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ARMY ENERGY DATA ANALYSIS; FY 80 UPDATE. (U)

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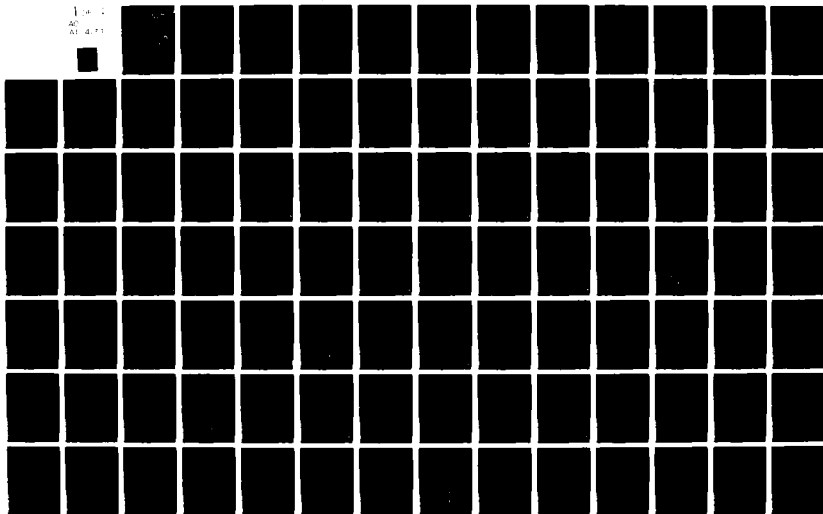
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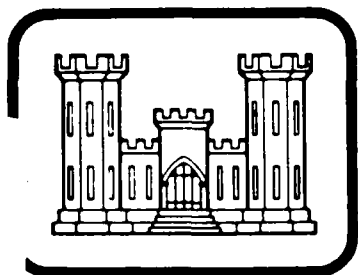
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FACILITIES ENGINEERING SUPPORT AGENCY

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ARMY ENERGY DATA ANALYSIS, FY80 UPDATE

COMPUTER SCIENCES CORPORATION

July 1981

FINAL REPORT

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Prepared for:
US Army Facilities Engineering Support Agency
Technology Support Division
Fort Belvoir, VA 22060

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER AFESA-2108	2. GOVT ACCESSION NO. AD-A104134	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Army Energy Data Analysis, FY 80 Update		5. TYPE OF REPORT & PERIOD COVERED
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Computer Sciences Corporation		8. CONTRACT OR GRANT NUMBER(s) DE-AC01-79CR10001 (DOE)
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS Task 5136
11. CONTROLLING OFFICE NAME AND ADDRESS Technology Support Division US Army Facilities Engineering Support Agency Fort Belvoir, VA 22060		12. REPORT DATE July 1981
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		13. NUMBER OF PAGES 340
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) APPROVED FOR PUBLIC RELEASE: DISTRIBUTION UNLIMITED		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Energy, Energy Consumption, ECIP		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This study was conducted for the U.S. Army by the Department of Energy under contract to the Computer Sciences Corporation, Washington, D.C. The data are compiled from Major Command (MACOM) Technical Data Reports, DA Form 2788 Series, prepared under the provisions of AR-420-16. These data are published annually under the title "Facilities Engineering Annual Summary of Operations", which is more commonly referred to as the "Red Book."		

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Justification	<input type="checkbox"/>
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INTRODUCTION

This study was conducted for the U.S. Army by the Department of Energy under contract to the Computer Sciences Corporation, Washington, D.C. The data are compiled from Major Command (MACOM) Technical Data Reports, DA Form 2788 Series, prepared under the provisions of AR-420-16. These data are published annually under the title "Facilities Engineering Annual Summary of Operations", which is more commonly referred to as the "Red Book."

This report presents statistical data at a detailed level for fiscal years 1975 through 1980 for each reporting installation or activity in the Red Book, including MACOM summary data. The use of the term "Installation" throughout this report refers to Red Book "reporting installations" and includes all sub-posts and activities satellited upon that installation and not otherwise reported separately. This report presents and examines data as discussed in the following paragraphs.

A Data Sheet has been prepared for each installation and MACOM, and a graph displaying seven key data elements has been provided on the page opposite each data sheet. These data sheets and graphs are included in Appendix A. Information pertaining to completed Energy Conservation Investment Program (ECIP) projects, including family housing projects, has been posted on the data sheets and graphs. This enables a visual determination of the effects of ECIP projects on the graphically displayed data.

The Installation Data Sheets contain selected performance indicators which influence or measure energy consumption. These data elements include:

- *1. Total Energy Consumption and the percent deviation (PD) from the base year, FY 75.
- *2. Thermal energy consumption and PD;
- *3. Electrical energy consumption and PD;
4. Resident population and PD.
5. Non-resident population and PD.
6. Population served and PD (Resident plus non-resident population).
- *7. Effective population and PD (Resident plus 1/3 non-resident population).
8. Energy consumption per population served and PD.
9. Energy consumption per effective population and PD.
10. Electric energy consumption per resident population and PD.
- *11. Installed air conditioning capacity and PD;
12. Electrical energy consumption per ton of air conditioning and PD.
- *13. Real property inventory (in KSF) and PD.
14. Real property inventory per effective population and PD.
- *15. Energy consumption per gross square foot and PD.
16. Thermal energy consumption per gross square foot and PD.
17. Electrical energy consumption per gross square foot and PD.
18. The Real Property Inventory is broken down into building categories on Installation data sheets.

*These seven data elements are plotted on Installation and MACOM graphs.

Trend lines have been computed for each Installation, MACOM and the world-wide consolidation graph using a linear regression model for the total energy consumption data. The correlation coefficient has been determined and is posted below the trend line on each graph. These trend lines allow a statistical prediction of the total energy consumption in FY 85. The correlation coefficient shows how much reliance can be placed on the prediction. The closer the correlation coefficient is to the value 1.00 the higher the confidence level that the prediction is reliable. For example, on the World-Wide Consolidation graph, the trend line predicts a reduction in energy consumption of 14.5 percent in FY 85 with a correlation coefficient of .79. A trend analysis of the energy consumption per gross square foot of building space (BTU/GSF) predicts a reduction of 22.8 percent in FY 85 with a correlation coefficient of .90. These predictions, over such a large data base, are quite reliable. Like all statistical tools, however, there are limitations. The trend lines are only a prediction of future performance based on past "track records". Also, where the analysis predicts a reduction of greater than one hundred percent, it is obviously impossible.

A detailed look at Installations with completed ECIP projects has been included in this report and offers a significant opportunity to view the results of retrofitting facilities.

Climatic influences have been analyzed by grouping Installations based on average recorded heating and cooling degree days. These groups are then divided into those installations "with" and "without" completed ECIP projects in order to measure the improved building efficiencies after retrofitting.

A similar report was published in August 1980 covering FY 75 through FY 79 for U.S. Installations only.

PERFORMANCE INDICATORS BY MACOM

The performance indicators displayed on MACOM/Installation data sheets are compared at the MACOM level in the following discussion and tables. The world-wide indicators are included and form a base for comparisons. Energy consumption can be measured against population and the size and type of facilities. Industrial activities are more energy-intensive, but no common factor can be used to measure conservation performance for all types of activities. The best performance indicator within the following tables is the percent deviation (PD) of FY 80 from FY 75.

Table 1 shows the PD of total energy consumption* and energy consumption as a factor of the population served and the effective population. The negative PDs indicate the improvement occurring in most MACOMS.

A further breakout throughout this report occurs within DARCOM. The GOCO installations are grouped together because they have comparable energy consumption characteristics and are less affected by energy conservation measures than they are by production contracts. The Army Depots are grouped together because they are generally similar in energy consuming characteristics. The remainder of DARCOM, called "Other" consists of Arsenals, RDTE installations, Proving Grounds and the remaining DARCOM installations. This sub-dividing of DARCOM permits a closer scrutiny of their internal energy management program by looking clearly at the groups of similar installations which are affected by energy conservation measures.

* Total energy consumption reported herein is based on Red Book data only and does not include the Army National Guard or the Civil Works activities of the Corps of Engineers. Therefore these data will not correlate with the Defense Energy Information System (DEIS).

TABLE 1
TOTAL ENERGY CONSUMPTION AND AS A FACTOR
OF POPULATION SERVED AND EFFECTIVE POPULATION

	TOTAL ENERGY CONSUMPTION PERCENT CHANGE FY 80 from FY 75	ENERGY CONSUMPTION/ POPULATION SERVED & PD (MBTU/CAPITA)	ENERGY CONSUMPTION/ EFFECTIVE POPULATION & PD (MBTU/CAPITA)		
World Wide	-9.1	103.5	-11.6	141.3	-10.5
DARCOM	-28.9	221.9	-28.7	466.9	-30.6
OTHER	-11.1	164.9	-15.5	305.9	-16.9
DEPOTS	-9.0	154.3	-16.5	402.7	-16.5
GOCO	-48.0	656.6	-24.4	1,832.2	-25.5
FORSCOM	+ 0.6	89.7	-5.2	121.9	0
USAREUR	-2.1	82.5	-11.3	101.2	-8.9
TRADOC	+0.8	100.0	+1.5	128.7	-0.7
EUSA	-6.3	85.1	-0.7	120.8	-1.0
USARJ	-66.2	78.4	-28.0	140.8	-14.9
HSC	+33.8	281.5	+27.6	514.4	+24.7
WESTCOM	+13.8	74.7	+18.2	83.5	+0.7
USMA	-4.8	122.6	-7.2	149.6	-3.2
ACC	-1.1	80.0	6.0	118.5	+9.5
MTMC	-19.9	209.6	-2.8	477.5	+0.1
MDW	-11.4	31.2	-12.5	75.1	-7.4
INSCOM	-0.8	101.0	+15.0	186.4	+18.3
OCE	+32.4	327.0	+17.0	977.9	+16.7
BMDSC	+19.6	13.0	+60.5	13.1	+59.8

World-Wide electrical energy consumption has risen 6.7 percent since FY 75. The following factors help to explain this increase. The construction program has been devoted to projects that improve soldiers' living conditions, such as medical, troop housing and community facilities. Some training facilities, such as flight simulators, have also contributed to this increase. Overall, the installed air conditioning capacity has increased 31.1 percent from 486,652 tons in FY 75 to 638,184 tons in FY 80. Electric consumption as a factor of resident population and installed air conditioning capacity is shown in Table 2, along with the electric energy consumption per square foot of building space. This efficiency indicator shows the general increase in electric BTU/GSF, which amounts to 2 percent world-wide.

The Real Property Inventory has increased world-wide by 4.6 percent in this period, from 730 SF to 750 SF per capita of effective population. Table 3 shows that this increase in space is spread across almost all MACOMS. The effective population rose 1.5 percent in this time frame.

Table 3 also shows the total energy consumption per gross square foot of building space. This column is most important inasmuch as Presidential Executive Order 12003, dated 20 July 1977, requires all Federal agencies to reduce their BTU/GSF by 20 percent by FY 1985. The Army achievement of a reduction of 13.1 percent through FY 80 shows good progress, but not evenly distributed across all the MACOMS. The last column in Table 3 shows the thermal energy consumption/GSF. The improvement in reduction of thermal BTU/GSF since FY 75 is remarkably different from the electric BTU/GSF. It is apparent that most of the energy conservation measures have been successfully targeted against heating fuels. The ECIP projects discussed verify that heating system controls, insulation and such have been the most popular projects undertaken. A notable exception is the ECIP project completed at Red River Army Depot in February 1977. This \$341,359 project provided lighting improvements, and the reduction in electric consumption was sharp and has remained at the new low level since that time.

TABLE 2

ELECTRIC CONSUMPTION AS A FACTOR OF RESIDENT POPULATION,
AIR CONDITIONING CAPACITY AND GROSS SQUARE FEET OF BUILDINGS

	ELECTRIC CONSUMPTION/ RESIDENT POPULATION & PD (MBTU/CAPITA)		ELECTRIC CONSUMPTION/ TON OF AIR CONDITION- ING & PD (MBTU/TON)		ELECTRIC CONSUMPTION/ GROSS SQUARE FOOT OF BUILDINGS & PD (BTU/GSF)	
World Wide	77.2	+6.2	137.3	-18.7	84,283	+2.0
DARCOM	416.4	-21.8	109.9	-35.6	77,095	-21.4
OTHER	256.6	-9.0	86.0	-23.6	111,033	-19.4
DEPOTS	1,006.7	-10.6	176.9	-19.3	48,818	-6.9
GOCO	4,104.8	-32.9	153.0	-62.5	67,279	-40.2
FORSCOM	77.6	+22.2	135.0	-25.6	98,856	+8.0
USAREUR	37.4	+9.4	1,143.1	+6.1	52,303	+7.5
TRADOC	77.3	+20.8	98.4	-1.9	104,107	+18.7
EUSA	68.9	+19.6	278.4	-34.2	130,995	+20.1
USARJ	123.0	-22.4	109.0	-36.1	74,583	-41.1
HSC	463.4	+55.1	109.7	+63.5	256,654	+25.8
WESTCOM	80.0	-6.3	239.0	-18.8	108,014	-15.3
USMA	57.7	+4.7	93.3	-21.2	62,668	+0.7
ACC	88.6	+48.4	125.9	-4.5	100,577	+13.1
MTMC	554.3	+39.1	239.2	-8.2	54,780	+54.4
MDW	153.6	+27.4	78.7	+11.7	153,714	+19.9
INSCOM	171.6	+25.6	52.8	+0.8	126,580	+0.7
OCE	NA	--	512.8	-28.6	535,043	-14.3
BMDC	NA	--	NA	--	NA	--

TABLE 3

GROSS SQUARE FOOTAGE AS A FACTOR OF EFFECTIVE POPULATION,
TOTAL ENERGY CONSUMPTION AND THERMAL ENERGY CONSUMPTION

	RPI/EFFECTIVE POPULATION & PD (KSF/CAPITA)		TOTAL ENERGY CONSUMP- TION/GROSS SQUARE FOOT OF BUILDINGS & PD (MBTU/TON)		THERMAL ENERGY CONSUMP- TION GROSS SQUARE FOOT OF BUILDINGS & PD (BTU/GSF)	
WORLD-WIDE	0.75	+2.7	188,643	-13.1	104,360	-22.4
DARCOM	2.42	+6.1	192,947	-34.6	115,852	-41.1
OTHER	1.32	15.8	231,132	-28.3	120,099	-35.0
DEPOTS	4.03	-4.3	99,984	-12.8	51,166	-17.8
GOCO	6.82	+38.6	267,258	-46.2	199,979	48.0
FORSCOM	0.64	+8.5	189,212	-7.8	90,356	-20.5
USAREUR	0.63	0	159,489	-8.8	107,186	-15.1
TRADOC	0.60	-1.6	214,390	+1.6	110,283	-10.5
EUSA	0.42	0	290,707	-0.8	159,712	-13.2
USARJ	0.99	+6.5	142,062	-20.2	67,479	+30.8
HSC	1.06	+27.8	485,879	-2.4	229,225	-22.0
WESTCOM	0.70	+22.8	119,729	-18.3	11,715	-38.4
USMA	0.82	+1.1	182,461	-4.3	119,792	-6.7
ACC	0.67	+15.3	177,246	-5.1	76,669	-21.6
MTMC	3.65	-17.8	130,813	+2.1	76,033	+5.6
MDW	0.30	-12.9	252,191	+6.3	98,478	-10.0
INSCOM	0.78	+18.2	237,861	-1.2	111,281	-3.2
OCE	1.59	+54.2	613,460	-24.3	78,416	-58.0
BMDSU	0.86	+26.5	15,290	+26.6	15,290	+26.6

THE ENERGY CONSERVATION INVESTMENT PROGRAM

The Army's performance in energy conservation since the oil embargo of 1973 has been quite successful. The level of energy consumption in fixed facilities fell from 254 Trillion Btu (TBTU) in FY 1973 to 221 TBTU in FY 1974 and 215 TBTU in FY 1975. The reduced energy consumption in these three years was primarily due to Command emphasis on conservation, low cost or no cost conservation measures in facilities and changes in operating techniques of facilities. The fiscal year 1976 savings, down to 201 TBTU, reflected a mild winter over most the populated areas of the Army combined with a substantial reduction (32 percent) in the amount of energy consumed by the DARCOM Government Owned-Contractor Operated (GOCO) installations. This GOCO reduction reflects the reduced activity in the ammunition plants and has leveled off in FY 1980 at 48 percent below FY 1975. The GOCO reduction in FY 1976 accounted for 69 percent of the total Army savings and in FY 1980 for 77 percent. These savings are fragile because they reflect an idle industrial base instead of permanently increased efficiency in facilities operations. These timely savings have permitted the Army time to plan a strategy for permanent savings, however, and the progress in that direction is beginning to show dividends.

The Energy Conservation Investment Program (ECIP) started in FY 1976 as the DOD program for major building retrofits to improve energy efficiency. The early program years used the simple payback formula for project selection and changed to Energy Savings to Cost Ratios (E/C) and more sophisticated Life Cycle Cost Analysis to support project selection in the later years. The results of the ECIP are difficult, if not impossible, to accurately measure because of the lack of utility consumption meters on individual buildings. Consequently there are no individual "before and after" data to prove the benefits of these retrofit projects and confirm the design estimates of their anticipated savings.

The following analysis examines the ECIP program through FY 1980 and makes predictions about energy consumption through 1985. The Army Energy Plan and the Army Facilities Energy Plan outline the goals and objectives to be achieved, and the ECIP is the major effort in the area of Buildings and Facilities. The goals of reducing overall energy consumption by 20 percent and the energy consumption per gross square foot (BTU/GSF) by 20 percent by FY 1985 are truly a worthwhile challenge in view of the awesome increase in energy prices since 1973. The achievements through FY 1980 are notable, but, as mentioned above, fragile. The overall energy consumption in facilities is down 9.1 percent from FY 1975 and the BTU/GSF is down 13.1 percent from the same base.* Computing the trend analysis for these two goals shows that by the end of FY 1985 the predicted energy consumption will be down by 14.5 percent and the BTU/GSF will be down by 22.8 percent. However, this trend analysis statistically presumes that the past GOCO impact on savings will continue to the same degree through FY 1985 and that is not true. Other MACOMS and the remaining installations within DARCOM must show progress toward meeting the FY 1985 goals if they are to be met.

* Red Book data only. Does not include Army National Guard and Civil Works Activities in the Corps of Engineers. Actual total Army Consumption is lower than Red Book data indicates.

Figure 1 shows the distribution of Army Energy Consumption by each MACOM for FY 75 through FY 80. Obviously, a substantial change in energy consumption within a MACOM that consumes only a small amount of the total Army energy will not have a significant impact. For example, the Health Services Command increased their overall energy consumption by 33.8 percent, but they only consumed 2.6 percent of the Army total. This is shown on Table 4 which lists each MACOM in order of the difference in MBTUs consumed in FY 1980 from FY 1975. Interestingly, HSC reduced its BTU/GSF consumption in FY 1980 by 2.6 percent, compared to FY 1975.

The largest percentage reduction occurs in the U.S. Army, Japan, with a 66.2 percent reduction. This is the direct result of a mission drawdown in Okinawa which reduced its energy consumption by 89.8 percent and its square footage by 93.5 percent. The remaining facilities in Okinawa are consuming 58.1 percent more BTU/GSF in contrast to the Honshu Garrison which is consuming 20.3 percent fewer BTU/GSF with an overall reduction in consumption of 23.5 percent with only 3.9 percent less square footage. Overall, Japan has 57.7 percent less square footage and is consuming 20.2 percent less BTU/GSF.

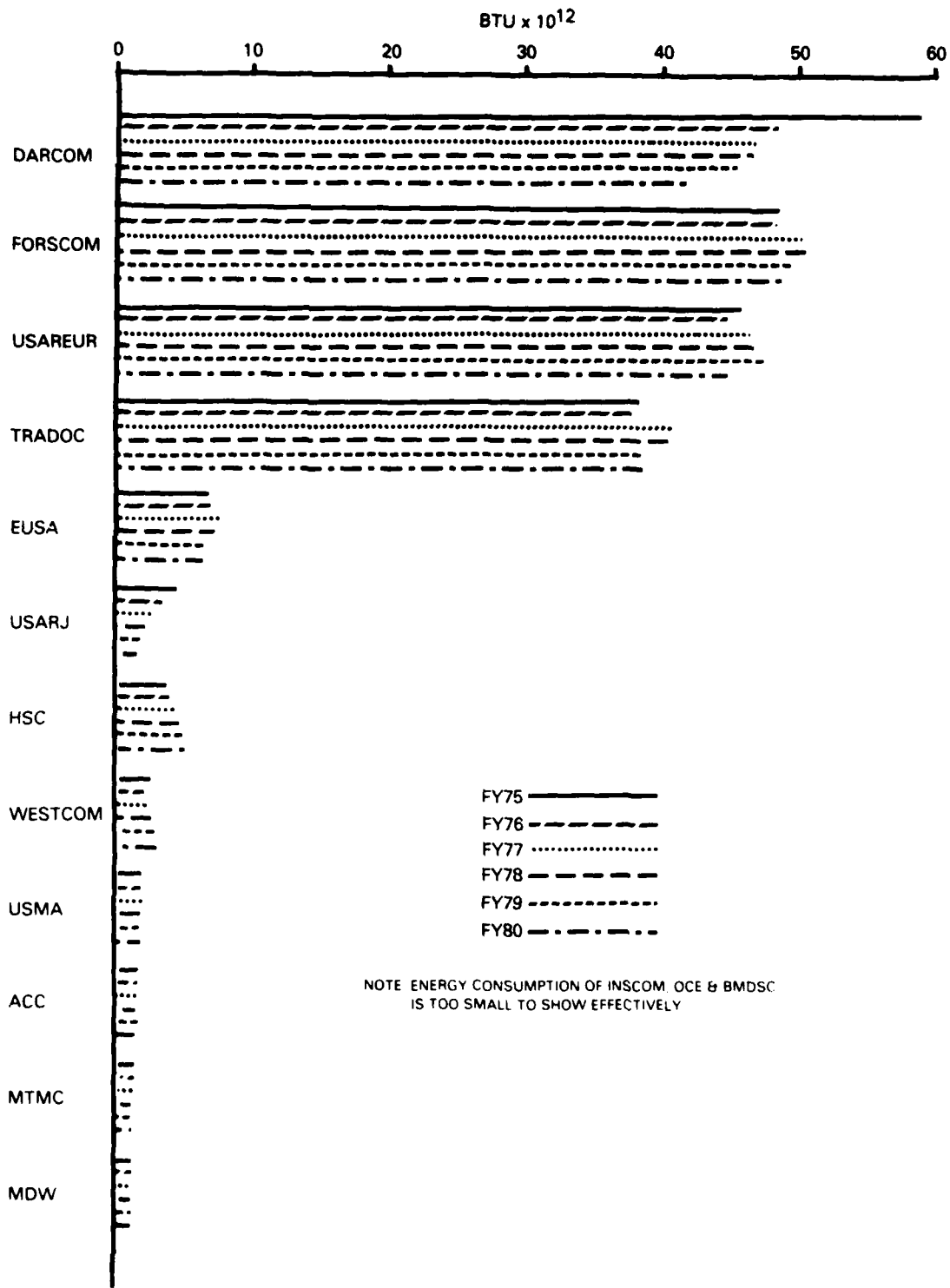


FIGURE 1
DISTRIBUTION OF ARMY ENERGY CONSUMPTION
BY MACOM AND FISCAL YEAR

TABLE 4

DIFFERENCE IN MBTUS CONSUMED BY MACOM IN FY 80
 COMPARED TO FY 75 AND PERCENT OF ARMY TOTAL IN FY 80

	DIFFERENCE IN MBTUS CONSUMED IN FY 80 COMPARED TO FY 75	PERCENT CHANGE FY 80 FROM FY 75	PERCENT OF TOTAL ARMY CONSUMPTION IN FY80
DARCOM	-17,044,459	-28.9	21.3
(GOCOs)	(-13,912,168)	(-48.0)	(7.7)
(OTHER)	(-2,354,070)	(-11.1)	(9.6)
(DEPOTS)	(-778,221)	(-9.0)	(4.0)
USARJ	-2,834,944	-66.2	0.7
USAREUR	-947,430	-2.1	22.8
KOREA	-433,541	-6.3	3.3
MTMC	-297,703	-19.9	0.6
MDW	-135,222	-11.4	0.5
USMA	-92,496	-4.8	0.9
ACC	-18,510	-1.1	0.8
INSCOM	-4,737	-0.8	0.3
BMDSC	+6,275	+19.6	-
OCE	+24,163	+32.4	0.1
FORSCOM	+279,961	+0.6	24.9
TRADOC	+314,941	+0.8	19.6
WESTCOM	+353,724	+13.8	1.5
HSC	+1,268,695	+33.8	2.6
TOTAL	-19,561,283	-9.1	100.0

In evaluating the ECIP, it should be noted that the early program years were restricted to Stateside installations and those overseas installations which consume U.S. source energy (e.g., USAREUR which burns U.S. coal). A further restriction was made to exclude GOCO facilities from receiving ECIP projects because of the peculiar contracts governing their operations. Other modernization energy conservation programs support the GOCOs but ECIP can be used at GOCO facilities when non-production facilities are being retrofitted.

Regardless, any meaningful analysis of the ECIP and its impact can only be made when the projects are completed, not on the drawing board or under construction. For this reason, this analysis concentrates on those ECIP projects which were completed by the end of FY 1980. Included in this analysis are those Family Housing ECIP type projects which were funded under the Family Housing Appropriations.

Based on the above discussion, GOCO plants are not included in this analysis except when they do have completed ECIP projects. The sensitivity of GOCO plants to production runs is far greater than the impact of building retrofits, so distortion could easily result if they were included. The reporting requirements under ECIP and the program criteria have changed considerably since the program was implemented so certain estimates were made as to some of the project completion dates. The project costs changed with the various stages of design, construction and modifications so the costing data is the best available through current records. Through the end of FY 1980 no ECIP projects were completed at any overseas locations so they do not influence this analysis and are also excluded. With these qualifications, the following analysis of the completed ECIP projects is made.

Table 5 shows the number and cost of the ECIP projects completed by the end of FY 1980. As stated, the GOCO installations without completed ECIP projects and overseas MACOMS have been excluded from this analysis to avoid distortion. This analysis includes 58 installations with completed ECIP projects and 40 installations without completed ECIP projects, all within the United States. The combined total energy consumption is compared later against the rate of completion of ECIP projects using dollars and fiscal years.

TABLE 5
ECIP PROJECTS COMPLETED BY END FY 1980

PROGRAM YEAR	COMPLETED AT AT END OF FY 80 (\$)	REMAINING TO TO BE COMPLETED (\$)	NUMBER OF PROJECTS COMPLETED	NUMBER OF INSTALLATIONS WITH PROJECTS
FY 76	27,150,144	0	30	25
FY 77	44,816,956	0	57	40
FY 78	14,625,000	1,325,000	12	12
FY 79	6,198,000	38,577,000	16	13
FY 80	2,146,472	41,880,000	5	5
TOTAL	94,936,572	81,782,000	120	58*

* DUE TO SOME INSTALLATIONS HAVING PROJECTS IN MORE THAN ONE PROGRAM YEAR, THIS NUMBER IS NOT A MATHEMATICAL TOTAL.

In order to show the energy consumption in dollars, a value of \$23.25 per Army Barrel of Energy was used. This value was determined by data provided by MACOMS to DAEN-MPO-U as part of the FY80 Technical Data Report.

Figure 2 illustrates the composition or mix of the "Army Energy Barrel", which shows that of the total amount of fuel used by the Army, the major portion is electricity.

The "Army Barrel of Oil" Contains the Energy of a Barrel of Crude Oil (5.8 Million BTU's). Its Composition Represents the Various Fuel Used by the Army in its Operations of Buildings & Facilities.

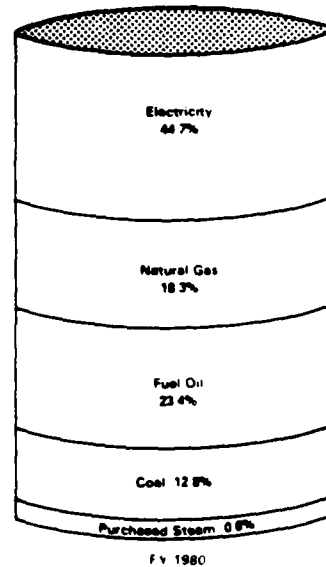


FIGURE 2
THE ARMY ENERGY BARREL
FY 1980 COST \$23.25/BARREL

Each type of fuel within the mix has increased in price, resulting in increased cost to the Army. The cost of the Army energy barrel in FY 1980 was \$23.25.

Using the value of \$23.25 per barrel equivalent and showing the combined total energy consumption (58 installations with ECIP projects) converted at that rate, a comparison is made in Figure 3 that shows the cumulative cost of retrofit projects and the cost of fuel consumed. The simple payback shows a 3.5 year payback.

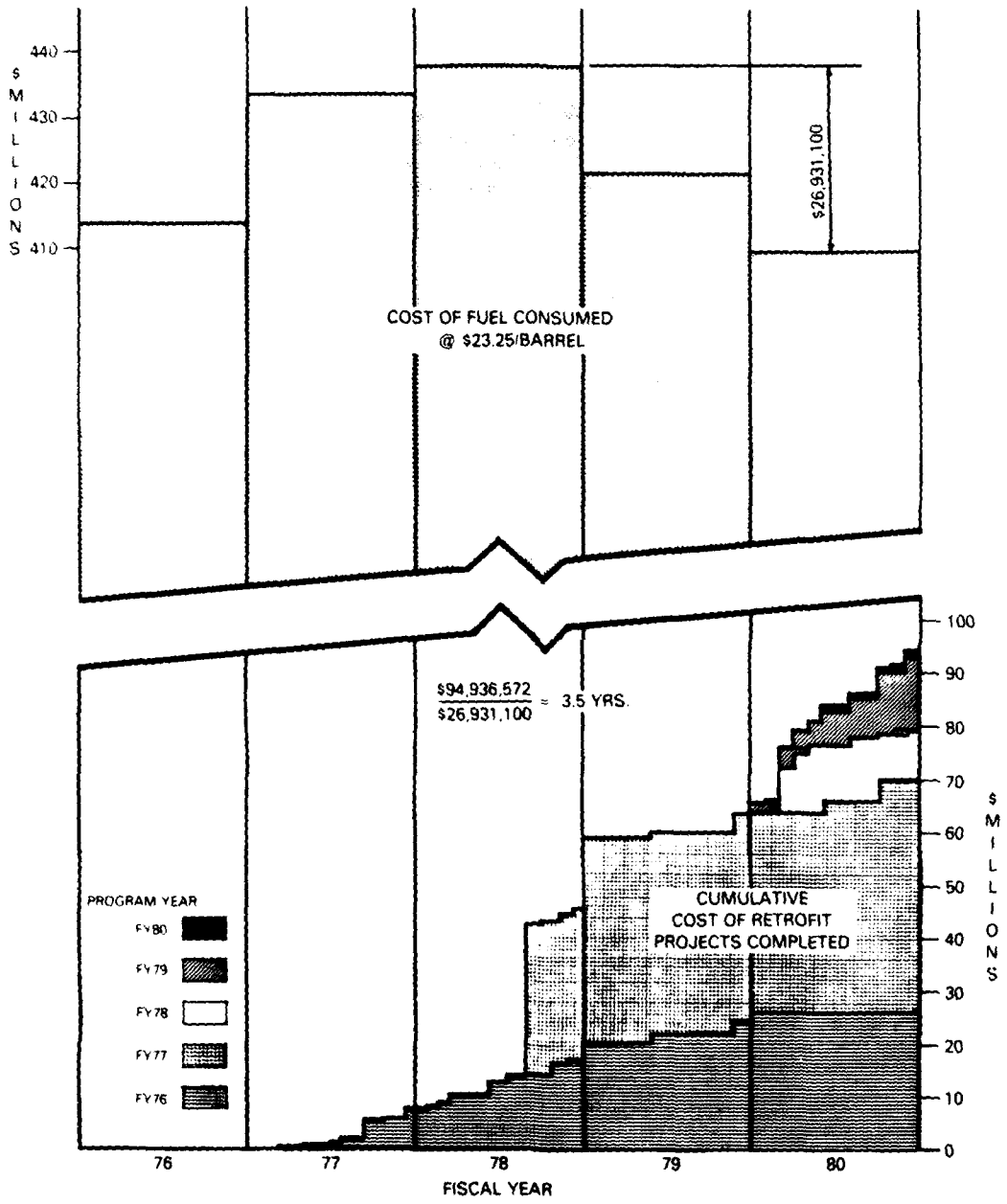


FIGURE 3
CUMULATIVE COST OF COMPLETED ECIP PROJECTS AND COST AVOIDANCE OF REDUCED CONSUMPTION OF INSTALLATIONS WITH ECIP PROJECTS

Looking at the 98 installations in the two groups of installations with ECIP projects completed and installations without ECIP projects completed in Figure 4, shows more clearly the impact on installations with completed ECIP projects. The sharp downturn in energy consumption from FY 78 on is directly related to the rate of completed ECIP projects. The installations without ECIP projects continue at a level of increased energy consumption. A trend analysis, using FY 78 as the base year, shows a remarkable difference in the predicted behavior of the two groups. The group without ECIP projects is predicted to consume 15.6 percent more energy in FY 85, compared to FY 75, and the installations with ECIP projects is predicted to consume 19.9 percent less energy in FY 85, compared to FY 75.

Short of having "before and after" metered data for validation of ECIP projects, this group comparison strongly indicates that ECIP projects are successfully reducing energy consumption in a cost effective manner.

Other data also indicate better management of the ECIP. The FY 1976 ECIP projects were not completed for 51 months after the beginning of FY 1976. The FY 1977 ECIP projects were completed in 45 months. The more recent requirements by Congress to have advanced design prior to authorization and appropriation is resulting in shorter lead time to completion. The bottom portion of Figures 3 & 4 shows the first five program years of the completed ECIP projects and it shows that some FY 1979 projects were completed at the beginning of FY 1980 and two FY 1980 projects were completed within FY 1980.

There are ten general groupings of ECIP project types. Several projects include more than one type of project, but the primary type was used to classify projects into their respective types. The percentage of the completed program dollars and numbers of projects is shown on Figure 5. The largest percentage of dollars and the largest number of projects dealt with the building shell and included insulation, storm doors and storm windows. This was followed by modification of the HVAC systems and energy monitoring and control systems. The family housing ECIP projects included insulation, storm doors and windows, weatherstripping and set back thermostats. As noted previously, only seven projects, using 6 percent of the dollars, related directly to electrical energy savings.

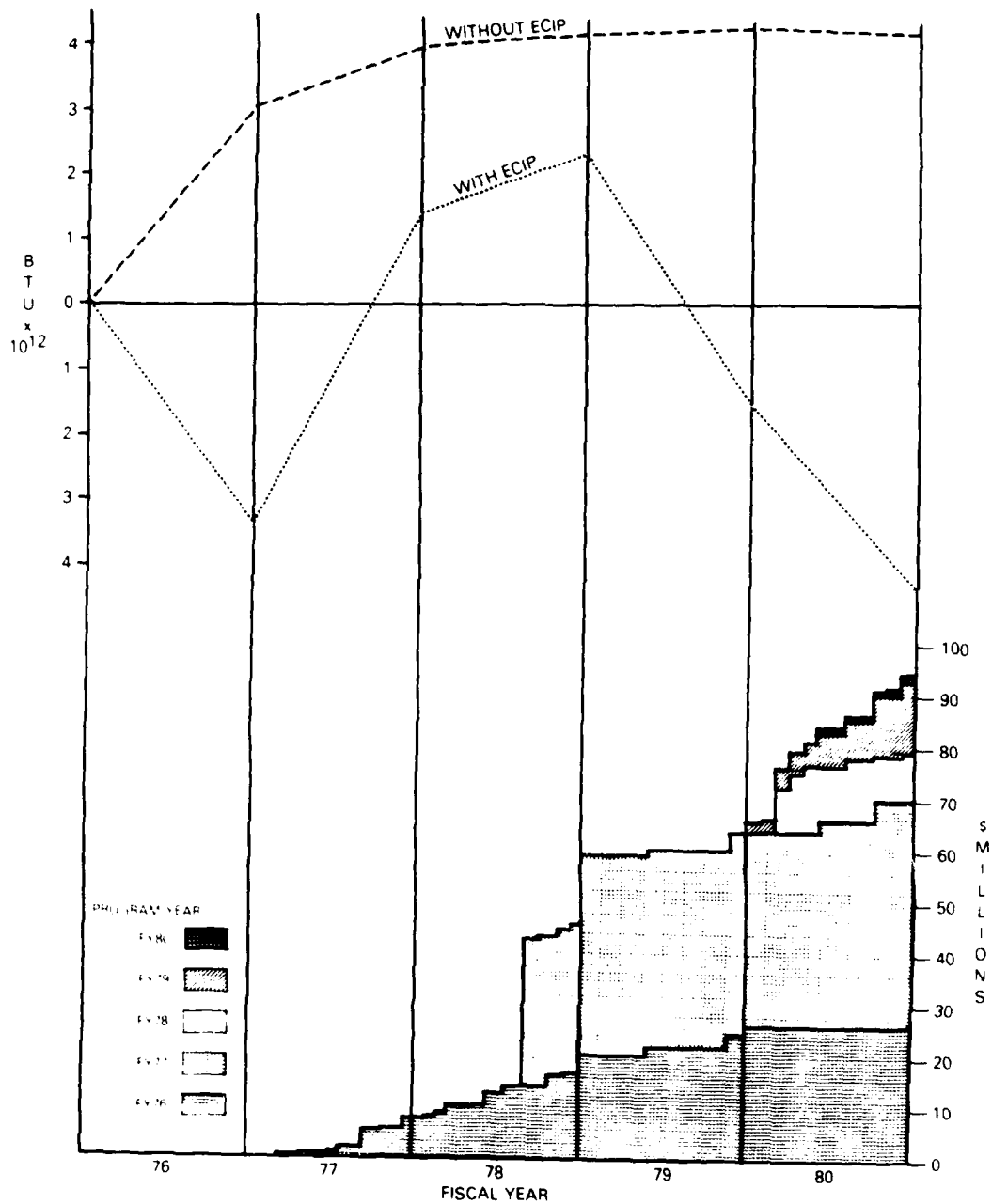


FIGURE 4
CUMULATIVE COST OF COMPLETED ECIP PROJECTS AND ANNUAL CHANGE
IN ENERGY CONSUMPTION OF INSTALLATIONS WITH AND WITHOUT ECIP PROJECTS

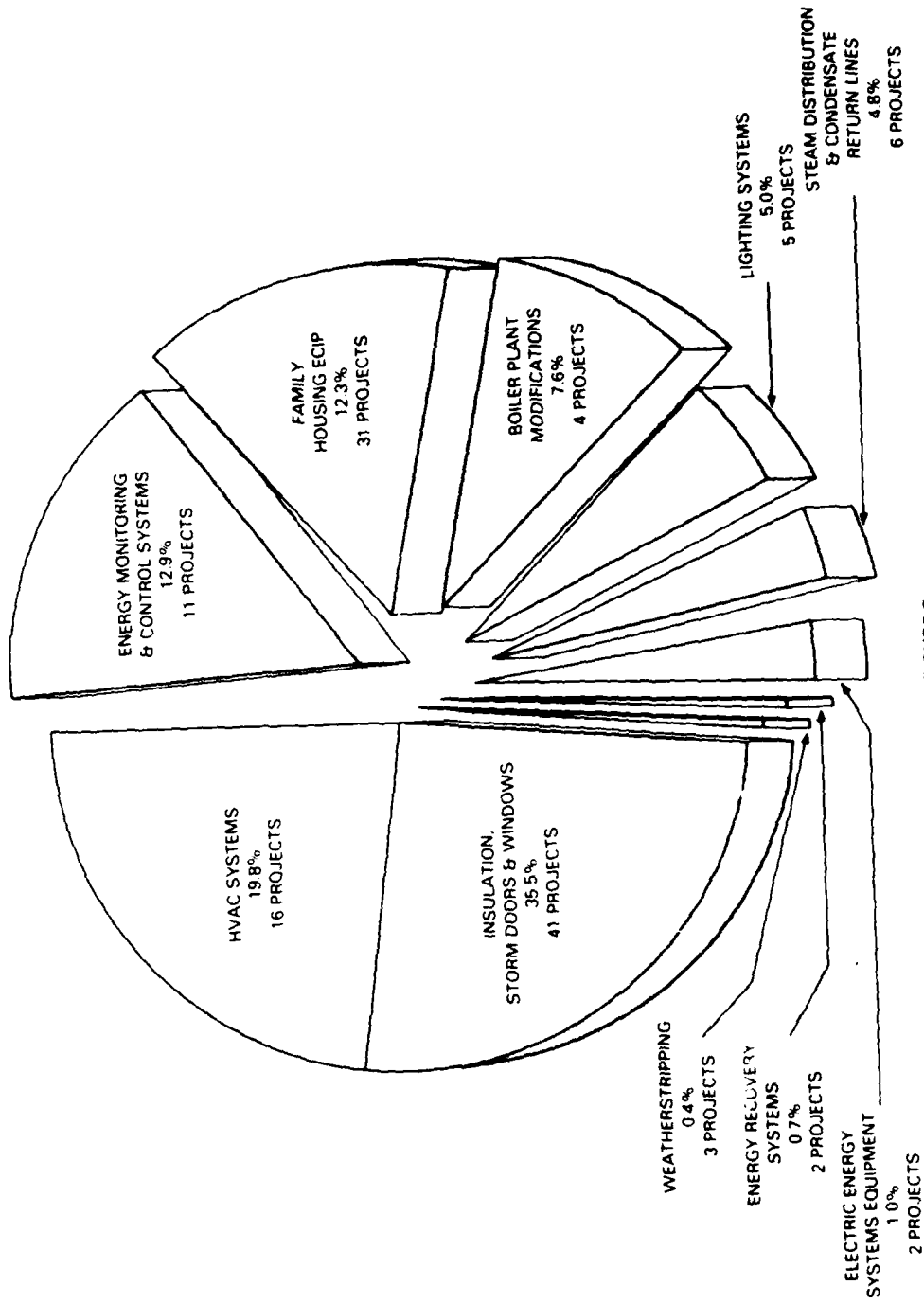


FIGURE 5
 U.S. ARMY ENERGY CONSERVATION INVESTMENT PROGRAM
 PERCENT DISTRIBUTION OF DOLLARS BY TYPE AND NUMBER OF PROJECTS

The extension of ECIP to overseas areas should have a significant impact on energy conservation in those areas. Figures 6a through 6d list each reporting installation in the "Red Book" and show the FY 75 and FY 80 total energy consumption. Through the use of symbols those installations with completed ECIP projects are readily comparable with those installations without ECIP projects. If the potential for conservation is greatest in installations consuming the largest quantity of energy then the overseas areas offer a lucrative target for building retrofits. The first four installations on Figure 6a consumed over 45 trillion BTU ($\text{BTU} \times 10^{12}$) in FY 80, almost one fourth the total Army consumption. The abscissa on Figures 6a through 6d changes in scale to provide a more meaningful display.

An evaluation of the ECIP would be incomplete without investigating the rate of energy consumption in retrofitted buildings. The energy consumption per gross square foot (BTU/GSF) has been analyzed using the same overview approach as the preceding evaluation.

BTU/GSF is an indicator of building efficiency and was adopted by Executive Order 12003 as the primary indicator to measure energy conservation progress within Federal agencies. Table 6 lists the MACOMS and their FY 75 and FY 80 BTU/GSF and the percent deviation. Better progress is being made in meeting the BTU/GSF reduction goal than in meeting the overall energy reduction goal.

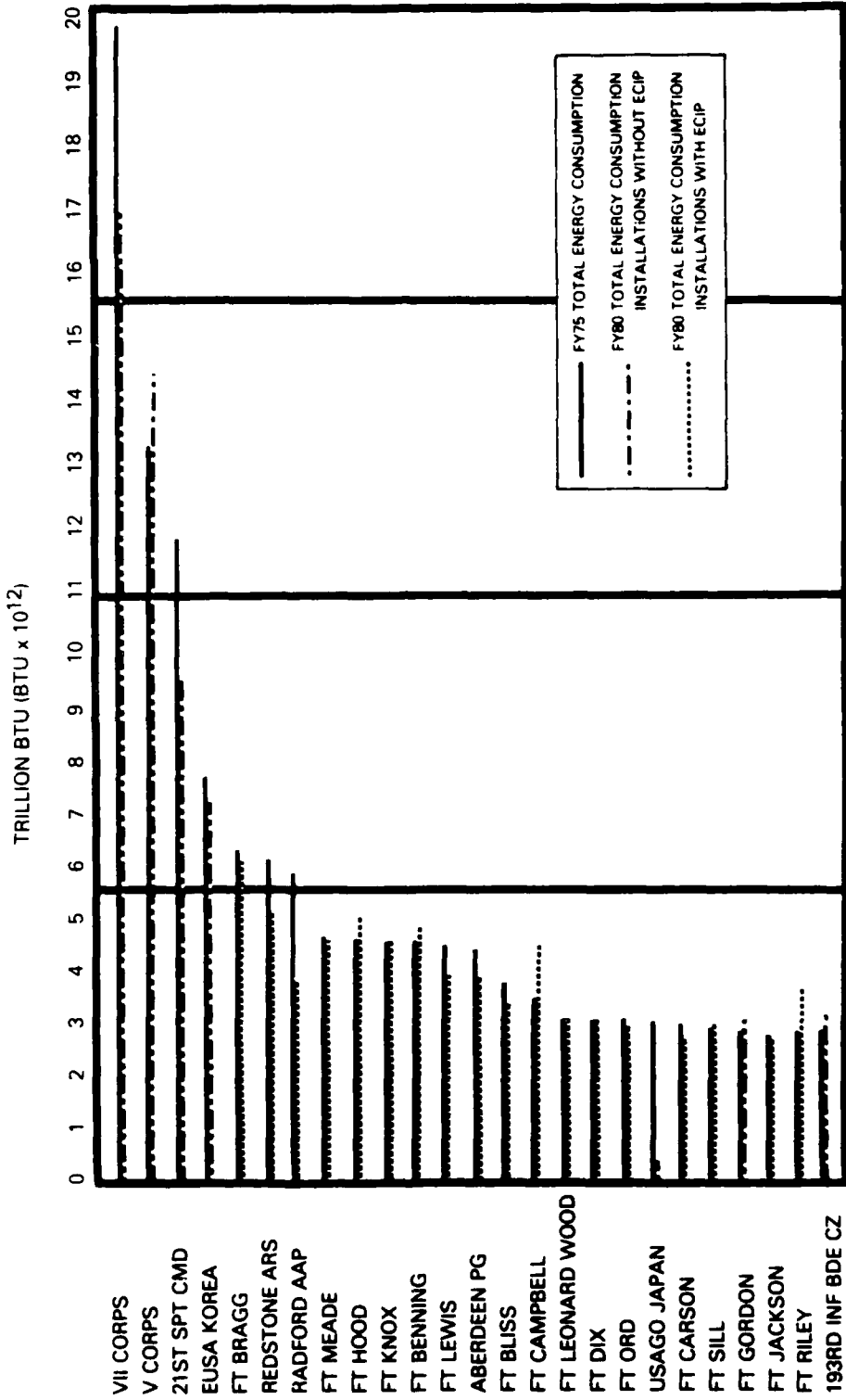


FIGURE 6A
 FY75 & FY80
 ENERGY CONSUMPTION BY INSTALLATION

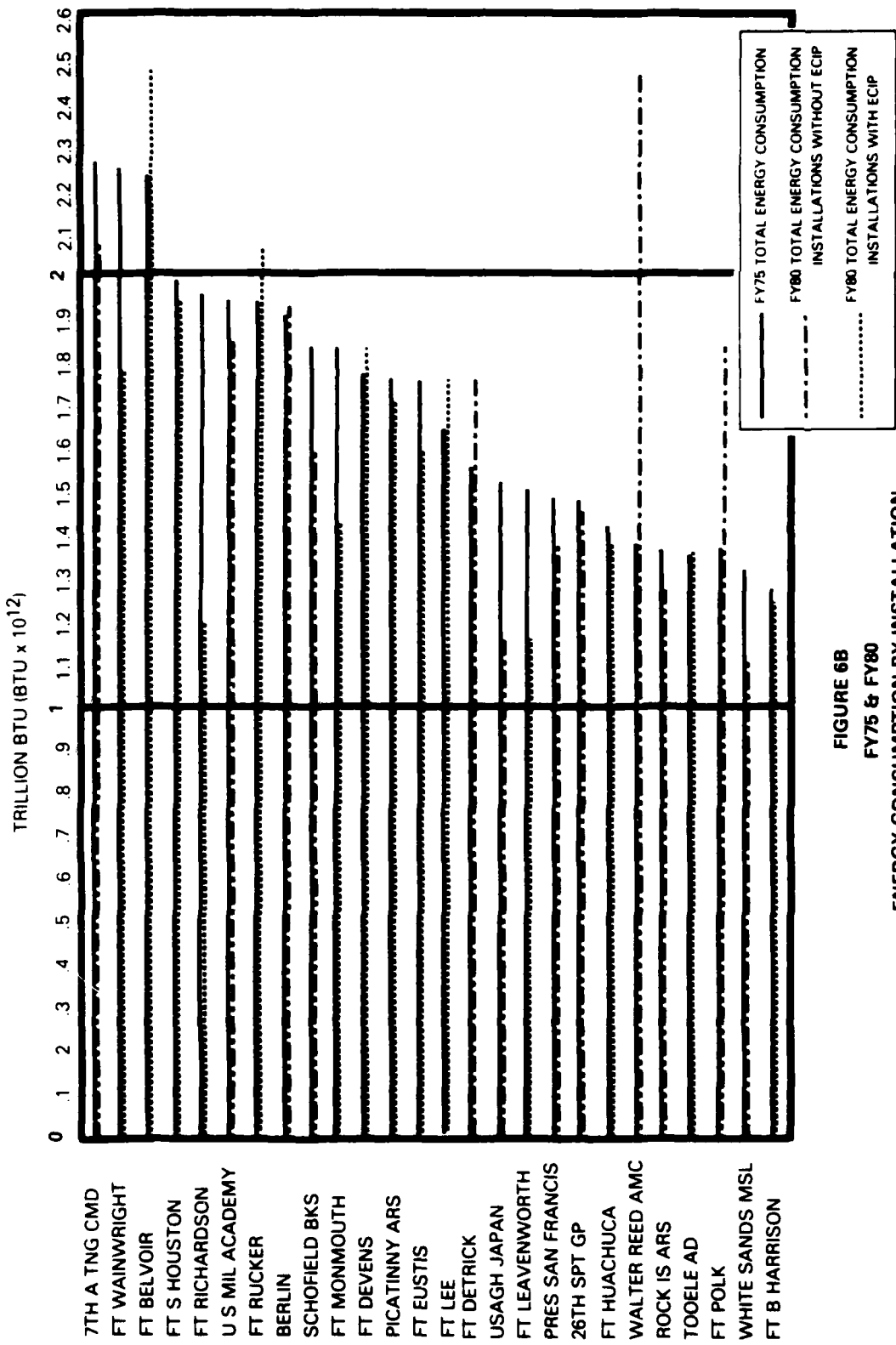


FIGURE 6B
 ENERGY CONSUMPTION BY INSTALLATION
 FY75 & FY80

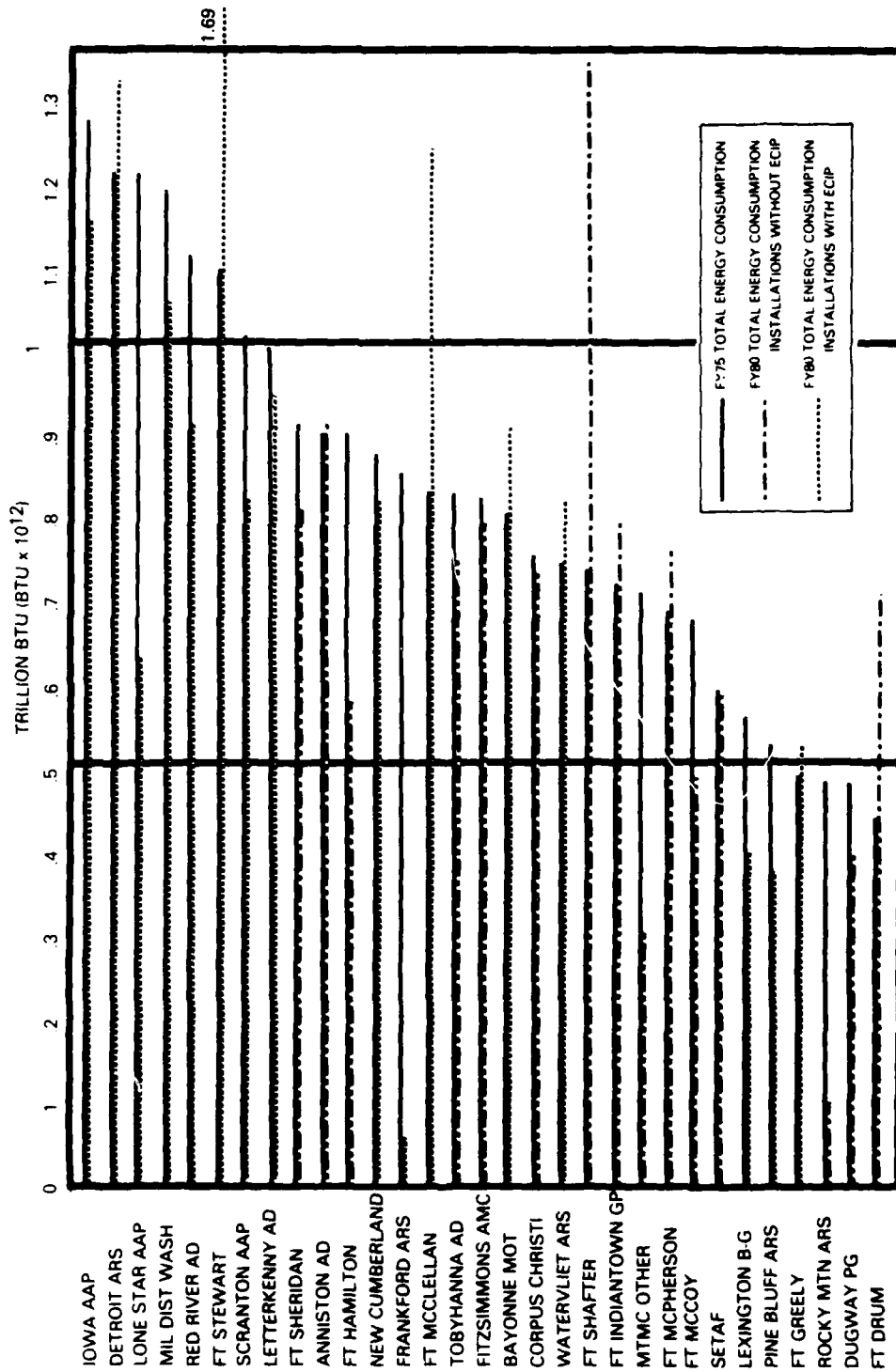


FIGURE 8C

FY75 & FY80
ENERGY CONSUMPTION BY INSTALLATION

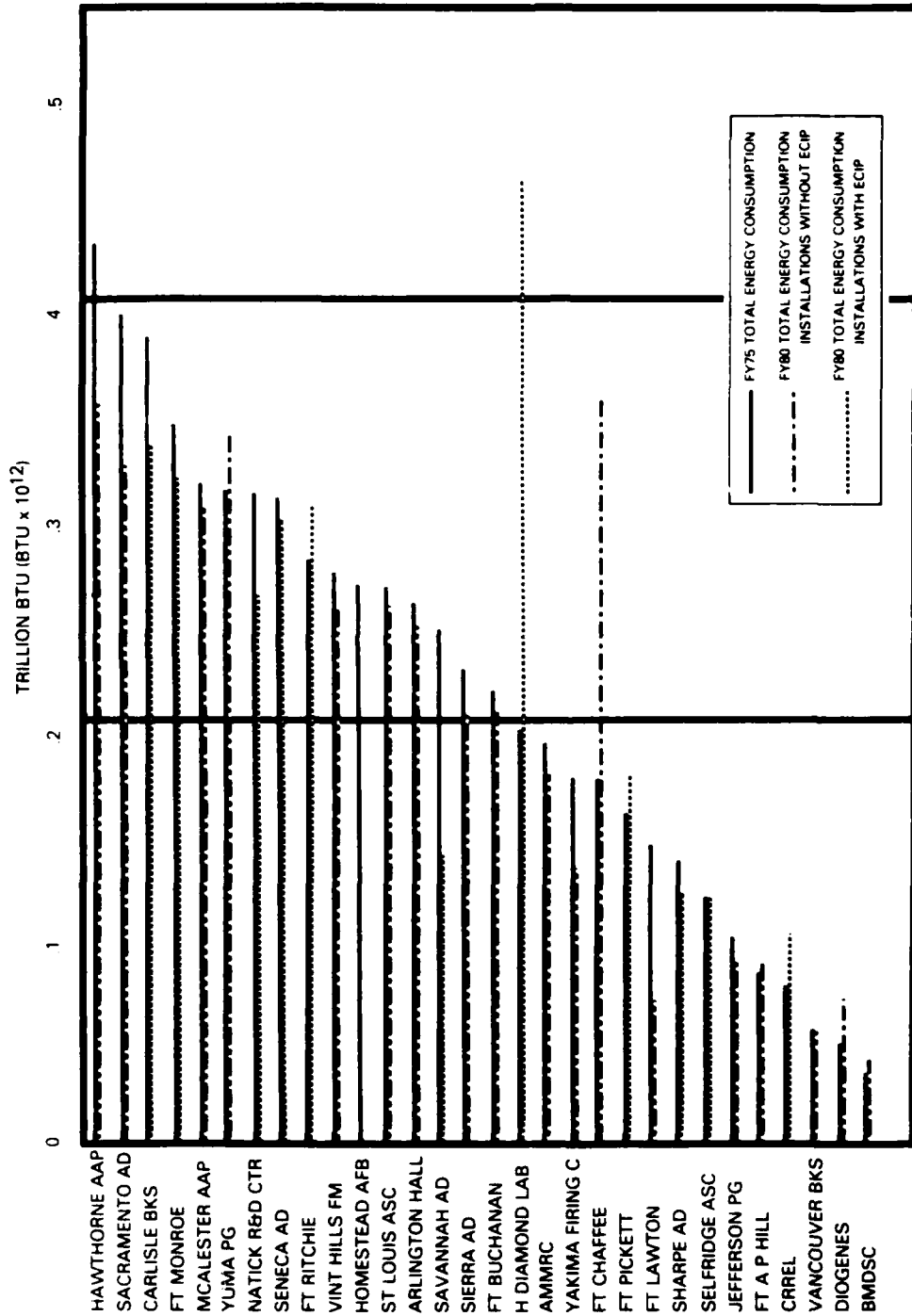


FIGURE 6D
 FY75 & FY80
 ENERGY CONSUMPTION BY INSTALLATION

TABLE 6

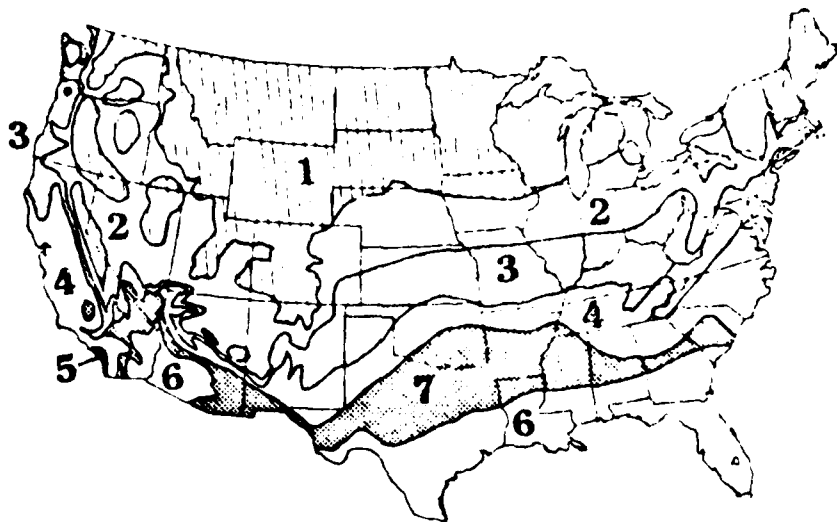
FY 75 & FY 80 ENERGY CONSUMPTION
PER GROSS SQUARE FOOT OF BUILDINGS

	BTU/GSF		PERCENT DEVIATION
	FY 75	FY 80	
WORLD-WIDE	217,025	188,643	-13.1
DARCOM	294,984	192,947	-34.6
OTHER	322,440	231,132	-28.3
DEPOTS	114,688	99,984	-12.8
GOCO	497,047	267,258	-46.2
FORSCOM	205,188	189,212	-7.8
USAREUR	174,930	159,489	-8.8
TRADOC	210,984	214,390	+1.6
EUSA	293,042	290,707	-0.8
USARJ	178,151	142,062	-20.2
HSC	497,789	485,879	-2.4
WESTCOM	146,498	119,729	-18.3
USMA	190,591	182,461	-4.3
ACC	186,735	177,246	-5.1
MTMC	107,454	130,813	+2.1
MDW	237,319	252,191	+6.3
INSCOM	240,650	237,861	-1.2
OCE	810,913	613,460	-24.3
BMDSC	12,075	15,290	+26.6

The United States has been divided into seven climate zones as a result of a joint study conducted by the Department of Housing and Urban Development and the Department of Energy. These zones were developed using average heating and cooling degree days. These zones are described and depicted in figure 7. Heating and cooling degree day data has been posted on the data sheets and were extracted from TM 5-785, dated 1 July 1978.

**Zone Descriptions in Heating (HDD) and Cooling (CDD)
Degree Days are:**

- Zone 1 - Less than 2000 CDD and more than 7000 HDD
- 2 - Less than 2000 CDD and 5500 to 7000 HDD
- 3 - Less than 2000 CDD and 4000 to 5499 HDD
- 4 - Less than 2000 CDD and 2000 to 3999 HDD
- 5 - Less than 2000 CDD and 0 to 1999 HDD
- 6 - More than 2000 CDD and 0 to 1999 HDD
- 7 - More than 2000 CDD and 2000 to 4000 HDD



**FIGURE 7
CLIMATIC ZONES IN THE
UNITED STATES**

The 98 installations used in the preceding ECIP analysis are used again to provide a measure of difference between installations with and without completed ECIP projects. Two installations are deleted from this study, Hawthorne and McAlester AAP, because they were transferred to Army as of FY 78 from the U. S. Navy and no FY 75 data is available.

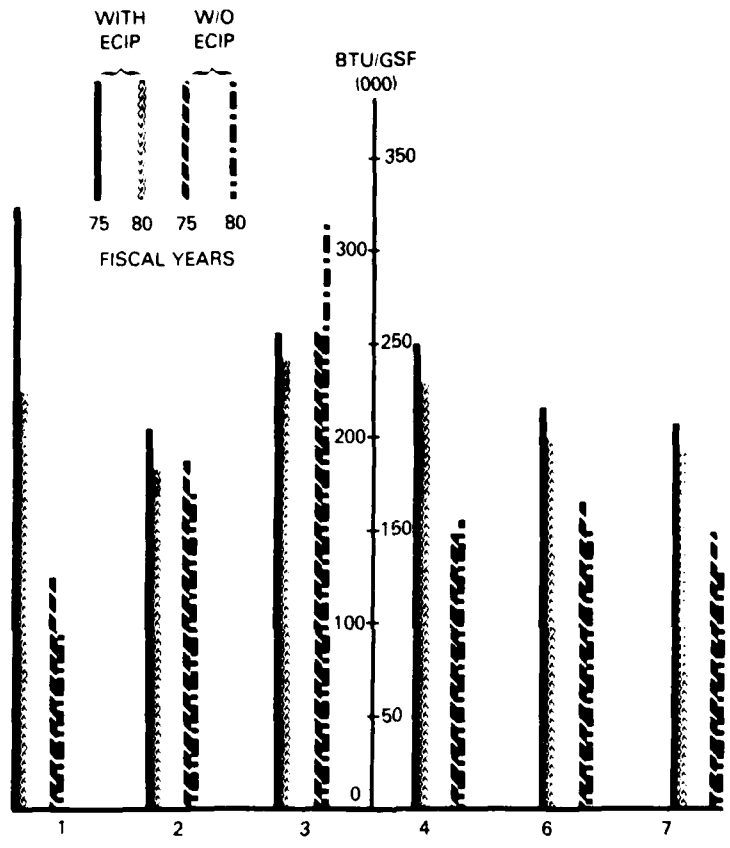
The remaining 96 installations are grouped by climatic zones and their BTU/GSF plotted for FY 75 and FY 80 into two groups, with and without ECIP projects. Figure 8 shows the comparison and the tabulation shows the significant weighting factors for each zone and group. Overall, installations with ECIP projects reduced their BTU/GSF by 8.2 percent compared to a 3.6 percent reduction for installations without ECIP projects.

Overseas locations have been classified according to the climatic zone descriptions and Table 7 shows these installations along with the stateside groups. By and large, overseas locations compare most favorably and the 8.8 percent overseas reduction matches that of the consolidated USAREUR. The overall energy consumption overseas has been reduced 10.9 percent from FY 75, including USARJ. Excluding USARJ for reasons discussed on page 9, overseas locations reduced their overall energy consumption by 6.6 percent.

It perhaps should be reiterated that the DARCOM GOCO installations are not included in this analysis, except when they have completed ECIP projects. The consolidated GOCO data sheet shows a 46.2 percent reduction in BTU/GSF.

The dollars spent in completing ECIP projects through FY 80 have been distributed to the MACOMS as recorded in Table 8.

It is interesting to note that the completed ECIP projects, spread over the entire gross size of the 58 installations receiving them, amounts to 20 cents per gross square foot. Not an accurate or usable number, but interesting.



	CLIMATIC ZONES						TOTALS
NR INSTLS W/ECIP	4	15	18	10	4	7	58
NR INSTLS W/O ECIP	2	12	9	6	7	2	38
PERCENTAGE OF GSF INSTLS W/ECIP	2.4	12.4	25.6	13.0	7.9	11.6	71.5
PERCENTAGE OF GSF INSTLS W/O ECIP	2.0	6.7	2.8	6.4	9.1	1.5	28.5
PERCENTAGE OF TOTAL ECIP DOLLARS	11.1	18.3	30.0	24.8	3.8	12.0	

FIGURE 8
 ENERGY CONSUMPTION PER GROSS SQUARE FOOT
 BY CLIMATIC REGIONS AND INSTALLATIONS
 WITH AND WITHOUT ECIP PROJECTS

TABLE 7

BTU/GSF COMPARISONS BY CLIMATIC ZONE DESCRIPTIONS BETWEEN
U. S. INSTALLATIONS (WITH AND WITHOUT ECIP) AND OVERSEAS LOCATIONS

ZONE	WITH ECIP			WITHOUT ECIP		
	FY 75	FY 80	PD	FY 75	FY 80	PD
1	321,788	221,786	-31.1	123,613	92,922	-24.8
7th ATC				182,170(FY 77)	162,440	-10.8
2	204,110	182,739	-10.5	185,925	167,602	- 9.9
BERLIN				168,643	158,255	- 6.2
V CORPS				188,474	169,115	-10.3
VII CORPS				180,215	165,551	- 8.1
21st SPT CMD				155,721	138,617	-11.0
3	255,579	242,947	- 4.9	255,637	313,540	+22.7
EUSA-KOREA				293,042	290,707	- 0.8
4	248,845	228,150	- 8.3	147,825	155,064	+ 4.9
USAGH-JAPAN				158,402	137,016	-13.5
SETAF				157,905	125,806	-20.3
6	214,948	198,827	- 7.5	165,024	150,641	- 8.7
USAGO-JAPAN				191,674	303,095	+58.1
BMDSC				12,075	15,290	+26.6
7	206,388	192,918	- 6.5	149,809	127,158	-15.1
TOTAL U.S.	236,092	216,632	- 8.2	172,814	166,592	- 3.6
TOTAL OVERSEAS				182,988	166,953	- 8.8

TABLE 8
DISTRIBUTION OF ECIP \$
BY MACOM

	ECIP \$	PERCENT OF TOTAL	NUMBER OF INSTAL- LATIONS WITH ECIP	AVERAGE ECIP \$ PER INSTALLATION
TRADOC	39,696,502	41.8	17	2,335,088
FORSCOM	35,273,196	37.2	14	2,519,514
DARCOM	18,640,594	19.6	22	847,300
DEPOTS	(10,080,350)	(10.6)	(8)	(1,260,044)
GOCO	(1,405,000)	(1.5)	(4)	(351,250)
OTHER	(7,155,244)	(7.5)	(10)	(715,524)
ACC	971,568	1.0	2	485,784
MTMC	128,000	0.1	1	128,000
MDW	120,000	0.1	1	120,000
OCE	106,712	0.1	1	106,712
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
TOTAL	94,936,572	100	58	1,636,837

APPENDIX A

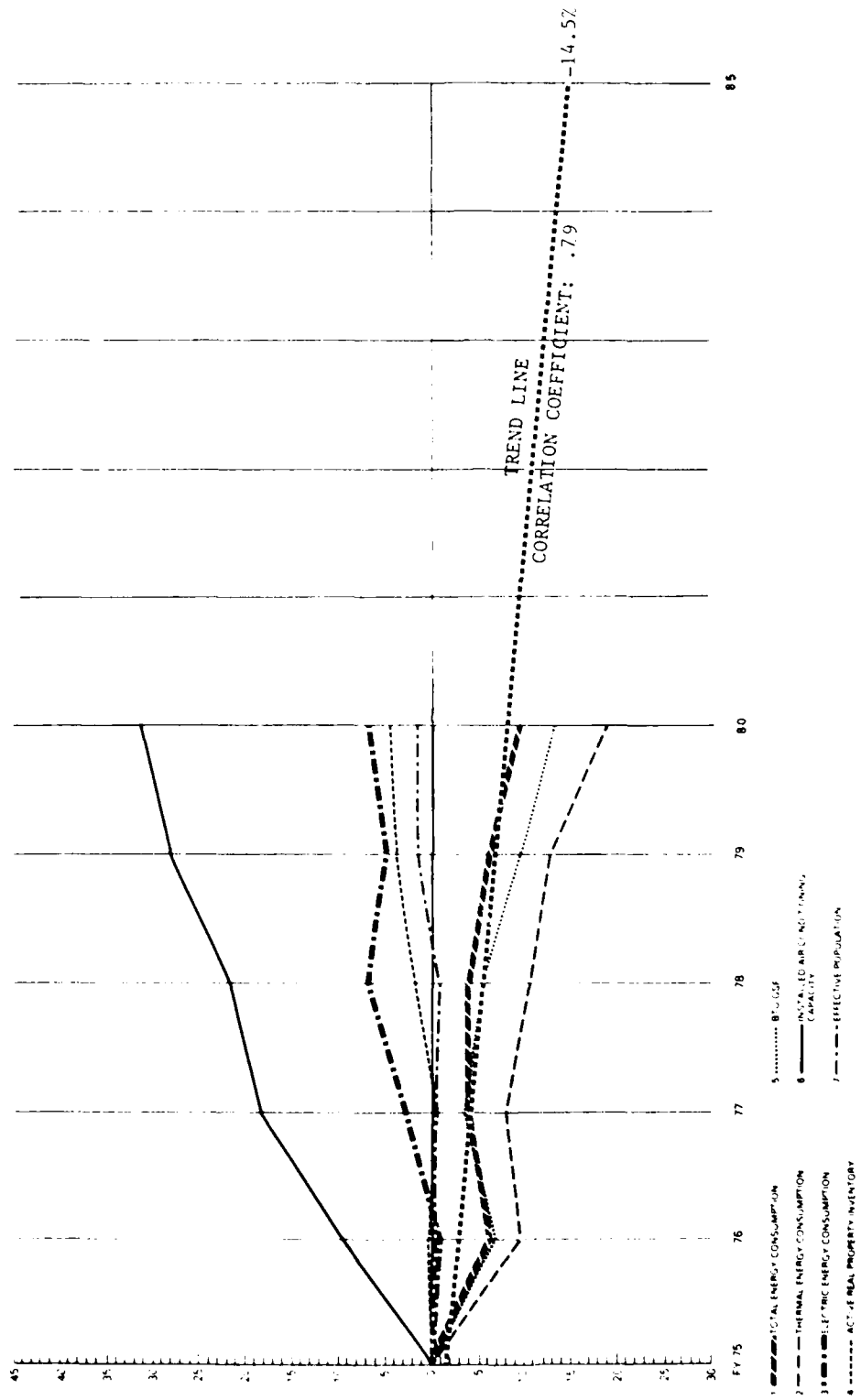
This Appendix consists of a Data Sheet and a Graph for each reporting Installation in the Red Book and for each MACOM.

The graphs display 7 key data elements for the fiscal years 1975 through 1980. The zero line is the FY 75 base and the ordinate is the percent change from FY 75 for each subsequent year. The trend line represents the Total Energy Consumption from FY 75 through FY 80, with the trend analysis prediction for FY 85.

The Data Sheets contain the raw data from the Red Book for the same years and selected performance indicators. The Installation Data Sheets contain the real property breakdown by categories, in addition to the above data.

The remarks section on the Data Sheets is used to identify any organizational changes and any ECIP projects completed along with a triangle symbol across the top of the sheet to indicate the point in time when these projects were completed. The ECIP remarks and symbols were repeated on the Graphs and offer visual impact of the completed ECIP projects.

World-wide Consolidation



U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION

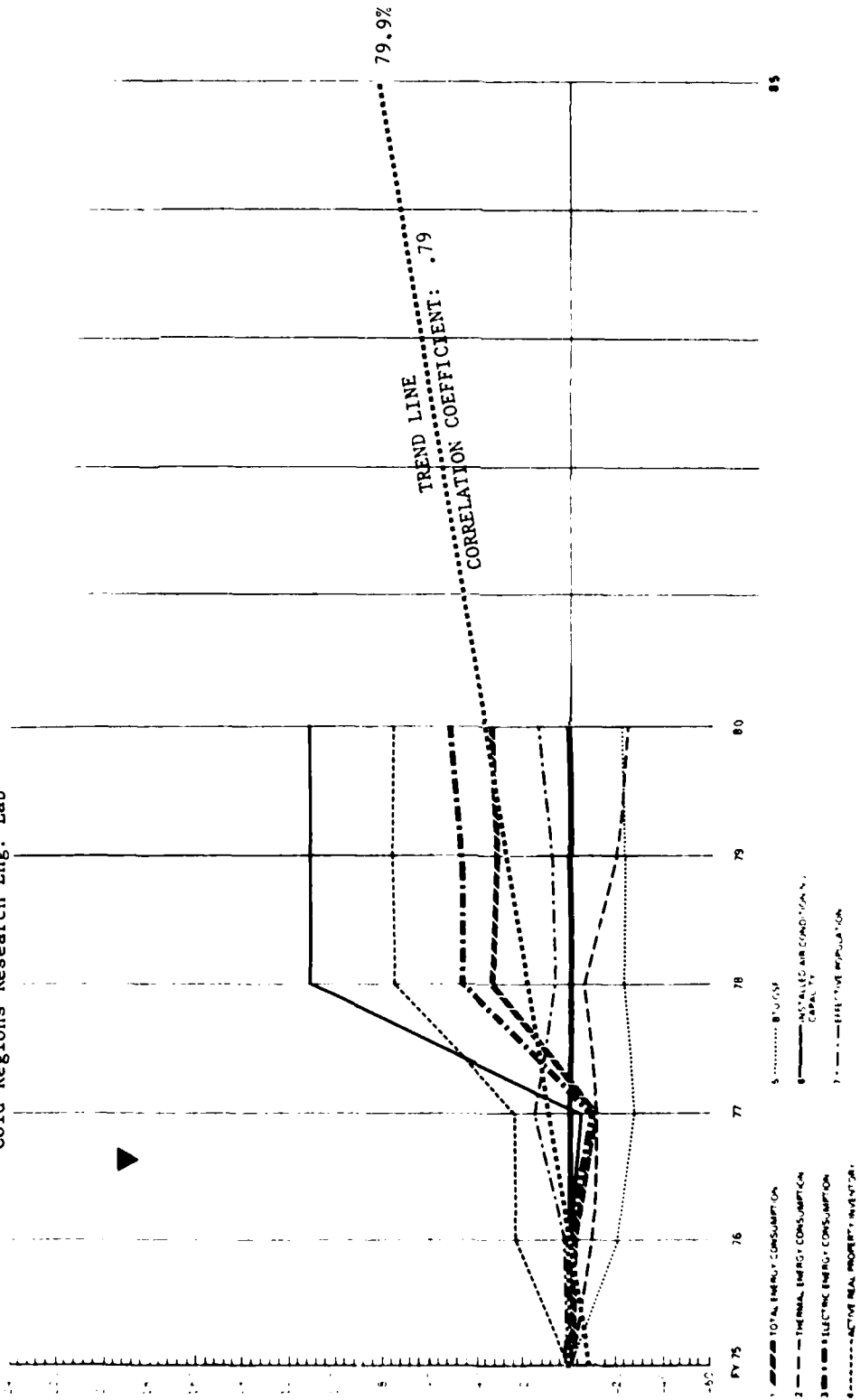
MAJCOM

ACTIVITY	S	T	R	M	P	NO
1 Energy Consumption (Btu)	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
2 Thermal En. Conv. to PD	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
3 Electrical En. Conv. to PD	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
4 Resident Population (Btu)	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
5 Non-Resident Population (Btu)	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
6 Population (Btu) - PD	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
7 Inactive Population (Btu)	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
8 En. Consumption/Pop. Served (Btu)	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
9 En. Consumption/Pop. (Btu)	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
10 Non-En. Consumption/Population	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
11 Installed Air Load Capacity (Btu)	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
12 Fuel Energy (Ton of Oil Cond.) (Btu)	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
13 Fuel Energy Inventory (Tons) (Btu)	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
14 Non-Resident Population	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
15 Energy Consumption/GSP (Btu)	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
16 Thermal En. Consumption/GSP (Btu)	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
17 Electrical En. Consumption/GSP (Btu)	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
18 kWh by Category	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352	133,612,352
Training						
Maintenance & Production						
Research, Development & Testing						
Security						
Overseas Contingent Support						
Hospital & Ambulance						
Administration						
Bachelor Housing						
Community Facilities						
Family Housing						
Operational Buildings						
Utility Buildings						
Other						

133,612,352

REMARKS

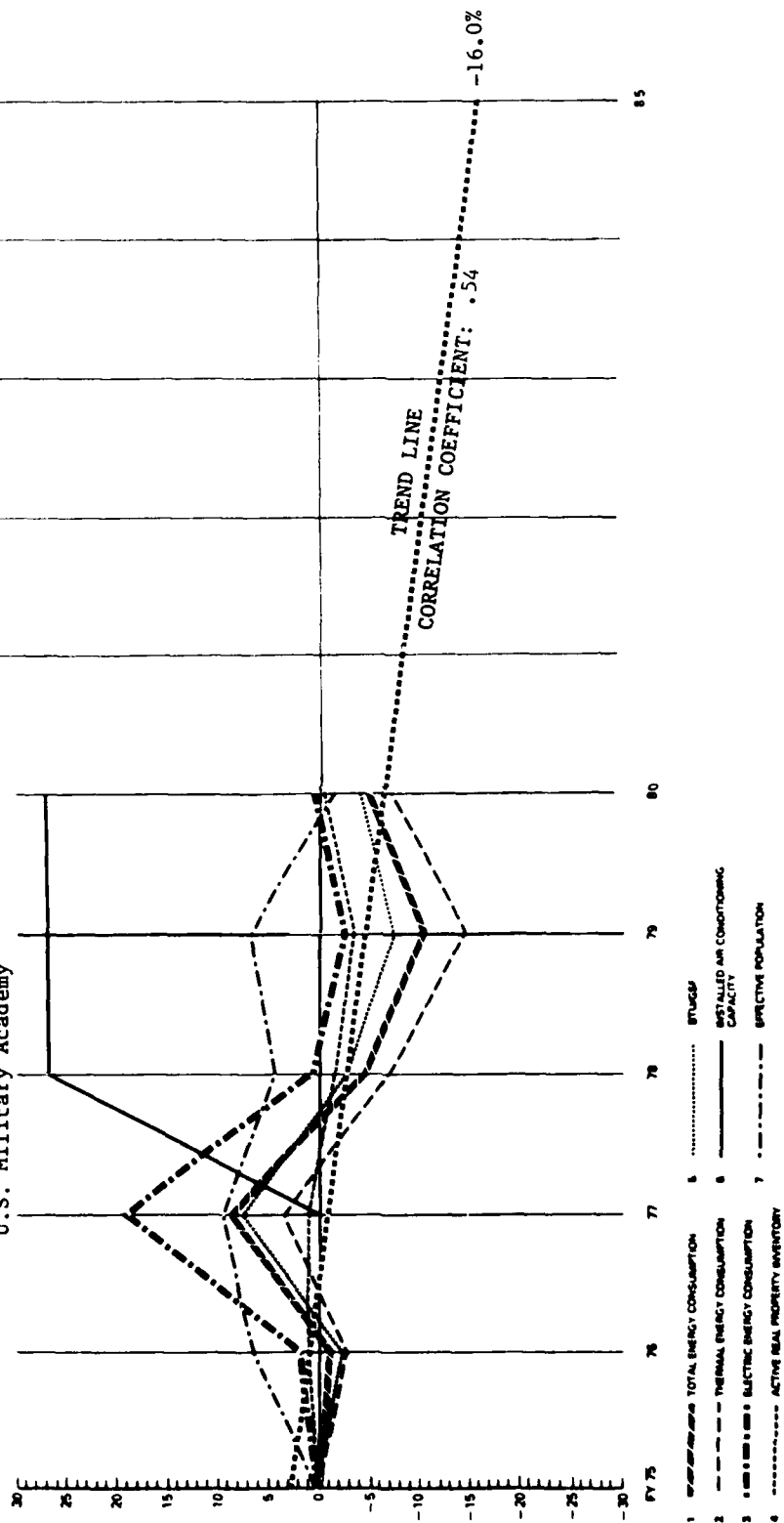
Cold Regions Research Eng. Lab



UNITS	75	76	77	78	79	80
1 Energy Consumption (Btu)	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
2 Thermal En. Cons. (Btu)	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
3 Electrical En. Cons. (Kwh)	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
4 Resident Population (Btu)	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
5 Non-Resident Population (Btu)	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
6 Population Served (Btu)	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
7 Effective Population (Btu)	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
8 En. Consumption/Pop. Served (Btu)	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
9 En. Consumption/Pop. Served (Kwh)	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
10 Electric En. Consumption/Resident Population	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
11 Inhabited Area (Capacity (Btu)	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
12 Electric Load Capacity (Btu)	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
13 Peak Power Inventory (Btu & PD)	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
14 Effective Population	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
15 Energy Consumption/GSF & PD	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
16 Thermal En. Consumption/GSF & PD	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
17 Electrical En. Consumption/GSF & PD	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
18 Btu by Category	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274	1,424,274
Training						
Maintenance & Production						
Research, Development & Testing						
Storage						
Other Covered Storage						
Headquarters & Medical						
Administration						
Bachelor Housing						
Community Fee Area						
Family Housing						
Operational Building						
Other						

**Population Served is the total Resident & Non-Resident Population
 *PD is Percent Drawdown from Base Year
 *Btu by Category is Completed June 1977
 **1977 Pop in Resident + 1/3 Non-Resident

U.S. Military Academy

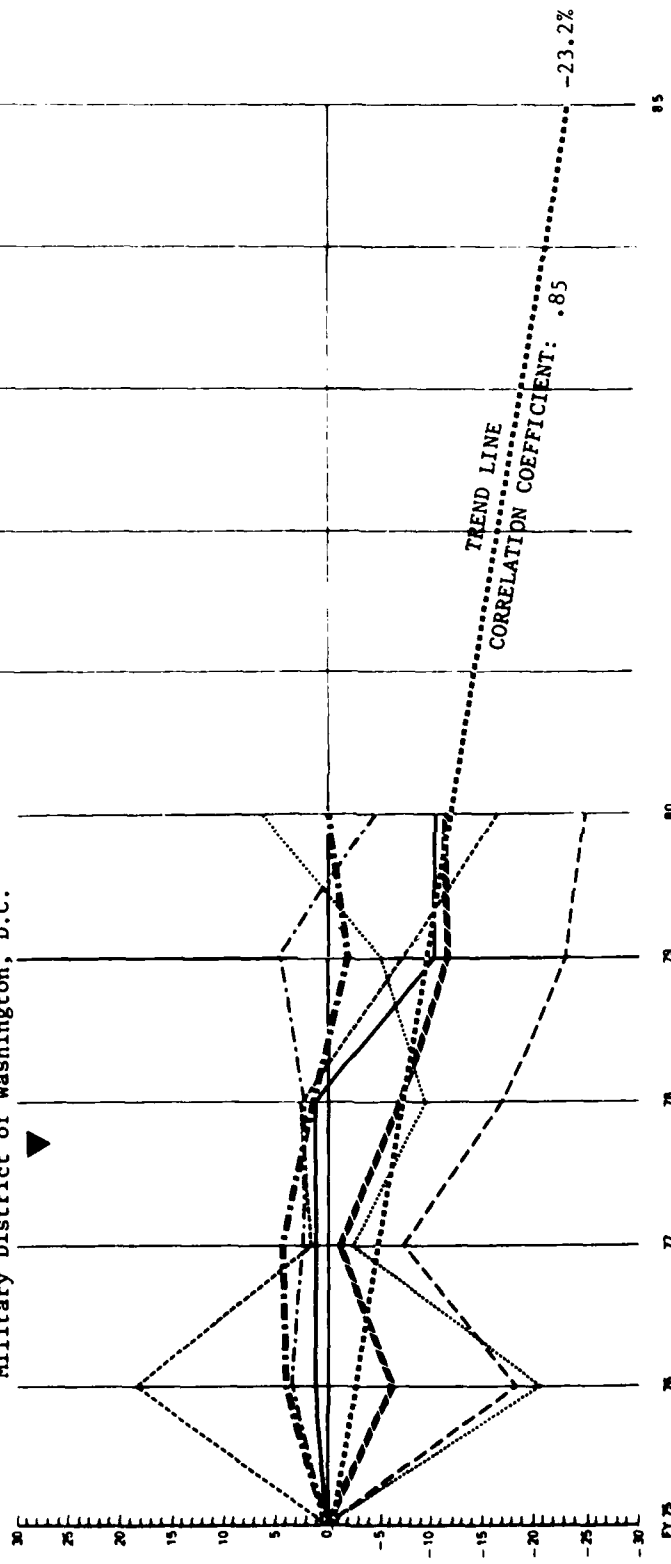


U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION U.S. MILITARY ACADEMY, WV MACOM USMA CLIMATIC REGION HDD, DD, CDD

UNITS	P5	P6	P7	P8	P9	P10	P11
1 Energy Consumption & PD	1,945,933	1,920,247	2,111,579	1,771,471	1,540,815	1,310,000	1,100,000
2 Thermal En. Cons & PD	1,410,455	1,272,525	1,351,875	1,344,111	1,413,900	1,512,421	1,610,000
3 Electrical En. Cons & PD	635,506	647,722	759,904	427,360	126,915	64,157	64,157
4 Resident Population & PD	11,532	11,521	11,409	10,000	11,980	13,491	13,491
5 Non-Resident Population & PD	3,136	5,452	6,429	10,000	13,906	18,641	18,641
6 Population & PD	14,724	17,035	18,279	20,000	25,886	32,541	32,541
7 Effective Population *** & PD	12,592	13,400	14,576	15,279	17,986	21,641	21,641
8 En. Consumption/Pop Served & PD	122.1	112.6	115.2	115.2	115.2	115.2	115.2
9 En. Consumption/Pop & PD	154.5	143.3	153.0	153.0	153.0	153.0	153.0
10 Electric En. Consumption/Resident Population	5,165	5,165	5,165	5,165	5,165	5,165	5,165
11 Resident Air Cond Capacity & PD	118.5	120.7	131.6	131.6	131.6	131.6	131.6
12 Elec Energy/Ton of Air Cond & PD	10,210	10,318	10,318	10,318	10,318	10,318	10,318
13 Heat Property Inventory (RPI) & PD	190,591	186,105	204,940	225,129	261,841	276,060	276,060
14 RPI/Effective Population	128,347	123,311	131,112	131,112	131,112	131,112	131,112
15 Energy Consumption/GSF & PD	8,506	8,506	8,506	8,506	8,506	8,506	8,506
16 Thermal En. Consumption/GSF & PD	6,348	6,348	6,348	6,348	6,348	6,348	6,348
17 Electrical En. Consumption/GSF & PD	2,158	2,158	2,158	2,158	2,158	2,158	2,158
18 RPI by Category	948	948	948	948	948	948	948
Training	363	363	363	363	363	363	363
Maintenance & Production	252	252	252	252	252	252	252
Research & Development & Testing	166	166	166	166	166	166	166
Storage	401	401	401	401	401	401	401
Other Covered Storage	2,531	2,531	2,531	2,531	2,531	2,531	2,531
Hospital & Medical	1,980	1,980	1,980	1,980	1,980	1,980	1,980
Administration	1,281	1,281	1,281	1,281	1,281	1,281	1,281
Community Facilities	1,165	1,165	1,165	1,165	1,165	1,165	1,165
Family Housing	114	114	114	114	114	114	114
Operational Buildings	114	114	114	114	114	114	114
Utility Buildings	114	114	114	114	114	114	114
Other	114	114	114	114	114	114	114

*Population Served is the total Resident & Non-Resident Population
 **RPI Pop is Resident + Non-Resident
 ***PD is Percent Deviation from Base Year

Military District of Washington, D.C.



