Lakes		3,860,583
Other recreation facilities		1,143,402
Total recreation and environmental education facilities		<u>5,003,985</u>
General plant		
General construction equipment and materials	-	1,486,878
Other additions to general plant	1,476,454	9,111,917
Total general plant	<u>1,476,454</u>	<u>10,598,795</u>
Total construction in progress	<u>4,578,462,216</u>	<u>4,790,791,264</u>
Investigations for future power facilities	<u>8,088,439</u>	<u>8,088,439</u>
Total construction and investigations in progress	<u>\$4,586,550,655</u>	<u>\$4,798,879,703</u>
NUCLEAR FUEL		
Nuclear fuel in process		
Browns Ferry	\$ 33,210,346	\$ 33,210,346
Sequoyah	48,681,373	48,681,373
Watts Bar	47,465,762	47,465,762
Bellefonte	43,003,096	43,003,096
Enrichment	46,885,417	46,885,417
Total nuclear fuel in process	<u>219,245,994</u>	<u>219,245,994</u>
Nuclear fuel in stock	<u>108,689,190</u>	<u>108,689,190</u>
Nuclear fuel in reactor		
Browns Ferry	<u>150,498,226</u>	<u>150,498,226</u>
Spent nuclear fuel in cooling		
Browns Ferry	<u>7,429,714</u>	<u>7,429,714</u>
Total nuclear fuel	<u>\$ 485,363,124</u>	<u>\$ 485,363,124</u>
ACCUMULATED AMORTIZATION		
Browns Ferry	<u>\$ 92,317,300</u>	<u>\$ 92,317,300</u>
MINE AND MILL DEVELOPMENT COSTS		
Coal mine development and leases	\$ 34,278,030	\$ 34,278,030
Uranium mine and mill development and preoperations	42,209,237	42,209,237
Total mine and mill development costs	<u>\$ 76,487,267</u>	<u>\$ 76,487,267</u>

TENNESSEE VALLEY AUTHORITY
DETAILS OF POWER EXPENSE
 FOR THE YEAR ENDED SEPTEMBER 30, 1978

SCHEDULE C
 PAGE 1

SUMMARY	Total	Provision for depreciation	Total before depreciation (exhibit II)	Operation		Maintenance	Other production
				Fuel	Other		
Production							
Multipurpose dams							
Direct; page 32	\$ 11,503,905	\$ 5,457,302	\$ 6,046,603	\$ -	\$ 4,660,724	\$ 1,705,279	\$ -
Multiple-use; schedule I	3,165,362	1,746,953	1,918,409	-	3,332,124	854,795	-
Total multipurpose dams	14,669,267	7,204,255	7,965,012	-	7,992,848	2,560,074	-
Single-purpose dams; page 34	1,111,570	1,093,067	2,018,603	-	1,710,345	808,278	-
Cumberland Basin projects; note a	10,441,983	-	10,441,983	-	-	-	10,441,983
Steam plants; page 36	1,170,381,403	69,806,687	1,240,188,090	897,390,341	39,113,623	146,170,772	-
Nuclear plants; page 38	112,730,545	28,456,449	141,186,994	38,155,587	20,177,905	25,742,504	-
Gas turbine plants; page 38	126,647,645	8,381,882	135,029,527	95,110,513	796,173	8,266,331	-
Total generation	1,434,824,353	102,446,290	1,537,270,643	1,032,656,439	38,791,472	150,078,249	10,441,983
Purchased power	26,997,389	-	26,997,389	-	-	-	26,997,389
Interchange power received	175,939,010	-	175,939,010	-	-	-	175,939,010
Interchange power delivered	36,122,850	-	36,122,850	-	-	-	36,122,850
Power purchased and interchanged, net	166,713,049	-	166,713,049	-	-	-	166,713,049
System control and load dispatching	1,020,284	374,128	1,394,412	-	-	-	1,394,412
Other	50,706,933	-	50,706,933	-	-	-	50,706,933
Total production	1,653,246,217	112,820,473	1,766,066,690	1,032,656,439	38,791,472	150,078,249	129,997,311
Transmission; page 35	19,824,084	32,333,047	52,157,131	-	16,177,586	11,313,151	-
Customer accounts; page 39	706,065	-	706,065	-	706,065	-	-
Demonstration of power use; page 39	4,260,831	-	4,260,831	-	4,260,831	-	-
Payments in lieu of taxes; note b	79,872,152	-	79,872,152	-	-	-	79,872,152
Social security taxes	11,727,034	-	11,727,034	-	-	-	11,727,034
Administrative and general; page 39							
Direct	84,236,432	2,791,902	87,028,334	-	80,979,526	469,304	-
Multiple-use	114,007	-	114,007	-	114,007	-	-
Total operating expense	\$1,895,966,822	\$150,447,155	\$2,046,413,977	\$1,032,656,439	\$191,029,587	\$167,856,604	\$321,597,017

