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TENNESSEE VALLEY AUTHORITY

Division of Navigation Development and Regional Studies

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Watts Bar Nuclear Plant
CONSTRUCTION EMPLOYMENT IMPACT
July 1974

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Results of July 1974 Survey
of
Watts Bar Nuclear Plant Construction Employees

In July 1974, TVA conducted the second survey of construction employees at the Watts Bar Nuclear Plant near Spring City, Tennessee. This survey was taken as a part of a continuing program to evaluate the temporary impact of large TVA construction projects. At the time of the survey, construction employment was about 1,700 with a projected peak of about 2,300.

From the survey, the following information was obtained: (1) the number of employees who moved into the area and where they moved to, (2) the number of employees moving into the area who brought their families, (3) the total number of children accompanying families moving into the area and how many were of school age, (4) the kind of accommodations selected by the new arrivals, and (5) the number and location of workers who already lived in the area.

Information for the survey was obtained from a questionnaire distributed to all employees--both the trades and labor hourly (referred to in the following table as Hourly) and the salary policy annual (referred to in the following table as Annual). Of the approximately 1,700 questionnaires distributed, 1,501 were returned with usable information. Table 2 contains the towns where all surveyed employees live. The employees in each town are categorized into those who moved there (371) and those who were already living there (1,130). Figure 1 shows the area surrounding the construction site with the towns where employees live underlined (if the towns were shown on the base map). Of the 371 employees who moved into the area, 319 responded to questions concerning accommodations and family status. This information is contained in Table 1.

Table 3 contains selected data from all TVA surveys. To make the data comparable, the percentages calculated from actual survey data were applied to the total number of employees. This assumes that the survey sample accurately reflects the situation of the total work force. It is possible that a bias is introduced due to nonresponse, but there is no obvious reason to expect nonrespondents as a group to differ significantly from that portion of the work force which returned questionnaires.

The nearby town of Spring City and surrounding area has continued to absorb the largest proportion of the employees moving into the area, 35% as compared to 37% in the first survey. Other towns containing more than 5% of the movers are Ten Mile (10%), Kingston (8%), Decatur (7%), and Athens (6%). The remaining 34% of the movers are distributed among at least 27 different communities at varying distances from the site ranging to Chattanooga and Knoxville.

Overall, the housing choice distribution finds 44% of the movers in houses, 42% in mobile homes, 9% in apartments, and 5% in sleeping rooms. This distribution is very similar to that found in the first survey. Also, there continues to be a large difference between the Annual and Hourly employees housing choice distribution. Over 50% of the Annual movers own or rent homes compared to 35% of the Hourly employees. Apartments are rented by 13% of the Annual employees compared to 7% of the Hourly employees. This is the reverse of the results of the first survey. However, the Annual and Hourly employees continue to occupy nearly the same proportion of sleeping rooms--4% and 6% respectively. Finally, mobile homes are rented or owned by 29% of the Annual employees while 52% of the Hourly employees occupy mobile homes. Since a number of employees have moved without their families and room together, some double counting of accommodations, particularly mobile homes, is in the data. However, there is no way to adjust the data for this with the present information.

Movers who brought their family totaled 311 and they were accompanied by 191 school-age children. This average of 0.6 school-age child per family is still low compared to previous surveys at other projects. However, it is a significant increase from the 0.4 recorded in the first Watts Bar survey.

A few observations can be made which have relevance for anticipating impacts resulting from the continuation of the project to peak employment. First, the percentage of movers is likely to be somewhat greater than the 25% projected earlier, possibly approaching 30% at peak. Second, the Spring City area will likely continue to be the focal point for the largest share of movers although the percentage will probably continue to drop somewhat. Third, movers are about equally divided in their housing choice between mobile homes and houses. This will lead to the continued diffusion of the remaining movers among those communities within commuting distance which have vacant conventional housing.

TABLE 1
 SUMMARY CHARACTERISTICS—CONSTRUCTION WORKERS WHO MOVED INTO AREA OF
 WATTS BAR NUCLEAR PLANT
 JULY 1974

ANNUAL EMPLOYEES

TYPE OF ACCOMMODATIONS	TOTAL	WITH FAMILIES				WITHOUT FAMILIES	ANNUAL TOTAL
		WITH CHILDREN IN SCHOOL	NUMBER OF CHILDREN IN SCHOOL	GRADE	HIGH SCHOOL COLLEGE		
HOUSE OWNED	56	38	30	14	6	2	58
HOUSE RENTED	15	11	7	3	0	3	18
APARTMENT OWNED	0	0	0	0	0	0	0
APARTMENT RENTED	7	4	2	0	0	11	18
TRAILER OWNED	25	10	12	0	0	6	31
TRAILER RENTED	1	1	0	0	0	8	9
SLEEPING ROOM	0	0	0	0	0	6	6
TOTAL	104	64	51	17	6	36	140