- 1 TOTAL ENERGY CONSUMPTION
- 2 THERMAL ENERGY CONSUMPTION
- 3 ELECTRIC ENERGY CONSUMPTION
- 4 ACTIVE REAL PROPERTY INVENTORY
- 5 STUDES
- 6 INSTALLED AIR CONDITIONING CAPACITY
- 7 EFFECTIVE POPULATION

▼ FY 77 PP (R) Military District of Washington and the Department of Defense
 Completed Continuously Time 1975

U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION CLIMATIC REGION: HDD 3,111 CDD 1,115

MACOM: WMC

UNITS/PT	75	76	77	78	79	80
MBTU	1,182,321	1,107,525	1,169,548	1,099,153	1,400,822	1,122,000
MBTU	541,868	441,010	502,908	456,653	522,059	408,579
MBTU	638,453	666,515	666,640	642,500	878,763	713,421
PEOPLE	5,292	5,296	5,120	5,120	5,455	5,160
PEOPLE	22,830	29,360	29,360	29,360	29,360	29,360
PEOPLE	31,122	36,652	36,680	36,680	36,680	36,680
PEOPLE	14,574	15,081	14,902	14,902	15,242	14,902
MBTU/CAP	31.7	32.0	31.9	31.9	31.2	31.5
MBTU/CAP	81.1	71.4	78.5	71.7	86.4	75.1
MBTU/CAP	120.5	125.5	130.2	128.7	131.5	115.0
TONS	9,066	9,166	9,166	9,166	9,166	9,166
MBTU/TON	70.4	72.5	72.7	70.8	77.1	79.7
RSP	4,982	5,900	5,055	5,120	4,625	4,172
RSP/CAP	16	19	16	16	16	16
BTU/GSF	232,319	182,716	231,365	214,628	275,421	252,191
BTU/GSF	109,162	75,086	99,487	88,018	90,168	98,478
BTU/GSF	128,152	112,630	131,878	126,610	135,253	153,712
RSP	400	494	380	380	344	366
RSP	155	245	290	290	365	325
RSP	520	612	418	418	266	363
RSP	83	95	66	66	67	67
RSP	833	1,607	869	869	929	813
RSP	1,173	1,153	747	747	982	924
RSP	857	890	1,404	1,404	788	868
RSP	588	588	651	651	575	571
RSP	196	95	95	95	65	62
RSP	129	220	220	220	246	25
RSP	Not Available	BASE	BASE	BASE	BASE	BASE

- 1 Energy Consumption & PD
- 2 Thermal En. Cons & PD
- 3 Electrical En. Cons & PD
- 4 Resident Population & PD
- 5 Non-Resident Population & PD
- 6 Population Services** & PD
- 7 Effective Population*** & PD
- 8 In Consumption/Pop Served to PD
- 9 In Consumption/Pop & PD
- 10 Electric En. Consumption/Resident Population
- 11 Insulated Air Cooled Capacity & PD
- 12 Elec Energy/Ton of Air Cooled & PD
- 13 Real Property Inventory (RPI) & PD
- 14 RPI/Effective Population
- 15 Energy Consumption/GSF & PD
- 16 Thermal En. Consumption/GSF & PD
- 17 Electrical En. Consumption/GSF & PD
- 18 RPI by Category

- Training
- Maintenance & Production
- Research, Development & Testing
- Storage
- Other Covered Storage
- Hospital & Medical
- Administration
- Residence Housing
- Community Facilities
- Family Housing
- Operational Buildings
- Utility Buildings
- Other

**PD is Percent Deduction from Base Year

***Population Served is the Total Resident & Non-Resident Population

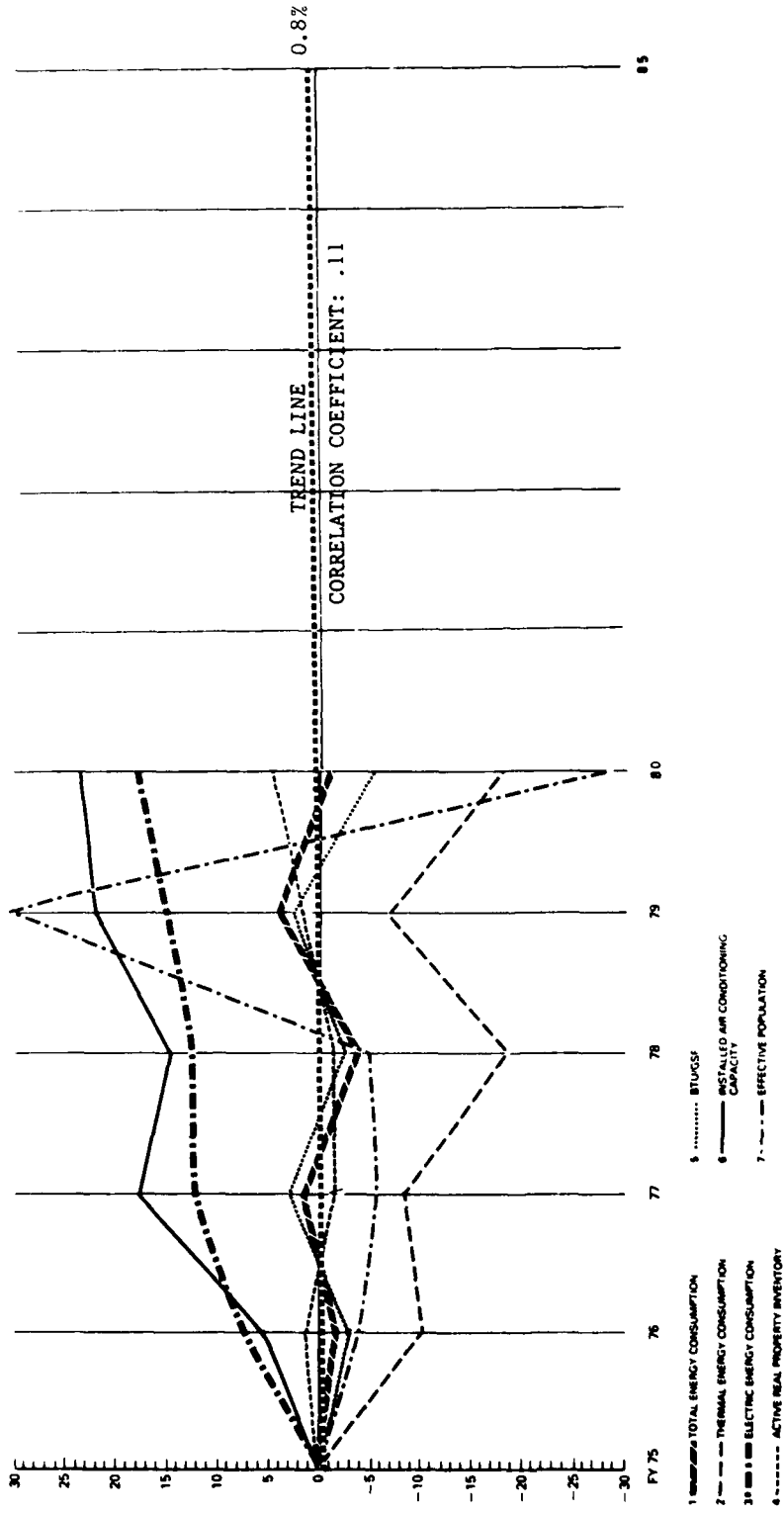
****RPI Pop is Resident + 1/2 Non-Resident

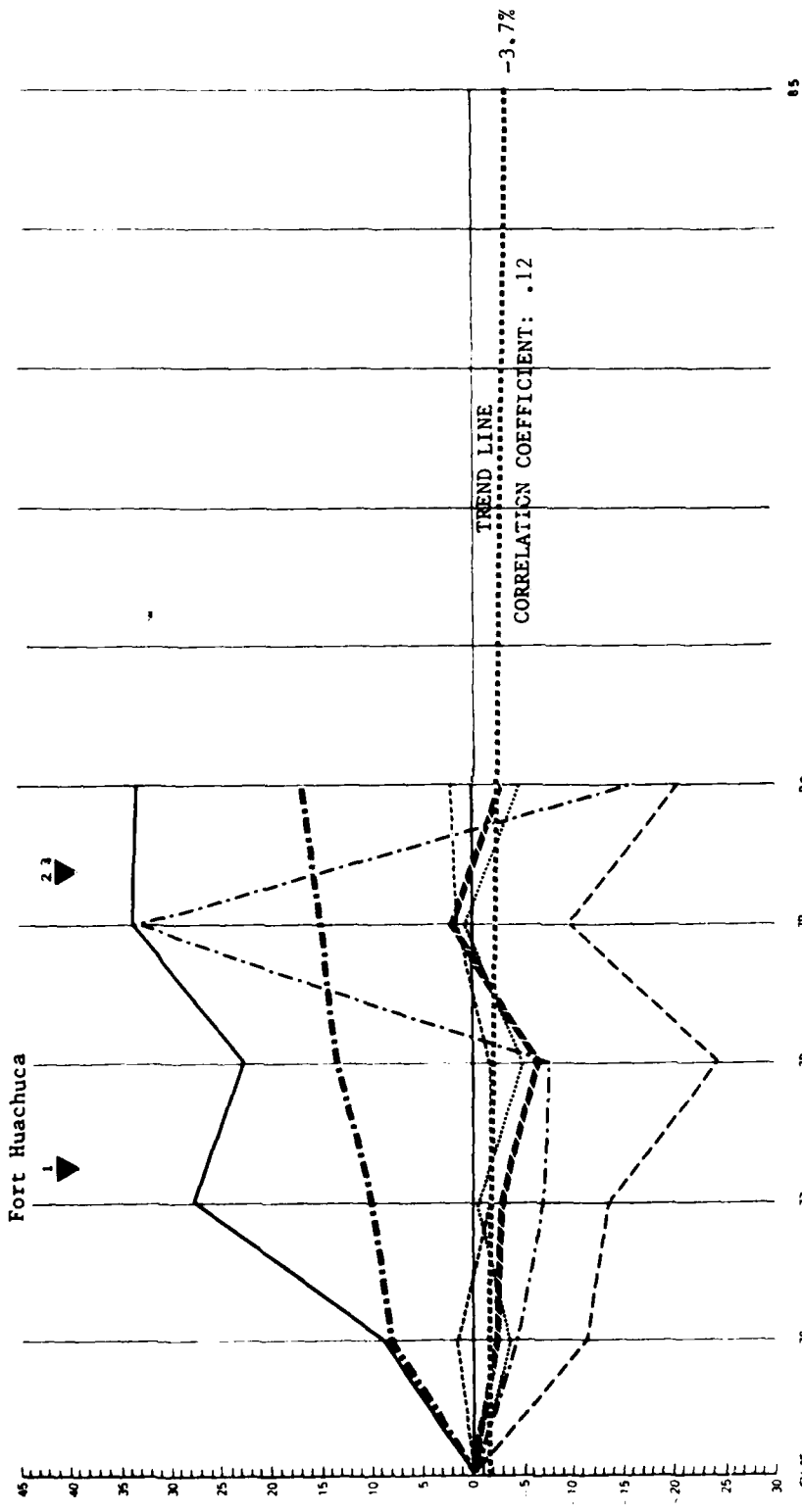
Includes Cameron Station, VA., Ft. Myer, VA., and Ft. McNair, Washington, DC.

▼ FY 77 ECIP (Ft. McNair) - Insulation, Storms and Thermostats - \$120,000 - Completed (estimated) June 1978

REMARKS

Army Communications Command





U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - MACOM - CLIMATIC REGION - HOD - COD

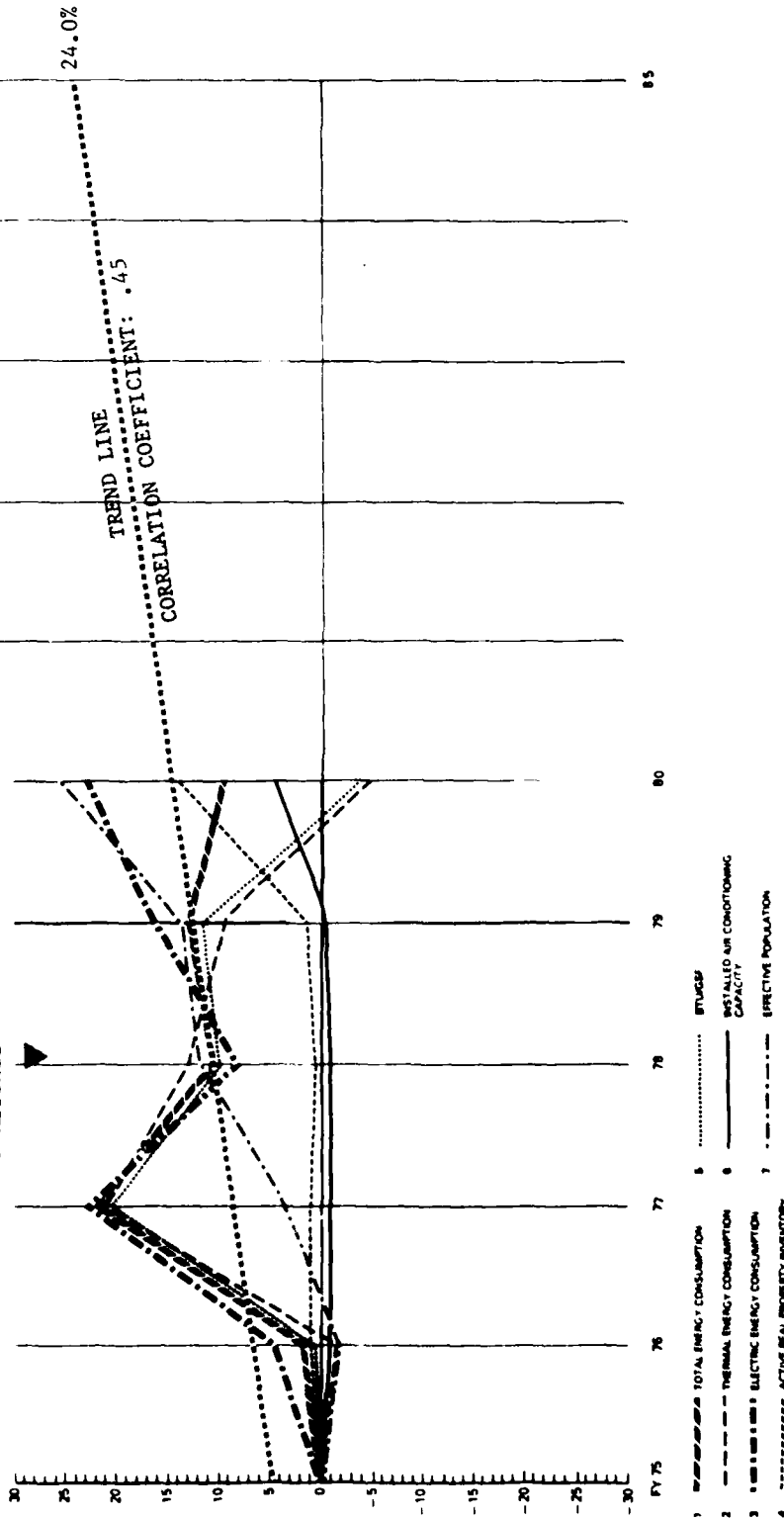
UNITS	75	76	77	78	79	80
WRTU	1,270,227	1,270,227	1,270,227	1,270,227	1,270,227	1,270,227
WRTU	252,876	252,876	252,876	252,876	252,876	252,876
WRTU	667,487	667,487	667,487	667,487	667,487	667,487
PEOPLE	1,128,711	1,128,711	1,128,711	1,128,711	1,128,711	1,128,711
PEOPLE	4,527	4,527	4,527	4,527	4,527	4,527
PEOPLE	16,411	16,411	16,411	16,411	16,411	16,411
PEOPLE	11,183	11,183	11,183	11,183	11,183	11,183
WRTUCAP	86.6	86.6	86.6	86.6	86.6	86.6
WRTUCAP	106.1	106.1	106.1	106.1	106.1	106.1
WRTUCAP	58.4	58.4	58.4	58.4	58.4	58.4
TONS	4,019	4,019	4,019	4,019	4,019	4,019
WRTUTDM	7,180	7,180	7,180	7,180	7,180	7,180
WRTUCAP	55	55	55	55	55	55
BTUGSF	134,586	134,586	134,586	134,586	134,586	134,586
BTUGSF	103,131	103,131	103,131	103,131	103,131	103,131
BTUGSF	91,455	91,455	91,455	91,455	91,455	91,455
WRTU	4,416	4,416	4,416	4,416	4,416	4,416
WRTU	419	419	419	419	419	419
WRTU	113	113	113	113	113	113
WRTU	138	138	138	138	138	138
WRTU	170	170	170	170	170	170
WRTU	763	763	763	763	763	763
WRTU	1,508	1,508	1,508	1,508	1,508	1,508
WRTU	64.0	64.0	64.0	64.0	64.0	64.0
WRTU	2,75.0	2,75.0	2,75.0	2,75.0	2,75.0	2,75.0
WRTU	65	65	65	65	65	65
WRTU	7.0	7.0	7.0	7.0	7.0	7.0
WRTU	2.0	2.0	2.0	2.0	2.0	2.0

PD is Percent Deviation from Base Year **Population Saved is the total Resident & Non Resident Population ***EP Pop & Resident + (D) Non Resident

1 V 76 EICP - Electrical Alterations, Cooling System Alterations and Solar Film - \$172,773 - Completed December 1976
 2 V 77 EICP - Insulation & Window Alterations - \$55,000 - Completed (estimated) February 1980
 3 V 79 EICP - Energy Control System - \$478,000 - Completed February 1980

- 1 Energy Consumption (WRTU)
- 2 Thermal En. Cons. (WRTU)
- 3 Electrical En. Cons. (WRTU)
- 4 Resident Population (PEOPLE)
- 5 Non Resident Population (PEOPLE)
- 6 Population Saved (PEOPLE)
- 7 Electric Population (WRTUCAP)
- 8 En. Consumption (Pop. Saved) (WRTUCAP)
- 9 En. Consumption (EP Pop.) (WRTUCAP)
- 10 Electric En. Consumption (Resident Population) (TONS)
- 11 Insulated Air Cons. (WRTUTDM)
- 12 Fuel Energy of Air (WRTUCAP)
- 13 Heat Property Inventory (WRTUCAP)
- 14 Heat Effective Population (BTUGSF)
- 15 Energy Consumption (WRTUCAP)
- 16 Thermal En. Consumption (WRTUCAP)
- 17 Electrical En. Consumption (WRTUCAP)
- 18 WRTU by Category
- Training
- Maintenance & Production
- Research, Development & Testing
- Storage
- Non Available Separately Included Above
- Hospital & Medical
- Administration
- Behavior Housing
- Community Facilities
- Family Housing
- Operational Buildings
- Utility Buildings
- Other

Fort Ritchie



- 1 TOTAL ENERGY CONSUMPTION
- 2 THERMAL ENERGY CONSUMPTION
- 3 ELECTRIC ENERGY CONSUMPTION
- 4 ACTIVE REAL PROPERTY INVENTORY

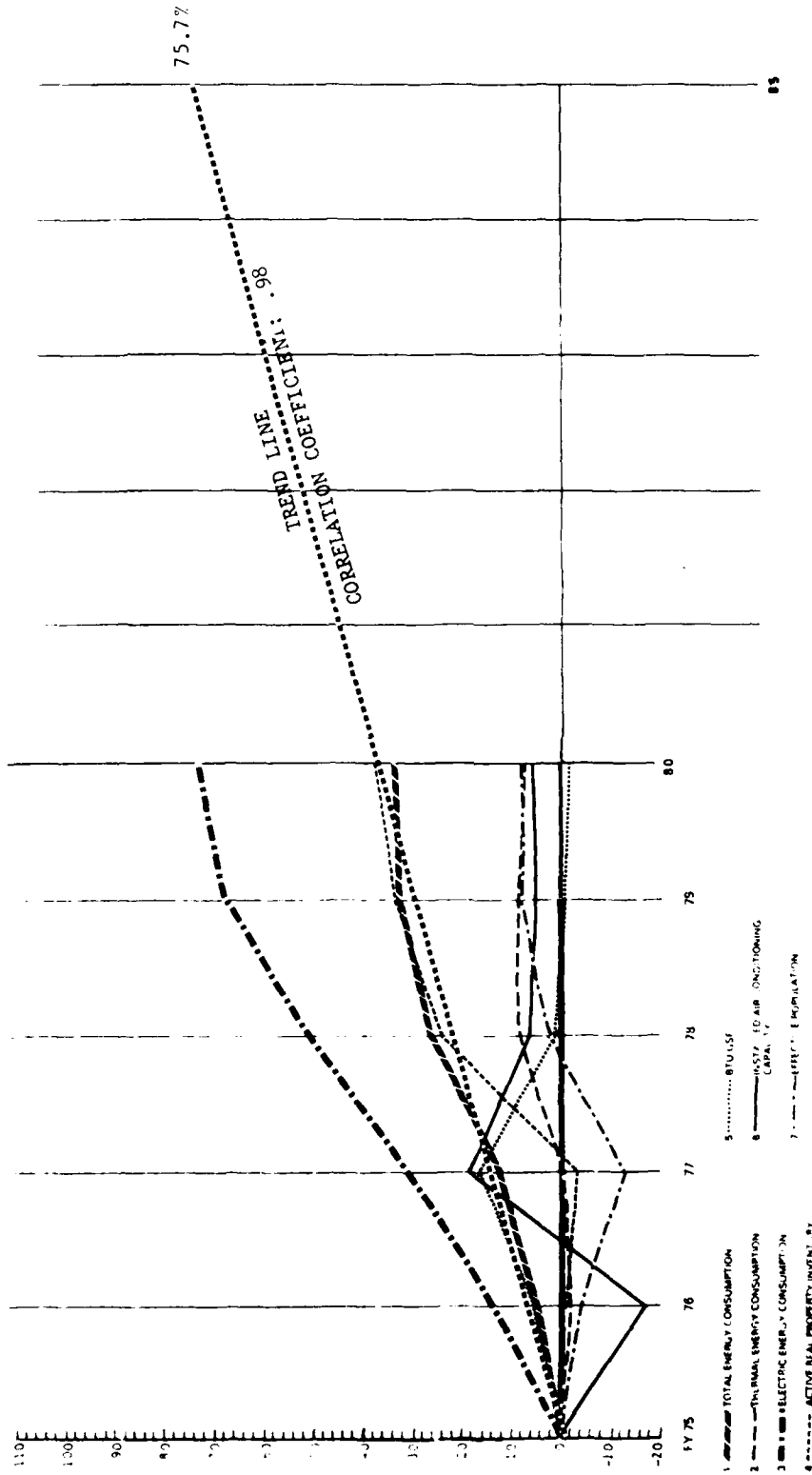
▼ FY 77 Family Housing (FHP) Department (see Appendix A for details)

U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - FT. BELLEVUE, MD. MACOM AUC CLIMATIC REGION - HDD 5,842 CDD 682

UNITS/FY	75	76	77	78	79	80
1 Energy Consumption B PD	226,154	290,674	338,005	305,276	311,002	301,024
2 Thermal En Cons B PD	135,950	141,625	154,575	151,625	150,000	154,000
3 Electrical En Cons B PD	140,265	146,269	152,330	153,651	161,002	147,024
4 Resident Population B PD	1,702	1,832	1,852	1,983	1,850	1,850
5 Non Resident Population B PD	1,833	1,841	1,841	1,841	1,841	1,841
6 Population Served** B PD	3,535	3,673	3,693	3,824	3,691	3,691
7 Effective Population*** B PD	2,310	2,251	2,066	2,066	2,066	2,066
8 En Consumption/Pop Served B PD	78.3	80.7	81.7	80.7	80.8	80.7
9 En Consumption/Pop B PD	119.6	124.0	124.1	118.1	118.7	109.1
10 Electric En Consumption/Resident Population	82.5	82.7	82.5	76.5	76.5	76.5
11 Available Air Cond Capacity B PD	2,085	2,067	2,067	2,067	2,067	2,067
12 Elec Energy/Ton of Air Cond B PD	1,286	1,403	1,401	1,401	1,401	1,401
13 Real Property Inventory (RPI) B PD	154,664	155,641	156,857	176,055	172,371	148,277
14 RPI/En Consumption	76,140	74,100	51,272	55,585	60,336	63,853
15 Energy Consumption/GSF B PD	8.3	8.4	8.5	8.7	8.7	8.7
16 Thermal En Consumption/GSF B PD	5.0	5.0	5.1	5.1	5.1	5.1
17 Electrical En Consumption/GSF B PD	3.3	3.4	3.4	3.6	3.6	3.6
18 RPI by Category						
Training	50	50	51	51	51	51
Maintenance & Production	6	6	7	7	7	7
Research, Development & Testing	66	66	66	66	66	66
Storage	75	75	75	75	75	75
Other General Storage	9	9	9	9	9	9
Hospital & Medical	195	196	196	196	196	196
Administration	158	158	158	158	158	158
Bachelors Housing	130	134	140	155	155	155
Community Facilities	433	433	433	433	433	433
Family Housing	433	433	433	433	433	433
Operational Buildings	1	1	1	1	1	1
Utility Buildings	1	1	1	1	1	1
Other	1	1	1	1	1	1
Non Available	BASE	BASE	BASE	BASE	BASE	BASE
Population Served in the Total Resident & Non-Resident Population	3,535	3,673	3,693	3,824	3,691	3,691
**Pop in Percent Deviation from Base Year	0	2.0	1.5	2.2	1.5	1.5
***Eff Pop in Resident + IG Non-Resident	2,310	2,251	2,066	2,066	2,066	2,066

REMARKS: FY 77 Family Housing ECTP Improvements - \$63,795 - Completed (estimated) October 1978

Health Services Command



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION CONSOLIDATION MACOM HSC

UNIT/TYPE	76	78	79	77	78	79	80
UTILITY	3,254,245	3,929,898	3,236,415	1,749	2,255,600	2,667	5,023,020
WBTU	2,215,868	2,171,303	2,212,734	-0.17	2,418,963	9.0	2,269,290
WBTU	1,538,457	1,755,595	2,031,681	31.41	2,130,637	51.51	2,921,991
PEOPLE	5,149	6,405	3,114	-15.21	5,203	3.85	11,211
PEOPLE	11,867	12,968	14,781	16.21	14,317	1.81	14,115
PEOPLE	17,011	17,371	17,115	-0.61	17,520	1.01	17,841
PEOPLE	9,106	8,278	7,978	-12.91	9,408	2.21	9,794
WATT/CAP	230.7	228.0	227.5	-12.11	270.9	23.21	281.5
WATT/CAP	422.4	443.9	545.1	29.37	502.8	12.61	515.4
WATT/CAP	238.8	398.5	608.3	102.91	547.9	49.91	663.3
TONS	22,928	18,939	27,111	42.8	24,652	10.1	24,129
WATT/TUR	67.1	92.7	74.6	-11.11	95.1	27.01	107.1
WATT/TUR	7,562	7,515	7,298	-3.21	9,191	23.51	10,090
WATT/CAP	0.81	0.86	0.92	11.11	1.01	21.81	1.06
BTU/GSF	497,789	572,561	580,216	16.61	505,489	1.51	485,879
BTU/GSF	291,806	288,929	303,197	3.21	257,185	-12.71	229,225
BTU/GSF	203,985	213,812	227,018	15.81	268,706	25.61	276,654
WATT	188	211	188		188		188
WATT	1,036	1,036	1,036		1,036		1,036
WATT	319	319	319		319		319
WATT	1,036	1,036	1,036		1,036		1,036
WATT	555	555	555		555		555
WATT	111	111	111		111		111
WATT	189	189	189		189		189
WATT	605	605	605		605		605

**PO & Percent Deviation from Base Year **Population Served & not used Resident & Non-Resident Population

- 1 Energy Consumption & PD
- 2 Thermal En. Conv. & PD
- 3 Electrical En. Conv. & PD
- 4 Resident Population & PD
- 5 Non-Resident Population & PD
- 6 Population Served** & PD
- 7 Effective Population*** & PD
- 8 En. Consumption/Pop Served & PD
- 9 En. Consumption/Pop & PD
- 10 Electric En. Consumption/Person Population
- 11 Installed Air Cond Capacity & PD
- 12 Elec Energy/Ton of Air Cond & PD
- 13 Real Property Inventory (RPI) & PD
- 14 RPI/Household Population
- 15 Energy Consumption/GSF & PD
- 16 Thermal En. Consumption/GSF & PD
- 17 Electrical En. Consumption/GSF & PD
- 18 WAT by Category

- Training
- Maintenance & Production
- Research, Development & Testing
- Storage
- Other Contract Storage
- Hospital & Medical
- Administration
- Bachelor Housing
- Community Fire Base
- Family Housing
- Operational Air Base
- Utility Buildings
- Other

REMARKS

Fort Detrick



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - FT. BELLE ME... MACOM_HIC... CLIMATIC REGION 3 HDD 5,050 CDD 9...

UNITS	75	76	77	78	79	80
1 Energy Consumption (Btu)	1,255,216	1,260,917	1,270,000	1,285,900	1,270,800	1,270,800
2 Thermal En. Conv. (Btu)	2,714,214	2,749,917	2,770,000	2,796,202	2,796,202	2,796,202
3 Thermal En. Conv. (Kwh)	681,914	681,914	681,914	681,914	681,914	681,914
4 Resident Population (Pop)	2,312	2,312	2,312	2,312	2,312	2,312
5 Non-Resident Population (Pop)	3,204	3,204	3,204	3,204	3,204	3,204
6 Population (Total) (Pop)	5,516	5,516	5,516	5,516	5,516	5,516
7 Electric Production (Kwh)	1,214	1,214	1,214	1,214	1,214	1,214
8 En. Consumption (Pop. Served) (Pop)	2,312	2,312	2,312	2,312	2,312	2,312
9 En. Consumption (Pop. Served) (Kwh)	2,714,214	2,749,917	2,770,000	2,796,202	2,796,202	2,796,202
10 Electric En. Consumption (Resident Population)	2,714,214	2,749,917	2,770,000	2,796,202	2,796,202	2,796,202
11 Electric En. Consumption (Resident Population)	2,714,214	2,749,917	2,770,000	2,796,202	2,796,202	2,796,202
12 Heat Energy (Ton of Air Cond. & PD)	1,214	1,214	1,214	1,214	1,214	1,214
13 Heat Property Inventory (RPH) (Pop)	1,214	1,214	1,214	1,214	1,214	1,214
14 Heat Property Inventory (RPH) (Kwh)	1,214	1,214	1,214	1,214	1,214	1,214
15 Energy Consumption (GSE & PD)	1,214	1,214	1,214	1,214	1,214	1,214
16 Thermal En. Consumption (GSE & PD)	1,214	1,214	1,214	1,214	1,214	1,214
17 Electrical En. Consumption (GSE & PD)	1,214	1,214	1,214	1,214	1,214	1,214
18 Pop by Category						
Training	16	16	16	16	16	16
Maintenance & Production	100	100	100	100	100	100
Research, Development & Testing	933	933	933	933	933	933
Storage	131	131	131	131	131	131
Other Covered Storage	131	131	131	131	131	131
Hospital & Medical	131	131	131	131	131	131
Administration	131	131	131	131	131	131
Business Housing	131	131	131	131	131	131
Community Facilities	131	131	131	131	131	131
Family Housing	131	131	131	131	131	131
General Buildings	131	131	131	131	131	131
Utility Buildings	131	131	131	131	131	131
Other	131	131	131	131	131	131

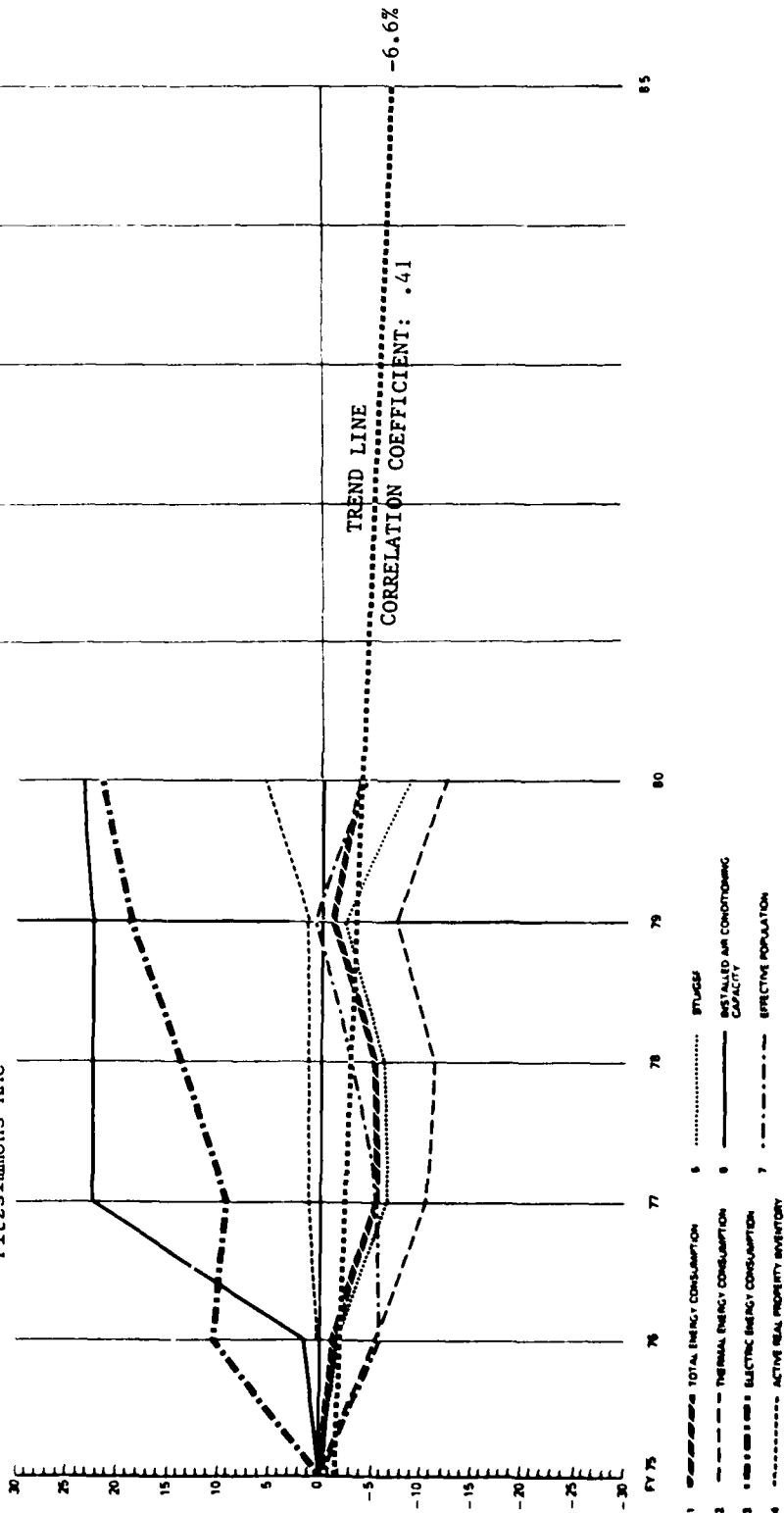
**Population Served is the total Resident & Non-Resident Population

**PD is Percent Deviation from Base Year

***EET Pop is Resident + 1/3 Non-Resident

REMARKS

Fitzsimmons AMC



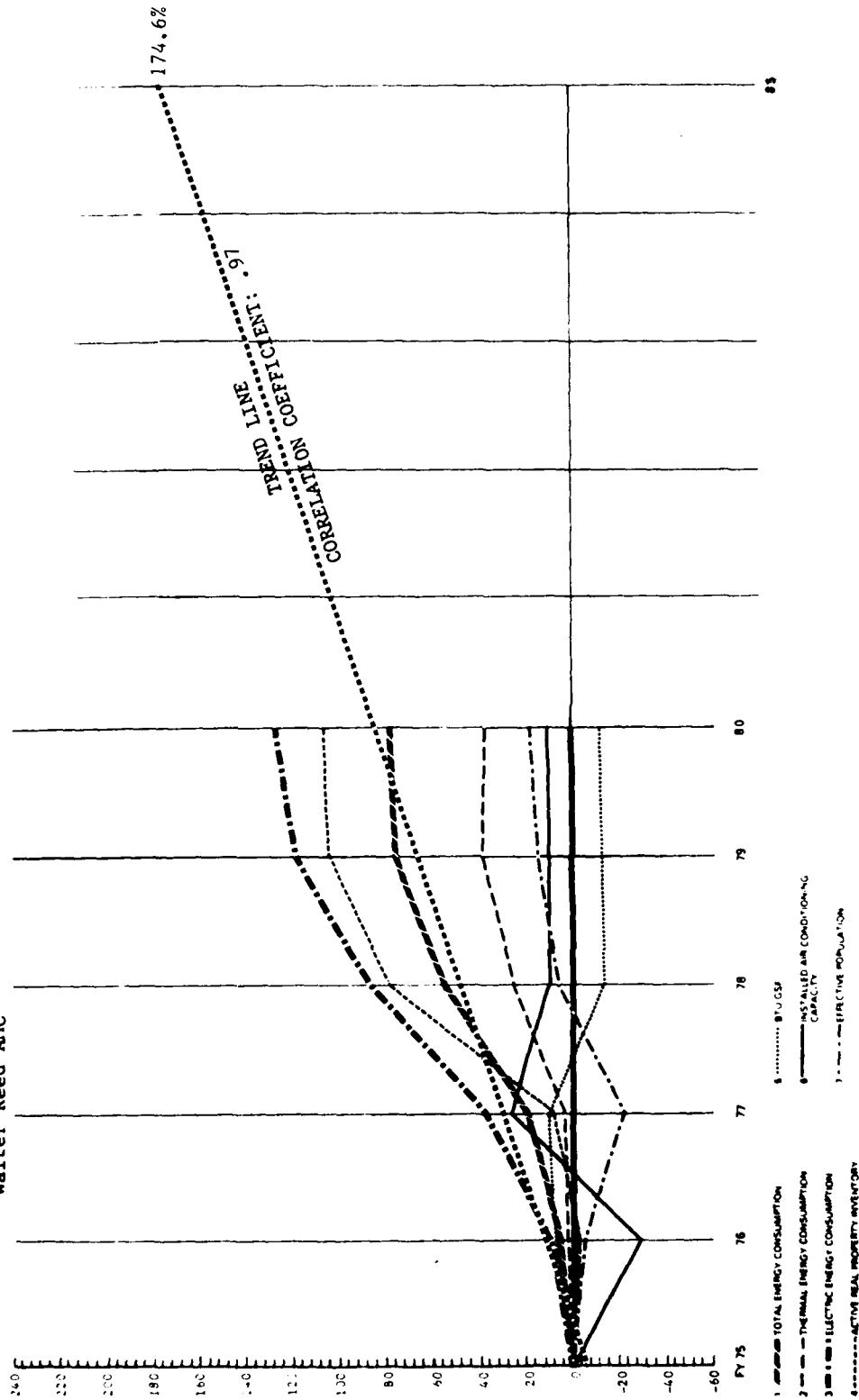
UNITS/FY	75	76	77	78	79	80
1 Energy Consumption B PD	815,370	802,378	769,378	773,500	805,863	842,223
2 Thermal En. Cons B PD	511,590	519,001	516,510	511,545	564,183	515,003
3 Electrical En. Cons B PD	201,830	282,777	252,868	261,955	241,680	327,220
4 Resident Population B PD	1,957	1,770	1,918	1,850	1,706	1,408
5 Non-Resident Population B PD	3,065	3,111	2,984	2,850	2,850	2,850
6 Population Servicer** B PD	5,022	4,881	4,802	4,754	4,466	4,252
7 Effective Population*** B PD	2,979	2,807	2,813	2,826	2,986	2,858
8 En. Consumption/Pop Served B PD	162.3	164.5	160.3	165.5	164.6	164.3
9 En. Consumption/Pop B PD	273.7	286.0	272.6	269.0	269.0	269.0
10 Electric En. Consumption/Inhabitant Population	104.2	127.0	112.8	119.6	118.2	130.2
11 Installed Air Cond Capacity B PD	1,037	1,051	1,223	1,223	1,273	1,283
12 Elec Energy/Ton of Air Cond B PD	286.6	213.9	175.4	182.1	169.9	191.9
13 Real Property Inventory (RPI) B PD	2,355	2,355	2,381	2,584	2,584	2,606
14 RPI/Inhabitant Population	86	91	92	90	86	94
15 Energy Consumption/GSF B PD	319,108	314,193	297,099	299,362	311,635	290,903
16 Thermal En. Consumption/GSF B PD	239,331	226,224	211,580	209,551	218,137	198,628
17 Electrical En. Consumption/GSF B PD	79,777	87,975	85,519	89,811	93,498	92,275
18 kWh per Category	163	163	163	163	163	163
Maintenance & Production	83	83	83	83	83	83
Research, Development & Training	63	63	63	63	63	63
Storage	127	126	126	126	126	126
Other Covered Storage	627	627	627	627	627	627
Hospital & Medical	235	235	235	235	235	235
Administration	396	396	396	396	396	396
Bachelor Housing	376	376	376	376	376	376
Community Facilities	648	648	648	648	648	648
Family Housing	31	31	31	31	31	31
Operational Buildings	26	26	26	26	26	26
Utility Buildings	26	26	26	26	26	26
Other	26	26	26	26	26	26

**Population Served is the total Resident & Non-Resident Population

**PD is Percent Deviation from Base Year

REMARKS

Walter Reed AMC



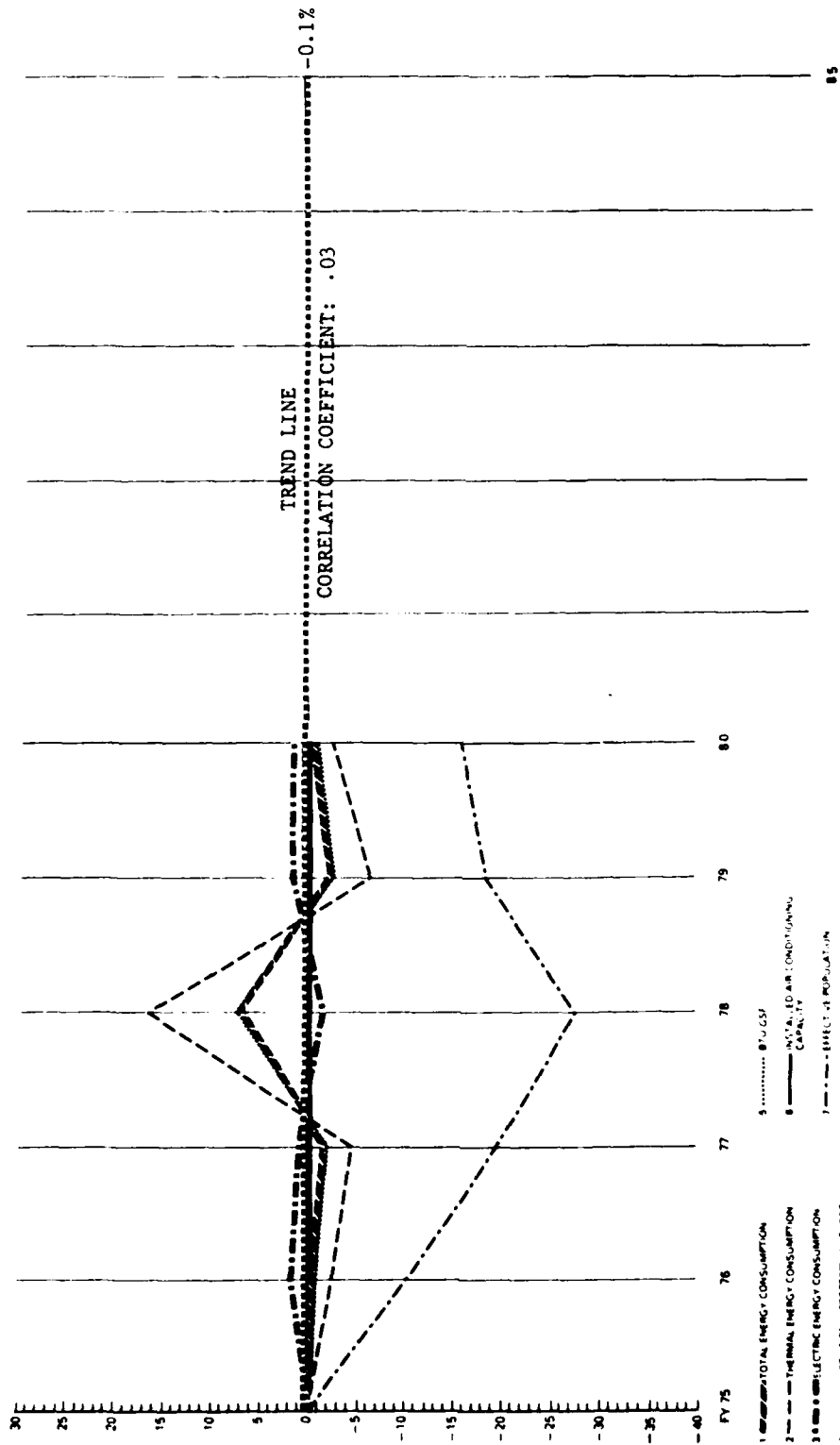
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION WALTER REED ANV. HANSL D.S.C. - MACOM HSC - CLIMATIC REGION 3 HDD 4,481 CDD 1,212

UNITS	75	76	77	78	79	80
1 Energy Consumption & PD	1,392,192	1,463,500	1,652,943	1,194,611	2,133,200	2,415,436
2 Thermal En Cons & PD	734,366	746,385	760,354	1,378,111	912,976	1,014,684
3 Electrical En Cons & PD	657,826	717,115	892,589	1,206,500	1,220,224	1,400,752
4 Non-Resident Population & PD	7,300	1,748	710	4,501	2,406	2,916
5 Non-Resident Population	6,593	7,510	8,372	2,740	2,105	2,540
6 Population Served** & PD	8,893	9,278	9,082	1,211	9,509	9,474
7 Effective Population*** & PD	4,498	4,258	3,501	4,272	4,777	5,114
8 En Consumption/Pop Served & PD	155.4	157.7	182.0	17.1	224.3	254.9
9 En Consumption/Pop & PD	307.3	343.7	472.1	53.6	447.0	472.3
10 Electric En Consumption/Population	282.4	410.2	1,257.2	136.5	505.8	477.5
11 Installed Air Cond Capacity & PD	14,898	10,574	18,969	27,311	16,310	16,310
12 Elec Energy/Ton of Air Cond & PD	63.6	67.8	47.1	7.9	74.6	87.9
13 Heat Property Inventory Btu's & PD	2,966,668	2,876,681	3,236,911	92,140	5,323,795	6,019,102
14 Implications Population	466,014	508,866	510,798	9,611	4,001,302	4,011,302
15 Energy Consumption/GSF & PD	246,388	259,522	234,667	1,601	172,323	168,567
16 Thermal En Consumption/GSF & PD	219,026	249,364	273,831	1,256	328,638	332,755
17 Electrical En Consumption/GSF & PD	129	14	14	14	14	14
18 Btu's by Category	47	46	46	51	50	49
Manufacture & Production	675	680	684	207	489	485
Research, Development & Testing	84	79	79	76	78	78
Storage	1,159	1,157	1,153	3,283	2,983	2,868
Other Covered Storage	152	160	157	165	696	754
Health & Medical	621	647	640	584	487	509
Administrative	291	280	280	361	351	351
Bachelor Housing	135	134	57	81	348	348
Community Fee Area	51	51	51	51	51	51
Family Housing	86	86	86	86	86	86
Operational Buildings	86	86	86	86	86	86
Utility Buildings	86	86	86	86	86	86
Other	86	86	86	86	86	86

PD is Percent Deviation from Base Year **Population Served is the total Resident & Non-Resident Population *En Pop is Resident + 1/2 Non-Resident

REMARKS

Intelligence & Security Command



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - MACOM TASON

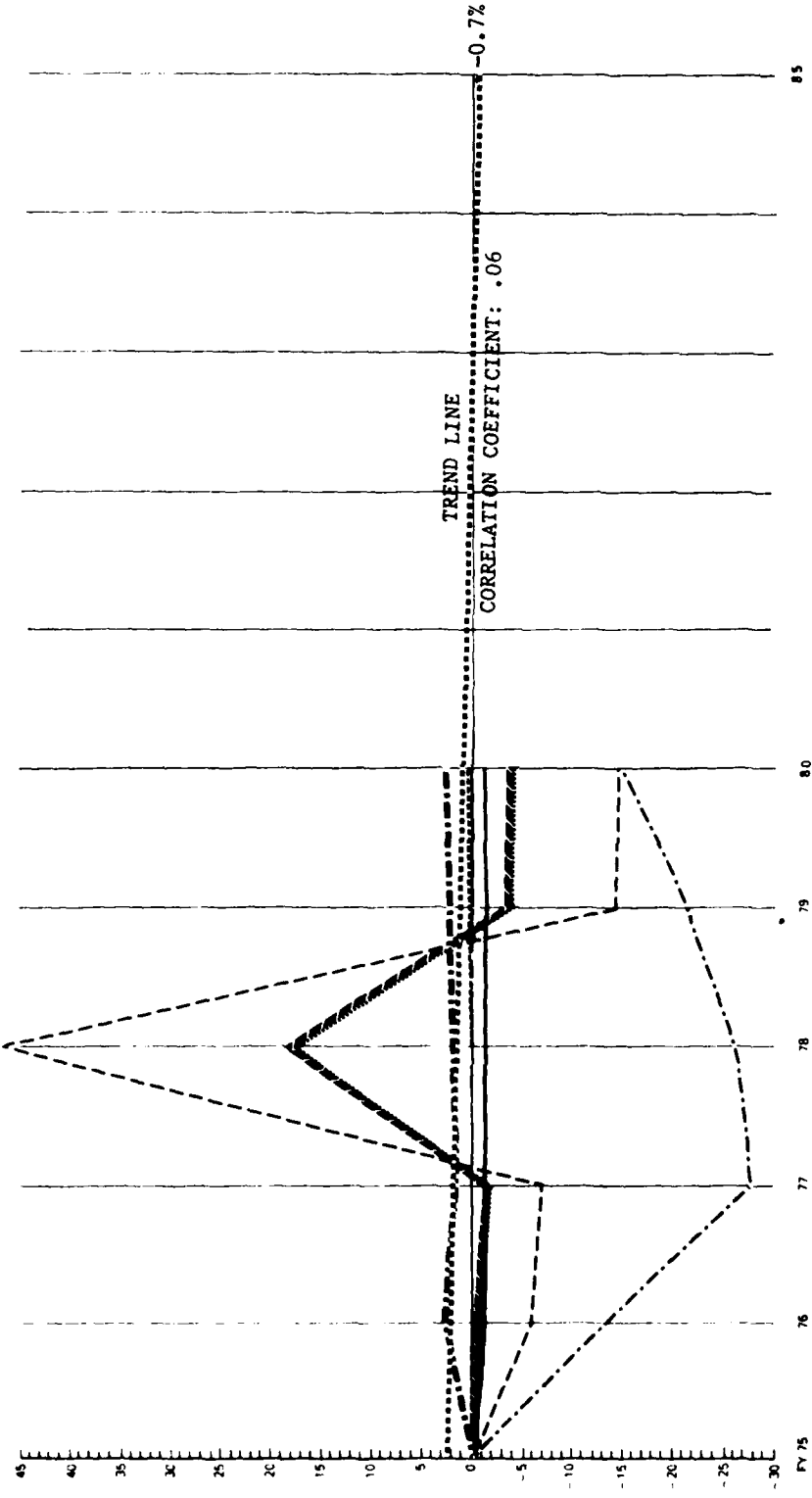
UNIT/ST	M	N	77	78	K	PD
1 Energy Consumption - PD	5,298	571,843	562,426	612,043	538,420	568,230
2 Thermal En Cons - PD	2,717	297,477	291,528	317,953	255,462	265,850
3 Electrical En Cons - PD	2,581	274,366	270,898	294,090	282,958	302,380
4 Resident Population - PD	2,394	1,474	1,757	1,571	1,257	1,782
5 Non Resident Population - PD	5,171	3,461	3,498	3,196	3,407	3,882
6 Population Served** - PD	5,333	5,835	5,255	4,767	5,364	5,624
7 Effective Population*** - PD	6,234	5,241	5,924	5,737	6,959	7,049
8 En Consumption Pop Served - PD	3,635	1,928	2,924	2,637	2,959	3,049
9 En Consumption Eff Pop - PD	1,577	1,144	1,073	1,284	1,041	1,161
10 Electric En Consumption/Resident - PD	1,167	1,111	1,324	1,473	1,188	1,186
11 Installed Air Cond Capacity - PD	1,167	1,111	1,324	1,473	1,188	1,186
12 Real Property Inventory (RPI) - PD	5,208	5,489	5,489	5,719	5,736	5,726
13 Real Property Inventory (RPI) - PD	5,208	5,489	5,489	5,719	5,736	5,726
14 RPI/Effective Population	2,381	2,381	2,386	2,386	2,389	2,389
15 Energy Consumption/GSF - PD	240,650	239,089	235,811	256,516	233,750	237,861
16 Thermal En Consumption/GSF - PD	114,942	111,753	109,609	133,258	107,016	111,281
17 Electrical En Consumption/GSF - PD	125,708	127,335	126,202	123,258	126,734	126,580
18 RPI by Category						
19 Training						
20 Maintenance & Production						
21 Research, Development & Testing						
22 Storage						
23 Other Covered Storage						
24 Hospital & Medical						
25 Administration						
26 Bachelor Housing						
27 Community Facilities						
28 Family Housing						
29 Operational Buildings						
30 Utility Buildings						
31 Other						

**PD is Percent Dependent from Base Year
 ***Population Served is the total Resident & Non-Resident Population
 ****# Pop of Resident + 1/3 Non Resident

THIS CONSOLIDATION INCLUDES ARLINGTON HALL STATION, VINT HILLS FARM STATION AND BIOGENES (OVERSEAS).

REMARKS

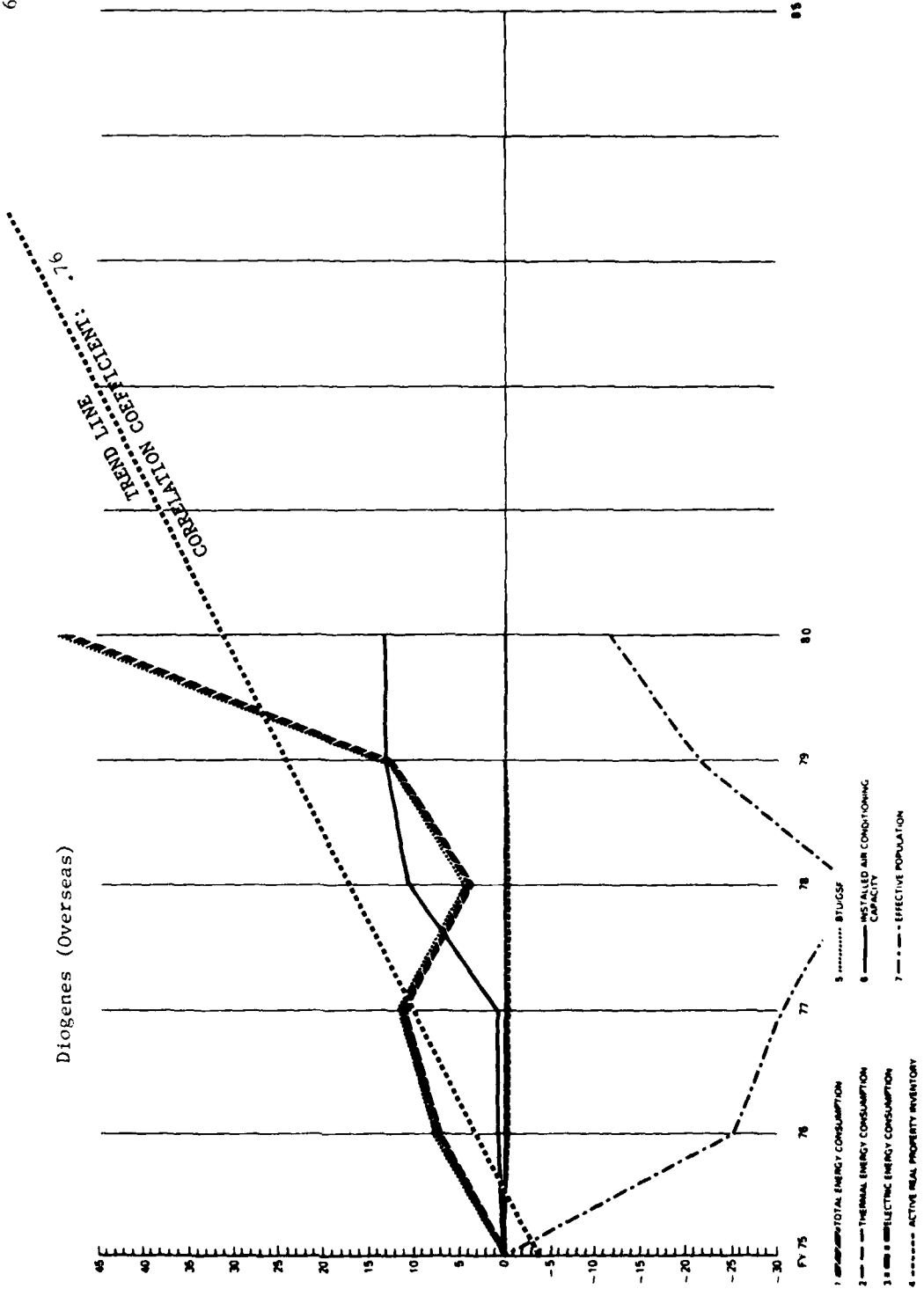
Arlington Hall Station



- 1 TOTAL ENERGY CONSUMPTION
- 2 THERMAL ENERGY CONSUMPTION
- 3 ELECTRIC ENERGY CONSUMPTION
- 4 ACTIVE REAL PROPERTY INVENTORY
- 5 INSTALLED AIR CONDITIONING CAPACITY
- 7 EFFECTIVE POPULATION

66.9%

Diogenes (Overseas)



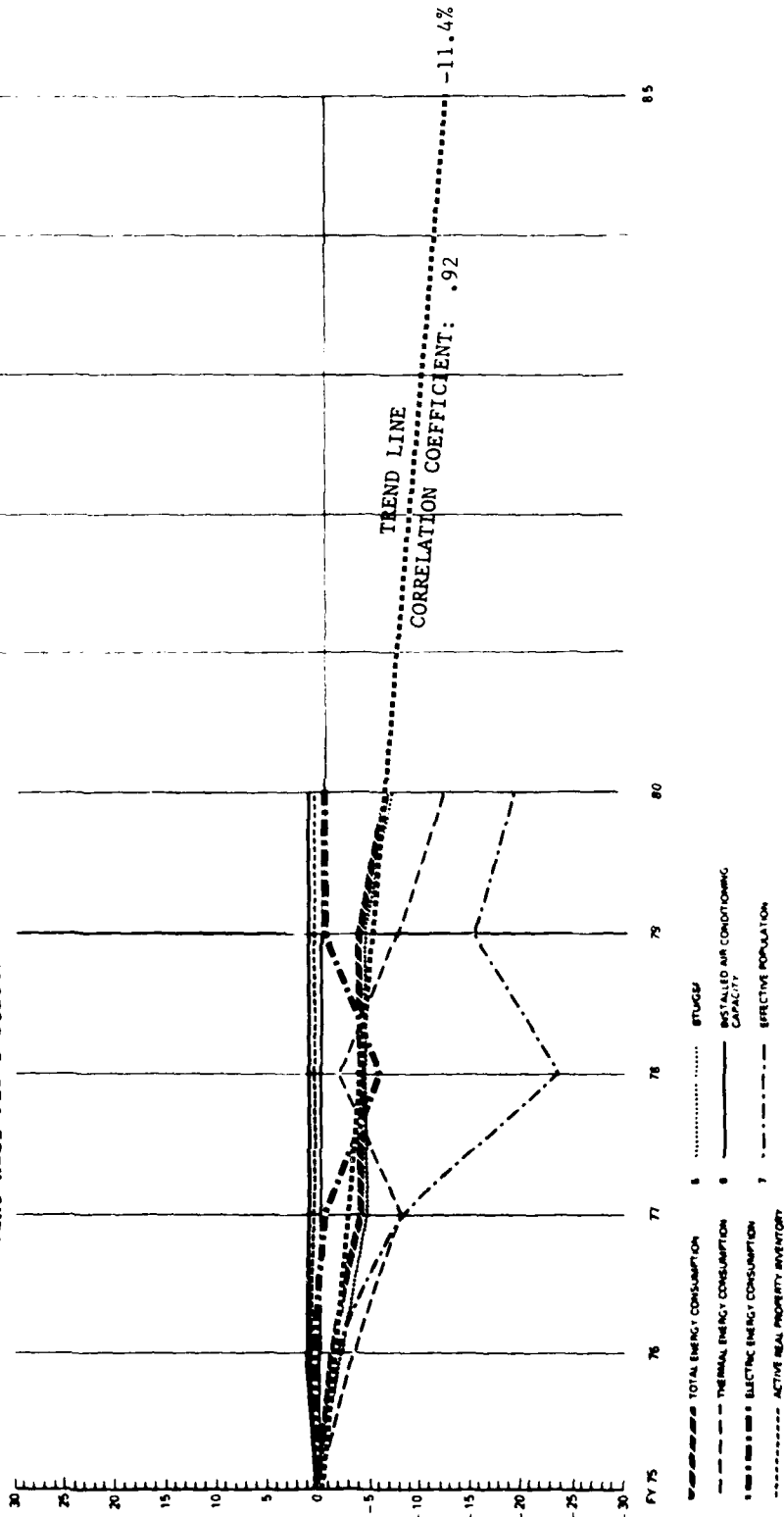
U.S. Army ANALYSIS OF ENERGY CONSUMPTION
 ENERGY CONSUMPTION INSTALLATION DECREASES

UNITS/KEY	75	76	77	78	79	80
1 Energy Consumption B PD	54,375	49,825	51,550	48,175	52,200	58,575
2 Thermal En. Cons. B PD	46,175	49,825	51,550	48,175	52,200	58,575
3 Electrical En. Cons. B PD	0	0	0	0	0	0
4 Resident Population B PD	580	417	340	326	443	506
5 Non Resident Population B PD	433	422	521	516	443	457
6 Population Served** B PD	1,013	839	861	842	880	963
7 Effective Population*** B PD	744	538	514	465	585	658
8 En. Consumption/Pop Served B PD	43.2	59.4	59.9	64.9	59.3	71.2
9 En. Consumption/Pop B PD	62.3	89.3	100.3	103.6	89.2	108.2
10 Electric En. Consumption/Resident Population	300	302	302	331	339	339
11 Installed Air Cond. Capacity B PD	366	365	365	365	366	366
12 Heat Energy/ton of Air Cond. B PD	49	65	71	78	63	63
13 Heat Property Inventory (MBT) B PD	126,708	136,507	141,233	131,986	142,623	187,363
14 Heat Effective Population	126,708	136,507	141,233	131,986	142,623	187,363
15 Energy Consumption/GSF B PD	0	0	0	0	0	0
16 Thermal En. Consumption/GSF B PD	0	0	0	0	0	0
17 Electrical En. Consumption/GSF B PD	0	0	0	0	0	0
18 kWh by Category						
Maintenance & Production	20	20	20	20	20	21
Research, Development & Testing	1	1	1	1	1	1
Storage	50	53	55	53	55	54
Other General Storage						
Housing & Hospital	3	3	3	3	3	3
Administration	18	18	18	18	18	18
Bachelor Housing	150	145	144	144	143	143
Community For Rent	61	62	60	66	66	66
Family Housing						
Operational Buildings						
Utility Buildings	43	42	42	42	42	42
Other	20	21	16	16	16	16

**PD is Percent Deviation from Base Year
 ***En Pop is Resident + 1/3 Non Resident
 Electric Energy is Generated On-Site

REMARKS

Vint Hill Farms Station



U.S. Army ANALYSIS OF ENERGY CONSUMPTION

INSTALLATION MACOM CLIMATIC REGION 1 HDD 5,010 CDD 920

UNITS/FTY	75	76	77	78	79	80
MRTU	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
MRTU	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
MRTU	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
PEOPLE	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
PEOPLE	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
PEOPLE	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
MBTU/CAP	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
MBTU/CAP	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
MBTU/CAP	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
TONS	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
MBTU/TON	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
KCF	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
Btu/GSF	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
Btu/GSF	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
Btu/GSF	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
KCF	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
KCF	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
KCF	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111
Research Development & Training						
Storage						
Other General Storage						
Hospital & Medical						
Administration						
Recreation						
Community Facilities						
Family Housing						
Operational Buildings						
Other						

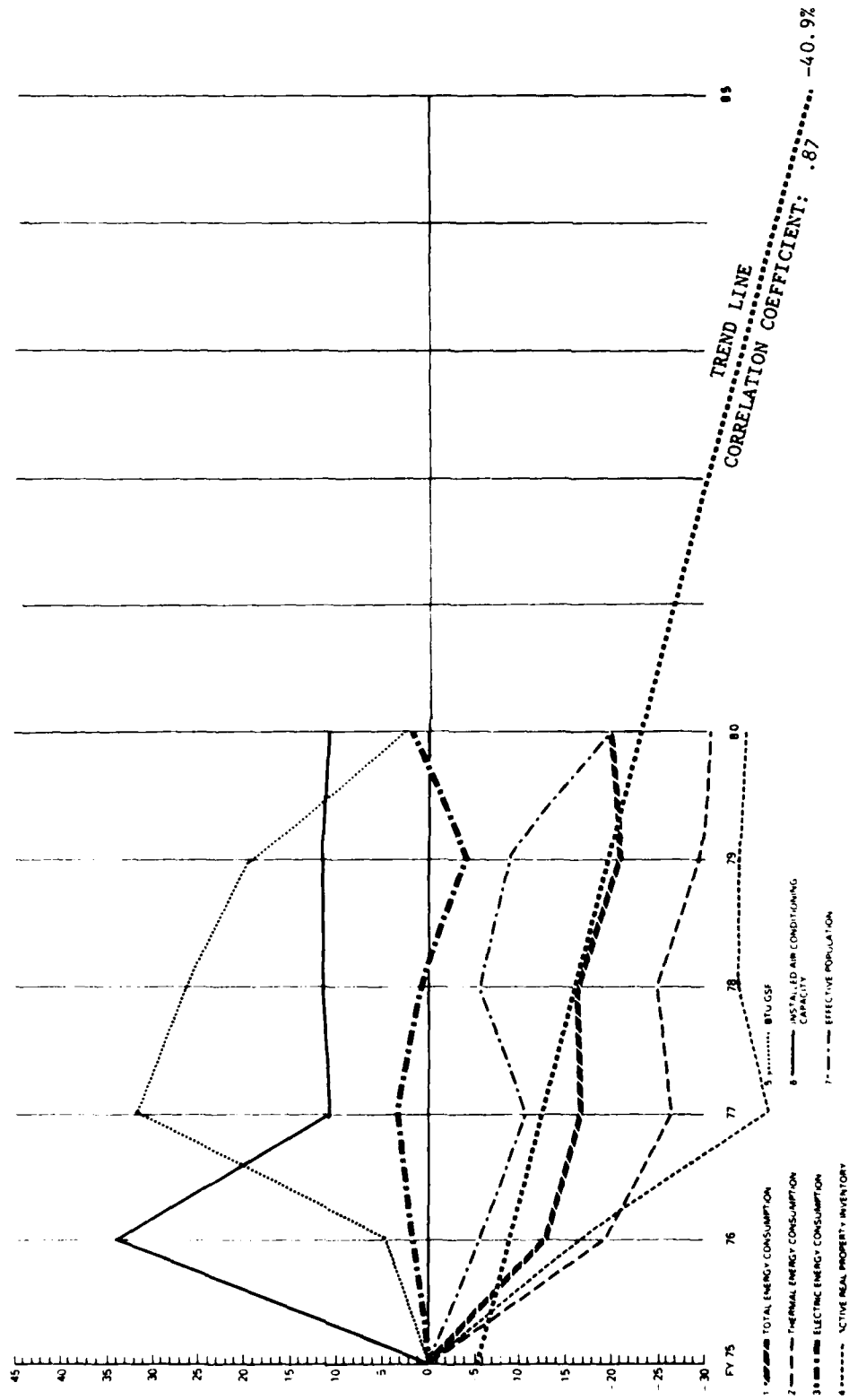
**Population 56 and is the total Resident & Non-Resident Population

**Population 115 is the total Resident & Non-Resident Population

**Population 115 is the total Resident & Non-Resident Population

REMARKS

Military Traffic Management Command



U.S. ARMY ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION CONSUMPTION MACOM

UTILITY	76	77	78	79	80
1 Energy Consumption & PD	1,392,420	1,226,981	1,251,218	1,181,816	1,196,527
2 Thermal En Cons & PD	1,392,420	1,226,981	1,251,218	1,181,816	1,196,527
3 Electrical En Cons & PD	1,392,420	1,226,981	1,251,218	1,181,816	1,196,527
4 Residential Population & PD	2,433,333	2,094,336	2,094,336	2,094,336	2,094,336
5 Non-Residential Population & PD	1,476	1,476	1,476	1,476	1,476
6 Population Served** & PD	2,695	2,695	2,695	2,695	2,695
7 Effective Population*** & PD	3,114	3,114	3,114	3,114	3,114
8 En Consumption/Pop Served & PD	476.8	476.8	476.8	476.8	476.8
9 En Consumption/Pop Resident	189.1	189.1	189.1	189.1	189.1
10 Electric En Consumption/Resident Population	189.1	189.1	189.1	189.1	189.1
11 Installed Air Cond Capacity & PD	2,662.6	2,662.6	2,662.6	2,662.6	2,662.6
12 Elec Energy/Ton of Air Cond & PD	4.44	4.44	4.44	4.44	4.44
13 Real Property Inventory (RPI) & PD	11,433	11,433	11,433	11,433	11,433
14 RPI/Resident Population	11,433	11,433	11,433	11,433	11,433
15 Energy Consumption/GSF & PD	107,532	107,532	107,532	107,532	107,532
16 Thermal En Consumption/GSF & PD	21,978	21,978	21,978	21,978	21,978
17 Electrical En Consumption/GSF & PD	85,554	85,554	85,554	85,554	85,554
18 RPI by Category					
Training					
Maintenance & Production					
Research, Development & Testing					
Storage					
Other Covered Storage					
Hospital & Medical					
Administration					
Bachelor Housing					
Community Facilities					
Family Housing					
Operational Buildings					
Utility Buildings					
Other					
Net Available					

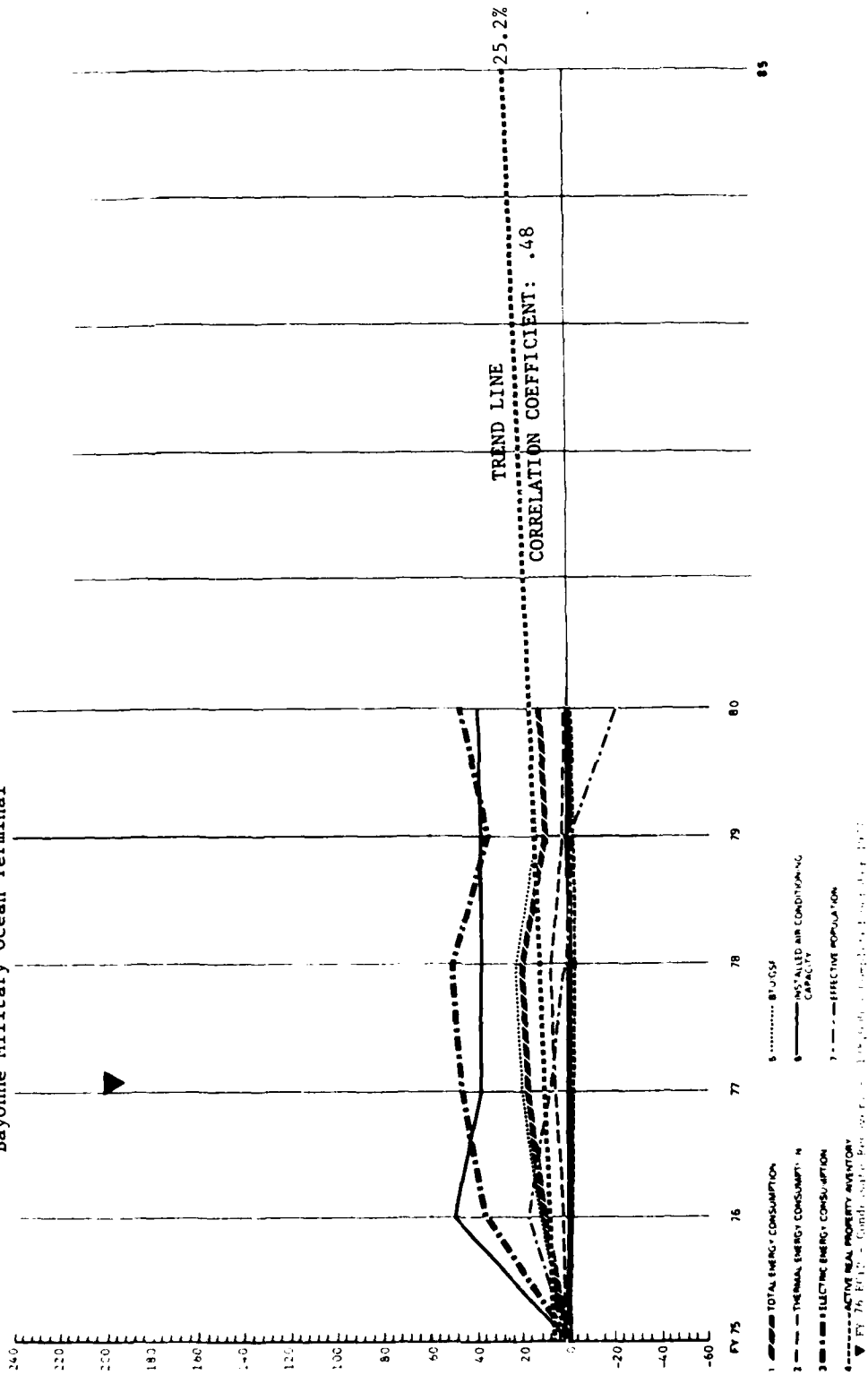
**PD is Percent Deviation from Base Year

***Population Served is the total Resident & Non-Resident Population

****RPI Pop & Number + 10 Non-Resident

REMARKS

Bayonne Military Ocean Terminal



UNITS	75	76	77	78	79	80
WRTU	293,771	800,552	1,12,211	929,268	1,17,115	969,414
WRTU	571,516	587,265	1,2,811	604,025	5,271	617,120
WRTU	222,255	102,887	1,16,211	3,55,263	1,46,311	1,13,944
PEOPLE	809	881	1,8,911	8,611	1,1,701	7,921
PEOPLE	2,319	2,910	1,35,511	2,731	1,17,811	2,384
PEOPLE	3,128	3,791	1,31,211	3,532	1,12,011	3,128
PEOPLE	1,582	1,851	1,17,011	1,711	1,8,211	1,582
MRTUCAP	253,8	2,34,9	1,7,741	2,61,1	1,2,701	2,98,7
MRTUCAP	501,8	681,1	1,4,411	5,51,1	1,8,211	5,97,5
MRTUCAP	1,205	1,949	1,5,311	5,06,0	1,7,94	6,18,5
TONS	1,170,3	1,555,4	1,8,811	1,81,3	1,7,94	1,7,94
KSCAP	5,436	5,433	1,0,1	5,287	1,2,71	5,288
BTUGSF	16,6,025	1,63,915	1,12,211	1,75,765	1,20,311	1,79,575
BTUGSF	103,176	1,09,184	1,3,911	1,16,247	1,8,64	1,16,224
BTUGSF	50,930	52,731	1,15,311	61,511	50,411	67,851
ESP	768	768	768	768	768	768
ESP	3,806	3,579	BASE	3,431	3,431	3,431
ESP	6	6	6	6	6	6
ESP	259	486	486	486	486	486
ESP	62	64	64	64	64	64
ESP	176	176	176	176	176	176
ESP	211	211	211	211	211	211
ESP	163	163	163	163	163	163
ESP	BASE	BASE	BASE	BASE	BASE	BASE

- 1 Energy Consumption @ PD
- 2 Thermal En Cons @ PD
- 3 Electrical En Cons @ PD
- 4 Thermal En Cons @ PD
- 5 Resident Population @ PD
- 6 Non Resident Population @ PD
- 7 Population Serviced @ PD
- 8 Effective Population @ PD
- 9 En Consumption @ PD
- 10 En Consumption @ PD
- 11 Installed Air Cond Capacity @ PD
- 12 Elec Energy @ PD
- 13 Heat Property Inventory @ PD
- 14 Heat Property Inventory @ PD
- 15 Energy Consumption @ PD
- 16 Thermal En Consumption @ PD
- 17 Electrical En Consumption @ PD
- 18 En by Category
- Training
- Manufacture & Production
- Research, Development & Testing
- Storage
- Other Covered Storage
- Administration
- Sanitation
- Community Facilities
- Family Housing
- Government Buildings
- Utility Buildings
- Other

▼ FY 76 ECTP - Condensate Recovery - \$128,000 - Completed October 1977

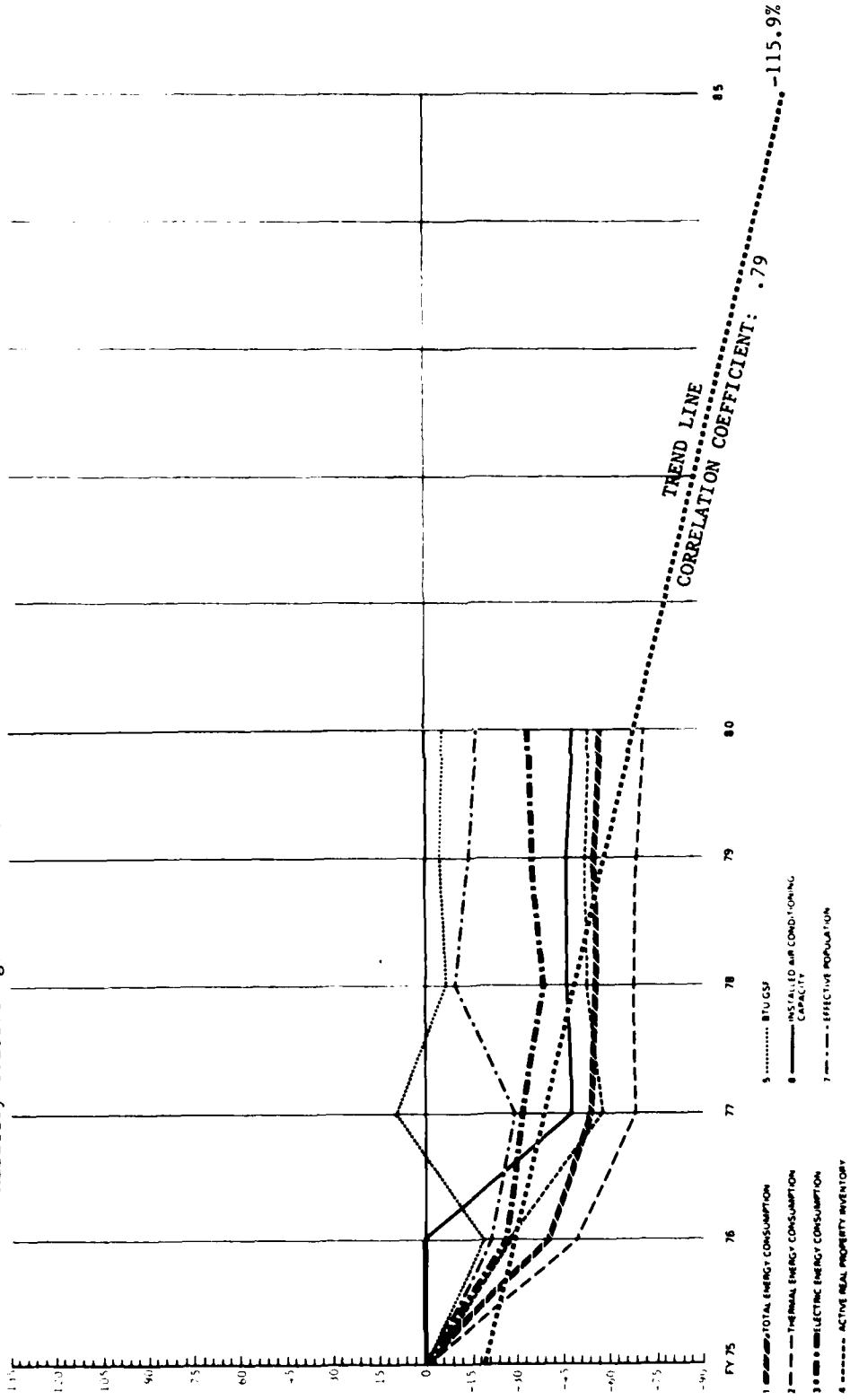
REMARKS

**Populations Serviced in the total Resident & Non-Resident Population

**En by Category

**En by Category

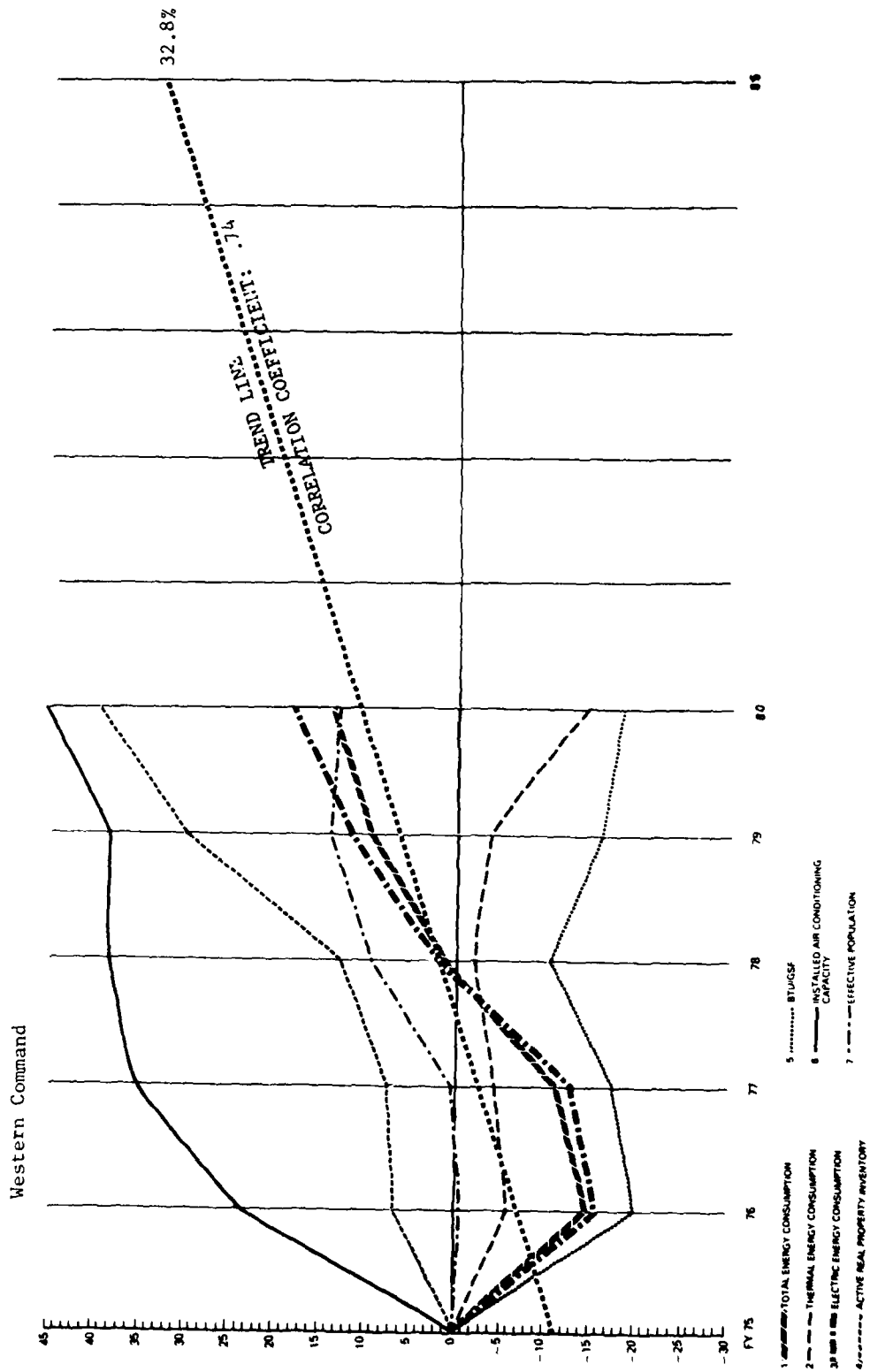
Military Traffic Mgt. Command (other)



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - MILITARY TRAFFIC MET. COND. - MACOM - (OTHER) - CLIMATIC REGION - HDD 2,384 CDD 1,565

UNITS/FY	75	76	77	78	79	80
1 Energy Consumption (B PD)	100,170	116,005	117,214	107,104	108,001	98,928
2 Thermal En. Cons. (B PD)	327,102	272,510	271,600	336,680	331,453	320,150
3 Electrical En. Cons. (B PD)	271,070	124,490	185,111	165,624	176,520	178,278
4 Heat/Hot Water (B PD)	320	293	374	506	558	453
5 Non-Resident Population (B PD)	1,169	2,457	2,151	2,617	2,595	2,400
6 Population Served** (B PD)	3,798	2,457	2,551	3,143	3,053	2,823
7 Effective Population*** (B PD)	1,552	1,212	1,093	1,485	1,353	1,287
8 En. Consumption/Pop Served (B PD)	185.4	151.2	139.0	125.7	141.9	141.2
9 En. Consumption/Pop Served (B PD)	451.3	333.2	380.7	327.3	348.2	327.3
10 Electrical En. Consumption/Pop Served (B PD)	611.9	672.9	489.7	377.3	438.2	394.7
11 Installed Air Cond Capacity (B PD)	588	589	602	315	314	301
12 Elec. Energy/Ton of Air Cond (B PD)	681.0	337.0	609.6	575.8	562.2	593.9
13 Heat Property Inventory (Btu) (B PD)	8,172	6,202	1,570	3,948	3,938	3,878
14 Ineffective Population	3,445	5,117	3,327	2,853	2,98	2,991
15 Energy Consumption/GSF (B PD)	82,682	67,076	69,259	76,571	78,213	77,683
16 Thermal En. Consumption/GSF (B PD)	50,685	35,071	37,653	36,490	37,388	31,143
17 Electrical En. Consumption/GSF (B PD)	31,997	12,000	15,005	14,951	14,935	14,935
18 Btu by Category	37	37	37	37	37	37
Maintenance & Production	259	320	330	328	328	328
Research, Development & Testing	5,862	4,108	4,108	4,108	4,108	4,108
Storage	20	18	18	18	18	18
Other Covered Storage	1,462	1,084	1,084	1,084	1,084	1,084
Hospital & Medical	283	156	191	204	204	204
Administration	110	104	216	207	207	204
Bachelor Housing	172	167	167	167	167	167
Community Facilities	16	12	12	12	12	12
Family Housing	61	61	61	61	61	61
Operational Buildings	61	61	61	61	61	61
Utility Buildings	61	61	61	61	61	61
Other	61	61	61	61	61	61
Non-Resident	---	---	---	---	---	---
Population Served at the total Resident & Non-Resident Population	---	---	---	---	---	---
**PD in Percent Deviation from Base Year	---	---	---	---	---	---
***En. Pop. at Resident + 1/3 Non-Resident	---	---	---	---	---	---

REMARKS: Includes all MTRC activities except Revenue Military Ocean Terminal, NJ, which is reported separately.