SYSTEM STATISTICS	kWh generated less station use (thousands)	Production expense		Installed capacity at September 30, 1978 (kilowatts)	Ratio of average gross generation to installed capacity (percent)
		Total	Per kWh (mills)		
Generation					
Multipurpose dams					
Direct; page 32	14,384,915	\$ 13,823,905	.961	1,020,750	54.65
Multiple-use; schedule I	-	1,645,362	.359	-	-
Total multipurpose dams	14,384,915	15,469,267	1.300	1,020,750	54.65
Single-purpose dams; page 34	1,115,769	3,111,670	2.789	249,160	51.25
Cumberland Basin projects; note a	1,170,381	10,441,983	3.285	853,000	42.52
Alcoa dams; note c	2,018,603	-	-	423,213	54.42
Total hydro generation	20,690,134	4,746,549	23.00	2,546,123	50.22
Steam plants; page 36	77,939,589	1,177,881,403	15.048	17,796,085	53.15
Nuclear plants; page 38	15,795,810	112,730,545	7.137	3,456,000	53.90
Gas turbine plants; page 38	2,240,867	126,607,645	39.668	2,510,000	13.46
Total commercial generation; note d	117,269,780	1,297,219,593	11.066	25,762,110	54.87
Purchased power	901,104	26,997,389	30.000	-	-
Interchange power received	12,140,134	175,939,010	14.491	-	-
System control and load dispatching	-	1,020,284	-	-	-
Other; note e	10,334	50,706,933	4,906	-	-
Total system input	130,396,361	1,474,963,519	11.314	-	-
Delivered under Alcoa Agreement	1,825,240	-	-	-	-
Interchange power delivered	1,115,078	36,122,850	32.421	-	-
Net energy supply	129,436,989	1,458,840,669	11.271	-	-
Shop and internal uses	10,355	-	-	-	-
Transmission and transformation losses	1,582,760	-	-	-	-
Total kWh sales and production expense	117,844,790	\$1,457,257,819	12.364	-	-

- Notes:
- TVA purchases substantially all of the output of eight hydro plants in the Cumberland River Basin. In accordance with memorandums of understanding with the Corps of Engineers, Department of the Army, the Cumberland Basin projects are operated for optimum production of power in conjunction with TVA's power system, subject to flood control, navigation, and other operating requirements of the Army.
 - Payments made to states and counties in which power operations are carried out. The basic amount is 5 percent of gross revenues from the sale of power to other than Federal agencies during the preceding year, with the provision of minimum payments under certain circumstances.
 - Operation of twelve hydro plants of the Aluminum Company of America is coordinated with the operation of TVA's power plants under an arrangement whereby the storage and release of water from the Alcoa plants are carried out by the company under TVA's direction.
 - Installed capacity increased 13,750 kilowatts during fiscal year 1978. Additions consisted of 13,750 kilowatts from modifications to four generators.
 - "kWh generated" included kWh generated, less energy for pumping, during test runs of the first and second units at the Raccoon Mountain Pumped Storage Plant. The expenses of the generation, less credit for the fair value of energy delivered to the TVA power system, were charged to construction.

*Detail

POOR ORIGINAL

TENNESSEE VALLEY AUTHORITY
DETAILS OF POWER EXPENSE
 FOR THE YEAR ENDED SEPTEMBER 30, 1978

	<u>Total</u>	<u>Kentucky</u>	<u>Pickwick</u>	<u>Wilson</u>	<u>Wheeler</u>	<u>Guntersville</u>	<u>Nickajack</u>	<u>Chickamauga</u>
Direct hydraulic production - multipurpose dams								
Operation								
Supervision and engineering	\$ 367,478	\$ 28,901	\$ 32,067	\$ 49,342	\$ 44,212	\$ 29,051	\$ 17,809	\$ 25,111
Hydraulic	77,968	53,824	4,148	2,723	5,619	2,918	143	9
Electric	2,539,111	144,161	157,937	335,112	239,901	144,352	94,515	142,598
Miscellaneous	<u>1,676,167</u>	<u>123,473</u>	<u>116,334</u>	<u>238,758</u>	<u>157,230</u>	<u>92,854</u>	<u>44,625</u>	<u>118,241</u>
Total operation	<u>4,660,724</u>	<u>350,359</u>	<u>310,486</u>	<u>625,935</u>	<u>446,962</u>	<u>269,175</u>	<u>157,092</u>	<u>285,919</u>
Maintenance								
Supervision and engineering	375,386	31,088	35,452	33,376	29,820	30,834	15,490	56,485
Structures	296,487	56,067	6,267	48,363	35,991	7,955	4,300	19,564
Reservoirs, dams, and waterways	208,808	568	3,897	8,598	8,863	913	1,408	403
Electric plant	2,488,210	166,268	212,566	464,376	303,077	93,199	74,121	315,658
Miscellaneous plant	<u>336,388</u>	<u>17,445</u>	<u>15,574</u>	<u>85,069</u>	<u>25,436</u>	<u>18,033</u>	<u>13,240</u>	<u>13,383</u>
Total maintenance	<u>3,705,279</u>	<u>271,436</u>	<u>273,756</u>	<u>639,782</u>	<u>403,187</u>	<u>150,934</u>	<u>108,559</u>	<u>405,493</u>
Provision for depreciation	<u>5,457,922</u>	<u>335,806</u>	<u>395,160</u>	<u>913,904</u>	<u>688,922</u>	<u>224,545</u>	<u>436,469</u>	<u>253,450</u>
Total	<u>\$13,823,925</u>	<u>\$957,601</u>	<u>\$979,402</u>	<u>\$2,179,621</u>	<u>\$1,539,071</u>	<u>\$644,654</u>	<u>\$702,120</u>	<u>\$944,862</u>
kWh generated less station use (thousands)	14,384,915	1,142,516	1,360,001	2,955,655	1,526,832	784,083	680,938	789,257
Total production expense including depreciation per kWh (mills)	.961	.838	.720	.737	1.008	.822	1.031	1.197
Installed capacity at September 30, 1978 (kilowatts); note 4, page 31	3,020,750	175,000	220,040	629,340	359,100	106,200	100,350	117,000
Ratio of average gross generation to installed capacity (percent)	54.65	74.71	70.72	53.70	48.73	87.29	77.59	77.35