HOURLY EMPLOYEES

TYPE OF ACCOMMODATIONS	TOTAL	WITH FAMILIES				WITHOUT FAMILIES	HOURLY TOTAL
		WITH CHILDREN IN SCHOOL	NUMBER OF CHILDREN IN SCHOOL	GRADE	HIGH SCHOOL COLLEGE		
HOUSE OWNED	34	18	10	5	2	1	35
HOUSE RENTED	23	15	15	9	0	5	28
APARTMENT OWNED	0	0	0	0	0	0	0
APARTMENT RENTED	4	2	0	0	0	8	12
TRAILER OWNED	47	29	24	6	0	5	52
TRAILER RENTED	24	11	6	2	0	18	42
SLEEPING ROOM	0	0	0	0	0	10	10
TOTAL	132	75	55	22	2	47	179

ANNUAL AND HOURLY EMPLOYEES

TYPE OF ACCOMMODATIONS	TOTAL	WITH FAMILIES				WITHOUT FAMILIES	ANNUAL AND HOURLY TOTAL
		WITH CHILDREN IN SCHOOL	NUMBER OF CHILDREN IN SCHOOL	GRADE	HIGH SCHOOL COLLEGE		
HOUSE OWNED	90	56	40	19	8	3	93
HOUSE RENTED	38	26	22	12	0	8	46
APARTMENT OWNED	0	0	0	0	0	0	0
APARTMENT RENTED	11	6	2	0	0	19	30
TRAILER OWNED	72	39	36	6	0	11	83
TRAILER RENTED	25	12	6	2	0	26	51
SLEEPING ROOM	0	0	0	0	0	16	16
TOTAL	236	139	106	39	8	83	319

TABLE 2

TOWN OF CURRENT RESIDENCE
WATTS BAR NUCLEAR PLANT
JULY 1974

TOWN	MOVED TO TOWN	ALREADY LIVING IN TOWN	TOTAL	1970 POPULATION
ATHENS, TN	24	71	95	11,790
CLEVELAND, TN	10	32	42	20,651
DAYTON, TN	14	37	51	4,361
DECATUR, TN	26	43	69	698
HARRIMAN, TN	16	71	87	8,734
KINGSTON, TN	31	60	91	4,142
LENOIR CITY, TN	6	52	58	5,324
ROCKWOOD, TN	10	58	68	5,259
SPRING CITY, TN	130	94	224	1,756
SWEETWATER, TN	7	29	36	4,340
TEN MILE, TN	39	22	61	200
	SUBTOTAL	313	569	882
CHATANOOGA, TN	1	33	34	119,082
CLINTON, TN	2	11	13	4,794
CONCORD, TN	0	13	13	400
CROSSVILLE, TN	4	45	49	5,381
ENGLEWOOD, TN	2	9	11	1,878
ERIE, TN	0	9	9	25
ETOWAH, TN	1	19	20	3,736
EVENSVILLE, TN	4	16	20	250
GRANDVIEW, TN	0	11	11	300
GRAYSVILLE, TN	1	5	6	951
HIXSON, TN	0	14	14	6,188
KNOXVILLE, TN	5	65	70	174,587
LAKE CITY, TN	1	5	6	1,923
LOUDON, TN	0	23	23	3,728
MADISONVILLE, TN	2	33	35	2,614
MARYVILLE, TN	4	10	14	13,808
NIOTA, TN	2	10	12	629
OAKDALE, TN	1	7	8	376
OLIVER SPRINGS, TN	4	15	19	3,405
PETROS, TN	1	6	7	
PHILADELPHIA, TN	0	9	9	554
PIKEVILLE, TN	1	11	12	1,454
POWELL, TN	1	6	7	2,000
SODDY-DAISY, TN	2	20	22	7,569
SUNBRIGHT, TN	0	6	6	500
TELLICO PLAINS, TN	0	27	27	773
VONORE, TN	0	11	11	524
WARTBURG, TN	1	12	13	541
BENTON, TN	1	5	6	749
OAK RIDGE, TN	2	7	9	28,319
	SUBTOTAL	43	473	516
OTHER	15	88	103	
	TOTAL	371	1130	1501