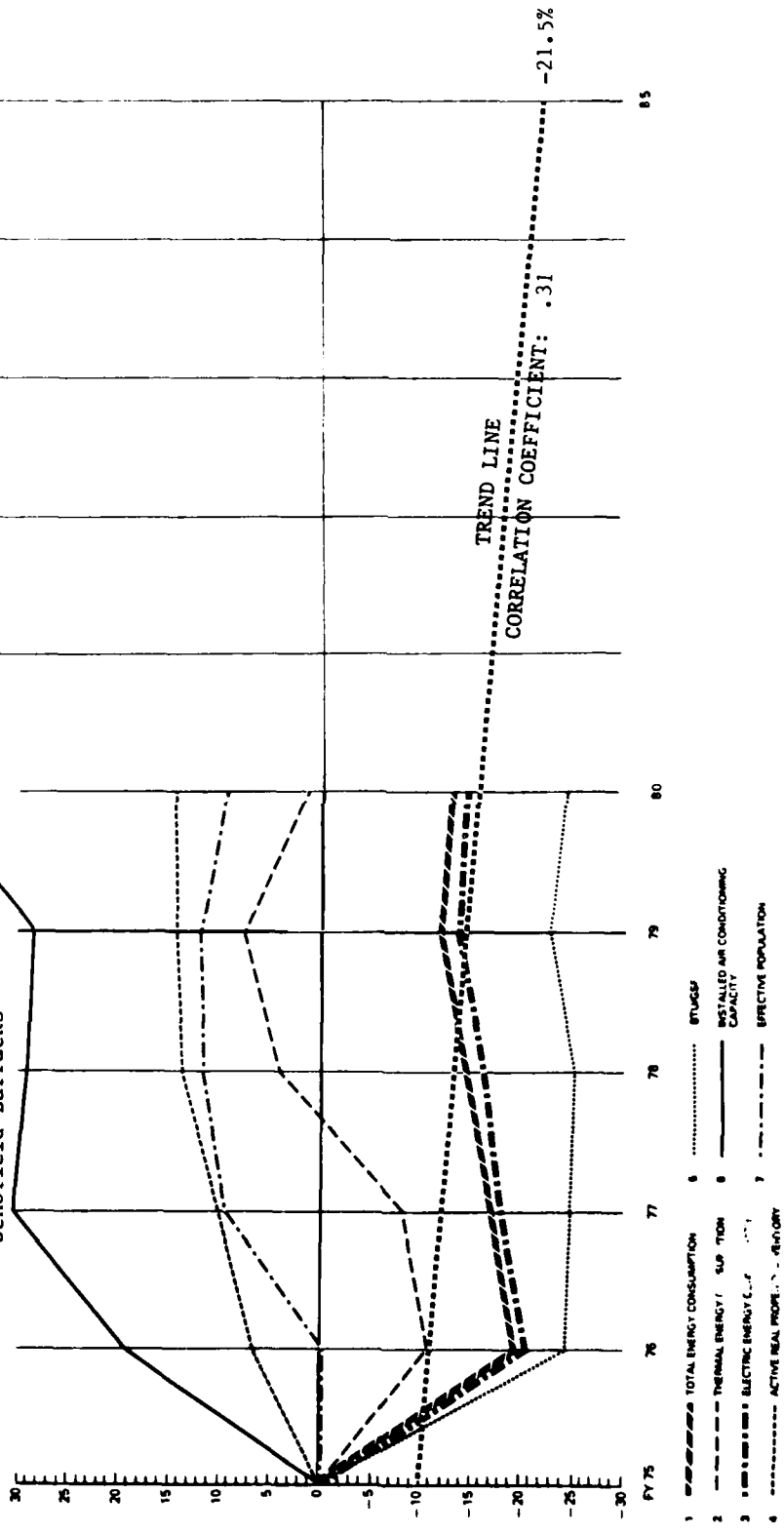
U.S. Army ANALYSIS OF ENERGY CONSUMPTION -- INSTALLATION CONSUMPTION MACOM PERCENTUM

UNITS/CFY	75	76	77	78	79	80
1 Energy Consumption & PD	2,570,300	2,199,472	2,284,457	2,803,196	2,817,203	2,924,824
2 Thermal En Cons & PD	111,367	114,119	119,928	127,848	121,900	128,169
3 Electrical En Cons & PD	2,236,938	1,884,356	1,964,529	2,275,348	2,495,303	2,638,555
4 Resident Population & PD	29,407	29,407	29,407	31,757	33,218	32,994
5 Non Resident Population & PD	14,481	14,481	14,481	15,541	16,290	16,134
6 Population Served** & PD	40,688	40,191	35,888	38,213	39,508	39,128
7 Effective Population*** & PD	31,010	30,823	31,188	33,902	35,315	35,039
8 En Consumption/Pop Served & PD	61.2	61.4	61.4	68.1	71.3	74.7
9 En Consumption/Pop & PD	81.9	71.3	71.4	76.8	79.8	83.5
10 Electric En Consumption/Resident Population	83.4	72.1	72.8	71.7	75.1	80.0
11 Installed Air Cond Capacity & PD	7,332	9,426	10,321	10,521	10,312	11,040
12 Elec Energy/Ton of Air Cond & PD	294.4	199.9	190.1	216.2	237.4	239.0
13 Real Property Inventory (RPI) & PD	17,549	18,735	18,853	19,789	22,868	24,627
14 kWh/Electric Population	0.57	0.61	0.60	0.58	0.65	0.70
15 Energy Consumption/GSF & PD	146,438	117,409	121,107	131,536	121,302	119,729
16 Thermal En Consumption/GSF & PD	19,031	16,776	16,977	16,568	16,089	15,801
17 Electrical En Consumption/GSF & PD	127,407	100,632	104,130	114,968	109,213	108,014
18 kWh/Category						
Training						
Maintenance & Production						
Research, Development & Testing						
Storage						
Other Covered Storage						
Hospital & Medical						
Administration						
Resistor Housing						
Community Facilities						
Family Housing						
Operational Buildings						
Utility Buildings						
Other						

PD = Percent Division from Base Year **Population Served is the total Resident & Non Resident Population *Eff Pop is Resident + 1/3 Non Resident

REMARKS

Schofield Barracks



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION Schofield Barracks, HI MACOM WESTCOM CLIMATIC REGION 6 HDD 8 CDD 2,883

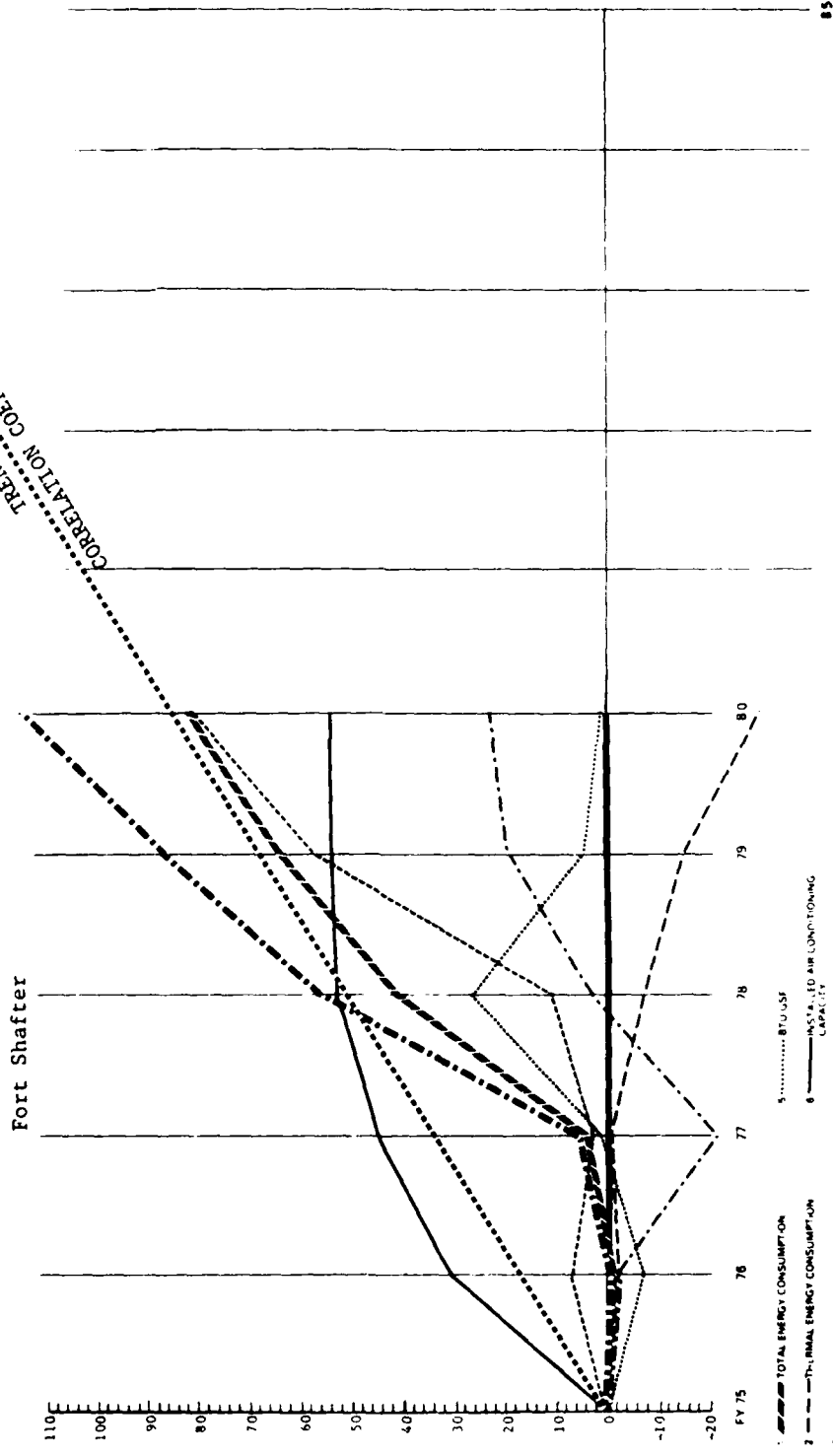
UNITS	76	77	78	79	80
1 Energy Consumption & PD	1,818,189	1,518,103	1,566,259	1,616,315	1,284,530
2 Thermal En Cons & PD	165,638	151,811	172,289	172,817	167,229
3 Electrical En Cons & PD	1,652,551	1,366,292	1,393,970	1,443,497	1,117,301
4 Resident Population & PD	20,347	21,700	23,688	24,452	21,633
5 Non-Resident Population & PD	25,725	25,840	26,357	26,446	25,881
6 Population Serv** & PD	22,343	24,430	24,964	24,985	25,197
7 Effective Population*** & PD	71.5	58.7	59.4	61.1	61.6
8 En Consumption/Pop Serv** & PD	82.3	66.1	67.1	67.1	65.2
9 En Consumption/Pop Serv** & PD	81.0	64.6	65.7	65.7	63.8
10 Electric En Consumption/Resident Population	4,679	6,093	6,054	6,023	6,549
11 Insulated Air Cond Capacity & PD	357.5	237.1	224.2	238.91	214.94
12 Elec Energy/Ton of Air Cond & PD	11,041	12,167	12,557	12,610	12,657
13 Real Property Inventory (RPI) & PD	166,488	124,977	124,731	128,193	125,974
14 RPI/Effective Population	16,984	12,748	12,711	13,101	13,216
15 Energy Consumption/GSF & PD	151,506	117,253	111,001	114,093	114,297
16 Thermal En Consumption/GSF & PD	95	137	135	125	121
17 Electrical En Consumption/GSF & PD	737	888	888	888	888
18 RPI by Category					
Maintenance & Production					
Research, Development & Testing					
Storage					
Other Covered Storage					
Housing & Medical					
Administration					
Bachelor Housing					
Community For Rent					
Family Housing					
Operational For Rent					
Utility Buildings					
Other					

**Population Served is the total Resident & Non-Resident Population
 ***Pop at Percent Division from Base Year
 **RPI Pop in Resident & Non-Resident

REMARKS

168.8%

TREND LINE
CORRELATION COEFFICIENT: .95



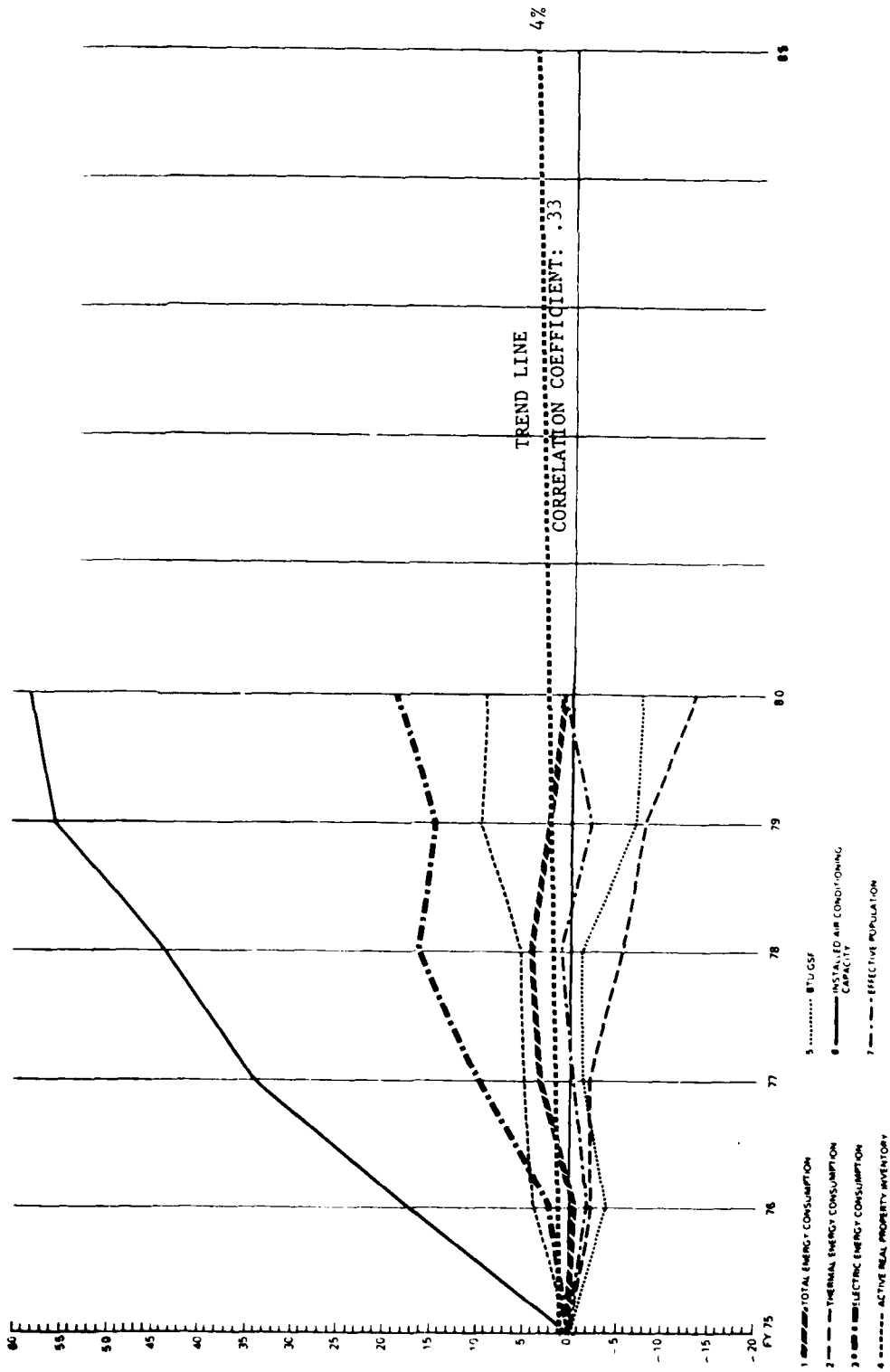
U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION _____ MACOM _____ REGION _____ HDD _____ CDD _____

UNITS/FY	75	76	77	78	79	80
1 Energy Consumption by PD	1,424,221	1,555,415	1,644,115	1,814,065	1,930,659	1,992,122
2 Thermal En Units by PD	5,242,221	5,655,415	5,844,115	6,314,065	6,630,659	6,812,122
3 Electric En Units by PD	5,242,221	5,655,415	5,844,115	6,314,065	6,630,659	6,812,122
4 Resident Population by PD	5,242,221	5,655,415	5,844,115	6,314,065	6,630,659	6,812,122
5 Non-Resident Population by PD	5,242,221	5,655,415	5,844,115	6,314,065	6,630,659	6,812,122
6 Population Served** by PD	5,242,221	5,655,415	5,844,115	6,314,065	6,630,659	6,812,122
7 Effective Population*** by PD	5,242,221	5,655,415	5,844,115	6,314,065	6,630,659	6,812,122
8 En Consumption Pop Served by PD	5,242,221	5,655,415	5,844,115	6,314,065	6,630,659	6,812,122
9 En Consumption Eff Pop by PD	5,242,221	5,655,415	5,844,115	6,314,065	6,630,659	6,812,122
10 Electric En Consumption-Resident Population	5,242,221	5,655,415	5,844,115	6,314,065	6,630,659	6,812,122
11 Installed Air Cond Capacity by PD	5,242,221	5,655,415	5,844,115	6,314,065	6,630,659	6,812,122
12 Elec Energy Ton of Air Cond by PD	5,242,221	5,655,415	5,844,115	6,314,065	6,630,659	6,812,122
13 Base Property Inventory (BPI) by PD	5,242,221	5,655,415	5,844,115	6,314,065	6,630,659	6,812,122
14 BPI Effective Population	5,242,221	5,655,415	5,844,115	6,314,065	6,630,659	6,812,122
15 Energy Consumption/GSF by PD	5,242,221	5,655,415	5,844,115	6,314,065	6,630,659	6,812,122
16 Thermal En Consumption/GSF by PD	5,242,221	5,655,415	5,844,115	6,314,065	6,630,659	6,812,122
17 Electrical En Consumption/GSF by PD	5,242,221	5,655,415	5,844,115	6,314,065	6,630,659	6,812,122
18 BPI by Category	5,242,221	5,655,415	5,844,115	6,314,065	6,630,659	6,812,122
Training						
Maintenance & Production						
Research, Development & Testing						
Storage						
Other Covered Storage						
Residential						
Administration						
Bachelor Housing						
Community Facilities						
Family Housing						
Operational Bar Single						
Other Buildings						
Other						

PD is Percent Deviation from Base Year **Population Served is the total Resident & Non-Resident Population *Eff Pop is Resident + IG Non-Resident

REMARKS

FORSKOM



U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION MAJCOM

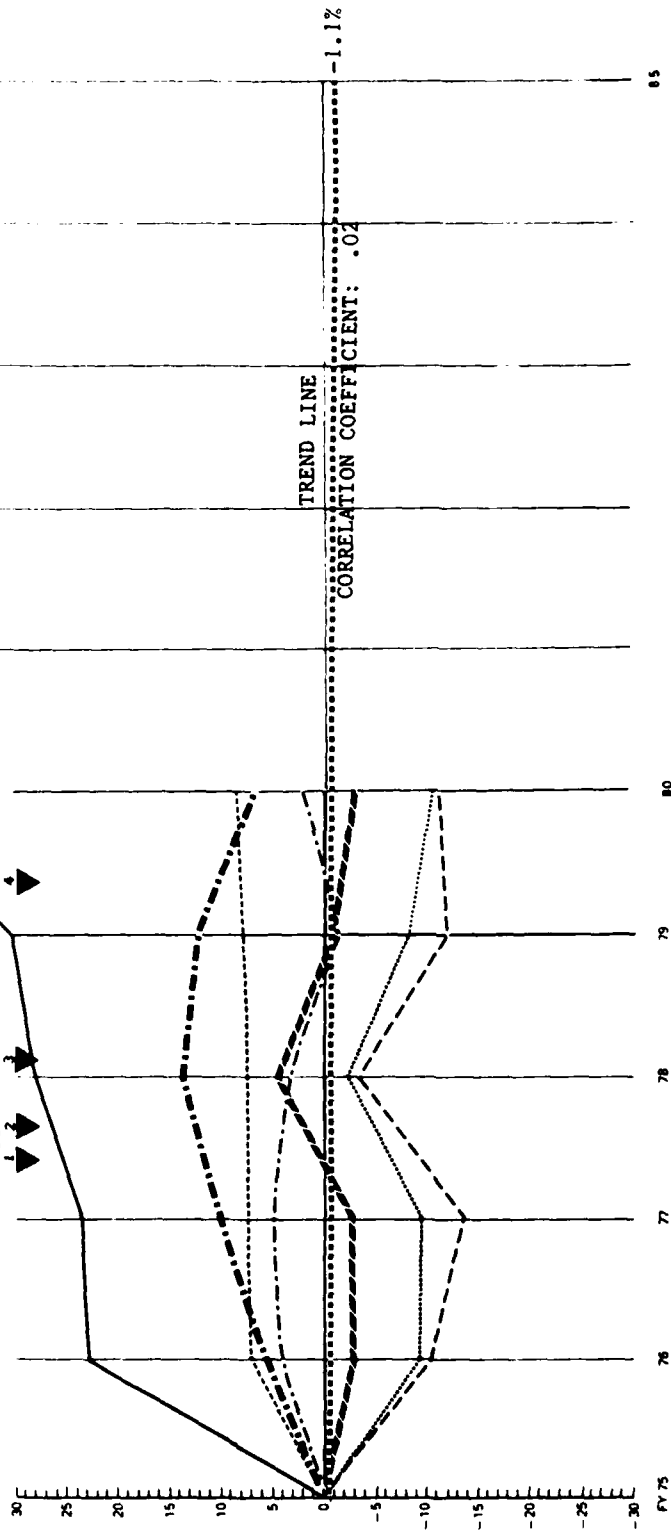
	16	17	18	19	20	21
1 Energy Consumption In PD	4,675,283	5,322,222	5,297,479	5,657,986	5,752,401	5,720,411
2 Thermal En. Cons. In PD	1,333,000	1,315,000	1,315,000	1,315,000	1,315,000	1,315,000
3 Electrical En. Cons. In PD	3,342,283	4,007,222	3,982,479	4,342,986	4,437,401	4,405,411
4 Resident Population In PD	1,144,247	1,144,247	1,144,247	1,144,247	1,144,247	1,144,247
5 Non Resident Population In PD	113,215	113,215	113,215	113,215	113,215	113,215
6 Population Serviced In PD	1,257,462	1,257,462	1,257,462	1,257,462	1,257,462	1,257,462
7 Inactive Population In PD	113,215	113,215	113,215	113,215	113,215	113,215
8 En. Consumption/Pop Served In PD	1,970,074	4,280,074	4,280,074	3,471,074	3,536,074	3,536,074
9 En. Consumption/Pop In PD	4,675,283	5,322,222	5,297,479	5,657,986	5,752,401	5,720,411
10 Electric En. Consumption/Inmate Population	1,219	1,219	1,219	1,219	1,219	1,219
11 Heated Air Cond Capacity In PD	61,215	61,215	61,215	61,215	61,215	61,215
12 The Energy/Ft of Air Cond In PD	172,462	172,462	172,462	172,462	172,462	172,462
13 Real Property Inventory (RPI) In PD	1,219,462	1,219,462	1,219,462	1,219,462	1,219,462	1,219,462
14 RPI/Inmate Population	1,219,462	1,219,462	1,219,462	1,219,462	1,219,462	1,219,462
15 Energy Consumption/GSF In PD	205,188	205,188	205,188	205,188	205,188	205,188
16 Thermal En. Consumption/GSF In PD	113,215	113,215	113,215	113,215	113,215	113,215
17 Electrical En. Consumption/GSF In PD	1,138,073	1,138,073	1,138,073	1,138,073	1,138,073	1,138,073
18 RPI by Category	90,120	90,120	90,120	90,120	90,120	90,120
ESF						
Maintenance & Production						
Research, Development & Testing						
Storage						
ESF						
Other General Storage						
Hospital & Medical						
Administration						
Recycled Housing						
Community Facilities						
Family Housing						
Operational Bar Berge						
Utility Buildings						
Other						
ESF						
Not Available						

POP in Parenthesis Denotes from April 1974

*Population - Source: 1974 1978 Report to Non-Resident Population

**1978 Page 8, Resident - 1,130,000

Fort Bragg



85

80

77

76

75

- 1 TOTAL ENERGY CONSUMPTION
- 2 THERMAL ENERGY CONSUMPTION
- 3 ELECTRIC ENERGY CONSUMPTION
- 4 ACTIVE REAL PROPERTY INVENTORY
- 5 BTU/GSF
- 6 INSTALLED AIR CONDITIONING CAPACITY
- 7 EFFECTIVE POPULATION

- 1V FY76 EIP - Insulate in 6 months
- 2V FY77 EIP - Install mercury vapor lighting in 6 months
- 3V FY77 Family Housing EIP - Insulate in 6 months
- 4V FY78 EIP - Insulate in 6 months

U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION

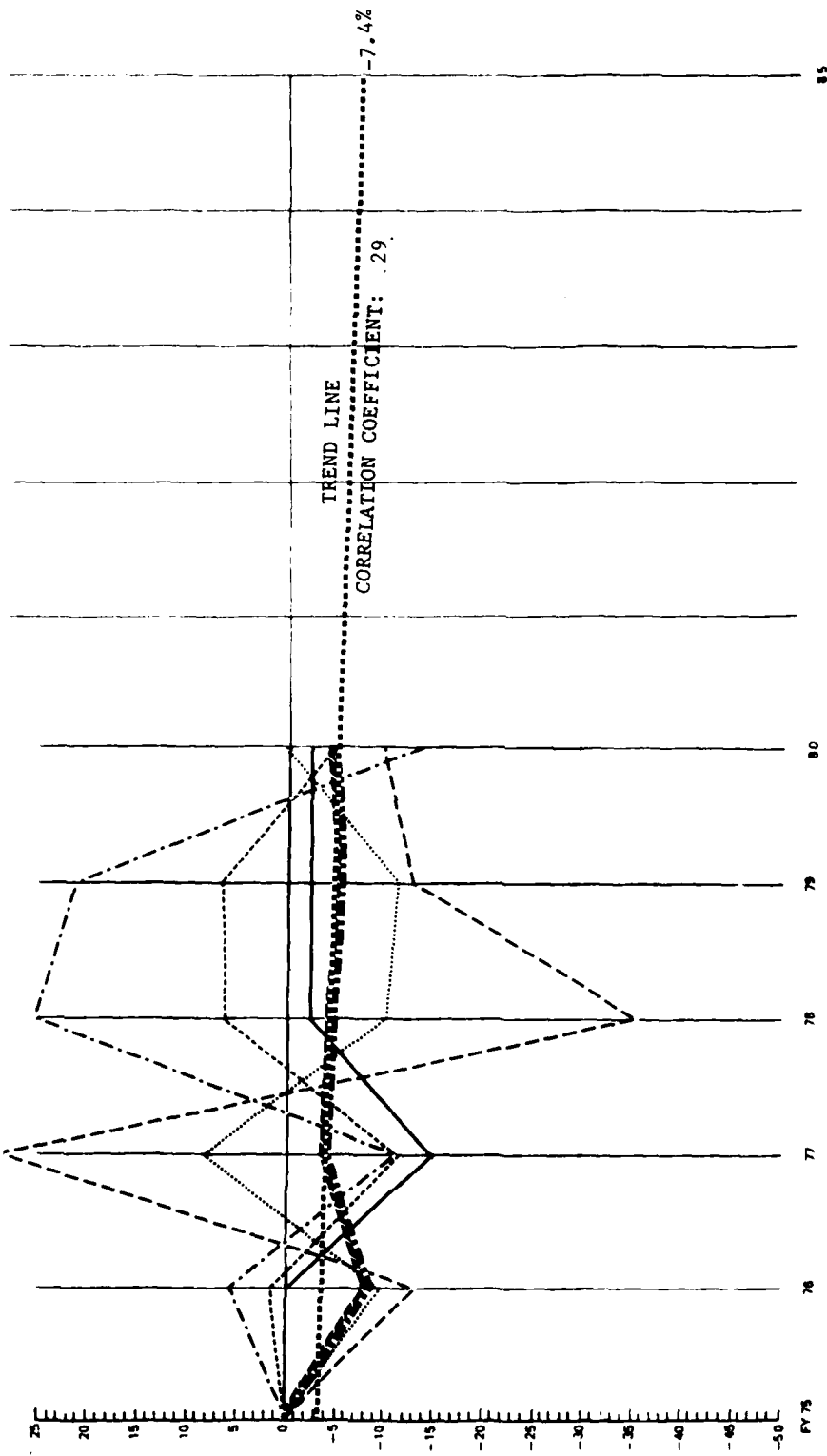
UNITS/yr	MACOM				CLIMATIC REGION				CDD
	75	76	77	78	75	76	77	78	
WRTU	5,674,124	5,253,452	5,253,452	5,253,452	5,253,452	5,253,452	5,253,452	5,253,452	5,253,452
WRTU	1,017,524	1,017,524	1,017,524	1,017,524	1,017,524	1,017,524	1,017,524	1,017,524	1,017,524
WRTU	2,587,574	2,587,574	2,587,574	2,587,574	2,587,574	2,587,574	2,587,574	2,587,574	2,587,574
PEOPLE	33,480	33,480	33,480	33,480	33,480	33,480	33,480	33,480	33,480
PEOPLE	5,013	5,013	5,013	5,013	5,013	5,013	5,013	5,013	5,013
PEOPLE	41,495	41,495	41,495	41,495	41,495	41,495	41,495	41,495	41,495
PEOPLE	36,352	36,352	36,352	36,352	36,352	36,352	36,352	36,352	36,352
WRTUCAP	134.9	134.9	134.9	134.9	134.9	134.9	134.9	134.9	134.9
WRTUCAP	134.7	134.7	134.7	134.7	134.7	134.7	134.7	134.7	134.7
WRTUCAP	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8
WRTUCAP	15,696	15,696	15,696	15,696	15,696	15,696	15,696	15,696	15,696
WRTUCAP	164.9	164.9	164.9	164.9	164.9	164.9	164.9	164.9	164.9
WRTUCAP	29,338.5	29,338.5	29,338.5	29,338.5	29,338.5	29,338.5	29,338.5	29,338.5	29,338.5
WRTUCAP	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
WRTUCAP	273,883	273,883	273,883	273,883	273,883	273,883	273,883	273,883	273,883
WRTUCAP	157,901	157,901	157,901	157,901	157,901	157,901	157,901	157,901	157,901
WRTUCAP	135,989	135,989	135,989	135,989	135,989	135,989	135,989	135,989	135,989
WRTUCAP	669	669	669	669	669	669	669	669	669
WRTUCAP	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213
WRTUCAP	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481
WRTUCAP	776	776	776	776	776	776	776	776	776
WRTUCAP	969	969	969	969	969	969	969	969	969
WRTUCAP	7,097	7,097	7,097	7,097	7,097	7,097	7,097	7,097	7,097
WRTUCAP	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832
WRTUCAP	5,275	5,275	5,275	5,275	5,275	5,275	5,275	5,275	5,275
WRTUCAP	537	537	537	537	537	537	537	537	537
WRTUCAP	124	124	124	124	124	124	124	124	124
WRTUCAP	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE
WRTUCAP	44	44	44	44	44	44	44	44	44
WRTUCAP	49	49	49	49	49	49	49	49	49
WRTUCAP	50	50	50	50	50	50	50	50	50

- 1 Energy Consumption is PD
- 2 Thermal En. Cons is PD
- 3 Electrical En. Cons is PD
- 4 Non-Resident Population is PD
- 5 Non-Resident Population is PD
- 6 Population Served is PD
- 7 Electric Population is PD
- 8 En. Consumption is PD
- 9 En. Consumption is PD
- 10 Electric En. Consumption is PD
- 11 Installed Air Cond Capacity is PD
- 12 Elec Energy/Ft of Air Cond is PD
- 13 Fuel Property Inventory is PD
- 14 Non-Resident Population is PD
- 15 Energy Consumption is PD
- 16 Thermal En. Consumption is PD
- 17 Electrical En. Consumption is PD
- 18 WRTUCAP Category
- 19 Training
- 20 Maintenance & Production
- 21 Research, Development & Testing
- 22 Storage
- 23 Other General Storage
- 24 Hospital & Medical
- 25 Administration
- 26 Bachelor Housing
- 27 Community Facilities
- 28 Family Housing
- 29 Operational Air Base
- 30 Utility Buildings
- 31 Other

1 FY 76 ECIP - Insulation and Weatherproofing - \$2,045,027 - Completed (estimated) June 1978
 2 FY 77 ECIP - Install Mercury Vapor Lighting \$217,000 - Completed (estimated) October 1978
 3 FY 77 Family Housing ECIP Improvements - \$218,980 - Completed (estimated) January 1980
 4 FY 78 ECIP - Lighting Conversion - \$2,789,000 - Completed January 1980

REMARKS

Ft. Buchanan

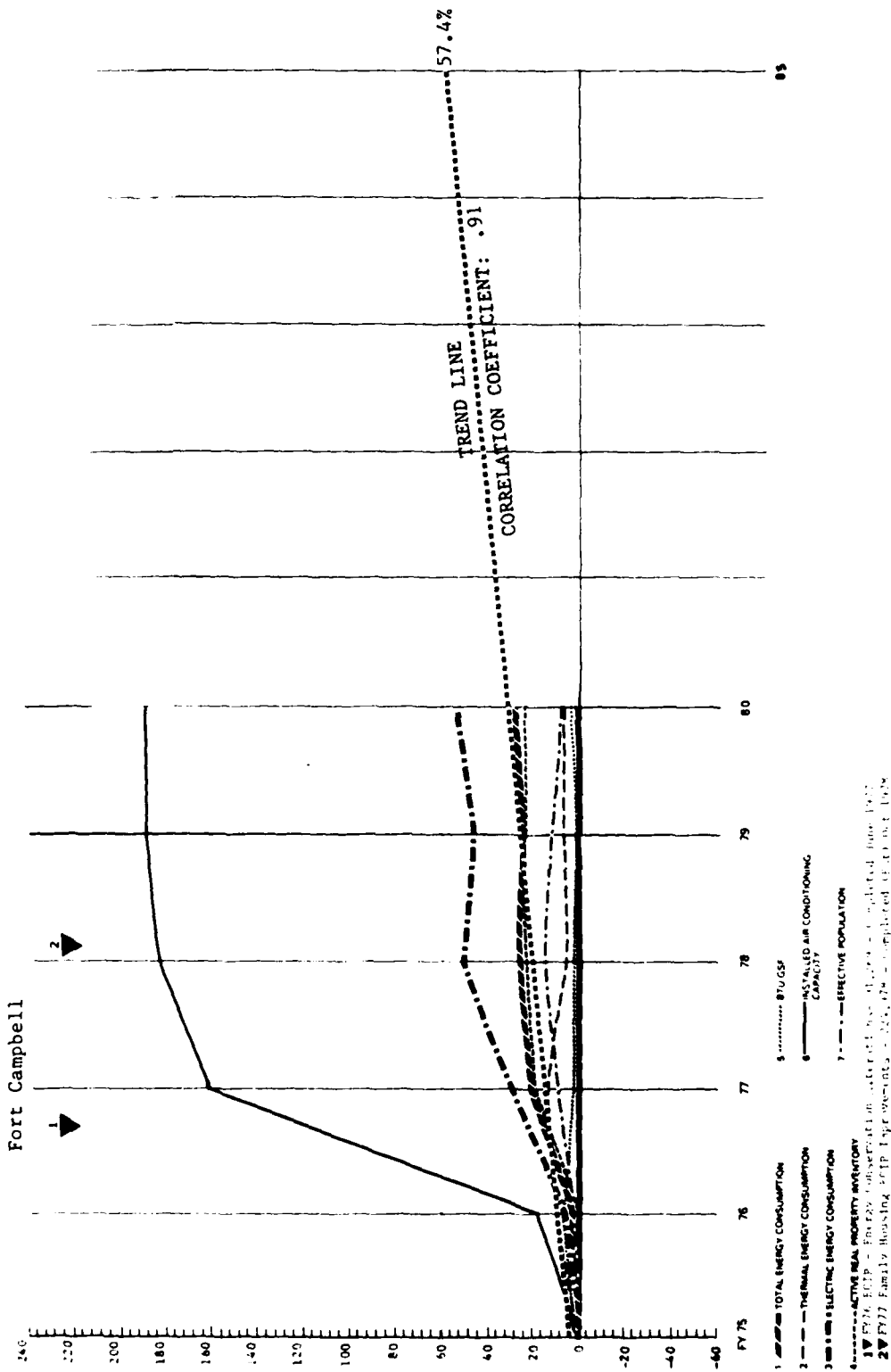


U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION Ft. Buchanan, PR MACOM FOFSCOM

UNIT**	S	P	Q	R	T	U	V	W	X	Y	Z
1 Energy Consumption B PD	212,869	195,543	-8.1	204,510	-3.9	203,349	-4.5	201,483	-5.3	203,236	-4.4
2 Thermal En Cons B PD	775	675	-12.9	1,000	29.0	500	-35.5	675	-12.9	700	-9.7
3 Electrical En Cons B PD	212,094	194,868	-8.1	203,510	-4.0	202,849	-4.4	200,808	-5.3	202,846	-4.4
4 Resident Population B PD	1,070	1,300	21.5	1,100	1.9	1,260	12.7	959	-23.6	1,244	1.9
5 Non-Resident Population B PD	3,166	5,200	63.3	2,900	-6.3	4,917	63.3	6,397	49.7	4,046	-36.4
6 Population Served** B PD	2,151	2,700	25.5	2,200	2.3	7,027	216.8	7,156	1.8	3,274	47.4
7 Effective Population*** B PD	63.2	15.6	-75.4	68.7	8.5	1,199	15.6	1,091	-8.2	2,110	11.3
8 En Consumption/Pop Served B PD	83.4	72.4	-13.2	90.2	8.2	28.7	-56.0	27.4	-38.0	46.9	41.7
9 En Consumption/Pop B PD	96.7	149.9	55.0	136.5	61.8	63.6	-23.7	65.2	-21.8	88.1	10.4
10 Electric En Consumption/Resident Population	619	619	0.0	527	-14.9	161.0	-66.5	209.4	116.3	131.2	17.1
11 Installed Air Cond Capacity B PD	142.6	314.8	122.2	386.2	12.7	335.3	-2.1	331.9	-3.2	335.2	0.1
12 Elec Energy/Ton of Air Cond B PD	1,879	1,905	1.4	1,668	-11.2	1,999	6.4	2,005	6.7	1,795	-9.3
13 Real Property Inventory (RPI) B PD	74	71	-4.1	74	0.0	62	-16.2	65	-12.2	81	9.5
14 RPI/Electric Population	113,288	102,647	-9.4	122,008	8.2	101,725	-10.2	100,490	-11.2	113,385	0.1
15 Energy Consumption/GSF B PD	412	354	-14.1	600	45.6	250	-39.3	337	-18.2	390	5.3
16 Thermal En Consumption/GSF B PD	112,876	102,293	-9.4	132,008	8.1	101,475	-10.1	100,153	-11.3	112,995	0.1
17 Electrical En Consumption/GSF B PD	111	117	6.3	117	0.0	409	352.1	409	352.1	198	78.1
18 RPI by Category	96	116	20.8	5	-48.2	44	-89.2	44	-54.3	91	23.4
Maintenance & Production	116	116	0.0	204	76.7	8	-93.3	8	-93.3	8	-93.3
Research, Development & Testing	6	6	0.0	8	33.3	8	33.3	8	33.3	8	33.3
Storage	116	116	0.0	114	-1.8	114	-1.8	114	-1.8	114	-1.8
Other Covered Storage	6	6	0.0	71	1083.3	76	1133.3	76	1133.3	76	1133.3
Hospital & Medical	154	154	0.0	485	315.0	485	315.0	485	315.0	485	315.0
Administration	8	8	0.0	602	7525.0	602	7525.0	602	7525.0	602	7525.0
Resident Housing	636	636	0.0	58	-9.1	58	-9.1	58	-9.1	58	-9.1
Community Facilities	605	605	0.0	58	-9.1	58	-9.1	58	-9.1	58	-9.1
Family Housing	74	74	0.0	58	-9.1	58	-9.1	58	-9.1	58	-9.1
Operational Buildings	58	58	0.0	58	0.0	58	0.0	58	0.0	58	0.0
Utility Buildings	58	58	0.0	58	0.0	58	0.0	58	0.0	58	0.0
Other	58	58	0.0	58	0.0	58	0.0	58	0.0	58	0.0

**Population Served is the total Department of Non-Resident Population

REGULATIONS



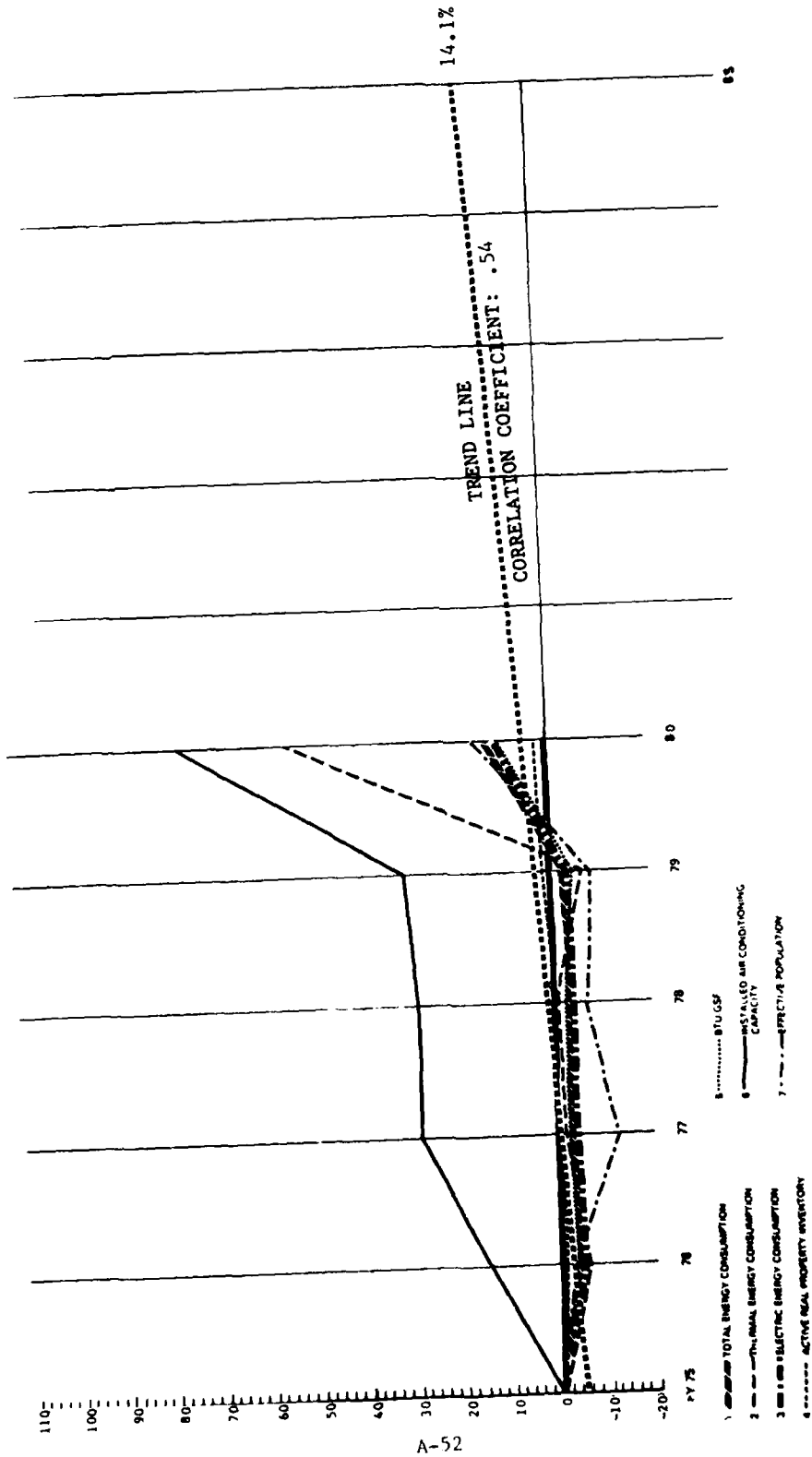
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION FT. CARPENTERS, KY MACOM TUSCOMM CLIMATIC REGION HDD 5,700 CDD 1,200

UNITS	75	76	77	78	79	80
1 Energy Consumption & PD	3,158,466	1,405,279	1,205,123	3,965,901	1,256,671	3,896,615
2 Thermal En Cons & PD	1,332,152	1,902,212	1,978,666	1,118,917	1,482,315	1,831,316
3 Electrical En Cons & PD	1,826,314	1,503,067	1,226,457	2,846,984	1,074,356	2,065,299
4 Resident Population & PD	29,132	29,294	33,192	33,818	16,111	32,812
5 Non Resident Population & PD	3,324	6,183	6,022	6,180	4,511	5,872
6 Population Served** & PD	35,056	35,477	39,214	40,098	20,621	38,684
7 Effective Population*** & PD	31,107	31,859	33,192	35,881	15,110	32,942
8 En Consumption/Pop Served & PD	90.1	106.9	111.3	111.5	110.5	118.2
9 En Consumption/Pop & PD	101.5	120.9	121.3	121.5	120.0	127.2
10 Electric En Consumption/Resident Population	48.8	50.2	56.7	63.1	29.8	67.9
11 Heating En Consumption/Resident Population	6,906	8,111	17,085	19,503	182.4	185.7
12 Heating En Consumption/Pop Served & PD	205.8	184.8	102.2	102.8	126.6	108.7
13 Heating En Consumption/Pop Served & PD	13,301	13,565	15,963	16,564	122.5	16,643
14 Heating En Consumption/Pop Served & PD	0.43	0.42	0.47	0.46	0.46	0.48
15 Energy Consumption/GSF & PD	233,821	251,461	234,371	239,718	251.1	336,117
16 Thermal En Consumption/GSF & PD	122,668	150,407	123,051	110,270	124.3	110,015
17 Electrical En Consumption/GSF & PD	109,214	101,054	111,320	129,448	126.8	126,102
18 kWh by Category	552	466	287	509	515	515
Maintenance & Production	1,520	1,424	1,484	1,574	1,557	1,557
Research, Development & Training	1,258	1,258	1,317	1,317	1,317	1,317
Storage	Net Available Space only included Above					
Other Covered Storage	627	627	627	627	627	627
Hospital & Medical	373	373	395	360	635	649
Administrative	4,240	4,310	4,621	4,270	313	313
Bachelor Housing	850	897	1,087	1,087	4,884	4,884
Community Facilities	3,316	3,321	3,217	3,106	1,114	1,114
Family Housing	184	232	244	253	5,080	5,080
Operational Buildings	373	367	58	58	100	100
Other	BASE	BASE	BASE	BASE	BASE	BASE

**Population Served as the total Resident & Non Resident Population
 ***Eff Pop as Resident + 1/2 Non Resident

1 ▽ FY 76 ECLIP - Energy Conservation Alterations \$91,269 - Completed June 1977
 2 ▽ FY 77 Family Housing ECLIP Improvements - \$224,978 - Completed (estimated) October 1978

193d Inf Bde, CZ



U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION 1-33 131 BDL, CZ MALCOM FORTSUM

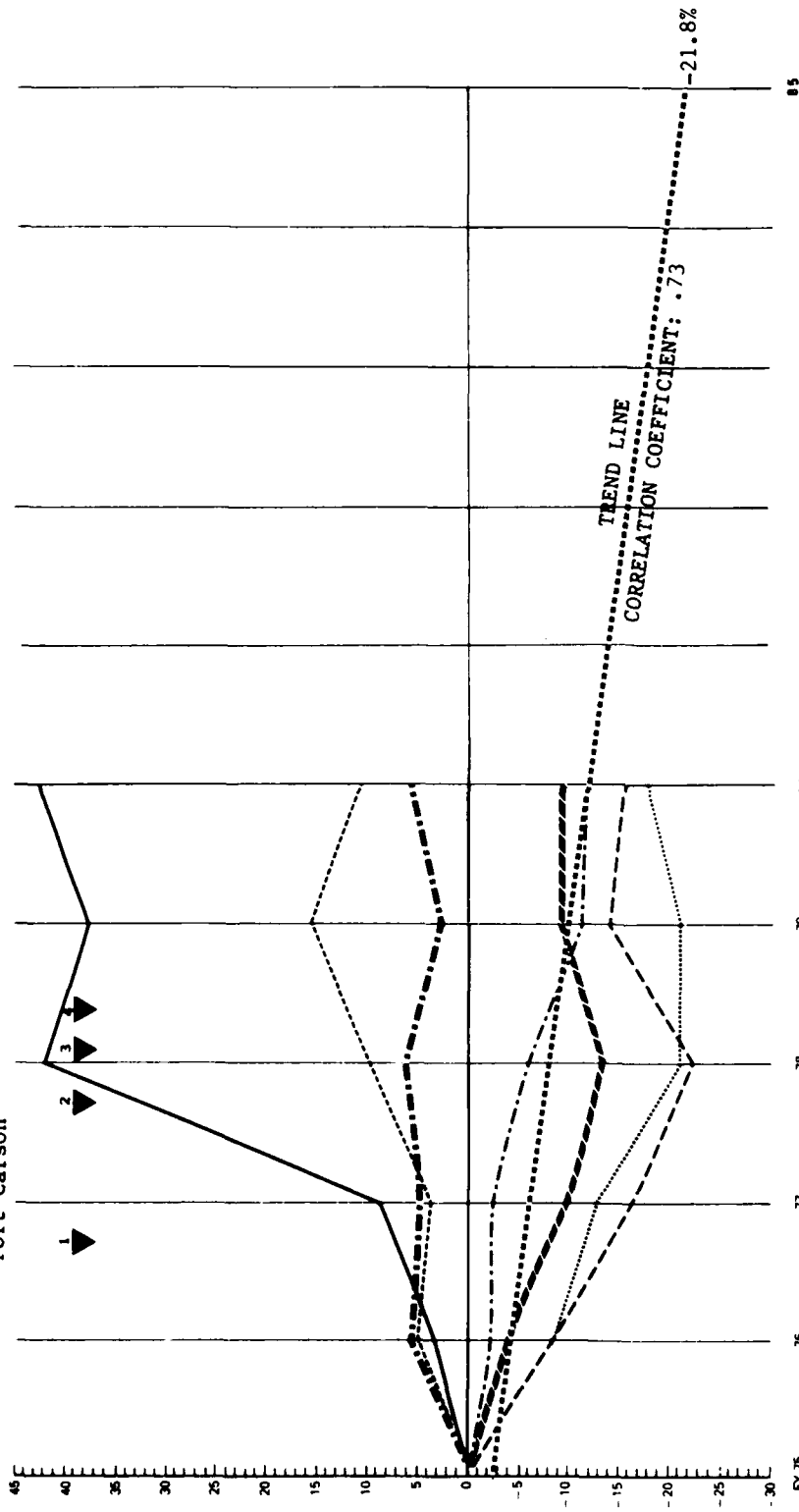
UNITS	76	77	78	79	80
1 Energy Consumption & PD	2,559,317	2,465,396	2,457,575	2,460,670	2,480,457
2 Thermal En Cons & PD	92,275	90,350	91,175	86,100	86,100
3 Electrical En Cons & PD	2,467,042	2,375,046	2,366,400	2,374,570	2,394,357
4 Resident Population & PD	17,550	14,795	16,076	14,906	14,906
5 Non Resident Population & PD	3,750	5,821	5,139	7,765	7,765
6 Population Served** & PD	22,300	20,616	21,215	22,671	22,671
7 Electric Population*** & PD	19,133	18,002	17,892	17,489	17,489
8 En Consumption/Pop Served & PD	114.8	114.9	114.8	108.5	108.5
9 En Consumption/Pop & PD	133.8	148.5	137.7	140.7	140.7
10 Electric En Consumption/Resident Population	140.6	160.5	147.2	159.3	159.3
11 Installed Air Cond Capacity & PD	8,679	9,994	11,161	11,341	11,341
12 Elec Energy/Ton of Air Cond & PD	284.3	212.8	212.0	209.4	209.4
13 Heat Poperty Inventory (Btu) & PD	16,156	16,121	16,130	16,403	16,403
14 Int'lucive Population	158,413	152,930	152,360	150,010	150,010
15 Energy Consumption/GSF & PD	5,712	5,598	5,652	5,249	5,249
16 Thermal En Consumption/GSF & PD	152,201	147,332	146,708	146,781	146,781
17 Electrical En Consumption/GSF & PD	461	459	458	438	438
18 WPI by Category	1,925	1,899	1,899	1,892	1,892
Training	83	71	71	72	72
Maintenance & Production	1,465	1,413	1,413	1,413	1,413
Research, Development & Testing	157	157	157	174	174
Storage	850	851	759	764	764
Other Covered Storage	3,272	3,229	3,224	3,222	3,222
Hospital & Medical	1,876	1,674	1,674	1,674	1,674
Administration	5,438	5,792	5,803	6,064	6,064
Residence Housing	781	567	571	549	550
Community Facilities	188	180	180	178	178
Family Housing	BASE	BASE	BASE	BASE	BASE
Operational Buildings	BASE	BASE	BASE	BASE	BASE
Utility Buildings	BASE	BASE	BASE	BASE	BASE
Other	BASE	BASE	BASE	BASE	BASE

PD is Percent Deviation from Base Year *Population Served is the total Resident & Non Resident Population

FL. Anadot, CZ in FY 1975

REMARKS

Fort Carson



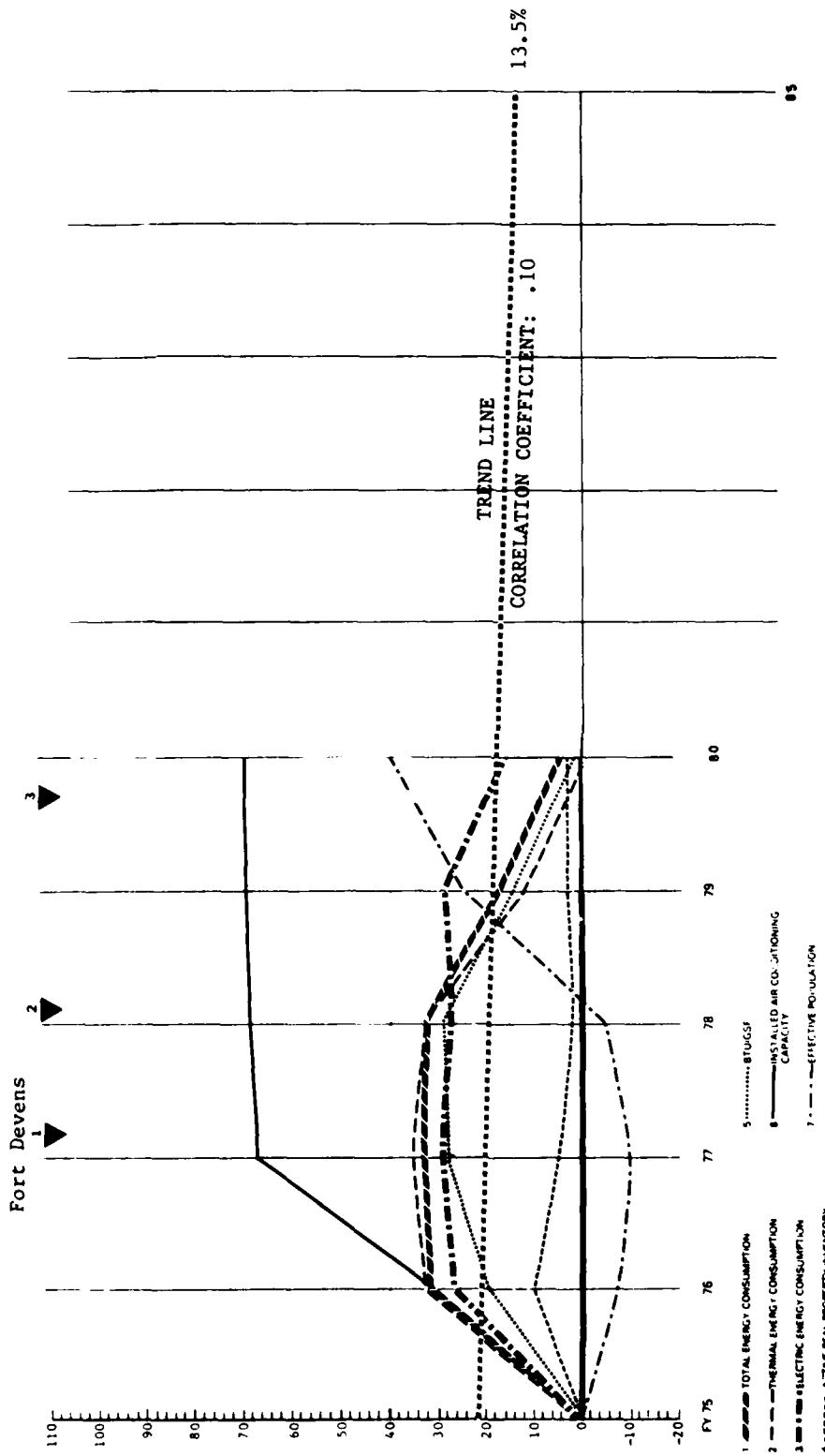
- 1. TOTAL ENERGY CONSUMPTION
 - 2. THERMAL ENERGY CONSUMPTION
 - 3. ELECTRIC ENERGY CONSUMPTION
 - 4. ACTIVE REAL PROPERTY INVENTORY
 - 5. EFFECTIVE POPULATION
 - 6. INSTALLED AIR CONDITIONING CAPACITY
1. FY 76, 2. FY 77, 3. FY 78, 4. FY 79, 5. FY 80, 6. FY 81, 7. FY 82, 8. FY 83, 9. FY 84, 10. FY 85
1. FY 76, 2. FY 77, 3. FY 78, 4. FY 79, 5. FY 80, 6. FY 81, 7. FY 82, 8. FY 83, 9. FY 84, 10. FY 85

U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - ST. CARBON, CO. MACOM Bldg. CLIMATIC REGION 2 HDD 4,173 CDD 602

UNITS/FY	75	76	77	78	79	80
1 Energy Consumption in PD	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
2 Thermal En Cons in PD	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
3 Electrical En Cons in PD	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
4 Resident Population in PD	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
5 Non-Resident Population in PD	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
6 Population Growth in PD	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
7 Effective Population in PD	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
8 En Consumption Pop Served in PD	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
9 En Consumption FM Pop in PD	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
10 Electric En Consumption/Resident Population	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
11 Installed Air Cond Capacity in PD	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
12 Elec Energy/ton of Air Cond in PD	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
13 Real Property Inventory (RPM) in PD	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
14 RPE/Effective Population	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
15 Energy Consumption/GSF in PD	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
16 Thermal En Consumption/GSF in PD	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
17 Electrical En Consumption/GSF in PD	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
18 RPE by Category	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
Maintenance & Production	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
Research, Development & Testing	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
Storage	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
Other Command Storage	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
Medical & Hospital	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
Administration	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
Electrical Housing	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
Community Facilities	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
Family Housing	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
Operational Buildings	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
Utility Buildings	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000
Other	1,255,000	1,355,000	1,455,000	1,555,000	1,655,000	1,755,000

1 FY 76 EICP - Storms, Insulation and Heating Controls - \$509,410 - Completed June 1977
 2 FY 77 EICP - Insulation and Electrical Alterations - \$591,217 - Completed (estimated) June 1978
 3 FY 77 Family Housing EICP Improvements - \$676,587 - Completed (estimated) October 1978
 4 FY 78 EICP - Convert to Fluorescent Lighting - \$1,209,000 - completed February 1980

**Population Served is the total Resident & Non Resident Population
 **FY Pop is Resident + 1/3 Non Resident



A-56

1. TOTAL ENERGY CONSUMPTION
2. THERMAL ENERGY CONSUMPTION
3. ELECTRIC ENERGY CONSUMPTION
4. ACTIVE REAL PROPERTY INVENTORY
5. STUGGS
6. INSTALLED AIR COOLING CAPACITY
7. EFFECTIVE POPULATION

1. 1975-1976
2. 1976-1977
3. 1977-1978
4. 1978-1979
5. 1979-1980

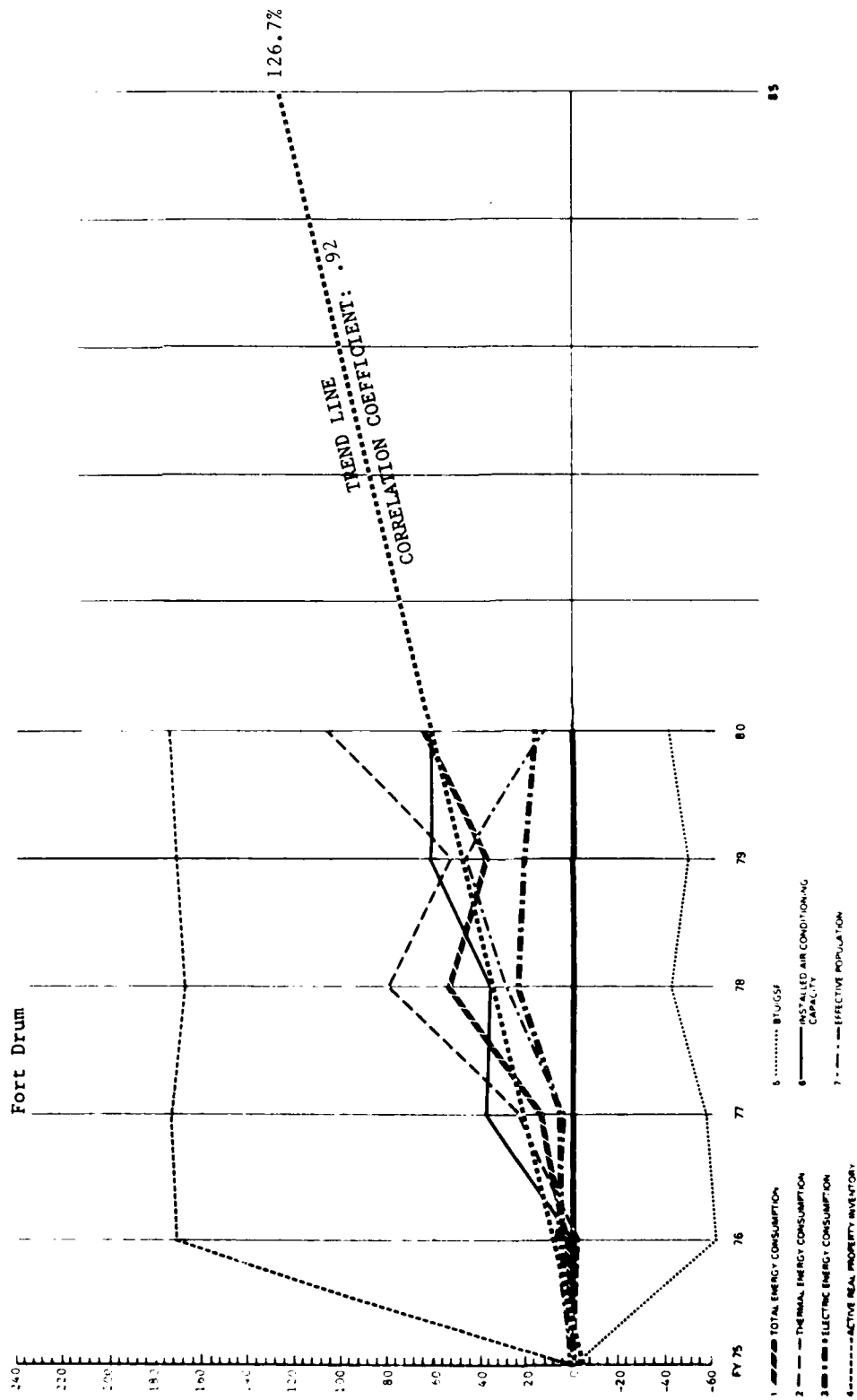
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION FT. DRIVERS, VA MACOM FURSCOPY CLIMATIC REGION HDD 6,325 CDD 560

UNITS	75	76	77	78	79	80
ARTY	1,772,173	2,110,409	2,364,265	2,329,058	2,072,863	1,816,211
ARTY	1,240,868	1,311,111	1,478,984	1,653,632	1,392,035	1,212,925
ARTY	531,305	800,298	885,281	675,426	680,828	603,286
PEOPLE	72,408	72,408	11,875	12,458	14,360	16,360
PEOPLE	2,496	1,271	1,807	1,746	1,312	1,121
PEOPLE	13,603	13,603	13,655	12,404	8,363	2,102
PEOPLE	13,807	12,817	12,480	13,213	17,148	19,250
WATERCAP	113.6	170.6	172.8	161.7	91.4	76.5
WATERCAP	128.4	181.8	189.5	176.3	121.2	92.4
WATERCAP	61.2	54.5	57.7	53.5	47.7	36.5
TOWNS	2,468	3,130	3,130	3,153	3,171	3,171
ESF	10,211	11,805	11,298	10,911	11,040	10,974
ESFCAP	165,111.7	197,408.92	210,882.90	213,659.83	188,196.64	167,162.42
BTUGSF	115,591	130,160	149,802	151,556	126,090	110,987
BTUGSF	69,410	77,498	81,185	81,900	69,108	59,194
ESF	1,675	1,428	1,290	1,441	1,676	1,463
ESF	873	749	803	762	771	767
ESF	709	744	119	124	14	14
ESF	1,664	1,664	569	563	519	526
ESF	1,957	2,532	1,664	1,660	1,650	1,650
ESF	1,815	2,157	2,491	1,955	1,974	1,904
ESF	619	610	1,518	1,979	1,942	1,893
ESF	3,024	3,068	3,123	2,926	3,082	3,021
ESF	55	55	272	250	278	206
ESF	27	58	96	67	72	74
ESF	14	14	14	18	40	41

1 Energy Consumption is PD
 2 Thermal En Cons is PD
 3 Electrical En Cons is PD
 4 Resident Population is PD
 5 Non Resident Population is PD
 6 Population Served** is PD
 7 Effective Population*** is PD
 8 In Consumption/Pop Served is PD
 9 In Consumption/Pop is PD
 10 Electric En Consumption/Residence Population
 11 Installed Air Cond Capacity is PD
 12 Fuel Energy/Ton of Air Cond is PD
 13 Heat Recovery Inventory (HRI) is PD
 14 Heat Recovery Inventory (HRI) is PD
 15 Energy Consumption/GSF is PD
 16 Thermal En Consumption/GSF is PD
 17 Electrical En Consumption/GSF is PD
 18 WPI by Category

Maintenance & Production
 Research, Development & Testing
 Storage
 Other Covered Storage
 Hospital & Medical
 Administration
 Bachelor Housing
 Community Facilities
 Family Housing
 Quarantine Bus Stop
 Utility Buildings
 Other

**PD is Percent Deviation from Base Year
 ***Population Served is the Total Resident & Non-Resident Population
 1 FY 76 EICP - Storms and Energy Conservation Alterations - \$232,742 Completed (estimated) November 1977
 2 FY 77 Family Housing EICP Improvements - \$615,550 - Completed (estimated) October 1978
 3 FY 79 EICP - Install Windows - Heat Recovery - \$465,000 - Completed May 1980



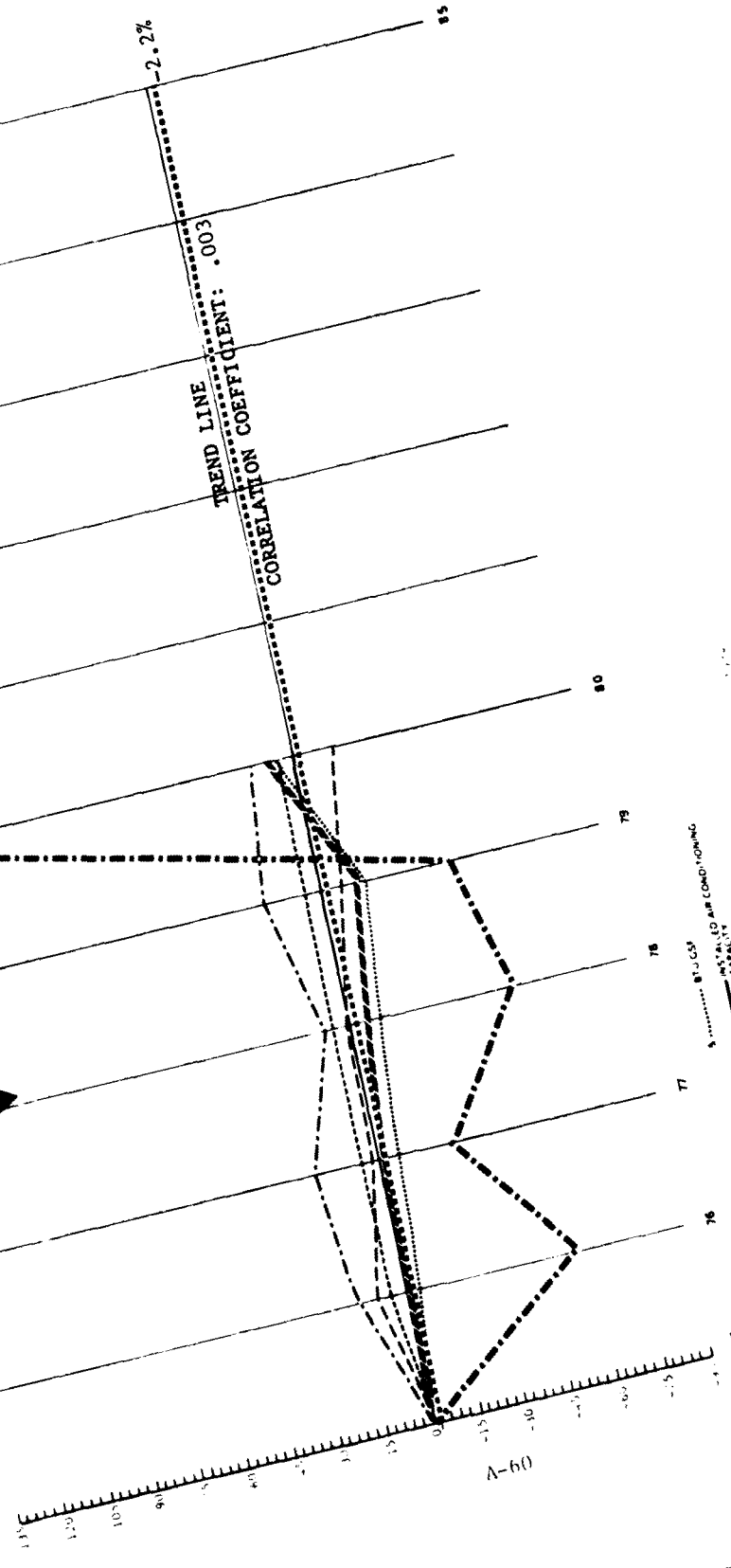
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - ET. DRUM, N.Y. MACOM_EORSOCOM CLIMATIC REGION 1 HDD 7,601 CDD 452

UNITS/FY	75	76	77	78	79	80
1 Energy Consumption to PD	432,179	437,272	1,331	494,660	1,245,311	661,613
2 Thermal En Core to PD	229,055	223,264	1,251	281,957	410,201	410,201
3 Electrical En Core to PD	203,124	214,508	1,281	212,703	1,434,110	251,412
4 Resident Population to PD	1,644	2,849	1,811	3,456	3,456	3,470
5 Non Resident Population to PD	1,019	1,110	1,011	1,188	1,011	1,251
6 Population Saved** to PD	3,724	3,979	1,691	3,493	1,541	4,291
7 Effective Population*** to PD	3,004	3,224	1,741	3,131	1,461	3,863
8 En Consumption/Pop Saved to PD	116,1	110,0	1,521	174,1	1,611	160,9
9 En Consumption/Pop to PD	143,9	135,7	1,721	158,0	1,911	171,3
10 Electric En Consumption/Person Population	76,8	75,3	1,201	77,8	1,211	72,4
11 Installed Air Cond Capacity to PD	864,4	912,8	1,541	654,5	1,241	788,1
12 Elec Energy/Ton of Air Cond to PD	1,750	4,729	1,170,211	4,761	1,172,111	4,663
13 Heat Property Inventory Btu to PD	58	1,46	1,31,611	103,698	1,57,911	1,21,107,211
14 Ineffective Population	246,959	92,571	1,62,511	103,698	1,57,911	141,885
15 Energy Consumption/GSF to PD	130,889	47,211	1,63,411	59,272	1,54,811	87,969
16 Thermal En Consumption/GSF to PD	116,070	45,180	1,60,911	44,676	1,61,511	53,916
17 Electrical En Consumption/GSF to PD	354	398	470	398	470	470
18 Btu by Category	532	665	567	606	588	588
Measurements to Production	315	677	44	39	39	39
Research, Development & Testing	28	28	28	28	28	28
Storage	56	56	56	56	56	56
Other Central Storage	137	137	137	137	137	137
Household & Medical	180	180	180	180	180	180
Administrative	18	18	18	18	18	18
Blanchet Housing	5	5	5	5	5	5
Community Fin Bldg	1	1	1	1	1	1
Family Housing	1	1	1	1	1	1
Operational Bldg Shop	1	1	1	1	1	1
Utility Buildings	1	1	1	1	1	1
Other	1	1	1	1	1	1

**Population Saved is the total Number of Non-Resident Population
 ***Eff Pop is Resident + 1/3 Non-Resident
 **PD is Percent Diversion from Base Year

REMARKS

Fort Greely



TREND LINE
CORRELATION COEFFICIENT: .003

-2.2%

A-60

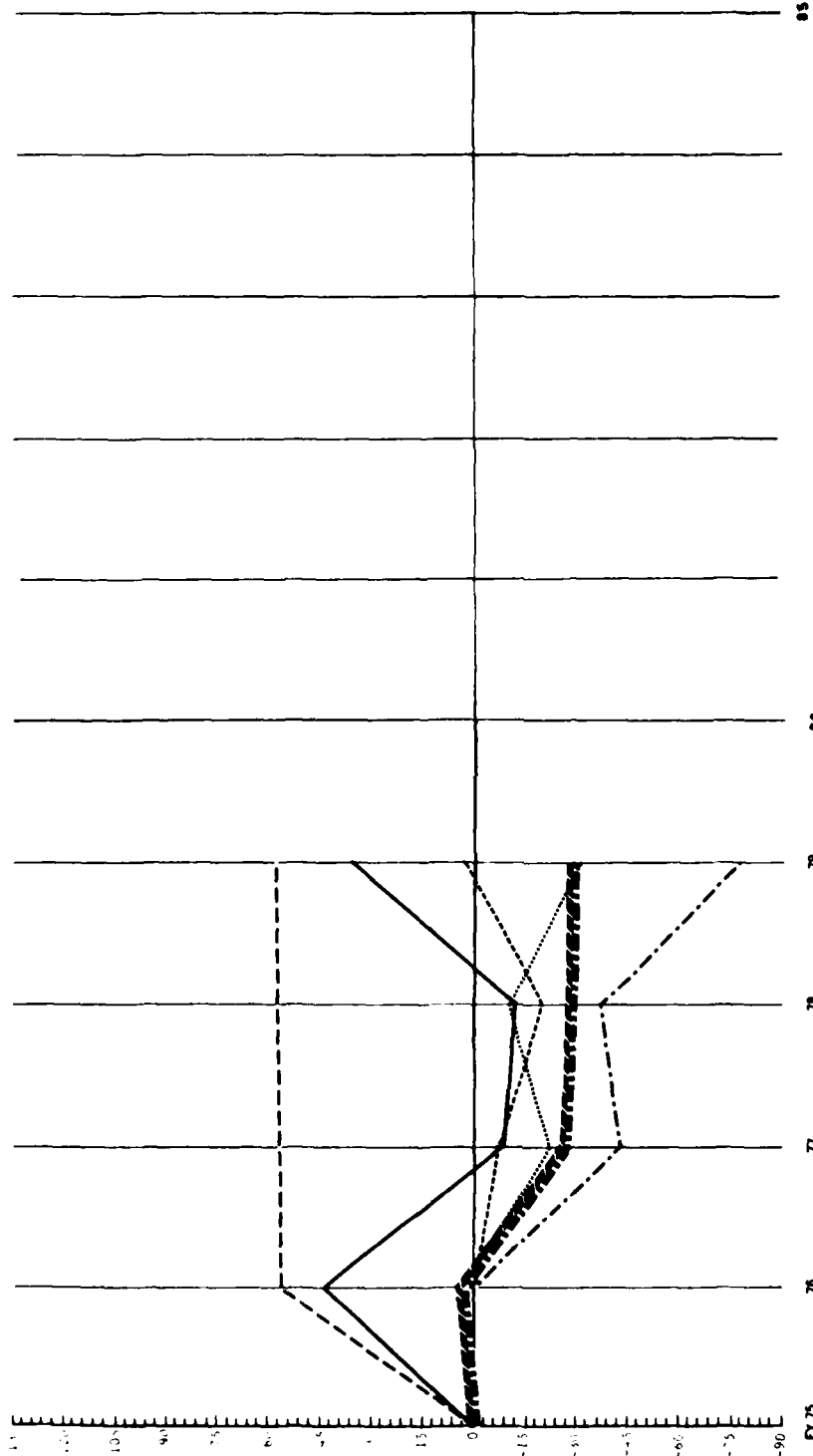
- 1 TOTAL ENERGY CONSUMPTION
- 2 ELECTRICAL ENERGY CONSUMPTION
- 3 TOTAL ENERGY CONSUMPTION
- 4 ACTIVE MAIL INVENTORY
- 5 B-105 CAPACITY
- 6 INSTALLED AIR CONDITIONING CAPACITY
- 7 SELECTIVE POPULATION

1
2

UNITS/YR	75	76	77	78	79	80
1 Energy Consumption, B PD	15,221,115	14,508,776	12,733,000	13,311,111	12,733,000	13,311,111
2 Thermal En Cons, B PD	112,443	152,452	1,011	1,011	1,011	1,011
3 Electrical En Cons, B PD	52,202	31,416	33,300	15,706	40,681	38,700
4 Resident Population, B PD	1,315	1,315	1,315	1,315	1,315	1,315
5 Non-Resident Population, B PD	1,315	1,315	1,315	1,315	1,315	1,315
6 Population Served** - B PD	1,315	1,315	1,315	1,315	1,315	1,315
7 Effective Population*** - B PD	1,315	1,315	1,315	1,315	1,315	1,315
8 En Consumption/Pop Served B PD	266.6	235.2	220.1	217.4	220.1	217.4
9 En Consumption/EF Pop B PD	296.7	256.0	241.0	218.8	221.6	215.4
10 Electric En Consumption/Resident Population	65.2	12.4	28.3	12.3	24.8	100.0
11 Installed Air Cond Capacity, B PD	1,506	1,580	1,547	1,541	1,557	1,541
12 Etc Energy/Ton of Air Cond B PD	1,506	1,580	1,547	1,541	1,557	1,541
13 Heat Property Inventory (BPD) B PD	322,520	307,016	200,670	201,124	274,683	315,922
14 Inefficient Population	216,112	237,140	246,100	241,611	248,855	232,864
15 Energy Consumption/GSF B PD	66,408	9,836	13,328	13,328	13,328	13,328
16 Thermal En Consumption/GSF B PD	195	174	174	174	180	179
17 Electrical En Consumption/GSF B PD	65	57	57	57	43	73
18 100% by Category	167	157	131	131	118	14
Training	12	12	12	12	12	12
Maintenance & Production	35	40	40	40	50	10
Research, Development & Testing	245	251	251	251	274	215
Storage	134	125	125	125	173	181
Other Covered Storage	593	569	569	569	590	591
Hospital & Medical	26	5	5	5	5	28
Administration	12	12	12	12	12	12
Recruiter Housing	3	3	3	3	3	3
Community Facilities	1	1	1	1	1	1
Family Housing	1	1	1	1	1	1
Operational Buildings	1	1	1	1	1	1
Utility Buildings	1	1	1	1	1	1
Other	1	1	1	1	1	1

**Population Served is the total Resident & Non-Resident Population
 ***EF Pop of Resident + 10 Non-Resident
 PD is Percent Deviation from Base Year
 1 W FY 77 Family Housing ECIP Improvements - \$183,305 - Completed (estimated) October 1978
 2 W FY 79 ECIP - Insulation & Heating Controls - \$1,817,000 - Completed September 1980

Homestead AFB



No Trend Analysis conducted because this activity reverted to U.S. Air Force control as of FY 80.

5 BTU/GSF
 6 INSTALLED AIR CONDITIONING CAPACITY
 7 EFFECTIVE POPULATION

1 TOTAL ENERGY CONSUMPTION
 2 THERMAL ENERGY CONSUMPTION
 3 ELECTRIC ENERGY CONSUMPTION
 4 ACTIVE REAL PROPERTY INVENTORY

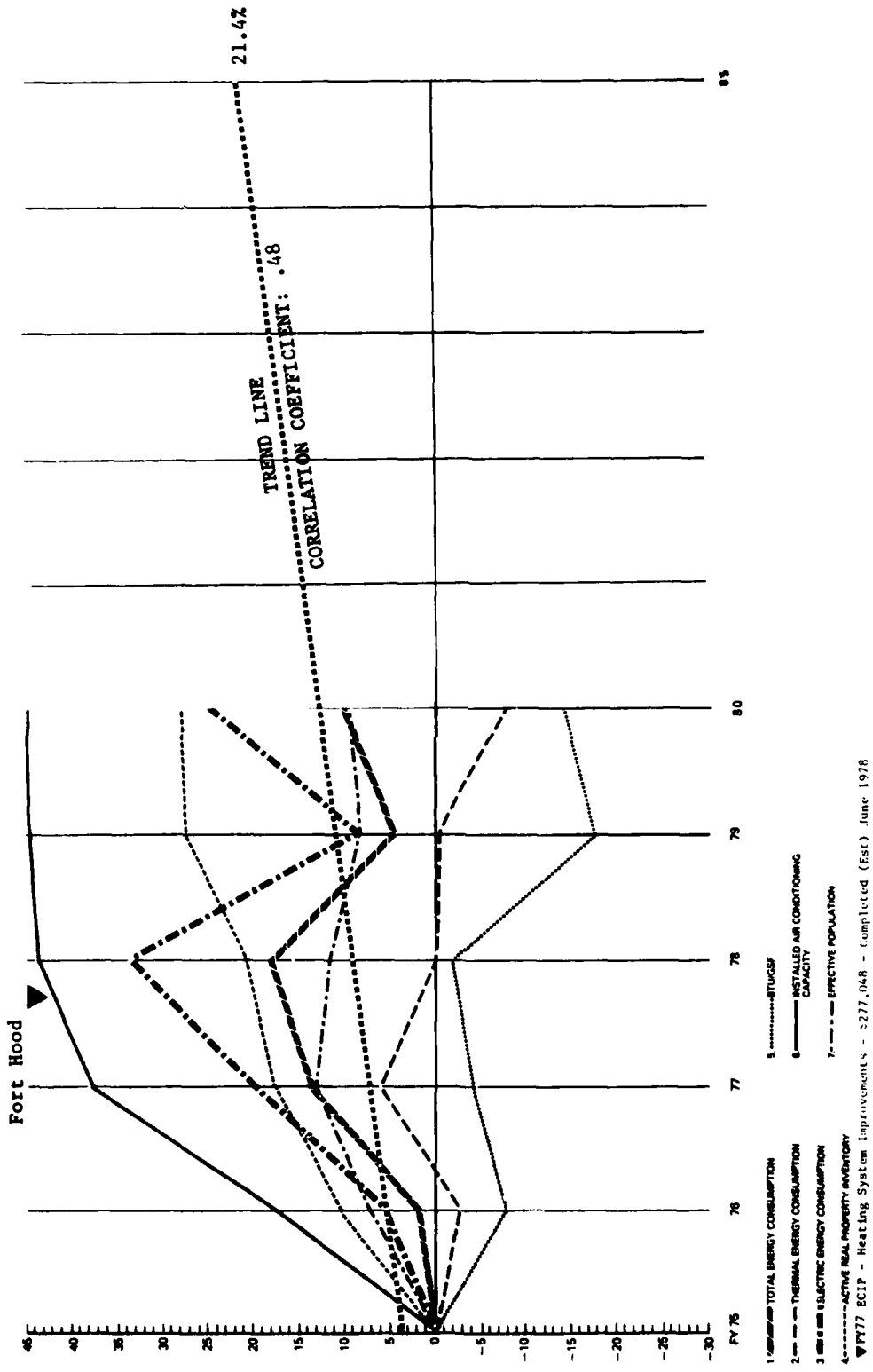
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION Homestead AFB Florida FORSCOM MACOM CUMMATIC REGION HDD CDD 4326

UNITS/FY	76	78	77	78	79
1 Energy Consumption & PD	264,589	272,184	193,293	187,988	187,988
2 Thermal En Cons & PD	275	350	350	350	350
3 Electrical En Cons & PD	264,364	271,834	192,943	187,618	187,618
4 Resident Population & PD	4,170	4,170	2,230	2,500	2,500
5 Non-Resident Population & PD	1,251	1,251	1,251	1,251	1,251
6 Population Served** & PD	5,421	5,421	3,481	3,753	3,753
7 Effective Population*** & PD	4,187	4,187	2,647	2,919	2,919
8 En Consumption/Pop Served & PD	68.8	50.2	55.5	50.1	50.1
9 En Consumption/EN Pop & PD	57.7	59.1	73.0	54.4	54.4
10 Electric En Consumption/Resident Population	63.4	65.2	86.5	75.0	75.0
11 Insulated Air Cond Capacity & PD	728	1,043	668	640	640
12 Elec: Energy/Ton of Air Cond & PD	363.1	261.1	288.8	283.2	283.2
13 Heat Property Inventory (RPR) & PD	308	308	285	284	284
14 RPR/Inmate Population	07	07	11	08	08
15 Energy Consumption/GSF & PD	864,620	889,490	678,221	770,360	770,360
16 Thermal En Consumption/GSF & PD	735	1,164	1,228	1,434	1,434
17 Electrical En Consumption/GSF & PD	863,933	889,366	676,993	768,926	768,926
18 RPR by Category					
Maintenance & Production	31	31	31	32	32
Research, Development & Testing	43	43	43	40	40
Storage					
Other Covered Storage					
Hospital & Medical					
Administration					
Bechtler Housing					
Community Facilities					
Family Housing					
Operational Buildings					
Utility Buildings					
Other					

PD at Percent Decrease from Base Year **Population Served is the total Resident & Non-Resident Population *EN Pop is Resident + 1/3 Non-Resident

Reverted to B.S. Air Force Control as of End FY 1979

REMARKS



Category	76	77	78	79	80
MEETRY	4,117,156	4,569,467	4,855,367	4,298,246	4,527,740
METU	1,893,892	2,007,863	1,893,594	1,893,259	1,768,450
METU	2,223,266	2,561,584	2,961,773	2,407,017	2,779,290
PEOPLE	38,105	43,465	43,021	41,467	43,196
PEOPLE	21,221	25,853	25,209	25,300	21,765
PEOPLE	61,876	69,298	68,230	66,767	64,961
PEOPLE	46,079	52,063	51,424	49,900	50,451
METUCAP	86.5	67.4	71.2	64.4	67.7
METUCAP	82.4	69.7	64.6	66.1	65.7
METUCAP	88.3	61.2	68.6	58.0	64.3
TOTAL	22,982	31,371	32,897	33,326	33,289
ADDITIONAL	56.9	84.3	90.0	72.6	75.0
ADDITIONAL	18,110	21,368	21,784	23,035	23,132
ADDITIONAL	227,361.6	209,467.3	222,886.8	186,596.3	195,366
ADDITIONAL	1,08,577.1	94,035.9	86,925.9	82,102.4	75,521
ADDITIONAL	122,764.4	117,290.4	135,960.9	104,493.9	120,085
ADDITIONAL	519	640	661	685	718
ADDITIONAL	2,041	2,114	2,161	2,208	2,233
ADDITIONAL	1,132	291	291	291	292
ADDITIONAL	375	408	399	410	408
ADDITIONAL	132	132	132	132	132
ADDITIONAL	6,348	6,728	7,020	7,223	7,379
ADDITIONAL	1,558	1,756	1,759	1,759	1,702
ADDITIONAL	6,274	7,341	7,402	8,280	8,280
ADDITIONAL	307	338	338	338	352
ADDITIONAL	108	110	95	84	84
ADDITIONAL	108	110	17	22	22

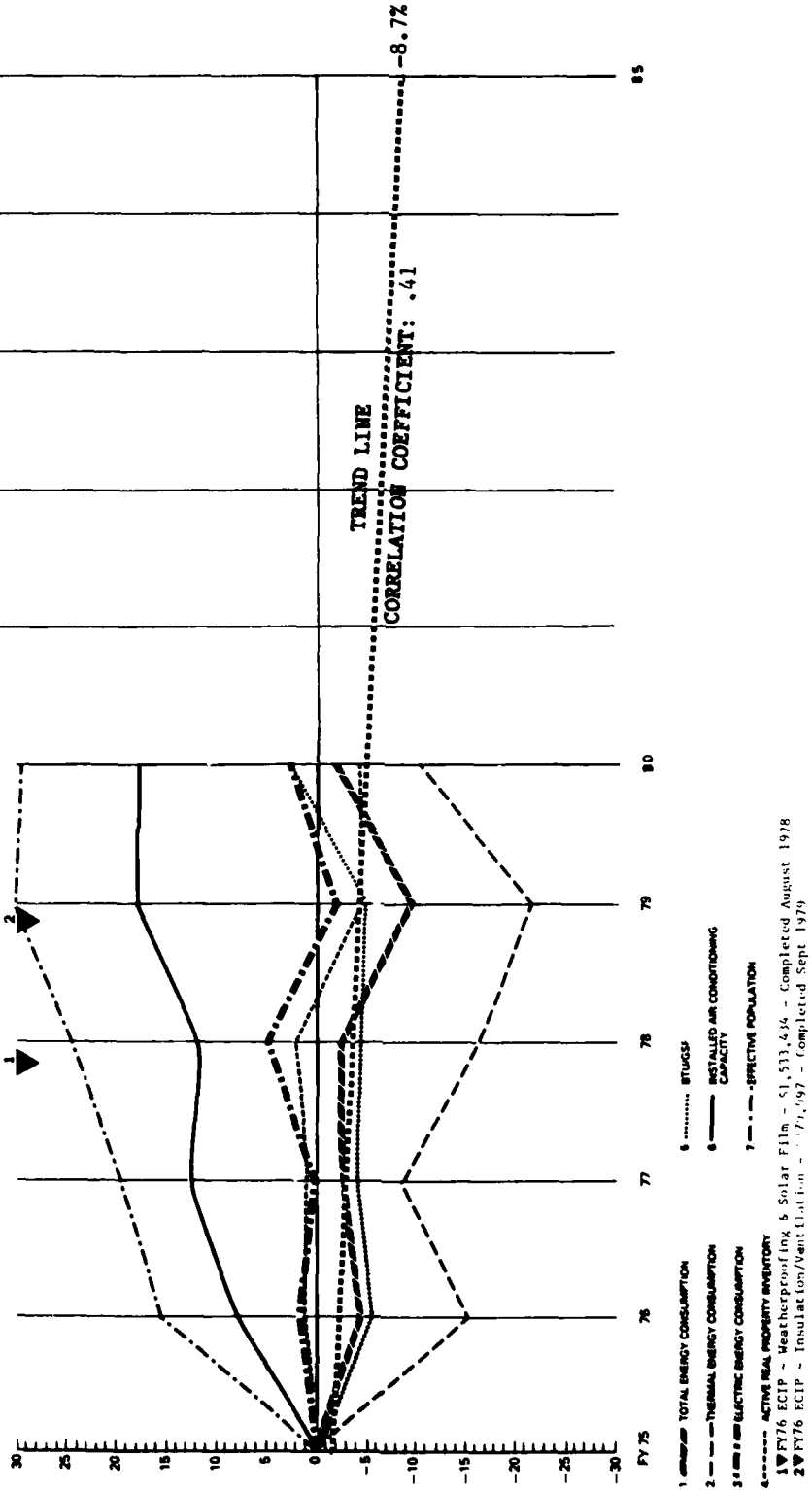
1 Energy Consumption @ PD
 2 Thermal In Cost @ PD
 3 Electrical In Cost @ PD
 4 Resident Population @ PD
 5 Non-Resident Population @ PD
 6 Population @ PD
 7 Electric Population @ PD
 8 On Consumption @ PD
 9 On Consumption @ PD
 10 Electric On Consumption @ PD
 11 Installed Air Cond Capacity @ PD
 12 Heat Energy @ PD
 13 Heat Energy Inventory @ PD
 14 Installation Population
 15 Energy Consumption @ PD
 16 Thermal In Consumption @ PD
 17 Electrical In Consumption @ PD
 18 By Category

ADDITIONAL
 Maintenance & Protection
 Research, Development & Testing
 Storage
 Other Contract Storage
 Hospital & Medical
 Administration
 Residential Housing
 Community Facilities
 Family Housing
 Government Buildings
 Utility Buildings
 Other

PD is Percent Decision from Base Year
 **Population Based on the Last Resident & Non-Resident Population
 ***By Page in Resident + 1/3 Non-Resident

FT 77 ECIP - Heating System Improvements - \$277,048 - Completed (estimated) June 1978

Fort Sam Houston



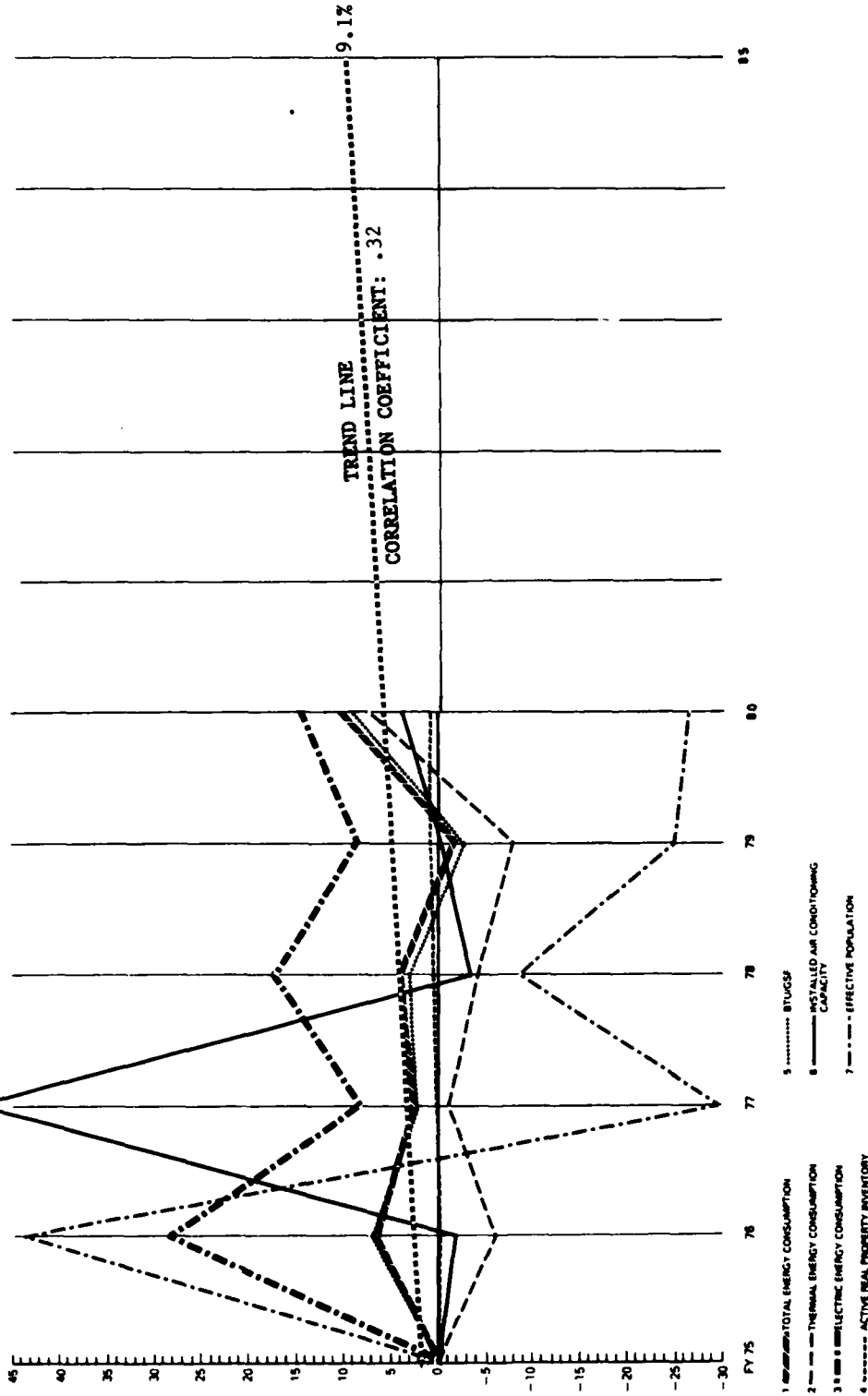
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION_ET_SAM_HOUSTON_TX MACOM_EDBSCON CLIMATIC REGION 6 HDD 1,570 CDD 2,994

UNITS	75	76	77	78	79	80
1 Energy Consumption & PD	1,896,262	1,896,837	1,928,900	1,932,674	1,803,896	1,945,697
2 Thermal En Cons & PD	715,055	606,988	655,826	599,129	559,208	641,300
3 Electrical En Cons & PD	1,171,207	1,289,849	1,273,074	1,333,545	1,244,688	1,304,397
4 Resident Population & PD	3,160	10,362	11,666	12,174	12,749	12,387
5 Non Resident Population & PD	11,280	13,866	11,931	11,648	12,710	13,079
6 Population Served*** & PD	20,440	24,228	23,597	23,822	25,019	25,466
7 Effective Population*** & PD	12,920	14,964	15,190	15,057	16,839	16,749
8 En Consumption/Pop Served & PD	97.2	78.4	82.9	81.1	72.1	76.4
9 En Consumption/Pop & PD	153.7	126.8	125.3	120.4	107.1	116.2
10 Electric En Consumption/Pop & PD	138.8	124.7	111.2	109.5	97.6	105.3
11 Heating En Consumption/Pop & PD	13,389	14,487	15,087	14,940	15,756	15,756
12 Hot Water/Pop Served & PD	94.9	89.0	84.4	89.3	79.0	82.8
13 Total Energy/Pop Served & PD	10,819	10,934	10,940	11,038	10,320	10,360
14 Total Energy/Pop & PD	84	73	71	69	61	62
15 Total Energy/Pop Served & PD	183,590	173,481	176,316	175,091	174,796	187,809
16 Energy Consumption/GSF & PD	66,093	55,214	59,948	54,279	54,187	61,902
17 Electrical En Consumption/GSF & PD	11,497	11,490	11,638	12,016	12,009	12,507
18 Total En Consumption/GSF & PD	994	1,026	1,049	913	828	899
Training	651	474	478	477	403	395
Maintenance & Production	27	28	28	28	28	28
Research, Development & Training	1,693	1,757	1,478	1,558	1,275	1,171
Storage	751	794	777	778	776	778
Other Covered Storage	1,044	998	884	1,012	998	1,190
Hospital & Medical	2,464	2,313	2,305	2,306	2,299	1,918
Administration	315	266	266	266	266	266
Bachelor Housing	2,480	2,464	2,464	2,469	2,454	2,480
Community Fit Bns	89	111	108	104	86	90
Family Housing	87	79	77	75	67	67
Operational Bn Bnps	34	34	34	34	34	32
Utility Buildings						
Other						

**PD is Percent Deviation from Base Year
 ***Population Served is the total Resident & Non-Resident Population
 **En Pop is Resident + 1/2 Non-Resident

1 FY 76 ECIP - Weatherproofing and Solar Film - \$1,533,434 - Completed August 1978
 2 FY 76 ECIP - Insulation/Ventilation - \$279,997 - Completed September 1979