930060

	Fert								South				William	
Watts Bar	Loudoun	Norris	Hiwassee	Cherokee	Chatuge	Wofford	Fontana	Holston	Watauga	Douglas	Boone	Hill	Time Ford	
\$ 15,564	\$ 9,255	\$ 12,343	\$ 24,874	\$ 15,030	\$ 4,905	\$ 5,154	\$ 11,427	\$ 6,714	\$ 6,123	\$ 11,848	\$ 5,890	\$ 6,115	\$ 3,741	
8,584	-	-	-	-	-	-	-	-	-	-	-	-	-	-
179,784	121,222	112,950	67,411	128,363	19,541	20,549	87,081	55,954	120,293	118,223	116,643	75,783	56,678	
38,549	114,245	43,312	87,213	104,391	14,213	13,096	66,143	29,278	66,996	52,251	34,460	36,724	23,811	
302,481	244,722	168,605	173,498	247,754	38,659	38,859	164,651	91,946	193,412	184,332	156,995	118,622	84,230	
24,330	14,089	13,816	3,691	12,663	4,596	2,463	13,624	9,378	7,368	12,876	9,196	11,057	3,938	
18,040	22,198	3,310	3,136	17,203	1,656	988	10,493	3,006	9,453	15,536	8,877	2,536	1,548	
1,010	4,363	36,825	7,482	3,455	1,110	2,984	22,998	91,451	1,859	87	2,601	2,750	5,183	
165,699	183,287	61,487	43,193	62,047	11,575	5,989	32,945	63,020	46,418	30,815	46,443	84,277	21,750	
19,969	24,984	4,441	11,862	27,965	1,756	2,451	10,157	8,190	13,359	12,280	7,550	824	1,420	
229,048	248,917	119,879	69,364	123,333	20,653	14,875	90,217	175,045	78,457	72,394	74,667	101,444	33,839	
240,312	231,604	88,878	163,590	184,725	33,055	38,998	248,520	85,165	130,511	203,559	179,286	237,269	144,194	
<u>\$771,841</u>	<u>\$725,243</u>	<u>\$377,362</u>	<u>\$412,452</u>	<u>\$555,842</u>	<u>\$92,367</u>	<u>\$92,732</u>	<u>\$503,388</u>	<u>\$352,156</u>	<u>\$402,380</u>	<u>\$460,285</u>	<u>\$410,948</u>	<u>\$457,335</u>	<u>\$262,263</u>	
1,023,985	688,781	515,224	266,325	415,577	32,651	36,112	936,663	128,492	177,472	441,008	214,038	194,282	75,023	
.754	1.053	.732	1.549	1.338	2.829	2.568	.537	2.741	2.267	1.044	1.920	2.354	3.496	
159,900	139,140	100,800	117,100	135,180	10,000	15,000	238,500	35,000	50,000	120,600	75,000	72,000	45,000	
74.43	57.02	58.48	26.12	35.39	37.47	27.61	44.91	42.10	40.70	41.87	32.75	30.96	19.19	

930061

TENNESSEE VALLEY AUTHORITY
DETAILS OF POWER EXPENSE
FOR THE YEAR ENDED SEPTEMBER 30, 1978

	<u>Total</u>	<u>Apalachia</u>	<u>Fort Patrick Henry</u>
Hydraulic production - single-purpose dams			
Operation			
Supervision and engineering	\$ 100,524	\$ 20,923	\$ 5,256
Hydraulic	29,626	1,002	10,414
Electric	669,168	58,947	57,011
Miscellaneous	<u>411,007</u>	<u>30,244</u>	<u>134,245</u>
Total operation	<u>1,210,325</u>	<u>111,116</u>	<u>206,926</u>
Maintenance			
Supervision and engineering	109,159	5,448	17,816
Structures	79,405	30,999	4,935
Reservoirs, dams, and waterways	263,425	6,967	23,304
Electric plant	253,727	19,768	75,838
Miscellaneous plant	<u>102,562</u>	<u>2,455</u>	<u>4,085</u>
Total maintenance	<u>808,278</u>	<u>65,637</u>	<u>125,978</u>
Provision for depreciation	<u>1,093,067</u>	<u>275,601</u>	<u>158,250</u>
Total	<u>\$3,111,670</u>	<u>\$452,354</u>	<u>\$491,160</u>
kWh generated less station use (thousands)	1,115,769	457,838	129,857
Total production expense including depreciation per kWh (mills)	2.789	.988	3.782
Installed capacity at September 30, 1978 (kilowatts)	249,160	82,800	36,000
Ratio of average gross generation to installed capacity (percent)	51.25	63.19	41.38

