

TENNESSEE VALLEY AUTHORITY

HARTSVILLE NUCLEAR PLANTS  
SOCIOECONOMIC MONITORING AND MITIGATION REPORT  
HNP SMR - 12  
March 31, 1982

Knoxville, Tennessee

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HARTSVILLE NUCLEAR PLANTS  
SOCIOECONOMIC MONITORING AND MITIGATION REPORT

Background and Highlights

In permits to construct the four-unit Hartsville Nuclear Plants located in Smith and Trousdale Counties, Tennessee, TVA agreed to undertake certain monitoring and mitigation actions to reduce the socioeconomic impact caused by the incoming population for the construction project. The impact area is defined as Trousdale, Smith, Macon, Sumner, and Wilson Counties, Tennessee. TVA also agreed to report to the Nuclear Regulatory Commission the results of the monitoring efforts and mitigation actions taken to mitigate the impacts.

This is the twelfth in a series of semiannual reports which TVA agreed to submit to the Nuclear Regulatory Commission to report on the results of TVA's socioeconomic monitoring and mitigation efforts for the Hartsville Nuclear Plants. This report is for the period October 1, 1981, through March 31, 1982.

This report does not contain the results of an employee survey. TVA decided in March 1982 to defer all construction on the Hartsville units and reduce the work force to a maintenance level of approximately 500 by October 1, 1982. With these conditions, it was concluded that a survey would not provide sufficient usable information. Furthermore, the need for the data obtained in the survey in terms of impacts due to population influx had disappeared.

Functional Area Impact and  
Mitigation Actions

Even though employment was declining, the mitigation program continued due to contractual obligations. Following is a summary of those expenditures with the project-life totals shown in Table 1 at the end of this section.

Education

Due to the project deferral, school system monitoring has stopped. However, revenue shortfall assistance to the school operating budget continued. A summary of those payments is shown below.

Education Mitigation

Operating Expense Payments

October 1, 1981 - March 31, 1982

Lebanon City	\$ 5,025
Smith County	11,350
Wilson County	<u>8,135</u>
Total	\$24,510

Local Planning and Coordination Assistance--TVA continued to assist the local planning commissions affected by this project by reimbursing them for one-half of their cost of obtaining the services of the Tennessee State Planning Office for a one-year period. The need for additional assistance to the communities is evaluated and negotiated on a year-to-year basis as appropriate. A summary of these payments is shown below.

TVA Local Planning Assistance Payments

<u>Planning Commissions</u>	<u>Amount Paid This Period</u>	<u>Amount Paid To Date</u>
Trousdale County	\$ 525	\$ 6,617*
Smith County	---	8,891
Sumner County	2,461	10,992
Wilson County	---	12,769
Hartsville	525	*
Carthage	212	4,733
South Carthage	56	2,281
Gordonsville	164	2,530
Lafayette	---	2,094
Gallatin	---	11,263
Lebanon	---	12,403
Hendersonville	1,562	12,825
Tennessee State Planning Office	---	20,000
	<u>\$5,505</u>	<u>\$107,398</u>

\*Hartsville and Trousdale County were funded separately for the first time this period. However, the amount paid to date will continue to be totaled for Trousdale County.

TVA continues to provide annual support for the Hartsville Project Coordination Committee for professional staff services. The committee is composed of the chief elected officials in the five-county impact area (five county judges and the mayors of the incorporated towns within the five counties). As of March 1982, \$325,000 has been provided to the committee with funding at \$12,500 per quarter.

Local Government Budgets--The impact on the budgets of local governments in the impact of the Hartsville construction project is measured on an annual basis. This measurement is made by projecting the project-related revenues to be received by the local governments. The projected revenues and expenditures are then compared to determine whether deficits will occur. TVA has executed contracts, which are modified as appropriate, with local governments to provide payments to cover the amounts of any projected deficits. The only payment made to local governments during this period was \$10,000 to the town of South Carthage.

Water and Sewer--During this period, the final payment of \$23,620 was made to the City of Hartsville bringing the total amount paid to the city under this contract to \$106,152. This contract was for the installation of an eight-inch waterline to relieve low pressures which occasionally occurred in the Shady Grove Mobile Home Park and the elementary school on Lock Six Road which were thought to be caused by relatively high water demands at the nuclear plant construction site.