Fort Indiantown Gap



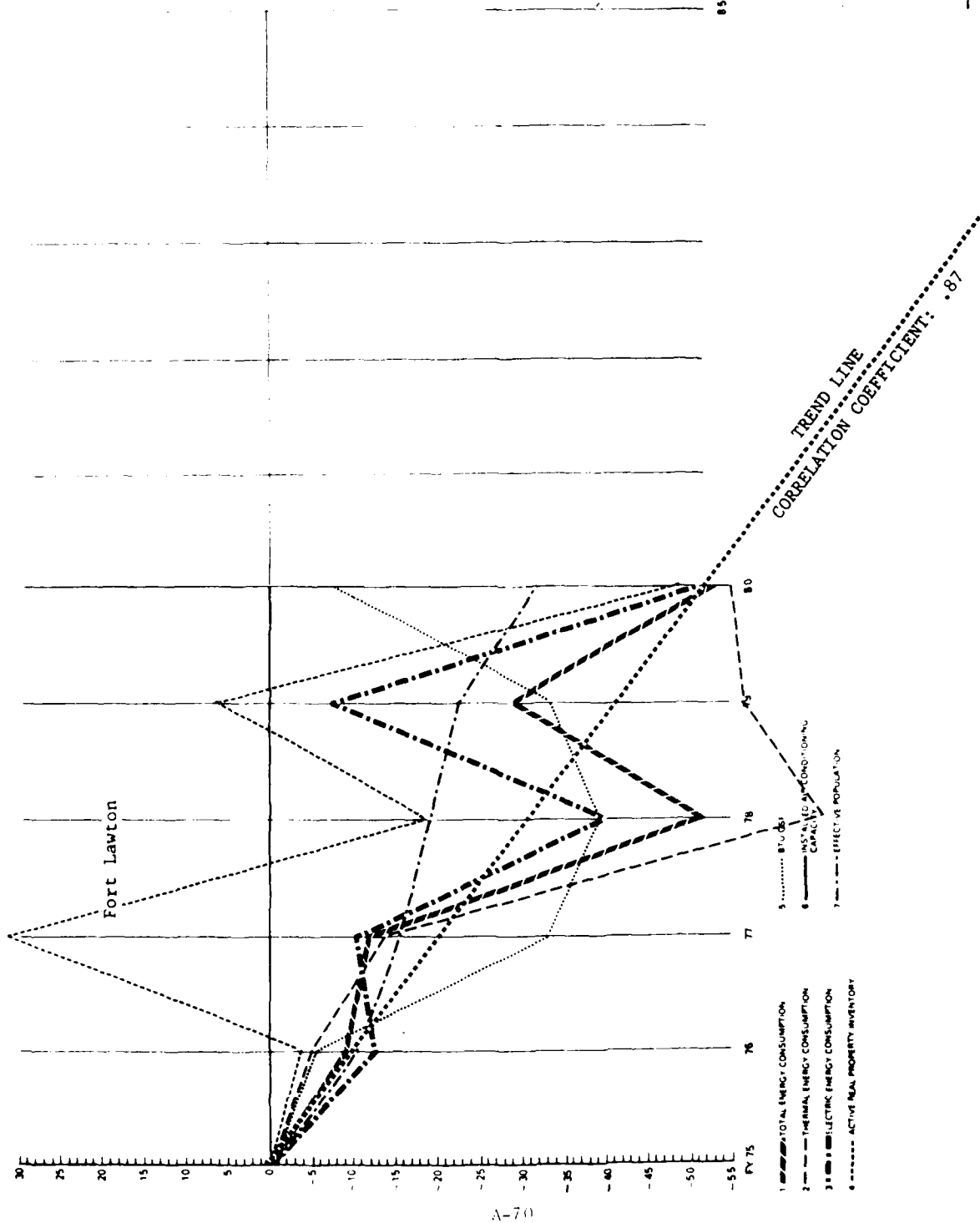
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - MACOM - CLIMATIC REGION - HDD - CDD

UNIT/FY	76	77	78	79	80
1 Energy Consumption B PD	115,272	131,291	133,581	131,954	137,605
2 Thermal En. Cons. B PD	44,244	45,228	44,655	44,872	44,879
3 Electrical En. Cons. B PD	44,244	45,228	44,655	44,872	44,879
4 Resident Population B PD	3,812	3,812	3,812	3,812	3,812
5 Non Resident Population B PD	1,242	1,242	1,242	1,242	1,242
6 Population Served** B PD	6,552	6,552	6,552	6,552	6,552
7 Effective Population*** B PD	1,061	1,061	1,061	1,061	1,061
8 En. Consumption/Pop. Served B PD	102.2	102.2	102.2	102.2	102.2
9 En. Consumption/Pop. B PD	126.1	126.1	126.1	126.1	126.1
10 Effective En. Consumption/Resident Population	133.2	133.2	133.2	133.2	133.2
11 Installed Air Cond Capacity B PD	35.8	35.8	35.8	35.8	35.8
12 Effective En. Consumption/Resident Population	133.2	133.2	133.2	133.2	133.2
13 Heat Production Inventory (MWh) B PD	6,113	6,113	6,113	6,113	6,113
14 Effective Population	1,061	1,061	1,061	1,061	1,061
15 Energy Consumption/GSF B PD	116,622	119,089	119,990	119,217	126,227
16 Thermal En. Consumption/GSF B PD	71,128	72,166	72,492	72,843	72,539
17 Electrical En. Consumption/GSF B PD	43,494	46,923	47,498	46,374	53,688
18 pop by Category	1,242	1,242	1,242	1,242	1,242
Training	1,242	1,242	1,242	1,242	1,242
Maintenance & Production	1,242	1,242	1,242	1,242	1,242
Research, Development & Testing	1,242	1,242	1,242	1,242	1,242
Storage	1,242	1,242	1,242	1,242	1,242
Other Covered Storage	1,242	1,242	1,242	1,242	1,242
Hospital & Medical	1,242	1,242	1,242	1,242	1,242
Administration	1,242	1,242	1,242	1,242	1,242
Bachelor Housing	1,242	1,242	1,242	1,242	1,242
Community Facilities	1,242	1,242	1,242	1,242	1,242
Family Housing	1,242	1,242	1,242	1,242	1,242
Operational Buildings	1,242	1,242	1,242	1,242	1,242
Utility Buildings	1,242	1,242	1,242	1,242	1,242
Other	1,242	1,242	1,242	1,242	1,242

**Population Served is the total Resident & Non Resident Population

***EF Pop is Resident + 1/3 Non-Resident

REMARKS: Includes Okladia Support Center, Pa - No Okladia Support Center Report for FY 76 as data was Estimated Except for RFI by Category which Reflects Ft. Imbiantown Gap only

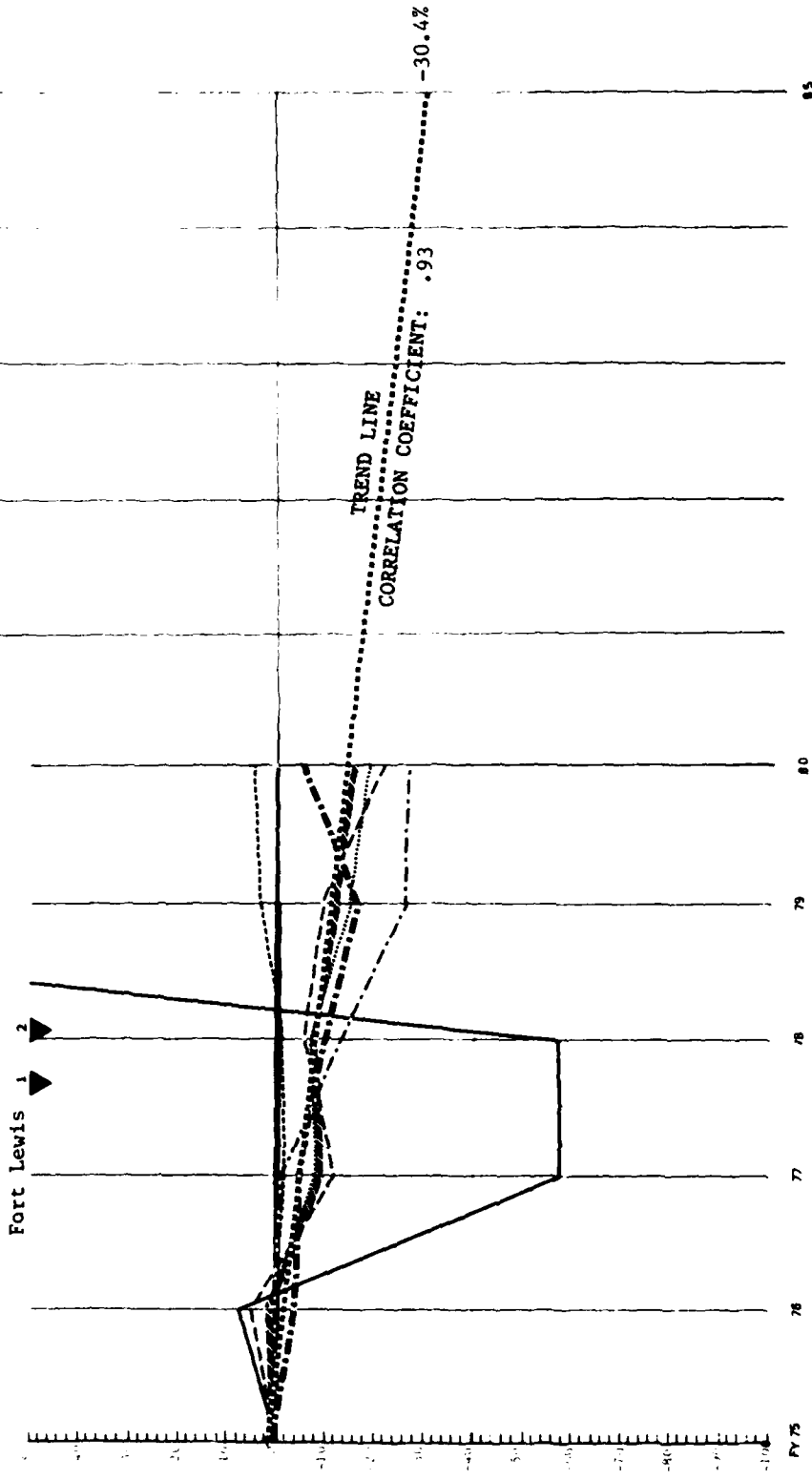


U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - MACOM - CLIMATIC REGION - HDD - CDD

UNITS	PD	70	77	78	79	80	81
1 Energy Consumption B PD	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
2 Thermal En. Cons B PD	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
3 Electrical En. Cons B PD	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
4 Resident Population B PD	556	556	556	556	556	556	556
5 Non-Resident Population B PD	614	614	614	614	614	614	614
6 Population Served B PD	1,170	1,170	1,170	1,170	1,170	1,170	1,170
7 Effective Population B PD	1,170	1,170	1,170	1,170	1,170	1,170	1,170
8 En. Consumption Served B PD	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
9 En. Consumption Pop B PD	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
10 Electric En. Consumption Resident Population	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
11 Installed Air Cond Capacity B PD	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
12 Elec. Energy/Ton of Air Cond B PD	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
13 Real Property Inventory (RPI) B PD	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
14 RPI/Effective Population	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
15 Energy Consumption/GSF B PD	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
16 Thermal En. Consumption/GSF B PD	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
17 Electrical En. Consumption/GSF B PD	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
18 Btu by Category	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
Training	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
Maintenance & Production	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
Research, Development & Testing	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
Storage	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
Other Covered Storage	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
Hospital & Medical	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
Administration	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
Bachelor Housing	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
Community Facilities	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
Family Housing	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
Operational Buildings	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
Utility Buildings	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5
Other	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5	1,015.5

PD is Percent Deviation from Base Year
 **Population Served is the total Resident & Non-Resident Population
 ***RPI Pop & Number & 1/2 Non-Resident

REMARKS



- 1 TOTAL ENERGY CONSUMPTION
 - 2 THERMAL ENERGY CONSUMPTION
 - 3 ELECTRIC ENERGY CONSUMPTION
 - 4 ACTIVE REAL PROPERTY INVENTORY
 - 5 INSTALLED AIR CONDITIONING CAPACITY
 - 6 EFFECTIVE POPULATION
- 1977 EOP - Improve Facilities
2000 Family Housing EOP Encouragements - Encourage Completion of EOP

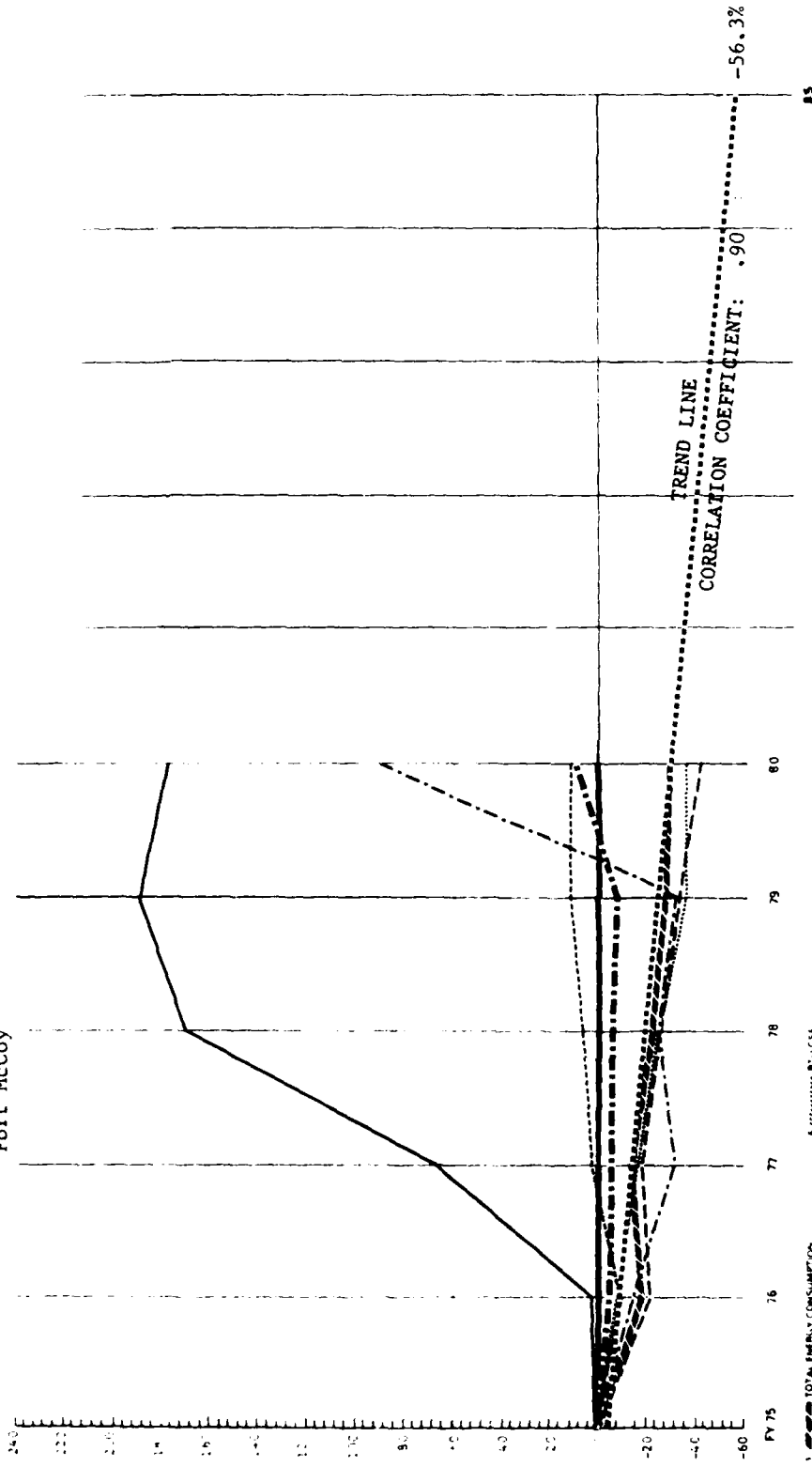
U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION _____ MACOM _____ CLIMATIC REGION _____ HDD _____ CDD _____

UNITS/FY	75	76	77	78	79	80
1 Energy Consumption B PD	1,992,976	2,052,976	2,052,976	2,052,976	2,052,976	2,052,976
2 Thermal En Cons B PD	2,417,451	2,417,451	2,417,451	2,417,451	2,417,451	2,417,451
3 Electrical En Cons B PD	1,478,299	1,478,299	1,478,299	1,478,299	1,478,299	1,478,299
4 Resident Population B PD	34,273	34,273	34,273	34,273	34,273	34,273
5 Non Resident Population B PD	3,214	3,214	3,214	3,214	3,214	3,214
6 Population Served** B PD	37,487	37,487	37,487	37,487	37,487	37,487
7 Effective Population*** B PD	35,519	35,519	35,519	35,519	35,519	35,519
8 En Consumption/Pop Served B PD	105.1	105.1	105.1	105.1	105.1	105.1
9 En Consumption/Pop B PD	112.5	112.5	112.5	112.5	112.5	112.5
10 Electric En Consumption/Resident Population	42.9	42.9	42.9	42.9	42.9	42.9
11 Installed Air Cond Capacity B PD	415	415	415	415	415	415
12 Elec Energy/ton of Air Cond B PD	3,844.1	3,844.1	3,844.1	3,844.1	3,844.1	3,844.1
13 Real Property Inventory (RPI) B PD	19,847	19,847	19,847	19,847	19,847	19,847
14 RPI/Effective Population	56	56	56	56	56	56
15 Energy Consumption/GSF B PD	201,338	201,338	201,338	201,338	201,338	201,338
16 Thermal En Consumption/GSF B PD	116,776	116,776	116,776	116,776	116,776	116,776
17 Electrical En Consumption/GSF B PD	84,562	84,562	84,562	84,562	84,562	84,562
18 RPI by Category	104	104	104	104	104	104
Maintenance & Production	1,561	1,561	1,561	1,561	1,561	1,561
Research, Development & Testing	2,538	2,538	2,538	2,538	2,538	2,538
Source	655	655	655	655	655	655
Other General Support	1,030	1,030	1,030	1,030	1,030	1,030
Medical & Medical Administration	6,395	6,395	6,395	6,395	6,395	6,395
Bachelor Housing	1,531	1,531	1,531	1,531	1,531	1,531
Community Facilities	5,617	5,617	5,617	5,617	5,617	5,617
Family Housing	137	137	137	137	137	137
Operational Buildings	108	108	108	108	108	108
Utility Buildings	131	131	131	131	131	131
Other	1,632	1,632	1,632	1,632	1,632	1,632
Net Available	1,632	1,632	1,632	1,632	1,632	1,632
Net Available Separately Included Above	BASE	BASE	BASE	BASE	BASE	BASE
Net Available	655	655	655	655	655	655
Net Available	1,030	1,030	1,030	1,030	1,030	1,030
Net Available	6,395	6,395	6,395	6,395	6,395	6,395
Net Available	1,531	1,531	1,531	1,531	1,531	1,531
Net Available	5,617	5,617	5,617	5,617	5,617	5,617
Net Available	137	137	137	137	137	137
Net Available	108	108	108	108	108	108
Net Available	131	131	131	131	131	131
Net Available	1,632	1,632	1,632	1,632	1,632	1,632

**Population Served is the total Resident & Non Resident Population
 ***EN Pop & Resident + 1/3 Non Resident

REMARKS 1 FY 77 ECIP - Improve Lighting - \$166,118 - Completed (estimated) June 1978
 2 FY 77 Family Housing ECIP Improvements - \$1,015,000 - Completed (estimated) October 1978

Fort McCoy



U.S. ARMY ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - MACOM - CLIMATIC REGION - HDD 1,550 CDD 55.4

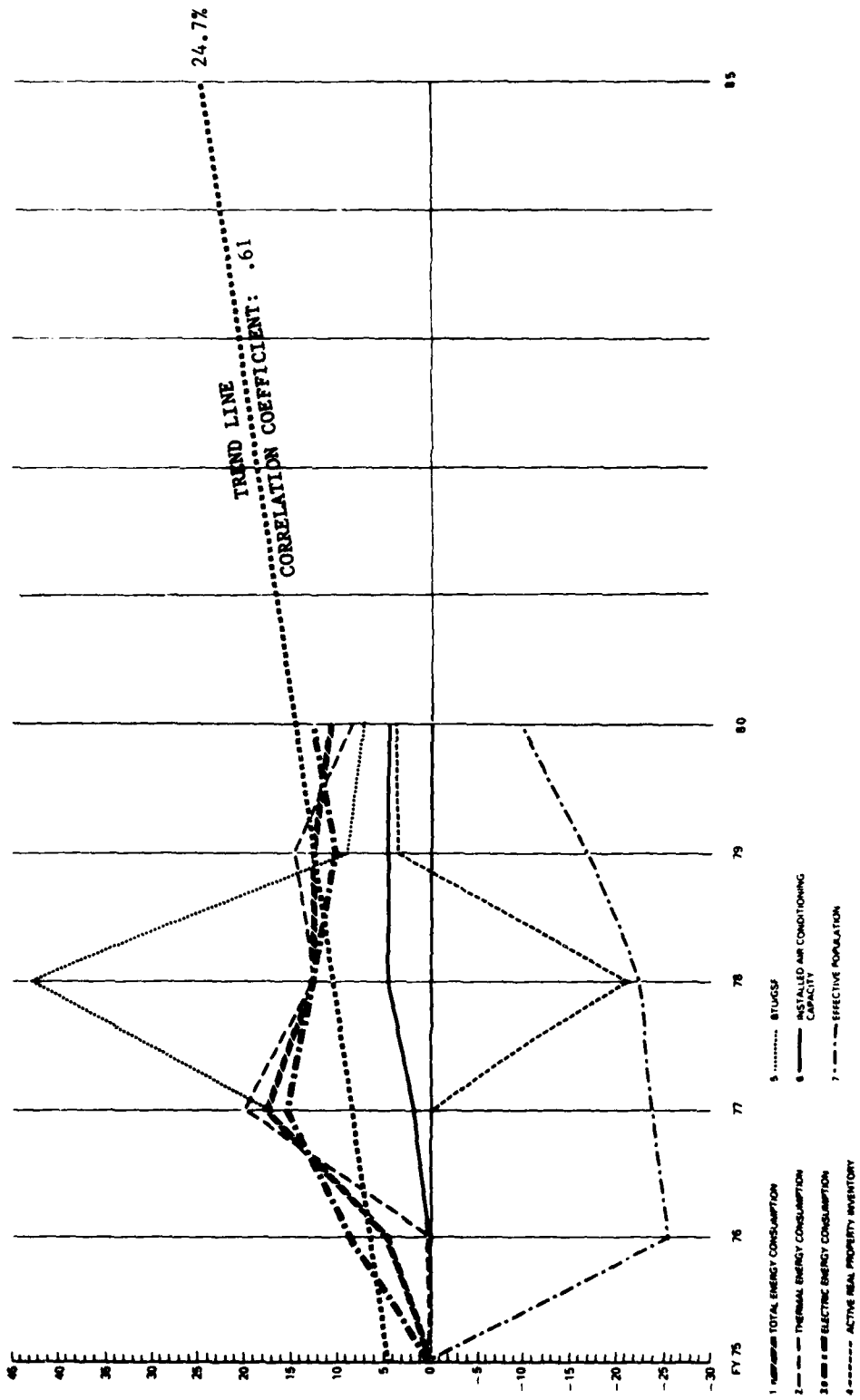
UNIT/TYPE	75	76	77	78	79	80
1 Energy Consumption - PD	5,135,543	5,135,543	5,135,543	5,135,543	5,135,543	5,135,543
2 Thermal En. Cons. B PD	508,433	508,433	508,433	508,433	508,433	508,433
3 Electrical En. Cons. B PD	168,133	168,133	168,133	168,133	168,133	168,133
4 Resident Population B PD	2,523	2,523	2,523	2,523	2,523	2,523
5 Non Resident Population B PD	2,163	2,163	2,163	2,163	2,163	2,163
6 Population Serv... B PD	2,125	2,125	2,125	2,125	2,125	2,125
7 Inmate Population... B PD	3,282	3,282	3,282	3,282	3,282	3,282
8 En Consumption Pop. Serv... B PD	1,220	1,220	1,220	1,220	1,220	1,220
9 En Consumption Pop. B PD	2,042	2,042	2,042	2,042	2,042	2,042
10 Electric En Consumption/Resident Population	253.3	253.3	253.3	253.3	253.3	253.3
11 Installed Air Cond Capacity B PD	622.2	622.2	622.2	622.2	622.2	622.2
12 Elec Energy/ton of Air Cond B PD	2.31	2.31	2.31	2.31	2.31	2.31
13 Real Property Inventory (RPI) B PD	93,579	93,579	93,579	93,579	93,579	93,579
14 RPI/Electric Population	20,184	20,184	20,184	20,184	20,184	20,184
15 Thermal En Consumption/GSF B PD	23,195	23,195	23,195	23,195	23,195	23,195
16 Electrical En Consumption/GSF B PD	915	915	915	915	915	915
17 RPI by Category	555	555	555	555	555	555
Maintenance & Production	53	53	53	53	53	53
Research, Development & Training	537	537	537	537	537	537
Storage	166	166	166	166	166	166
Other Covered Storage	338	338	338	338	338	338
Resident B PD	166	166	166	166	166	166
Administrative	3,200	3,200	3,200	3,200	3,200	3,200
Residential Housing	506	506	506	506	506	506
Community Facilities	31	31	31	31	31	31
Family Housing	51	51	51	51	51	51
Operational Bu. Bldg	31	31	31	31	31	31
Utility Buildings	31	31	31	31	31	31
Other	31	31	31	31	31	31

PD is Percent Distribution from Base Year

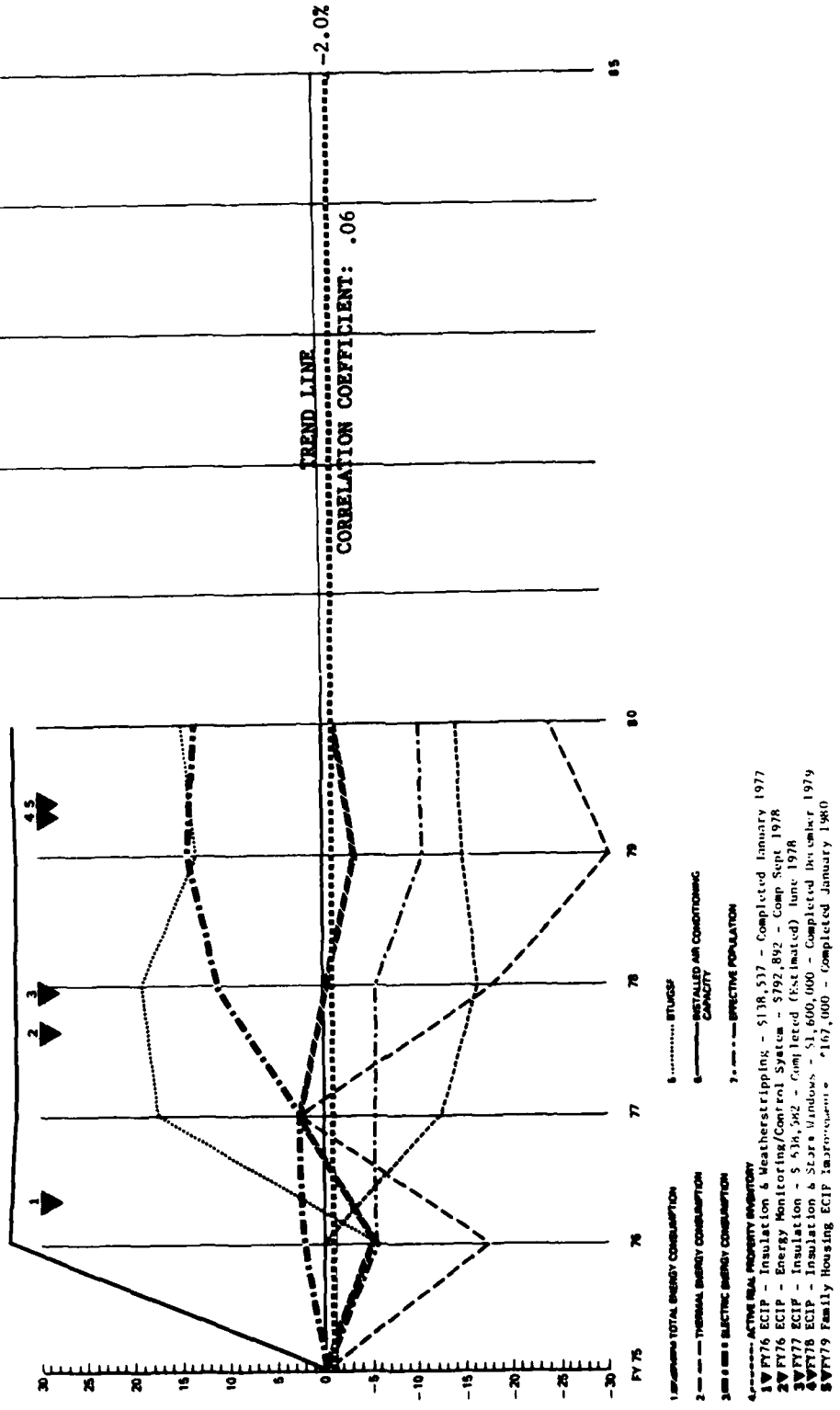
**Population Served is the total Resident & Non-Resident Population

REMARKS

Fort McPherson



Fort Meade

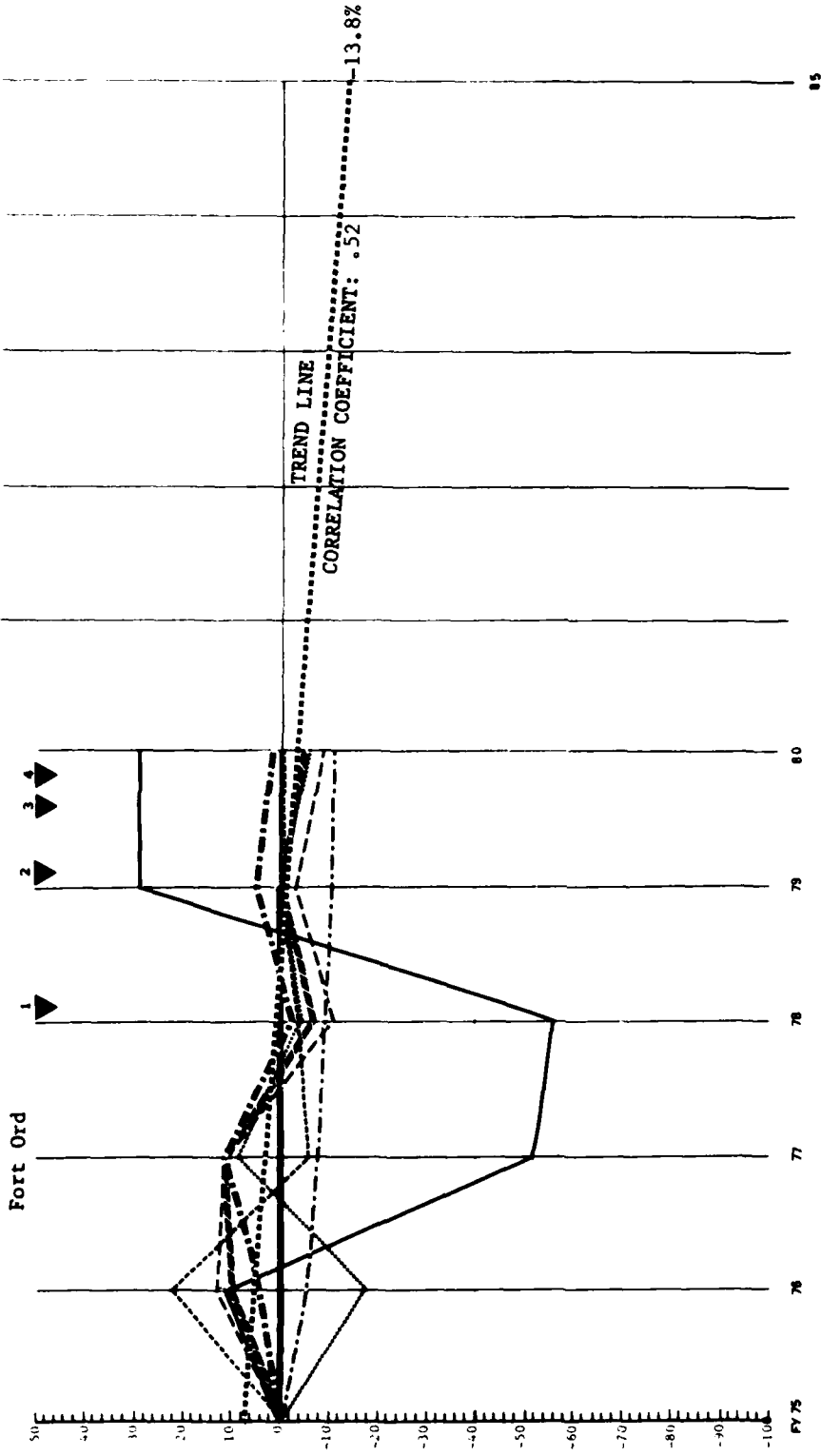


U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - FT. MEAD, MD MACOM FORSTON CLIMATIC REGION 3 HDD: 753 CDD 1,039 4.5

UNITS/AV	76	77	78	79	80
UNITS	4,165,633	4,271,407	4,159,688	4,021,581	4,110,537
UNITS	1,624,605	1,662,869	1,327,831	1,326,041	1,232,200
UNITS	5,561,068	2,605,538	2,824,638	2,895,538	2,875,382
PEOPLE	22,082	18,901	17,438	18,732	17,484
PEOPLE	23,191	28,033	32,076	27,332	27,455
PEOPLE	55,216	46,934	49,512	44,704	44,969
PEOPLE	29,755	29,745	28,728	26,683	26,666
UNITS/AV	92.1	83.8	83.8	91.0	91.4
UNITS/AV	140.0	139.2	147.5	151.9	154.3
UNITS/AV	115.4	137.1	161.8	166.7	164.4
TONS	6,921	9,228	9,228	9,228	9,228
UNITS/TON	184.5	219.4	305.8	313.8	311.6
UNITS	12,665	11,071	10,555	10,755	10,837
UNITS/AV	42	45	38	43	41
UNITS/AV	323,430.8	385,819.4	393,128.2	373,926.6	378,606
UNITS/AV	128,478.1	105,708.2	175,801.0	104,699.5	113,770
UNITS/AV	200,952.8	235,199.8	267,327.1	269,227.2	264,836
UNITS/AV	437	382	543	700	490
UNITS/AV	891	702	655	460	598
UNITS/AV	10	10	10	10	10
UNITS/AV	1,165	75	26	16	17
UNITS/AV	BASE	BASE	682	823	1,208
UNITS/AV	410	92	267	318	255
UNITS/AV	1,284	1,363	848	653	1,098
UNITS/AV	3,437	2,886	2,675	2,443	2,067
UNITS/AV	977	885	859	1,168	1,088
UNITS/AV	3,732	3,593	3,731	3,700	3,700
UNITS/AV	173	173	162	162	98
UNITS/AV	189	180	19	22	78
UNITS/AV	BASE	BASE	43	22	150

- 1 Energy Consumption & PD
- 2 Thermal En Conv & PD
- 3 Electrical En Conv & PD
- 4 Residential Population & PD
- 5 Non Residential Population & PD
- 6 Population Survey** & PD
- 7 Electric Population*** & PD
- 8 En Consumption/Pop Served & PD
- 9 En Consumption/Pop & PD
- 10 Electric En Consumption/Population
- 11 Installed Air Cond Capacity & PD
- 12 Elec Energy/Ton of Air Cond & PD
- 13 Heat Property Inventory (RHS) & PD
- 14 RHE/Inch Population
- 15 Energy Consumption/GSF & PD
- 16 Thermal En Consumption/GSF & PD
- 17 Electrical En Consumption/GSF & PD
- 18 RPH by Category
- 19 Training
- 20 Maintenance & Production
- 21 Research, Development & Testing
- 22 Storage
- 23 Other Contract Storage
- 24 Hospital & Medical
- 25 Administration
- 26 Bachelor Housing
- 27 Community Facilities
- 28 Family Housing
- 29 Operational Bar Camp
- 30 Utility Buildings
- 31 Other

**PD as Percent Deviation from Base Year
 ***Population Served is the Total Resident & Non Resident Population
 **Population Served is the Total Resident & Non Resident Population
 1 FY 76 ECIP - Insulation and Weatherstripping - \$138,537 - Completed January 1977
 2 FY 77 ECIP - Insulation - \$638,582 - Completed (estimated) June 1978
 3 FY 76 ECIP - Energy Monitoring/Control System - \$792,892 - Completed September 1976
 4 FY 78 ECIP - Insulation & Storm Windows - \$1,600,000 - Completed December 1979
 5 FY 79 Family Housing ECIP Improvements - \$167,000 - Completed January 1980



- 1 TOTAL ENERGY CONSUMPTION
- 2 THERMAL ENERGY CONSUMPTION
- 3 ELECTRIC ENERGY CONSUMPTION
- 4 ACTIVE REAL PROPERTY INVENTORY
- 5 STUGSE
- 6 INSTALLED AIR CONDITIONING CAPACITY
- 7 EFFECTIVE POPULATION

1 ▽ 77 Family Housing EIP Improvements - 1,054,907 - Completed (1st) Oct. 1978
 2 ▽ 79 EIP - Weatherstripping - 588,000 - Completed November 1979
 3 ▽ 77 EIP - Energy Control System - 5,871,000 - Completed July 1980
 4 ▽ 79 EIP - (Pres. Maint.) Energy Control System - 5400,000 - Completed Sept. 1980

U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION FT. ORD., CA. MACOM FORSCOM CLIMATIC REGION 4 HDD 3,812 CDD 37

UNITS/FY	75	76	77	78	79	80
1 Energy Consumption @ PD	2,766,700	2,700,838	2,870,476	2,574,892	2,757,786	2,640,609
2 Thermal En. Cons @ PD	1,432,407	1,816,665	1,716,916	1,462,689	1,521,919	1,489,529
3 Electrical En. Cons @ PD	1,334,293	924,173	1,043,560	1,102,203	1,235,867	1,151,080
4 Available Population @ PD	21,922	21,922	25,468	24,400	21,879	23,098
5 Non-Resident Population @ PD	6,535	7,216	7,255	9,416	3,184	10,953
6 Population Services @ PD	34,758	33,189	32,771	34,016	33,061	34,051
7 Negative Population @ PD	30,101	28,378	27,886	27,605	26,940	26,749
8 En. Consumption @ PD	80.3	86.1	86.2	75.7	83.4	77.5
9 En. Consumption @ PD	91.9	98.3	101.1	93.3	102.4	98.7
10 Electric En. Consumption @ PD	60.4	67.6	67.6	65.4	69.7	67.4
11 Heating En. Cons @ PD	1,192	1,127	1,104	531	1,510	1,529
12 Heat Energy of Air Cond @ PD	950.9	716.1	763.2	2,085.1	775.1	752.8
13 Heat Property Inventory @ PD	17,177	20,971	16,175	16,518	17,113	17,128
14 HPH @ PD	161,075	133,081	174,376	155,884	161,152	154,169
15 Energy Consumption @ PD	95,024	86,503	108,856	89,854	91,857	86,965
16 Thermal En. Consumption @ PD	66,891	66,578	64,518	67,010	69,295	67,205
17 Electrical En. Consumption @ PD	1,206	1,262	1,222	1,206	1,217	1,215
18 En. by Camp	756	711	822	897	957	989
19 Maintenance & Production	41	41	50	38	50	42
20 Research, Development & Training	1,074	1,100	993	993	991	987
21 Storage	617	527	830	888	565	634
22 Other General Storage	887	4,866	610	888	900	857
23 Hospital & Related	5,218	4,990	4,936	5,078	4,972	4,949
24 Administration	1,658	1,471	1,472	1,487	1,490	1,443
25 Recreational	5,610	5,583	4,888	4,999	5,581	5,577
26 Family Housing	268	251	233	217	224	239
27 Operational Bldg	68	74	65	34	72	68
28 Utility Buildings	48	73	112	116	56	61
29 Other	48	73	112	116	56	61

**Population Served to one unit Resident & Non-Resident Population
 **% of Present Dependent from Base Year
 **EIP Pay @ Resident - 18 Non-Resident

Includes Ft MacArthur CA data from FY75 and FY76 when they were reported separately. Ft Ord was transferred from TRADOC to FORSCOM as of FY76.

REMARKS
 1 FY 77 Family Housing EICIP Improvements - \$1,046,907 - Completed (Est) Oct. 1978
 2 FY 79 EICIP - Weatherstripping - \$86,000 - Completed November 1979
 3 FY 77 EICIP - Energy Control System - \$2,621,000 - Completed July 1980
 4 FY 79 EICIP - (Pres. Mont.) Energy Control System - \$400,000 - Completed Sept. 1980



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION FT. POLK, IA. MACOM FORSCOM CLIMATIC REGION 6 HDO 1,889 CDD 2,466

UNITS/TYPE	75	76	77	78	79	80
1 Energy Consumption by PD	1,367,892	1,368,102	1,604,639	1,590,017	1,590,017	1,841,216
2 Thermal En Core & PD	293,378	752,557	802,319	747,706	717,508	512,850
3 Electrical En Core & PD	574,514	615,645	802,319	842,706	1,170,508	1,328,386
4 Resident Population & PD	18,009	9,403	10,073	12,649	14,239	16,958
5 Non-Resident Population & PD	22,416	16,495	20,843	26,724	21,920	37,988
6 Population Storage** & PD	20,478	11,100	13,663	17,364	16,799	23,465
7 Effective Population*** & PD	53,8	84,6	74,9	59,5	117,4	84,3
8 En Consumption/Pop Saved & PD	66,8	173,2	172,4	91,7	117,4	31,3
9 En Consumption/EN Pop & PD	31,9	45,5	79,7	66,6	87,2	47,8
10 Electric En Consumption/Resident Population	8,682	8,905	9,699	11,782	19,411	46,73
11 Installed Air Cond Capacity & PD	67,7	69,1	82,7	71,5	58,8	20,436
12 Elec Energy/Ton of Air Cond & PD	8,551	9,288	10,071	10,288	12,037	13,204
13 Heat Property Inventory (HP) & PD	42	82	74	59	72	58
14 HP/Effective Population	159,969	167,298	159,332	154,550	156,864	139,445
15 Energy Consumption/GSF & PD	92,782	81,014	79,666	72,639	59,608	38,841
16 Thermal En Consumption/GSF & PD	67,187	66,784	79,666	81,911	97,256	100,605
17 Electrical En Consumption/GSF & PD	323	329	1,071	517	609	687
18 HP by Category	978	1,085	860	914	950	1,007
Training						
Maintenance & Production						
Research, Development & Testing						
Storage	1,221	1,169	662	22	20	37
Other General Storage	375	375	317	1,158	1,083	1,046
Heated & Heated	168	168	368	322	324	320
Administration	3,531	4,026	1,180	376	461	286
Bachelor Housing	839	967	827	2,831	3,383	3,973
Community Facilities	442	479	1,117	923	937	1,023
Family Housing	672	507	516	1,612	3,569	4,053
Operational Buildings			144	539	64	582
Utility Buildings			2,385	1,039	625	87
Other						

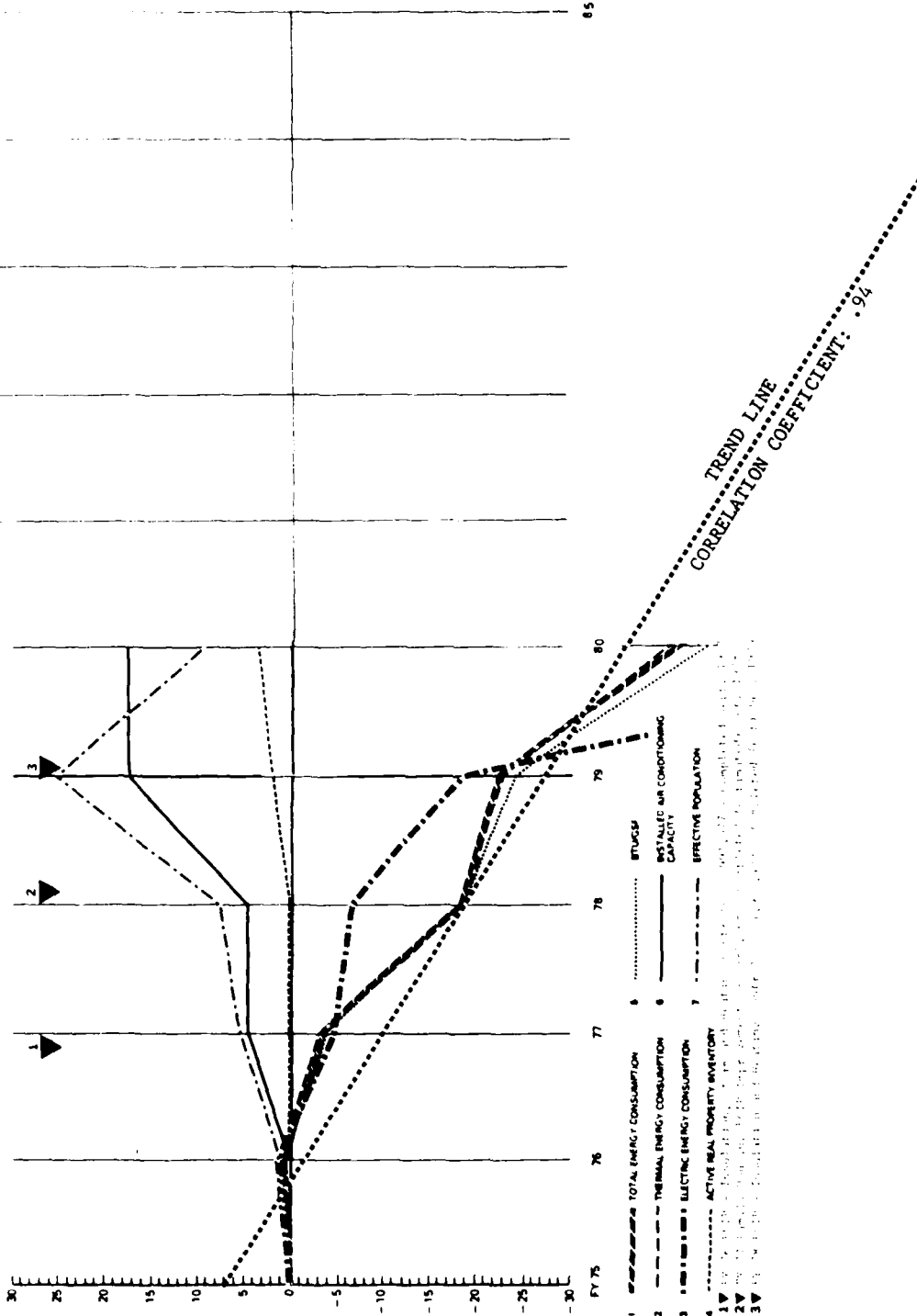
PD as Percent Deviation from Base Year *Population Saved is the total Resident to Non-Resident Population

****EN Pop is Resident + 1/2 Non-Resident

Ft Polk was transferred from TRADOC to FORSCOM as of FY76.

REMARKS

Fort Richardson



U.S. Army ANALYSIS OF ENERGY CONSUMPTION FT. RICHARDS, AK MACOM_FORSICM CLIMATIC REGION_1_ MOD_0_222 COD_0

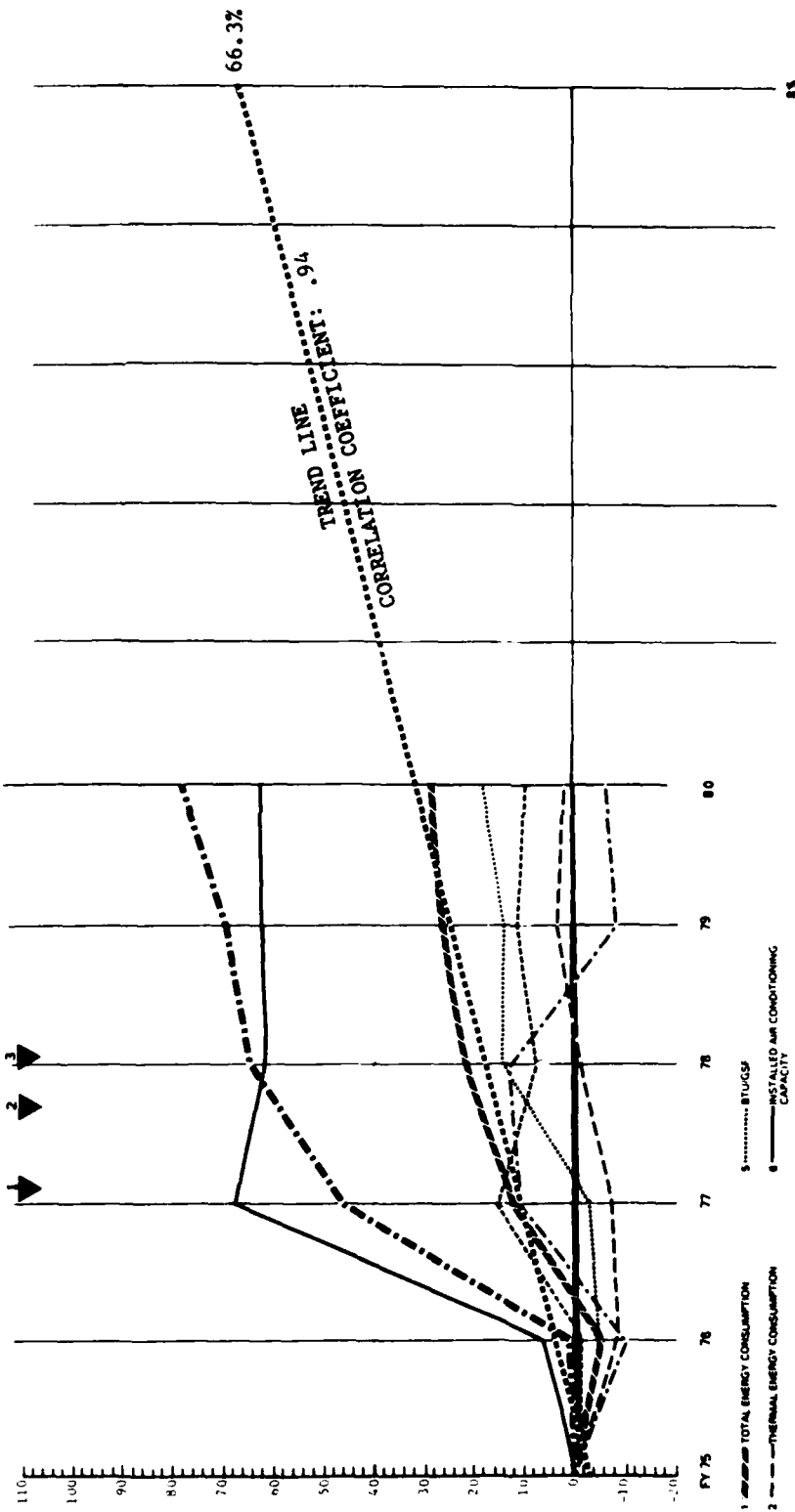
UNIT/TYPE	76	76	76	77	78	78	79	80
1 Energy Consumption & PD	1,960,160	1,959,977	1,021	1,899,412	1,311	1,691,632	1,187,311	1,119,536
2 Thermal En. Cons. & PD	1,859,550	1,901,623	1,021	1,841,500	1,311	1,353,172	1,187,311	1,108,372
3 Electrical En. Cons. & PD	60,610	61,352	1,211	57,919	1,211	36,460	43,428	11,159
4 Resident Population & PD	8,805	8,908	1,211	9,499	1,211	9,812	11,411	8,936
5 Non-Resident Population & PD	3,263	3,263	1,211	3,263	1,211	3,263	3,263	3,263
6 Population Service & PD	12,068	12,151	1,211	12,068	1,211	12,310	12,310	14,558
7 Effective Population & PD	9,893	9,989	1,011	10,434	1,011	10,645	10,645	10,821
8 En. Consumption/Person & PD	162.4	162.1	1,021	158.2	1,021	150.1	149.9	142.9
9 En. Consumption/Person & PD	198.1	197.2	1,021	182.0	1,021	150.5	142.2	131.5
10 Electric En. Consumption/Person & PD	6.9	6.9	1,021	6.0	1,021	5.8	5.0	4.3
11 Installed Air Cond Capacity & PD	210	210	1,021	220	1,021	220	247	267
12 Elec Energy/Ton of Air Cond & PD	288.6	288.2	1,021	263.1	1,021	236.6	200.1	184.3
13 Real Property Inventory & PD	7,600	7,600	1,021	7,616	1,021	7,616	7,751	7,855
14 Appliances Population	77	77	1,021	77	1,021	77	77	77
15 Energy Consumption/Person & PD	237,316	239,208	1,021	249,398	1,021	210,288	195,249	182,523
16 Thermal En. Consumption/Person & PD	249,941	251,135	1,021	241,794	1,021	202,885	188,692	141,104
17 Electrical En. Consumption/Person & PD	7,975	8,071	1,021	7,604	1,021	7,411	6,547	4,427
18 kWh by Category	76	76	76	76	76	76	76	76
Thermal	700	700	700	700	700	700	670	657
Electric	1,330	1,330	1,330	1,330	1,330	1,330	1,330	1,330
Other	17	17	17	17	17	17	17	17
Other Covered Storage	186	186	186	186	186	186	186	186
Health & Medical	1,287	1,287	1,287	1,287	1,287	1,287	1,287	1,287
Administration	881	881	881	881	881	881	881	881
Community Facilities	2,353	2,353	2,353	2,353	2,353	2,353	2,353	2,353
Family Housing	231	231	231	231	231	231	231	231
Operational Site Bldg	284	284	284	284	284	284	284	284
Utility Buildings	4	4	4	4	4	4	4	4
Other	284	284	284	284	284	284	284	284

1 Energy Consumption & PD
 2 Thermal En. Cons. & PD
 3 Electrical En. Cons. & PD
 4 Resident Population & PD
 5 Non-Resident Population & PD
 6 Population Service & PD
 7 Effective Population & PD
 8 En. Consumption/Person & PD
 9 En. Consumption/Person & PD
 10 Electric En. Consumption/Person & PD
 11 Installed Air Cond Capacity & PD
 12 Elec Energy/Ton of Air Cond & PD
 13 Real Property Inventory & PD
 14 Appliances Population
 15 Energy Consumption/Person & PD
 16 Thermal En. Consumption/Person & PD
 17 Electrical En. Consumption/Person & PD
 18 kWh by Category

PD is Percent Overhead from Base Year
 *Population Serviced is the total Resident & Non-Resident Population
 **98 Pop in Residence + 10 Non-Resident

1977 76 ECIP - Insulation, Storm and Heating Controls - \$991,077 - Completed September 1977
 2077 77 Family Housing ECIP Improvements - \$385,068 - Completed (estimated) October 1978
 3077 78 ECIP - Insulation and Heating Controls - \$1,971,428 - Completed (estimated) December 1979

Fort Riley



- 1 TOTAL ENERGY CONSUMPTION
- 2 THERMAL ENERGY CONSUMPTION
- 3 ELECTRIC ENERGY CONSUMPTION
- 4 ACTIVE REAL PROPERTY INVENTORY
- 5 STAGES
- 6 INSTALLED AIR CONDITIONING CAPACITY
- 7 EFFECTIVE POPULATION

1 FY76 EPIP - Insulation, Storage & Mech. Alter. - 500,000 - Comp. Nov. 1977
 2 FY77 EPIP - Insulation, Storage & Mech. Alter. - 2,111,000 - Comp. Oct. 1978
 3 FY77 Family Housing, EPIP Improvements - 672,000 - Completed (USD) Oct. 1977

U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION

MACOM ENERGY

CLIMATIC REGION 1 HDD 5,306 CDD 1,503

UNITS	76	77	78	79	80
1 Energy Consumption B PD	2,572,161	2,426,243	2,415,702	3,276,637	3,207,081
2 Thermal En Cons B PD	1,693,345	1,524,652	1,517,118	1,686,252	1,686,250
3 Electrical En Cons B PD	924,272	901,591	898,584	1,590,385	1,520,831
4 Resident Population B PD	21,162	24,008	24,559	24,002	24,002
5 Non-Resident Population B PD	8,021	6,909	6,552	6,802	6,802
6 Population Servant** B PD	29,218	31,062	31,164	26,822	26,802
7 Effective Population*** B PD	21,831	25,401	25,723	21,621	21,621
8 En Consumption/Pop Servant B PD	64.3	67.3	67.1	67.0	67.0
9 En Consumption/Pop B PD	106.1	113.2	112.6	117.6	117.6
10 Electrical En Consumption/Resident Population	51.9	45.2	44.2	53.2	53.2
11 Industrial Air Cond Capacity B PD	113.9	133.2	132.5	114.7	114.7
12 Electric Energy/Ton of Air Cond B PD	13,775	13,733	15,921	15,323	15,323
13 Real Property Inventory (RPI) B PD	58	60	61	61	61
14 RPI/Resident Population	187,090	179,092	180,696	213,170	213,170
15 Energy Consumption/GSF B PD	119,736	119,417	119,848	110,178	110,178
16 Thermal En Consumption/GSF B PD	67,352	67,675	67,322	70,792	70,792
17 Electrical En Consumption/GSF B PD	644	641	641	767	767
18 RPI per Category	1,198	1,155	1,152	1,541	1,541
Training					
Maintenance & Production					
Research, Development & Testing					
Storage					
Other Controlled Storage					
Hospital & Medical					
Administration					
Technical Heating					
Community Facilities					
Family Housing					
Operational Bar Drags					
Utility Buildings					
Other					

1 FY 76 ECIP - Insulation, Storms and Mechanical System Alterations - 569,207 - Completed November 1977

2 FY 77 ECIP - Insulation, Storms and Mechanical System Alterations - 52,111,464 - Completed (estimated) June 1978

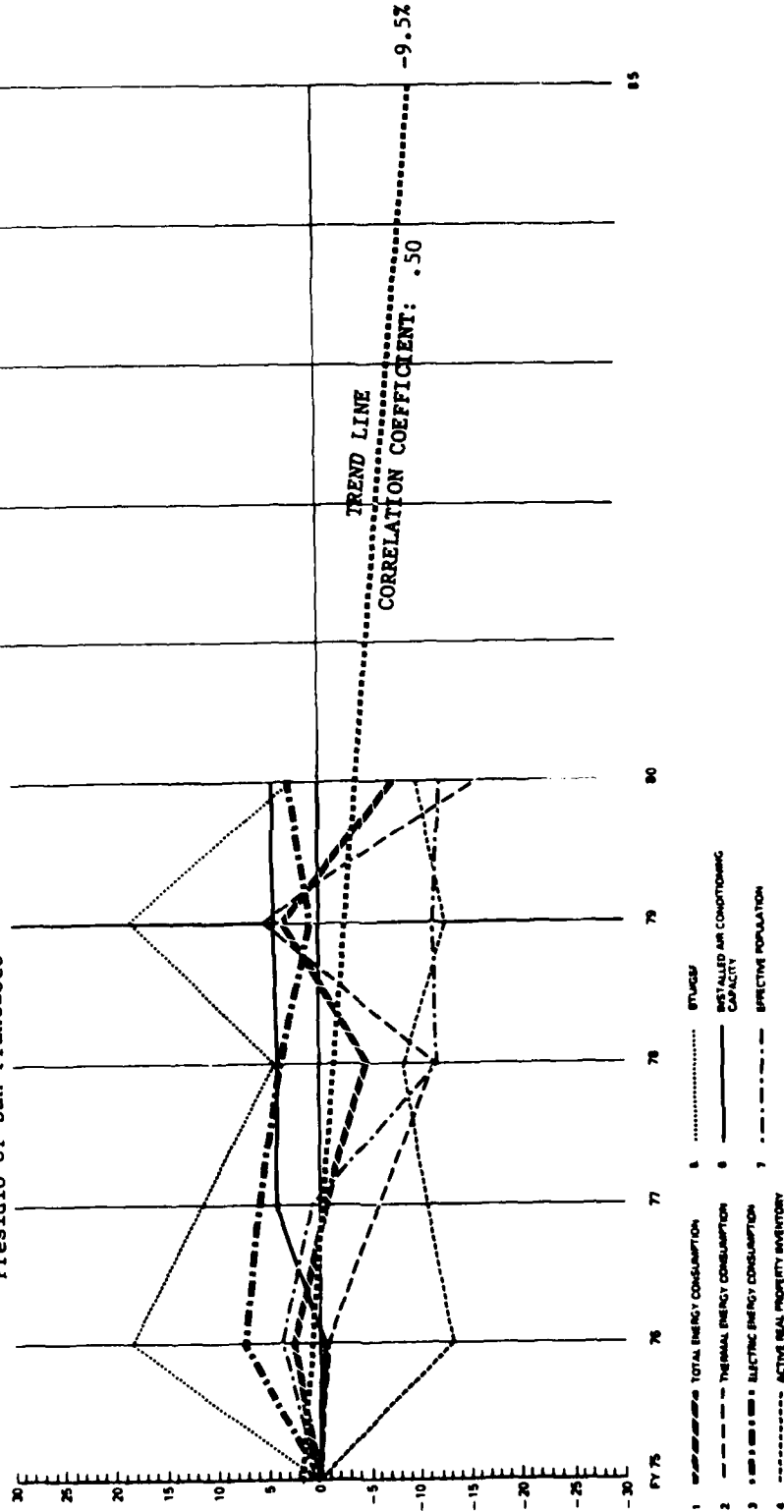
3 FY 77 Family Housing ECIP Improvements - 5672,055 - Completed (estimated) October 1978

**PD is Percent Division from Base Year

**Population Servant is the total Resident & Non-Resident Population

***Right Page is Resident + 1/2 Non-Resident

Presidio of San Francisco



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION PRESIDIO OF SAN FRANCISCO, CALIFORNIA FORSCOM CLIMATIC REGION 4 MOD 3,000 CDD 39

UNITARY	76	77	78	79	80	81
WRTU	1,486,418	1,528,207	1,248,150	1,479,150	1,477,191	1,534,952
WRTU	817,510	809,930	1,049,158	829,158	722,768	859,574
WRTU	58,888	718,251	1,461,108,992	1,08,992	694,423	675,378
PEOPLE	7,155	6,924	1,231,1	6,916	6,669	6,669
PEOPLE	6,917	6,671	1,231,1	6,784	5,057	5,321
PEOPLE	14,072	15,621	1,11,011	14,710	11,726	11,790
PEOPLE	9,461	9,821	1,1,811	9,511	8,355	8,318
WRTUCAP	105,6	91,8	1,1,1,1	100,5	100,8	110,7
WRTUCAP	157,1	152,6	1,1,1,1	152,2	169,8	183,2
WRTUCAP	93,5	102,7	1,1,1,1	102,4	104,1	101,7
TONS	3,007	2,989	1,1,1,1	3,133	3,127	3,163
WRTUTUM	222,4	240,3	1,1,1,1	226,6	222,1	216,9
ESFCAP	8,660	7,515	1,1,1,1	7,723	7,920	7,567
BTUCAP	171,662	203,334	1,1,1,1	191,525	178,978	202,982
BTUCAP	94,403	107,771	1,1,1,1	99,593	91,238	113,670
BTUCAP	77,219	95,576	1,1,1,1	91,932	87,680	89,317
ESF	4,31	4,19	1,1,1,1	4,05	4,78	4,78
ESF	22,2	20,0	1,1,1,1	19,1	17,9	17,9
ESF	136	128	1,1,1,1	129	122	119
ESF	229	238	1,1,1,1	229	229	229
ESF	467	467	1,1,1,1	467	467	467
ESF	556	659	1,1,1,1	634	635	601
ESF	850	776	1,1,1,1	795	774	774
ESF	1,284	928	1,1,1,1	1,012	967	979
ESF	1,058	845	1,1,1,1	831	831	832
ESF	2,403	2,138	1,1,1,1	2,339	2,458	2,448
ESF	379	230	1,1,1,1	190	206	102
ESF	50	16	1,1,1,1	51	85	85
ESF	5	5	1,1,1,1	5	5	5

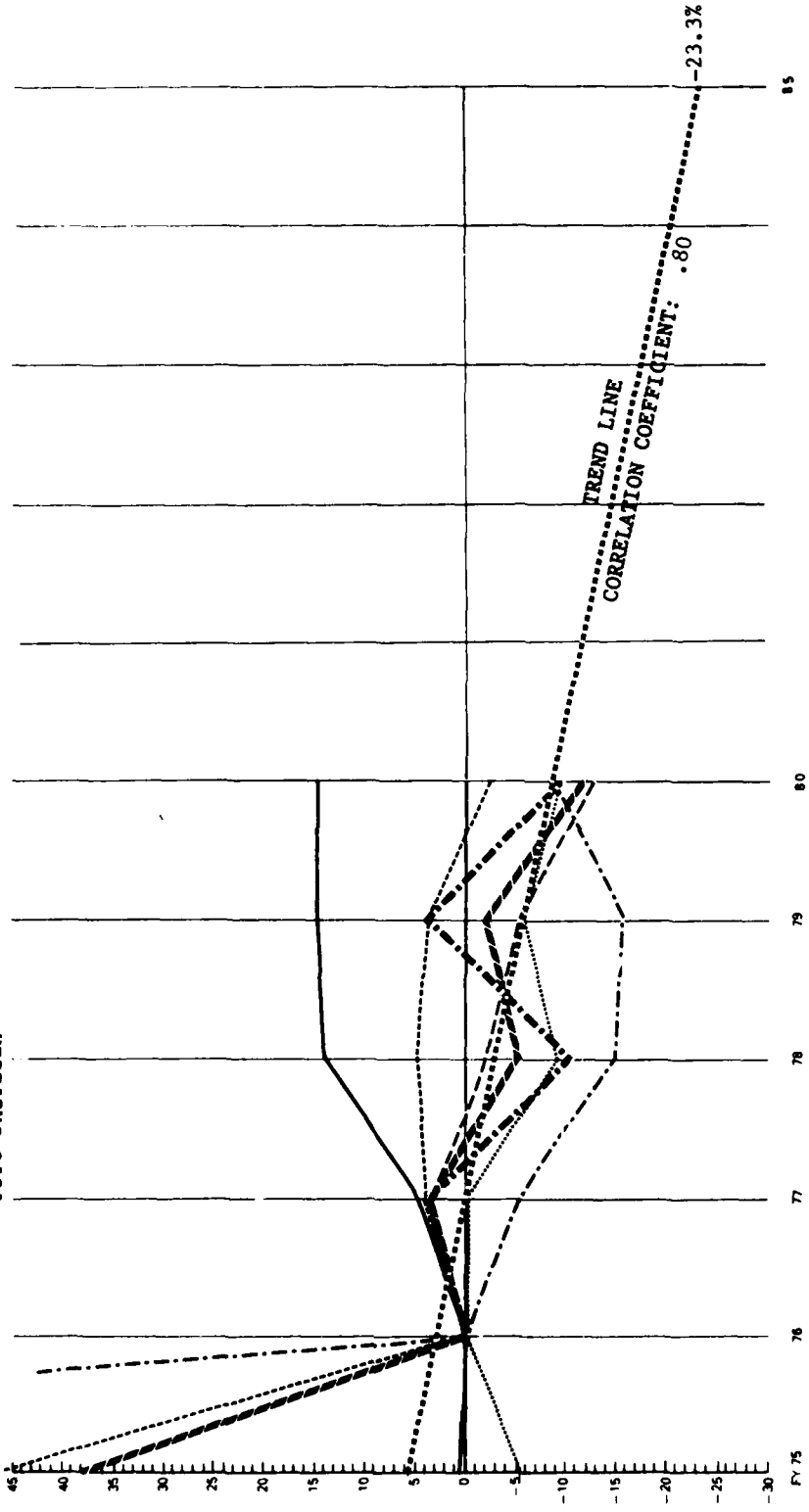
1 Energy Consumption & PD
 2 Thermal En Conv & PD
 3 Electrical En Conv & PD
 4 Standby Production & PD
 5 Non Resident Population & PD
 6 Resident Population & PD
 7 Effective Population & PD
 8 En Consumption/Pop Served & PD
 9 En Consumption/Pop & PD
 10 Electrical En Consumption/Pop & PD
 11 Incapable Air Cond Capacity & PD
 12 Elec Emerg/Tot of Air Cond & PD
 13 Peak Priority Inventory (PPI) & PD
 14 Non-Resident Population
 15 Energy Consumption/ESF & PD
 16 Thermal En Consumption/ESF & PD
 17 Electrical En Consumption/ESF & PD
 18 kWh per Category

Training
 Maintenance & Production
 Research, Development & Testing
 Storage
 Other Computer Storage
 Hospital & Medical
 Administration
 Bachelor Housing
 Community Fd Bldg
 Family Housing
 Operational Bn Camp
 Utility Buildings
 Other

PD = Percent Decrease from Base Year
 **ESF Pop is Resident & Non-Resident Population

REMARKS

Fort Sheridan



- 1 TOTAL ENERGY CONSUMPTION
- 2 THERMAL ENERGY CONSUMPTION
- 3 ELECTRIC ENERGY CONSUMPTION
- 4 ACTIVE REAL PROPERTY INVENTORY
- 5 BTU-GSF
- 6 INSTALLED AIR CONDITIONING CAPACITY
- 7 EFFECTIVE POPULATION

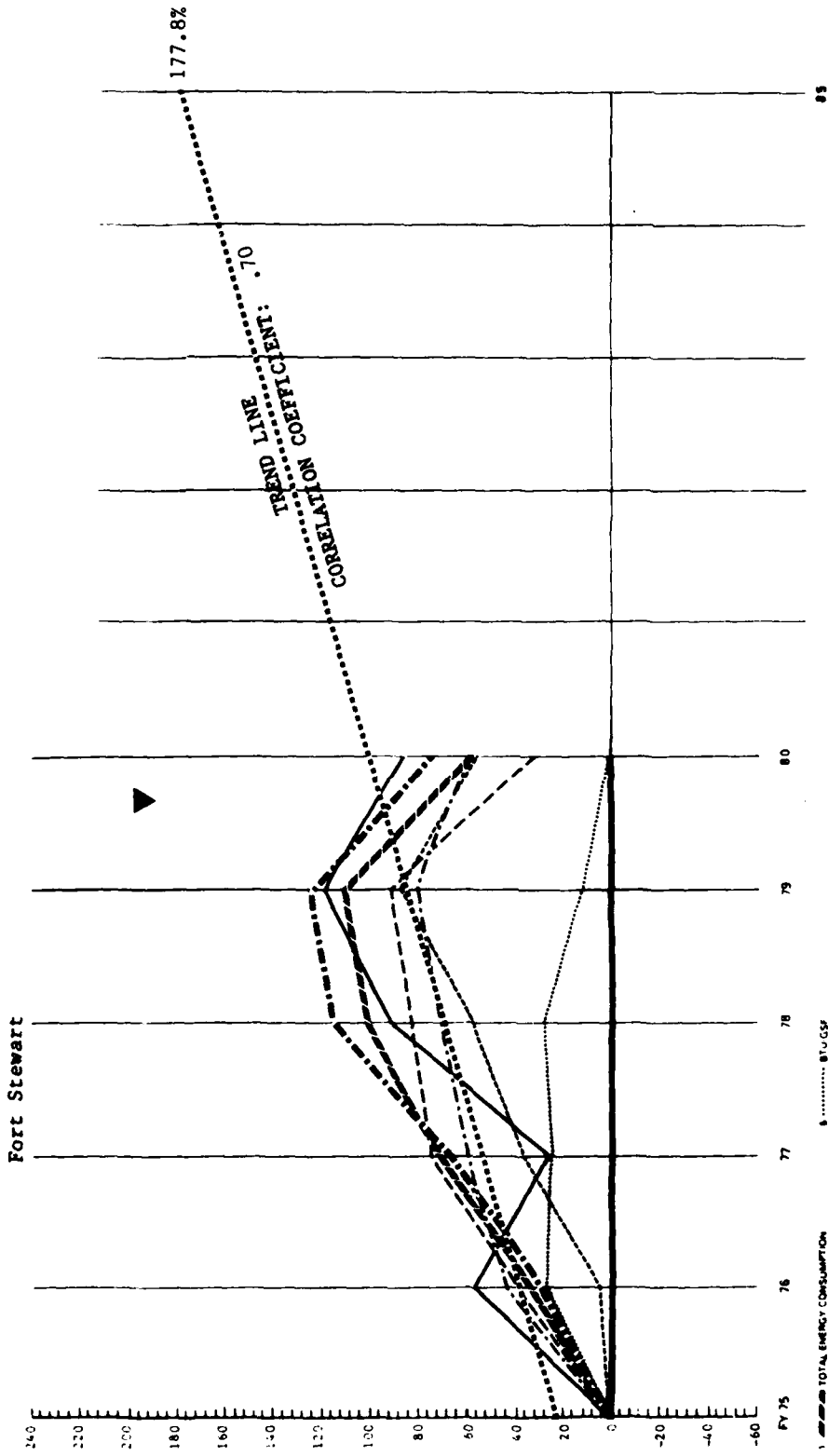
U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION FT SHERIDAN, IL MACOM FURSCOM CLIMATIC REGION 2 HDD 6,068 CDD 826

UNITS/FY	75	76	77	78	79	80
1 Energy Consumption & PD	1,255,842	907,267	938,119	862,719	888,423	801,346
2 Thermal En. Cons & PD	828,856	598,797	619,139	566,649	568,591	521,879
3 Electrical En. Cons & PD	426,986	308,470	318,980	276,070	319,832	279,467
4 Resident Population & PD	8,511	1,015	2,786	2,393	2,382	2,668
5 Non-Resident Population & PD	7,500	1,282	3,853	3,797	3,730	3,910
6 Population Support** & PD	16,301	6,817	6,639	6,190	6,112	6,538
7 Effective Population*** & PD	11,108	4,296	6,070	6,659	6,625	6,918
8 En Consumption/Pop Served & PD	113.0	133.1	141.3	139.4	145.4	122.6
9 En Consumption/Pop & PD	101.9	119.1	120.5	117.7	124.5	104.5
10 Electric En Consumption/Resident Population	50.7	114.5	114.5	113.6	134.3	107.2
11 Installed Air Cond Capacity & PD	2,225	2,217	2,313	2,522	2,542	2,582
12 Elec Energy/Ton of Air Cond & PD	6,580	4,503	4,663	4,774	4,458	4,491
13 Heat Property Inventory (RHS) & PD	529	1,051	1,115	1,229	1,291	1,312
14 RPH/Resident Population	190,857	201,480	201,183	182,740	190,363	182,083
15 Energy Consumption/GSF & PD	123,986	132,977	132,781	124,264	121,832	118,582
16 Thermal En Consumption/GSF & PD	84,891	68,503	68,402	58,477	68,530	61,501
17 Electrical En Consumption/GSF & PD	38,095	64,474	64,379	65,787	53,292	57,081
18 kWh by Category	1,288	1,206	1,315	1,362	1,336	1,168
Microtrans & Production	595	553	600	604	604	663
Research, Development & Training	390	4	4	4	4	4
Storage	327	4	4	4	4	4
Other Contract Storage	68	48	47	47	37	311
Hospital & Medical	618	604	591	484	610	47
Administration	313	347	322	339	338	610
Residence Housing	520	378	380	375	375	366
Community Fe Bldg	2,672	987	987	987	987	987
Family Housing	36	36	35	35	35	36
Chromatid Bldg	28	16	26	24	10	26
Utility Buildings	28	16	26	24	10	26
Other	28	16	26	24	10	26

- 1 Energy Consumption & PD
- 2 Thermal En. Cons & PD
- 3 Electrical En. Cons & PD
- 4 Resident Population & PD
- 5 Non-Resident Population & PD
- 6 Population Support** & PD
- 7 Effective Population*** & PD
- 8 En Consumption/Pop Served & PD
- 9 En Consumption/Pop & PD
- 10 Electric En Consumption/Resident Population
- 11 Installed Air Cond Capacity & PD
- 12 Elec Energy/Ton of Air Cond & PD
- 13 Heat Property Inventory (RHS) & PD
- 14 RPH/Resident Population
- 15 Energy Consumption/GSF & PD
- 16 Thermal En Consumption/GSF & PD
- 17 Electrical En Consumption/GSF & PD
- 18 kWh by Category
- Microtrans & Production
- Research, Development & Training
- Storage
- Other Contract Storage
- Hospital & Medical
- Administration
- Residence Housing
- Community Fe Bldg
- Family Housing
- Chromatid Bldg
- Utility Buildings
- Other

FT 75 data includes Selfridge Area Support Center, MI, which was a sub-activity of Ft. Sheridan at that time. As of FY 76, Selfridge was transferred to DARCOM, FY76 is the base year for Percent Deviations.

**Pop in Residence + 1/3 Non-Resident
 ***Pop in Residence + Non-Resident Population
 PD in Percent Deviation from Base Year
 Population Served is the total Resident & Non-Resident Population

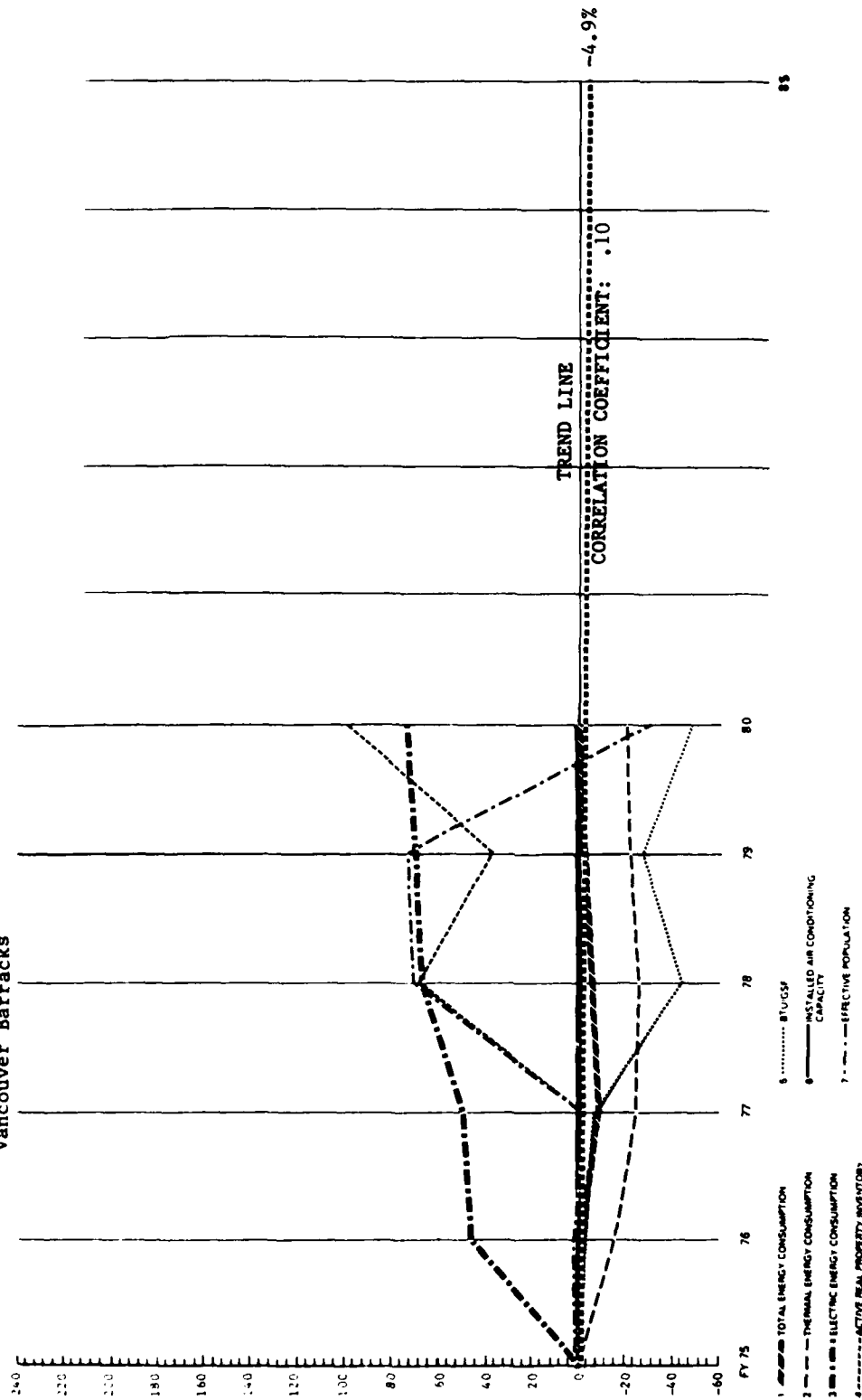


UNITS/FY	75	76	77	78	79	80
1 Energy Consumption in PD	1,084,800	1,450,952	1,848,114	2,198,047	3,101,311	3,696,218
2 Normal En Cons in PD	456,560	618,119	795,669	1,111,558	1,462,277	1,865,917
3 Electrical En Cons in PD	610,329	812,333	1,053,525	1,516,889	2,112,810	2,604,308
4 Resident Population in PD	12,757	17,287	24,912	34,666	49,811	69,201
5 Non-Resident Population in PD	6,637	11,026	15,411	21,043	29,215	40,008
6 Population Served** in PD	19,494	28,313	40,323	55,704	79,026	109,209
7 Effective Population*** in PD	14,803	21,666	30,912	43,727	60,811	84,201
8 En Consumption/Pop Served in PD	56.6	50.3	45.1	41.6	37.9	34.5
9 En Consumption/Pop in PD	72.9	67.6	61.8	56.4	51.3	47.6
10 Heating En Consumption/Pop in PD	49.4	45.7	41.8	38.6	35.7	33.1
11 Heating En Consumption/Pop in PD	8.05%	12.69%	10.08%	8.62%	7.61%	6.84%
12 Heat Property Inventory (HPI) in PD	78.3	64.0	52.6	43.4	36.7	31.7
13 Heat Property Inventory (HPI) in PD	6,357	5,571	4,824	4,163	3,598	3,121
14 HPI/En Consumption	42	45.7	52.1	60.9	72.6	86.1
15 Energy Consumption/GSF in PD	170,962.6	217,273.4	272,919.9	348,760.9	441,179.2	559,124.6
16 Normal En Consumption/GSF in PD	71,819.3	95,600.3	123,111.1	171,585.7	221,179.2	281,179.2
17 Electrical En Consumption/GSF in PD	99,158.3	121,673.1	149,808.8	177,175.2	220,000.0	277,945.4
18 kWh by Category	573	559	564	661	860	885
Training						
Maintenance & Production						
Research Development & Testing						
Storage						
Other Covered Storage						
Hospital & Medical						
Administration						
Bachelor Housing						
Community Facilities						
Family Housing						
Overseas Base Camp						
Utility Buildings						
Other						

**Population Served is the total Resident & Non-Resident Population
 ***Eff Pop is Resident + 1/3 Non-Resident
 **PD is Percent Deviation from Base Year
 **Population Served is the total Resident & Non-Resident Population
 *PD is Percent Deviation from Base Year

▼ FY 79 ECIP - Insulation & Weatherstripping (HAAP) - \$153,000 - Completed July 1980
 RE MARKS

Vancouver Barracks



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - WASHINGTON BARBERS PT, VA MACOM FURSCOM CLIMATIC REGION 1 HDD 5,192 CDD 100

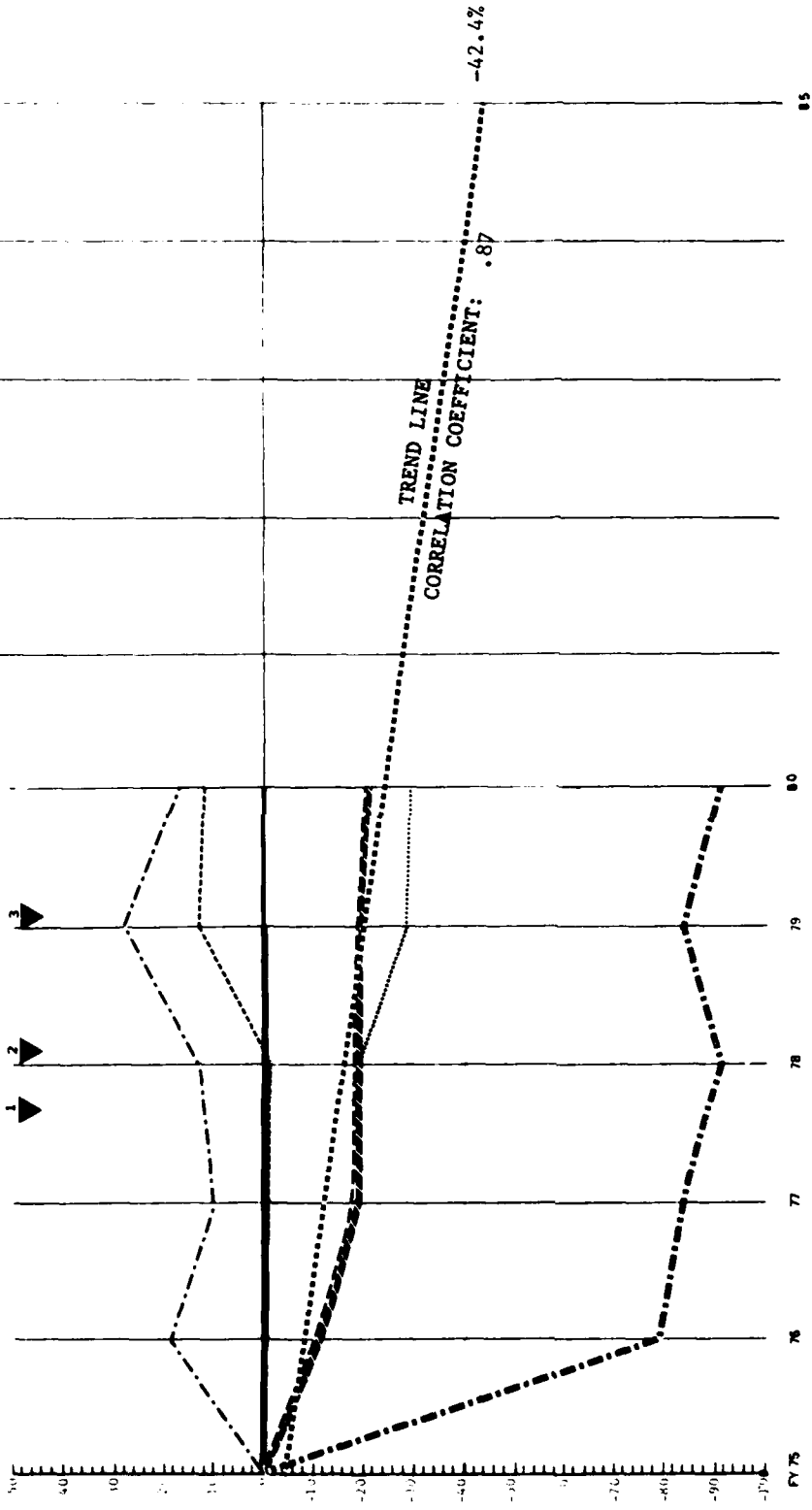
UNITARY	75	76	77	78	79	80
1 Energy Consumption & PD	52,181	51,235	47,546	48,905	46,311	50,717
2 Thermal En Load & PD	60,202	35,138	4,252	7,831	1,436	11,436
3 Electrical En Load & PD	11,472	16,907	17,116	19,071	16,611	19,278
4 Resident Population & PD	55	50	41	106	135	61
5 Non Resident Population & PD	71	90	170	33	156	44
6 Population Served** & PD	118	130	170	130	177	44
7 Effective Population*** & PD	69	70	146	137	169	44
8 En Consumption/Pop Served & PD	442.2	396.1	321.2	351.8	270.4	95.8
9 En Consumption/Pop & PD	756.2	731.9	699.2	417.8	247.1	1095.8
10 Electric En Consumption/Resident Population	255.1	422.2	611.1	179.9	279.5	468.2
11 Installed Air Cond Capacity & PD	-	-	-	-	-	-
12 Elec Energy/Ton of Air Cond & PD	665	665	664	1,087	1,087	665
13 Heat Property Inventory (HP) & PD	9,335	9,221	9,471	9,255	7,391	7,275
14 HP/Effective Population	80,901	79,436	73,829	65,196	42,411	27,411
15 Energy Consumption/GSP & PD	63,104	51,222	47,251	27,570	26,717	35,763
16 Thermal En Consumption/GSP & PD	17,297	26,212	26,578	17,686	13,351	24,966
17 Electrical En Consumption/GSP & PD	3,881	2,491	2,682	1,884	1,366	1,797
18 HP/Pop Capacity	91	91	91	171	94	171
Maintenance & Production	-	-	-	-	-	-
Research, Development & Training	-	-	-	-	-	-
Storage	48	48	48	48	48	48
Other Central Storage	-	-	-	-	-	-
Hospital & Medical	117	117	117	117	117	117
Administration	35	35	35	35	35	35
Bachelor Housing	38	38	38	38	38	38
Community Facilities	40	40	40	40	40	40
Family Housing	-	-	-	-	-	-
Quarantine Bar Camp	-	-	-	-	-	-
Utility Buildings	-	-	-	-	-	-
Other	-	-	-	-	-	-
Total Available	-	-	-	-	-	-

PD at Percent Division from Base Year **Population Served is the total Residents & Non-Resident Population *HP/Pop is Residents + 1/3 Non-Resident

- 1 Energy Consumption & PD
- 2 Thermal En Load & PD
- 3 Electrical En Load & PD
- 4 Resident Population & PD
- 5 Non Resident Population & PD
- 6 Population Served** & PD
- 7 Effective Population*** & PD
- 8 En Consumption/Pop Served & PD
- 9 En Consumption/Pop & PD
- 10 Electric En Consumption/Resident Population
- 11 Installed Air Cond Capacity & PD
- 12 Elec Energy/Ton of Air Cond & PD
- 13 Heat Property Inventory (HP) & PD
- 14 HP/Effective Population
- 15 Energy Consumption/GSP & PD
- 16 Thermal En Consumption/GSP & PD
- 17 Electrical En Consumption/GSP & PD
- 18 HP/Pop Capacity

REMARKS

Fort Wainwright



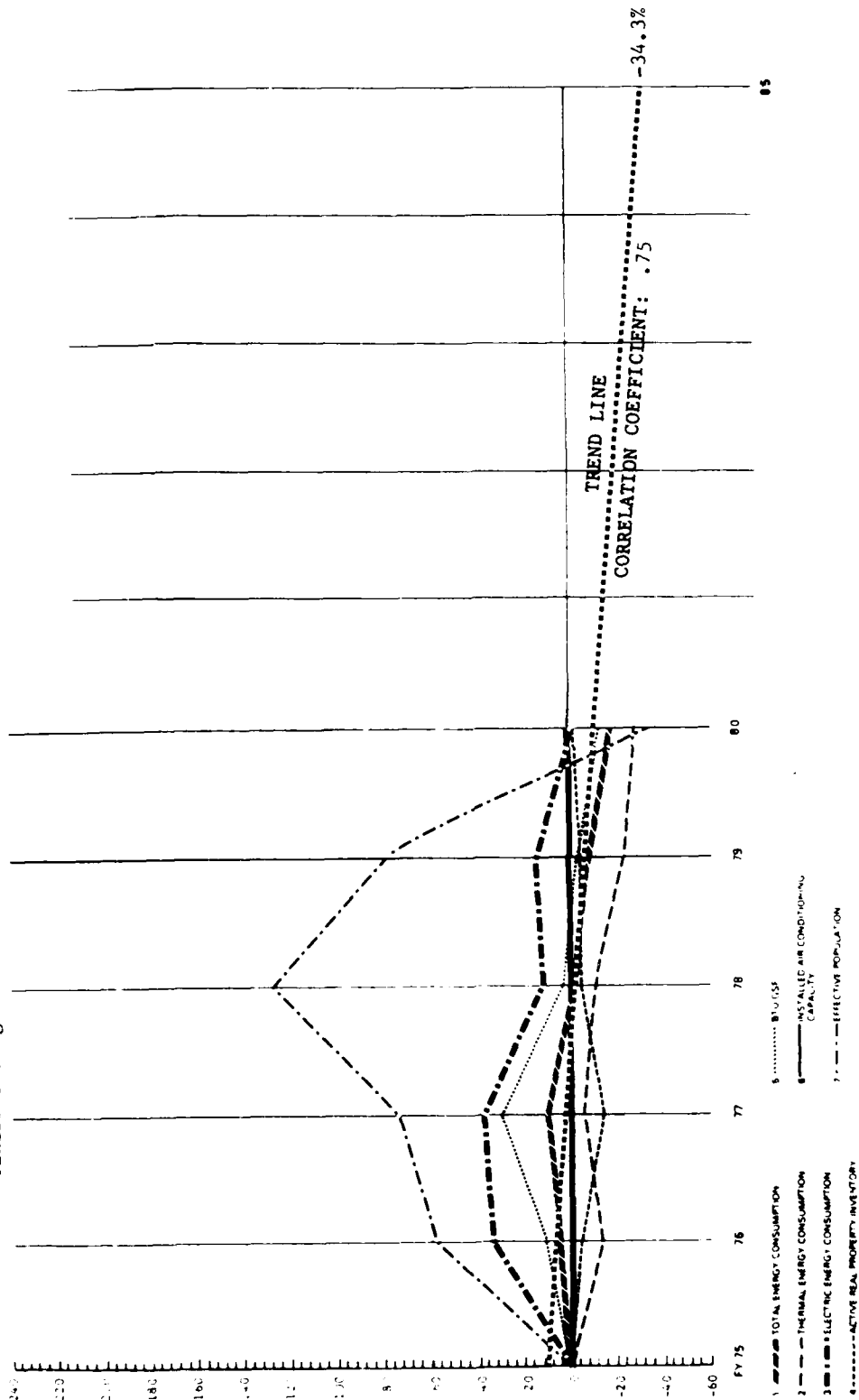
- 1 — TOTAL ENERGY CONSUMPTION
 - 2 — THERMAL ENERGY CONSUMPTION
 - 3 — ELECTRIC ENERGY CONSUMPTION
 - 4 — ACTIVE REAL PROPERTY INVENTORY
 - 5 — INSTALLED AIR CONDITIONING CAPACITY
 - 6 — EFFECTIVE POPULATION
- 1 ▲ FY77 EIP - Insulation & Heating Controls - 5,900,400 - Completed (FY 76-77)
 2 ▲ FY77 Family Housing EIP Improvements - 51,581,961 - Completed (FY 76-77)
 3 ▲ FY78 EIP - Insulation & Heating Controls - 52,475,700 - Completed (FY 77-78)