930062

<u>Great Falls</u>	<u>Ocoee No. 3</u>	<u>Ocoee No. 2</u>	<u>Blue Ridge</u>	<u>Ocoee No. 1</u>	<u>Wilbur</u>
\$ 25,879	\$ 11,565	\$ 9,597	\$ 4,871	\$ 18,465	\$ 3,968
10,515	2,165	603	-	1,121	3,806
201, 7	35,431	78,310	25,416	193,365	19,111
<u>39,646</u>	<u>31,192</u>	<u>35,731</u>	<u>27,631</u>	<u>94,897</u>	<u>17,421</u>
<u>277,617</u>	<u>80,353</u>	<u>124,241</u>	<u>57,918</u>	<u>307,848</u>	<u>44,306</u>
25,758	12,182	15,690	15,914	10,752	5,599
5,656	6,276	17,782	1,657	10,465	1,635
26,151	66,517	120,091	12,190	5,428	2,777
25,871	26,420	2,018	4,507	84,136	15,169
<u>64,118</u>	<u>8,310</u>	<u>12,274</u>	<u>1,588</u>	<u>7,818</u>	<u>1,914</u>
<u>147,554</u>	<u>119,705</u>	<u>167,855</u>	<u>35,856</u>	<u>118,599</u>	<u>27,094</u>
<u>177,193</u>	<u>105,325</u>	<u>82,812</u>	<u>55,976</u>	<u>201,631</u>	<u>36,273</u>
<u>\$602,364</u>	<u>\$305,383</u>	<u>\$374,908</u>	<u>\$149,750</u>	<u>\$628,078</u>	<u>\$107,673</u>
192,327	186,098	353*	44,250	74,639	31,113
3.132	1.641	-	3.384	8.415	3.461
31,860	28,800	21,000	20,000	18,000	10,700
69.06	73.90	-	25.32	47.55	33.25

930063

TENNESSEE VALLEY AUTHORITY
DETAILS OF POWER EXPENSE
FOR THE YEAR ENDED SEPTEMBER 30, 1978

	<u>Total</u>	<u>Cumberland</u>	<u>Paradise</u>	<u>Widows Creek</u>	<u>Shawnee</u>
Steam production					
Operation					
Supervision and engineering	\$ 6,389,701	\$ 684,090	\$ 567,113	\$ 916,818	\$ 625,309
Fuel	897,590,341	130,057,095	74,065,271	102,371,694	94,063,320
Steam	19,303,370	1,887,470	1,685,951	3,692,493	2,029,874
Electric	7,398,110	562,863	687,591	961,834	804,146
Miscellaneous	19,122,442	2,334,529	2,496,733	2,753,789	1,347,557
Rent	6,900,000	-	-	-	-
Total operation	<u>956,703,964</u>	<u>135,526,047</u>	<u>79,502,659</u>	<u>110,696,628</u>	<u>98,870,206</u>
Maintenance					
Supervision and engineering	3,882,517	518,237	562,735	471,747	247,260
Structures	7,913,953	799,349	1,059,627	1,513,486	627,991
Boiler plant	104,634,280	14,930,753	13,652,091	15,183,674	5,800,487
Electric plant	23,066,063	3,711,826	2,398,531	2,630,277	3,366,799
Miscellaneous plant	6,873,959	1,032,493	983,419	965,793	390,513
Total maintenance	<u>146,370,772</u>	<u>20,992,168</u>	<u>18,656,403</u>	<u>20,764,977</u>	<u>10,433,050</u>
Provision for depreciation	<u>69,806,687</u>	<u>12,286,966</u>	<u>10,407,533</u>	<u>9,149,750</u>	<u>7,034,692</u>
Total	<u>\$1,172,881,423</u>	<u>\$168,805,181</u>	<u>\$108,566,595</u>	<u>\$140,611,355</u>	<u>\$116,337,948</u>
kWh generated less station use (thousands)	77,939,589	10,496,579	10,545,585	7,395,572	7,721,688
Total production expense including depreciation per kWh (mill.)	15.048	16.082	10.295	19.013	15.066
Installed capacity at September 30, 1978 (kilowatts)	17,796,085	2,600,000	2,558,200	1,977,985	1,750,000
Ratio of average gross generation to installed capacity (percent)	53.15	47.96	49.38	45.50	54.09