NA - INFORMATION NOT AVAILABLE

TABLE 3
COMPARISON OF EMPLOYEE IMPACT SURVEYS -
MAJOR TVA CONSTRUCTION PROJECTS SINCE 1968

PROJECT NAME DATE OF SURVEY	PARADISE JAN 1968	CUMBERLAND SEPT 1968	CUMBERLAND SEPT 1969	CUMBERLAND MAY 1971	CUMBERLAND APRIL 1973
TOTAL EMPLOYEES EMPLOYEES SURVEYED EXPECTED PEAK	2000 2000 2000	544 544 2900	1450 1100 2900	2900 1500 2900	725 625 2900
TOTAL MOVERS NUMBER % TOTAL EMPLOYMENT	643 32	158 29	435 30	1035 36	340 47
PRIMARY TOWNS IMPACTED AND NUMBER OF EMPLOYEES MOVING THERE	DRAKESBORO CENTRAL CITY GREENVILLE MADISONVILLE	ERIN-66 CLARKSVILLE-22 CUMBERLAND CTY-31 TENNESSEE RDG-16 WAVERLY-11	ERIN-140 CLARKSVILLE-69 CUMBERLAND CTY-97 TENNESSEE RDG-31 WAVERLY-23	ERIN-294 CLARKSVILLE-212 CUMBERLAND CTY-230 TENNESSEE RDG-74 WAVERLY-51 DOVER-41	ERIN-99 CLARKSVILLE-69 CUMBERLAND CTY-74 TENNESSEE RDG-28 WAVERLY-13 DOVER-12
HOUSING TYPE SELECTED HOUSE-BOUGHT RENTED TOTAL	34 (5%) 181 (28%) 215 (33%)	25 (16%) 50 (32%) 75 (48%)	65 (15%) 144 (33%) 209 (48%)	155 (15%) 300 (29%) 455 (44%)	75 (22%) 75 (22%) 150 (44%)
M. HOME BOUGHT RENTED TOTAL	66 (10%) 55 (9%) 121 (19%)	23 (14%) 11 (7%) 34 (21%)	100 (23%) 30 (7%) 130 (30%)	228 (22%) 155 (15%) 383 (37%)	78 (23%) 45 (13%) 123 (36%)
APARTMENT	113 (18%)	10 (6%)	26 (6%)	73 (7%)	36 (11%)
SLEEPING ROOM	194 (30%)	39 (25%)	70 (16%)	124 (12%)	31 (9%)
GRAND TOTAL	643 (100%)	158 (100%)	435 (100%)	1035 (100%)	340 (100%)
MOVERS WITH FAMILIES WITHOUT FAMILIES	317 (49%) 326 (51%)	90 (57%) 68 (43%)	296 (68%) 139 (32%)	683 (66%) 352 (34%)	224 (66%) 116 (34%)
SCHOOL-AGE CHILDREN NUMBER PER FAMILY	410 1.3	94 1.0	356 1.2	668 1.0	145 0.7

TABLE 3 (Continued)

PROJECT NAME DATE OF SURVEY	SEQUOYAH OCT 1970	SEQUOYAH JULY 1972	SEQUOYAH AUG 1974	BELLEFONTE APRIL 1975
TOTAL EMPLOYEES EMPLOYEES SURVEYED EXPECTED PEAK	1100 847 2000	2200 1477 2200	1600 1300 2200	900 650 3300
TOTAL MOVERS NUMBER % TOTAL EMPLOYMENT	187 17	513 23	474 30	279 31
PRIMARY TOWNS IMPACTED AND NUMBER OF EMPLOYEES MOVING THERE	CHATTANOOGA-29 HIXSON-45 SODDY-DAISY-83	CHATTANOOGA-73 HIXSON-113 RED BANK-15 SODDY-DAISY-216	CHATTANOOGA-63 DAYTON-12 HIXSON-107 RED BANK-21 SODDY-DAISY-192	SCOTTSBORO-167 HOLLYWOOD-34 HUNTSVILLE-15 STEVENSON-10
HOUSING TYPE SELECTED HOUSE-BUGHT RENTED TOTAL	56(30%) 28(15%) 84 (45%)	95(19%) 76(14%) 171 (33%)	128(27%) 48(10%) 176 (37%)	30(11%) 51(18%) 81 (29%)
% HOME BOUGHT RENTED TOTAL	46(25%) 25(13%) 71 (38%)	130(25%) 102(20%) 232 (45%)	130(28%) 59(12%) 189 (40%)	71(25%) 66(24%) 137 (49%)
APARTMENT	30 (16%)	77 (15%)	84 (18%)	40 (14%)
SLEEPING ROOM	2 (1%)	33 (7%)	25 (5%)	21 (8%)
GRAND TOTAL	187(100%)	513(100%)	474(100%)	279(100%)
MOVERS WITH FAMILIES WITHOUT FAMILIES	138(73%) 49(27%)	376(73%) 137(27%)	349(74%) 125(26%)	144(52%) 135(48%)
SCHOOL-AGE CHILDREN NUMBER PER FAMILY	124 0.9	276 0.7	216 0.6	108 0.8