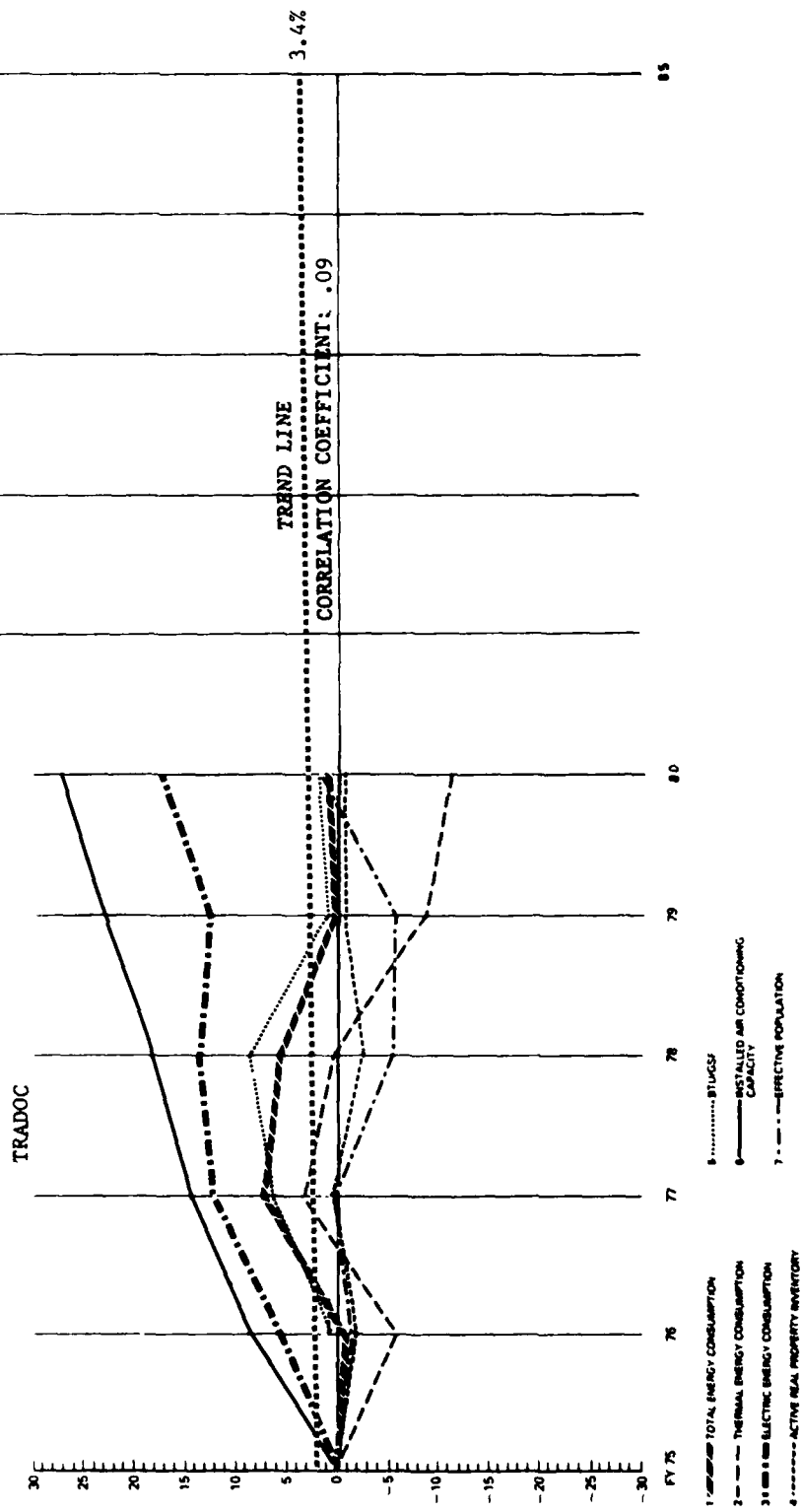
UNITARY	76	77	78	79	80
1 Energy Consumption @ PD	2,458,103	2,017,308	1,812,220	1,812,431	1,774,106
2 Thermal En Cons @ PD	2,242,625	2,014,025	1,811,200	1,812,925	1,772,679
3 Electrical En Cons @ PD	15,478	3,283	1,520	2,506	1,427
4 Resident Population @ PD	5,833	6,986	6,454	6,631	6,237
5 Non Resident Population @ PD	719	731	746	769	762
6 PEOPLE	6,612	7,722	7,200	7,400	7,000
7 Effective Population** @ PD	6,093	7,240	6,840	7,085	6,811
8 En Consumption/Pop Served @ PD	360.0	241.1	248.4	248.4	257.8
9 En Consumption/Pop @ PD	368.9	278.6	273.0	273.4	250.4
10 Electric En Consumption/Person	2.6	34.5	34.2	34.2	22.4
11 Installed Air Cond Capacity @ PD	293	342	342	342	342
12 Elec Energy/Ton of Air Cond @ PD	52.7	9.6	5.615	5.615	5.615
13 Heat Property Inventory @ PD	5,621	5,615	5,615	5,615	5,615
14 HEI/Effective Population	92	78	82	82	89
15 Energy Consumption/GSF @ PD	399,947	359,271	326,658	326,397	288,118
16 Thermal En Consumption/GSF @ PD	397,202	358,686	326,126	326,126	287,724
17 Electrical En Consumption/GSF @ PD	2,745	585	471	471	384
18 BPT by Category					
Training					
Manufacture & Production					
Research, Development & Testing					
Storage					
Other General Storage					
Headquarters & Medical					
Administration					
Residence Heating					
Community Facilities					
Family Housing					
Overseas Base Other					
Utility Buildings					
Other					

**PD @ Percent Division from Base Year
 **Population Served is the total Resident & Non-Resident Population
 ***Est Pop at Resident + 1/3 Non-Resident

1 ▽ FY 77 ECIP - Insulation and Heating Controls - 9990,496 - Completed (estimated) June 1978
 2 ▽ FY 77 Family Housing ECIP Improvements \$1,581,991 - Completed (estimated) October 1978
 3 ▽ FY 78 ECIP - Insulation and Heating Controls - 82,475,730 - Completed (estimated) December 1979

Yakima Firing Center





U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION

CROSS SECTION

MACOM

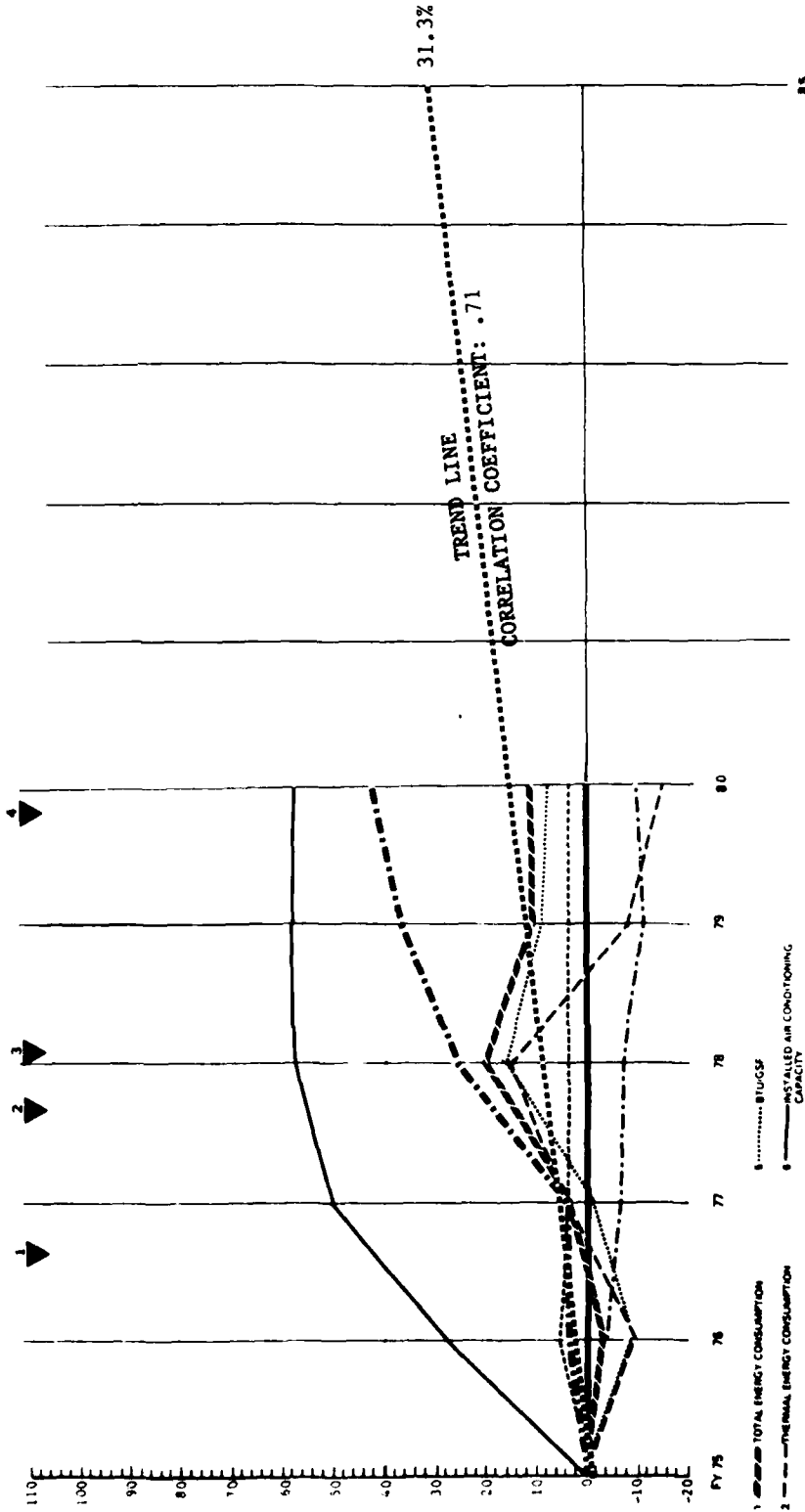
UNIT/SP	76	77	78	79	80
1 Energy Consumption to PD	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
2 Thermal En Core to PD	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
3 Electrical En Core to PD	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
4 Non-Resident Population to PD	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
5 Non-Resident Population to PD	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
6 Population Served** to PD	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
7 Effective Population*** to PD	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
8 En Consumption/Pop Served to PD	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
9 En Consumption/Pop to PD	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
10 Electric En Consumption/Person	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
11 Installed Air Cond Capacity to PD	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
12 Elec Energy/ton of Air Cond to PD	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
13 Heat Recovery Inventory kWh to PD	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
14 HVAC/Person	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
15 Energy Consumption/GSF to PD	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
16 Thermal En Consumption/GSF to PD	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
17 Electrical En Consumption/GSF to PD	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
18 kWh by Category	15,826,915	17,801,000	17,989,573	17,801,274	18,659,380
Training					
Maintenance & Production					
Research, Development & Testing					
Storage					
Other General Storage					
Hospital & Medical					
Administration					
Recreation					
Community Fire Area					
Family Housing					
Operational Bus Stops					
Utility Buildings					
Other					

**Population Served is the total Resident & Non-Resident Population

***100 Pop & Resident + 170 Non-Resident

REMARKS

Fort Belvoir



- 1 TOTAL ENERGY CONSUMPTION
 - 2 THERMAL ENERGY CONSUMPTION
 - 3 ELECTRIC ENERGY CONSUMPTION
 - 4 ACTIVE REAL PROPERTY INVENTORY
 - 5 BTU/GSF
 - 6 INSTALLED AIR CONDITIONING CAPACITY
 - 7 EFFECTIVE POPULATION
1. FY 76 EUIP - Installation & Start-ups - 5662,000 Completed Nov. 1972
 2. FY 77 EUIP - Installation & Start-ups - 51,475,318 - Completed Feb. 1978
 3. FY 77 EUIP - Installation & Start-ups - 51,475,318 - Completed Feb. 1978
 4. FY 78 EUIP - Installation & Start-ups - 51,475,318 - Completed Feb. 1978

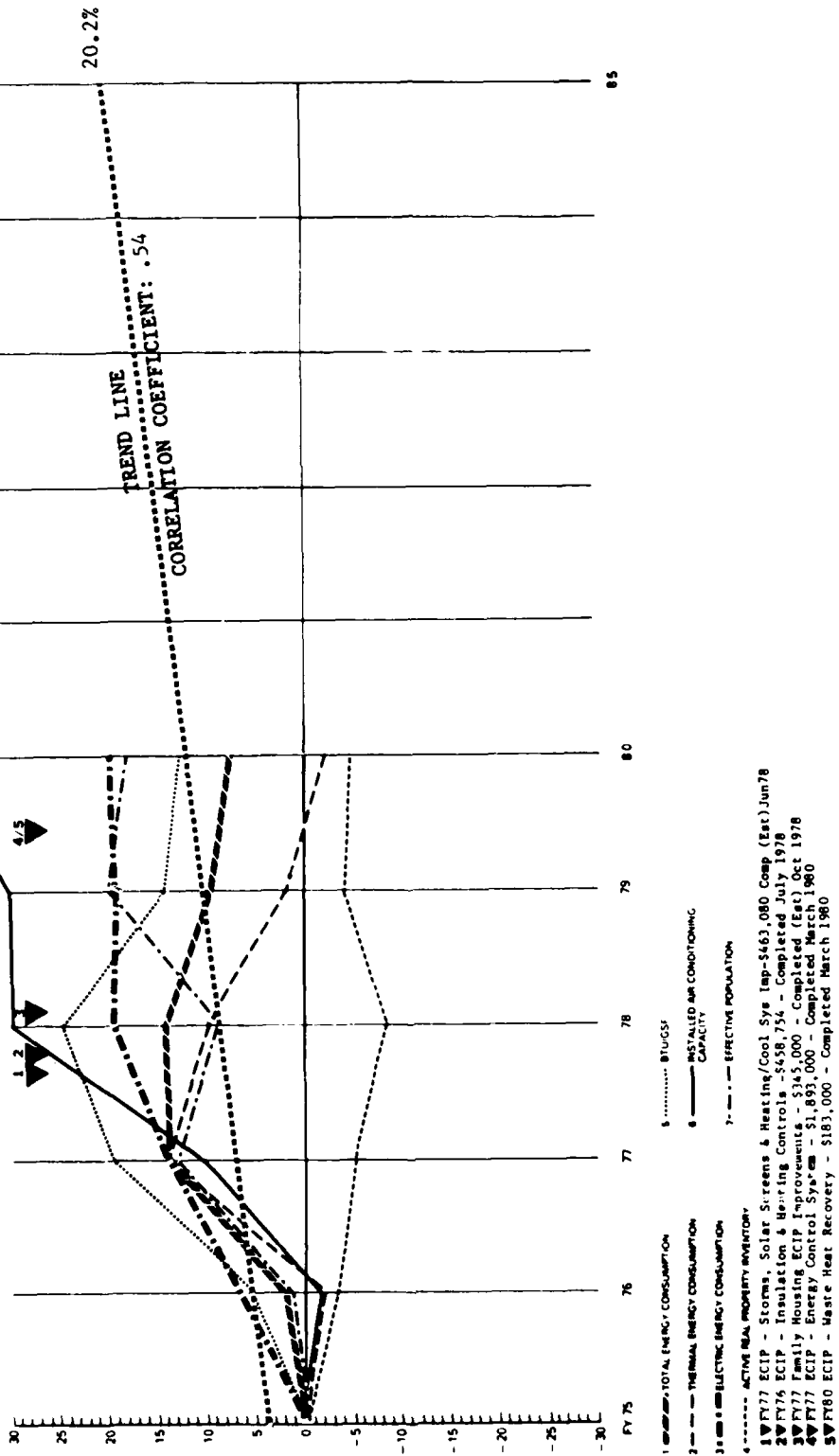
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION FT. BELVOIR, VA MACOM TRAMON CLIMATIC REGION 1 HOO 4,819 CDD 1,130

UNITS	75	76	77	78	79	80
1 Energy Consumption & PD	2,212,240	1,159,498	1,313,111	2,316,384	1,371,171	2,680,304
2 Thermal En Cons & PD	1,228,007	1,127,919	1,215,011	1,215,011	1,371,171	1,430,465
3 Electrical En Cons & PD	1,004,233	3,016,579	1,098,100	1,101,373	1,371,171	1,249,839
4 Resident Population & PD	10,134	9,243	5,721	9,647	6,201	9,565
5 Non Resident Population & PD	7,677	7,851	5,011	7,416	4,401	8,872
6 Population Saved** & PD	17,811	17,584	1,221	16,723	1,731	16,318
7 Effective Population*** & PD	12,826	12,360	3,661	12,009	4,471	11,931
8 En Consumption/Pop Saved & PD	125.4	122.7	2.1	137.9	10.0	162.1
9 En Consumption/Pop & PD	174.7	174.7	0.0	192.9	10.8	226.5
10 Electric En Consumption/Resident Population	97.2	106.4	9.4	108.4	11.5	130.6
11 Electric En Consumption/Non-Resident Population	7,206	9,881	28.2	11,620	50.8	12,130
12 Heating En Consumption/Pop & PD	130.4	104.9	19.5	89.7	11.2	103.8
13 Total Energy/Pop at Cost & PD	8,419	8,891	5.6	8,242	3.8	8,713
14 IPM/Electric Population	0.66	0.72	9.5	0.73	10.9	0.73
15 Energy Consumption/GSF & PD	265,203	242,886	8,411	264,972	16,011	307,621
16 Thermal En Consumption/GSF & PD	145,861	126,301	13,411	145,735	0,011	163,039
17 Electrical En Consumption/GSF & PD	119,342	116,585	2,311	119,237	0,011	144,582
18 En by Category	984	1,110	1,122	1,122	1,138	1,129
Training	574	582	565	565	569	570
Management & Production	240	241	241	241	241	241
Research, Development & Testing	516	516	516	516	516	516
Storage	BASE	BASE	BASE	BASE	BASE	BASE
Other Computer Storage	324	368	311	311	311	311
Hospital & Medical Administration	517	517	517	517	517	517
Residence Housing	1,570	1,570	1,570	1,570	1,570	1,570
Community En Area	564	564	564	564	564	564
Family Housing	2,138	2,138	2,138	2,138	2,138	2,138
Operational En Area	194	194	194	194	194	194
Utility Buildings	50	50	50	50	50	50
Other	34	34	34	34	34	34

*Pop in Percent Division from Base Year **Population Saved is the total Population & Non-Resident Population ***Pop in Percent Division from Base Year

- 1 FY 76 ECIP - Insulation and Storms - \$662,000 - Completed May 1977
- 2 FY 77 ECIP - Insulation and Heating/Cooling System Improvements - \$1,475,318 - Completed (estimated) June 1978
- 3 FY 77 Family Housing ECIP Improvements - \$134,015 - Completed (estimated) October 1978
- 4 FY 80 ECIP - Insulate Buildings - \$720,000 - Completed August 1980

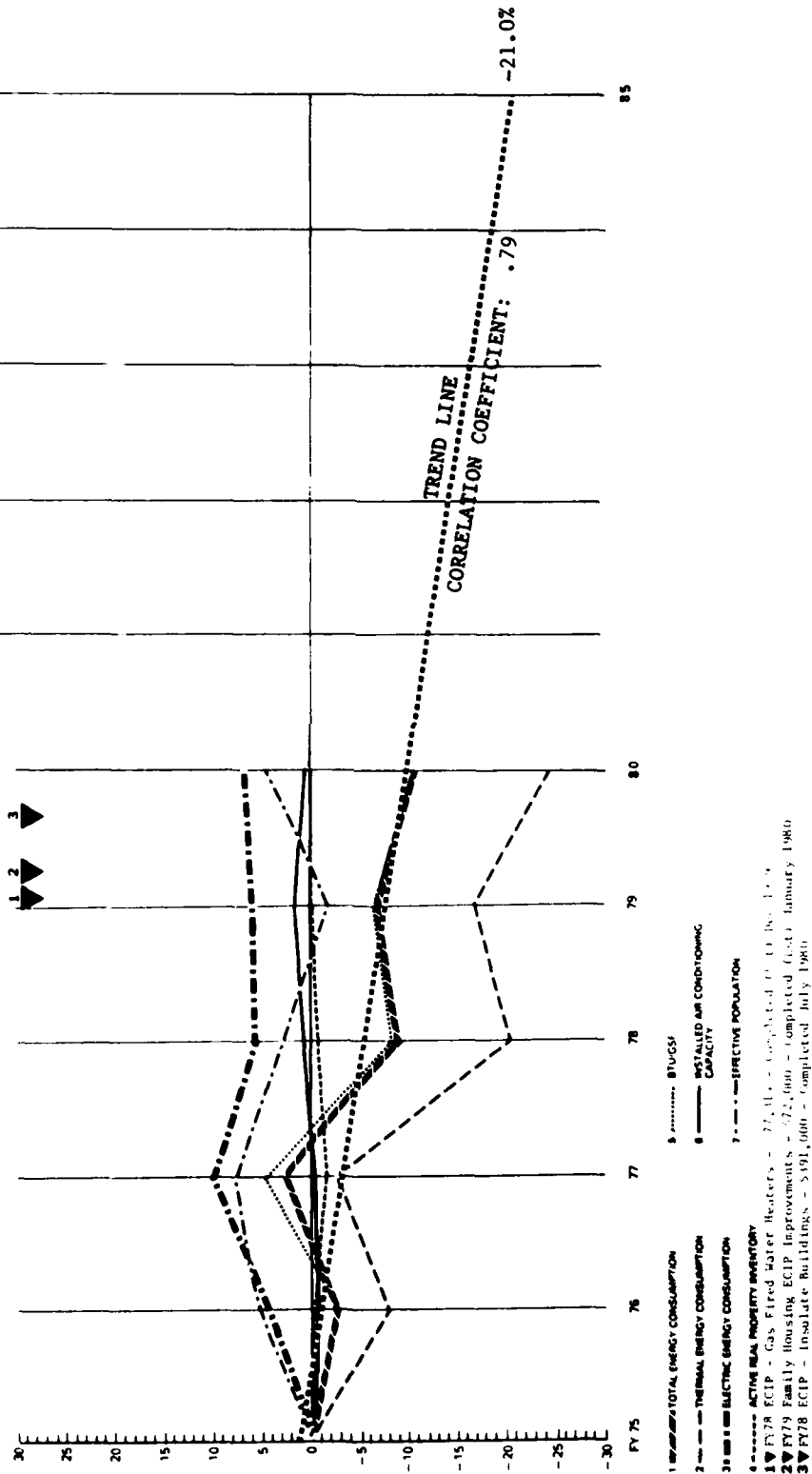
Fort Benning



UNITS	75	76	77	78	79	80
1 Energy Consumption & PD	3,051,328	5,118,100	4,610,604	5,618,082	5,425,287	4,247,910
2 Thermal En Cons & PD	2,311,008	2,464,955	2,638,245	2,539,946	2,345,668	2,260,525
3 Electrical En Cons & PD	1,741,191	1,853,145	1,972,359	2,078,136	2,080,119	2,087,385
4 Resident Population & PD	21,664	21,908	22,186	26,081	27,831	28,919
5 Non-Resident Population & PD	13,510	13,510	13,510	13,481	12,224	12,860
6 Population Serv'd** & PD	37,519	37,519	40,902	39,564	45,055	41,679
7 Effective Population*** & PD	28,119	28,119	31,758	30,577	33,572	33,206
8 En Consumption/Pop Serv'd & PD	109.4	109.9	112.7	116.7	121.2	104.1
9 En Consumption/Pop & PD	144.2	144.9	145.2	151.0	151.8	130.9
10 Electric En Consumption/Resident Population	73.7	72.5	72.9	79.7	74.7	72.2
11 Heatable & Cold Capacity & PD	20,856	20,497	22,985	26,896	27,520	28,716
12 Elec Energy/ft of Cold & PD	83.6	82.1	86.2	77.3	75.6	72.7
13 Heat Property Inventory BHP & PD	21,219	20,439	20,172	19,455	20,385	20,240
14 BHP/Effective Population	76	72	66	64	61	61
15 Energy Consumption/GSF & PD	190,896	200,831	228,564	237,372	217,110	214,818
16 Thermal En Consumption/GSF & PD	108,809	110,430	130,281	120,255	115,068	111,686
17 Electrical En Consumption/GSF & PD	82,087	90,401	98,283	107,117	102,043	103,132
18 BHP by Category	1,571	1,623	1,718	1,731	2,159	2,167
Training	1,484	1,381	1,348	1,362	1,333	1,322
Maintenance & Production	5	5	5	5	14	5
Research, Development & Testing	1,465	1,267	68	71	72	73
Storage	561	554	572	501	505	496
Other Covered Storage	771	757	750	699	574	546
Hospital & Medical	7,619	6,510	6,088	5,290	6,011	5,942
Administration	1,648	1,562	1,522	1,551	1,537	1,522
Recreation Housing	5,522	5,406	6,518	6,587	6,592	6,592
Community Facilities	309	260	250	237	227	214
Family Housing	84	108	102	191	116	116
Operational Buildings	BASE	BASE	51	71	115	109
Other						

**Population Serv'd is the total Resident & Non-Resident Population
 ***PD is Percent Deviation from Base Year
 1▼ FY 77 ECIP - Storms, Solar Screens and Heating/Cooling System Improvements - \$463,080 - Completed (estimated) June 1978
 2▼ FY 76 ECIP - Insulation and Heating Controls \$658,754 - Completed July 1978
 3▼ FY 77 Family Housing ECIP Improvements - \$345,000 - Completed (estimated) October 1978
 4▼ FY 77 ECIP - Energy Control System - \$1,893,000 - Completed March 1980
 5▼ FY 80 ECIP - Waste Heat Recovery - \$183,000 - Completed March 1980

Fort Bliss



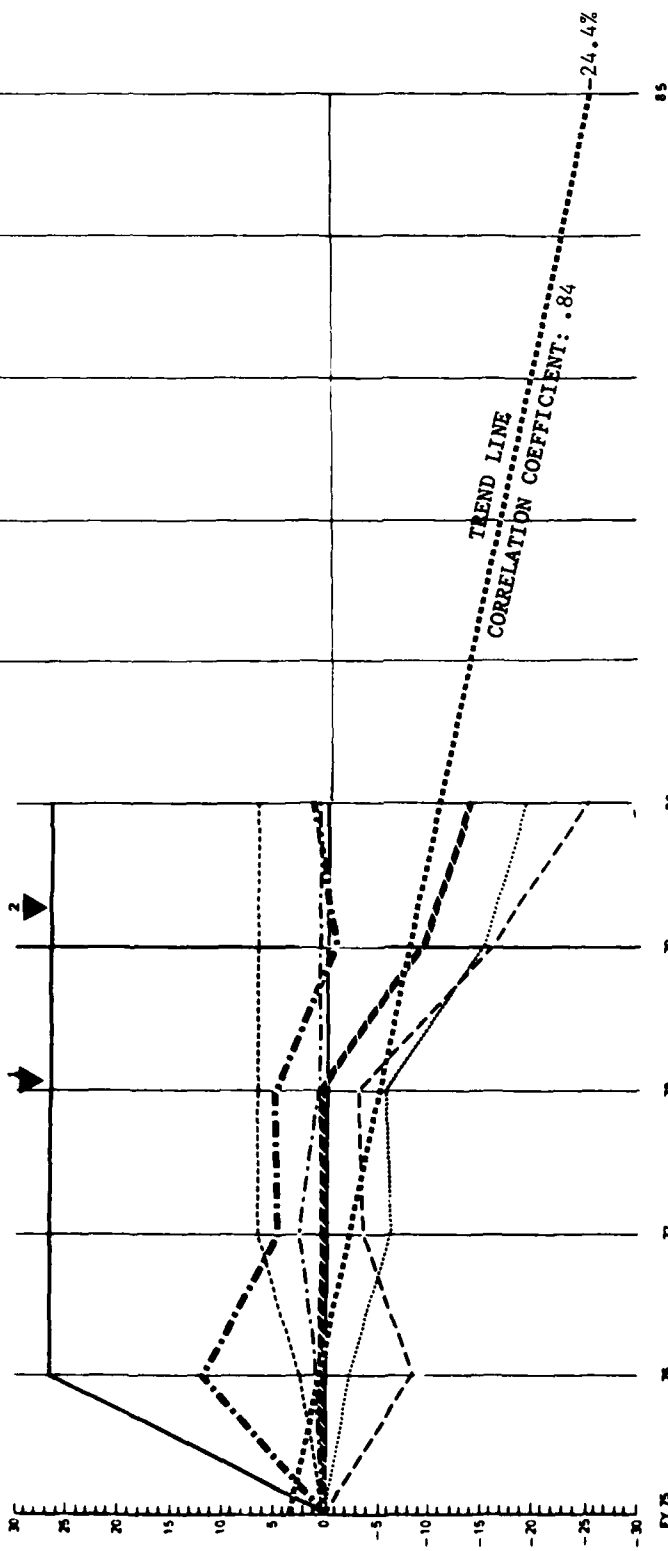
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION FT. BLISS, TX MACOM TRAINOC CLIMATIC REGION 7 HDD 3,432 CDD 2,253

UNIT/TYPE	76	78	77	78	78	79	80
1 Energy Consumption B PD	3,256,885	3,256,202	3,432,802	3,271	3,053,193	3,416,158	2,986,485
2 Thermal En. Cons. B PD	1,873,696	1,755,788	1,822,036	1,881	1,526,085	1,502,071	1,418,871
3 Electrical En. Cons. B PD	1,472,188	1,510,414	1,610,766	1,390	1,527,108	1,914,087	1,567,614
4 Resident Population B PD	21,598	22,838	22,673	5,071	21,202	20,750	23,184
5 Non Resident Population B PD	16,977	15,674	17,237	14,421	18,345	13,965	13,752
6 Population Served** B PD	36,575	38,512	40,910	19,531	39,547	34,715	36,936
7 Effective Population*** B PD	26,590	28,063	28,585	7,511	27,317	26,072	27,265
8 En. Consumption/Pop Served B PD	91.5	84.6	85.1	7.01	77.7	84.9	77.1
9 En. Consumption/Pop B PD	125.8	116.0	120.3	4.51	111.8	115.6	107.6
10 Electric En. Consumption/Population	68.2	67.0	71.3	4.51	73.4	75.3	67.6
11 Installed Air Cond Capacity B PD	5,715	5,670	5,689	1,031	5,262	5,311	5,736
12 Elec Energy/Ton of Air Cond B PD	257.6	265.9	284.0	10.31	271.7	269.7	273.3
13 Real Property Inventory BPD B PD	17,182	17,159	16,916	1,351	17,048	17,108	17,158
14 RPI/Effective Population	.65	.61	.59	1.83	.62	.66	.61
15 Energy Consumption/GSF B PD	194,732	189,877	203,228	4,641	179,094	182,246	174,070
16 Thermal En. Consumption/GSF B PD	109,049	100,634	107,710	1,221	87,756	119,551	87,695
17 Electrical En. Consumption/GSF B PD	85,682	89,242	95,517	11,511	91,338	62,695	86,375
18 RPI per Category	1,251	1,767	1,758	1,259	1,692	1,692	1,670
Training	1,298	1,109	1,344	1,346	1,360	1,350	1,355
Maintenance & Production	92	146	147	146	150	148	148
Research, Development & Training	1,403	1,397	1,370	1,397	1,386	1,377	1,378
Storage	944	974	962	962	960	967	966
Other General Storage	982	982	982	982	982	982	982
Hospital & Medical Administration	2,711	2,711	2,711	2,711	2,711	2,711	2,711
Bachelor Housing	1,694	1,694	1,694	1,694	1,694	1,694	1,694
Community Facilities	6,841	6,841	6,841	6,841	6,841	6,841	6,841
Family Housing	614	614	614	614	614	614	614
Quartermaster Bn Shops	87	87	87	87	87	87	87
Utility Buildings	46	46	46	46	46	46	46
Other	BASE	BASE	BASE	BASE	BASE	BASE	BASE

*PD as Percent Deviation from Base Year
 **Population Served in the total Buildings & Non-Resident Population
 ***RPI per Population & 100 Non-Resident

17 FY 78 ECIP - Gas Fired Water Heaters - \$77,314 - Completed (estimated) December 1979
 20 FY 79 Family Housing ECIP Improvements - \$72,000 - Completed (estimated) January 1980
 30 FY 78 ECIP - Insulate Buildings - \$391,000 - Completed July 1980

Carlisle Barracks



- 1 TOTAL ENERGY CONSUMPTION
- 2 THERMAL ENERGY CONSUMPTION
- 3 ELECTRIC ENERGY CONSUMPTION
- 4 ACTIVE RMA PROPERTY INVENTORY

1V FY 77 Family Plan and FCP completed - 678,224 - Completed (Estimated) 8.1.79
 2V FY 79 FCP - Replace Underground Steamlines - 51,074,000 - Completed December 1979

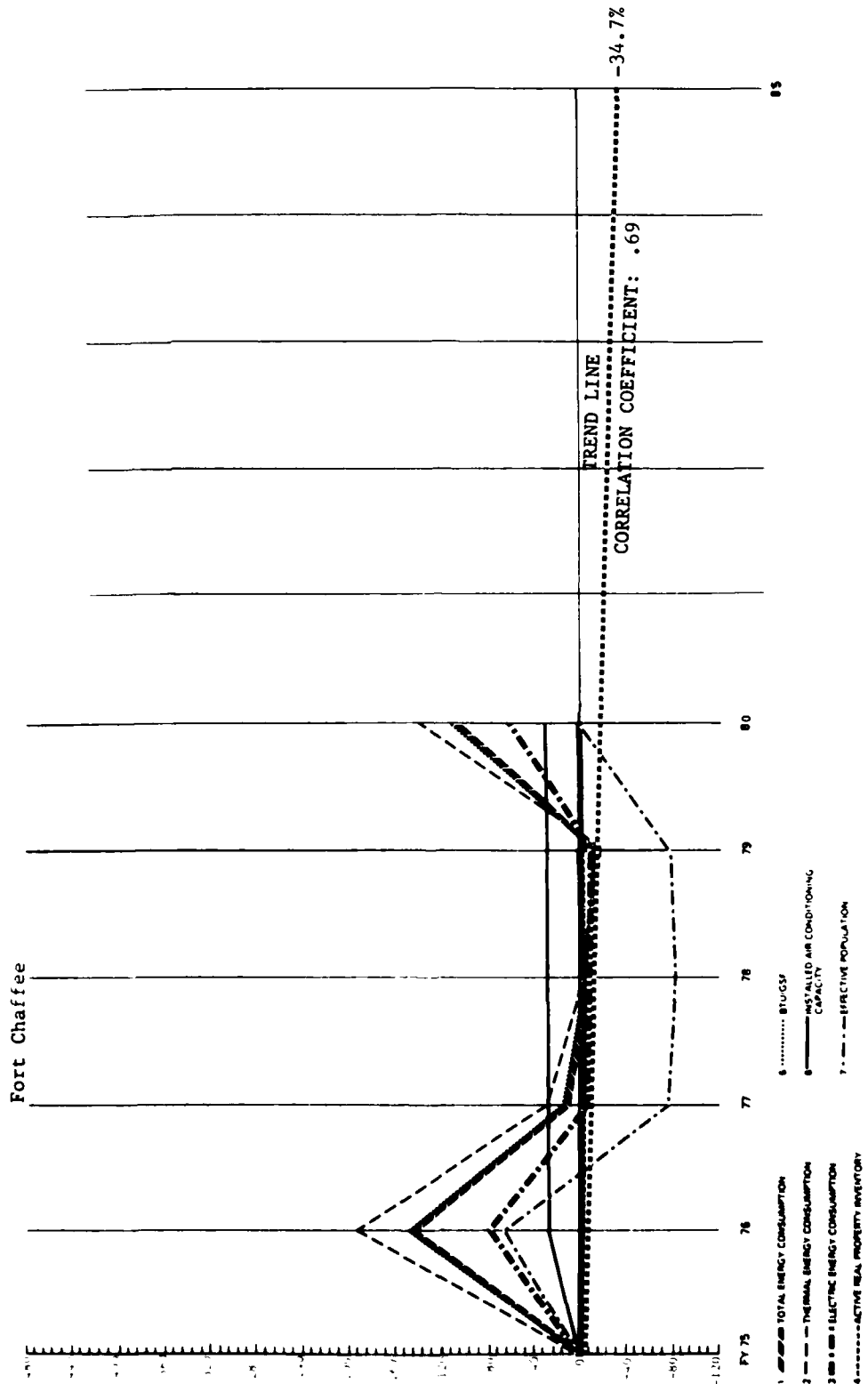
U S Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION CARLISLE BARBACKS PA MACOM TRADOC CLIMATIC REGION 3 HDD 5,269 CDD 995

UNITS/FY	75	76	77	78	79	80
1 Energy Consumption @ PD	382,836	481,529	383,056	384,531	347,251	330,377
2 Thermal En Cons @ PD	218,217	199,416	210,681	211,493	184,044	163,650
3 Electrical En Cons @ PD	164,619	184,093	172,375	173,038	163,207	166,727
4 Resident Population @ PD	1,535	1,536	1,590	1,537	1,537	1,561
5 Non Resident Population @ PD	1,453	1,416	1,449	1,483	1,483	1,428
6 Population Survey** @ PD	2,988	2,972	3,039	3,020	3,020	2,989
7 Employee Population*** @ PD	2,019	2,028	2,073	2,031	2,031	2,037
8 En Consumption/Pop Served @ PD	128.1	129.0	127.3	127.3	115.0	110.5
9 En Consumption/Pop @ PD	189.6	189.1	188.8	189.3	171.0	162.2
10 Electric En Consumption/Resident @ PD	107.2	118.3	108.4	112.6	106.2	106.8
11 Installed Air Cond Capacity @ PD	1,367	1,707	1,701	1,707	1,707	1,710
12 Elec Energy/Ton of Air Cond @ PD	1,22.2	1,07.8	1,01	1,01.4	1,26.7	1,26.7
13 Heat Property Inventory (BHP) @ PD	1,400	1,436	1,493	1,493	1,493	1,493
14 HVAC/Inch Population	6.9	7.0	7.2	7.4	7.4	6.0
15 Energy Consumption/GSF @ PD	273,454	267,081	256,568	257,556	232,586	221,784
16 Thermal En Consumption/GSF @ PD	155,869	138,883	141,112	141,656	121,271	109,612
17 Electrical En Consumption/GSF @ PD	117,585	128,198	115,455	115,899	111,314	111,672
18 kWh by Category	194	194	253	252	252	257
Training	50	40	24	24	24	24
Maintenance & Production	71	71	53	53	53	53
Research, Development & Testing	41	41	44	44	44	44
Storage	65	65	100	100	100	100
Other Command Storage	110	110	107	108	108	108
Headquarters & Support	211	211	211	211	211	211
Administrative	64.5	64.5	67.6	67.6	67.6	67.6
Backbone Housing	2.0	2.0	3.2	3.2	3.2	3.2
Community Facilities	3	3	3	3	3	3
Family Housing	3	3	3	3	3	3
Operational Buildings	3	3	3	3	3	3
Utility Buildings	3	3	3	3	3	3
Other	BASE	BASE	BASE	BASE	BASE	BASE

**PD as Percent Distribution from Base Year
 ***Pop in Resident & Non-Resident Population
 **Pop in Resident & Non-Resident Population

1977 FY Family Housing ECIP Improvements - \$278,724 - Completed (estimated) October 1978
 2077 FY 79 Replace Underground Steamlines - \$1,074,000 - Completed December 1979

REMARKS



NOTE: Trend Line has been adjusted to delete FY76 & FY80 energy consumption which was a reflection of support to Southeast Asia refugees and Cuban refugees.

UNITS/TYPE	75	76	77	78	79	80	81
1 Energy Consumption \$ PD	121,292	321,119	196,723	1,132,221	1,430,000	1,632,332	1,760,000
2 Thermal En. Cons \$ PD	13,210	296,741	127,600	1,131,711	1,430,000	1,632,332	1,760,000
3 Electric En. Cons \$ PD	108,082	19,378	69,123	9,510	9,510	9,510	9,510
4 Resident Population \$ PD	5,115	110,656	66,910	66,910	66,910	66,910	66,910
5 Non Resident Population \$ PD	608	1,130	721	350	350	350	350
6 Population Serv** \$ PD	5,723	111,786	67,631	70,260	70,260	70,260	70,260
7 Inactive Population*** \$ PD	5,115	110,656	66,910	66,910	66,910	66,910	66,910
8 En. Consumption/Serv** \$ PD	10.4	15.5	15.5	15.5	15.5	15.5	15.5
9 En. Consumption/Pop \$ PD	13.9	18.5	18.5	18.5	18.5	18.5	18.5
10 Electric En. Consumption/Resident Population	14.1	15.7	15.7	15.7	15.7	15.7	15.7
11 Insulated Air Cond Capacity \$ PD	25.9	1,010	1,010	1,010	1,010	1,010	1,010
12 Ice Energy Ton of Air Cond \$ PD	31.9	1,291	1,291	1,291	1,291	1,291	1,291
13 Real Property Inventory (RPI) \$ PD	3,207	5,893	5,893	5,893	5,893	5,893	5,893
14 RPI/Active Population	94	56	56	56	56	56	56
15 Energy Consumption/GSF \$ PD	35,103	86,131	113,511	40,487	31,501	31,501	31,501
16 Thermal En. Consumption/GSF \$ PD	20,159	59,130	1,01,910	26,656	10,910	10,910	10,910
17 Electrical En. Consumption/GSF \$ PD	14,944	26,700	12,161	13,531	20,591	20,591	20,591
18 RPI by Category	6463	6463	6463	6463	6463	6463	6463
19	6463	6463	6463	6463	6463	6463	6463
20	6463	6463	6463	6463	6463	6463	6463
21	6463	6463	6463	6463	6463	6463	6463
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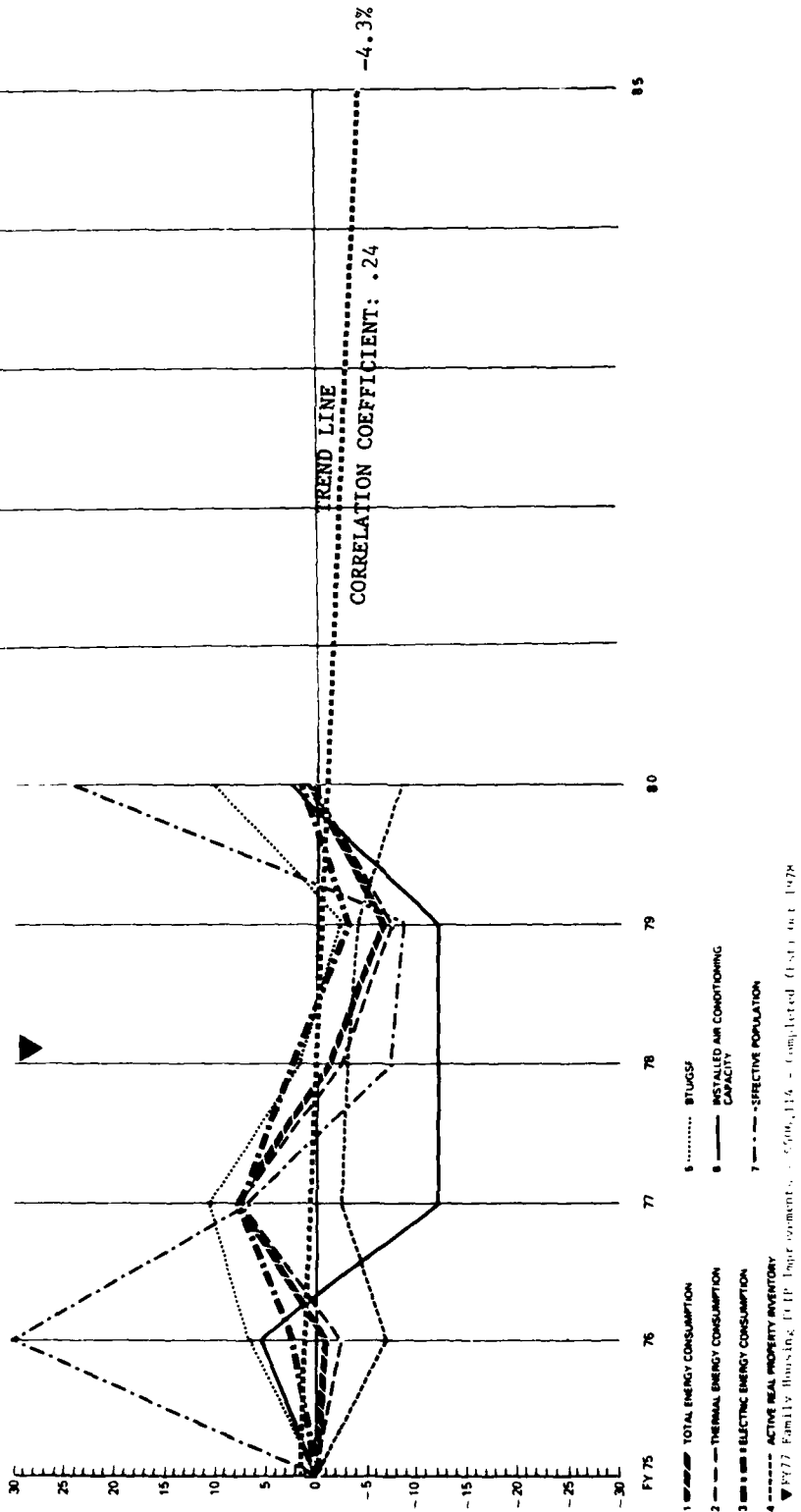
**Pop in Percent Deviation from Base Year

**Population Served is the total Resident & Non-Resident Population

**RPI Pop = Resident + 1/3 Non-Resident

REMARKS

Fort Dix

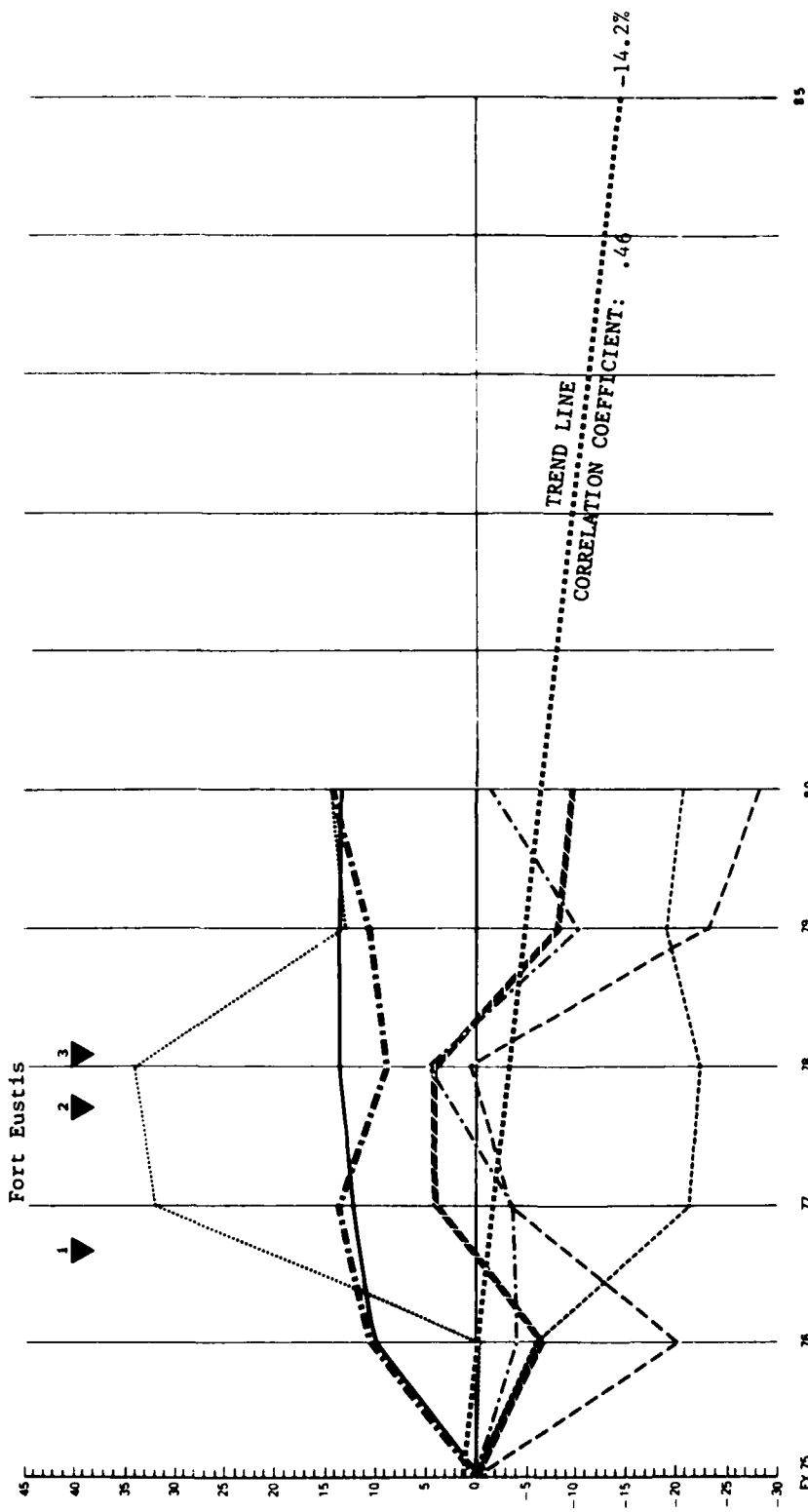


U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION JT. DIV. S. I. MACOM TRADOC CLIMATIC REGION HDD 5,119 CDD 941

UNIT/TYPE	74	75	76	77	78	79	80	81	82
1 Energy Consumption B PD	2,805,469	2,771,214	2,721,214	1,021,709	2,271,708	2,699,852	2,699,852	2,699,852	2,699,852
2 Thermal En Conv B PD	1,061,829	1,011,518	1,011,518	2,114,967	1,912,114	1,874,122	1,874,122	1,874,122	1,874,122
3 Electrical En Conv B PD	841,640	859,696	859,696	906,242	859,696	815,110	815,110	815,110	815,110
4 Non-Residential Population B PD	15,255	20,236	20,236	17,101	11,712	11,800	11,800	11,800	11,800
5 Non-Residential Population B PD	3,368	4,082	4,082	3,038	2,816	2,816	2,816	2,816	2,816
6 Population Served*** B PD	19,123	25,818	25,818	19,958	15,534	15,534	15,534	15,534	15,534
7 Electrical Population*** B PD	16,818	22,092	22,092	17,082	15,534	15,534	15,534	15,534	15,534
8 En Consumption/Pop Served B PD	166.7	111.7	111.7	186.1	161.4	161.4	161.4	161.4	161.4
9 En Consumption/Pop B PD	166.7	125.5	125.5	186.1	178.2	178.2	178.2	178.2	178.2
10 Electrical En Consumption/Pop B PD	521.6	512.5	512.5	52.7	52.7	52.7	52.7	52.7	52.7
11 Electrical En Conv Capacity B PD	5,222	6,225	6,225	5,103	5,103	5,103	5,103	5,103	5,103
12 Elec Energy/Ton of Air Cond B PD	121.8	117.7	117.7	151.6	148.1	148.1	148.1	148.1	148.1
13 Fuel Property Inventory (MPP) B PD	11,920	11,095	11,095	11,618	11,572	11,572	11,572	11,572	11,572
14 MPP/Residence Population	721	50	50	85	85	85	85	85	85
15 Energy Consumption/GSF B PD	235,158	249,951	249,951	249,951	219,275	219,275	219,275	219,275	219,275
16 Thermal En Consumption/GSF B PD	164,750	172,466	172,466	181,715	165,238	165,238	165,238	165,238	165,238
17 Electrical En Consumption/GSF B PD	10,400	77,485	77,485	77,485	76,237	76,237	76,237	76,237	76,237
18 kWh by Category	586	701	701	687	618	618	618	618	618
19 Maintenance & Production	131	309	309	427	444	444	444	444	444
20 Research, Development & Testing	4	4	4	4	4	4	4	4	4
21 Storage	877	863	863	856	833	833	833	833	833
22 Other Covered Storage	581	530	530	521	511	511	511	511	511
23 Magazines & Material	342	443	443	521	4,069	4,069	4,069	4,069	4,069
24 Administration	4,538	1,881	1,881	4,095	1,273	1,273	1,273	1,273	1,273
25 Recreational Housing	971	971	971	971	971	971	971	971	971
26 Community Facilities	1,131	2,771	2,771	2,832	2,799	2,799	2,799	2,799	2,799
27 Family Housing	218	218	218	265	297	297	297	297	297
28 Operational Buildings	160	157	157	97	97	97	97	97	97
29 Utility Buildings	160	157	157	97	97	97	97	97	97
30 Other	160	157	157	97	97	97	97	97	97
31	160	157	157	97	97	97	97	97	97
32	160	157	157	97	97	97	97	97	97
33	160	157	157	97	97	97	97	97	97

- 1 Energy Consumption B PD
- 2 Thermal En Conv B PD
- 3 Electrical En Conv B PD
- 4 Non-Residential Population B PD
- 5 Non-Residential Population B PD
- 6 Population Served*** B PD
- 7 Electrical Population*** B PD
- 8 En Consumption/Pop Served B PD
- 9 En Consumption/Pop B PD
- 10 Electrical En Consumption/Pop B PD
- 11 Electrical En Conv Capacity B PD
- 12 Elec Energy/Ton of Air Cond B PD
- 13 Fuel Property Inventory (MPP) B PD
- 14 MPP/Residence Population
- 15 Energy Consumption/GSF B PD
- 16 Thermal En Consumption/GSF B PD
- 17 Electrical En Consumption/GSF B PD
- 18 kWh by Category
- 19 Maintenance & Production
- 20 Research, Development & Testing
- 21 Storage
- 22 Other Covered Storage
- 23 Magazines & Material
- 24 Administration
- 25 Recreational Housing
- 26 Community Facilities
- 27 Family Housing
- 28 Operational Buildings
- 29 Utility Buildings
- 30 Other

**Population Served is the total Resident & Non-Resident Population
 ***Pop B Resident + 1/3 Non-Resident
 PD is Percent Deviation from Base Year
 FY 77 Family Housing ECIP Improvements - 5506,114 - Completed (estimated) October 1978
 REMAINS



1 TOTAL ENERGY CONSUMPTION
 2 THERMAL ENERGY CONSUMPTION
 3 ELECTRIC ENERGY CONSUMPTION
 4 ACTIVE REAL PROPERTY INVENTORY
 1 FY 76 EICP - Energy Monitoring and Control System, Phase 1 - C-103, completed in
 2 FY 77 EICP - EICS, Phase 2 - Installation and Start-up, completed in
 3 FY 77 EICP - EICP, Phase 1 - Installation and Start-up, completed in

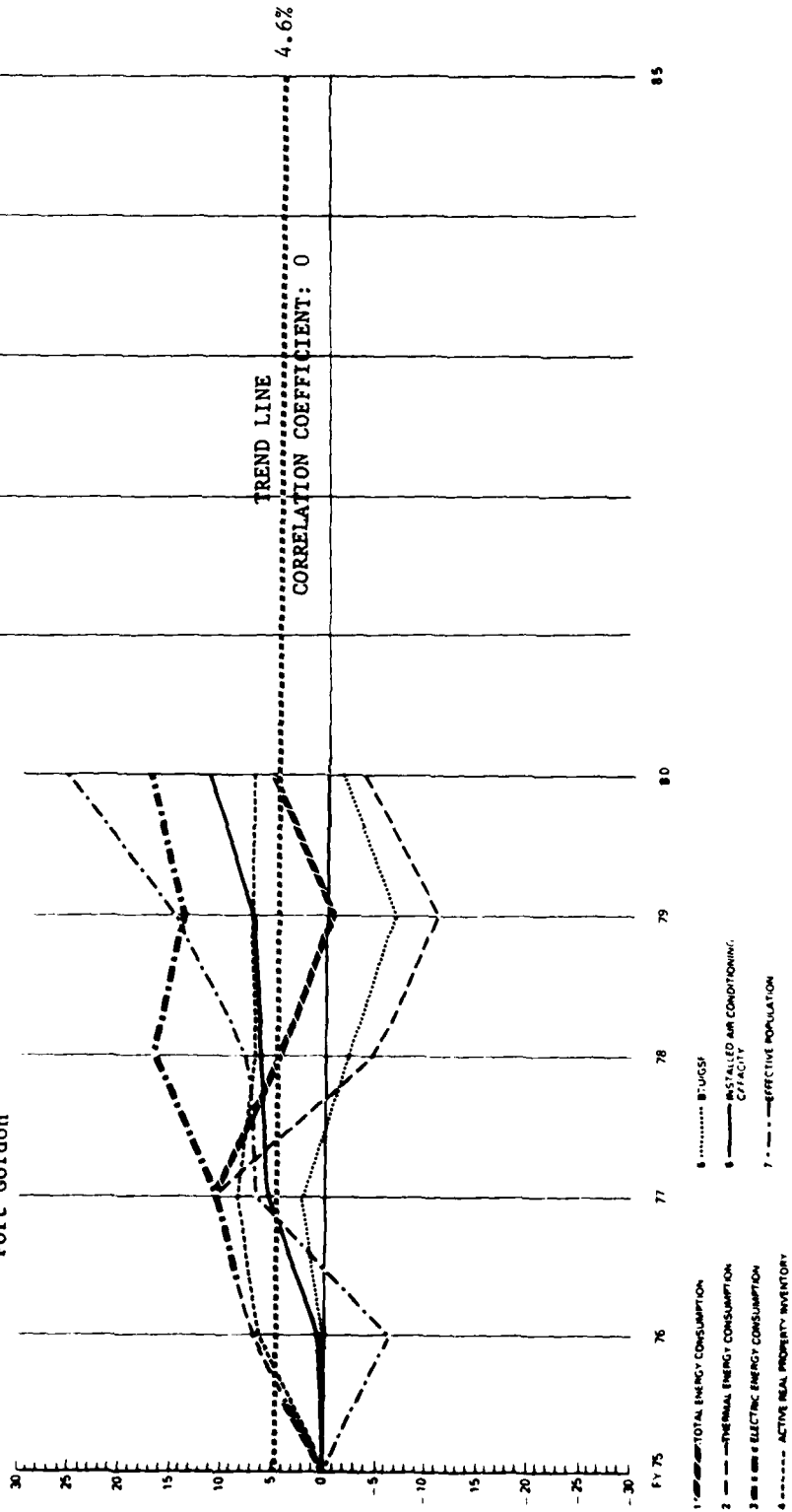
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION FT. FISHERS, VA. MACOM TPADOC CLIMATIC REGION HDD 3,752 CDD 1,585

UNITS/STORY	76	77	78	79	80
1 Energy Consumption B PD	1,754,955	1,643,932	1,831,011	1,837,336	1,612,721
2 Thermal En Cons B PD	945,038	1,129,519	952,126	989,461	796,003
3 Electrical En Cons B PD	771,957	854,844	878,885	852,873	854,768
4 Resident Population B PD	11,661	11,502	11,545	10,911	10,257
5 Non Resident Population B PD	4,053	3,199	3,351	8,087	4,190
6 Population Served** B PD	15,714	14,601	14,796	18,998	14,447
7 Effective Population*** B PD	13,012	12,468	12,562	13,607	11,654
8 En Consumption/Pop Served B PD	111.9	112.6	123.8	96.4	111.6
9 En Consumption/En Pop B PD	115.2	121.8	125.8	71.2	138.4
10 Electric En Consumption/Effective Population	66.4	75.0	76.8	77.2	83.3
11 Insulated Air Cond Capacity B PD	9,152	9,003	9,109	9,233	9,235
12 Elec Energy/Con of Air Cond B PD	84.9	94.9	96.2	91.3	82.6
13 Real Property Inventory BPD B PD	8,032	7,524	6,324	6,218	6,503
14 RPI/En Consumption B PD	62	60	50	46	56
15 Energy Consumption/GSF B PD	218,998	218,492	289,534	294,682	248,004
16 Thermal En Consumption/GSF B PD	122,619	104,876	150,538	159,128	116,562
17 Electrical En Consumption/GSF B PD	96,379	113,616	138,996	135,554	131,442
18 RPI by Category	1,351	1,351	1,010	1,015	1,152
Training	654	649	310	310	317
Manufacture & Production	54	54	52	52	55
Research, Development & Testing	533	533	3	3	4
Storage	BASE	BASE	403	403	608
Other General Storage	121	115	151	151	151
Medical & Medical	624	369	325	447	486
Administration	2,164	2,016	1,667	1,379	1,431
Bachelor Housing	658	607	519	562	572
Community Fc Bldg	2,019	1,793	1,801	1,801	1,796
Family Housing	126	141	65	55	55
Operational Bldg	50	56	50	50	40
Utility Buildings	BASE	BASE	31	31	30

**Population Served is the total Resident & Non-Resident Population
 ***RPI by Category
 **PD in Percent Direction from Base Year
 Includes Ft Story data which was reported separately in FY75 and FY76, but combined herein for consistency.

- 1 FY 76 ECIP - Energy Monitoring and Control System, Phase 1 - \$2,303,000 - Completed June 1977
- 2 FY 77 ECIP - EACS, Phase 2 - Insulation and Storms - \$2,538,000 - Completed (estimated) June 1978
- 3 FY 77 Family Housing ECIP Improvements - \$899,000 - Completed (estimated) October 1978

Fort Gordon



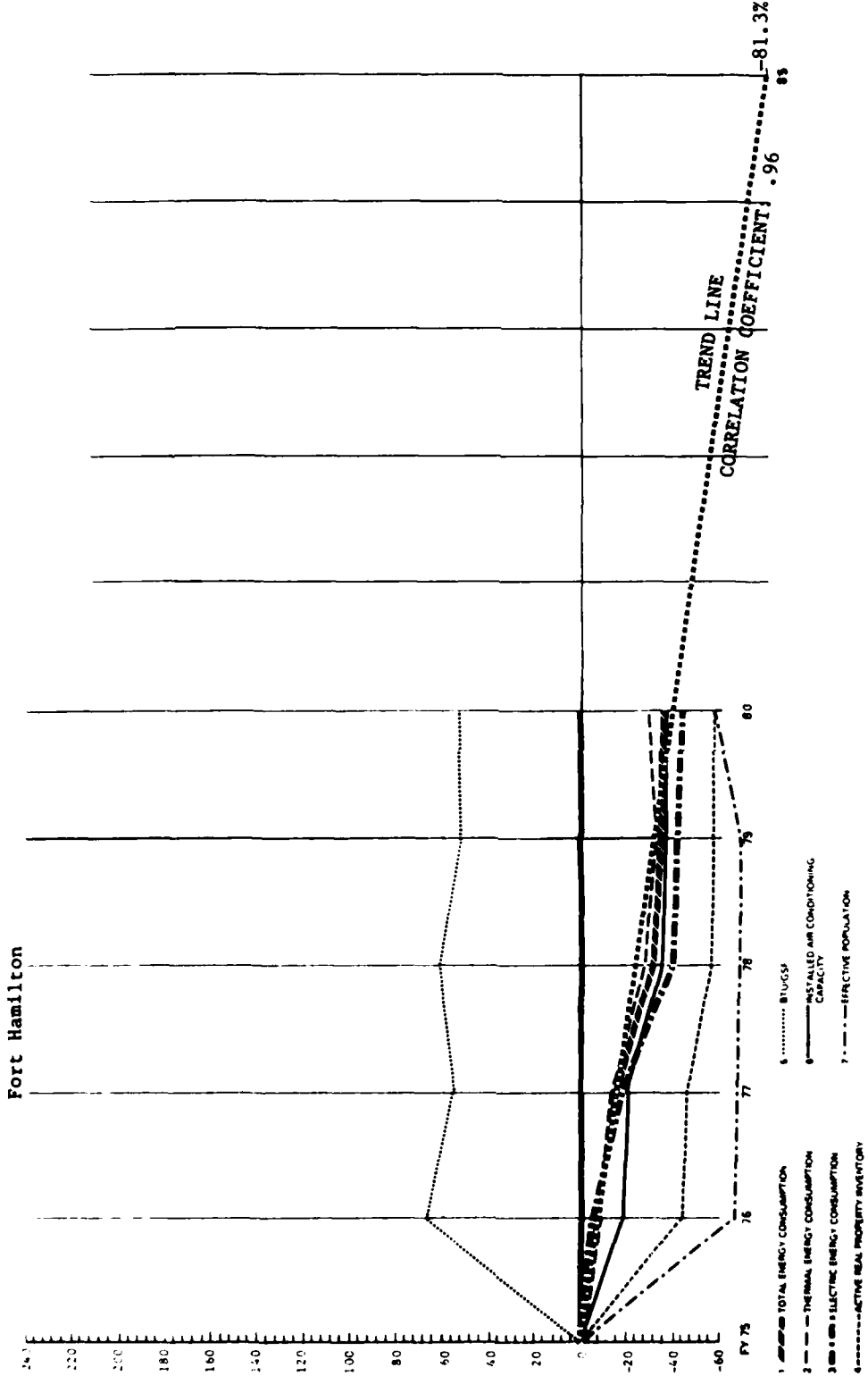
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - ET. CONDON, GA. MACOM - TRADOC CLIMATIC REGION - 4. HDD 2,547 CDD 1,985

UNITS	75	76	77	78	79	80
UNITS	2,509,063	2,280,017	2,001,750	2,714,881	2,380,086	2,748,264
MBTU	1,481,455	1,584,610	1,640,323	1,411,739	1,370,434	1,432,375
MBTU	1,117,584	1,195,407	1,237,435	1,303,142	1,268,652	1,315,869
PEOPLE	11,685	11,052	13,101	13,292	14,287	16,246
PEOPLE	10,201	9,650	11,311	9,475	9,210	8,832
PEOPLE	22,126	20,200	22,596	22,767	23,997	25,078
PEOPLE	13,233	14,140	16,265	16,650	17,524	19,190
PEOPLE	116,111	134,313	127,419	119,212	109,914	109,616
PEOPLE	170,211	194,313	176,913	165,013	147,713	143,213
PEOPLE	95,611	108,213	96,413	98,013	88,813	81,013
PEOPLE	19,314	19,433	20,459	20,580	20,696	21,581
PEOPLE	8,941	9,544	9,609	9,563	9,573	9,592
PEOPLE	230,688	291,284	296,707	283,894	270,457	286,514
PEOPLE	165,692	166,012	169,123	147,625	137,933	149,330
PEOPLE	134,984	125,252	137,586	136,269	132,524	137,184
PEOPLE	1,311	1,432	1,406	1,406	1,414	1,366
PEOPLE	381	385	422	391	392	392
PEOPLE	12	18	18	18	16	16
PEOPLE	657	710	777	732	653	762
PEOPLE	387	1,009	733	717	739	762
PEOPLE	616	611	594	591	613	621
PEOPLE	2,981	2,952	3,163	3,077	3,057	2,997
PEOPLE	1,285	917	949	1,002	1,066	1,093
PEOPLE	287	1,270	1,270	1,270	1,271	1,275
PEOPLE	13	249	249	236	226	219
PEOPLE	13	88	88	93	93	93
PEOPLE	15	15	15	15	16	18

- 1 Thermal Consumption & PD
- 2 Thermal En Cons & PD
- 3 Electrical En Cons & PD
- 4 Electrical En Cons & PD
- 5 Non Resident Population & PD
- 6 Population Served** & PD
- 7 Effective Population*** & PD
- 8 En Consumption/Pop Served & PD
- 9 En Consumption/Pop & PD
- 10 Electrical En Consumption/Resident Population
- 11 Installed Air Cond Capacity & PD
- 12 Elec Energy/ton of Air Cond & PD
- 13 Fuel Property Inventory BHP & PD
- 14 Inefficiency Population
- 15 Energy Consumption/GSF & PD
- 16 Thermal En Consumption/GSF & PD
- 17 Electrical En Consumption/GSF & PD
- 18 BHP by Category

**Populaton Served is the total Resident & Non Resident Population
 ***Populaton Served is the total Resident & Non Resident Population
 *PD is Percent Deviation from Base Year

REMARKS



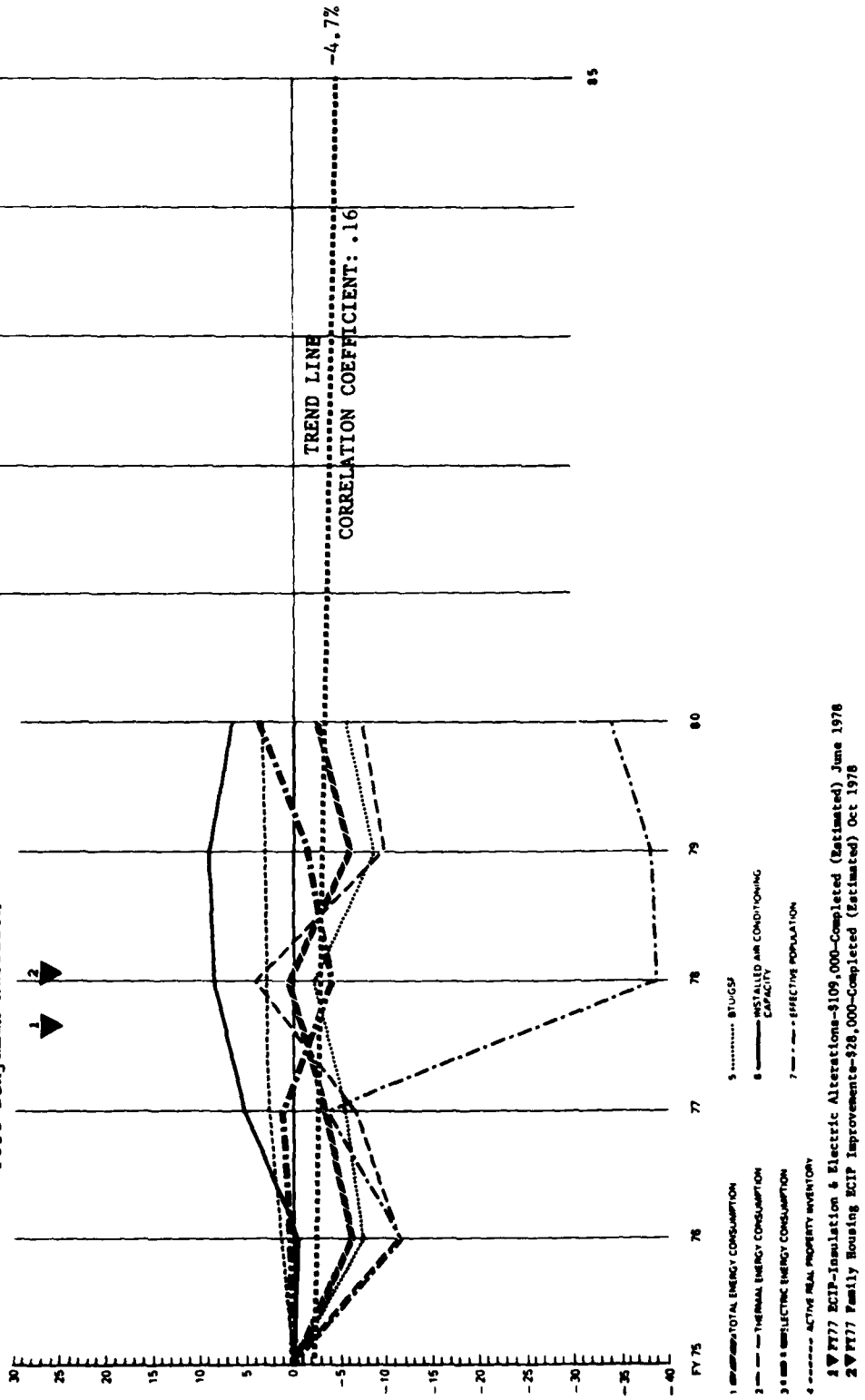
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION FT. BELLEVILLE, ILL. CLIMATIC REGION I HDD 5,184 CDD 841

UNITS	%	76	77	78	79	80
AMTU	890,616	820,000	749,654	604,785	565,521	570,428
AMTU	569,842	520,000	487,276	411,256	378,900	394,850
AMTU	320,540	300,000	282,378	193,533	186,621	175,578
PEOPLE	10,000	10,000	10,000	10,000	10,000	10,000
PEOPLE	2,812	2,812	2,812	2,812	2,812	2,812
PEOPLE	16,890	16,890	16,890	16,890	16,890	16,890
PEOPLE	34,912	34,912	34,912	34,912	34,912	34,912
AMTUCAP	52.7	52.7	52.7	52.7	52.7	52.7
AMTUCAP	72.8	72.8	72.8	72.8	72.8	72.8
TONS	2,946	2,400	2,168	1,862	1,862	1,862
RSP	1,098	1,098	1,098	1,098	1,098	1,098
RSP	2,621	2,621	2,621	2,621	2,621	2,621
RSP	119,986	119,986	119,986	119,986	119,986	119,986
RSP	76,291	76,291	76,291	76,291	76,291	76,291
RSP	63,185	63,185	63,185	63,185	63,185	63,185
RSP	1,274	1,274	1,274	1,274	1,274	1,274
RSP	591	591	591	591	591	591
RSP	325	325	325	325	325	325
RSP	185	185	185	185	185	185
RSP	672	672	672	672	672	672
RSP	1,217	1,217	1,217	1,217	1,217	1,217
RSP	2,097	2,097	2,097	2,097	2,097	2,097
RSP	104	104	104	104	104	104
RSP	10	10	10	10	10	10
RSP	BASE	BASE	BASE	BASE	BASE	BASE

- 1 Energy Consumption to PD
- 2 Thermal En Cons to PD
- 3 Electrical En Cons to PD
- 4 Resident Population to PD
- 5 Non-Resident Population to PD
- 6 Population Survey to PD
- 7 Electric Population to PD
- 8 En Consumption to PD
- 9 En Consumption to PD
- 10 Electric En Consumption to PD
- 11 Installed Air Cond Capacity to PD
- 12 Elec Equip on Air Cond to PD
- 13 Heat Property Inventory to PD
- 14 Refrigeration Inventory to PD
- 15 Energy Consumption to PD
- 16 Thermal En Consumption to PD
- 17 Electrical En Consumption to PD
- 18 PD by Category
- 19 Training
- 20 Maintenance & Production
- 21 Research, Development & Testing
- 22 Storage
- 23 Other General Storage
- 24 Hospital & Medical
- 25 Administration
- 26 Recreation
- 27 Community Facilities
- 28 Family Housing
- 29 Quarantine Buildings
- 30 Utility Buildings
- 31 Other

Reported as a FORSCOM Installation in FY75. Transferred to TRADOC as a sub-Installation of Ft Dix as of FY77 but is reported separately. As a result of the transfer, no report was submitted for FY76 so the above data for FY76 is estimated for comparison purposes.

Fort Benjamín Harrison



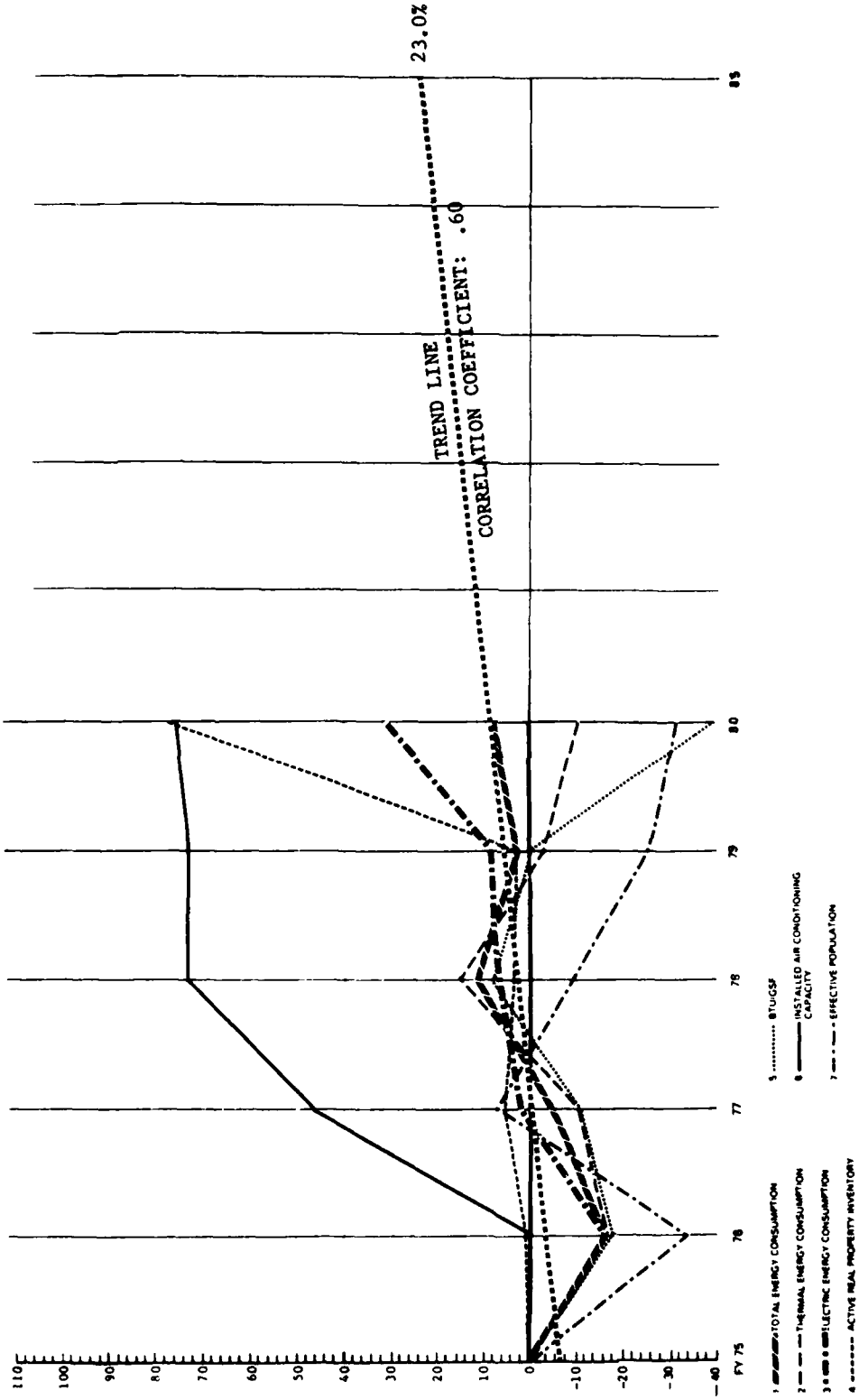
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - INT. CLIMATIC REGION 7 MOD 5,577 CDD 974

UNITARY	76	77	78	79	80
UTILITY	1,273,276	1,232,094	1,277,063	1,198,376	1,241,998
WTR	1,195,006	1,161,111	1,277,063	1,198,376	1,241,998
WTR	700,102	653,010	727,926	635,113	649,250
WTR	572,974	571,602	549,137	563,213	592,748
PEOPLE	3,588	3,751	2,795	3,090	3,130
PEOPLE	13,523	13,061	12,158	12,211	12,211
PEOPLE	12,161	15,882	15,909	15,896	15,896
PEOPLE	8,112	7,180	7,804	8,025	8,162
WTR	74.2	72.2	77.4	73.7	77.6
WTR	156.9	166.4	157.9	157.3	157.3
WTR	159.7	203.0	196.4	182.3	178.0
TONS	8,187	8,147	8,874	8,914	8,707
WTR	69.9	70.4	67.1	63.2	68.1
WTR	4,798	4,857	4,922	4,941	4,958
WTR	59	68	99	98	92
WTR	265,376	250,375	259,460	242,527	250,504
WTR	145,957	127,940	147,892	128,539	130,950
WTR	119,419	118,098	111,676	113,988	119,554
WTR	921	945	1,026	1,022	921
WTR	121	121	107	108	238
WTR	179	163	2	2	2
WTR	136	134	230	231	259
WTR	885	899	116	116	116
WTR	378	375	1,507	1,507	1,451
WTR	584	578	900	900	870
WTR	33	32	403	424	459
WTR	16	16	578	578	578
WTR	34	34	16	16	24
WTR	34	34	34	34	34
WTR	34	34	34	34	34

- 1 Energy Consumption & PD
- 2 Thermal En. Cons. & PD
- 3 Electrical En. Cons. & PD
- 4 Residential Population & PD
- 5 Non-Residential Population & PD
- 6 Population Services & PD
- 7 Electric Population & PD
- 8 En. Consumption/Pop. Serv. & PD
- 9 En. Consumption/El. Pop. & PD
- 10 Electric En. Consumption/Population
- 11 Installed Air Cond. Capacity & PD
- 12 Elec. Energy/Pop. of Air Cond. & PD
- 13 Real Property Inventory (RPI) & PD
- 14 RPI/Electric Population
- 15 Energy Consumption/El. Pop. & PD
- 16 Thermal En. Consumption/El. Pop. & PD
- 17 Electrical En. Consumption/El. Pop. & PD
- 18 RPI by Category
- 19 Training
- 20 Maintenance & Production
- 21 Research, Development & Testing
- 22 Storage
- 23 Other Command Support
- 24 Hospital & Medical
- 25 Administration
- 26 Detachment Housing
- 27 Community Fire Alarms
- 28 Family Housing
- 29 Detachment Bus Stop
- 30 Utility Buildings
- 31 Other

REMARKS
 1 V FY 77 ECIP - Insulation and Electric Alterations - \$109,000 - Completed (estimated) June 1978
 2 V FY 77 Family Housing ECIP Improvements - \$28,000 - Completed (estimated) October 1978

Fort A. P. Hill

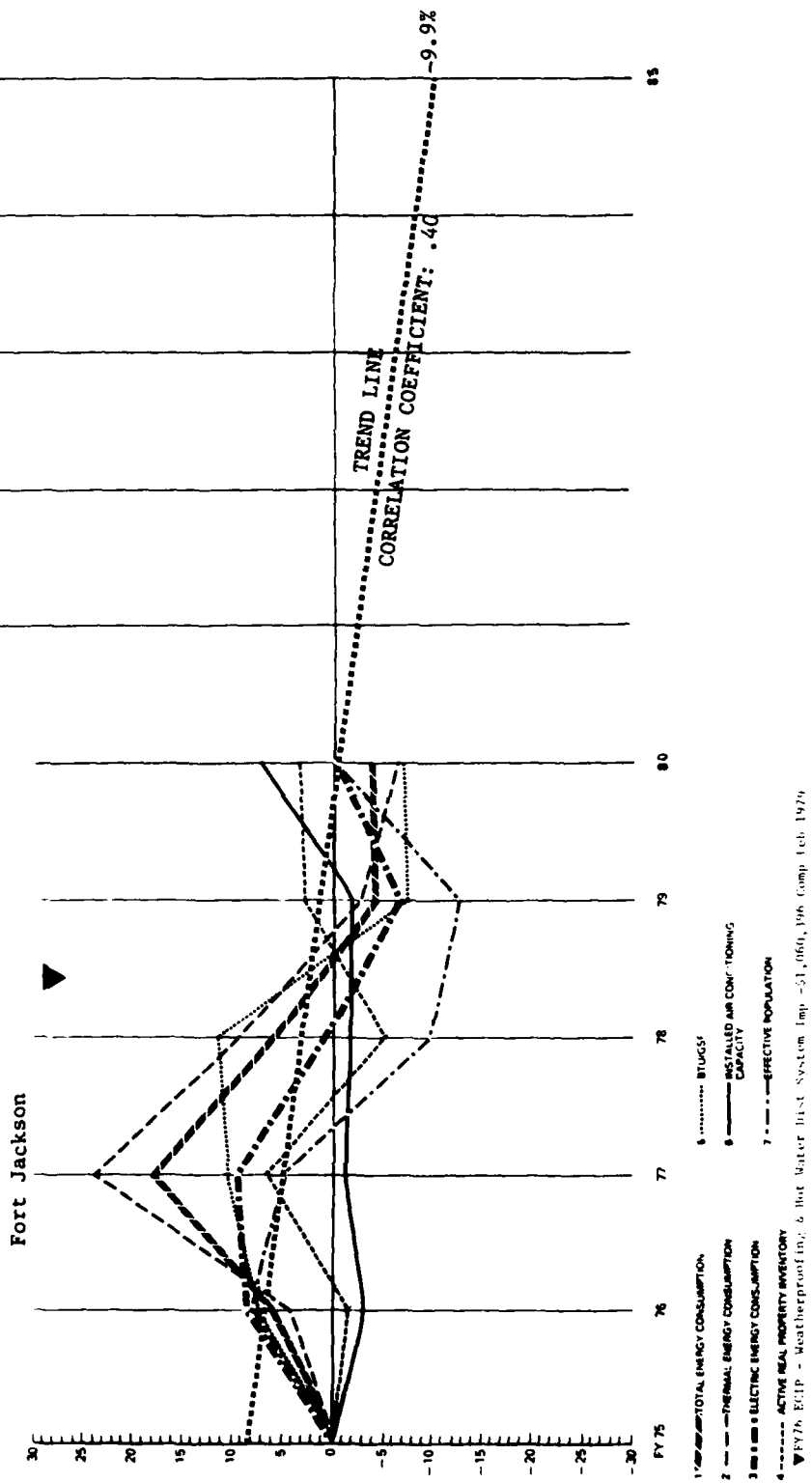


U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - FT. A. P. HILL, VA. - MACOM - TRAINIC - CLIMATIC REGION 3 - HDD 2,198 CDD 1,188

UNITS/FY	75	76	77	78	79	80
1 Energy Consumption & PD	80,082	1-15,411	76,310	1-11,611	89,252	1-13,611
2 Thermal En Cons & PD	45,436	1-15,411	41,208	1-9,211	52,721	1-15,511
3 Electrical En Cons & PD	34,646	1-15,411	35,102	1-2,400	36,531	1-4,400
4 Auxiliary Population & PD	1,055	1-15,411	1,130	1-2,211	940	1-10,811
5 Non Resident Population & PD	361	1-0	367	1-2,211	603	1-1,611
6 Population Survival** & PD	1,515	1-26,811	1,497	1-5,811	1,343	1-5,111
7 Effective Population*** & PD	1,174	1-15,511	1,292	1-8,511	1,074	1-8,511
8 En Consumption/Pop Served & PD	66.6	1-15,511	51.0	1-9,911	66.5	1-17,611
9 En Consumption/Pop & PD	66.2	1-26,911	61.0	1-10,611	83.2	1-22,011
10 Electric En Consumption/Pop & PD	11.6	1-12,111	17.0	1-4,911	39.0	1-19,311
11 Installed Air Cond Capacity & PD	296.8	1-15,411	206.5	1-10,411	182.3	1-38,611
12 Elec Energy/Ton of Air Cond & PD	51.0	1-1,011	54.8	1-3,611	53.7	1-3,511
13 Heat Recovery Auxiliary (RHR) & PD	44	1-4,911	46	1-1,011	50	1-13,111
14 Specialized Population	134,262	1-16,211	139,252	1-9,711	166,400	1-7,911
15 Energy Consumption/GSF & PD	87,931	1-16,211	75,197	1-14,511	98,177	1-11,611
16 Thermal En Consumption/GSF & PD	46,311	1-16,211	46,055	1-3,411	68,223	1-2,911
17 Electrical En Consumption/GSF & PD	41,620	1-16,211	29,142	1-11,111	29,954	1-8,111
18 RPT by Category	16	16	16	15	15	15
Training	16	16	16	15	15	15
Maintenance & Production	16	16	16	15	15	15
Research, Development & Testing	16	16	16	15	15	15
Storage	16	16	16	15	15	15
Other Covered Storage	16	16	16	15	15	15
Hospital & Medical	16	16	16	15	15	15
Administration	16	16	16	15	15	15
Technical Training	16	16	16	15	15	15
Community Facilities	16	16	16	15	15	15
Family Housing	16	16	16	15	15	15
Operational Buildings	16	16	16	15	15	15
Utility Buildings	16	16	16	15	15	15
Other	16	16	16	15	15	15
Net Available	44	BASE	29	4	4	4
**PD is Percent Deviation from Base Year						
***Pop Served is the Total Resident & Non-Resident Population						
****Pop is Resident + 1/2 Non-Resident						

- 1 Energy Consumption & PD
- 2 Thermal En Cons & PD
- 3 Electrical En Cons & PD
- 4 Auxiliary Population & PD
- 5 Non Resident Population & PD
- 6 Population Survival** & PD
- 7 Effective Population*** & PD
- 8 En Consumption/Pop Served & PD
- 9 En Consumption/Pop & PD
- 10 Electric En Consumption/Pop & PD
- 11 Installed Air Cond Capacity & PD
- 12 Elec Energy/Ton of Air Cond & PD
- 13 Heat Recovery Auxiliary (RHR) & PD
- 14 Specialized Population
- 15 Energy Consumption/GSF & PD
- 16 Thermal En Consumption/GSF & PD
- 17 Electrical En Consumption/GSF & PD
- 18 RPT by Category
- Training
- Maintenance & Production
- Research, Development & Testing
- Storage
- Other Covered Storage
- Hospital & Medical
- Administration
- Technical Training
- Community Facilities
- Family Housing
- Operational Buildings
- Utility Buildings
- Other

REMARKS



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION FT. JACKSON, S.C., MACOM TRAINING CLIMATIC REGION 7 MDD 7.59R CDD 2.087