93C064

<u>Kingston</u>	<u>Johnsonville</u>	<u>Colbert</u>	<u>Gallatin</u>	<u>Bull Run</u>	<u>John Sevier</u>	<u>Watts Bar</u>	<u>Thomas H. Allen (note 3, page 11)</u>
\$ 542,912	\$ 640,463	\$ 635,662	\$ 451,780	\$ 413,859	\$ 325,212	\$ 173,470	\$ 413,013
118,157,116	79,027,318	61,327,465	76,116,777	45,744,521	65,507,156	15,347,380	35,805,228
1,921,513	1,928,977	1,538,117	1,093,862	826,280	915,689	862,245	900,857
839,399	848,744	683,744	501,481	399,200	422,431	354,510	332,167
1,768,328	1,773,389	1,562,346	1,310,915	1,078,128	833,506	583,472	1,279,750
-	-	-	-	-	-	-	6,900,000
<u>123,229,268</u>	<u>84,218,891</u>	<u>65,767,334</u>	<u>79,474,815</u>	<u>48,461,988</u>	<u>68,003,994</u>	<u>17,321,077</u>	<u>45,631,057</u>
406,260	269,222	312,579	236,677	298,932	187,518	104,408	266,942
904,244	471,667	560,475	650,403	226,227	207,140	187,692	705,652
10,293,992	6,513,971	13,202,715	6,347,118	5,628,718	2,594,628	2,956,518	7,530,105
1,458,479	1,491,714	3,918,335	794,499	1,000,086	526,554	308,245	1,460,718
<u>613,938</u>	<u>616,360</u>	<u>701,168</u>	<u>278,849</u>	<u>371,991</u>	<u>283,420</u>	<u>251,724</u>	<u>384,291</u>
<u>13,676,913</u>	<u>9,362,934</u>	<u>18,695,272</u>	<u>8,307,546</u>	<u>7,525,954</u>	<u>3,799,260</u>	<u>3,808,587</u>	<u>10,347,708</u>
<u>7,320,136</u>	<u>5,456,449</u>	<u>5,183,664</u>	<u>3,967,406</u>	<u>4,595,830</u>	<u>3,150,302</u>	<u>641,535</u>	<u>612,424</u>
<u>\$144,226,317</u>	<u>\$99,038,274</u>	<u>\$89,646,270</u>	<u>\$91,749,767</u>	<u>\$60,583,772</u>	<u>\$74,953,556</u>	<u>\$21,771,199</u>	<u>\$56,591,189</u>
9,693,602	6,312,007	5,020,661	6,308,444	4,570,832	5,227,802	985,490	3,661,327
14.879	15.690	17.855	14.544	13.254	14.337	22.092	15.456
1,723,250	1,485,200	1,419,750	1,255,200	950,000	846,500	240,000	990,000
69.15	52.42	43.20	61.26	57.13	74.66	49.68	45.96

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TENNESSEE VALLEY AUTHORITY
DETAILS OF POWER EXPENSE
 FOR THE YEAR ENDED SEPTEMBER 30, 1978

SCHEDULE C
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	<u>Allen</u>	<u>Colbert</u>	<u>Gallatin</u>	<u>Johnsonville</u>	<u>Total</u>
Gas turbine production					
Fuel expense	\$18,264,216	\$16,424,674	\$14,592,026	\$49,829,615	\$ 99,110,531
Other operating expense	<u>105,010</u>	<u>153,812</u>	<u>177,944</u>	<u>160,005</u>	<u>596,771</u>
	18,369,226	16,578,486	14,769,970	49,989,620	99,707,302
Maintenance	1,562,278	1,326,755	3,146,676	2,530,822	8,566,531
Provision for depreciation	<u>2,066,716</u>	<u>1,643,035</u>	<u>1,218,132</u>	<u>3,455,929</u>	<u>8,383,812</u>
Total	<u>\$21,998,220</u>	<u>\$19,548,276</u>	<u>\$19,134,778</u>	<u>\$55,976,371</u>	<u>\$116,657,645</u>

kWh generated less station use (thousands)	497,197	480,697	440,561	1,522,392	2,940,847
Total production expense including depreciation per kWh (mills)	44.244	40.667	43.433	37.769	39.668
Installed capacity at September 30, 1978 (kilowatts)	620,800	476,000	325,200	1,088,000	2,510,000
Ratio of average gross generation to installed capacity (percent)	9.22	11.60	15.58	16.06	13.46

Nuclear production - Browns Ferry

Operation					
Supervision and engineering					\$ 2,317,965
Fuel					38,355,587
Coolants and water					539,045
Steam					8,081,509
Electric					387,738
Miscellaneous					8,851,648
Total operation					<u>58,533,492</u>
Maintenance					
Supervision and engineering					2,864,600
Structures					1,560,186
Reactor plant					14,799,431
Electric plant					3,962,357
Miscellaneous plant					2,556,030
Total maintenance					<u>25,742,604</u>
Provision for depreciation					<u>28,456,449</u>
Total (statistics appear on page 31)					<u>\$112,732,545</u>

Transmission

Operation					
Supervision and engineering					\$ 3,616,496
Load dispatching					1,715,326
Stations					4,878,514
Overhead lines					613,286
Transmission of electricity by others					4,101
Miscellaneous					4,432,194
Rents					917,769
Total operation					<u>16,177,686</u>

930066

TENNESSEE VALLEY AUTHORITY
DETAILS OF POWER EXPENSE
 FOR THE YEAR ENDED SEPTEMBER 30, 1978

SCHEDULE C
PAGE 8

Transmission - continued

Maintenance

Supervision and engineering	\$ 438,746
Structures	602,167
Station equipment	5,395,956
Overhead lines	4,223,737
Miscellaneous plant	652,745
Total maintenance	<u>11,313,351</u>
Total	<u>\$27,491,037</u>

Customer accounts

Meter reading	\$ 203,830
Customer records and collections	502,235
Total	<u>\$ 706,065</u>

Demonstration of power use

Supervision and general	\$ 550,611
Domestic and rural	787,349
Commercial and industrial	841,004
Home insulation program	2,403,217
Information services	340,816
	<u>4,922,997</u>
Less reimbursement from power distributors for technical advisory services	662,166
Total	<u>\$ 4,260,831</u>

Administrative and general

Direct

Operation

Salaries	\$10,459,998	
Office supplies and expenses	4,041,136	\$14,501,134
Less transfers to construction and other accounts		<u>1,540,592</u>
		12,960,542
Outside services employed		176,119
Property insurance		585,201
Injuries and damages		5,290,409
Employee pensions and benefits		32,008,132
Miscellaneous		21,590,264
Rents		872,500
Electricity used by shops and laboratories		245,346*
Total operation		<u>73,237,821</u>