Health and Medical Services--TVA continued to assess the health needs for the five-county impact area. However, these assessments have not indicated a need for additional health mitigation efforts.

Intergenerational Child Care Program--This program ended March 3, 1981.

Traffic--In accordance with an agreement between TVA and the Tennessee Department of Transportation, the department has been supplying TVA with traffic counts for 12 locations on a quarterly basis beginning in October 1975. With approximately 2,600 employees, peak-hour traffic on Highway 25 was 300 vehicles per hour (VPH) east of the site and 570 VPH west of the site. Counts for other key highway segments are shown in the following table. Peak-hour volumes at all these locations are within the limits of acceptable volumes for level of service D operation of these highways (see appendix A). The reduction in employment during the semiannual period ending in March 1982 has resulted in a reduction in peak-hour traffic volumes on most of the monitored highway segments. Furthermore, the recent construction deferral is expected to reduce the construction-related commuter traffic volumes to insignificant levels on all the impacted highways. Therefore, this will be the last report on traffic counts.

TRAFFIC EVALUATION  
(October 1975 - March 1982)

	Number of Vehicles During Peak Hour*		Estimated TVA Commuter Traffic
	1975	1982	
Highway 25 East of Plant	120	300	165
Highway 25 West of Plant	120	570	335
Highway 25 West of Hartsville	290	600	265
Highway 25 West of 231 Junction	210	440	130
Highway 231 South of 25 Junction	150	300	75
Highway 231 North of Lebanon	150	230	60

\*The peak hour occurred during the 3-4 p.m. hour.

Employee Transportation--During this period the employee transportation program at the Hartsville Nuclear Plant operated 32 vans and 13 buses. This was a reduction of 10 buses and 11 vans from the previous reporting period. The average bus ridership was 24, while the vans carried an average of 9.6 each. The transportation program carried 37 percent of the day shift employees. TVA's expenditure for employee transportation this period was \$264,000.

Local Recruitment and Training--This program was discontinued during the October 1, 1980 - March 31, 1981 reporting period.

Recreation--TVA continued to provide financial and technical assistance to improve existing recreation facilities in the five-county impact area. The Hartsville-Trousdale County Recreation and Parks Department will receive \$14,000 to complete two new tennis courts and to support ongoing recreation programs. The city of LaFayette will receive \$6,000 to assist in the construction of a new city park in the downtown area, and Macon County will receive \$1,043 to install ballfield fencing at their new county park.

TVA also provided design assistance for the remodeling of the old Hartsville depot building. The depot was partially renovated in 1980 and is now being used as a combined community center and office complex for the Hartsville-Trousdale County Recreation and Parks Department.

Only one payment was made this period. It was for \$1,266 to Gallatin as the final payment under a \$67,000 contract.



TABLE 1

Summary of TVA Mitigation Expenditures

As of March 31, 1982

	<u>Expenditures This Period</u>	<u>Expenditures To Date</u>
Education	\$ 24,510	\$1,607,519
Housing	---	423,000 <sup>a</sup>
Local Planning & Coordination	30,505	431,093
Water & Sewer	23,620	403,620 <sup>b</sup>
Health	---	113,772
Intergenerational Child Care Program	---	33,887
Local Governments	10,000	965,219
Employee Transportation	264,000	4,970,737
Recreation	<u>1,266</u>	<u>231,454</u>
TOTAL	\$353,901	\$9,180,301

a. Includes \$60,000 interest-bearing loan.

b. Includes \$125,000 noninterest-bearing loan, which was defaulted and written off January 1981.

APPENDIX

APPENDIX A

TRAFFIC LEVEL DEFINED

Level of Service D

Level of service D approaches unstable flow, with tolerable operating speeds being maintained though considerably affected by changes in operating conditions. Fluctuations in volume and temporary restrictions to flow may cause substantial drops in operating speeds. Drivers have little freedom to maneuver, and comfort and convenience are low, but conditions can be tolerated for short periods of time.

Source: Highway Capacity Manual, Highway Research Board  
Special Report 87, 1965.