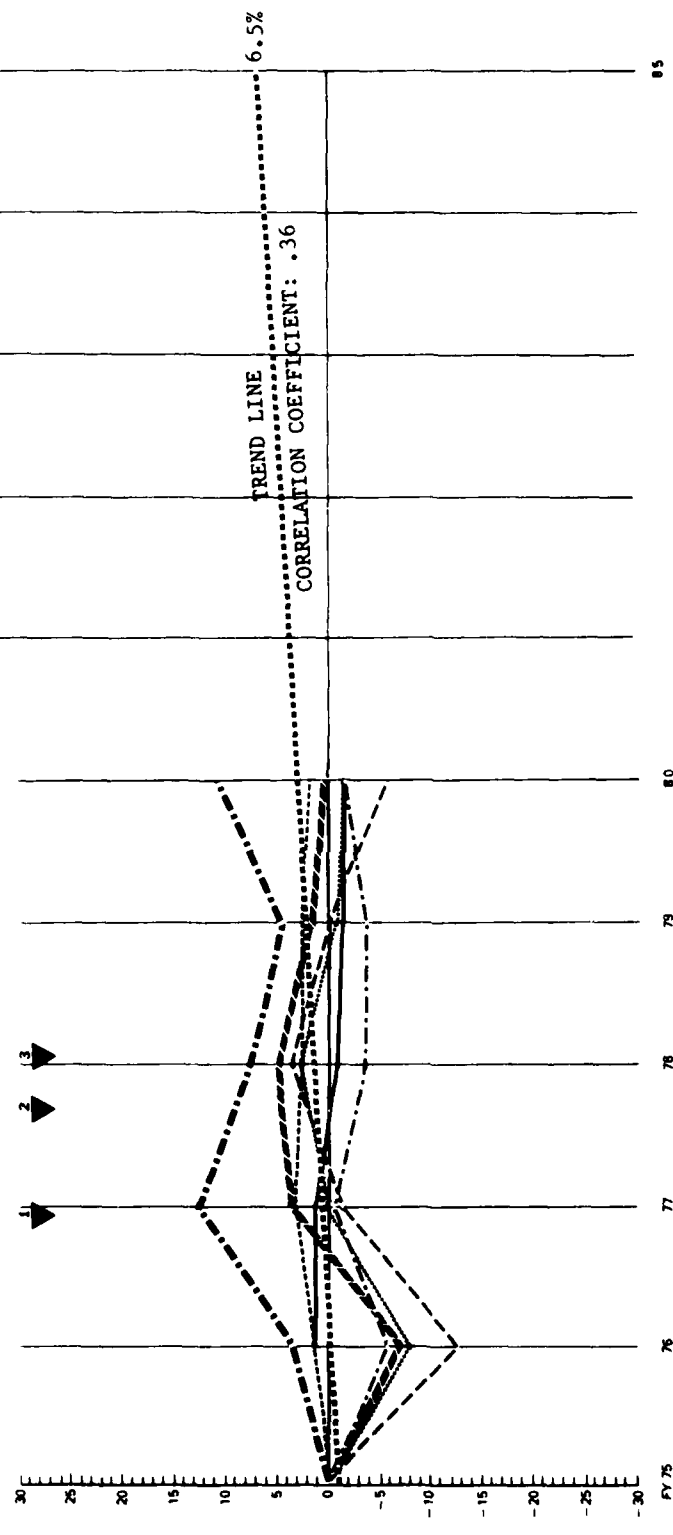
UNITS	75	76	77	78	79	80
1 Energy Consumption & PD	2,593,459	2,749,645	3,065,945	2,748,788	2,479,416	2,408,610
2 Thermal En Cons & PD	1,505,367	1,567,398	1,870,227	1,649,213	1,469,833	1,408,923
3 Electrical En Cons & PD	1,088,092	1,182,247	1,195,718	1,099,575	1,009,583	1,000,687
4 Resident Population & PD	17,389	18,933	18,481	15,236	13,682	14,168
5 Non-Resident Population & PD	8,571	8,768	8,331	8,009	5,978	6,108
6 Population Servant** & PD	25,960	27,701	28,812	23,675	21,658	20,204
7 Effective Population*** & PD	20,246	21,856	21,258	18,266	17,674	16,704
8 En Consumption/Pop Served & PD	100.0	99.3	114.3	116.4	114.5	102.8
9 En Consumption/Pop & PD	128.2	125.8	144.2	150.5	140.3	121.5
10 Electric En Consumption/Resident Population	62.7	65.5	64.7	70.5	66.8	59.8
11 Installed Air Cond Capacity & PD	43,074	42,660	42,952	42,824	42,879	42,820
12 Elec Energy/Pop of Air Cond & PD	83.4	101.4	92.3	85.7	78.2	77.5
13 Heat Property Inventory kWh & PD	10,381	10,216	11,087	9,868	10,670	10,732
14 Inefficiency Population	350,000	269,203	216,532	278,555	232,372	232,521
15 Energy Consumption/GSF & PD	143,011	151,446	149,482	167,133	137,099	131,321
16 Thermal En Consumption/GSF & PD	109,008	117,527	107,842	111,622	95,212	101,338
17 Electrical En Consumption/GSF & PD	34,003	33,919	41,640	55,511	41,887	29,983
18 kWh by Category						
Training	910	916	988	933	989	923
Manufacture & Production	762	768	346	337	337	311
Research, Development & Testing						
Storage	64	64	19	22	27	65
Other Condensed Storage						
Housing & Medical	517	517	579	635	648	566
Administration	292	262	671	520	491	500
Dishonor Housing	4,288	4,241	290	313	318	318
Community Facilities	1,114	1,114	6,197	6,156	4,558	4,567
Family Housing	1,237	1,694	1,346	1,346	1,109	1,100
Operational Bar Camp	415	207	964	964	1,682	1,688
Utility Buildings	82	82	68	32	32	368
Other			888	498	372	72

**PD in Percent Deviation from Base Year
 ***Population Served is the total Resident & Non-Resident Population
 **EIP Pop & Resident + I/O Non-Resident

FTJ/6 ECIP - Weatherproofing and Hot Water Distribution System - \$1,060,306 - Completed February 1979

REMARKS

Fort Knox



- 1 TOTAL ENERGY CONSUMPTION
- 2 THERMAL ENERGY CONSUMPTION
- 3 ELECTRIC ENERGY CONSUMPTION
- 4 ACTIVE REAL PROPERTY INVENTORY
- 5 FY76 EICP - Heating/Cooling Alterations, 324,336 - Completed Sept. 1977
- 6 FY77 EICP - Insulation, Heating/Cooling, Alter., 253,775,608 - Comp. (Est.) Nov. 1978
- 7 FY77 Family Housing EICP Improvements - 56,251,000 - Completed (Est.) Oct. 1978

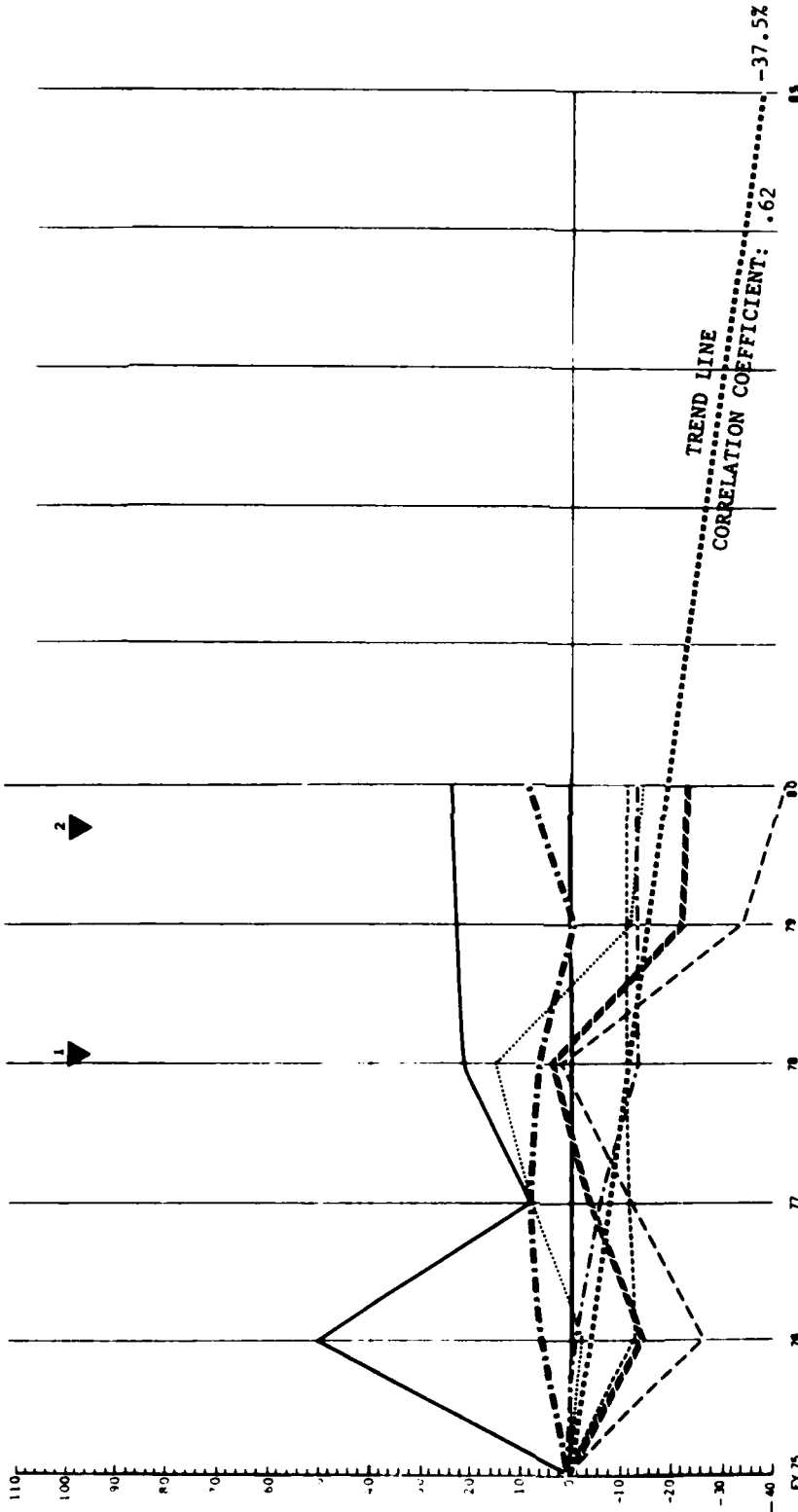
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - MACOM - REGION - HDO 4-516 CDD 1-160

UNITARY	75	76	77	78	79	80	81
MBTU	4,081,763	3,800,543	4,213,016	4,277,763	4,277,763	4,277,763	4,277,763
MBTU	2,612,329	2,280,266	2,582,151	2,582,151	2,582,151	2,582,151	2,582,151
MBTU	1,469,434	1,520,277	1,630,865	1,695,612	1,695,612	1,695,612	1,695,612
PEOPLE	29,658	27,519	29,010	29,067	29,067	29,067	29,067
PEOPLE	16,419	15,275	15,592	15,220	15,220	15,220	15,220
PEOPLE	66,027	62,794	63,418	63,847	63,847	63,847	63,847
PEOPLE	36,464	32,611	34,202	33,140	33,140	33,140	33,140
MBTU/CAP	92.6	88.8	96.9	103.6	103.6	103.6	103.6
MBTU/CAP	118.4	116.5	121.7	129.1	129.1	129.1	129.1
MBTU/CAP	49.5	53.2	56.9	54.4	54.4	54.4	54.4
TONS	8,468	8,364	8,531	8,389	8,389	8,389	8,389
INSTITUTION	173.5	177.5	183.1	188.7	188.7	188.7	188.7
ESP	19,832	20,126	20,506	20,160	20,160	20,160	20,160
BTU/GSF	205,196	188,813	209,427	210,106	210,106	210,106	210,106
BTU/GSF	131,326	113,100	125,311	132,167	132,167	132,167	132,167
BTU/GSF	71,870	75,511	80,116	77,739	77,739	77,739	77,739
ESP	1,879	2,191	2,091	2,191	2,191	2,191	2,191
ESP	1,614	1,427	1,619	1,493	1,493	1,493	1,493
ESP	1,088	95	95	95	95	95	95
ESP	1,208	1,210	62	62	62	62	62
ESP	476	476	1,352	1,157	1,157	1,157	1,157
ESP	716	806	676	676	676	676	676
ESP	5,768	5,596	5,596	5,596	5,596	5,596	5,596
ESP	1,590	1,671	1,686	1,686	1,686	1,686	1,686
ESP	6,218	6,218	6,218	6,218	6,218	6,218	6,218
ESP	287	179	366	281	281	281	281
ESP	121	121	121	121	121	121	121
ESP	138	138	68	68	68	68	68

- 1 Energy Consumption @ PD
- 2 Thermal En. Cons @ PD
- 3 Electrical En. Cons @ PD
- 4 Resident Population @ PD
- 5 Non-Resident Population @ PD
- 6 Population Served** @ PD
- 7 Effective Population*** @ PD
- 8 En. Consumption/Pop. Served @ PD
- 9 En. Consumption/Pop. @ PD
- 10 Electric En. Consumption/Resident Population
- 11 Inhabited Air Cond Capacity @ PD
- 12 Elec Energy/Ton of Air Cond @ PD
- 13 Heat Property Inventory (Btu) @ PD
- 14 Non-Residential Population
- 15 Energy Consumption/GSF @ PD
- 16 Thermal En. Consumption/GSF @ PD
- 17 Electrical En. Consumption/GSF @ PD
- 18 (Btu) by Category
- 19 Training
- 20 Maintenance & Production
- 21 Research, Development & Testing
- 22 Storage
- 23 Other Connected Storage
- 24 Housing @ Medical
- 25 Administration
- 26 Bachelor Housing
- 27 Community En. Cons
- 28 Family Housing
- 29 Quartermaster En. Cons
- 30 Utility Buildings
- 31 Other

1 76 ECIP - Heating/Cooling Alterations \$465,350 - Completed September 1977
 2 77 ECIP - Insulation, Heating/Cooling Alterations, Heating Plants Modifications - \$3,774,408 - Completed (estimated) June 1978
 3 77 Family Housing ECIP Improvements - \$425,000 - Completed (estimated) October 1978

Fort Leavenworth



- 1 TOTAL ENERGY CONSUMPTION
 - 2 THERMAL ENERGY CONSUMPTION
 - 3 ELECTRIC ENERGY CONSUMPTION
 - 4 ACTIVE MAIL PROPERTY INVENTORY
 - 5 STUCCO
 - 6 INSTALLED AIR CONDITIONING CAPACITY
 - 7 EFFECTIVE POPULATION
- 1 ▲ FY 77 FORT LEAVENWORTH STUCCO INVENTORY
2 ▲ FY 77 FORT LEAVENWORTH INSTALLED AIR CONDITIONING CAPACITY

U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION

FT. LEAVENWORTH, KS. MACOM TRAINING

CLIMATIC REGION 1 HDD 4,822 CDD 1,292

2

UNIT/SPY	75	76	77	78	79	80
1 Energy Consumption & PD	1,502,661	1,297,625	1,444,206	1,560,060	1,190,616	1,453,169
2 Thermal En. Cons & PD	916,612	674,587	808,756	936,036	607,215	519,650
3 Electrical En. Cons & PD	386,049	622,284	635,450	624,024	583,401	633,499
4 Resident Population & PD	9,002	8,883	8,484	7,275	7,748	7,262
5 Non-Resident Population & PD	2,354	3,075	2,925	2,823	2,825	2,283
6 Population Served** & PD	11,356	11,958	11,409	10,598	10,573	10,545
7 Effective Population*** & PD	9,982	9,908	9,459	8,476	8,690	8,262
8 En. Consumption/Pop Served & PD	125.7	108.5	133.7	147.2	122.6	122.8
9 En. Consumption/Pop & PD	150.5	130.9	152.7	179.0	137.0	159.6
10 Electric En. Consumption/Resident Population	65.1	70.1	74.9	80.3	75.3	81.8
11 Installed Air Cond Capacity & PD	4,762	7,180	5,152	5,815	5,833	5,888
12 Elec. Energy/Ton of Air Cond & PD	173.1	86.7	123.3	107.3	109.0	107.6
13 Real Property Inventory (RPI) & PD	2,756	6,836	6,912	6,962	6,943	6,921
14 RPI/Resident Population	242.8	773.1	731.1	801.2	801.2	801.2
15 Energy Consumption/GSF & PD	103,719	189,800	208,942	226,082	171,484	166,616
16 Thermal En. Consumption/GSF & PD	118,181	99,496	117,008	134,449	87,457	84,670
17 Electrical En. Consumption/GSF & PD	3,338	316,084	91,934	89,633	84,027	81,943
18 RPI by Category						
Training	453	571	433	433	411	414
Maintenance & Production	256	256	252	252	259	257
Research, Development & Testing					32	32
Storage	311	316	381	381	372	374
Other Covered Storage						
Hospital & Medical	129	141	147	144	143	143
Administration	324	319	414	407	410	415
Bachelor Housing	805	753	665	727	734	700
Community Fm. Hous.	623	657	753	755	753	761
Family Housing	3,911	3,687	3,689	3,659	3,652	3,651
Operational Bldg. Grp.	144	144	89	89	89	89
Utility Buildings	636	910	81	79	79	82
Other						

**PD is Percent Deviation from Base Year

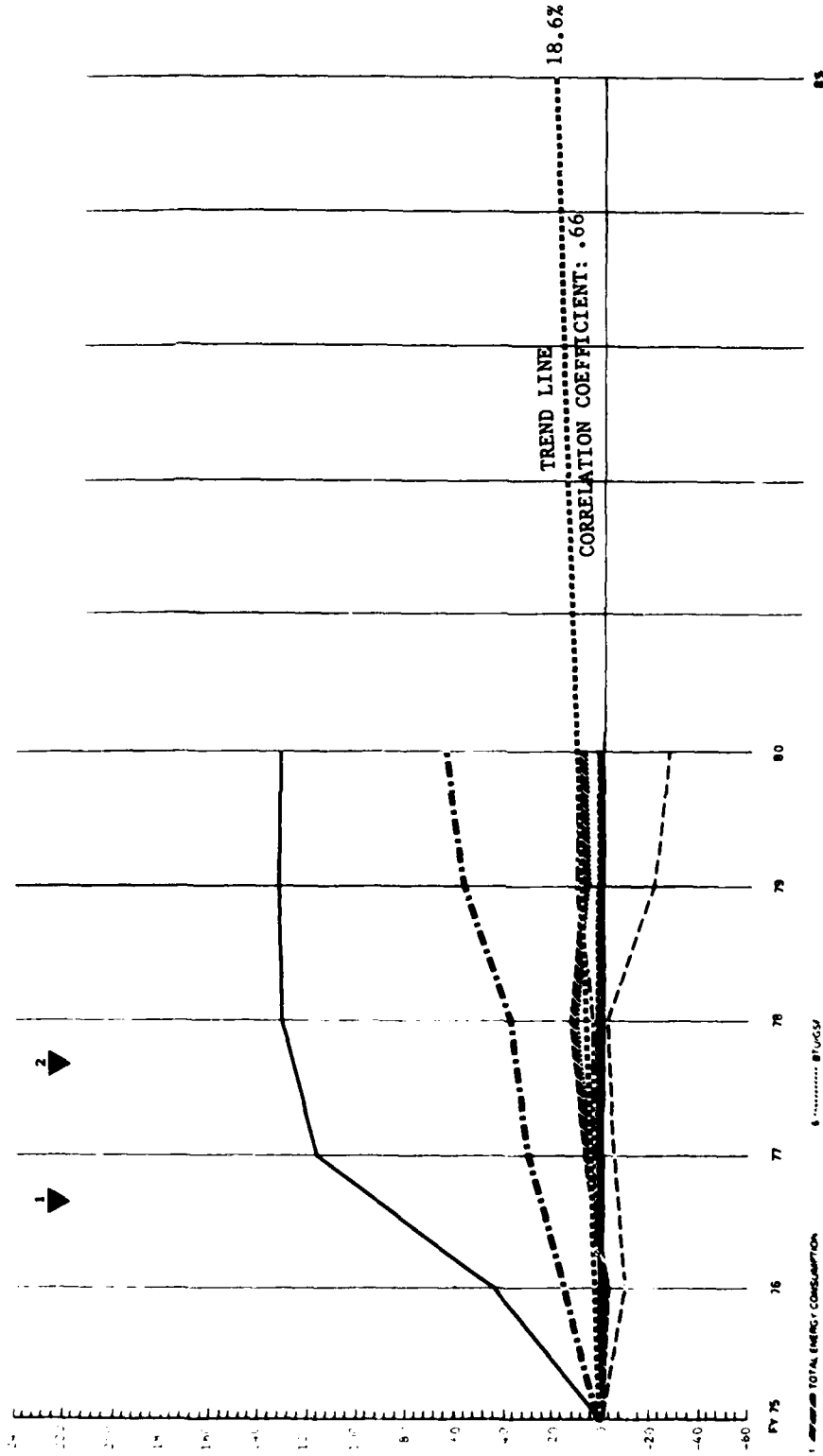
**Population Served is the total Resident & Non-Resident Population

**RPI Pop is Resident + 1/2 Non-Resident

1 FY 77 Family Housing, ECIP Improvements - \$179,418 - Completed (estimated) October 1978

2 FY 79 ECIP - Storm Windows & Weatherstripping - \$404,000 - Completed July 1980

Fort Lee



- 1 TOTAL ENERGY CONSUMPTION
- 2 THERMAL ENERGY CONSUMPTION
- 3 ELECTRIC ENERGY CONSUMPTION
- 4 EFFECTIVE POPULATION
- 5 INSTALLED AIR CONDITIONING CAPACITY
- 6 BUDGET

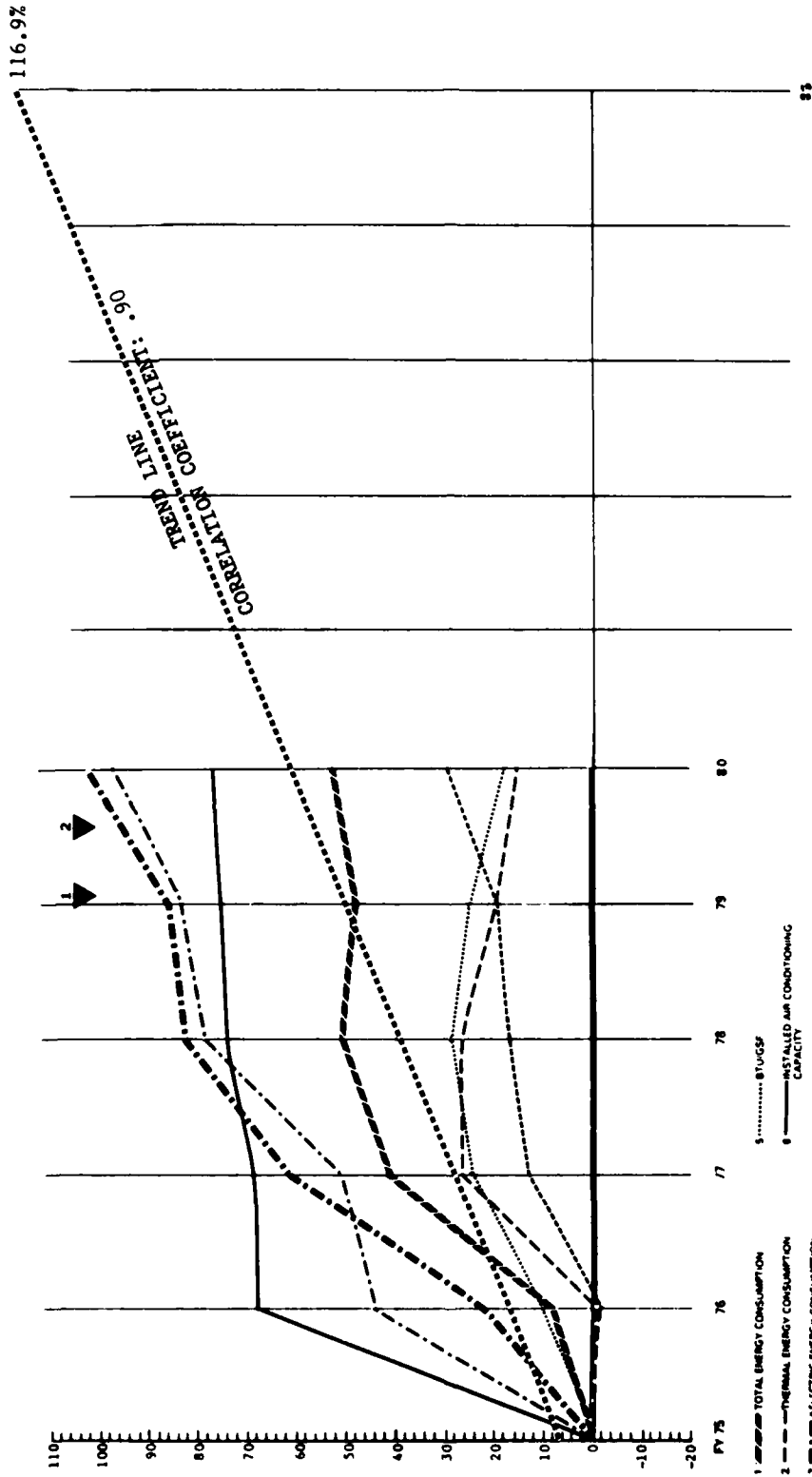
4/77 - ACTUAL BUDGET INVENTORY
 2/77 - BUILDING IMPROVEMENTS - \$417,000 Completed June 1977
 2/77 - BTP - Energy Monitoring/Control System - \$1,382,000 - Completed Oct. June 1978

U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION ET. LEE, VA MACOM_TRAJADS CLIMATIC REGION 4 HDD 1,232 CDD 1,323

UNITARY	76	77	78	79	80
1 Energy Consumption & PD	1,611,235	1,255,187	1,840,084	1,777,544	1,758,276
2 Thermal En Cons & PD	934,517	982,905	1,030,448	816,646	789,850
3 Electrical En Cons & PD	576,718	772,282	809,636	920,838	968,426
4 Population Population & PD	10,026	10,407	10,250	11,080	10,881
5 Non-Resident Population & PD	5,988	5,272	5,261	5,468	5,761
6 Population Services** & PD	15,832	16,144	16,013	16,548	16,604
7 Effective Population*** & PD	11,968	12,319	12,170	12,903	12,763
8 In Consumption/Pop Served & PD	104.8	108.7	116.9	105.0	105.9
9 In Consumption/Pop & PD	135.8	142.5	151.2	134.7	137.8
10 Electric En Consumption/Population	67.5	74.2	79.0	83.1	89.3
11 Installed Air Cond Capacity & PD	5,077	10,988	11,645	11,250	11,202
12 Elec Energy/Ton of Air Cond & PD	116.4	70.3	69.5	78.4	82.8
13 Fuel Property Inventory (MWh) & PD	7,595	7,654	7,689	7,684	7,642
14 RPE/Person Population	65	62	63	59	61
15 Energy Consumption/GSP & PD	216,136	229,216	239,313	227,908	230,081
16 Thermal En Consumption/GSP & PD	138,327	128,417	136,015	107,115	103,357
17 Electrical En Consumption/GSP & PD	77,809	100,899	103,298	120,793	126,724
18 kWh by Category	918	894	894	894	894
Training	273	267	245	245	245
Maintenance & Production	22	23	23	23	23
Research, Development & Training	441	11	11	11	11
Storage	460	11	11	11	11
Other Covered Storage	357	334	330	330	330
Hospital & Medical	531	564	573	579	584
Administration	1,973	2,015	2,071	2,119	2,171
Bachelor Housing	626	624	616	623	621
Community Facilities	2,150	2,150	2,150	2,150	2,150
Family Housing	260	260	260	260	260
Operational Buildings	44	39	39	39	39
Utility Buildings	76	24	24	24	24

**Population Served is the total Resident & Non-Resident Population
 ***Res Pop in Resident + 1/3 Non-Resident
 1976 FY 76 ECIP - Building Improvements - \$917,000 - Completed June 1977
 2076 FY 77 ECIP - Energy Monitoring/Control System - \$1,342,800 - Completed (estimated) June 1978

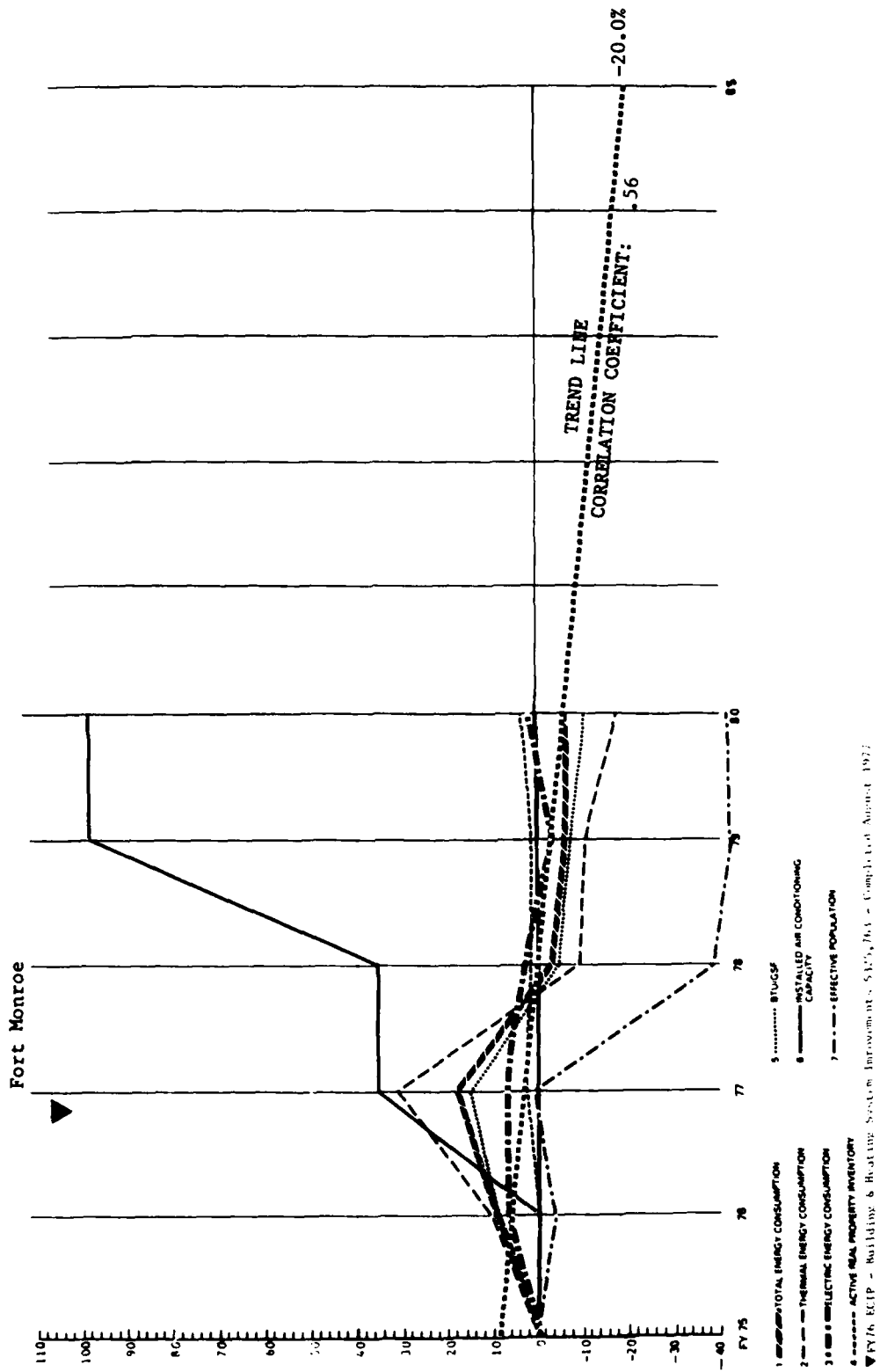
Fort McClellan



UNITARY	76	78	79	77	78	79	78	79	78	79	78	79
1 Energy Consumption @ PD	825,438	903,394	9,411	1,171,193	1,418,911	1,245,301	1,509,911	1,219,423	1,677,711	1,261,480	1,523,311	1,261,480
2 Thermal En. Conv. @ PD	670,435	458,765	-0.21	597,309	1,210,011	597,745	27,011	260,933	19,211	242,875	15,411	242,875
3 Electrical En. Conv. @ PD	356,934	433,629	22.21	573,884	61,711	667,556	82,411	8,068	6,511	718,625	1,072,511	718,625
4 Resident Population @ PD	5,211	7,116	36.51	7,636	8,132	8,132	8,132	8,132	8,132	8,243	8,243	8,243
5 Non-Resident Population @ PD	3,036	5,700	87.71	5,310	7,561	9,041	1,978	9,236	12,041	9,974	12,285	9,974
6 Population Served** @ PD	8,247	12,816	55.41	12,966	17,173	17,173	108,211	17,569	113,011	18,915	12,285	18,915
7 Electric Population*** @ PD	6,223	9,016	44.81	9,413	11,146	11,146	79,111	11,412	81,411	12,266	9,974	12,266
8 En. Consumption/Pop. Served @ PD	100.1	70.5	-29.61	90.3	9.81	72.5	-27.51	69.4	-30.71	66.7	-33.41	66.7
9 En. Consumption/Pop. Served @ PD	132.6	100.2	-24.41	124.4	10.31	111.7	-15.81	106.9	-19.41	102.8	-22.51	102.8
10 Electric En. Consumption/Pop. Served @ PD	68.1	61.0	-10.51	75.2	10.31	79.6	16.91	79.0	16.01	80.4	18.01	80.4
11 Incandescent Light @ PD	4,588	7,721	68.31	7,721	68.31	7,987	74.11	8,035	75.11	8,108	76.71	8,108
12 Elec. Energy/Team of Air Cond. @ PD	4,774	56.2	-27.41	74.3	3.91	81.1	4.81	82.0	5.91	88.6	14.61	88.6
13 Fuel Inventory @ PD	4,751	4,720	-0.71	5,373	1,321	5,549	50	5,615	49	6,166	29.81	6,166
14 Fuel Inventory @ PD	76	52	-31.41	57	23.21	224,419	29.21	213,172	23.01	204,586	17.81	204,586
15 Energy Consumption/GSP @ PD	173,737	191,397	10.21	217,896	12,211	107,721	8.81	99,899	0.91	88,035	11.11	88,035
16 Thermal En. Consumption/GSP @ PD	99,030	99,526	0.51	111,127	12,211	116,697	56.21	117,473	57.01	116,551	56.01	116,551
17 Electrical En. Consumption/GSP @ PD	74,707	91,870	23.01	106,769	42.91	116,697	56.21	117,473	57.01	116,551	56.01	116,551
18 1979 by Category	210	727	246.21	825	851	851	918	918	918	918	918	918
19 Heating	191	203	6.81	208	205	205	205	205	205	205	205	205
20 Maintenance & Production	667	665	-0.21	18	19	19	19	19	19	19	19	19
21 Research, Development & Testing	457	457	0.01	457	456	456	456	456	456	456	456	456
22 Storage	157	155	-1.51	158	182	182	182	182	182	182	182	182
23 Other Central Storage	282	374	33.01	381	362	362	362	362	362	362	362	362
24 Hospital & Medical	3,439	3,327	-3.21	3,740	3,761	3,761	3,761	3,761	3,761	3,761	3,761	3,761
25 Administration	469	470	0.21	585	693	693	693	693	693	693	693	693
26 Building Heating	863	865	0.21	855	851	851	851	851	851	851	851	851
27 Community Ice Sales	1,093	1,066	-2.71	1,066	1,071	1,071	1,071	1,071	1,071	1,071	1,071	1,071
28 Family Housing	48	45	-6.21	50	50	50	50	50	50	50	50	50
29 Operational Use Shop	12	12	0.01	12	12	12	12	12	12	12	12	12
30 Utility Buildings	4	4	0.01	4	4	4	4	4	4	4	4	4
31 Other	1	1	0.01	1	1	1	1	1	1	1	1	1

Population Served is the total Resident & Non-Resident Population *Pop in Percent Division from Base Year

1977 FT 76 ECIP - Heating & Cooling System/Improvements - \$1,982,000 - Completed October 1979
 20 FT 76 ECIP - Heating & Cooling System/Improvements - \$1,671,000 - Completed May 1980



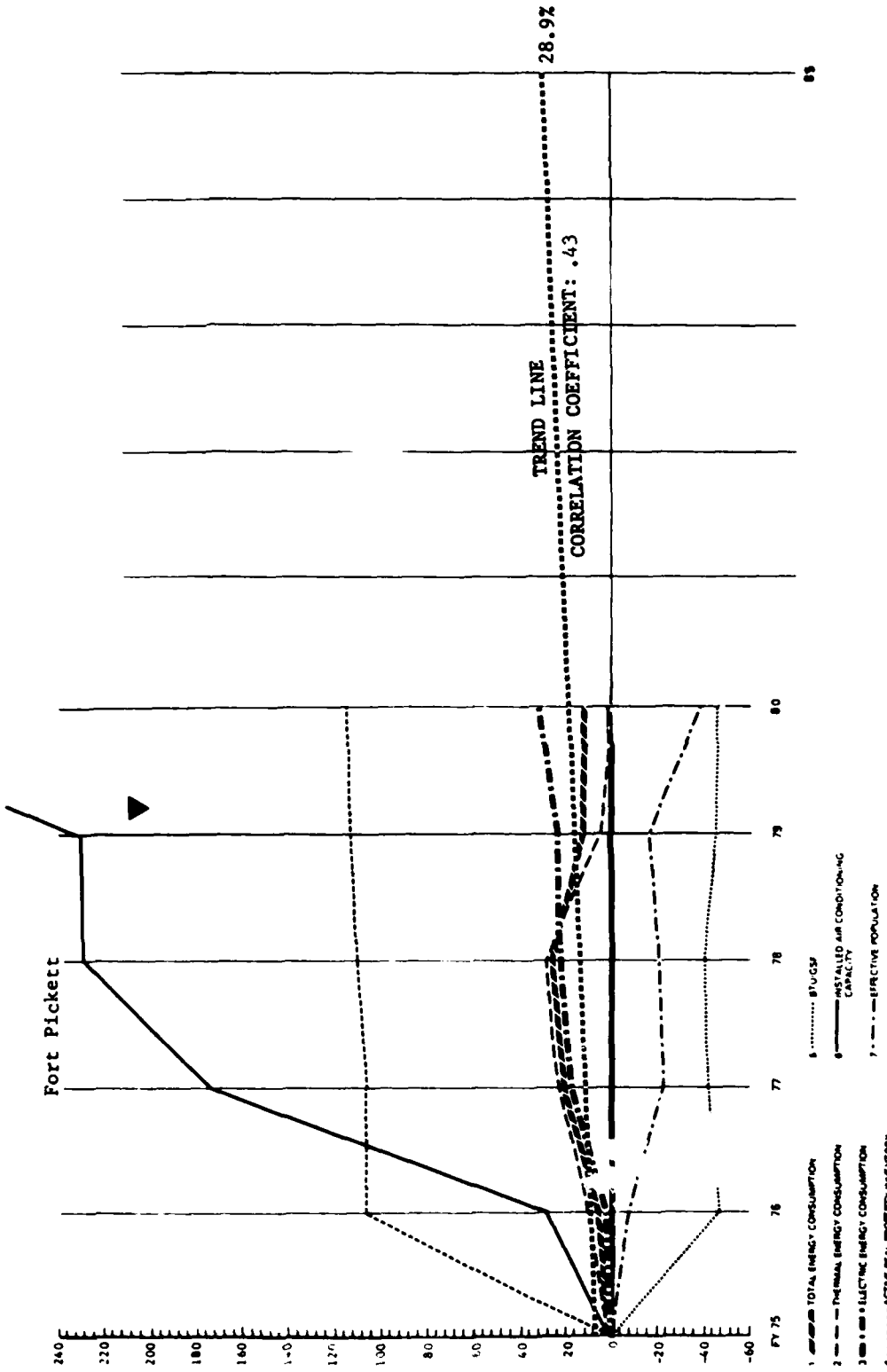
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - FT. MONROE, VA. MACOM TRADES CLIMATIC REGION 4 HDD1_623 CDD 1_539

UNITS/SPY	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
1 Energy Consumption @ PD	150.137	160.241	174.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6
2 Thermal En Cons @ PD	153.052	159.851	174.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6
3 Electrical En Cons @ PD	182.025	199.390	182.025	182.025	182.025	182.025	182.025	182.025	182.025	182.025	182.025	182.025	182.025	182.025	182.025	182.025	182.025
4 Residential Population @ PD	1.981	1.890	1.890	1.890	1.890	1.890	1.890	1.890	1.890	1.890	1.890	1.890	1.890	1.890	1.890	1.890	1.890
5 Non-Resident Population @ PD	2.560	2.554	2.554	2.554	2.554	2.554	2.554	2.554	2.554	2.554	2.554	2.554	2.554	2.554	2.554	2.554	2.554
6 Population Sample** @ PD	4.541	4.444	4.444	4.444	4.444	4.444	4.444	4.444	4.444	4.444	4.444	4.444	4.444	4.444	4.444	4.444	4.444
7 Electric Population*** @ PD	2.834	2.741	2.741	2.741	2.741	2.741	2.741	2.741	2.741	2.741	2.741	2.741	2.741	2.741	2.741	2.741	2.741
8 En Consumption/Pop Sample @ PD	74.9	83.1	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9
9 En Consumption/Pop @ PD	120.0	134.2	124.2	124.2	124.2	124.2	124.2	124.2	124.2	124.2	124.2	124.2	124.2	124.2	124.2	124.2	124.2
10 Electric En Consumption/Resident Population	94.4	102.3	111.7	111.7	111.7	111.7	111.7	111.7	111.7	111.7	111.7	111.7	111.7	111.7	111.7	111.7	111.7
11 Installed Air Cond Capacity @ PD	1.166	1.166	1.166	1.166	1.166	1.166	1.166	1.166	1.166	1.166	1.166	1.166	1.166	1.166	1.166	1.166	1.166
12 Electric En Consumption/Installed Air Cond Capacity	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922
13 Heat Priority Inventory @ PD	1.600	1.600	1.600	1.600	1.600	1.600	1.600	1.600	1.600	1.600	1.600	1.600	1.600	1.600	1.600	1.600	1.600
14 Heat Priority Inventory @ PD	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922	1.922
15 Energy Consumption/GSF @ PD	176.970	192.113	203.372	203.372	203.372	203.372	203.372	203.372	203.372	203.372	203.372	203.372	203.372	203.372	203.372	203.372	203.372
16 Thermal En Consumption/GSF @ PD	79.637	88.372	111.071	111.071	111.071	111.071	111.071	111.071	111.071	111.071	111.071	111.071	111.071	111.071	111.071	111.071	111.071
17 Thermal En Consumption/GSF @ PD	97.333	103.741	101.766	101.766	101.766	101.766	101.766	101.766	101.766	101.766	101.766	101.766	101.766	101.766	101.766	101.766	101.766
18 kWh by Category	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Totals	161	161	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151
Manufacture & Production	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Research, Development & Testing	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111
Storage	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Other Covered Storage	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Hospital & Medical	385	385	385	385	385	385	385	385	385	385	385	385	385	385	385	385	385
Administrative	203	203	203	203	203	203	203	203	203	203	203	203	203	203	203	203	203
Bachelor Housing	268	268	268	268	268	268	268	268	268	268	268	268	268	268	268	268	268
Community Fire Arms	647	647	647	647	647	647	647	647	647	647	647	647	647	647	647	647	647
Family Housing	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
Operational Bus Stops	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Utility Buildings	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Other	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

PD @ Percent Deviation from Base Year
 *Population Served is the total Resident & Non-Resident Population
 **En Pop @ Resident + 1/3 Non-Resident
 ***En Pop @ Resident + 1/3 Non-Resident

FY 76 EICIP - Building & Heating System Improvements \$325,763 - Completed August 1977

REMARKS



UNIT/SPY	76	78	79	77	78	79	80
1 Energy Consumption & PD	156,134	167,064	188,862	21,001	196,296	173,100	173,149
2 Thermal En Cons & PD	91,681	103,580	115,209	21,001	119,241	98,168	97,100
3 Electrical En Cons & PD	62,453	63,484	73,653	17,991	76,555	77,132	81,049
4 Radiation En Cons & PD	1,622	1,327	1,039	1,359	1,096	1,116	742
5 Non Resident Population & PD	609	1,071	1,059	73,911	1,025	1,145	1,140
6 Population Served** & PD	2,231	2,398	2,098	1,601	2,121	2,259	1,852
7 Effective Population*** & PD	1,825	1,686	1,392	1,237	1,438	1,496	1,112
8 Electric Population**** & PD	70,000	69,700	80,000	28,600	92,500	77,600	77,600
9 En Consumption/Pop Served & PD	85.2	92.2	135.2	158.6	136.5	117.2	137.0
10 Electric En Consumption/Pop & PD	38.5	47.8	70.9	84.1	49.8	69.2	79.8
11 Incidental Air Cond Capacity & PD	88	113	240	173	289	289	410
12 Elec Energy/Ton of Air Cond & PD	709.7	561.8	306.9	156.7	266.9	266.9	197.7
13 Fuel Property Inventory BHP & PD	1,393	2,859	2,859	1105.2	2,938	2,965	2,971
14 Inefficient Population	76	1,701	2,051	1169.1	2,061	1,961	2,67
15 Energy Consumption/GSP & PD	112,085	58,436	66,060	1,401	66,813	59,123	58,280
16 Thermal En Consumption/GSP & PD	67,251	36,229	40,297	1,401	40,256	31,109	31,000
17 Electrical En Consumption/GSP & PD	44,834	22,205	25,763	1,401	26,557	28,014	27,280
18 BHP by Category	311	188	188		313	255	355
19 Heating	227	308	308		312	314	314
20 Microclimate & Production							
21 Research, Development & Testing							
22 Storage							
23 Other General Storage							
24 Industrial							
25 Administration							
26 Business/Industry							
27 Community Facilities							
28 Family Housing							
29 Operational Bus Stops							
30 Utility Buildings							
31 Other							

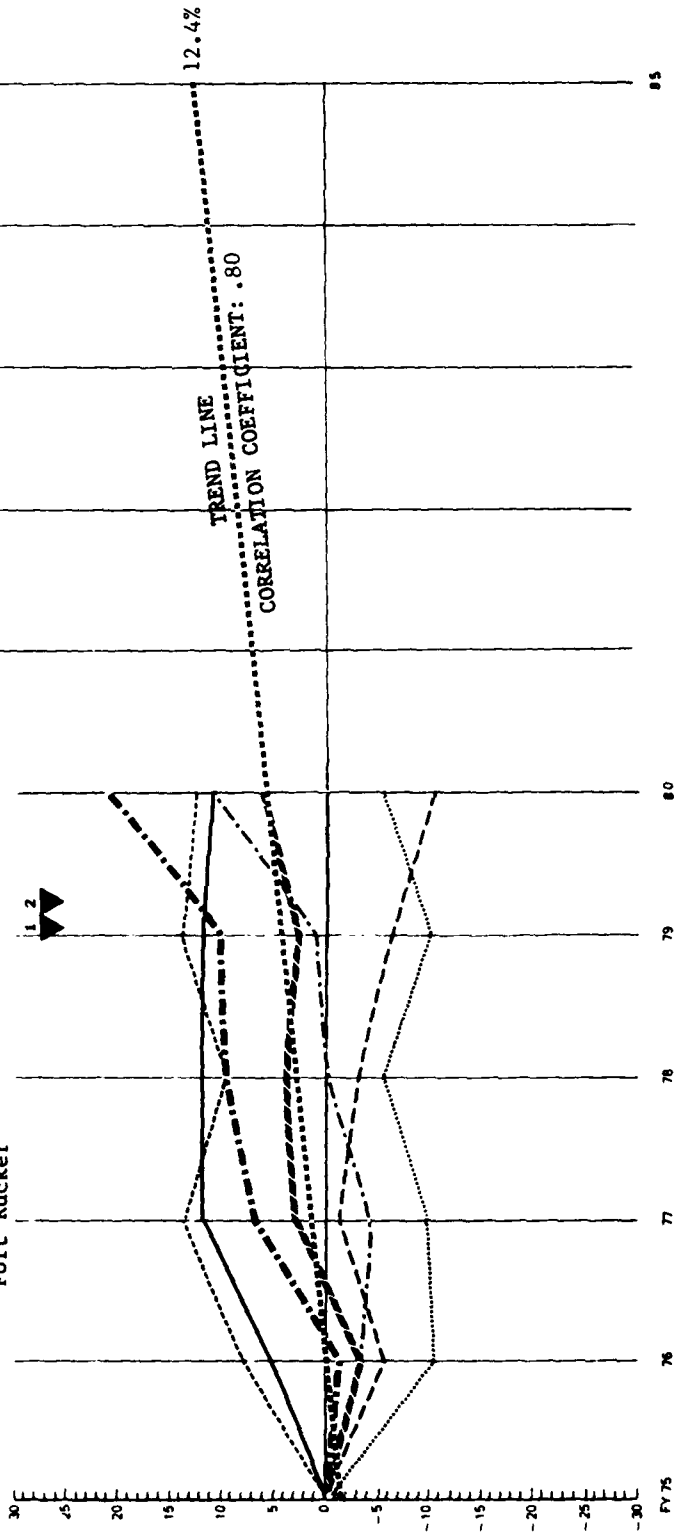
- 1 Energy Consumption & PD
- 2 Thermal En Cons & PD
- 3 Electrical En Cons & PD
- 4 Radiation En Cons & PD
- 5 Non Resident Population & PD
- 6 Population Served** & PD
- 7 Effective Population*** & PD
- 8 Electric Population**** & PD
- 9 En Consumption/Pop Served & PD
- 10 Electric En Consumption/Pop & PD
- 11 Incidental Air Cond Capacity & PD
- 12 Elec Energy/Ton of Air Cond & PD
- 13 Fuel Property Inventory BHP & PD
- 14 Inefficient Population
- 15 Energy Consumption/GSP & PD
- 16 Thermal En Consumption/GSP & PD
- 17 Electrical En Consumption/GSP & PD
- 18 BHP by Category
- 19 Heating
- 20 Microclimate & Production
- 21 Research, Development & Testing
- 22 Storage
- 23 Other General Storage
- 24 Industrial
- 25 Administration
- 26 Business/Industry
- 27 Community Facilities
- 28 Family Housing
- 29 Operational Bus Stops
- 30 Utility Buildings
- 31 Other

PD at Percent Deviation from Base Year *Population Served is one total Resident & Non-Resident Population ****ESP Pop & Resident + 10 Non-Resident

W79 ECIP - Insulation & Heating System Alterations - \$239,000 - Completed December 1979

REMARKS

Fort Rucker



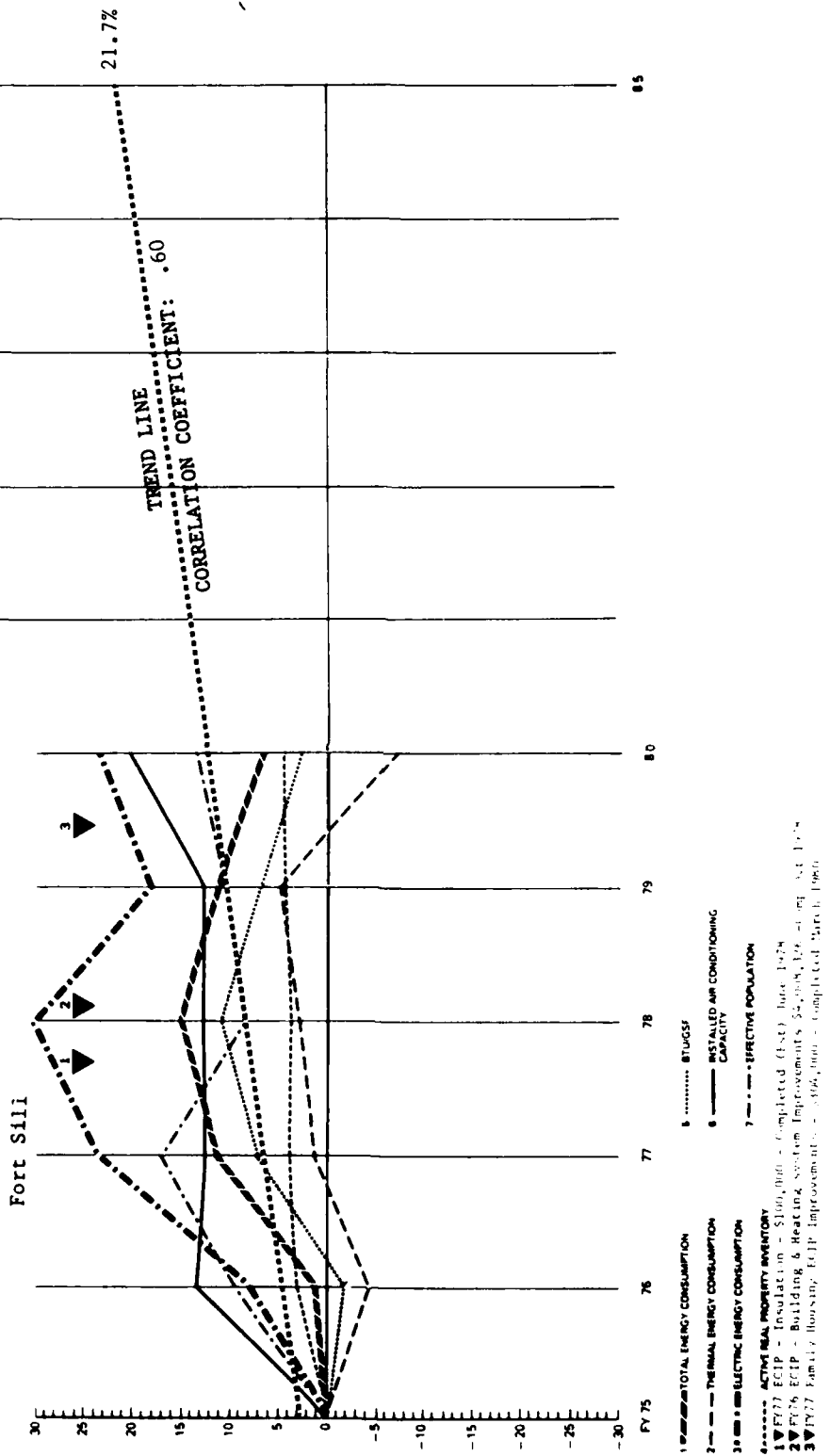
- 1 - TOTAL ENERGY CONSUMPTION
 - 2 - THERMAL ENERGY CONSUMPTION
 - 3 - ELECTRIC ENERGY CONSUMPTION
 - 4 - ACTIVE REAL PROPERTY INVENTORY
 - 5 - STUGS
 - 6 - INSTALLED AIR CONDITIONING CAPACITY
 - 7 - EFFECTIVE POPULATION
- 1 - FY 76 EICP - Insulate Buildings - 512,000 - Completed October 1979
 2 - FY 78 EICP - Energy Control System - 31,231,000 - Completed December 1979

U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - FT. RUCKER, ALA. - MACOM - 72ADDC - CLIMATIC REGION 6 - HDD 1,968 CDD 2,386

UNITS	76	77	78	79	80
1 Energy Consumption @ PD	1,876,505	1,996,469	2,010,497	1,988,947	2,063,768
2 Thermal En Conv @ PD	863,193	894,412	884,619	855,248	816,200
3 Electrical En Conv @ PD	1,013,312	1,098,057	1,125,878	1,133,699	1,247,568
4 Non-Peak Population @ PD	10,845	10,809	11,384	11,548	12,209
5 Peak Population @ PD	9,451	9,468	9,577	9,430	10,132
6 Population @ PD	20,598	20,277	20,961	20,970	22,341
7 Population @ PD	14,579	14,096	14,960	14,872	16,120
8 En Conv @ PD	92.5	96.6	96.1	94.8	90.0
9 En Conv @ PD	113.3	131.1	138.1	135.4	128.0
10 En Conv @ PD	90.6	91.4	98.9	98.2	98.2
11 En Conv @ PD	13,434	14,110	15,052	15,044	16,879
12 En Conv @ PD	76.6	72.9	74.8	75.4	83.8
13 En Conv @ PD	7,203	8,202	7,870	8,205	8,101
14 En Conv @ PD	55	59	54	59	50.3
15 En Conv @ PD	243,412	243,412	255,463	242,407	254,755
16 En Conv @ PD	111,050	109,536	112,496	104,235	100,752
17 En Conv @ PD	130,463	133,876	143,059	138,172	154,002
18 En Conv @ PD	203	263	211	281	856
19 En Conv @ PD	269	838	853	848	860
20 En Conv @ PD	51	56	56	51	51
21 En Conv @ PD	132	14	14	14	14
22 En Conv @ PD	561	559	559	636	220
23 En Conv @ PD	315	272	265	311	335
24 En Conv @ PD	319	388	352	371	585
25 En Conv @ PD	2,143	2,168	2,322	2,088	1,897
26 En Conv @ PD	630	674	652	686	812
27 En Conv @ PD	2,074	2,074	2,075	2,082	2,076
28 En Conv @ PD	108	149	120	215	163
29 En Conv @ PD	67	56	59	67	67
30 En Conv @ PD	82	82	55	74	85

PD in Percent Deviation from Base Year
 *Population Saved in the Year
 **Population in Peak
 ***En Conv @ PD

1 WY 76 ECIP - Inmate Buildings - \$112,000 - Completed October 1979
 2 WY 78 ECIP - Energy Control System - \$1,231,000 - Completed December 1979

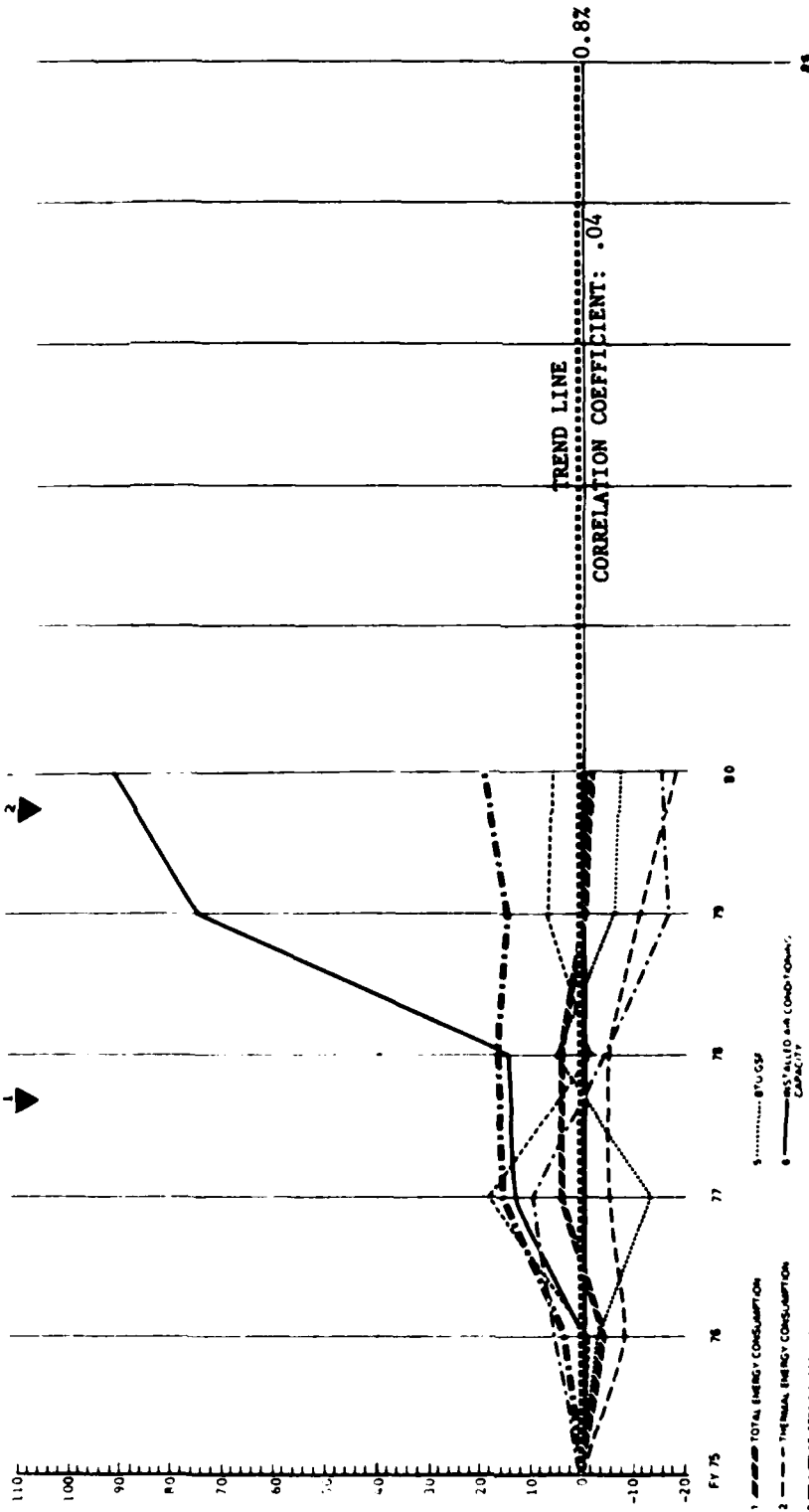


U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - ET. SILL, OK MACOM TRAINOP CLIMATIC REGION 7 HDD 3,167 CDD 2,217

Unit/Category	75	76	77	78	79	80
1 Energy Consumption & PD	2,650,157	1,111,111	2,800,527	1,111,111	3,000,198	1,111,111
2 Thermal En. Cons & PD	1,416,424	1,111,111	1,551,274	1,111,111	1,270,686	1,111,111
3 Electrical En. Cons & PD	1,233,733	1,111,111	1,249,253	1,111,111	1,729,512	1,111,111
4 Non-Renewable Population & PD	15,285	13,891	19,586	12,511	17,997	14,701
5 Non-Renewable Population	11,584	12,200	12,842	12,842	12,022	11,211
6 Population Served** & PD	29,129	30,681	32,068	32,068	30,019	30,385
7 Effective Population*** & PD	20,100	22,215	24,247	24,247	22,004	22,401
8 En. Consumption/Pop Served & PD	57.0	56.0	57.5	57.5	56.0	56.0
9 En. Consumption/Pop Served	128.6	128.6	127.2	127.2	136.2	136.2
10 Electric En. Consumption/Pop Served	74.4	74.4	74.1	74.1	85.1	85.1
11 Installed Air Cond Capacity & PD	16,820	19,112	18,924	18,924	18,987	18,987
12 Elec. Energy/ton of Air Cond & PD	69.9	66.3	66.7	66.7	60.7	60.7
13 Real Property Inventory (RPI) & PD	11,180	13,578	13,672	13,672	13,655	13,721
14 RPI/Pop. Population	65	61	58	58	62	61
15 Energy Consumption/GSP & PD	198,141	194,444	212,299	212,299	219,802	211,104
16 Thermal En. Consumption/GSP & PD	108,978	101,111	106,159	106,159	107,203	109,878
17 Electrical En. Consumption/GSP & PD	89,163	93,333	106,140	106,140	112,599	101,926
18 RPI by Category	1,472	1,464	1,461	1,461	1,282	1,274
19 Non-Renewable Population	1,165	1,111	1,160	1,160	1,186	1,185
20 Research, Development & Testing	841	811	811	811	84	83
21 Storage	128	128	128	128	286	286
22 Other General Storage	738	737	737	737	291	283
23 Hospitals & Medical Administration	4,538	4,372	4,813	4,777	782	749
24 Bachelor Housing	1,082	1,170	1,233	1,219	1,187	1,189
25 Community Facilities	2,500	2,500	2,509	2,515	2,517	2,519
26 Family Housing	168	168	168	168	156	128
27 Operational Storage	65	65	65	65	69	95
28 Utility Buildings	11	11	11	11	11	11
29 Other	105	105	105	105	91	95

**Population Served is the total Resident & Non-Resident Population
 ***RPI by Category
 1 FY 77 ECIP - Insulation - \$170,000 - Completed (estimated) June 1978
 2 FY 76 ECIP - Building and Heating System Improvements \$4,008,126 - Completed October 1974
 3 FY 77 Family Housing ECIP Improvements - 104,000 - Completed March 1980

Fort Leonard Wood



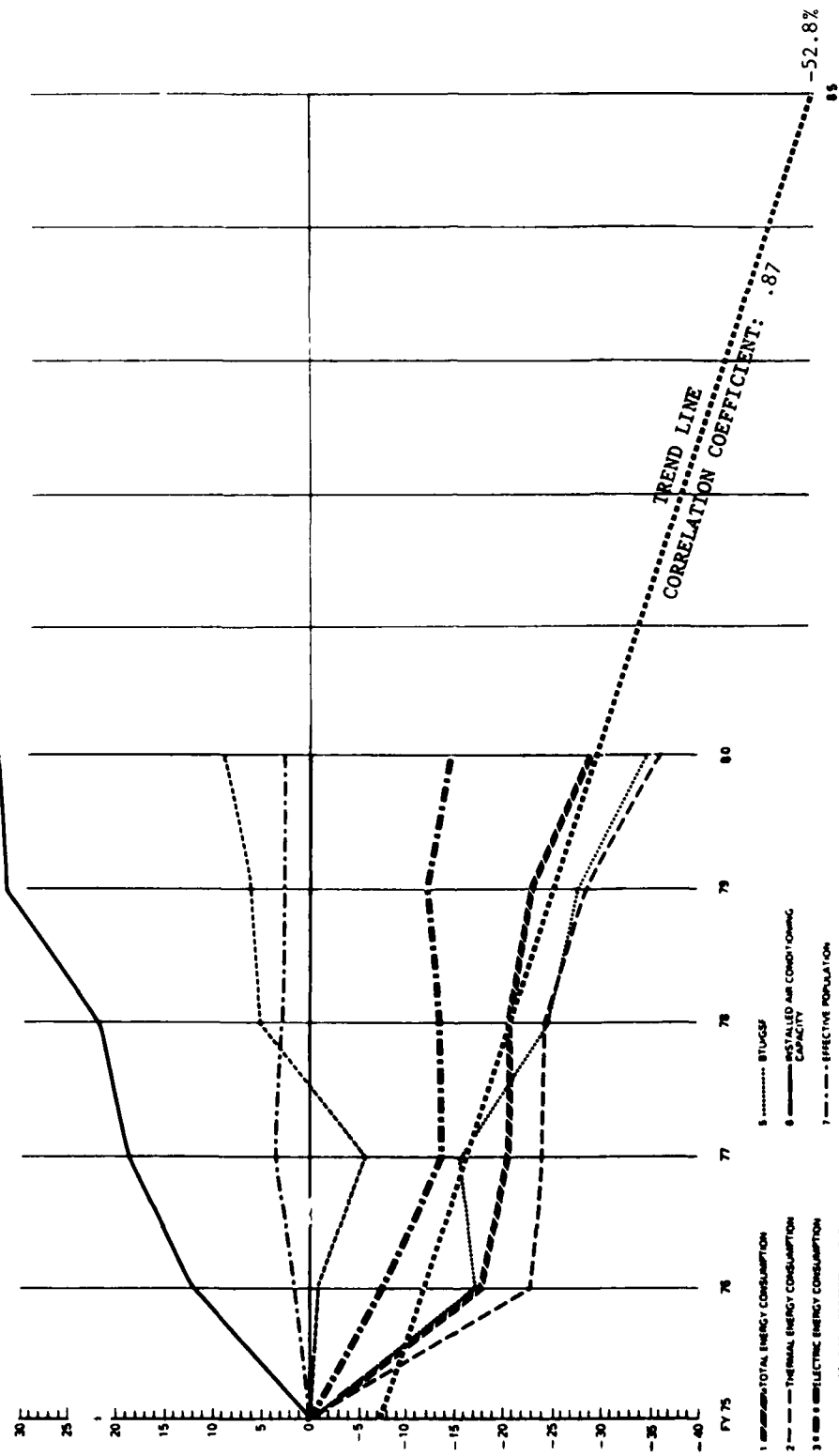
UNITARY	%	W	M	T	H	R	W	R	W	R	W	R	W	R
WWTU	2,816,261	2,715,270	1-3-61	2,916,603	1-3-61	2,933,550	1-4-71	2,811,007	1-0-71	2,766,246	1-1-81			
WWTU	1,633,490	1,493,377	1-8-61	1,545,656	1-5-61	1,558,952	1-4-91	1,462,868	1-10-61	1,366,625	1-17-67			
WWTU	1,182,871	1,221,853	3-1-1	1,170,944	1-15-91	1,178,298	1-16-51	1,330,339	1-21-21	1,419,924	1-20-67			
PEOPLE	25,849	27,185	1-5-21	28,378	1-9-51	25,498	1-1-91	22,133	1-15-50	22,595	1-12-61			
PEOPLE	5,658	5,974	1-9-11	6,378	1-16-71	5,354	1-5-21	2,351	1-56-91	2,681	1-50-81			
PEOPLE	11,207	11,119	1-5-81	11,678	1-10-81	11,852	1-4-61	12,466	1-21-91	12,489	1-19-11			
PEOPLE	21,648	19,170	1-5-41	10,411	1-10-01	26,282	1-5-01	22,897	1-17-21	23,489	1-19-11			
WWTUCAF	89,9	61,9	1-8-67	84,1	1-6-51	81,6	1-9-21	115,0	1-21-91	109,4	1-21-71			
WWTUCAF	101,8	93,1	1-8-61	95,9	1-5-81	111,6	1-9-61	122,9	1-20-71	117,8	1-15-71			
WWTUCAF	43,8	44,9	1-1-81	48,4	1-5-81	56,3	1-22-91	61,3	1-33-41	84,8	1-37-11			
TONES	9,455	9,455	1-0-11	10,178	1-11-81	10,839	1-14-71	16,562	1-25-31	18,099	1-31-61			
WWTUCAF	125,2	129,4	1-3-11	127,6	1-2-81	127,3	1-1-61	12,840	1-6-41	12,466	1-5-81			
WWTUCAF	11,781	11,738	1-0-41	14,038	1-19-11	11,626	1-1-31	12,540	1-6-41	12,466	1-5-81			
WWTUCAF	41	41	1-0-51	41	1-0-51	41	1-1-91	41	1-28-61	41	1-24-67			
WWTUCAF	239,019	231,120	1-3-21	207,786	1-11-11	257,241	1-5-51	274,339	1-6-11	271,892	1-7-21			
WWTUCAF	138,631	127,226	1-8-21	110,127	1-20-41	133,668	1-3-61	116,856	1-15-91	108,007	1-22-11			
WWTUCAF	100,388	106,094	1-1-71	97,659	1-2-71	118,553	1-18-11	107,883	1-7-21	113,885	1-13-41			
WWTUCAF	87,9	961	1-0-71	1,073	1-1-09	1,109	1-1-66	1,166	1-1-66	1,256	1-2-64			
WWTUCAF	51,9	525	1-5-26	526	1-5-26	522	1-5-26	532	1-5-26	536	1-5-26			
WWTUCAF	811	579	1-8	579	1-8	579	1-8	579	1-8	579	1-8			
WWTUCAF	218	218	BASE	218	BASE	218	BASE	218	BASE	218	BASE			
WWTUCAF	316	316	BASE	316	BASE	316	BASE	316	BASE	316	BASE			
WWTUCAF	4,081	4,029	BASE	4,029	BASE	4,029	BASE	4,029	BASE	4,029	BASE			
WWTUCAF	1,084	1,084	BASE	1,084	BASE	1,084	BASE	1,084	BASE	1,084	BASE			
WWTUCAF	1,554	1,554	BASE	1,554	BASE	1,554	BASE	1,554	BASE	1,554	BASE			
WWTUCAF	110	100	BASE	100	BASE	100	BASE	100	BASE	100	BASE			
WWTUCAF	71	100	BASE	100	BASE	100	BASE	100	BASE	100	BASE			

1 Energy Consumption @ PD
 2 Thermal En Cons @ PD
 3 Electrical En Cons @ PD
 4 Resident Population @ PD
 5 Non Resident Population @ PD
 6 Population Survey - @ PD
 7 Effective Population - @ PD
 8 En Consumption/Pop Served @ PD
 9 En Consumption/Res Pop @ PD
 10 Electric En Consumption/Resident Population
 11 Installed Air Cond Capacity @ PD
 12 Heat Energy/En of Air Cond @ PD
 13 Heat Property Inventory @ PD
 14 In-Place Population
 15 Energy Consumption/GSF @ PD
 16 Thermal En Consumption/GSF @ PD
 17 Electrical En Consumption/GSF @ PD
 18 kWh by Category

**Populations Served in and under Resident & Non-Resident Population
 ***En Pop in Resident + 1/3 Non-Resident

REMARKS 1 FY 77 ECIP - Insulation, Storms, Boiler Plant Alterations and Energy Monitoring/Control System - \$5,289,722 - Completed (estimated) June 1978
 2 FY 77 Family Housing ECIP Improvements - \$1,055,000 - Completed (estimated) May 1980

DARCOM Consolidation



NOTE: THE EFFECTIVE POPULATION PLOT FOR FY 79 WAS AVERAGED BECAUSE OF REPORTING ERROR BY SELF-REPORTING. AVOID DISTORTION CAUSED BY REPORTING ERROR BY SELF-REPORTING AND IN FY 79.

U.S. Army ANALYSIS OF ENERGY CONSUMPTION

CONOLIDATION MACOM DARCUM

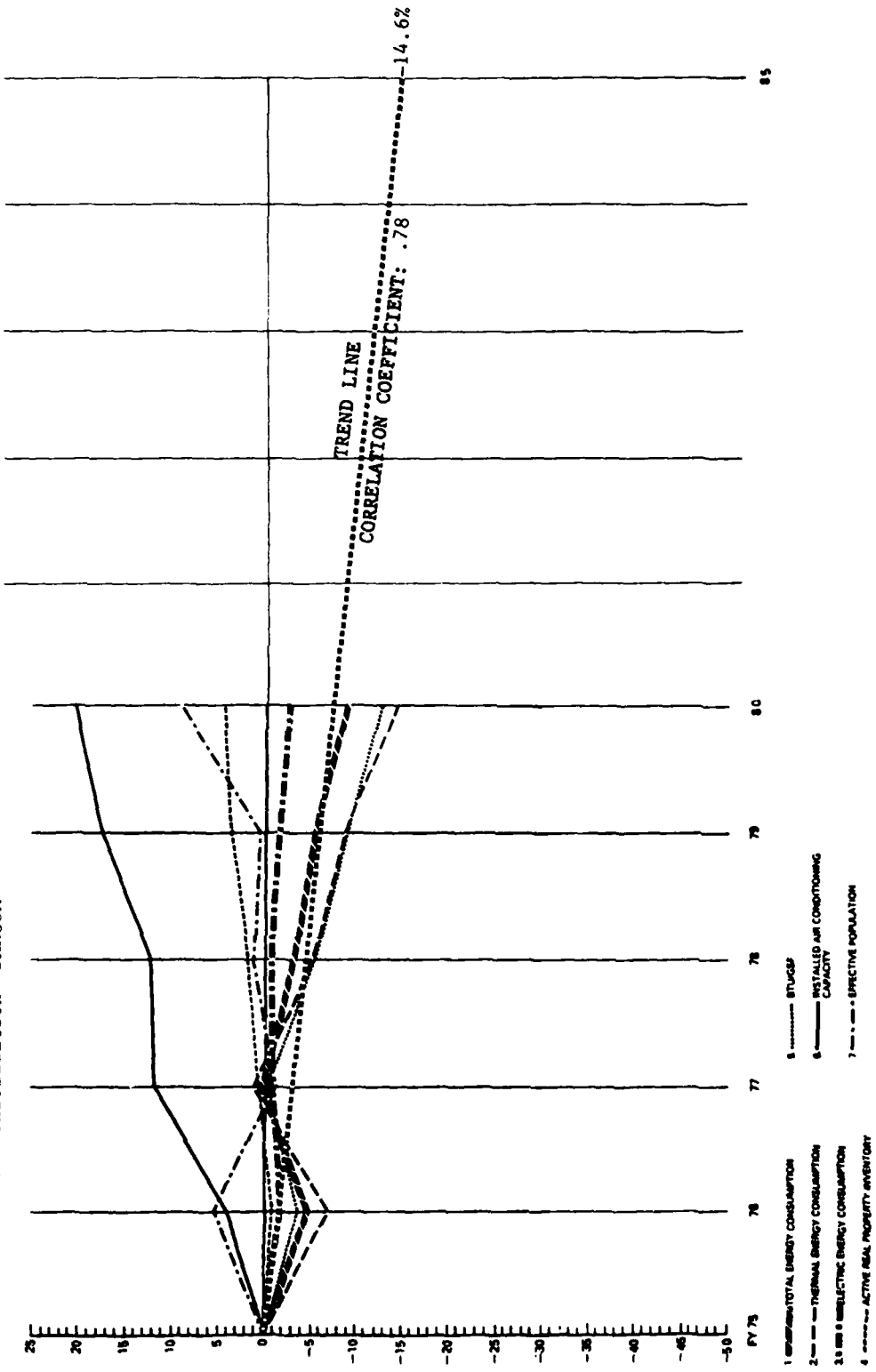
UNITS/TYPE	INS	IS	IS	IS	IS	IS	IS	IS	IS	IS
WRTU	58,902,087	68,404,949	-17.8	66,773,325	1,207.1	45,369,353	1,233.0	41,857,628	1,238.9	
WRTU	39,304,720	30,298,477	-22.9	29,874,660	-1.4	29,761,692	-0.4	25,132,808	-16.1	
WRTU	19,597,167	18,106,212	-7.6	16,886,983	-13.8	16,262,233	-3.5	16,724,820	1.7	
PEOPLE	36,789	37,902	3.0	42,740	14.5	38,222	-11.1	53,485	39.1	
PEOPLE	152,110	152,817	0.5	143,209	-6.0	155,731	1.7	148,479	-4.9	
PEOPLE	183,132	180,719	-1.3	185,958	1.7	193,953	4.3	188,641	-2.8	
PEOPLE	87,379	88,848	1.4	90,585	1.9	90,132	-0.4	89,655	-0.5	
WRTUCAP	311,4	333,9	7.3	311,5	-0.3	340,2	9.6	215,3	-35.2	
WRTUCAP	672,6	542,8	-19.0	516,8	-23.2	518,4	0.3	422,5	-17.2	
WRTUCAP	523,7	477,7	-9.1	395,1	-25.8	543,2	38.7	309,0	-42.0	
TONS	114,801	128,613	12.0	136,136	9.1	139,667	1.7	150,520	7.8	
WRTUCAP	170,7	197,824	115.8	188,032	-5.0	209,813	11.6	215,373	2.6	
WRTUCAP	2,28	2,231	-2.2	2,08	-6.7	2,32	10.1	1,97	-13.6	
WRTUCAP	294,984	244,685	-17.1	248,696	1.6	222,690	-9.2	214,243	-27.4	
WRTUCAP	184,840	153,158	-17.2	158,881	-3.3	141,866	-12.3	132,943	-6.3	
WRTUCAP	81,144	91,577	11.7	89,815	-1.9	80,844	-9.7	81,102	0.3	
WRTUCAP	100,000	100,000	0.0	100,000	0.0	100,000	0.0	100,000	0.0	
WRTUCAP	100,000	100,000	0.0	100,000	0.0	100,000	0.0	100,000	0.0	
WRTUCAP	100,000	100,000	0.0	100,000	0.0	100,000	0.0	100,000	0.0	
WRTUCAP	100,000	100,000	0.0	100,000	0.0	100,000	0.0	100,000	0.0	
WRTUCAP	100,000	100,000	0.0	100,000	0.0	100,000	0.0	100,000	0.0	
WRTUCAP	100,000	100,000	0.0	100,000	0.0	100,000	0.0	100,000	0.0	
WRTUCAP	100,000	100,000	0.0	100,000	0.0	100,000	0.0	100,000	0.0	
WRTUCAP	100,000	100,000	0.0	100,000	0.0	100,000	0.0	100,000	0.0	
WRTUCAP	100,000	100,000	0.0	100,000	0.0	100,000	0.0	100,000	0.0	

1 Energy Consumption @ PD
 2 Thermal En Conv @ PD
 3 Electrical En Conv @ PD
 4 Electrical Population @ PD
 5 Non-Restroom Population @ PD
 6 Restroom Population @ PD
 7 Restroom Population @ PD
 8 En Conv/Population @ PD
 9 En Conv/Population @ PD
 10 Electrical En Conv/Population @ PD
 11 Installed Air Cond Capacity @ PD
 12 Rec Energy/Con of Air Cond @ PD
 13 Rec Property Inventory @ PD
 14 Installation Population
 15 Energy Consumption/GSP @ PD
 16 Thermal En Conv/GSP @ PD
 17 Electrical En Conv/GSP @ PD
 18 HP by Category
 Training
 Maintenance & Production
 Research, Development & Testing
 Storage
 Other Contract Storage
 Medical & Isolation
 Administration
 Student Housing
 Community For Bases
 Family Housing
 Operational Bldg Storage
 Utility Buildings
 Other

*PD is Percent Deviation from Base Year **Population Based on the Used Population & Non-Resident Population ***HP by Population + HP Non-Resident

REMARKS

DEPOT Consolidation- DARCOM



U.S. Army ANALYSIS OF ENERGY CONSUMPTION

INSTALLATION DEPT. CONSOLIDATION MACOM DABCOM

UNITS/FY	75	76	77	78	79	80
1 Energy Consumption & PD	8,646,146	9,259,671	8,662,902	8,381,209	8,180,486	7,848,125
2 Thermal En Cons & PD	4,692,025	4,476,151	4,234,859	4,434,683	4,327,236	4,026,450
3 Electrical En Cons & PD	3,954,122	4,783,520	4,428,043	3,946,526	3,853,250	3,821,675
4 Non-Resident Population & PD	3,350	1,057	3,419	3,728	1,806	3,816
5 Non-Resident Population** & PD	43,248	43,643	43,678	43,240	42,681	47,163
6 Population Servant*** & PD	46,758	49,302	46,797	46,966	46,489	50,979
7 Effective Population**** & PD	17,926	19,873	17,712	18,119	18,034	19,537
8 En Consumption/Pop Servant & PD	186.9	167.5	187.2	178.5	176.0	154.3
9 En Consumption/Pop & PD	282.3	317.6	289.4	262.1	253.6	202.7
10 Electric En Consumption/Resident Population	1,126.0	1,061.1	1,146.0	1,032.5	1,020.3	1,006.7
11 Insulated Air Cond Capacity & PD	18,023	18,712	20,149	20,242	21,215	21,717
12 Air Emeg/Temp of Air Cond & PD	219.3	207.5	196.5	193.7	183.0	176.9
13 Heat Potency Inventory (MWh) & PD	75,390	74,113	75,710	76,831	77,826	78,694
14 Inefficiency Population	4.31	4.96	4.27	4.24	4.32	4.03
15 Energy Consumption/GSF & PD	115,688	110,522	114,488	109,086	104,980	99,986
16 Thermal En Consumption/GSF & PD	62,264	58,360	62,737	58,065	55,156	51,166
17 Electrical En Consumption/GSF & PD	53,424	52,162	51,751	51,021	49,824	48,818
18 kWh by Category						
Training						
Maintenance & Production						
Research, Development & Testing						
Storage						
Other General Storage						
Hospital & Medical						
Administration						
Bachelor Housing						
Community Fair Hous						
Family Housing						
Quartermaster Builings						
Utility Buildings						
Other						

**PD is Plan and Deviation from Base Year

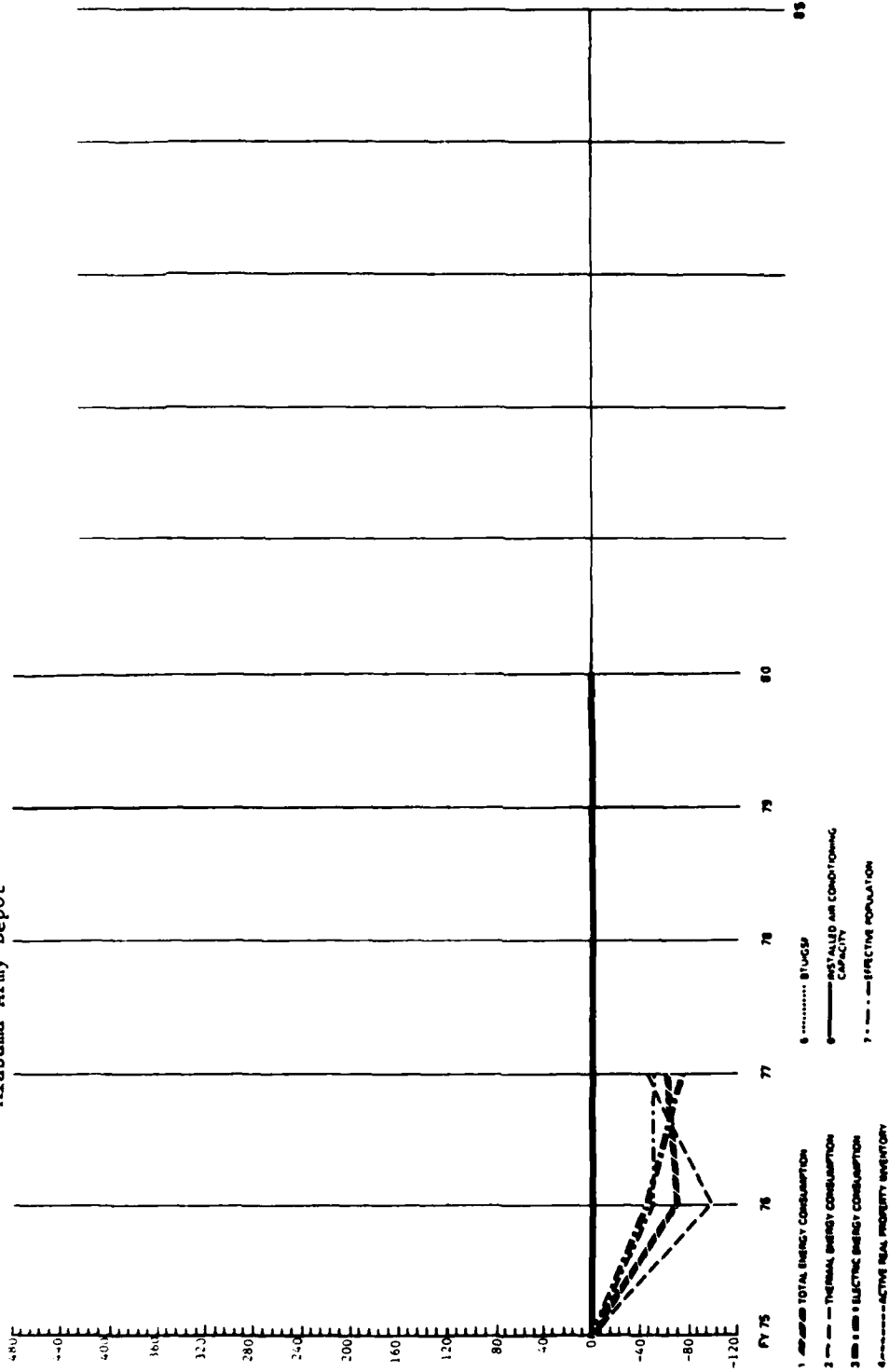
***Population Servant is the total Resident & Non-Resident Population

****kWh Pop is Resident + 1/3 Non-Resident

CORPUS CHRISTIE AD DATA WAS NOT REPORTED FOR FY 75. FY 76 DATA WAS ALSO USED FOR FY 75 FOR THIS CONSOLIDATION.

REMARKS

Alabama Army Depot



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION ALABAMA ARMO DEPT. AL MACOM DARGO CLIMATIC REGION 4 HDD 2,606 CDD 1,886

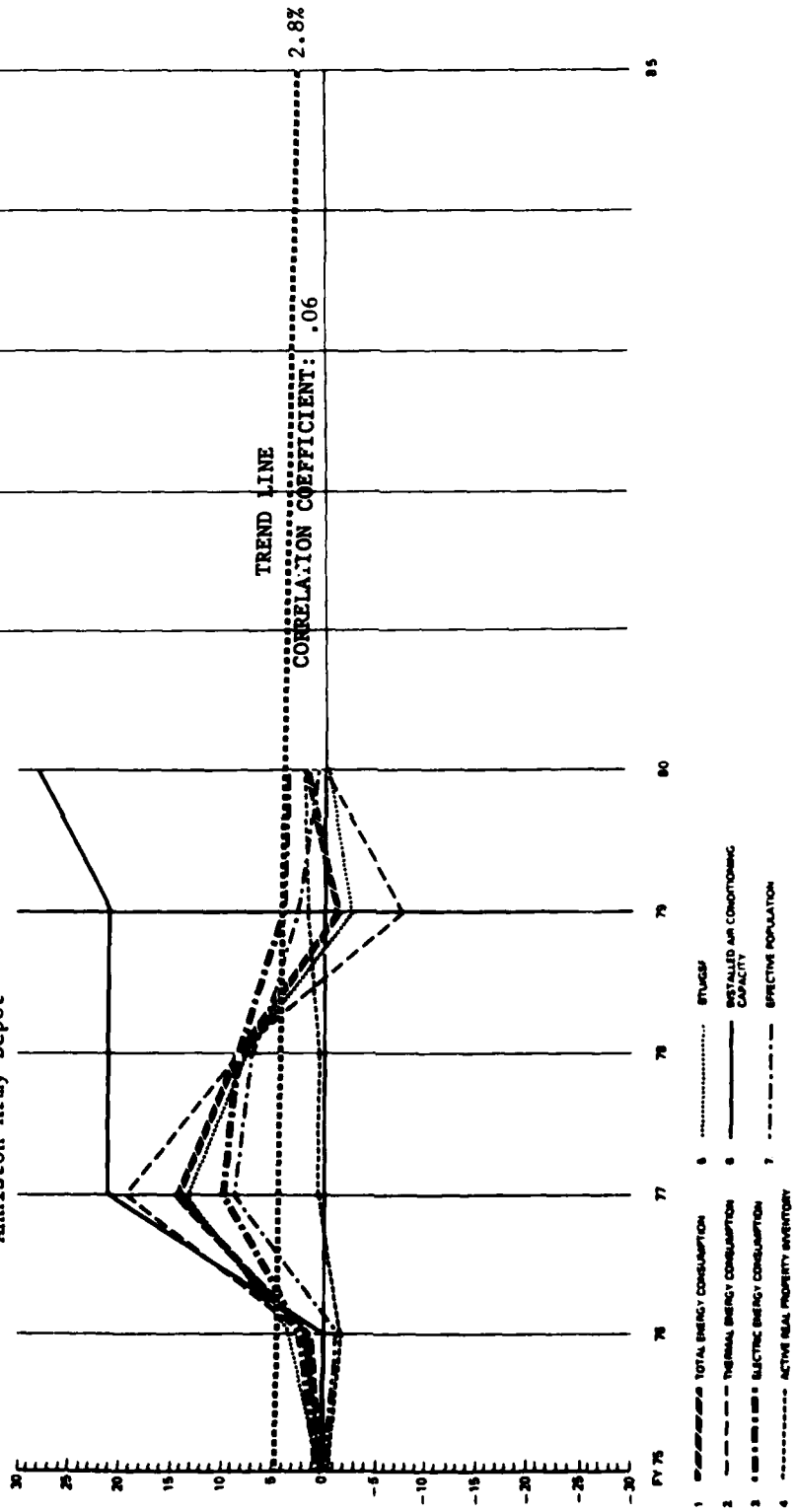
UNIT/SPY	'76	'77	'78	'79
1 Energy Consumption & PD	15,361	1,713.1	5,699	(-62.9)
2 Thermal En Cons & PD	7,211	(-98.8)	3,282	(-47.8)
3 Electrical En Cons & PD	8,150	(-66.9)	1,937	(-76.2)
4 Resident Population & PD	0	0	0	0
5 Non-Resident Population & PD	41	(-51.2)	20	(-51.2)
6 Population Served** & PD	41	(-51.2)	20	(-51.2)
7 Effective Population*** & PD	14	(-50.0)	7	(-50.0)
8 En Consumption/Pop Served & PD	374.2	(-61.1)	286.95	(-23.8)
9 En Consumption/Pop & PD	1,095.8	(-62.6)	814.1	(-25.7)
10 Electric En Consumption/Resident Population	-	-	-	-
11 Installed Air Cond Capacity & PD	-	-	-	-
12 Elec Energy/Ton of Air Cond & PD	1,739	-	-	-
13 Real Property Inventory 1976 & PD	124.2	-	-	-
14 WPE/Effective Population	8,921.7	-	-	-
15 Energy Consumption/GSF & PD	4,166.6	-	-	-
16 Thermal En Consumption/GSF & PD	4,675.1	-	-	-
17 Electrical En Consumption/GSF & PD	-	-	-	-
18 WPI by Category	-	-	-	-
Training	-	-	-	-
Maintenance & Production	-	-	-	-
Research, Development & Testing	-	-	-	-
Storage	-	-	-	-
Other Covered Storage	-	-	-	-
Hospital & Medical	-	-	-	-
Administration	-	-	-	-
Bachelor Housing	-	-	-	-
Community For Bldgs	-	-	-	-
Family Housing	-	-	-	-
Quartermaster Bldg	-	-	-	-
Utility Buildings	-	-	-	-
Other	-	-	-	-

- 1 Energy Consumption & PD
- 2 Thermal En Cons & PD
- 3 Electrical En Cons & PD
- 4 Resident Population & PD
- 5 Non-Resident Population & PD
- 6 Population Served** & PD
- 7 Effective Population*** & PD
- 8 En Consumption/Pop Served & PD
- 9 En Consumption/Pop & PD
- 10 Electric En Consumption/Resident Population
- 11 Installed Air Cond Capacity & PD
- 12 Elec Energy/Ton of Air Cond & PD
- 13 Real Property Inventory 1976 & PD
- 14 WPE/Effective Population
- 15 Energy Consumption/GSF & PD
- 16 Thermal En Consumption/GSF & PD
- 17 Electrical En Consumption/GSF & PD
- 18 WPI by Category

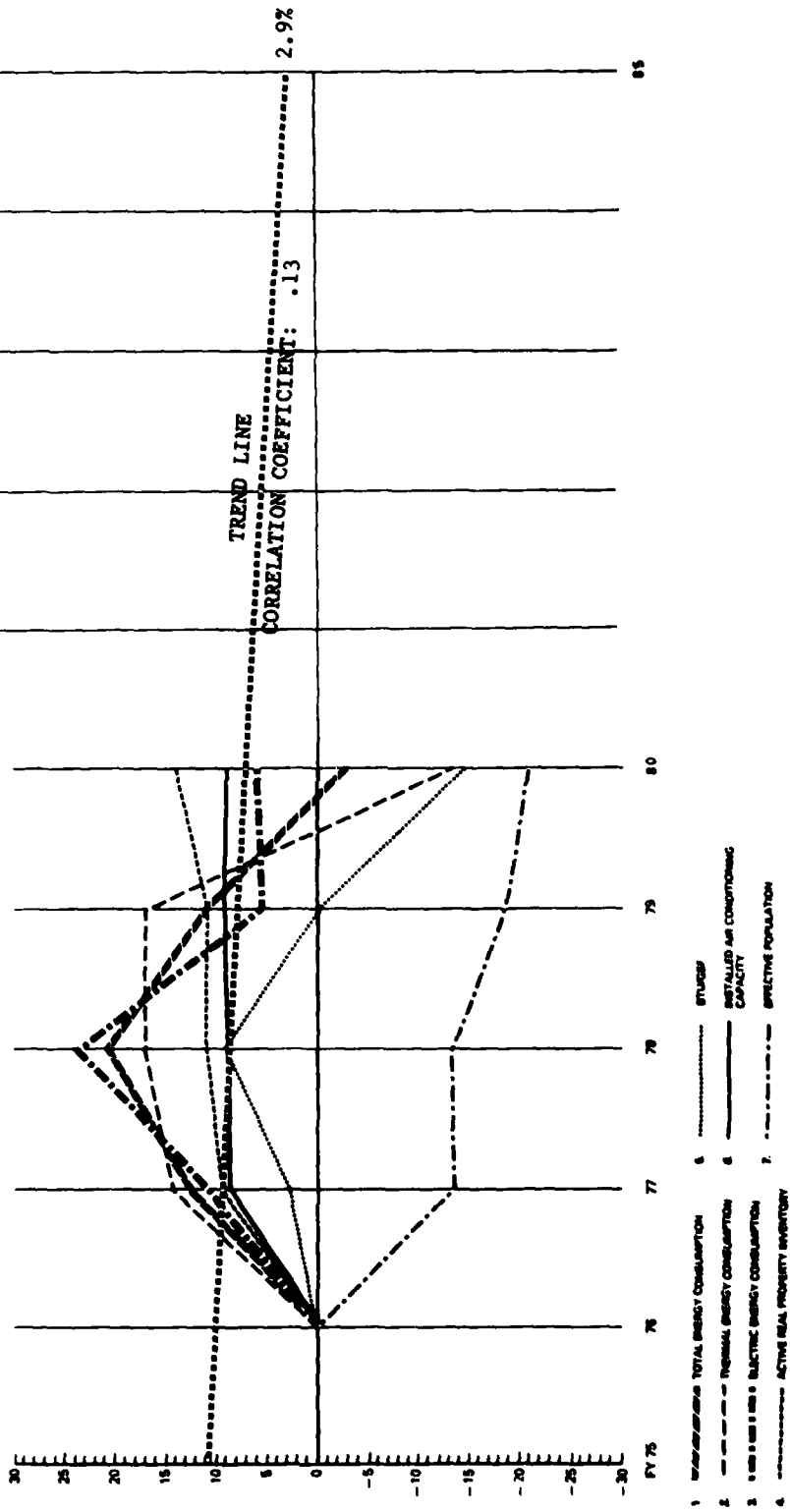
*PD is Percent Deviation from Base Year **Population Served is the total Resident & Non-Resident Population ***ER Pop is Resident + 1/3 Non-Resident

REMARKS In caretaker status since FY76.