Maintenance

General property		<u>465,004</u>
Total direct		73,702,825

Allocation from nonpower divisions

TVA general offices		
Direct; schedule F	7,829,722	
Multiple-use; schedule E	114,007	
Other divisions	38,017*	<u>7,855,712</u>

Total administrative and general charged to power operations

930007

\$81,558,537

*Deduct

TENNESSEE VALLEY AUTHORITY
DETAILS OF NONPOWER NET EXPENSE
FOR THE YEAR ENDED SEPTEMBER 30, 1978

SCHEDULE D
PAGE 1

	<u>Direct</u>	<u>Multiple-use (schedule E)</u>	<u>Total</u>
REGIONAL RESOURCES DEVELOPMENT			
Navigation operations			
Studies and investigations			
Navigation engineering and investigations	\$1,087,793	\$ -	\$ 1,087,793
Administrative and general expenses; schedule F	<u>51,182</u>	<u>-</u>	<u>51,182</u>
	1,138,975	-	1,138,975
Operation and maintenance of facilities			
Operation	96,710	2,083,049	2,179,759
Maintenance	338,147	584,132	922,279
Administrative and general expenses	-	84,450	84,450
Provision for depreciation	<u>2,017,771</u>	<u>962,983</u>	<u>2,980,754</u>
Total expense of navigation operations	<u>\$3,591,603</u>	<u>\$3,714,614</u>	<u>7,306,217</u>
System flood control operations			
Studies and investigations			
System studies and investigations	\$ 569,193	\$ -	569,193
Administrative and general expenses; schedule F	<u>10,968</u>	<u>-</u>	<u>10,968</u>
	580,161	-	580,161
Operation and maintenance of facilities			
Operation	-	2,842,870	2,842,870
Maintenance	-	713,436	713,436
Administrative and general expenses	-	114,007	114,007
Provision for depreciation	<u>368,024</u>	<u>1,051,584</u>	<u>1,419,608</u>
Total expense of system flood control operations	<u>\$ 948,185</u>	<u>\$4,721,897</u>	<u>5,670,082</u>
Recreation development			
Recreation development	\$1,282,987	\$ -	1,282,987
Administrative and general expenses; schedule F	<u>31,074</u>	<u>-</u>	<u>31,074</u>
	1,314,061	-	1,314,061
Operation and maintenance of facilities			
Operation	-	2,442,883	2,442,883
Maintenance	204,482	89,970	294,452
Administrative and general expenses	-	101,340	101,340
Provision for depreciation	<u>106,543</u>	<u>272,201</u>	<u>378,744</u>
Total expense of recreation development	<u>\$1,625,086</u>	<u>\$2,906,394</u>	<u>4,531,480</u>
Tributary area development			
Basic investigations	\$ 254,191	\$ -	254,191
Development assistance in specific tributary areas	1,468,742	-	1,468,742
Local government assistance	483,668	-	483,668
Administrative and general expenses; schedule F	<u>96,880</u>	<u>-</u>	<u>96,880</u>
	2,303,481	-	2,303,481
Operation and maintenance of facilities			
Operation and maintenance	-	331,958	331,958
Administrative and general expenses	-	8,445	8,445
Provision for depreciation	<u>195</u>	<u>280,688</u>	<u>280,883</u>
Total expense of tributary area development	<u>\$2,303,676</u>	<u>\$ 621,091</u>	<u>2,924,767</u>
Regional water quality management			
Regional water quality management			1,178,651
Provision for depreciation			61,922
Administrative and general expenses; schedule F			<u>49,354</u>
Total expense of regional water quality management			<u>1,289,927</u>
Fisheries and waterfowl resources development			
Fisheries resource assessment			177,492
Fisheries resource management and use			422,945
Waterfowl management and use			467,445
Provision for depreciation			37,237
Administrative and general expenses; schedule F			<u>31,074</u>
Total expense of fisheries and waterfowl resources development			<u>1,136,193</u>

930068

TENNESSEE VALLEY AUTHORITY
DETAILS OF NONPOWER NET EXPENSE
FOR THE YEAR ENDED SEPTEMBER 30, 1972

SCHEDULE D
PAGE 2

REGIONAL RESOURCES DEVELOPMENT - continued

Human resources development	
Human resources development	\$ 648,096
Administrative and general expenses; schedule F	31,074
Total expense of human resources development	<u>679,170</u>
Mass transportation demonstration	
Mass transportation demonstration	69,513
Administrative and general expenses; schedule F	36,558
Total expense of mass transportation demonstration	<u>106,071</u>
Minerals resources projects	
Minerals resources projects	314,517
Administrative and general expenses; schedule F	12,795
Total expense of minerals resources projects	<u>327,412</u>
Special opportunities counties program	
Special opportunities counties program	1,249,827
Minority economic development	
Minority economic development	105,592
Administrative and general expenses; schedule F	5,484
Total expense of minority economic development	<u>111,076</u>
Local flood damage prevention operations	
Local flood damage prevention operations	6,951,368
Local flood damage restoration	34,156
Provision for depreciation	13,520
Administrative and general expenses; schedule F	14,623
Total local flood damage prevention operations	<u>7,013,667</u>
Environmental quality projects	
Regional air quality management	194,866
Research on disposal of solid wastes	241,332
Administrative and general expenses; schedule F	43,871
Total expense of environmental quality projects	<u>480,069</u>
Net expense of regional resources development	<u>\$43,875,815</u>