Anniston Army Depot



Corpus Christi Army Depot



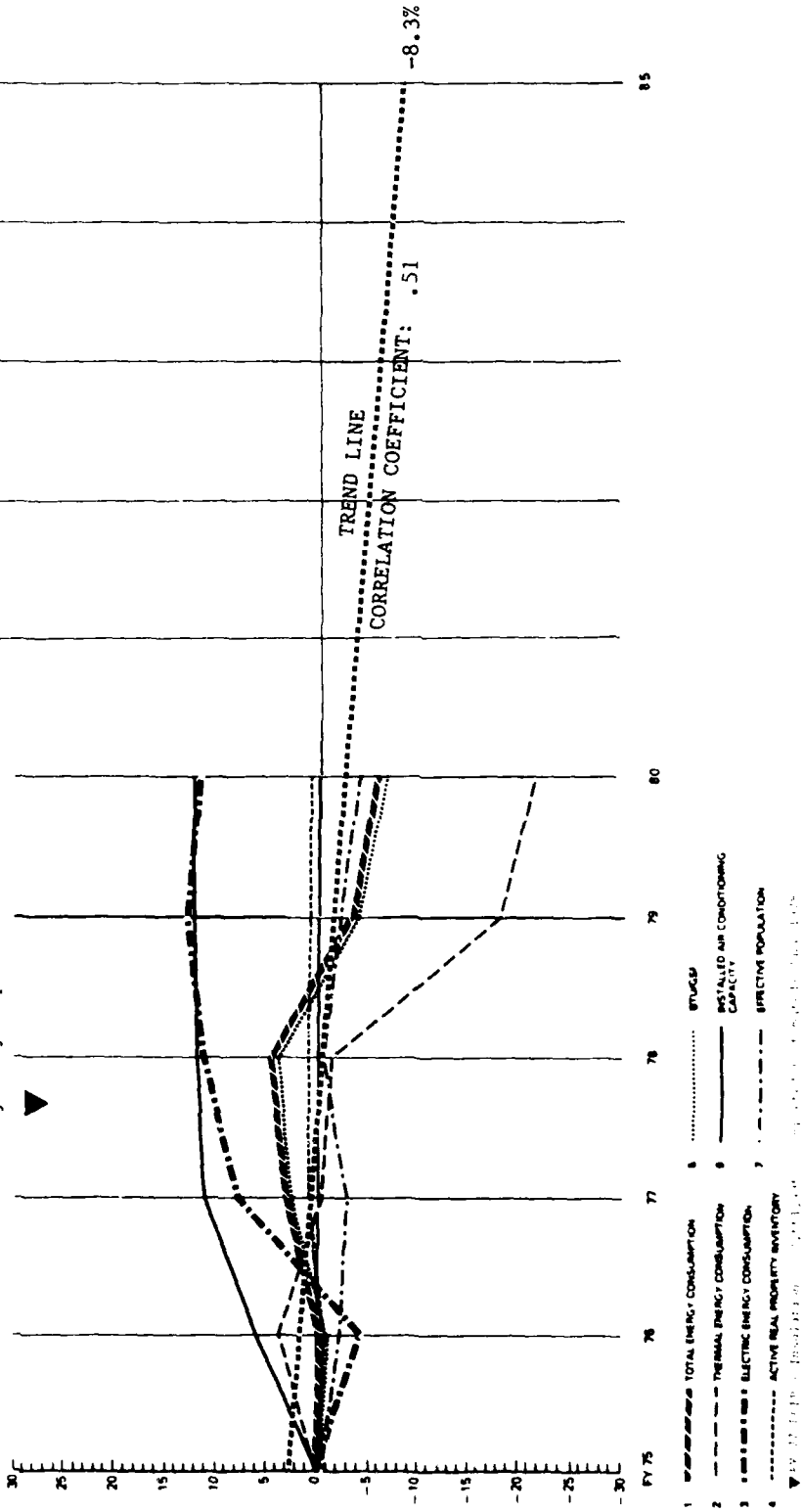
Category	77	78	79	80
1 Energy Consumption in PD	841,065	902,294	827,628	10,771
2 Thermal En. Cons. in PD	188,700	397,300	397,275	17,071
3 Electrical En. Cons. in PD	452,365	506,994	430,353	5,471
4 Resident Population in PD	0	0	0	0
5 Non-Resident Population in PD	1,975	3,446	3,227	18,871
6 Population Served** in PD	1,975	3,446	3,227	18,871
7 Effective Population*** in PD	1,125	1,149	1,076	1043
8 En. Consumption/Pop. Served in PD	244.6	261.8	256.5	232.0
9 En. Consumption/Pop. in PD	723.9	785.3	769.2	696.1
10 Electric En. Consumption/Resident Population	5,888	5,888	5,900	5,900
11 Heating En. Cons./Capacity in PD	76.8	85.8	72.9	71.2
12 Elec. Energy/Pop. of Air Cond. in PD	1,780	1,802	1,802	1,848
13 Heat Properties Inventory 1978 in PD	1.55	1.57	1.67	1.71
14 Indefinite Population	472,508	500,718	458,300	372,878
15 Energy Consumption/GSF in PD	218,371	220,477	220,466	159,266
16 Thermal En. Consumption/GSF in PD	254,137	280,241	238,836	231,637
17 Electrical En. Consumption/GSF in PD	1,189	1,211	1,211	1,256
18 1971 by Category	4	4	4	4
19 Training	1,189	1,211	1,211	1,256
20 Maintenance & Production	217	362	362	378
21 Research, Development & Testing	2	160	160	149
22 Storage	2	29	29	29
23 Other Covered Storage	132	160	160	149
24 Hospital & Medical	29	29	29	29
25 Administration	2	2	2	2
26 Bachelor Housing	2	2	2	2
27 Community Facilities	2	2	2	2
28 Family Housing	2	2	2	2
29 Other Housing	2	2	2	2
30 Unassigned Bus Stops	2	2	2	2
31 Utility Buildings	2	2	2	2
32 Other	2	2	2	2

PD is Percent Deviation from Base Year **Population Served is the total Resident & Non-Resident Population *Eff. Pop. is Resident + 1/3 Non-Resident

- (1) Not Reported in FY 1975 - Use FY 1976 as Base Year
- (2) Corpus Christie AD is Tenanted on a Navy Operated Installation

REMARKS

Letterkenny Army Depot



AD-A104 134

COMPUTER SCIENCES CORP FALLS CHURCH VA SYSTEMS DIV
ARMY ENERGY DATA ANALYSIS, FY 80 UPDATE.(U)
JUL 81

F/6 13/1

DE-AC01-79-CR-10001

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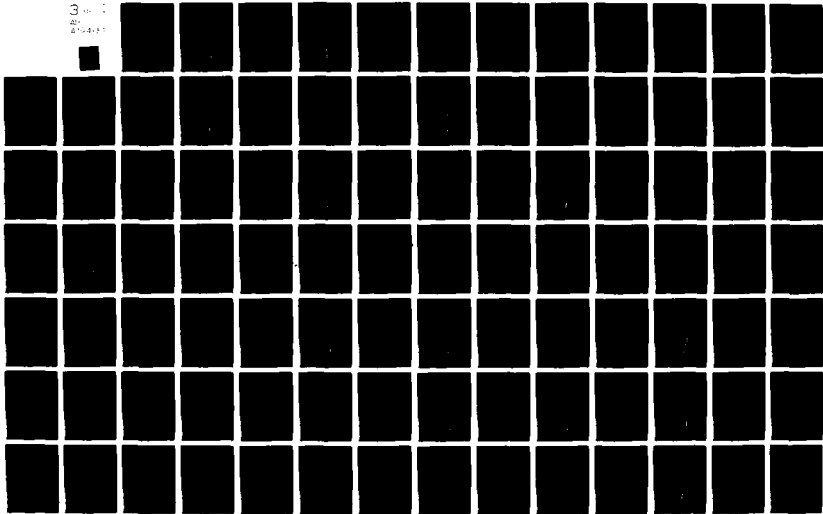
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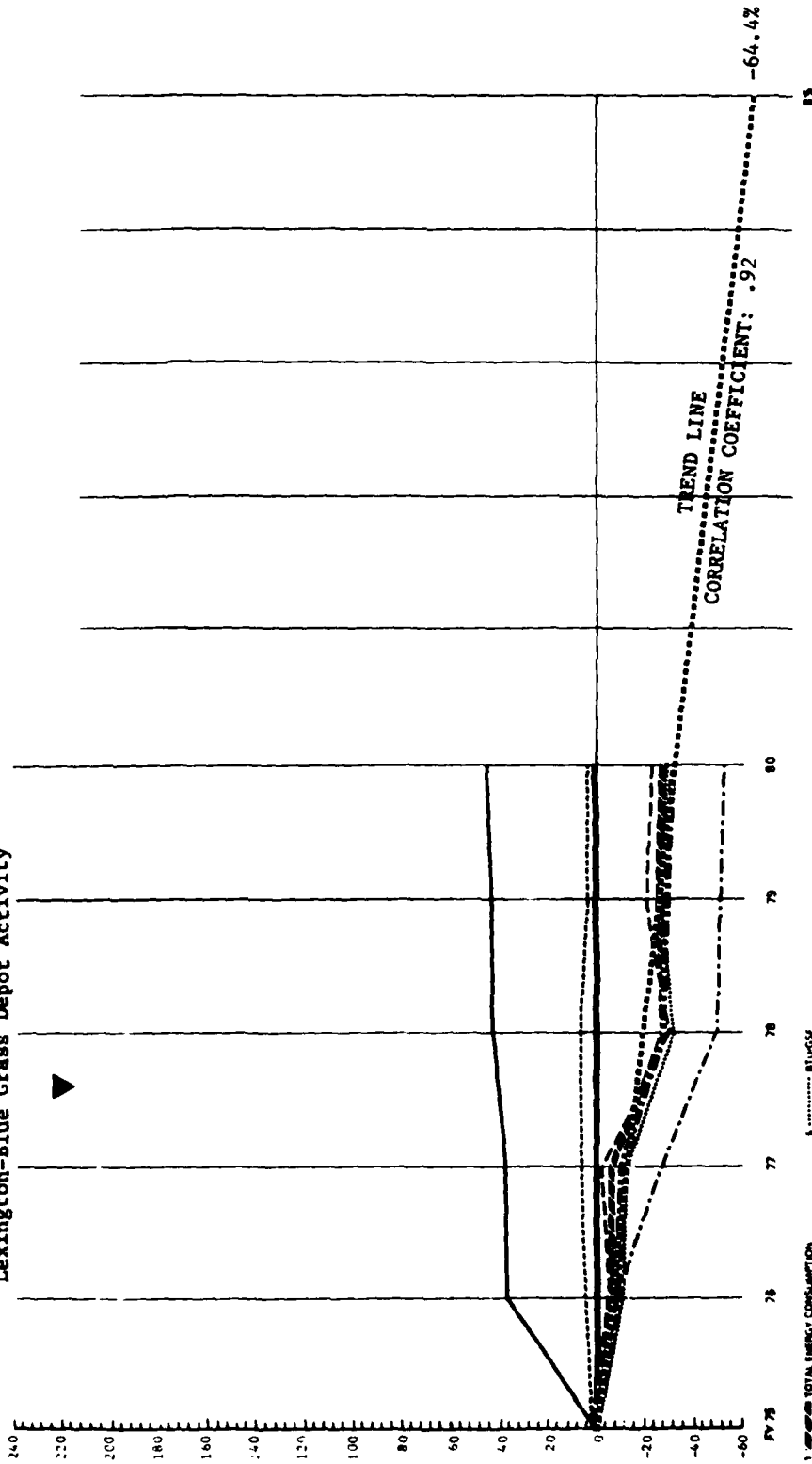


U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION LETTERKERRY AD, PA MACOM DARGOH CLIMATIC REGION 2 HDD 5,519 CDD 793

UNIT/SPY	76	78	77	79	80	81
1 Energy Consumption B PD	996,001	1,011,375	1,031,375	1,042,342	962,837	937,186
2 Thermal En Cons B PD	527,881	546,665	556,665	561,771	495,277	474,525
3 Electrical En Cons B PD	468,120	464,710	474,710	480,571	467,560	462,661
4 Non-Resident Population B PD	2,068	1,382	1,382	1,382	1,382	1,382
5 Non-Resident Population B PD	3,500	3,427	3,427	3,427	3,427	3,427
6 Population Services B PD	3,768	3,645	3,645	3,645	3,645	3,645
7 Electric Population B PD	2,061	1,291	1,291	1,291	1,291	1,291
8 En Consumption/Service B PD	172.7	183.6	183.6	180.8	170.0	167.7
9 En Consumption/Pop B PD	483.3	515.4	515.4	508.7	478.8	472.8
10 Electric En Consumption/Pop B PD	2,250.6	2,632.2	2,632.2	2,728.6	2,862.5	2,919.9
11 Installed Air Cond Capacity B PD	2,205	2,337	2,450	2,471	2,471	2,471
12 Elec Energy/Pop of Air Cond B PD	212.3	191.6	206.3	210.9	214.3	211.5
13 Heat Property Inventory (Btu) B PD	6,836	6,852	6,901	6,908	6,894	6,906
14 Heat Property Inventory (MWh) B PD	3.33	3.40	3.43	3.37	3.33	3.48
15 Storage Capacity (GWh) B PD	165,274	145,199	149,453	150,889	139,663	135,708
16 Thermal En Consumption/GSP B PD	76,995	79,859	76,221	75,465	62,848	60,024
17 Electrical En Consumption/GSP B PD	68,278	65,319	73,232	75,465	68,815	65,882
18 En by Category						
Training	1	1	1	1	1	1
Maintenance & Production	931	967	1,013	1,020	1,022	1,073
Research, Development & Testing						
Storage	4,944	4,918	2,104	2,111	2,111	2,131
Other Covered Storage			2,736	2,737	2,743	2,744
Support & Medical	4	4	4	4	4	4
Administration	317	317	321	321	321	317
Residence Housing	7	7	6	6	11	11
Community Facilities	118	119	122	122	127	130
Family Housing	602	199	69	69	69	69
Operational Run Support	468	468	468	468	435	375
Utility Buildings	61	49	2	4.9	4.8	4.9
Other						
Total	996,001	1,011,375	1,031,375	1,042,342	962,837	937,186

**Population Reported is the total Population B Non-Resident Population
 **GSP Pop is Resident + Non-Resident
 **PD is Percent Deviation from Base Year
 **FY 77 ECIP - Insulation - \$2,661,496 - Completed (estimated) June 1978

Lexington-Blue Grass Depot Activity



- 1 - TOTAL ENERGY CONSUMPTION
- 2 - THERMAL ENERGY CONSUMPTION
- 3 - ELECTRIC ENERGY CONSUMPTION
- 4 - INSTALLED AIR CONDITIONING CAPACITY
- 5 - EFFECTIVE POPULATION

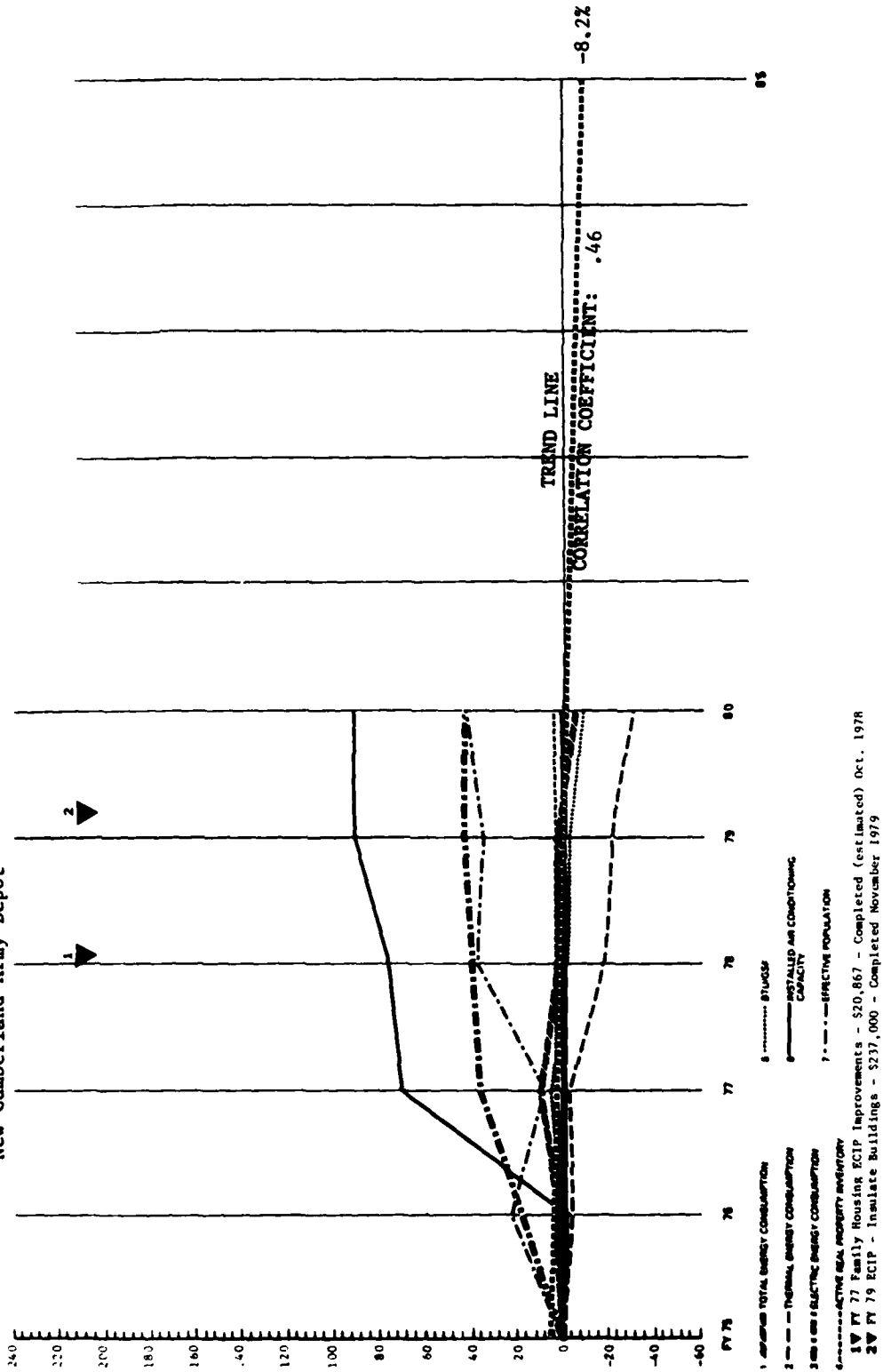
▼ FY 76 ECIP - Insulation - \$479,035 - Completed May 1978

U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - LEXINGTON-BLUE GRASS DETACT MACOM DARGOM CLIMATIC REGION 1 MOD 4,729 CDD 1,197

UNITS/ST	75	76	77	78	79	80
1 Energy Consumption @ PD	555,216	520,700	513,706	395,061	610,913	395,278
2 Thermal En Conv @ PD	266,501	249,926	257,567	185,679	209,566	202,625
3 Electrical En Conv @ PD	288,715	270,774	256,139	209,382	201,347	192,653
4 Resident Population @ PD	85	85	85	85	85	88
5 Non-Resident Population @ PD	1,366	1,366	1,366	1,366	1,366	1,366
6 Population Survey** @ PD	4,033	4,033	4,033	4,033	4,033	4,033
7 Electrical Survey*** @ PD	1,401	1,401	1,401	1,401	1,401	1,401
8 En Consumption/Pop Served @ PD	137.7	137.7	137.7	137.7	137.7	137.7
9 En Consumption/Pop @ PD	396.3	396.3	396.3	396.3	396.3	396.3
10 Electrical Consumption/Pop @ PD	931	931	931	931	931	931
11 Heated Air Cond Capacity @ PD	110.1	110.1	110.1	110.1	110.1	110.1
12 Hot Energy/Ton of Air Cond @ PD	5,408	5,408	5,408	5,408	5,408	5,408
13 Heating Capacity @ PD	3,866	3,866	3,866	3,866	3,866	3,866
14 Heating Capacity/Pop @ PD	49,219	49,219	49,219	49,219	49,219	49,219
15 Thermal En Consumption/GSP @ PD	53,364	53,364	53,364	53,364	53,364	53,364
16 Thermal En Consumption/GSP @ PD	19	19	19	19	19	19
17 Electrical En Consumption/GSP @ PD	514	514	514	514	514	514
18 Pop by Category	514	514	514	514	514	514
19	514	514	514	514	514	514
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REMARKS: **FY 76 ECIP - Insulation - \$979,035 - Completed May 1978
 **Population Served in the Year Reported @ Non-Resident Population
 ***Pop in Residence + 1/2 Non-Resident

New Cumberland Army Depot



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION USE CUMBERLAND AD - PA MACOM DARECOM CLIMATIC REGION 3 HDD 5,224 CDD 1,025

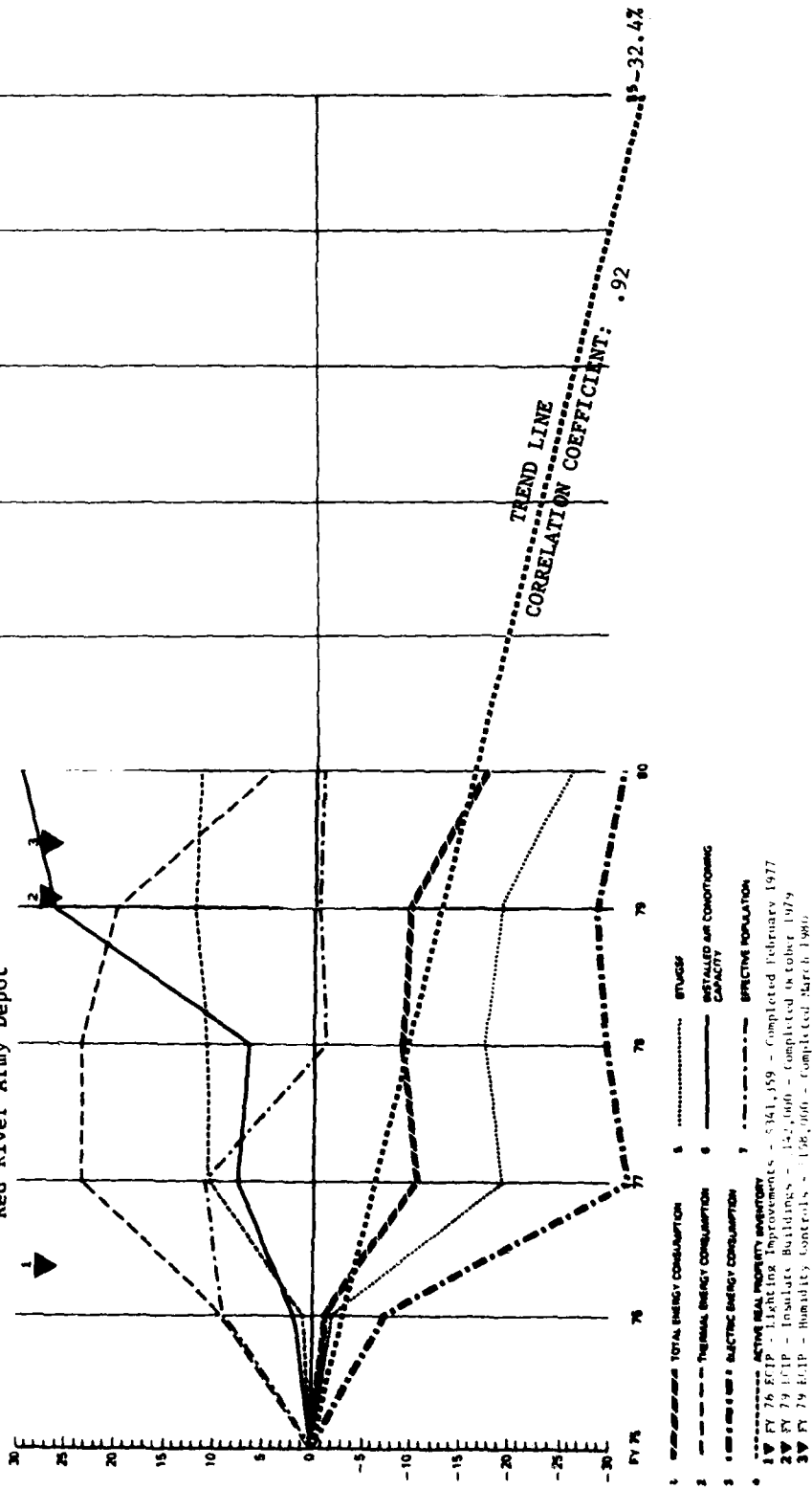
UNITS	76	77	78	79	80
1 Energy Consumption & PD	865,155	958,504	889,719	870,134	812,327
2 Thermal En Cons & PD	562,331	646,441	626,405	635,167	581,225
3 Electrical En Cons & PD	302,824	312,063	263,314	235,167	231,102
4 Resident Population & PD	400	393	393	387	389
5 Non-Resident Population & PD	5,345	5,041	6,398	6,230	6,991
6 Population Served** & PD	1,916	2,071	2,662	2,564	2,719
7 Electric Population*** & PD	174,9	163,5	176,5	128,4	110,1
8 En Consumption/Pop Served & PD	531,5	381,7	462,8	339,4	298,9
9 En Consumption/Pop & PD	255,1	898,5	1,054,3	1,124,5	1,104,1
10 Electric En Consumption/Resident Population	789	1,343	1,388	1,498	1,498
11 Installed Air Cond Capacity & PD	383,8	659,6	1,072,5	1,290,5	1,253,3
12 Elec Energy/Ton of Air Cond & PD	5,319	2,346	5,313	5,512	5,517
13 Fuel Property Inventory BPA & PD	2,78	2,28	2,07	2,15	2,03
14 APD/Reserve Population	162,654	173,799	161,299	157,898	167,313
15 Energy Consumption/GSF & PD	105,725	100,591	83,875	78,849	69,463
16 Thermal En Consumption/GSF & PD	56,929	67,000	77,673	78,949	77,851
17 Electrical En Consumption/GSF & PD	48,796	33,591	6,202	7,900	7,612
18 kWh Capacity	3	3	3	3	3
Training	602	600	601	572	576
Administration & Population	12	12	12	12	12
Research, Development & Training	3,880	3,984	3,982	4,009	4,000
Storage	7	7	7	7	7
Other Covered Storage	355	353	353	353	361
Hospital & Medical	81	82	83	83	83
Administrative	158	159	158	159	160
Recreation	204	204	204	204	204
Community Facilities	7	61	101	101	101
Family Housing	8	8	8	8	8
Quartermaster Storage	8	8	8	8	8
Utility Buildings	8	8	8	8	8
Other	8	8	8	8	8

PD in Parenthesis Deviation from Base Year **Population Served is the total Resident & Non-Resident Population *EF Pop & Resident + 1/2 Non-Resident

1 FY 77 Family Housing EICP Improvements - \$20,867 - Completed (Estimated) October 1978
 2 FY 79 EICP - Insulate Buildings - \$237,000 - Completed November 1979

REMARKS

Red River Army Depot



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - RED RIVER ARMY DEPOT, TX - MACOM, DABCOM - CLIMATIC REGION 7 - MOD 2, 531 - CDD 2, 245

UNIT/FY	76	77	78	79	80	81
1 Energy Consumption Is PD	1,102,839	1,090,834	1,003,789	995,232	902,220	1,317,71
2 Thermal En Conv Is PD	430,108	469,059	532,009	517,521	442,825	4,11
3 Electrical En Conv Is PD	672,731	621,775	471,780	477,711	459,395	1,311,71
4 Heating Population Is PD	292	415	282	291	218	1,25,3
5 Non-Resident Population Is PD	5,510	5,228	5,864	5,589	5,624	2,27
6 Population Storage** Is PD	5,808	6,163	5,851	5,851	5,894	1,4,1
7 Electric Population*** Is PD	2,131	2,324	2,164	2,161	2,109	1,1,01
8 En Consumption/Pop Servd Is PD	189,9	177,6	172,1	170,4	154,0	1,18,91
9 En Consumption/El Pop Is PD	517,5	489,4	476,9	476,9	430,2	1,15,91
10 Heating En Consumption/Pop Is PD	2,103,9	1,988,3	1,495,5	1,461,6	1,407,3	1,8,51
11 Electrical En Consumption/Pop Is PD	2,246	2,288	2,389	2,337	2,321	1,30,41
12 Elec Energy/ton of Air Cond Is PD	299,5	271,8	197,3	197,5	188,4	1,31,3
13 Heat Property Inventory W/rd Is PD	6,436	6,497	7,125	7,126	7,168	1,31,41
14 Non-Resident Population	3,02	2,80	3,39	3,37	3,40	1,32,51
15 En Consumption/GSF Is PD	121,355	167,898	138,124	138,112	126,565	1,26,11
16 Thermal En Consumption/GSF Is PD	66,829	72,196	74,657	74,657	62,476	1,6,51
17 Electrical En Consumption/GSF Is PD	104,526	95,702	63,537	63,455	64,089	1,38,71
18 HP by Category						
Training	40	40	38	43	55	
Maintenance & Production	1,149	1,171	1,181	1,196	1,198	
Research, Development & Testing						
Storage	4,101	3,726	3,725	3,748	3,768	
Other General Storage						
Hospital & Medical						
Administration	6	6	6	6	6	
Bachelor Housing	238	245	245	245	235	
Community Housing	12	12	12	12	12	
Community Fee Rate	93	96	97	105	116	
Family Housing	78	117	117	110	52	
Operational Use Charge	685	693	692	708	711	
Utility Buildings	37	55	72	70	73	
Other						
Total Available	1,180	1,171	1,181	1,196	1,198	
Total	4,111	3,726	3,725	3,748	3,768	
Base						
Net Available	6	6	6	6	6	
Training						
Maintenance & Production						
Research, Development & Testing						
Storage						
Other General Storage						
Hospital & Medical						
Administration						
Bachelor Housing						
Community Housing						
Community Fee Rate						
Family Housing						
Operational Use Charge						
Utility Buildings						
Other						

**PD is Percent Deviation from Base Year

**Population Servd in the total Resident & Non-Resident Population

**HP Pop & Residents + 10 Non-Resident

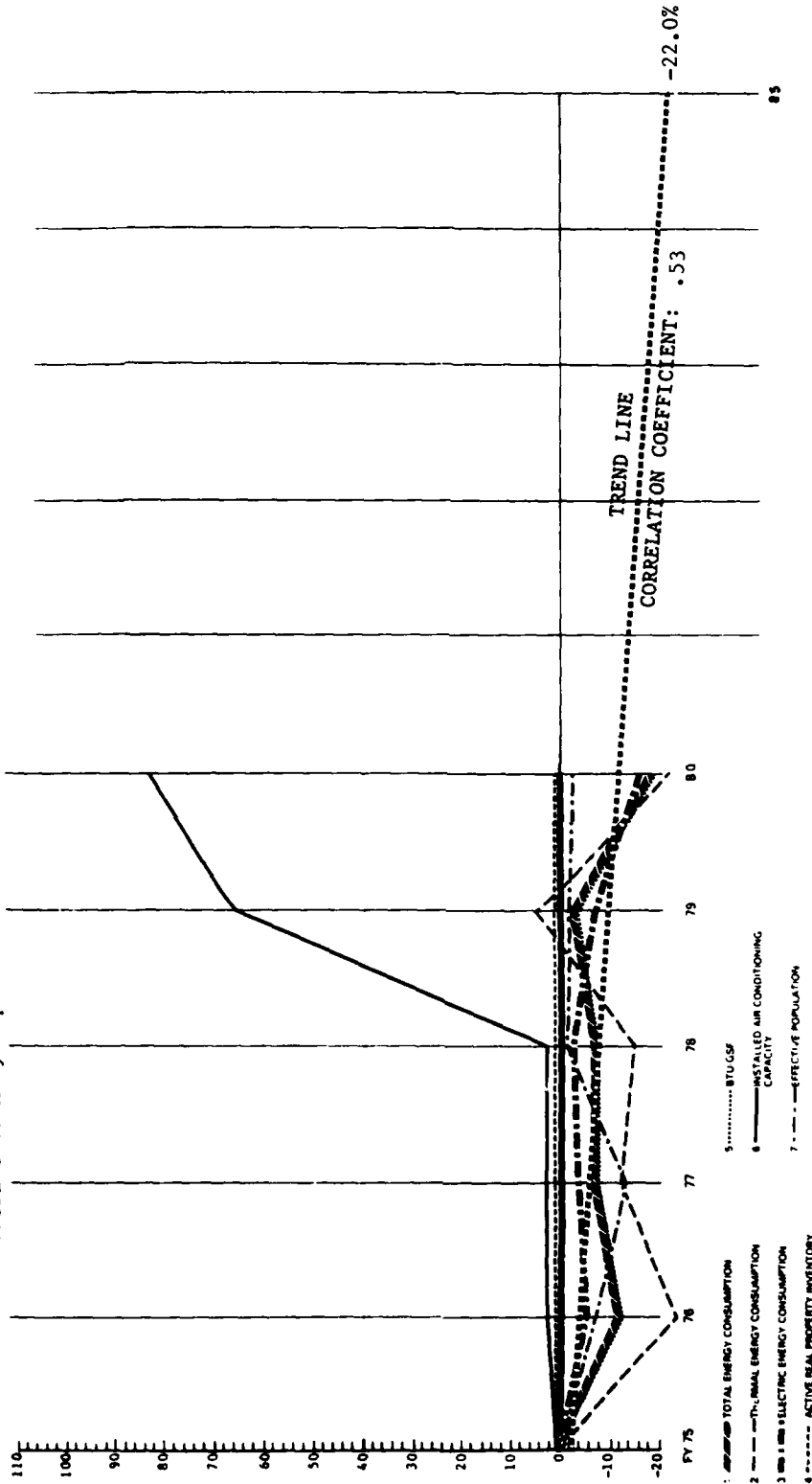
1 FY 76 ECIP - Lighting Improvements - \$341,359 - Completed February 1977

2 FY 79 ECIP - Insulate Buildings - \$142,000 - Completed October 1979

3 FY 79 ECIP - Humidity Controls - \$158,000 - Completed March 1980

REMARKS

Sacramento Army Depot



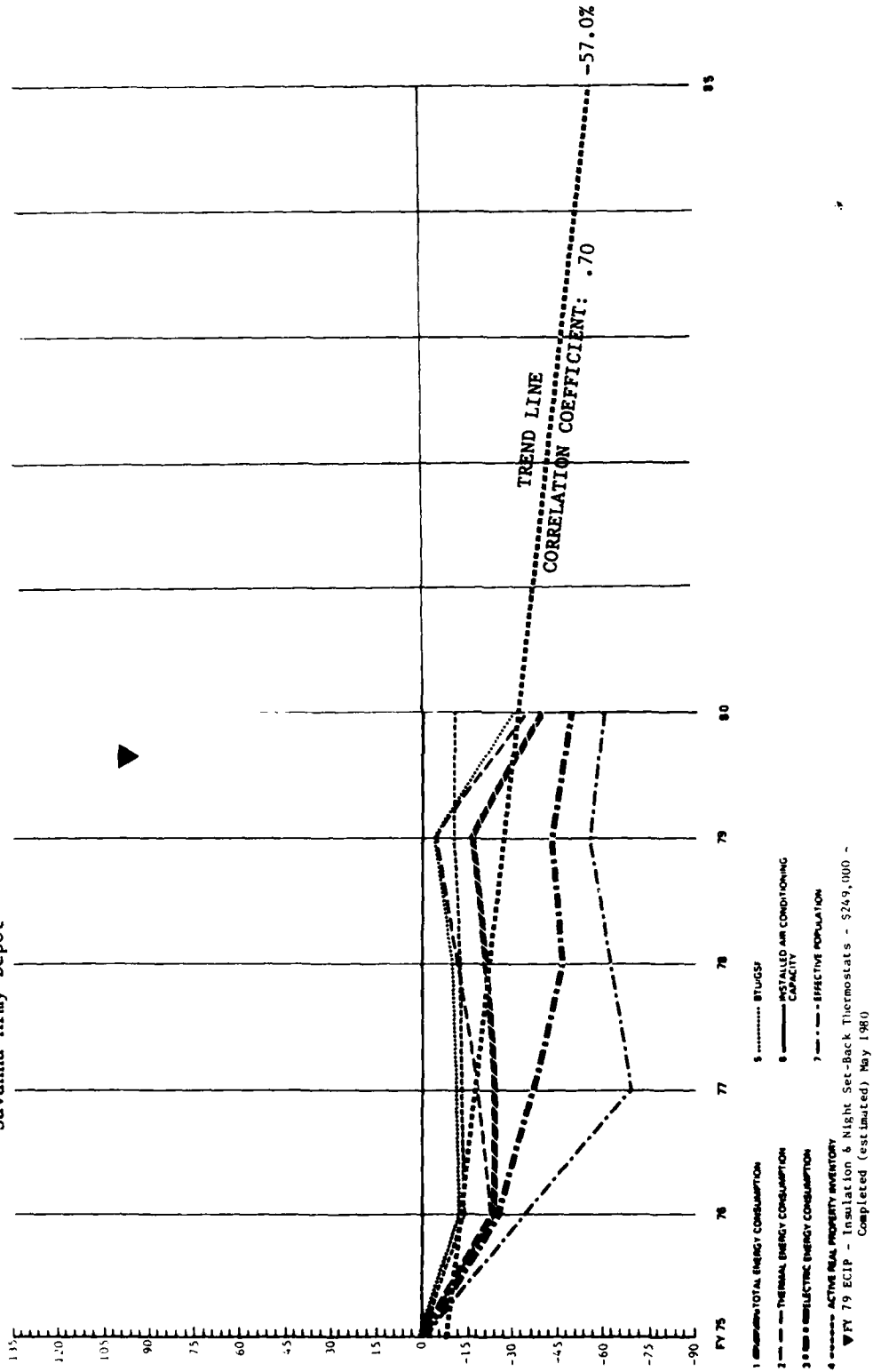
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION_SACRAMENTO ARMY DEPT. CA. MACOM_DARCOM CLIMATIC REGION 4. HDD 2,843 CDD 1,159

UNITS/FY	75	76	77	78	79	80
1 Energy Consumption & PD	192,125	343,693	122,451	365,290	12,693	379,573
2 Thermal En Cons & PD	161,237	106,565	124,611	124,199	120,073	148,034
3 Electrical En Cons & PD	251,088	237,128	11,840	241,091	263,782	231,539
4 Resident Population & PD	27	30	11,311	32	133	28
5 Non Resident Population & PD	2,914	2,676	8,231	2,488	1,416	2,819
6 Population Served** & PD	2,981	2,706	8,001	2,520	1,401	2,847
7 Effective Population*** & PD	333.4	922	13,771	861	2,932	968
8 En Consumption/Pop Served & PD	393.1	372.0	145.0	145.0	124.9	133.3
9 En Consumption/Pop & PD	9,299.6	7,904.9	15,001	7,536.1	7,387	8,269.3
10 Electric En Consumption/Resident Population	612	628	2,611	628	628	1,010
11 Installed Air Cond Capacity & PD	410.3	372.6	8,001	383.9	388.2	229.2
12 Heat Recovery Inventory (RR) & PD	2,824	2,838	0.51	2,839	2,839	2,839
13 Non-Resident Population	2,831	3,081	8,811	2,839	2,861	2,931
14 Non-Resident Population	118,975	121,104	12,811	128,714	128,163	133,700
15 Energy Consumption/GSF & PD	30,011	37,542	124,911	43,763	62,284	52,163
16 Thermal En Consumption/GSF & PD	88,917	81,300	5,001	84,931	85,749	81,537
17 Electrical En Consumption/GSF & PD	68	68	68	68	68	66
18 WPI by Category	284	284	302	302	302	302
Research & Production	2,123	2,134	BASE	1,847	2,102	2,102
Storage	7	7	7	7	7	7
Other General Storage	184	184	185	185	191	191
Resident & Medical	39	39	39	39	39	39
Administrative	56	56	56	56	55	55
Residence Housing	18	18	19	19	19	19
Community For Res	30	30	31	31	31	31
Family Housing	6	6	6	6	6	6
Operational Storage	8	8	8	8	8	8
Utility Buildings	6	6	6	6	6	6
Other	66	66	66	66	66	66

PD is Percent Deviation from Base Year **Population Served is the total Resident & Non-Resident Population *Eff Pop is Resident + 1/3 Non-Resident

REMARKS

Savanna Army Depot



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION SAVANNAH ARMY DEPOT, ILL. MACOM DABCOH CLIMATIC REGION HDO, 533, COO 741

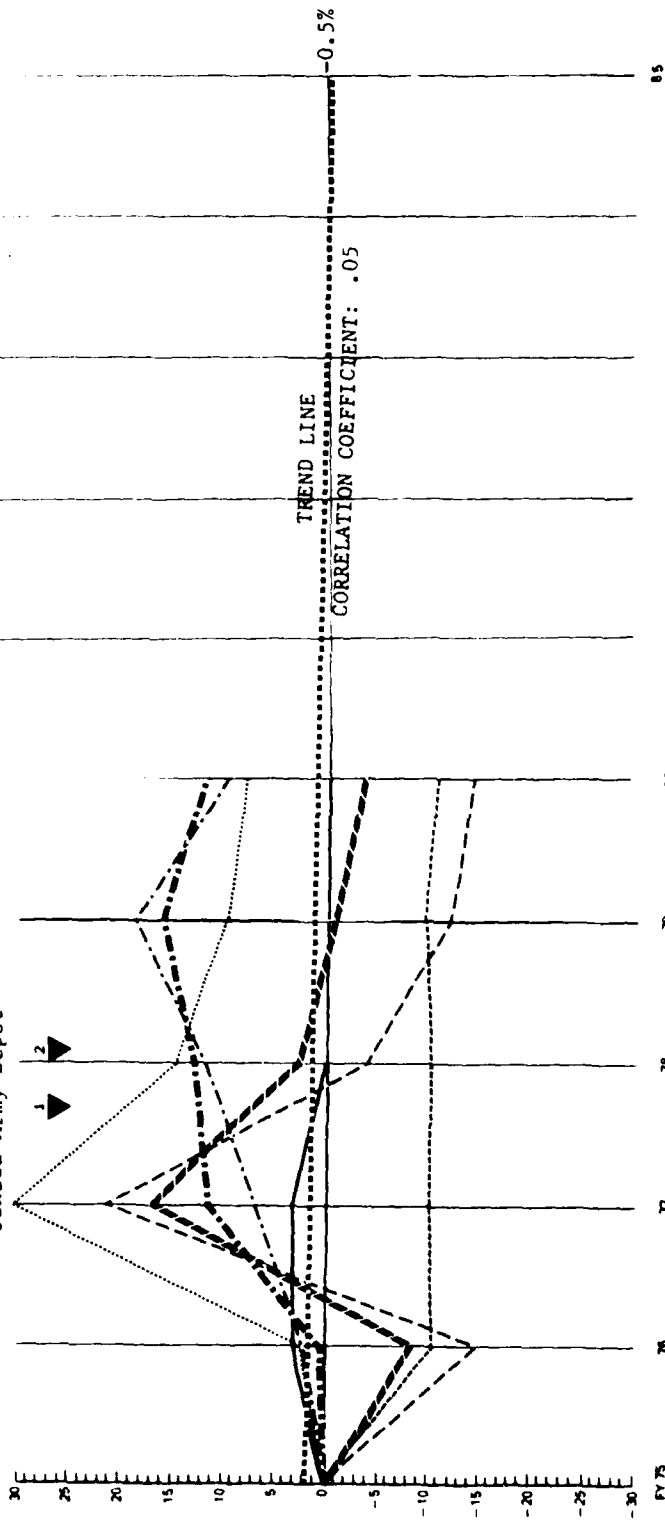
UNITS/yr	75	76	77	78	79	80
1 Energy Consumption b PD	251,662	332,292	184,666	190,194	205,818	167,826
2 Thermal En Cons b PD	173,003	127,298	121,213	136,156	164,655	112,550
3 Electrical En Cons b PD	78,661	51,291	34,251	38,039	41,163	32,278
4 Resident Population b PD	380	312	42	71	97	28
5 Non Resident Population b PD	798	864	473	522	571	349
6 Population Served** b PD	1,178	876	515	593	668	477
7 Effective Population*** b PD	656	433	190	245	287	261
8 En Consumption/Pop Served b PD	205.1	208.9	163.5	177.2	190.7	150.2
9 En Consumption/Pop b PD	314.4	272.6	135.3	138.1	146.2	115.0
10 Electric En Consumption/Resident Population	204.2	250.3	1,065.5	1,065.5	1,195.7	586.6
11 Installed Air Cond Capacity b PD	465	465	465	465	465	465
12 Elec Energy/ton of Air Cond b PD	152.0	114.1	96.2	81.8	88.5	75.9
13 Peak Primary Inventory kWh b PD	5,438	3,818	3,835	3,852	3,914	3,895
14 kWh/Person Population	6.75	19,271	11,611	13,721	13,641	14,921
15 Energy Consumption/GSF b PD	55,028	47,923	48,622	49,376	52,385	37,953
16 Thermal En Consumption/GSF b PD	39,020	35,015	36,953	39,501	42,068	28,896
17 Electrical En Consumption/GSF b PD	16,008	12,908	11,669	9,875	10,316	9,057
18 kWh by Category						
Training	54	64	62	62	62	62
Maintenance & Production	346	287	287	287	287	287
Research, Development & Testing	13	13	13	13	13	13
Storage	3,861	3,861	3,861	3,861	3,861	3,861
Other Covered Storage						
Hospital & Medical Administration						
Biotech Housing						
Community Facilities						
Family Housing						
Operational Buildings						
Other Buildings						
Other						

Population Served is the total Resident & Non-Resident Population *EFF Pop is Resident + 1/2 Non-Resident

REMARKS

▼ FY 79 DRTP - Insulation & Night Set-Back Thermostats - \$249,000 - Completed (estimated) May 1980

Seneca Army Depot



- 1 TOTAL ENERGY CONSUMPTION 5 BTU/GP
- 2 THERMAL ENERGY CONSUMPTION 6
- 3 ELECTRIC ENERGY CONSUMPTION 7
- 4 ACTIVE REAL PROPERTY INVENTORY
- 1 ▲ FY 77 RFP - Installation and Family Housing
- 2 ▼ FY 77 Family Housing RFP Improvement

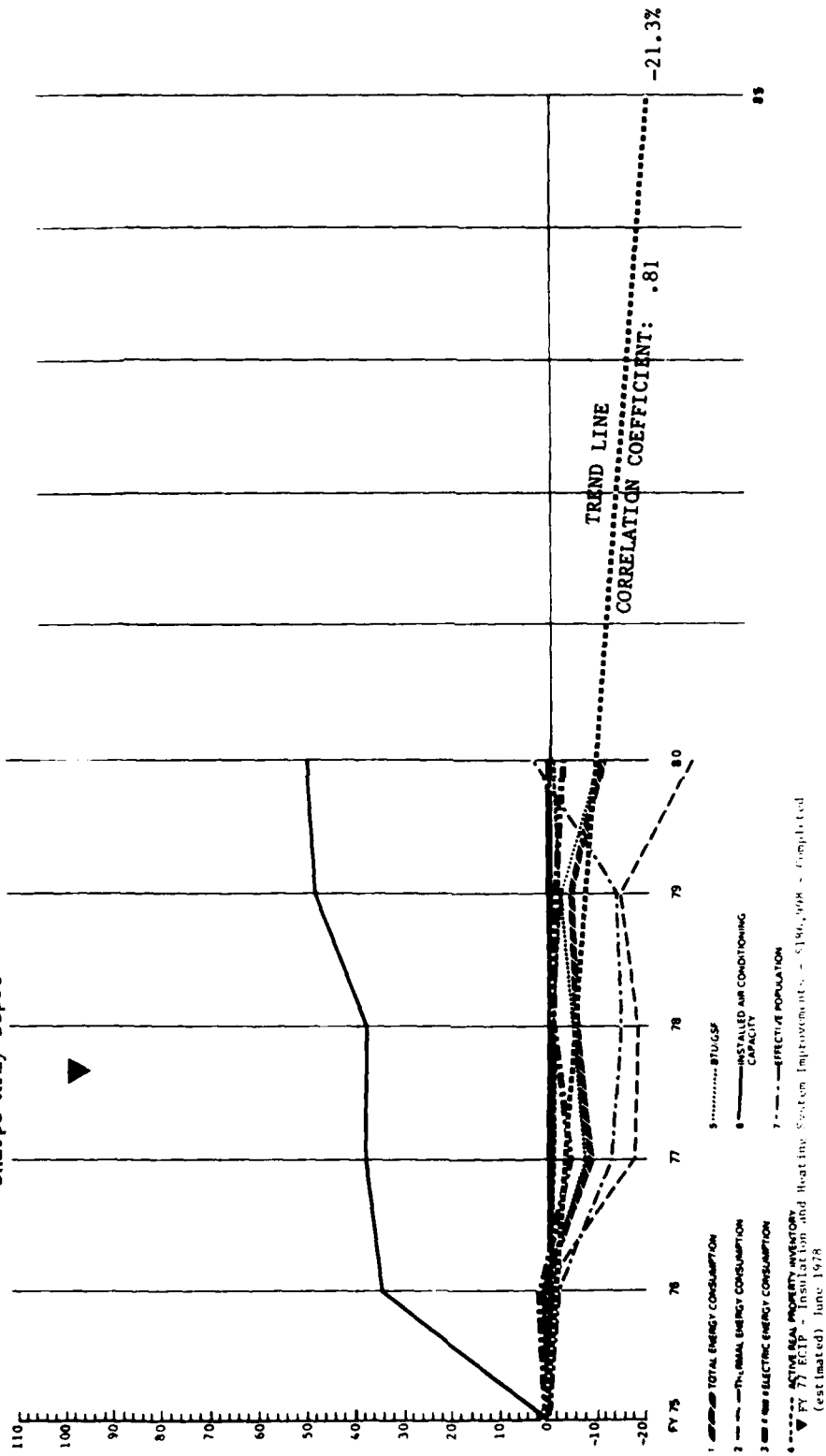
U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION GENERAL ABSTRACT REPORT 77 MACOM DARRCOM CLIMATIC REGION 7 HDD 5,159 CDD 655

Unit/Category	75	76	77	78	79	80
1 Energy Consumption B PD	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0
2 Thermal En. Cons B PD	120.0	120.0	120.0	120.0	120.0	120.0
3 Electric En. Cons B PD	120.0	120.0	120.0	120.0	120.0	120.0
4 Resident Population B PD	120.0	120.0	120.0	120.0	120.0	120.0
5 Non Resident Population B PD	120.0	120.0	120.0	120.0	120.0	120.0
6 Population Saved** B PD	120.0	120.0	120.0	120.0	120.0	120.0
7 Effective Population*** B PD	120.0	120.0	120.0	120.0	120.0	120.0
8 En. Consumption** Part B PD	120.0	120.0	120.0	120.0	120.0	120.0
9 En. Consumption** Full B PD	120.0	120.0	120.0	120.0	120.0	120.0
10 Electric En. Consumption** B PD	120.0	120.0	120.0	120.0	120.0	120.0
11 Installed Air Cond Capacity B PD	120.0	120.0	120.0	120.0	120.0	120.0
12 Elec. Energy/ton of Air Cond B PD	120.0	120.0	120.0	120.0	120.0	120.0
13 Real Property Inventory (M ²) B PD	120.0	120.0	120.0	120.0	120.0	120.0
14 RPIV (Nuclear) Population	120.0	120.0	120.0	120.0	120.0	120.0
15 Energy Consumption GSF B PD	120.0	120.0	120.0	120.0	120.0	120.0
16 Thermal En. Consumption GSF B PD	120.0	120.0	120.0	120.0	120.0	120.0
17 Electrical En. Consumption GSF B PD	120.0	120.0	120.0	120.0	120.0	120.0
18 RPIV by Category	120.0	120.0	120.0	120.0	120.0	120.0
Total	120.0	120.0	120.0	120.0	120.0	120.0
Training	120.0	120.0	120.0	120.0	120.0	120.0
Maintenance & Production	120.0	120.0	120.0	120.0	120.0	120.0
Research, Development & Testing	120.0	120.0	120.0	120.0	120.0	120.0
Storage	120.0	120.0	120.0	120.0	120.0	120.0
Other General Storage	120.0	120.0	120.0	120.0	120.0	120.0
Hospital & Medical	120.0	120.0	120.0	120.0	120.0	120.0
Administration	120.0	120.0	120.0	120.0	120.0	120.0
Community Housing	120.0	120.0	120.0	120.0	120.0	120.0
Community Facilities	120.0	120.0	120.0	120.0	120.0	120.0
Family Housing	120.0	120.0	120.0	120.0	120.0	120.0
Operational Buildings	120.0	120.0	120.0	120.0	120.0	120.0
Utility Buildings	120.0	120.0	120.0	120.0	120.0	120.0
Other	120.0	120.0	120.0	120.0	120.0	120.0

1975 FY 77 ECIP - Insulation and Controls - 5421,000 - Completed (estimated) June 1978
 2075 FY 77 Family Housing ECIP Improvements - 518,500 - Completed (estimated) October 1978

REMARKS: **Population Saved is the total Resident & Non-Resident Population
 ***Effective Population

Sharpe Army Depot



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - SHARPE ARMY DEPT. CA. MACOM DADCOM CLIMATIC REGION 4 HDD 2,806 CDD 1,259

UNITS	76	78	77	76	75	74	73	72	71	70	69	68
1 Energy Consumption & PD	133,723	135,862	121,982	118,885	117,885	117,885	117,885	117,885	117,885	117,885	117,885	117,885
2 Thermal En Cons & PD	40,123	40,758	32,936	32,936	32,936	32,936	32,936	32,936	32,936	32,936	32,936	32,936
3 Electrical En Cons & PD	93,600	95,104	89,046	85,949	84,949	84,949	84,949	84,949	84,949	84,949	84,949	84,949
4 Resident Population & PD	322	323	114	114	129	129	129	129	129	129	129	129
5 Non-Resident Population & PD	1,891	1,865	1,617	1,617	1,533	1,533	1,533	1,533	1,533	1,533	1,533	1,533
6 Population Saved** & PD	2,015	1,968	1,231	1,231	1,662	1,662	1,662	1,662	1,662	1,662	1,662	1,662
7 Effective Population*** & PD	253	238	653	653	640	640	640	640	640	640	640	640
8 En Consumption/Pop Served & PD	66.4	69.0	70.5	70.5	75.6	75.6	75.6	75.6	75.6	75.6	75.6	75.6
9 En Consumption/En Pop & PD	177.6	186.1	186.8	186.8	196.3	196.3	196.3	196.3	196.3	196.3	196.3	196.3
10 Electric En Consumption/Resident Population	267.4	273.2	281.1	281.1	270.4	270.4	270.4	270.4	270.4	270.4	270.4	270.4
11 Available Air Cond Capacity & PD	303	410	418	418	438	438	438	438	438	438	438	438
12 Elec Energy/Ton of Air Cond & PD	3,164	3,240	3,128	3,128	3,143	3,143	3,143	3,143	3,143	3,143	3,143	3,143
13 Heat Property Inventory kWh & PD	4,20	4,29	4,79	4,79	4,91	4,91	4,91	4,91	4,91	4,91	4,91	4,91
14 kWh/Person Population	42,270	42,913	38,997	38,997	39,957	39,957	39,957	39,957	39,957	39,957	39,957	39,957
15 Energy Consumption/GSF & PD	32,683	32,874	30,529	30,529	30,389	30,389	30,389	30,389	30,389	30,389	30,389	30,389
16 Thermal En Consumption/GSF & PD	29,583	29,819	28,468	28,468	29,568	29,568	29,568	29,568	29,568	29,568	29,568	29,568
17 Electrical En Consumption/GSF & PD	3,100	3,055	2,061	2,061	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
18 kWh by Category												
Heating	378	378	300	300	284	284	284	284	284	284	284	284
Refrigeration & Production												
Maintenance, Development & Testing												
Storage	2,466	2,468										
Other Covered Storage												
Inventory & Material												
Administration												
Bachelor Housing												
Community Facilities												
Family Housing												
Operational Bar Area												
Utility Buildings												
Other												
Net Available Storage	6	6	5	5	5	5	5	5	5	5	5	5
Inventory & Material	131	131	142	142	141	141	141	141	141	141	141	141
Administration												
Bachelor Housing												
Community Facilities												
Family Housing												
Operational Bar Area												
Utility Buildings												
Other												
Net Available	10	10	12	12	13	13	13	13	13	13	13	13
BASE												

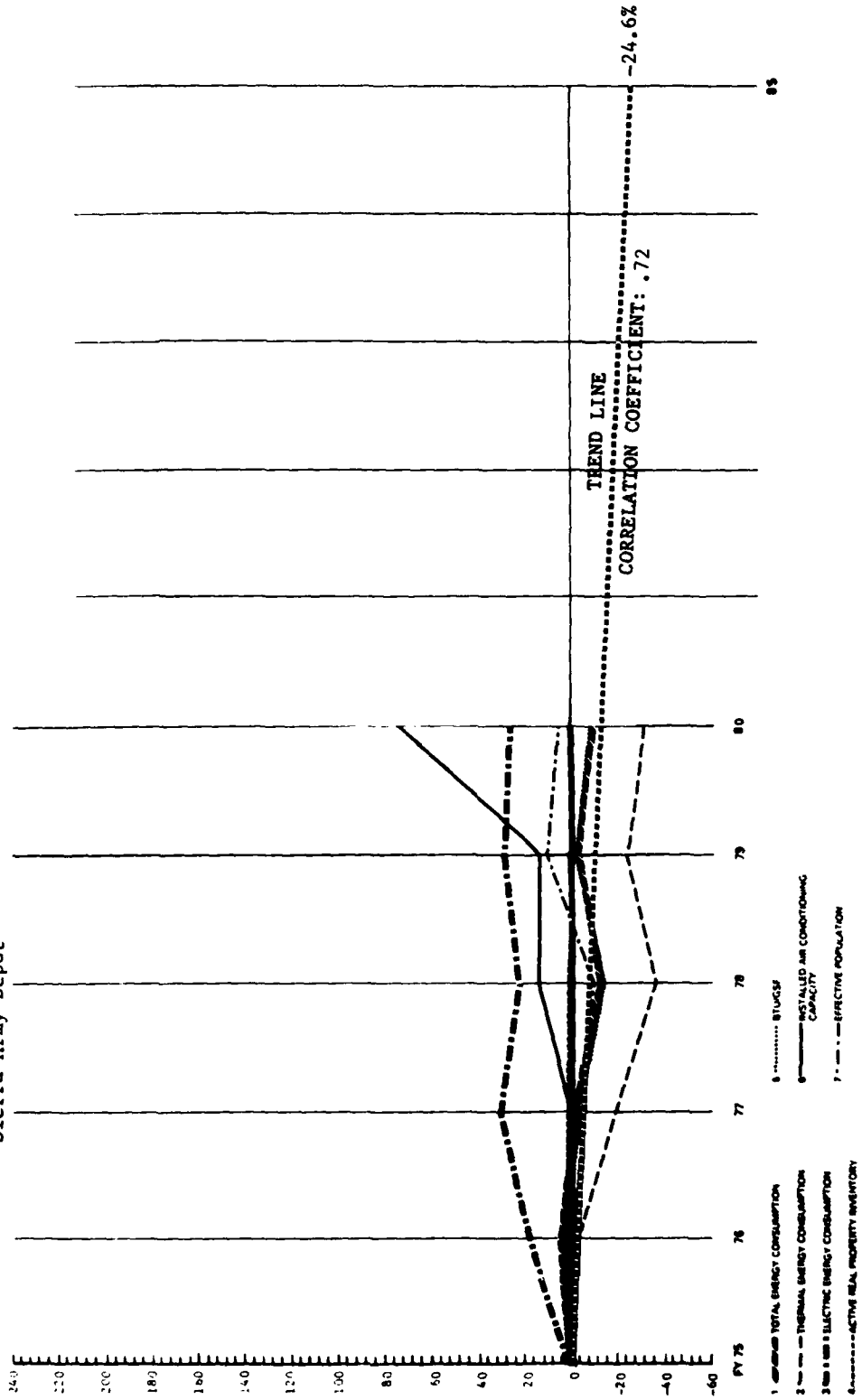
**Populations Served is the total number of Non-Resident Population

**Pop in Percent Deviation from Base Year

▼ FY 77 ECIP - Insulation and Heating System Improvements - \$186,998 - Completed (estimated) June 1978

REMARKS

Sierra Army Depot



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - FEDERAL DETROIT, MI - MACOM - DABCOM - CLIMATIC REGION - HDD 5,822 CDD 102

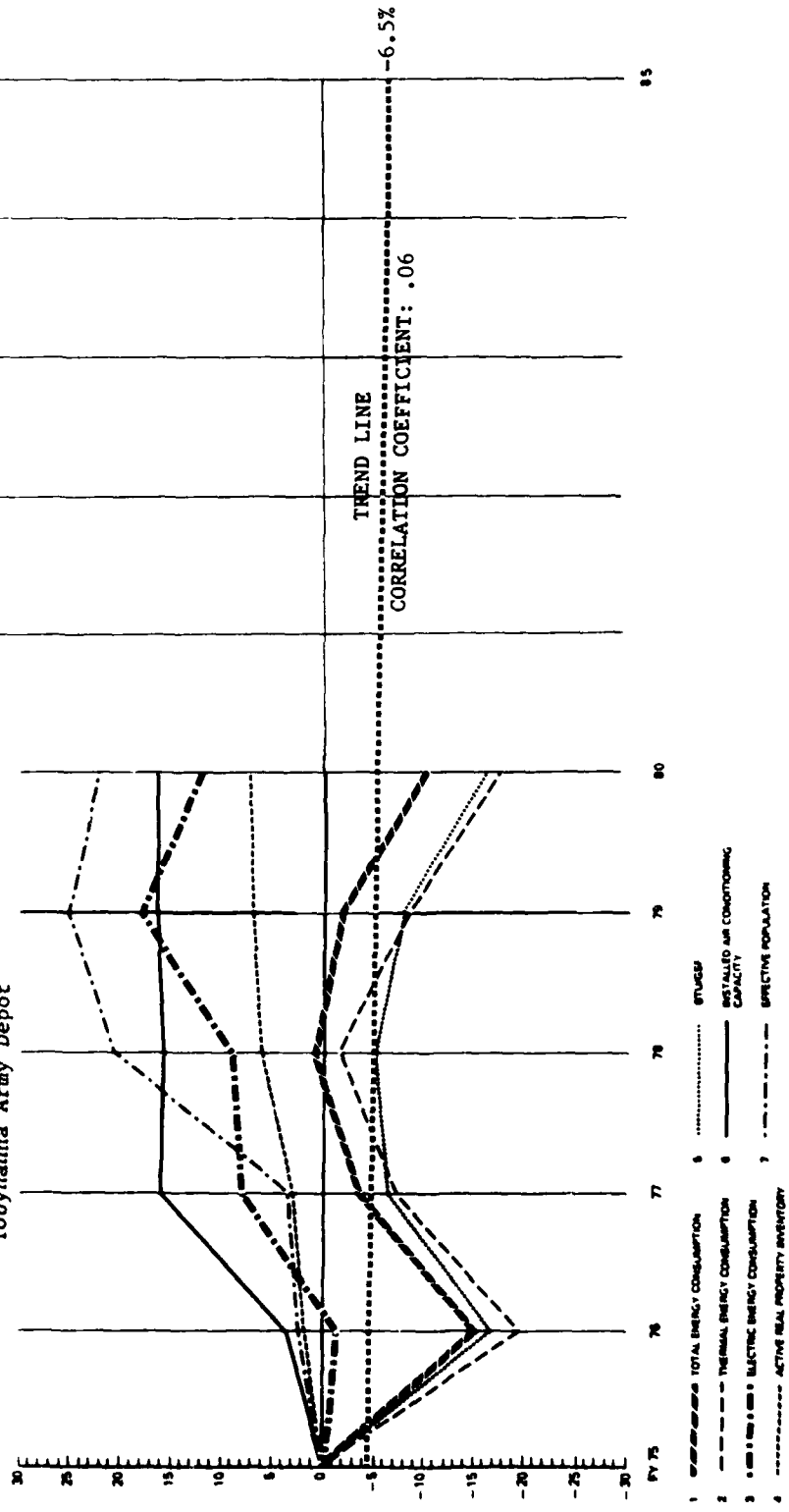
UTILITY	75	76	77	78	79	80
WTRTU	223,553	234,614	222,002	191,008	217,829	200,027
WTRTU	138,441	131,710	111,101	88,278	104,189	93,400
WTRTU	84,911	100,886	111,101	103,630	108,460	106,827
PEOPLE	880	872	826	770	967	816
PEOPLE	527	512	499	530	592	586
PEOPLE	1,407	1,384	1,325	1,309	1,559	1,512
PEOPLE	1,056	1,043	992	956	1,164	1,115
WTRTU	158.6	169.5	167.7	146.6	174.4	164.1
WTRTU	211.6	224.9	226.0	200.7	236.7	232.3
WTRTU	36.5	112.7	136.5	131.0	132.1	116.4
TONS	200	200	200	228	228	308
WTRTU	525.6	506.4	533.6	434.5	475.6	308.4
ESF	4,978	5,085	5,073	4,999	4,971	4,978
ESF	6.71	6.88	5.05	5.23	4.27	4.46
BTU/GSF	44,888	46,138	44,325	38,189	42,774	40,182
BTU/GSF	27,831	26,299	22,163	17,659	20,959	18,763
BTU/GSF	17,027	19,819	22,162	20,730	21,815	21,420
ESF	1.3	9	11	11	11	11
ESF	268	259	259	259	259	259
ESF	6,221	6,212	1,951	1,951	1,951	1,951
ESF	18	18	2,255	2,255	2,255	2,255
ESF	18	18	29	29	29	29
ESF	95	91	87	87	82	82
ESF	60	63	72	84	82	82
ESF	128	128	132	121	123	123
ESF	102	211	130	130	130	130
ESF	54	54	54	39	39	47
ESF	1.7	2.1	2.1	2.1	2.0	2.1
ESF	1.7	2.1	2.1	2.1	2.0	2.1

- 1 Energy Consumption & PD
- 2 Thermal En. Cons & PD
- 3 Electrical En. Cons & PD
- 4 Resident Population & PD
- 5 Non-Resident Population & PD
- 6 Population Serv... & PD
- 7 Military Personnel... & PD
- 8 En. Consumption/Pop. Served & PD
- 9 En. Consumption/Pop. & PD
- 10 Electric En. Consumption/Person & PD
- 11 Installed Air Cond Capacity & PD
- 12 Elec. Generation of Air Cond & PD
- 13 Heat Property Inventory (HP) & PD
- 14 HP/Person Population
- 15 Energy Consumption/GSF & PD
- 16 Thermal En. Consumption/GSF & PD
- 17 Electrical En. Consumption/GSF & PD
- 18 HP by Category

Training
 Maintenance & Production
 Research, Development & Testing
 Storage
 Other Covered Storage
 Hospital & Medical
 Adm. Building
 Bachelor Housing
 Community Fm Bldg
 Family Housing
 Operational Bldg Grp
 Utility Buildings
 Other

**Population Served is the total Resident & Non-Resident Population
 **HP by Category
 **HP Pop. at Resident + 1/3 Non-Resident

Tobyhanna Army Depot



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION TOBURNASSIA ABSE, DESERT DA MACOM BARZEEZ CLIMATIC REGION 2 HOO 63116 CDD 43A

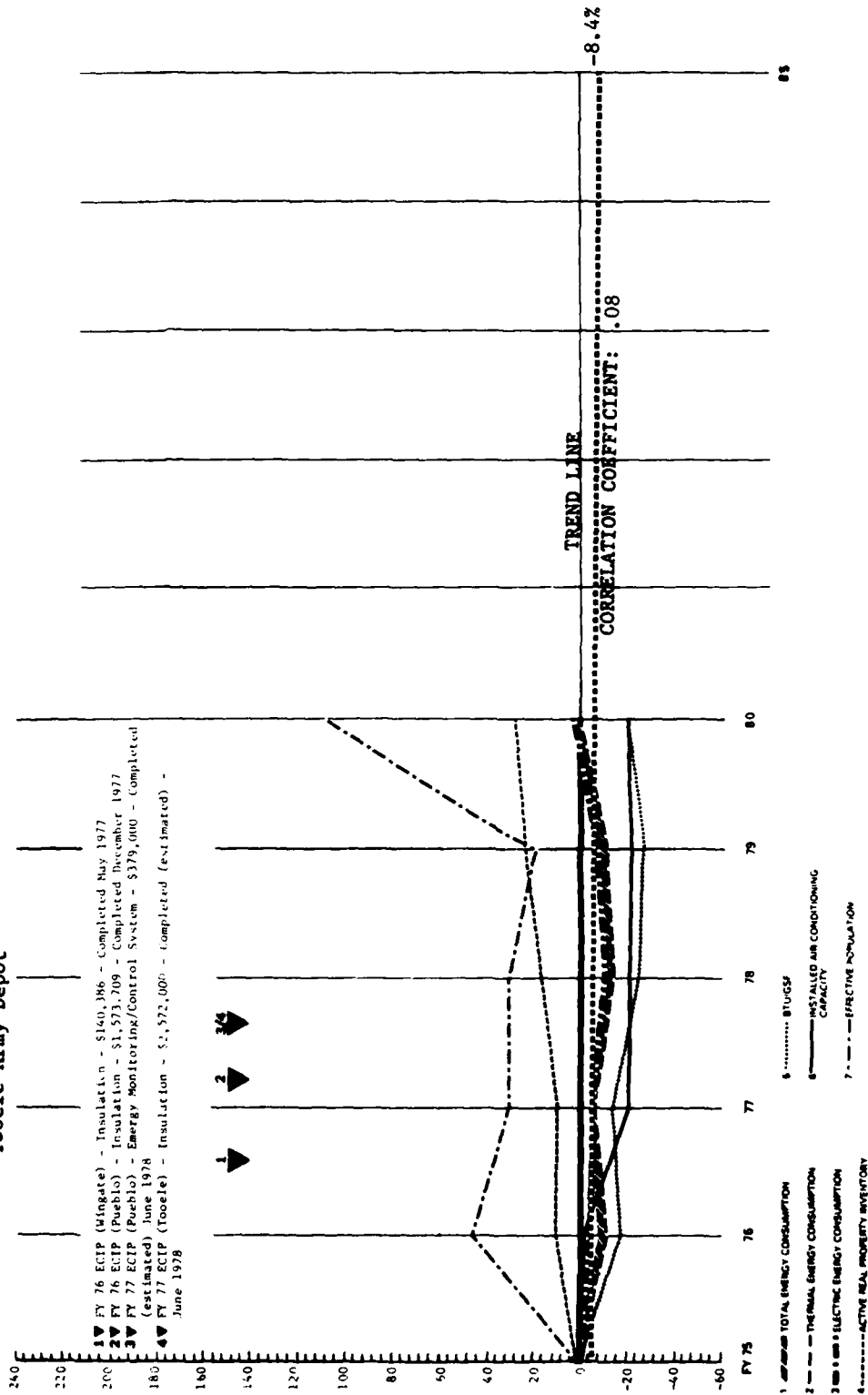
UNITS/CF	%	M	77	78	79	80
ABTU	822,101	697,036	1,155,211	793,074	830,236	738,435
ABTU	616,726	494,895	1,191,811	571,074	606,000	508,175
ABTU	705,575	202,139	1,211,211	222,060	224,136	210,260
PEOPLE	3,443	3,439	1,011	1,083	233	290
PEOPLE	3,561	3,386	1,041	1,484	4,074	4,067
PEOPLE	1,264	2,297	1,231	1,577	1,561	1,569
ABTU/ACAP	230,8	196,4	1,155,211	214,7	203,8	181,6
ABTU/ACAP	650,6	539,1	1,177,711	609,2	551,6	509,0
ABTU/ACAP	1,803,3	1,375,1	1,211,211	2,027,2	893,3	784,0
TONS	804	834	1,371	933	932	938
ABTU/ACAP	255,7	242,4	1,171	2,800	240,3	246,0
ABTU/ACAP	3,456	3,215	1,171	3,566	3,671	3,705
ABTU/ACAP	2,73	2,72	1,049	2,73	2,40	2,39
ABTU/ACAP	237,934	198,302	1,167	222,523	226,133	199,308
ABTU/ACAP	128,453	140,795	1,211,11	160,217	165,077	137,159
ABTU/ACAP	19,483	51,307	1,311	6,306	61,026	65,363
ABTU/ACAP	528	566	552	668	668	670
ABTU/ACAP	20	20	21	21	21	21
ABTU/ACAP	2,421	2,455	2,392	2,352	2,352	2,352
ABTU/ACAP	12	12	12	12	12	12
ABTU/ACAP	191	193	196	197	197	197
ABTU/ACAP	61	61	61	61	61	61
ABTU/ACAP	136	136	138	133	133	133
ABTU/ACAP	5	5	5	5	5	5
ABTU/ACAP	53	49	57	57	57	57
ABTU/ACAP	20	21	21	21	21	21

- 1 Energy Consumption & PD
- 2 Thermal En. Cost & PD
- 3 Electrical En. Cost & PD
- 4 Non-Residential Population & PD
- 5 Non-Residential Population & PD
- 6 Population Strength & PD
- 7 Effective Population & PD
- 8 En. Consumption/Pop. Served & PD
- 9 En. Consumption/Pop. & PD
- 10 Electrical En. Consumption/Population
- 11 Installed Air Cond Capacity & PD
- 12 Elec Energy/Ton of Air Cond & PD
- 13 Real Property Inventory, WPM & PD
- 14 Energy/Residence
- 15 Energy Consumption/GSF & PD
- 16 Thermal En. Consumption/GSF & PD
- 17 Electrical En. Consumption/GSF & PD
- 18 WPM by Category

- Training
- Manufacturing & Production
- Research, Development & Testing
- Storage
- Other Command Storage
- Hospital & Medical
- Administration
- Backshop Housing
- Community Air Base
- Family Housing
- Operational Use Only
- Utility Buildings
- Other

**PD at Percent Division from Base Year **Population Served is the total Resident & Non-Resident Population **1st Pop is Resident + 1/2 Non-Resident

Tooele Army Depot



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - TOOELE ARMY DEPOT, UT MACOM - PARCEL CLIMATIC REGION - MOD 5, 261 CDD 850

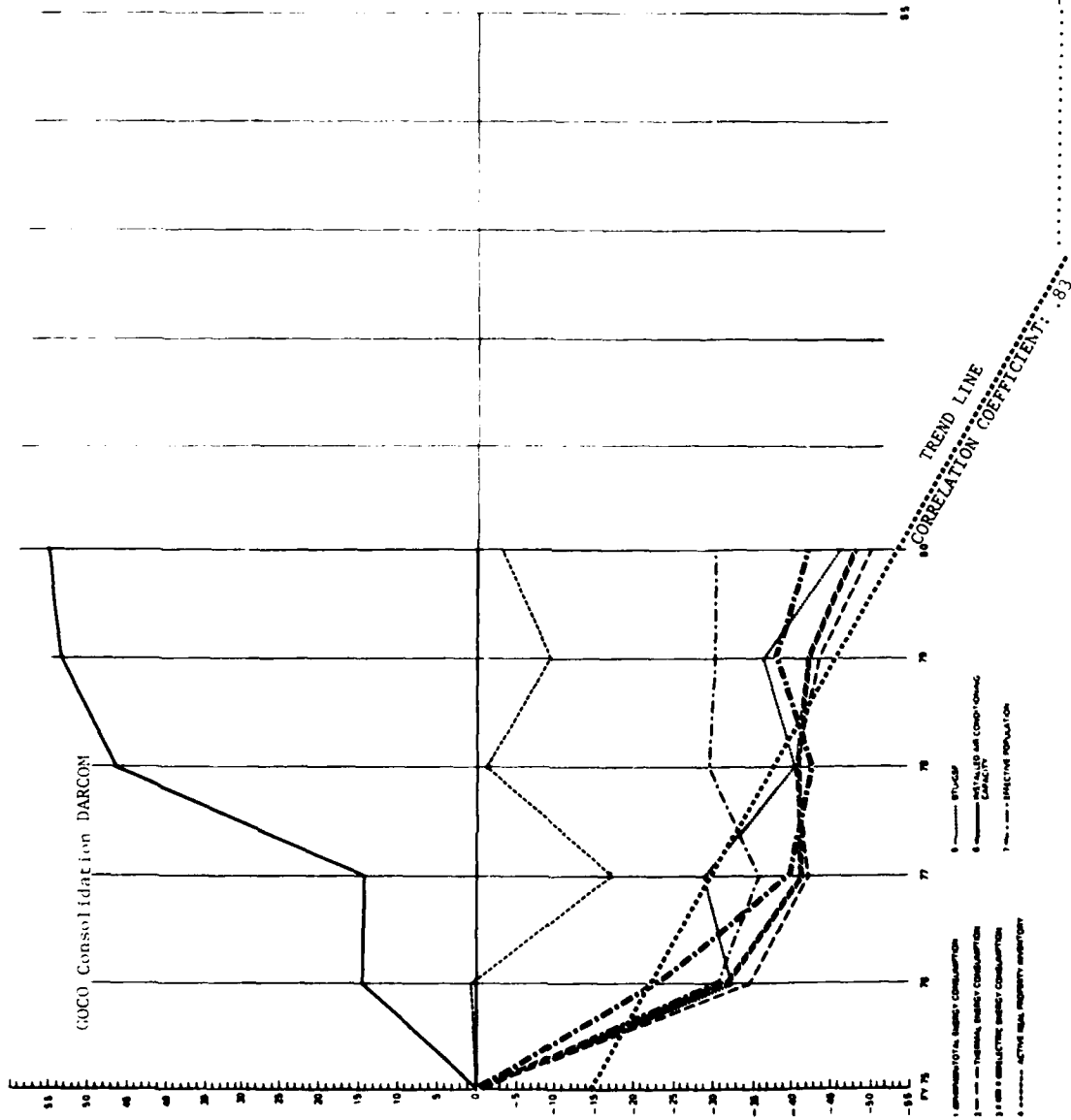
UNITS	75	76	77	78	79	80
ARTY	1,331,932	1,225,371	1,264,065	1,167,517	1,202,471	1,362,018
ASST	851,218	747,477	795,361	735,536	745,532	858,465
ASST	500,214	477,834	467,204	431,981	456,252	503,251
PEOPLE	559	643	601	542	632	567
PEOPLE	6,505	6,120	5,206	5,272	5,970	9,108
PEOPLE	6,764	6,781	6,107	5,769	5,402	9,867
PEOPLE	1,761	2,568	2,103	2,288	2,089	3,670
PEOPLE	283.8	480.7	207.0	202.4	222.6	188.0
PEOPLE	1,911.3	477.2	1,378.7	510.3	1,255.1	371.1
PEOPLE	1,621.1	1,036.6	1,166.3	789.7	1,057.7	887.8
PEOPLE	299.0	1,621.1	1,166.3	1,317	1,302	1,327
PEOPLE	16,072	866.0	1,411	328.0	1,351.0	379.3
PEOPLE	9,110	6,94	7,65	18,601	19,710	20,404
PEOPLE	86,380	68,741	71,769	63,766	61,008	66,733
PEOPLE	53,159	41,912	55,214	39,543	37,825	47,081
PEOPLE	31,221	26,800	28,555	21,223	21,183	24,671
PEOPLE	2,249	1,934	1,934	2,075	2,086	2,072
PEOPLE	22,067	11,982	8,127	8,804	8,800	9,474
PEOPLE	50	15	19	42	52	51
PEOPLE	571	456	454	422	437	465
PEOPLE	114	114	125	125	125	125
PEOPLE	240	215	216	234	243	226
PEOPLE	174	174	174	174	174	174
PEOPLE	518	562	504	510	517	510
PEOPLE	110	118	111	114	115	112
PEOPLE	5	5	5	5	5	5

1 Energy Consumption & PD
 2 Thermal En Cons & PD
 3 Electrical En Cons & PD
 4 Non-Residential Population & PD
 5 Non-Residential Population*** & PD
 6 Non-Residential Population*** & PD
 7 Electrical En Consumption*** & PD
 8 En Consumption*** & PD
 9 En Consumption*** & PD
 10 Electrical En Consumption*** & PD
 11 Available Air Cond Capacity & PD
 12 Elec Energy of Air Cond & PD
 13 Fuel Property Inventory 1978 & PD
 14 RPD (Reserve Population)
 15 Energy Consumption (OSF & PD)
 16 Thermal En Consumption (OSF & PD)
 17 Electrical En Consumption (OSF & PD)
 18 RPD by Category

Training
 Maintenance & Production
 Research, Development & Testing
 Storage
 Other Contract Storage
 Hospital & Medical
 Administration
 Bachelor Housing
 Community Facilities
 Family Housing
 Quartermaster Storage
 Utility Buildings
 Other

***PD is Percent Deviation from Base Year
 **Population Served is the Total Resident & Non-Resident Population
 ***RPT Page at Resident + 1/2 Non-Resident

REMARKS Data includes Pueblo AD, Ft Wingate AD, Umatilla AD and Navajo AD which are sub-activities of Tooele AD.
 1 FY 76 ECIP (Wingate) - Insulation - \$160,386 - Completed May 1977
 2 FY 76 ECIP (Pueblo) - Insulation - \$1,573,709 - Completed December 1977
 3 FY 77 ECIP (Pueblo) - Energy Monitoring/Control System - \$379,000 - Completed (estimated) June 1978
 3 FY 77 ECIP (Tooele) - Insulation - \$2,572,000 - Completed (estimated) June 1978



A-176

U.S. Army ANALYSIS OF ENERGY CONSUMPTION

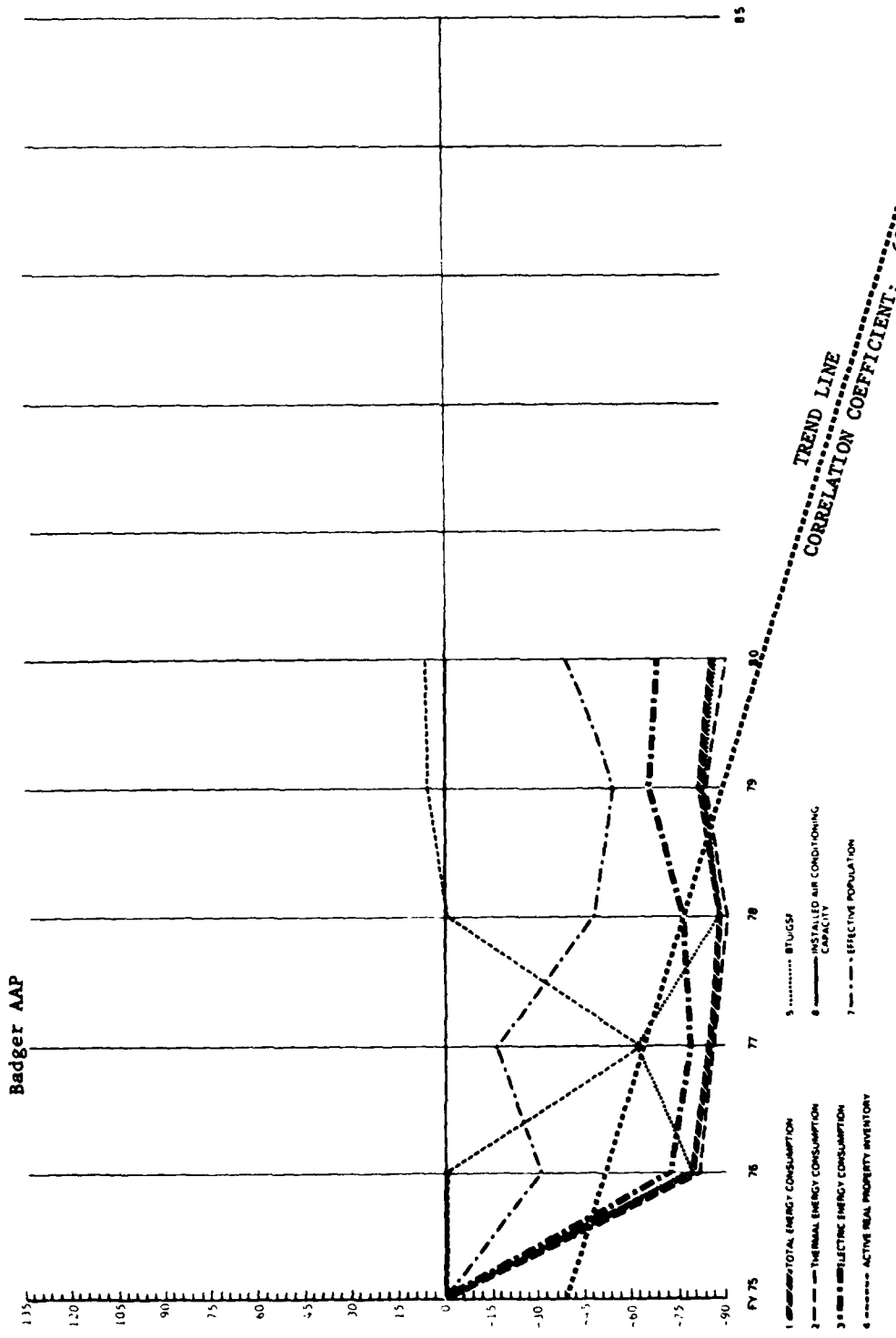
INSTALLATION COCO CONSOLIDATION MACOM DABCOM

UNITARY	75	76	77	78	79	80
1 Energy Consumption @ PD	28,318,857	19,710,753	16,387,892	17,167,402	15,745,020	15,066,689
2 Thermal En Cons @ PD	22,418,407	14,634,499	13,016,583	13,313,663	12,813,302	11,231,825
3 Electrical En Cons @ PD	6,560,450	5,035,734	3,971,209	3,787,739	3,070,842	3,792,864
4 Non-Housing Population @ PD	1,072	1,048	817	796	818	921
5 Population Service *** @ PD	32,315	21,508	20,398	22,651	22,371	22,021
6 Population Service **** @ PD	33,387	22,534	21,324	21,447	23,189	22,841
7 Electric Population**** @ PD	11,844	8,217	7,636	8,366	8,275	8,264
8 En Consumption/Pop Service @ PD	873.9	713.9	713.3	711.3	722.1	728.4
9 En Consumption/Pop Service @ PD	2,446.7	2,398.7	2,224.7	2,054.6	1,837.2	1,837.2
10 Electric En Consumption/Pop Service @ PD	6,119.8	4,824.2	4,744.6	4,733.3	4,976.3	4,104.8
11 Thermal En Cons/Pop Service @ PD	16,017	18,383	18,364	23,485	24,558	24,788
12 Total Energy/Pop Service @ PD	408.1	275.0	216.2	160.4	155.8	153.0
13 Total Energy/Pop Service @ PD	58,302	38,572	48,070	57,582	52,755	56,375
14 Energy Consumption/Pop @ PD	4.92	7.13	6.30	6.90	6.38	6.82
15 Thermal En Consumption/Pop @ PD	197,047	336,513	353,389	297,191	317,428	267,258
16 Electrical En Consumption/Pop @ PD	184,522	230,196	270,786	232,358	240,267	199,979
17 Thermal En Consumption/Pop @ PD	116,257	86,317	82,633	65,433	77,161	87,279
18 En Cons/Pop Service @ PD						
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PD @ Percent Division from Each Year
 **Population Service is the total Resident & Non-Resident Population
 ***En Cons @ Resident + 1/2 Non-Resident

DATA FOR SCRANTON AAP WAS NOT REPORTED FOR FY 78, 79 AND 80. ENERGY CONSUMPTION DATA WAS OBTAINED FROM DEIS AND FY 77 DATA WAS CARRIED OVER FOR MISSING YEARS TO PROVIDE FOR MORE CONSISTENT COMPARISONS IN OTHER DATA FIELDS.