FERTILIZER DEVELOPMENT

Research and development	
Chemical fertilizer research and development	
Fundamental research	\$ 1,742,435
Applied research	1,722,471
Process engineering	3,032,594
Ammonia from coal project	189,209
General expenses	2,403,806
Total	<u>9,090,515</u>
Soils and fertilizer research	1,490,545
Provision for depreciation	108,811
Administrative and general expenses; schedule F	202,799
Total expense of research and development	<u>10,892,670</u>
Fertilizer introduction	
Fertilizer industry demonstrations	
Fertilizers used	20,062,670
Educational distribution expense	2,278,129
Administrative and general expenses; schedule F	105,159
Total	<u>22,445,958</u>
Less industry payments for fertilizer	<u>19,600,201</u>
Total	<u>2,845,057</u>
Farm test demonstrations outside the Valley	
Fertilizers used	368,156
Planning and supervision	972,695
Administrative and general expenses; schedule F	35,661
Total	<u>1,376,512</u>
Less farmer payments for fertilizer	<u>221,367</u>
Total	<u>1,155,145</u>
Net expense of fertilizer introduction	<u>4,000,202</u>

9,300,69

TENNESSEE VALLEY AUTHORITY
DETAILS OF NONPOWER NET EXPENSE
FOR THE YEAR ENDED SEPTEMBER 30, 1978

SCHEDULE D
PAGE 3

REGIONAL RESOURCES DEVELOPMENT - continued

Human resources development	
Human resources development	\$ 648,096
Administrative and general expenses; schedule F	31,074
Total expense of human resources development	<u>679,170</u>
Mass transportation demonstration	
Mass transportation demonstration	69,513
Administrative and general expenses; schedule F	36,558
Total expense of mass transportation demonstration	<u>106,071</u>
Minerals resources projects	
Minerals resources projects	314,617
Administrative and general expenses; schedule F	12,795
Total expense of minerals resources projects	<u>327,412</u>
Special opportunities counties program	
Special opportunities counties program	1,249,827
Minority economic development	
Minority economic development	105,592
Administrative and general expenses; schedule F	5,484
Total expense of minority economic development	<u>111,076</u>
Local flood damage prevention operations	
Local flood damage prevention operations	6,951,368
Local flood damage restoration	34,156
Provision for depreciation	13,520
Administrative and general expenses; schedule F	14,623
Total local flood damage prevention operations	<u>7,013,667</u>
Environmental quality projects	
Regional air quality management	194,866
Research on disposal of solid wastes	241,332
Administrative and general expenses; schedule F	43,871
Total expense of environmental quality projects	<u>480,069</u>
Net expense of regional resources development	<u>\$43,875,815</u>

FERTILIZER DEVELOPMENT

Research and development	
Chemical fertilizer research and development	
Fundamental research	\$ 1,742,435
Applied research	1,722,471
Process engineering	3,032,594
Ammonia from coal project	189,209
General expenses	2,403,806
Soils and fertilizer research	1,490,545
Provision for depreciation	108,811
Administrative and general expenses; schedule F	202,799
Total expense of research and development	<u>10,892,670</u>
Fertilizer introduction	
Fertilizer industry demonstrations	
Fertilizers used	20,062,670
Educational distribution expense	2,278,129
Administrative and general expenses; schedule F	105,159
Less industry payments for fertilizer	<u>22,445,958</u>
Less industry payments for fertilizer	<u>19,600,901</u>
Farm test demonstrations outside the Valley	2,845,057
Fertilizers used	368,156
Planning and supervision	972,695
Administrative and general expenses; schedule F	35,661
Less farmer payments for fertilizer	<u>1,376,512</u>
Less farmer payments for fertilizer	<u>221,367</u>
Less farmer payments for fertilizer	<u>1,155,145</u>
Net expense of fertilizer introduction	<u>4,000,202</u>

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TENNESSEE VALLEY AUTHORITY
DETAILS OF NONPOWER NET EXPENSE
FOR THE YEAR ENDED SEPTEMBER 30, 1978

SCHEDULE D
PAGE 4

FERTILIZER DEVELOPMENT - continued

Developmental production		
Cost of products distributed		
Materials used		\$14,615,176
Direct manufacturing and shipping expense		9,673,663
Indirect manufacturing and shipping expense		2,548,249
Provision for depreciation and depletion		2,170,571
Finished inventory changes		<u>2,343,265*</u>
Total cost of products distributed		<u>26,663,794</u>
General expenses		
Gain on sale of phosphate reserves, net		107,032*
Loss on retirements of manufacturing plant and equipment, net		139,489
Other general expenses		
Administrative and general expenses; schedule F	\$582,192	
Shipping order and field inventory expenses	261,705	
Provision for depreciation of idle manufacturing plant and equipment	92,393	
Other, including depreciation of \$5,864	<u>75,304</u>	
Total general expenses		<u>1,011,594</u>
Total production expense		<u>1,044,051</u>
Total production expense		<u>27,707,845</u>
Less transfers and sales of products		
Transfers to TVA programs, at market prices		
Fertilizer industry demonstrations		20,062,670
Farm test demonstrations		368,156
Agricultural development		226,436
Other		<u>321,084</u>
Total transfers		<u>20,978,346</u>
Direct sales		334,934
Total transfers and sales		<u>21,313,280</u>
Net expense of developmental production		<u>6,394,565</u>
Net expense of fertilizer development		<u>\$21,287,437</u>

LAND BETWEEN THE LAKES OPERATIONS

Natural resources management	\$	755,427
Recreation and environmental education operations		624,361
Facilities operation and maintenance		3,426,875
Provision for depreciation		619,899
Administrative and general expenses; schedule F		<u>82,256</u>
Total expense of Land Between The Lakes operations	\$	<u>5,508,818</u>

VALLEY MAPPING AND REMOTE SENSING

Valley mapping and remote sensing	\$	739,113
Provision for depreciation		15,376
Administrative and general expenses; schedule F		<u>16,772</u>
Total expense of valley mapping and remote sensing	\$	<u>771,261</u>

OTHER EXPENSE OR INCOME

Scientific and technical cooperation	\$	27,222
Southeastern regional library demonstration		43,758
Joint bicentennial demonstration caravan		2,530*
Emergency preparedness		47,388
Maintenance of bridges financed by others on TVA dams		893,803
Interest income from receivables		<u>38,431*</u>
Other expense, net	\$	<u>971,710</u>

NET EXPENSE

\$72,415,041

*Deduct

930071

TENNESSEE VALLEY AUTHORITY
OPERATING EXPENSES OF MULTIPLE-USE FACILITIES
FOR THE YEAR ENDED SEPTEMBER 30, 1978

SCHEDULE E

Expenses

Operation

Water control operations	\$ 1,598,967
Water control investigations	252,733
Investigations and control of reservoir ecology	1,288,764
Plant protection and services to visitors	2,151,726
Operation and upkeep of dam reservations	2,065,441
Reservoir land management	2,821,047
Development of water resource management methods	<u>473,135</u>
Total operation	10,651,813
Administrative and general expenses; schedule F	422,249
Maintenance	2,353,394
Provision for depreciation	<u>3,816,409</u>
Total	<u><u>\$17,243,865</u></u>

Distributed to	<u>Operation</u>	<u>Administrative and general</u>	<u>Maintenance</u>	<u>Depreciation</u>	<u>Total</u>
Power operations	\$ 3,032,124	\$114,007	\$ 884,785	\$1,248,953	\$ 5,279,869
Navigation operations	2,083,049	84,450	584,132	962,983	3,714,614
Flood control operations	2,842,870	114,007	713,436	1,051,584	4,721,897
Recreation development	2,442,883	101,340	89,970	272,201	2,906,394
Tributary area development	<u>250,887</u>	<u>8,445</u>	<u>81,071</u>	<u>280,688</u>	<u>621,091</u>
Total	<u><u>\$10,651,813</u></u>	<u><u>\$422,249</u></u>	<u><u>\$2,353,394</u></u>	<u><u>\$3,816,409</u></u>	<u><u>\$17,243,865</u></u>

930072

TENNESSEE VALLEY AUTHORITY
ADMINISTRATIVE AND GENERAL EXPENSES
FOR THE YEAR ENDED SEPTEMBER 30, 1978

SCHEDULE F

Expenses	
Board of directors	\$ 354,733
Office of the general manager	598,475
Planning and budget staffs	847,646
Washington office	260,361
Information office, including technical library service	2,235,639
Equal employment opportunity staff	884,870
Division of personnel	1,305,270
Division of finance	3,966,444
Division of law	3,689,586
Division of property and services	1,201,144
Medical and safety services	3,028,669
Other administrative and general	169,518
Total	<u>\$18,542,355</u>

	<u>Amount</u>	<u>Percent of total</u>
Distributed to		
Construction and investigations in progress	\$ 8,327,623	44.91
Recovered through services billed to others at cost	235,657	1.27
Expense of programs		
Power	7,829,722	42.22
Water resources development		
Navigation	51,182	.28
System flood control	10,968	.06
Regional water quality management	49,354	.27
Fisheries and waterfowl resources development	31,074	.17
Preliminary surveys and engineering	9,140	.05
Recreation development	31,074	.17
Environmental education	18,279	.10
Multiple-use facilities operations	422,249	2.28
Fertilizer development		
Developmental production	582,192	3.14
Fertilizer introduction		
Fertilizer industry demonstrations	105,159	.57
Farm test demonstrations	35,661	.19
Research and development	202,799	1.09
General resources development		
Valley agricultural development	63,802	.34
Waste heat utilization	18,799	.10
Forest and wild land resources development	67,633	.36
Strip mine reclamation demonstrations	10,968	.06
Tributary area development	96,880	.52
Interagency health services demonstrations	12,795	.07
Regional economic studies	31,074	.17
Townlift community improvement	54,838	.30
Human resources development	31,074	.17
Mass transportation demonstration	36,558	.20
Minerals resources projects	12,795	.07
Minority economic development	5,484	.03
Local flood damage prevention operations	14,623	.08
Environmental quality projects	43,871	.23
Land Between The Lakes operations	82,256	.44
Valley mapping and remote sensing	16,772	.09
Total	<u>\$18,542,355</u>	<u>100.00</u>