REMARKS



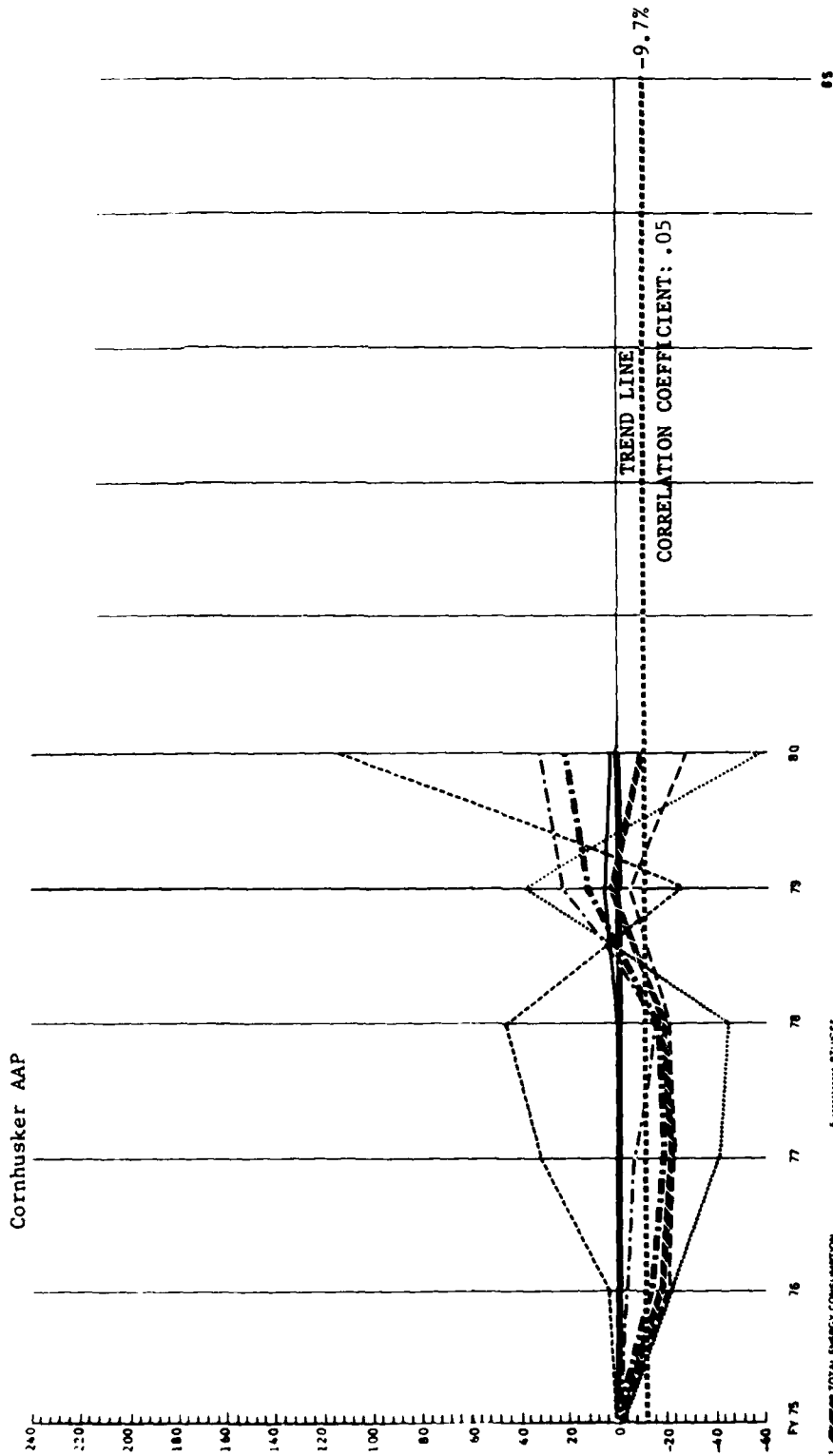
U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION BACKGR. RI MACOM PARTOM CLIMATIC REGION 1 HDD 7,382 CDD 631

UNIT/SPY	75	76	77	78	79	80
1 Energy Consumption B PD	2,632,885	372,507	1,850,003	184,706	301,669	225,895
2 Thermal En Cons B PD	1,393,903	238,731	1,155,172	127,426	217,202	148,175
3 Electrical En Cons B PD	265,982	68,776	197,206	57,280	84,467	77,720
4 Resident Population B PD	0	0	0	0	0	0
5 Non-Resident Population B PD	411	283	131,111	211	187	253
6 Population Served** B PD	411	283	131,111	211	187	253
7 Electric Population*** B PD	137	80	131,111	211	62	84
8 En Consumption/Pop Served B PD	3,025.9	1,372.3	1,271.0	875.2	1,613.2	897.9
9 En Consumption/Pop B PD	11,871.0	5,571.1	2,030.1	2,648.6	5,885.6	3,682.2
10 Electric En Consumption/Resident Population	310	410	1.0	410	410	410
11 Installed Air Cond Capacity B PD	400.0	187.2	1,271.0	137.7	206.0	139.6
12 Elec Energy/ton of Air Cond B PD	4,060	4,068	1,631.4	4,056	4,301	6,299
13 Heat Property Inventory (HPH) B PD	4,060	4,068	1,631.4	4,056	4,301	6,299
14 HPH/Resident Population	9,914	1,061	1,271.0	1,271.0	1,271.0	1,271.0
15 Energy Consumption/GSF B PD	403,913	80,906	1,800,011	153,104	70,139	57,566
16 Thermal En Consumption/GSF B PD	363,326	63,916	1,481,411	131,437	50,500	36,667
17 Electrical En Consumption/GSF B PD	60,587	16,990	1,271.0	16,126	19,639	18,079
18 HPH per Category	11	11	11	11	40	11
Maintenance & Production	2,974	2,972	465	2,971	3,189	631
Research, Development & Training	518	518	296	296	295	285
Storage	11	11	276	276	223	170
Other Covered Storage	11	11	11	11	11	11
Hospital & Medical	165	165	153	153	151	117
Administration	65	65	56	56	55	27
Community Facilities	28	28	46	46	337	33
Family Housing	108	108	290	290	337	155
Operational Buildings	108	108	290	290	337	155
Utility Buildings	108	108	290	290	337	155
Other	108	108	290	290	337	155

Population Served is the total Resident & Non-Resident Population *HPH Pop & Resident + 1/3 Non-Resident

- 1 Energy Consumption B PD
- 2 Thermal En Cons B PD
- 3 Electrical En Cons B PD
- 4 Resident Population B PD
- 5 Non-Resident Population B PD
- 6 Population Served** B PD
- 7 Electric Population*** B PD
- 8 En Consumption/Pop Served B PD
- 9 En Consumption/Pop B PD
- 10 Electric En Consumption/Resident Population
- 11 Installed Air Cond Capacity B PD
- 12 Elec Energy/ton of Air Cond B PD
- 13 Heat Property Inventory (HPH) B PD
- 14 HPH/Resident Population
- 15 Energy Consumption/GSF B PD
- 16 Thermal En Consumption/GSF B PD
- 17 Electrical En Consumption/GSF B PD
- 18 HPH per Category

REMARKS



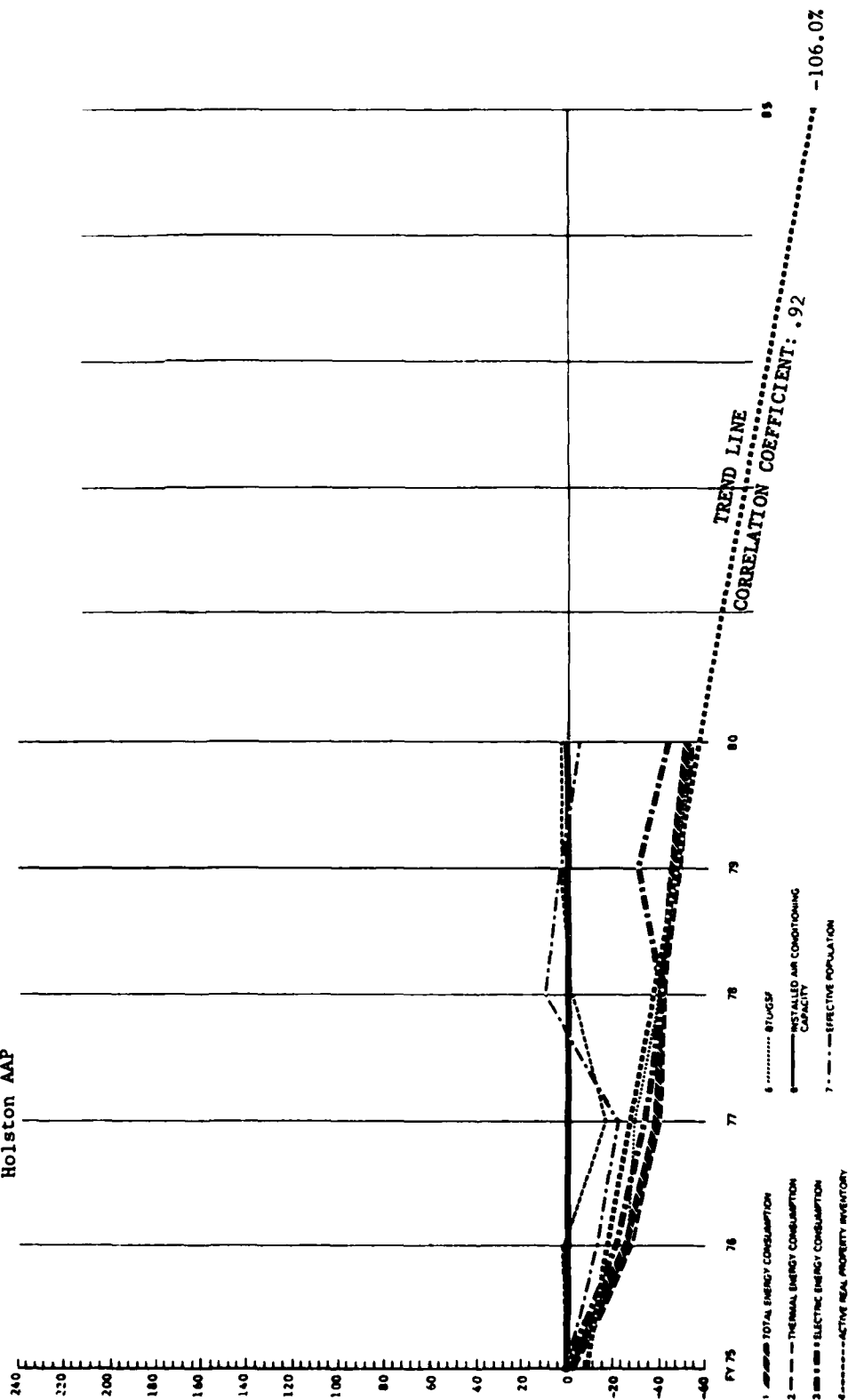
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION CORNLIUSKER AAF, NE MACOM DARCOR CLIMATIC REGION MOO 6,420 CDD 1,006

	76	77	78	79	80
1 Energy Consumption & PD	63,133	36,811	34,600	63,757	18,647
2 Thermal En Cons & PD	27,174	21,235	21,452	25,817	19,275
3 Electrical En Cons & PD	15,959	13,576	13,168	17,960	10,372
4 Resident Population & PD	61	54	35	70	36
5 Non-Resident Population & PD	134	97	89	171	204
6 Population Services** & PD	155	101	124	211	240
7 Military Personnel*** & PD	78	74	65	97	106
8 En Consumption/Pop Served & PD	278.1	248.9	278.0	207.4	180.2
9 En Consumption/Pop & PD	565.9	438.0	432.3	431.4	370.9
10 Electric En Consumption/Person	389.7	308.5	315.7	446.3	518.1
11 Installed Air Cond Capacity & PD	42	42	42	42	42
12 Site Energy/Pop of Air Cond & PD	379.9	327.2	313.0	407.7	480.5
13 Heat Production Inventory MW & PD	374	375	428	239	651
14 Distribution Production	6.10	6.41	7.23	2.46	6.84
15 Energy Consumption/GSP & PD	133,126	102,913	73,617	183,083	55,640
16 Thermal En Consumption/GSP & PD	81,870	63,388	63,642	106,020	27,605
17 Electrical En Consumption/GSP & PD	49,236	40,525	27,974	75,062	28,035
18 Btu by Category					
Training	135	203	213	61	227
Maintenance & Production					
Research, Development & Testing					
Storage	138	8	40		205
Other Command Storage					
Hazard & Mobile					
Administration	5	6	6	2	6
Bachelor Housing	18	18	18	18	18
Community For Bde	29	29	29	29	29
Family Housing	2	2	2	2	2
Operational Bn-ship	7	7	7	7	7
Utility Buildings					
Other					

**PD in Percent Division from Base Year

REMARKS

Holston AAP



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - BOLSHOBAK, IN - MACOM, DARCOR - CLIMATIC REGION 5 MOD 1.495 CDD 1.225

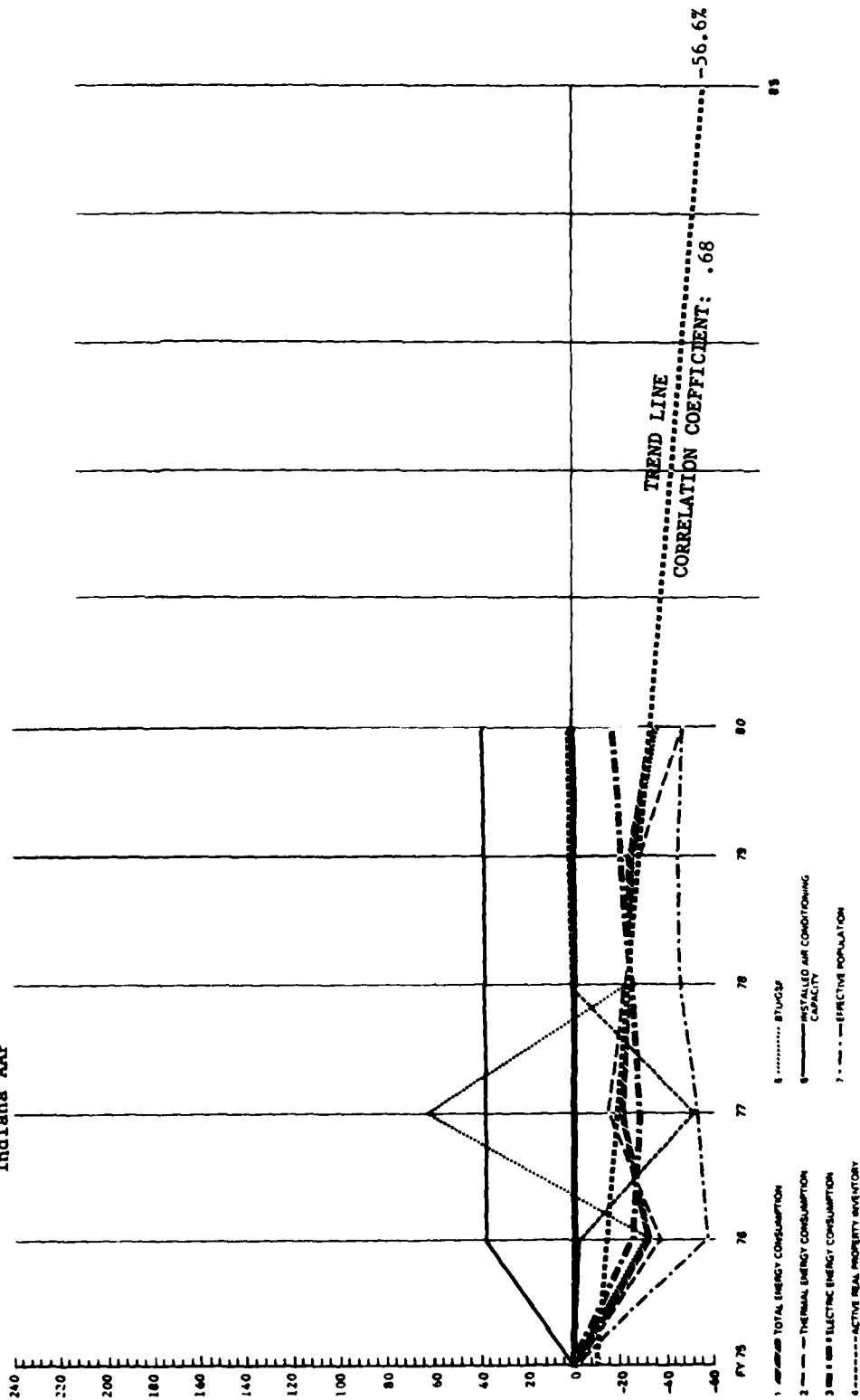
UNITS	PS	TR	TI	TR	TR	TR	TR	TR	TR	TR	TR	TR
UNIT	7,061,995	5,217,011	1,266,111	4,286,332	1,39,311	4,127,715	1,41,611	3,766,374	1,47,111	3,217,766	1,51,611	2,702,000
UNIT	6,002,696	4,182,290	1,271,011	3,600,319	1,40,011	3,508,358	1,41,611	3,050,682	1,49,111	2,502,000	1,55,011	1,955,011
UNIT	1,059,299	834,721	1,21,211	685,811	1,35,311	819,157	1,41,611	715,332	1,32,111	603,766	1,45,611	455,011
PEOPLE	0	0	0	0	0	0	0	0	0	0	0	0
PEOPLE	2,025	1,755	1,13,311	1,553	1,23,311	2,234	1,11,311	2,059	1,71	1,901	1,46,111	1,111
PEOPLE	2,025	1,755	1,13,311	1,553	1,23,311	2,234	1,11,311	2,059	1,71	1,901	1,46,111	1,111
PEOPLE	675	585	1,13,311	518	1,23,311	751	1,11,311	686	1,71	634	1,46,111	1,111
UNITUCAP	3,487.4	2,972.7	1,14,811	2,760.0	1,20,911	1,871.3	1,47,511	1,829.2	1,47,511	1,724.3	1,50,611	1,111
UNITUCAP	10,462.2	8,918.0	1,14,811	8,274.8	1,20,911	5,496.3	1,47,511	5,490.2	1,47,511	5,179.0	1,50,611	1,111
TONS	180	180	1,011	180	1,011	180	1,011	180	1,011	180	1,011	1,011
UNITUCAP	5,885.0	4,637.3	1,21,211	3,810.1	1,35,311	3,439.8	1,41,611	3,975.5	1,32,411	3,198.7	1,45,611	1,111
TR	2,449	2,457	1,0,311	2,053	1,16,211	2,416	1,1,311	2,488	1,1,611	2,445	1,1,511	1,1,511
TRUCAP	3,63	4,20	1,5,811	3,961	9,211	3,22	1,1,311	3,831	0,06	3,921	8,011	1,1,511
TRUCAP	2,883,624	2,123,326	1,26,411	2,087,818	1,27,611	1,708,491	1,40,811	1,513,776	1,47,511	1,319,021	1,56,311	1,1,511
TRUCAP	2,453,080	1,783,584	1,27,211	1,553,784	1,28,411	1,452,278	1,40,811	1,226,158	1,50,011	1,087,324	1,55,611	1,1,511
TRUCAP	3,12,451	1,37,311	1,21,511	1,374,054	1,23,811	256,274	1,40,811	281,611	1,55,511	331,657	1,46,411	1,1,511
TRUCAP	9	9	9	9	9	9	9	9	9	9	9	9
TRUCAP	1,371	1,378	1,378	976	1,378	1,378	1,378	1,378	1,378	1,378	1,378	1,378
TRUCAP	23	23	23	26	23	23	23	23	23	23	23	23
TRUCAP	509	509	509	215	215	215	215	215	215	215	215	215
TRUCAP	12	12	12	12	12	12	12	12	12	12	12	12
TRUCAP	110	110	110	126	126	126	126	126	126	126	126	126
TRUCAP	64	64	64	57	57	57	57	57	57	57	57	57
TRUCAP	10	10	10	20	20	20	20	20	20	20	20	20
TRUCAP	339	337	337	337	337	337	337	337	337	337	337	337
TRUCAP	24	24	24	24	24	24	24	24	24	24	24	24

- 1 Energy Consumption @ PD
- 2 Thermal En. Cons @ PD
- 3 Electrical En. Cons @ PD
- 4 Fuel En. Cons @ PD
- 5 Non-Residential Population @ PD
- 6 Residential Population @ PD
- 7 Electric Population @ PD
- 8 En. Consumption @ PD
- 9 En. Consumption @ PD
- 10 Electric En. Consumption @ PD
- 11 Available Air Cond Capacity @ PD
- 12 Base Consumption of Air Cond @ PD
- 13 Total Population @ PD
- 14 Available Population @ PD
- 15 Energy Consumption @ PD
- 16 Thermal En. Consumption @ PD
- 17 Electrical En. Consumption @ PD
- 18 Fuel En. Consumption @ PD

484848

**PD is Percent Distribution from Base Year **Population Served is the total Population @ Non-Residential Population + 100 Non-Residential

Indiana AAP



U.S. Army - ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - INDIANA, AR, 1RD. MACOM DARCON CLIMATIC REGION 3 HDD 4,640 CDD 1,268

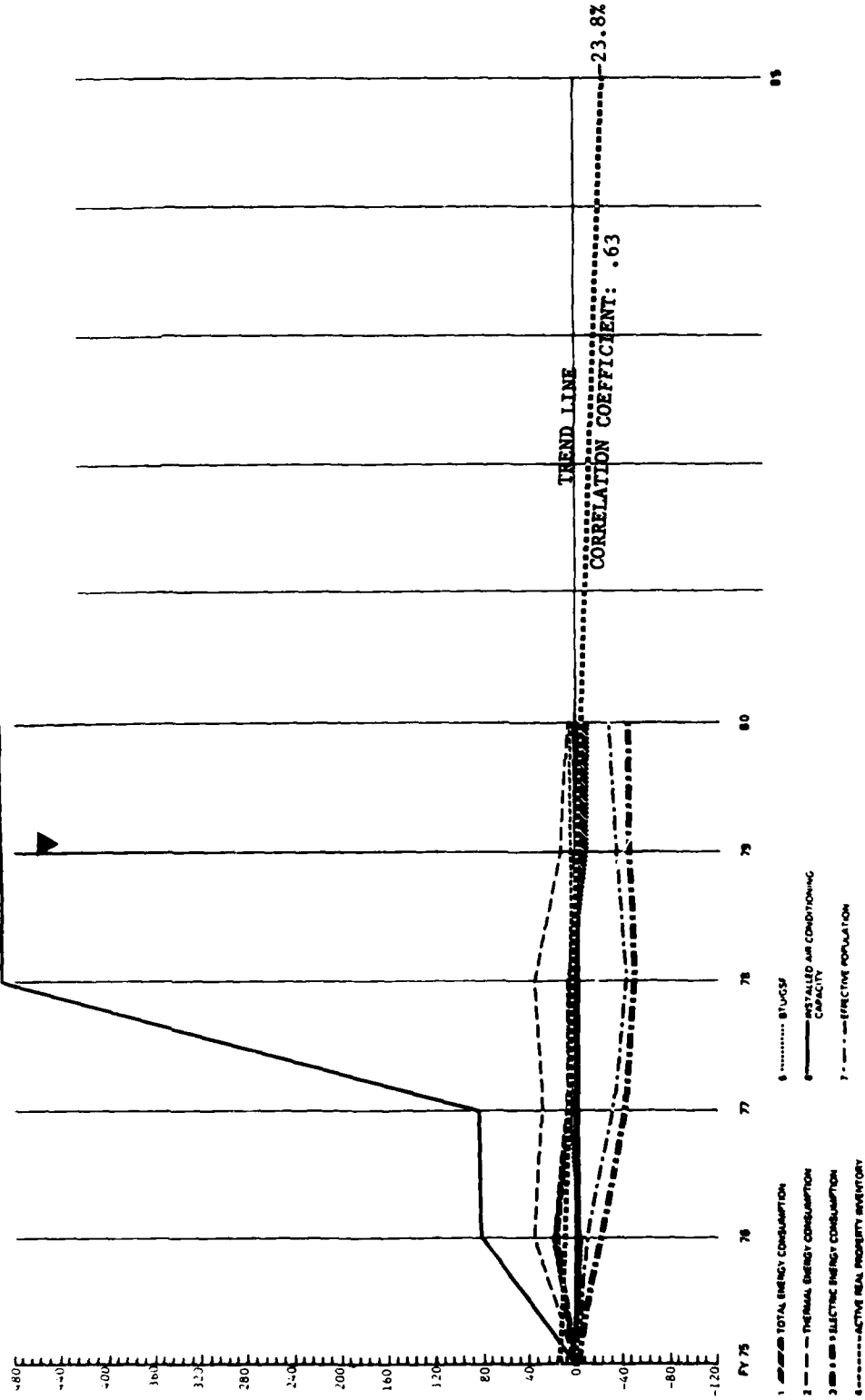
UNITARY	76	77	78	79	80
ENERGY	515,026	606,738	391,877	1-23,91	1-25,91
HEATING	247,760	1-21,1	1-21,1	1-21,1	1-21,1
CHEMICAL	184,313	247,867	227,289	1-22,61	1-29,81
ELECTRIC	221,661	158,472	164,588	1-25,71	1-20,71
PEOPLE	204	204	204	204	204
PEOPLE	1,040	1-67,61	1-44,1	1-55,11	1-54,81
PEOPLE	1,412	1-74,6	1-37,8	1-64,5	1-51,51
PEOPLE	1,212	1-53,1	1-53,1	1-46,1	1-46,0
PEOPLE	150,9	219,5	236,9	1-37,01	1-37,31
PEOPLE	508,6	631,1	682,9	1-31,6	1-30,31
PEOPLE	1,085,6	801,2	776,8	1-23,1	1-20,31
PEOPLE	1,002	1,388	1,390	1-38,71	1-38,71
PEOPLE	221,0	117,8	118,2	1-46,41	1-42,51
PEOPLE	4,670	4,660	2,263	1-51,51	1-49,1
PEOPLE	110,284	74,627	1,801	1-37,7	1-37,7
PEOPLE	62,862	93,552	109,530	1-62,81	1-62,81
PEOPLE	63,022	15,074	70,027	1-47,21	1-47,21
PEOPLE	2,797	2,287	2,331	1-3	1-3
PEOPLE	1,511	1,510	771	1-4	1-4
PEOPLE	183	190	191	1-20	1-20
PEOPLE	200	200	199	1-3	1-3
PEOPLE	115	115	114	1-115	1-114
PEOPLE	12	12	12	1-12	1-12
PEOPLE	32,3	58	329	1-32,3	1-32,3

- 1 Energy Consumption @ PD
- 2 Thermal En Conv @ PD
- 3 Electrical En Conv @ PD
- 4 Electrical En Conv @ PD
- 5 Non-Residential Population @ PD
- 6 Non-Residential Population @ PD
- 7 Effective Population @ PD
- 8 En Consumption/Pop Served @ PD
- 9 En Consumption/Pop Served @ PD
- 10 Electric En Consumption/Residential Population
- 11 Installed Air Cond Capacity @ PD
- 12 Elec Energy/Pop of Air Cond @ PD
- 13 Heat Property Inventory @ PD
- 14 Inefficiency Population
- 15 Energy Consumption/GSF @ PD
- 16 Thermal En Consumption/GSF @ PD
- 17 Electrical En Consumption/GSF @ PD
- 18 kWh by Category
- 19 Administration & Production
- 20 Research, Development & Testing
- 21 Storage
- 22 Other Command Storage
- 23 Vehicle & Material
- 24 Administration
- 25 Bachelor Housing
- 26 Community Fee Area
- 27 Family Housing
- 28 Operational Bldg Prog
- 29 Utility Buildings
- 30 Other

**PD is Percent Conversion from Base Year **Population Served is the total Population @ Non-Residential Population + 100 Non-Residential

REMARKS

Iowa AAP



▼ FY 78 ECIP - Insulate Steam Lines - \$194,000 - Completed (Estimated) December 1979

U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION IEBIA.ARP.IA MACOM DARTMOUTH CLIMATIC REGION 2 MOD 5,14,9 CDD 094

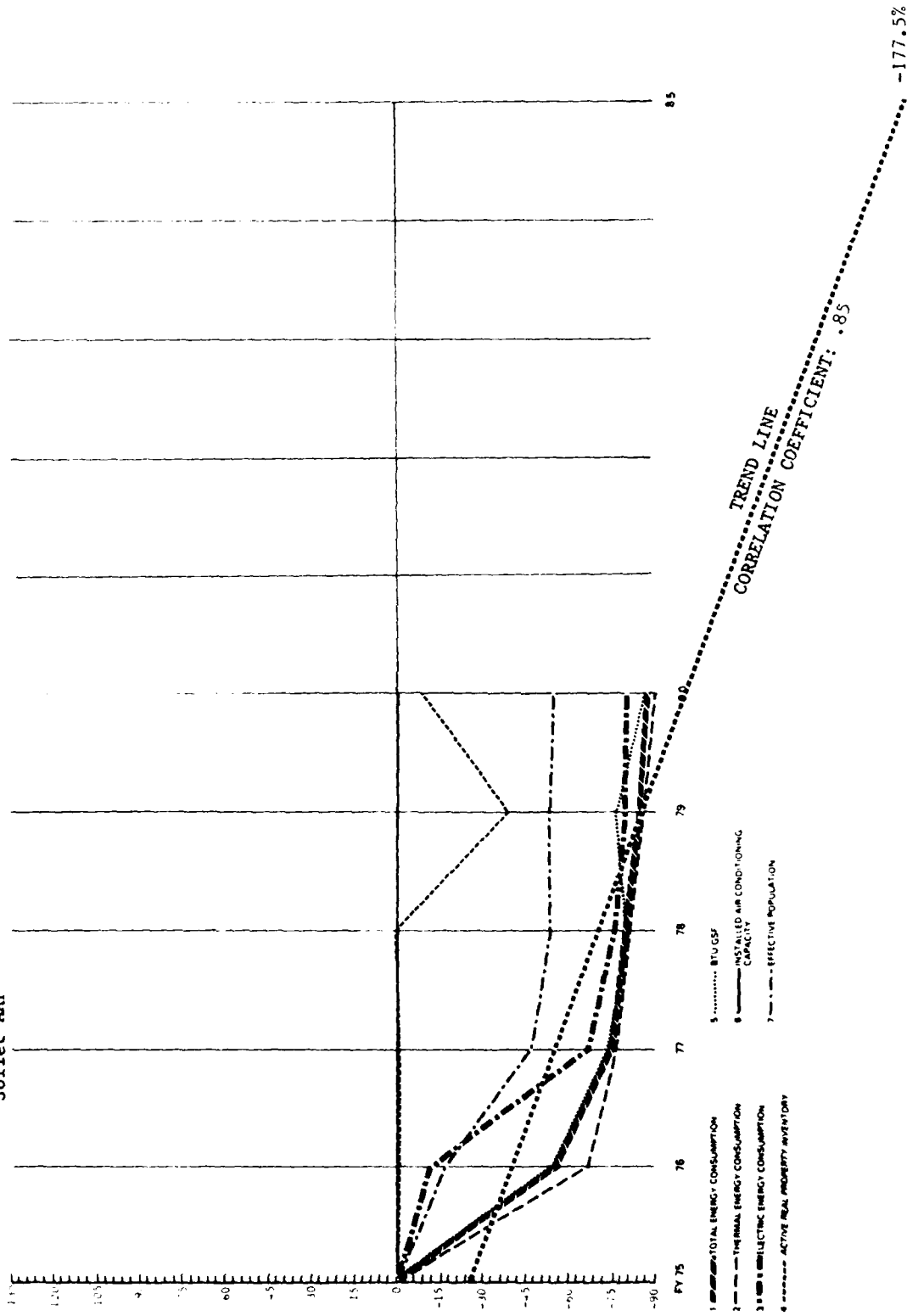
UNITARY	75	76	77	78	79	80
1 Energy Consumption @ PD	1,268,589	1,517,626	1,368,747	1,365,264	1,191,837	1,145,080
2 Thermal En Conv @ PD	875,377	1,214,103	1,116,063	1,174,128	989,235	938,250
3 Electrical En Conv @ PD	393,212	303,523	234,686	193,136	202,612	208,840
4 Resident Population @ PD	138	130	109	100	140	115
5 Non-Resident Population @ PD	1,593	1,408	1,304	1,083	1,163	1,024
6 Population Served** @ PD	1,731	1,538	1,413	1,183	1,203	1,138
7 Effective Population*** @ PD	669	629	466	431	478	475
8 En Consumption/Pop Served @ PD	2,611	2,417	2,035	1,976	1,997	1,988
9 En Consumption/Pop @ PD	1,841	2,412	2,032	1,691	1,644	1,512
10 Electric En Consumption/Pop @ PD	2,489	1,909	1,539	1,239	1,306	1,103
11 Installed Air-Cond Capacity @ PD	841	1,539	1,831	1,439	1,493	1,500
12 Elec Energy/Ton of Air-Cond @ PD	4,627	4,972	3,761	3,761	4,051	5,000
13 Heat Priority Inventory @ PD	3,638	4,368	3,760	3,761	3,761	3,769
14 HVE/Effective Population	5,728	8,941	8,071	8,221	8,791	8,664
15 Energy Consumption/GSF @ PD	348,705	347,442	364,028	363,006	316,894	303,818
16 Thermal En Consumption/GSF @ PD	240,607	277,954	302,144	312,185	261,022	268,919
17 Electrical En Consumption/GSF @ PD	108,098	69,488	61,885	50,821	55,872	54,899
18 kWh by Category	5	6	6	6	6	6
19 Administration @ Production	1,401	2,063	1,498	1,498	1,498	1,498
20 Research, Development & Training	12	38	32	32	32	32
21 Storage	1,876	1,879	906	906	906	906
22 Other Covered Storage	5	5	5	5	5	5
23 Pumps & Meters	114	117	87	87	87	87
24 Administration	26	27	26	26	26	26
25 Bachelor Housing	99	90	90	90	90	90
26 Family Housing	18	59	51	51	51	54
27 Quartermaster Base Bldg	61	78	92	93	93	93
28 Utility Buildings	1,048	1,048	1,048	1,048	1,048	1,048
29 Other	5	5	5	5	5	5

**PD @ Percent Deviation from Base Year
 ***Pop Served to the west Resident @ Non-Resident Population
 ****Pop @ Resident + 1/3 Non-Resident

▼ FY 78 ECIP - Insulate Steam Lines - \$194,000 - Completed (estimated) December 1979

REMARKS

Joliet AAP

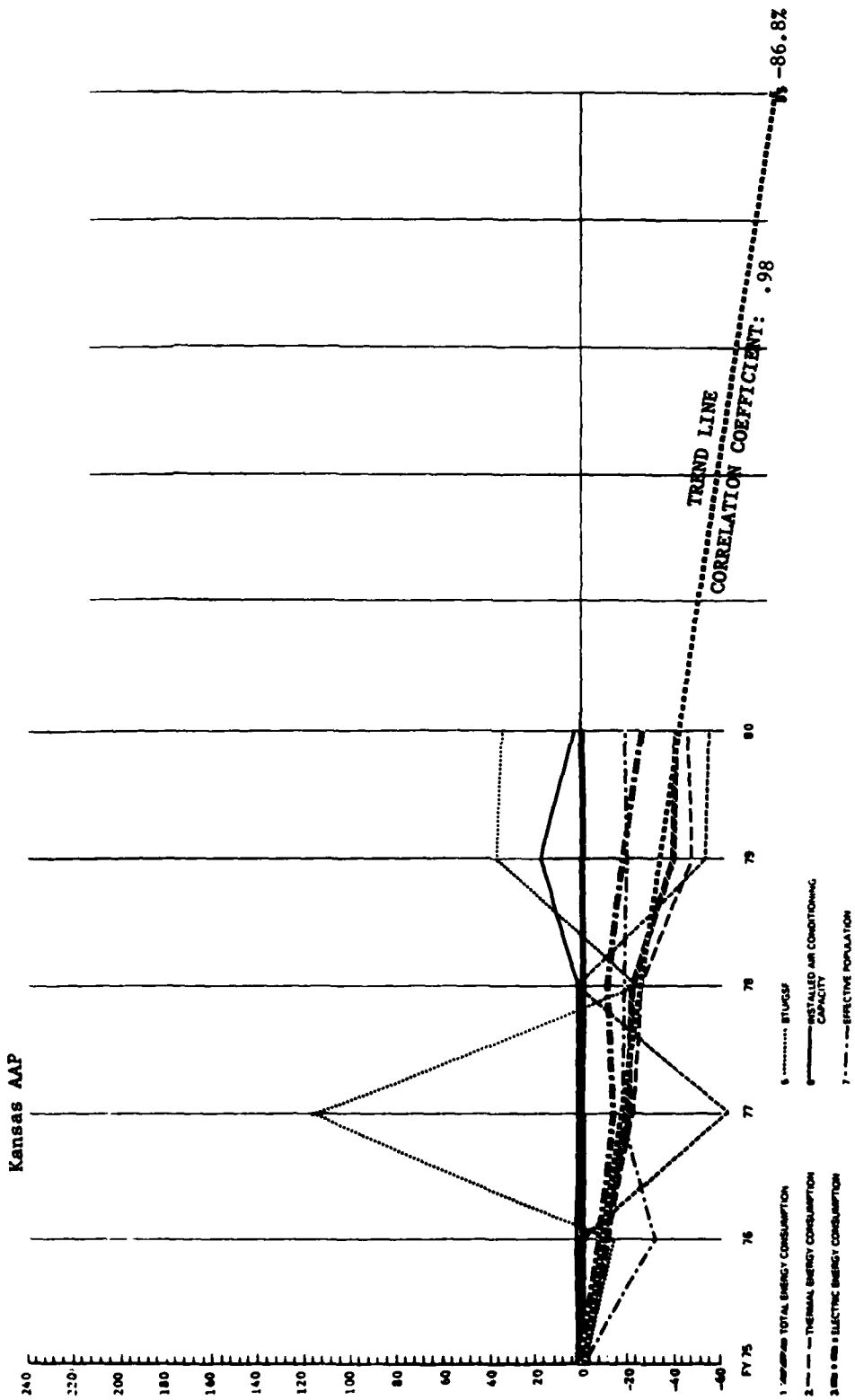


U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION ILLIET AFB, IL. MACOM PARCOM CLIMATIC REGION 2 HDD 6,180 CDD 993

UNIT/TYPE	76	77	78	79	80	81
1 Energy Consumption & PD	3,257,708	3,247,993	3,257,708	3,257,708	3,257,708	3,257,708
2 Thermal En Cons & PD	2,630,367	2,630,367	2,630,367	2,630,367	2,630,367	2,630,367
3 Electrical En Cons & PD	657,551	657,551	657,551	657,551	657,551	657,551
4 Electrical En Cons & PD	200	200	200	200	200	200
5 Non-Resident Population & PD	1,376	1,376	1,376	1,376	1,376	1,376
6 Population Servicer** & PD	1,573	1,573	1,573	1,573	1,573	1,573
7 Effective Population*** & PD	2,090.1	2,090.1	2,090.1	2,090.1	2,090.1	2,090.1
8 En Consumption/Pop Servicer & PD	4,988.9	4,988.9	4,988.9	4,988.9	4,988.9	4,988.9
9 En Consumption/ER Pop & PD	3,287.7	3,287.7	3,287.7	3,287.7	3,287.7	3,287.7
10 Electric En Consumption/Person Population	877	877	877	877	877	877
11 Installed Air Cond Capacity & PD	749.8	749.8	749.8	749.8	749.8	749.8
12 Elec Energy/Ton of Air Cond & PD	5,083	5,083	5,083	5,083	5,083	5,083
13 Real Property Inventory (RPI) & PD	7.71	7.71	7.71	7.71	7.71	7.71
14 RPI/En Consumption	646,805	646,805	646,805	646,805	646,805	646,805
15 Energy Consumption/GSF & PD	517,444	517,444	517,444	517,444	517,444	517,444
16 Thermal En Consumption/GSF & PD	129,316	129,316	129,316	129,316	129,316	129,316
17 Electrical En Consumption/GSF & PD	1,276	1,276	1,276	1,276	1,276	1,276
18 RPI by Category						
Training	1,276	1,276	1,276	1,276	1,276	1,276
Maintenance & Production	5	5	5	5	5	5
Research, Development & Testing	2,664	2,664	2,664	2,664	2,664	2,664
Storage	BASE	BASE	BASE	BASE	BASE	BASE
Other Covered Storage	12	12	12	12	12	12
Hospital & Medical	519	519	519	519	519	519
Administration	17	17	17	17	17	17
Bachelor Housing	183	183	183	183	183	183
Community Fr Bn	142	142	142	142	142	142
Family Housing	14	14	14	14	14	14
Operational Bldg Grp	237	237	237	237	237	237
Utility Buildings	BASE	BASE	BASE	BASE	BASE	BASE
Other						

**Population Served is the total Resident & Non-Resident Population
***ER Pop & Resident + 1/3 Non-Resident

REMARKS



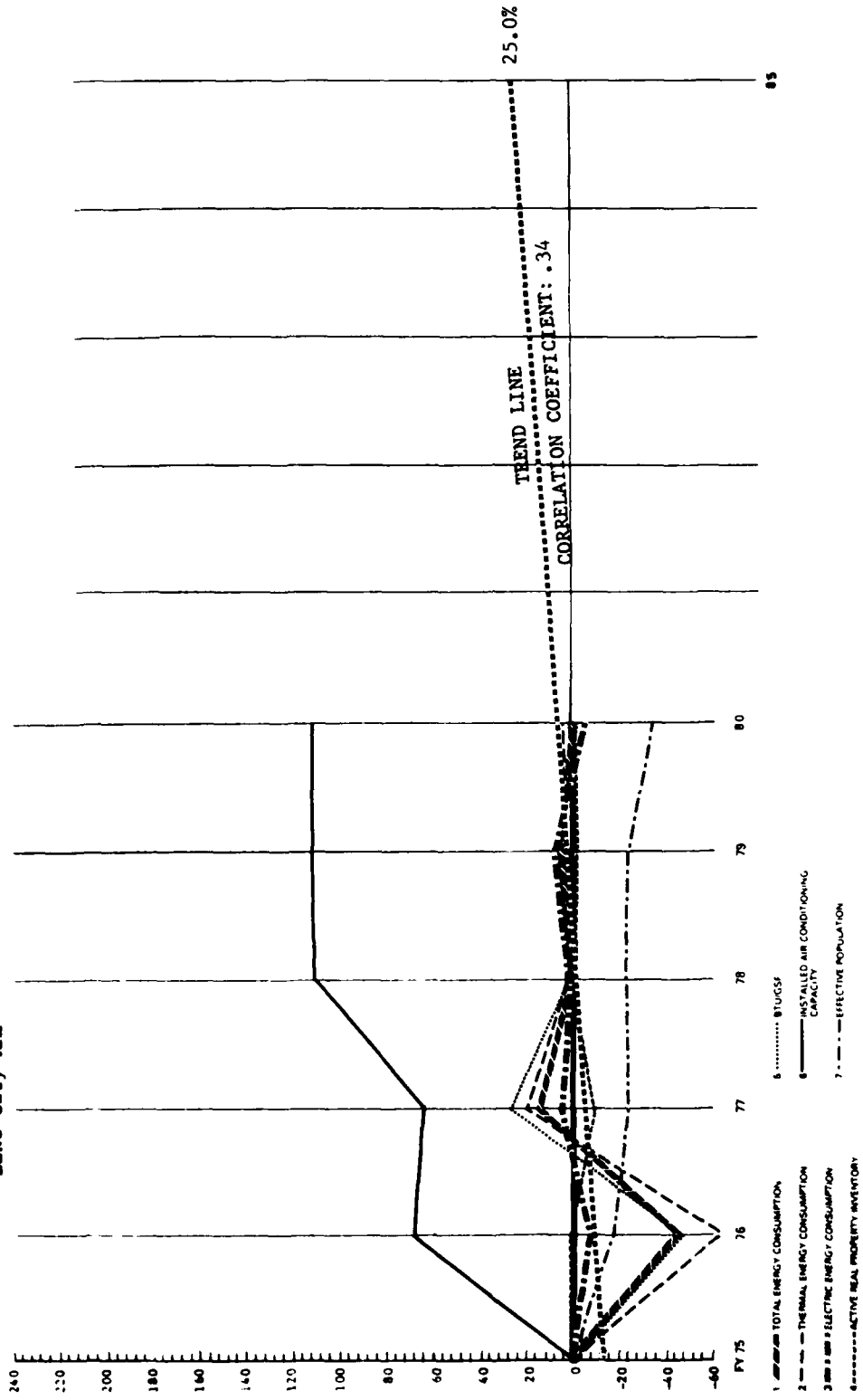
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION KANSAS AAF, KS MACOM DARGON CLIMATIC REGION 3 HDD: 2,005 CDD: 1,408

UNITS/FY	75	76	77	78	79	80
1 Energy Consumption & PD	315,070	315,537	315,138	315,138	315,138	315,138
2 Thermal En Cons & PD	255,000	255,000	255,000	255,000	255,000	255,000
3 Electrical En Cons & PD	100,070	100,070	100,070	100,070	100,070	100,070
4 Resident Population & PD	0	0	0	0	0	0
5 Non Resident Population & PD	0	0	0	0	0	0
6 Population Served** & PD	0	0	0	0	0	0
7 Effective Population*** & PD	0	0	0	0	0	0
8 En Consumption/Pop Served & PD	0	0	0	0	0	0
9 En Consumption/Pop & PD	0	0	0	0	0	0
10 Electric En Consumption/Resident Population	0	0	0	0	0	0
11 Heated Air Cond Capacity & PD	0	0	0	0	0	0
12 Elec Energy/Ton of Air Cond & PD	0	0	0	0	0	0
13 Real Property Inventory (RPI) & PD	0	0	0	0	0	0
14 Effective Population	0	0	0	0	0	0
15 Energy Consumption/GSF & PD	0	0	0	0	0	0
16 Thermal En Consumption/GSF & PD	0	0	0	0	0	0
17 Electrical En Consumption/GSF & PD	0	0	0	0	0	0
18 RPI by Category	0	0	0	0	0	0
Training	902	901	368	938	381	381
Maintenance & Production	16	17	8	19	8	8
Research, Development & Testing	1,065	1,070	116	976	297	297
Storage	0	0	201	90	138	138
Other Covered Storage	10	10	8	10	8	8
Hospital & Medical	95	95	57	95	59	59
Administration	29	30	11	30	13	13
Recreation	10	12	11	11	11	11
Community Facilities	33	33	24	33	29	29
Family Housing	0	0	0	0	0	0
Operational Buildings	0	0	0	0	0	0
Utility Buildings	0	0	0	0	0	0
Other	0	0	0	0	0	0

PD is Percent Deviation from Base Year **Population Served is the total Resident & Non-Resident Population *Eff Pop is Resident + 1/3 Non-Resident

REMARKS

Lake City AAP



A-192

U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION LAKE CITY AFB, MO MACOM DA COM CLIMATIC REGION 3 MOO 5,218 CDD 1,261

Category	W	M	J	J	A	S	O	N	D	W	M	J	J	A	S	O	N	D
UTILITY	1,049,559	561,700	-46,511	1,205,894	1,164,911	1,057,194	1,071,994	1,095,961	1,047,821	1,085,961	1,057,194	1,071,994	1,095,961	1,047,821	1,085,961	1,057,194	1,071,994	1,095,961
WTRU	203,205	241,531	-65,771	844,126	1,200,011	708,320	708,320	733,535	276,350	733,535	708,320	708,320	733,535	276,350	733,535	708,320	708,320	733,535
WTRU	346,354	320,169	-7,611	361,768	4,451	348,874	348,874	372,626	331,631	372,626	348,874	348,874	372,626	331,631	372,626	348,874	348,874	372,626
PEOPLE	2,692	2,180	-19,011	2,113	-21,511	2,064	2,064	1,984	1,466	1,984	2,064	2,064	1,984	1,466	1,984	2,064	2,064	1,984
PEOPLE	2,240	2,234	-18,511	2,125	-24,411	2,091	2,091	2,032	1,764	2,032	2,091	2,091	2,032	1,764	2,032	2,091	2,091	2,032
PEOPLE	945	181	-37,411	716	-24,711	728	728	709	610	709	728	728	709	610	709	728	728	709
WTRUCAP	353.1	231.4	-34,411	567.5	1,491.1	505.6	505.6	533.4	400.3	533.4	505.6	505.6	533.4	400.3	533.4	505.6	505.6	533.4
WTRUCAP	1,110.6	713.2	-35,211	1,684.2	1,310.1	1,522.2	1,522.2	1,543.8	1,197.2	1,543.8	1,522.2	1,522.2	1,543.8	1,197.2	1,543.8	1,522.2	1,522.2	1,543.8
WTRUCAP	2,215.7	5,923.1	-37,481	30,147.3	1,317.8	7,822.9	7,822.9	7,653.0	7,748	7,653.0	7,822.9	7,822.9	7,653.0	7,748	7,653.0	7,822.9	7,822.9	7,653.0
TONES	1,210	2,088	48,311	2,010	63,411	2,392	2,392	2,592	2,582	2,592	2,392	2,392	2,592	2,582	2,592	2,392	2,392	2,592
WTRUTROM	281.6	154.8	-45,011	180.0	-38,111	134.6	134.6	143.8	124.0	143.8	134.6	134.6	143.8	124.0	143.8	134.6	134.6	143.8
ESP	3,154	3,161	0.211	2,843	-9.911	3,162	3,162	3,123	3,143	3,123	3,162	3,162	3,123	3,143	3,123	3,162	3,162	3,123
ESPICAP	3.34	5.05	21,311	3.97	19.011	4.36	4.36	4.40	5.16	4.40	4.36	4.36	4.40	5.16	4.40	4.36	4.36	4.40
WTRUCSP	332.771	177.697	-46,611	824.163	27.511	334.343	334.343	350.932	332.742	350.932	334.343	334.343	350.932	332.742	350.932	334.343	334.343	350.932
WTRUCSP	222.957	76.410	-65,711	296.914	33.211	224.011	224.011	231.615	230.661	231.615	224.011	224.011	231.615	230.661	231.615	224.011	224.011	231.615
WTRUCSP	108,814	101,287	-7,811	127,249	135.911	110,333	110,333	119,317	107,682	119,317	110,333	110,333	119,317	107,682	119,317	110,333	110,333	119,317
ESP	2,231	2,231	0	1,909	2,229	2,229	2,229	2,208	2,224	2,208	2,229	2,229	2,208	2,224	2,208	2,229	2,229	2,208
ESP	231	732	BASE	67	BASE	67	67	67	65	67	67	67	67	65	67	67	67	67
ESP	50	50	BASE	43	BASE	43	43	43	43	43	43	43	43	43	43	43	43	43
ESP	14	14	BASE	14	BASE	14	14	14	14	14	14	14	14	14	14	14	14	14
ESP	61	61	BASE	61	BASE	61	61	61	61	61	61	61	61	61	61	61	61	61
ESP	91	91	BASE	91	BASE	91	91	91	91	91	91	91	91	91	91	91	91	91
ESP	15	15	BASE	15	BASE	15	15	15	15	15	15	15	15	15	15	15	15	15

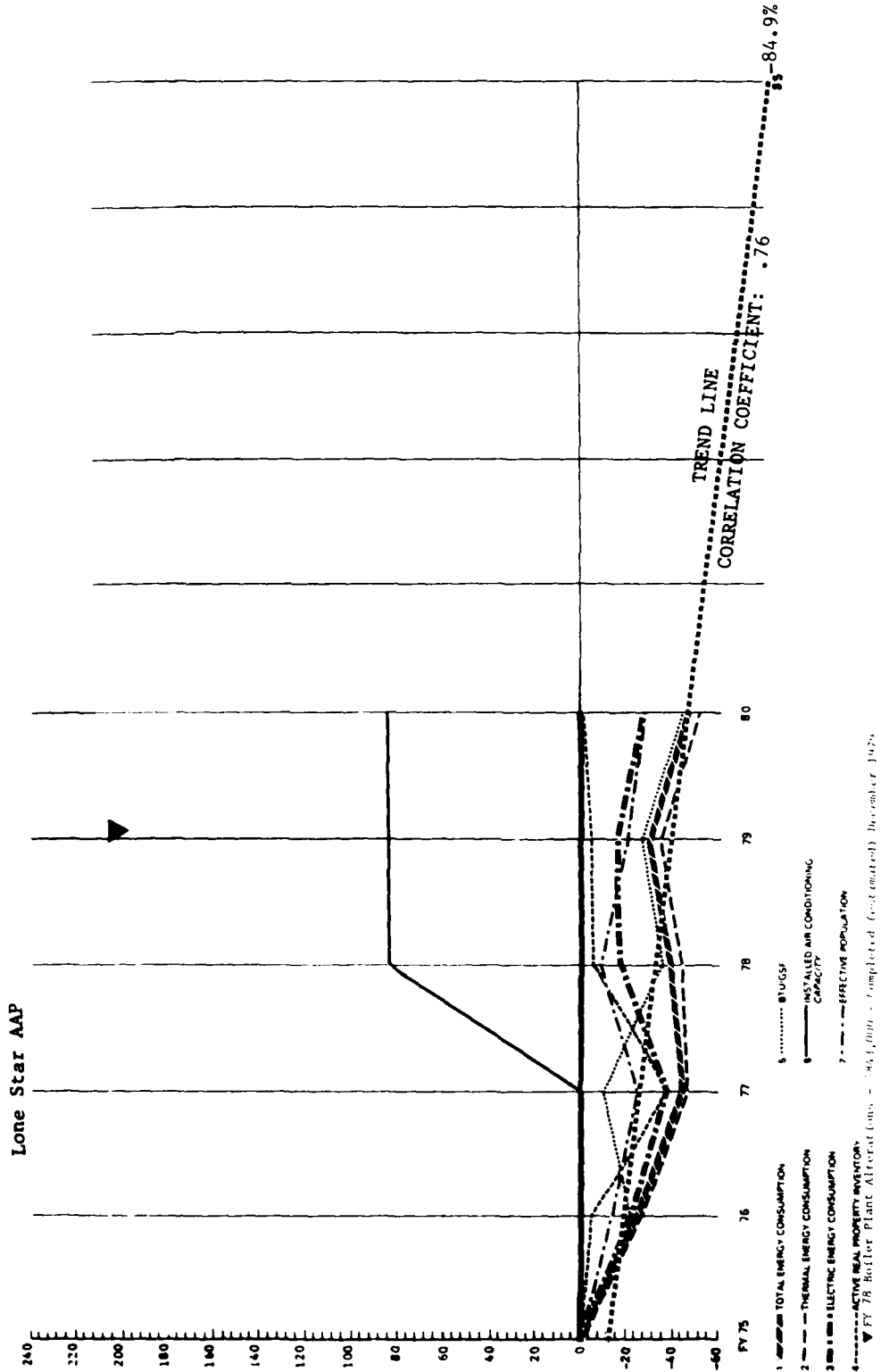
**Population Served is the total Population & Non-Population

**Population Served is the total Population & Non-Population

REMARKS

- 1 Energy Consumption & PD
- 2 Thermal En. Cons & PD
- 3 Electrical En. Cons & PD
- 4 Resident Population & PD
- 5 Non-Resident Population & PD
- 6 Population Served & PD
- 7 Program Population & PD
- 8 En. Consumption Served & PD
- 9 En. Consumption Cap. Served & PD
- 10 Electrical En. Consumption & PD
- 11 Available Air. Capacity & PD
- 12 Elec. Energy/ton of Air Cond. & PD
- 13 Heat Recovery Incentive (RPI) & PD
- 14 Inefficiency Population
- 15 Energy Consumption/GSF & PD
- 16 Thermal En. Consumption/GSF & PD
- 17 Electrical En. Consumption/GSF & PD
- 18 RPI by Category

- Maintenance & Production
- Research, Development & Testing
- Storage
- Other General Storage
- Headquarters & Medical
- Administration
- Bachelor Housing
- Community Fed Bldgs
- Family Housing
- Operational Bldg
- Utility Buildings
- Other



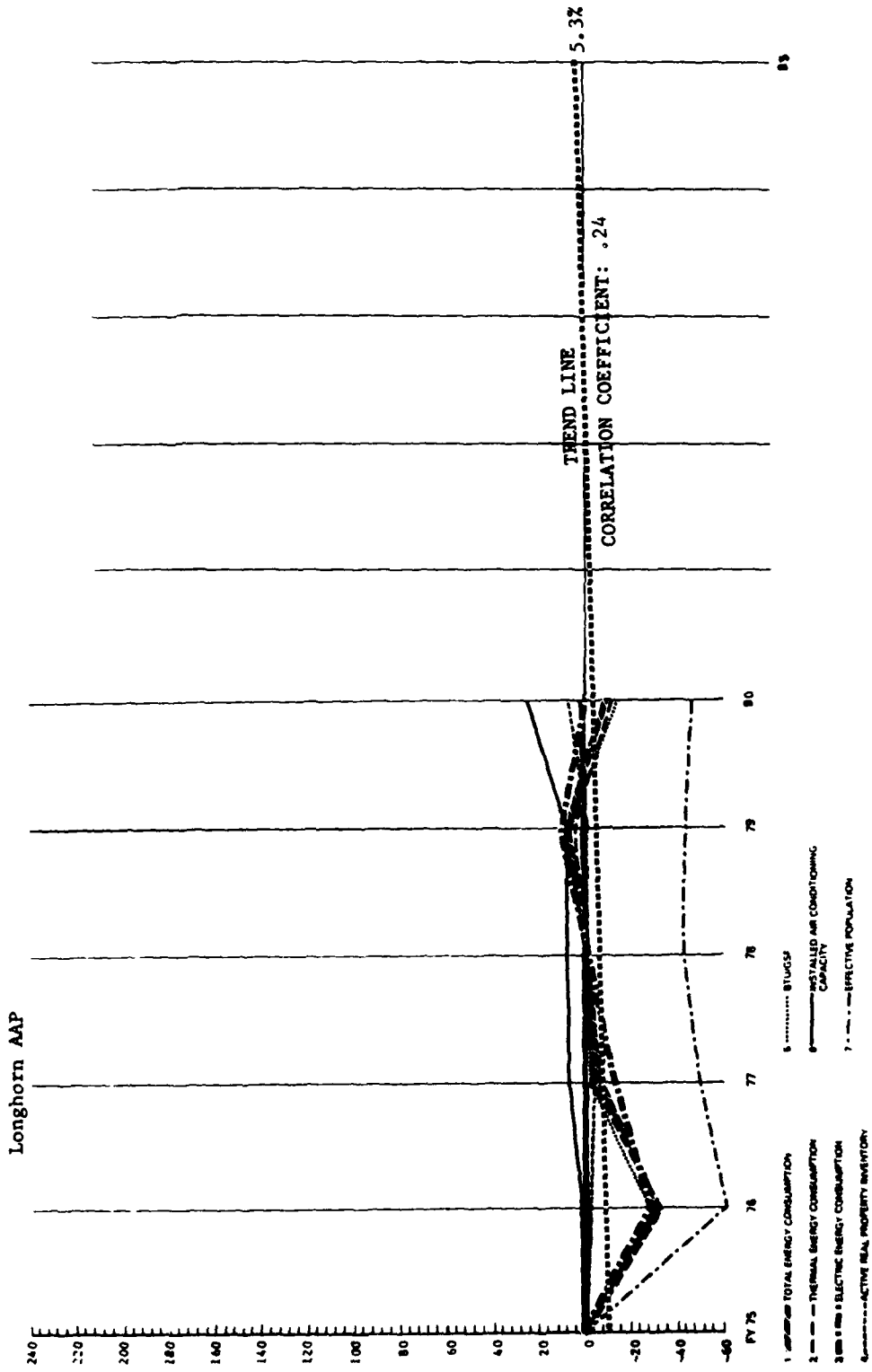
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION LONG STAR AFB, TX MACOM DABIC M1 CLIMATIC REGION 7 HOD 2,531 CDD 2,245

UNITS/TYPE	76	77	78	79	80						
1 Energy Consumption & PD	1,201,335	RR2,116	1-26,611	656,611	1-45,731	779,299	1-39,311	822,226	1-31,611	626,856	1-47,811
2 Thermal En Cons & PD	961,068	696,872	1-27,511	505,591	1-47,411	532,484	1-44,611	624,892	1-35,011	455,675	1-52,611
3 Electrical En Cons & PD	240,267	185,244	1-22,911	151,020	1-37,111	196,945	1-18,011	197,336	1-17,911	171,181	1-38,811
4 Resident Population & PD	2,494	2,137	1-26,311	1,849	1-25,911	2,275	1-8,811	1,971	1-21,011	1,781	1-28,511
5 Non-Resident Population & PD	2,494	2,137	1-26,311	1,849	1-25,911	2,275	1-8,811	1,971	1-21,011	1,781	1-28,511
6 Population Saved** & PD	831	312	1-16,311	616	1-25,911	358	1-8,811	657	1-21,011	588	1-28,511
7 Effective Population*** & PD	681	612	1-16,311	355	1-26,311	320,611	1-31,411	617,311	1-13,411	331,611	1-27,011
8 En Consumption/Pop Saved & PD	1,443.6	1,238.9	1-16,311	1,065.9	1-26,311	967.311	1-31,411	1,251.311	1-13,411	3,055.311	1-27,011
9 En Consumption/Pop & PD	2,768	2,768	1-0,011	2,768	1-0,011	5,087	1-81,811	5,087	1-81,811	5,087	1-81,811
10 Electric En Consumption/Resident Population	86.8	66.9	1-27,911	1,941	1-38,911	3,015	1-5,111	3,018	1-5,011	3,110	1-2,111
11 Heating En Cons/Pop & PD	3,178	3,023	1-4,911	1,941	1-38,911	3,115	1-5,111	3,018	1-5,011	3,110	1-2,111
12 Heat Empt/Ton of Air Cond & PD	3.82	4.25	1-11,011	338,285	1-10,511	241,933	1-36,011	272,441	1-27,911	201,561	1-46,711
13 Heat Recovery Inventory kWh & PD	378,016	291,802	1-22,811	230,523	1-21,811	260,480	1-13,911	207,055	1-31,511	166,519	1-51,511
14 Inefficiency Population	302,413	270,523	1-21,811	260,480	1-13,911	176,612	1-41,611	207,055	1-31,511	166,519	1-51,511
15 Energy Consumption/GSF & PD	75,603	61,278	1-18,911	77,805	1-2,911	65,321	1-13,611	65,386	1-13,511	55,042	1-27,211
16 Thermal En Consumption/GSF & PD	1,451	1,437	1-0,011	369	1-0,011	1,442	1-0,011	2,087	1-0,011	1,517	1-0,011
17 Electrical En Consumption/GSF & PD	1,451	1,437	1-0,011	369	1-0,011	1,442	1-0,011	2,087	1-0,011	1,517	1-0,011
18 kWh by Category	1,451	1,437	1-0,011	369	1-0,011	1,442	1-0,011	2,087	1-0,011	1,517	1-0,011
Training	8	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011
Measurement & Production	8	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011
Research, Development & Testing	8	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011
Storage	8	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011
Other Covered Storage	8	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011
Hospital & Medical	8	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011
Administration	8	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011
Business Housing	8	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011
Community Fire Area	8	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011
Family Housing	8	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011
Operational Use Area	8	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011
Utility Buildings	8	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011
Other	8	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011	8	1-0,011

PD & Percent Conversion from Base Year **Population Saved is the total Non-Res & Non-Resident Population *En Cons & Population is 1/3 Non-Resident

FY 78 Boiler Plant Alterations - \$863,000 - Completed (estimated) December 1979

REMARKS



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION LONGGROBE AFB, TX MACOM DABCOM CLIMATIC REGION 7 HDD 2,370 CDD 2,452

UNIT/TYPE	75	76	77	78	79	80
1 Energy Consumption B PD	660,533	651,076	-31,777	658,943	695,502	584,179
2 Thermal En Conv B PD	502,006	338,292	-163,671	500,797	521,627	431,450
3 Electrical En Conv B PD	158,527	112,784	-45,911	158,146	173,875	152,729
4 Resident Population B PD	-	-	-	-	-	-
5 Non Resident Population B PD	1,208	667	-540,911	986	937	865
6 Population Served** B PD	1,208	667	-540,911	986	937	865
7 Effective Population*** B PD	552	222	-50,911	328	312	288
8 En Consumption/Pop Served B PD	345,7	876,2	74,971	652,3	752,3	873,3
9 En Consumption/Pop B PD	1,180,2	2,031,8	75,111	2,002,9	2,229,2	2,008,2
10 Electric En Consumption/Effective Population	-	-	-	-	-	-
11 Installed Air Cond Capacity B PD	2,553	2,580	1,111	2,733	2,733	3,133
12 Elec Energy/Ton of Air Cond B PD	62,1	63,7	-29,61	49,1	57,9	68,7
13 Real Property Inventory (RPI) B PD	1,329	1,315	-4,311	1,325	1,326	1,397
14 RPI/Electric Population	2,33	5,92	153,67	4,07	4,25	4,85
15 Energy Consumption/GSF B PD	497,015	343,008	-131,01	496,940	524,511	418,131
16 Thermal En Consumption/GSF B PD	377,172	257,256	-111,91	377,675	393,384	308,840
17 Electrical En Consumption/GSF B PD	119,283	85,752	-28,11	119,265	131,127	109,291
18 RPI by Category	-	-	-	-	-	-
Training	-	-	-	-	-	-
Maintenance & Production	625	611	-14	606	606	672
Research, Development & Testing	69	69	-	69	69	69
Storage	441	441	-	441	441	441
Other Covered Storage	-	-	-	-	-	-
Hospitals & Medical	93	93	-	93	93	93
Administration	-	-	-	-	-	-
Machine Rooms	-	-	-	-	-	-
Community Facilities	37	37	-	37	37	37
Family Housing	-	-	-	-	-	-
Operational Buildings	10	10	-	10	10	10
Utility Buildings	47	47	-	47	47	47
Other	-	-	-	-	-	-

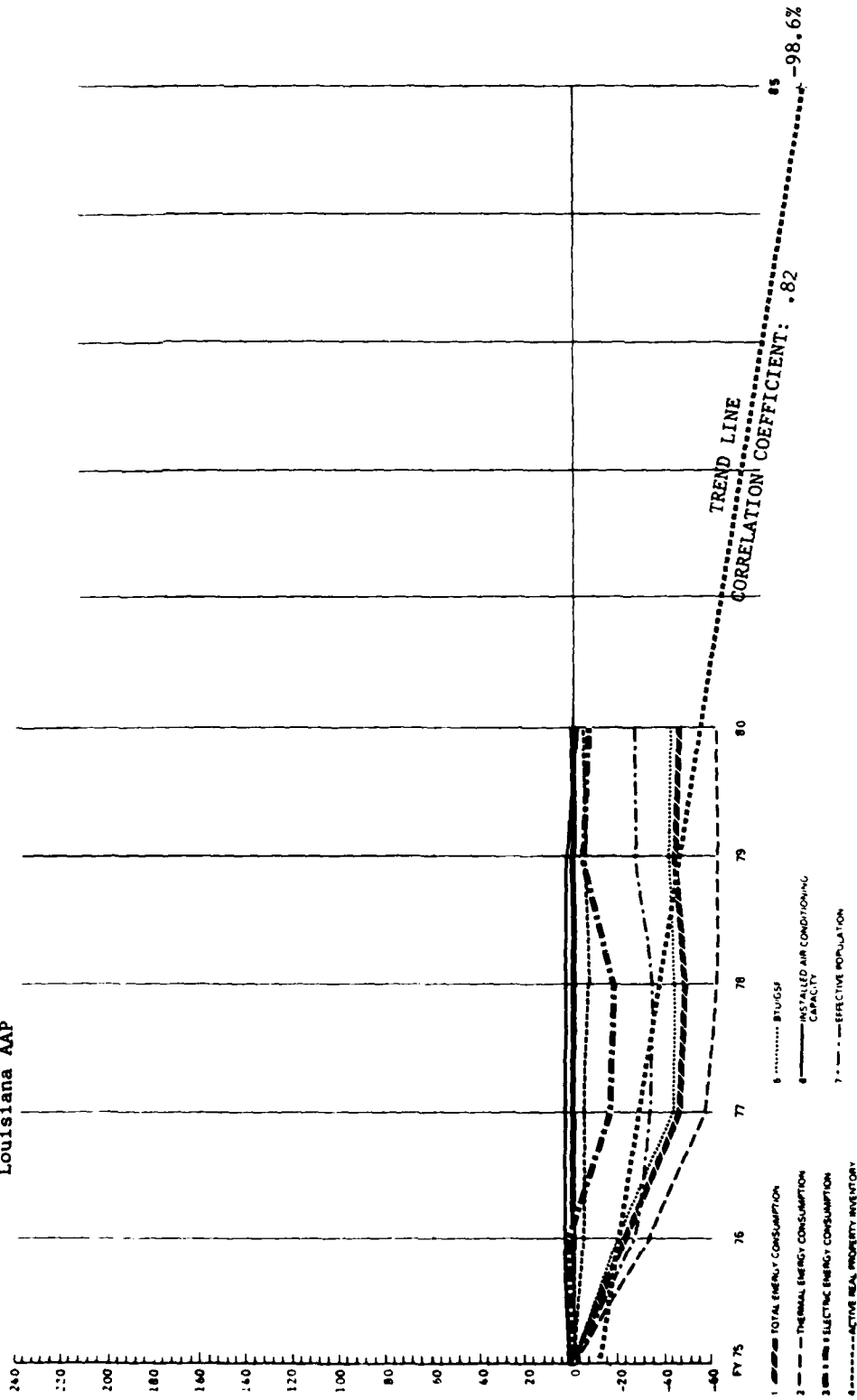
- 1 Energy Consumption B PD
- 2 Thermal En Conv B PD
- 3 Electrical En Conv B PD
- 4 Resident Population B PD
- 5 Non Resident Population B PD
- 6 Population Served** B PD
- 7 Effective Population*** B PD
- 8 En Consumption/Pop Served B PD
- 9 En Consumption/Pop B PD
- 10 Electric En Consumption/Effective Population
- 11 Installed Air Cond Capacity B PD
- 12 Elec Energy/Ton of Air Cond B PD
- 13 Real Property Inventory (RPI) B PD
- 14 RPI/Electric Population
- 15 Energy Consumption/GSF B PD
- 16 Thermal En Consumption/GSF B PD
- 17 Electrical En Consumption/GSF B PD
- 18 RPI by Category

Population Served is the total Resident & Non-Resident Population *Eff Pop is Resident + 1/3 Non-Resident

**PD is Percent Deviation from Base Year

REMARKS

Louisiana AAP

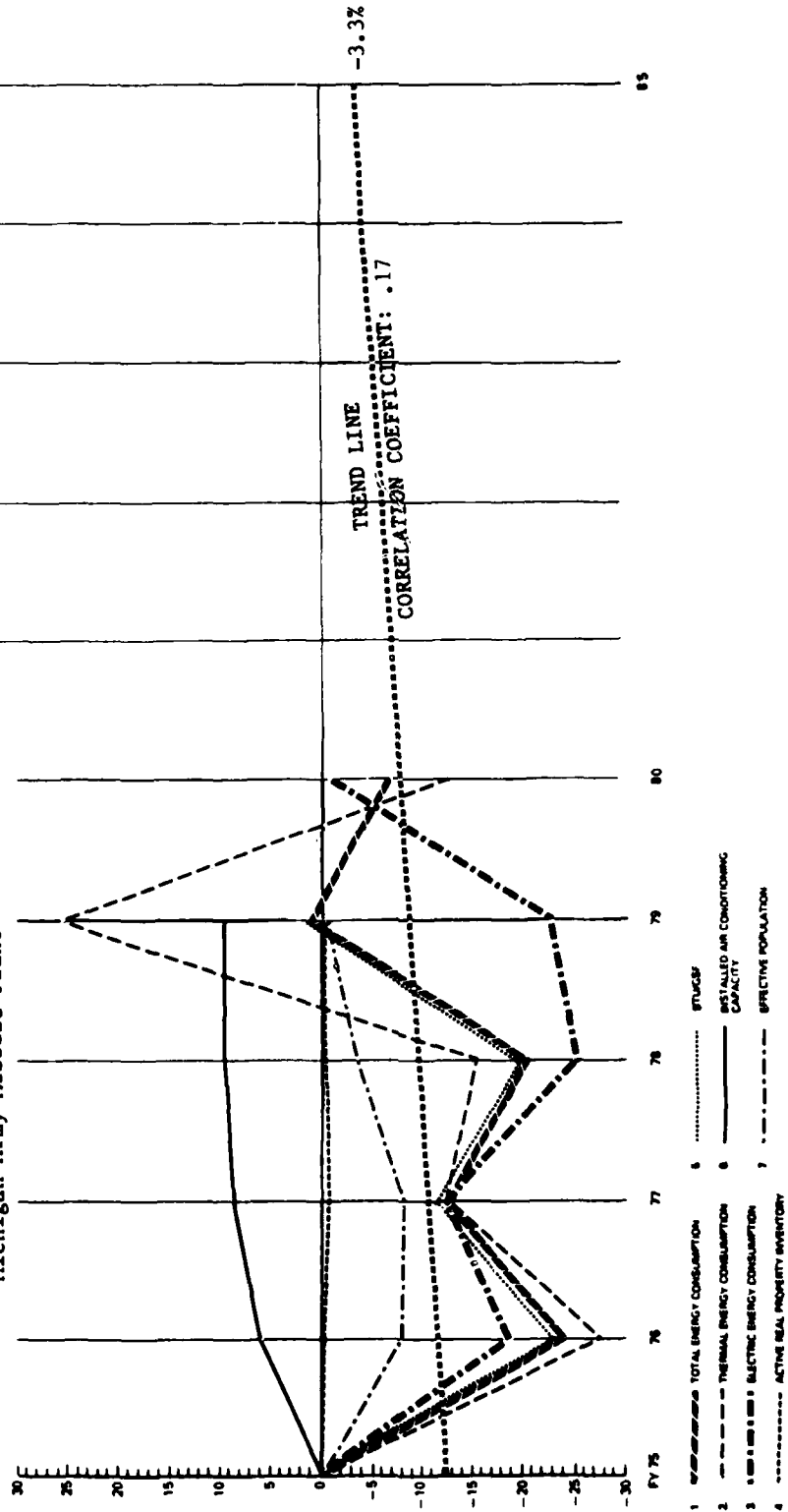


U.S. Army ANALYSIS OF ENERGY CONSUMPTION

CATEGORY	INSTALLATION		JUPITERVA AFB, LA		MACOM		DAPOLBY		CLIMATIC REGION		MOD 2, 3, 32		CDD 2, 3, 31	
	75	76	77	78	79	80	81	82	83	84	85	86	87	88
UNITS	560,658	528,937	501,560	478,788	457,000	434,228	411,456	388,684	365,912	343,140	320,368	297,596	274,824	252,052
WATER	174,066	167,043	160,020	153,000	146,000	139,000	132,000	125,000	118,000	111,000	104,000	97,000	90,000	83,000
PEOPLE	42	42	42	42	42	42	42	42	42	42	42	42	42	42
PEOPLE	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020
PEOPLE	1,402	1,402	1,402	1,402	1,402	1,402	1,402	1,402	1,402	1,402	1,402	1,402	1,402	1,402
PEOPLE	422	422	422	422	422	422	422	422	422	422	422	422	422	422
MBTU/CAP	508.7	508.7	508.7	508.7	508.7	508.7	508.7	508.7	508.7	508.7	508.7	508.7	508.7	508.7
MBTU/CAP	1,328.5	1,328.5	1,328.5	1,328.5	1,328.5	1,328.5	1,328.5	1,328.5	1,328.5	1,328.5	1,328.5	1,328.5	1,328.5	1,328.5
MBTU/CAP	1,982.7	1,982.7	1,982.7	1,982.7	1,982.7	1,982.7	1,982.7	1,982.7	1,982.7	1,982.7	1,982.7	1,982.7	1,982.7	1,982.7
TONS	874	874	874	874	874	874	874	874	874	874	874	874	874	874
MBTU/TON	2,920.0	2,920.0	2,920.0	2,920.0	2,920.0	2,920.0	2,920.0	2,920.0	2,920.0	2,920.0	2,920.0	2,920.0	2,920.0	2,920.0
KWH	6,92	6,92	6,92	6,92	6,92	6,92	6,92	6,92	6,92	6,92	6,92	6,92	6,92	6,92
KWH/CAP	181,996	181,996	181,996	181,996	181,996	181,996	181,996	181,996	181,996	181,996	181,996	181,996	181,996	181,996
KWH/CAP	124,312	124,312	124,312	124,312	124,312	124,312	124,312	124,312	124,312	124,312	124,312	124,312	124,312	124,312
KWH/CAP	55,629	55,629	55,629	55,629	55,629	55,629	55,629	55,629	55,629	55,629	55,629	55,629	55,629	55,629
ES	1,312	1,312	1,312	1,312	1,312	1,312	1,312	1,312	1,312	1,312	1,312	1,312	1,312	1,312
ES	1,312	1,312	1,312	1,312	1,312	1,312	1,312	1,312	1,312	1,312	1,312	1,312	1,312	1,312
ES	1,163	1,163	1,163	1,163	1,163	1,163	1,163	1,163	1,163	1,163	1,163	1,163	1,163	1,163
ES	11	11	11	11	11	11	11	11	11	11	11	11	11	11
ES	99	99	99	99	99	99	99	99	99	99	99	99	99	99
ES	106	106	106	106	106	106	106	106	106	106	106	106	106	106
ES	67	67	67	67	67	67	67	67	67	67	67	67	67	67
ES	69	69	69	69	69	69	69	69	69	69	69	69	69	69
ES	130	130	130	130	130	130	130	130	130	130	130	130	130	130
ES	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE
ES	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301
ES	1,053	1,053	1,053	1,053	1,053	1,053	1,053	1,053	1,053	1,053	1,053	1,053	1,053	1,053
ES	106	106	106	106	106	106	106	106	106	106	106	106	106	106
ES	10	10	10	10	10	10	10	10	10	10	10	10	10	10
ES	99	99	99	99	99	99	99	99	99	99	99	99	99	99
ES	99	99	99	99	99	99	99	99	99	99	99	99	99	99
ES	31	31	31	31	31	31	31	31	31	31	31	31	31	31
ES	47	47	47	47	47	47	47	47	47	47	47	47	47	47
ES	24	24	24	24	24	24	24	24	24	24	24	24	24	24
ES	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE

PD is Percent Decrease from Base Year
 **Population Served is one total Number & Non-Standard Population
 ***ES Pop is Number & Non-Standard Population
 ****ES Pop is Number & Non-Standard Population

Michigan Army Missile Plant



UNITS/PT	%	76	77	78	79	80
UNITS	762,578	584,601	668,692	607,764	772,543	711,699
UNITS	381,289	274,763	334,346	322,115	478,977	433,725
UNITS	381,289	309,838	334,346	285,649	293,566	277,974
PEOPLE	0	0	0	0	0	0
PEOPLE	2,508	2,308	2,306	2,416	2,487	2,487
PEOPLE	836	769	768	805	879	879
UNITS/ACAP	304.1	253.3	200.0	251.6	310.6	282.2
UNITS/ACAP	912.2	760.2	670.7	755.0	911.9	831.9
TONS	1,214	1,819	1,880	1,901	1,901	1,901
UNITS/TON	2,129.9	2,168.5	2,177.8	2,150.3	2,154.4	2,154.4
UNITS/TON	2,163	2,163	2,143	2,158	2,158	2,158
UNITS/TON	2.59	2.81	2.79	2.68	2.60	2.60
UNITS/TON	352,230	270,273	311,245	281,282	357,990	321,934
UNITS/TON	176,115	127,029	155,872	149,038	199,496	176,468
UNITS/TON	176,115	127,029	155,872	149,038	199,496	176,468
UNITS/TON	1,862	1,862	1,679	1,679	1,908	1,908
UNITS/TON	37	37	37	37	30	30
UNITS/TON	186	186	330	346	186	186
UNITS/TON	6	5	1	1	36	36
UNITS/TON	76	73	75	75	75	75

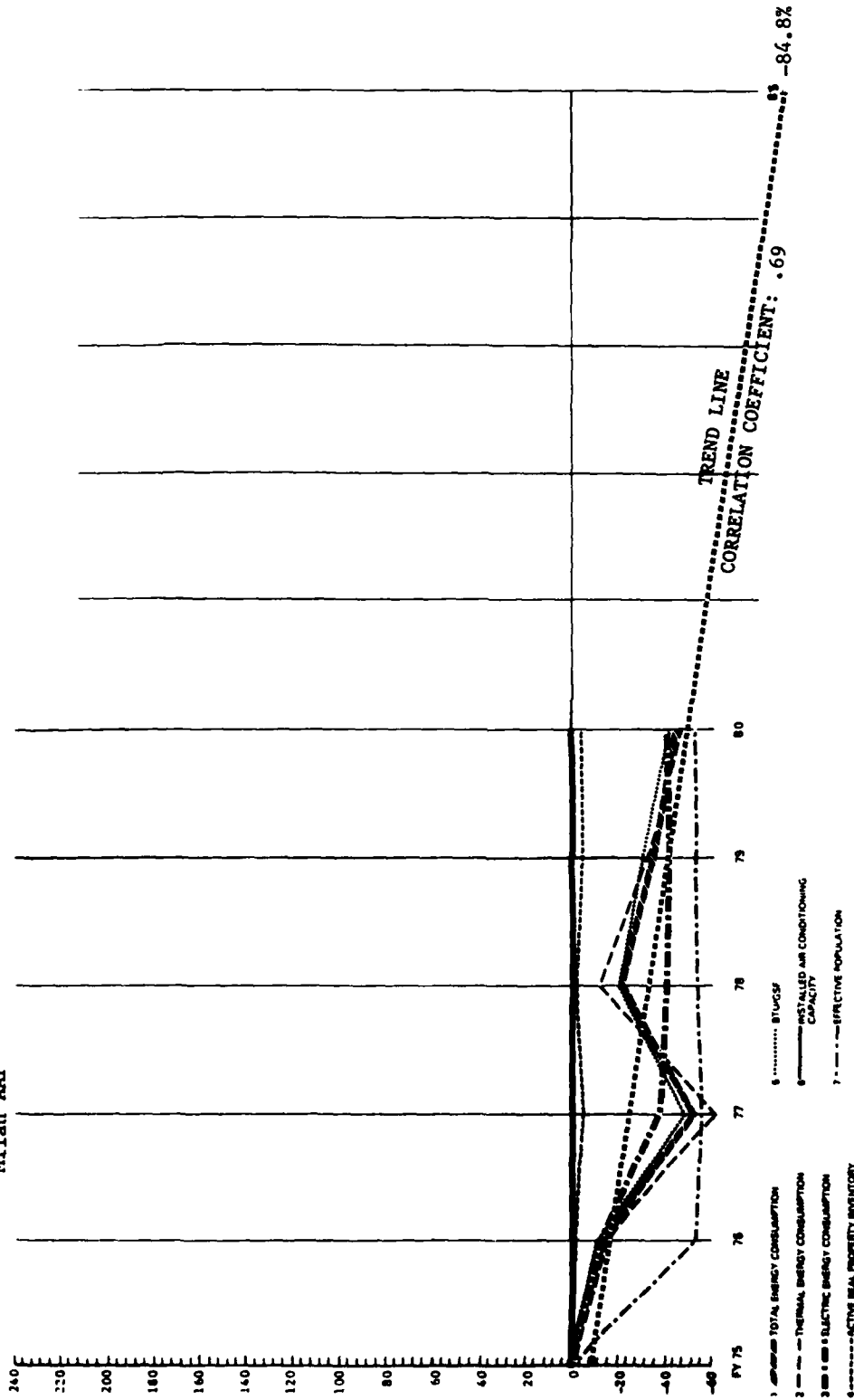
- 1 Energy Consumption & PD
- 2 Thermal En Conv & PD
- 3 Electrical En Conv & PD
- 4 Resident Population & PD
- 5 Non Resident Population & PD
- 6 Population Serv*** & PD
- 7 Electric Population*** & PD
- 8 En Consumption/Pop Serv & PD
- 9 En Consumption/Pop & PD
- 10 Electric En Consumption/Resident Population
- 11 Installed Air Cond Capacity & PD
- 12 Elec Energy/Ton of Air Cond & PD
- 13 Fuel Property Inventory (Btu) & PD
- 14 WPH/Resident Population
- 15 Energy Consumption/GSF & PD
- 16 Thermal En Consumption/GSF & PD
- 17 Electrical En Consumption/GSF & PD
- 18 Btu by Category
- Training
- Maintenance & Production
- Research, Development & Testing
- Storage
- Other Covered Storage
- Hospital & Medical
- Administration
- Recreation
- Community Fe Area
- Family Housing
- Operational Bldg
- Utility Buildings
- Other

**Population Serv'd is the total Resident & Non-Resident Population

***En Population Serv'd is the total Resident & Non-Resident Population

REMARKS

Milan AAP



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION MILAN_AAF, TN MACOM 333001 CLIMATIC REGION 4_HDD 3_851_CDD 1_632

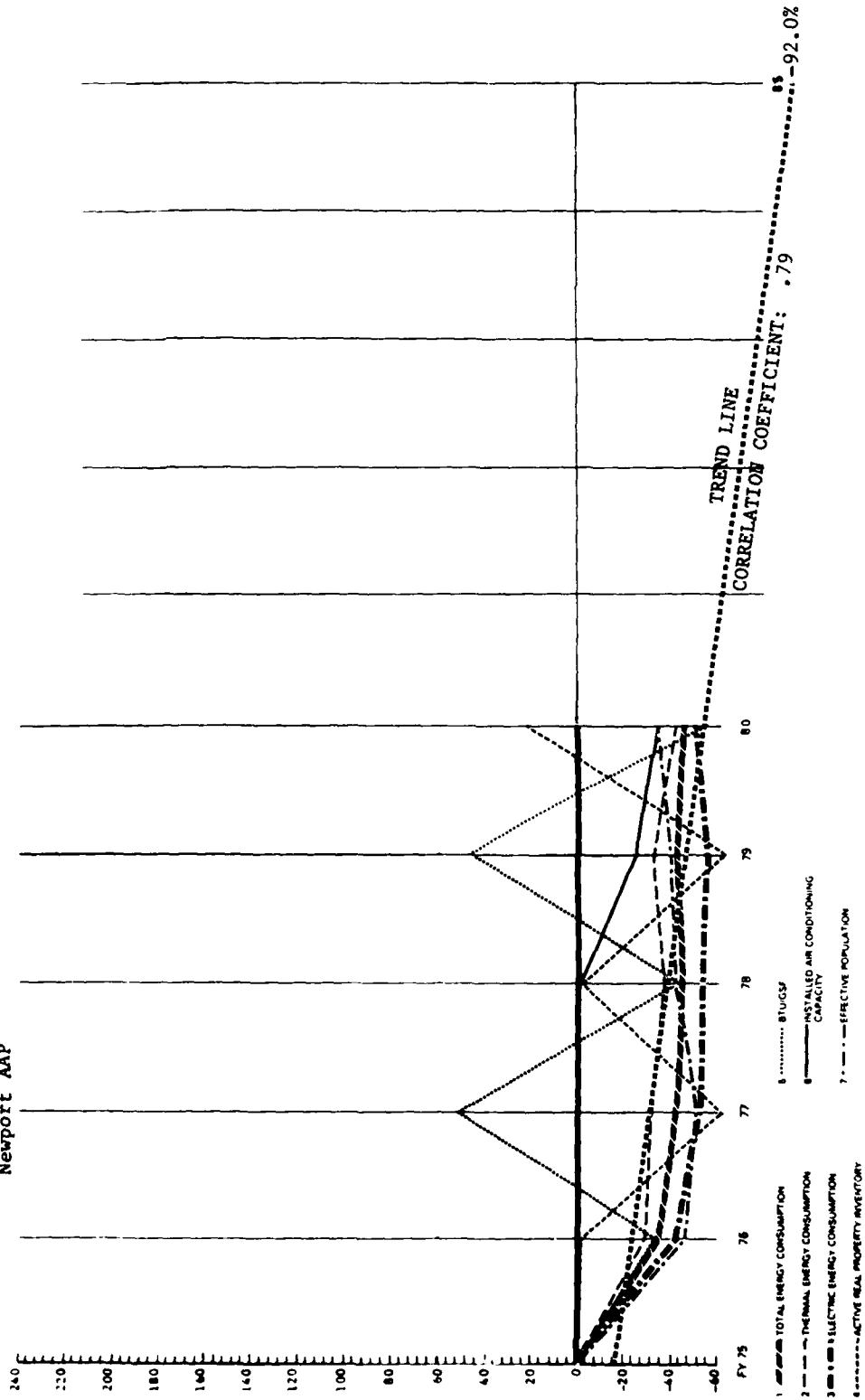
UNIT/SPY	76	77	78	79	80
WATER	627,375	554,044	798,208	504,012	408,935
WATER	423,975	365,670	161,033	372,969	222,150
WATER	218,410	188,374	137,175	131,043	128,076
PEOPLE	135	111	101	81	107
PEOPLE	3,281	3,295	3,316	3,412	3,398
PEOPLE	3,416	3,416	3,417	3,498	3,488
PEOPLE	1,229	576	540	553	565
PEOPLE	188.1	367.9	210.5	336.5	239.1
PEOPLE	522.7	967.9	552.2	911.4	738.1
PEOPLE	1,617.9	1,697.1	1,358.2	1,617.8	1,197.0
PEOPLE	-	-	-	-	840
PEOPLE	3,684	3,668	3,466	3,476	3,520
PEOPLE	3,00	6,37	6,42	6,62	6,27
PEOPLE	174,372	151,048	86,038	137,595	117,645
PEOPLE	115,086	99,692	68,461	101,821	99,496
PEOPLE	59,286	51,356	39,572	35,774	31,175
PEOPLE	-	-	-	-	16,470
PEOPLE	-	-	-	-	-
PEOPLE	870	866	689	863	711
PEOPLE	2,474	2,471	2,358	2,361	2,417
PEOPLE	-	-	-	-	106
PEOPLE	-	-	-	-	100
PEOPLE	60	55	54	55	64
PEOPLE	85	85	85	85	85
PEOPLE	31	36	29	37	29
PEOPLE	16	28	18	28	19
PEOPLE	-	-	-	-	25
PEOPLE	-	-	-	-	10

- 1 Energy Consumption & PD
- 2 Thermal En Cost & PD
- 3 Electrical En Cost & PD
- 4 Electrical En Cost & PD
- 5 Non Resident Population & PD
- 6 Population Saved** & PD
- 7 Effective Population*** & PD
- 8 En Consumption/Pop Saved & PD
- 9 En Consumption/Pop & PD
- 10 Electric En Consumption/Person/Population
- 11 Available Air Cond Capacity & PD
- 12 Elec Energy/Ton of Air Cond & PD
- 13 Red Property Inventory (RPI) & PD
- 14 RPI/Person/Population
- 15 Energy Consumption/SP & PD
- 16 Thermal En Consumption/SP & PD
- 17 Electrical En Consumption/SP & PD
- 18 RPI by Category

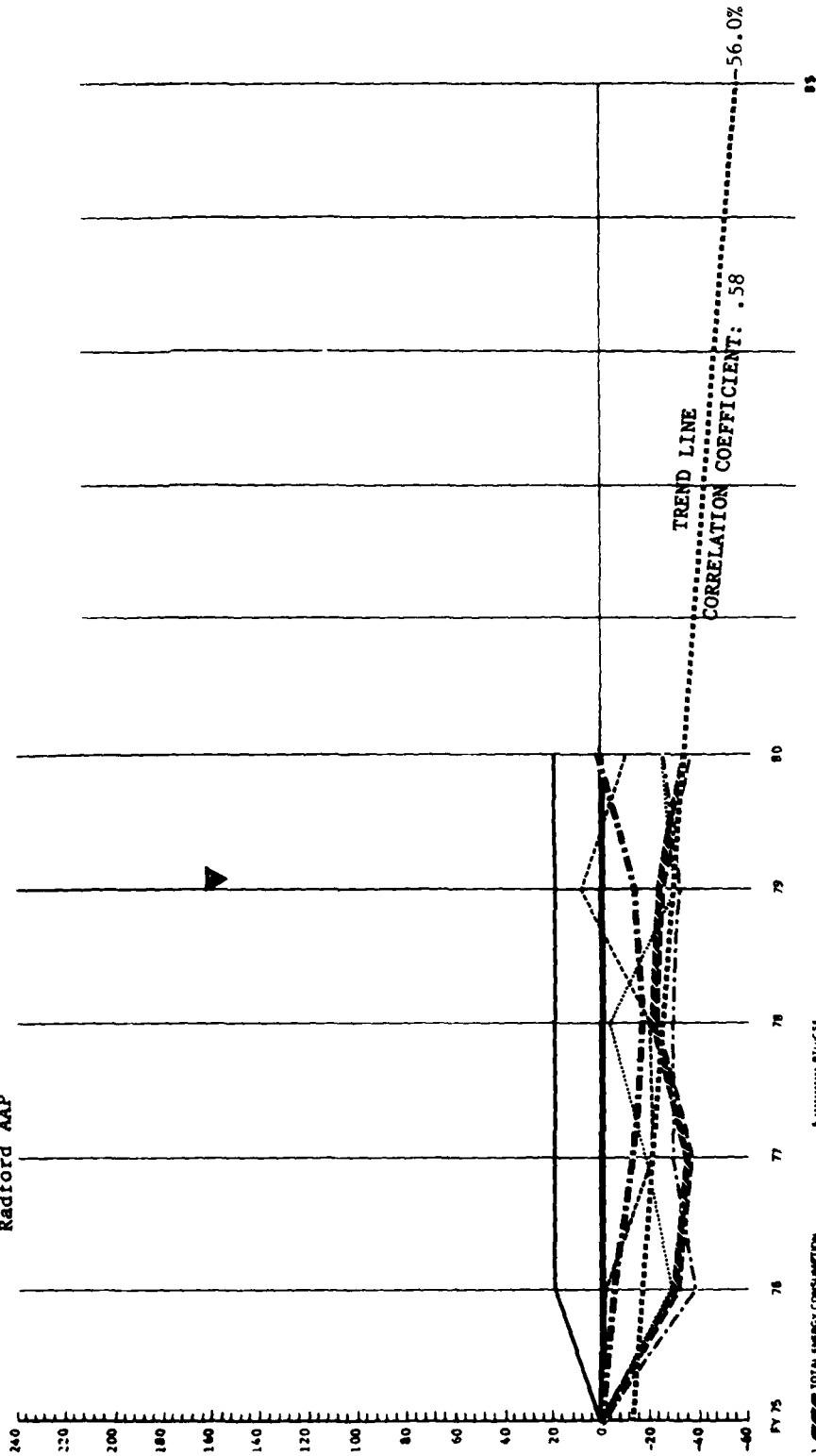
**PD is Percent Deviation from Base Year
 ***RPI Pop is Resident + 1/3 Non-Resident

REMARKS

Newport AAP



Radford AAP



▼ FY 79 EIP - Condensate Return Lines - 200,000 - completed in October 1979

U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - BARBERS PT AB - MACOM - DAGECCL - CLIMATIC REGION - HDD 4,680.0 CDD 225

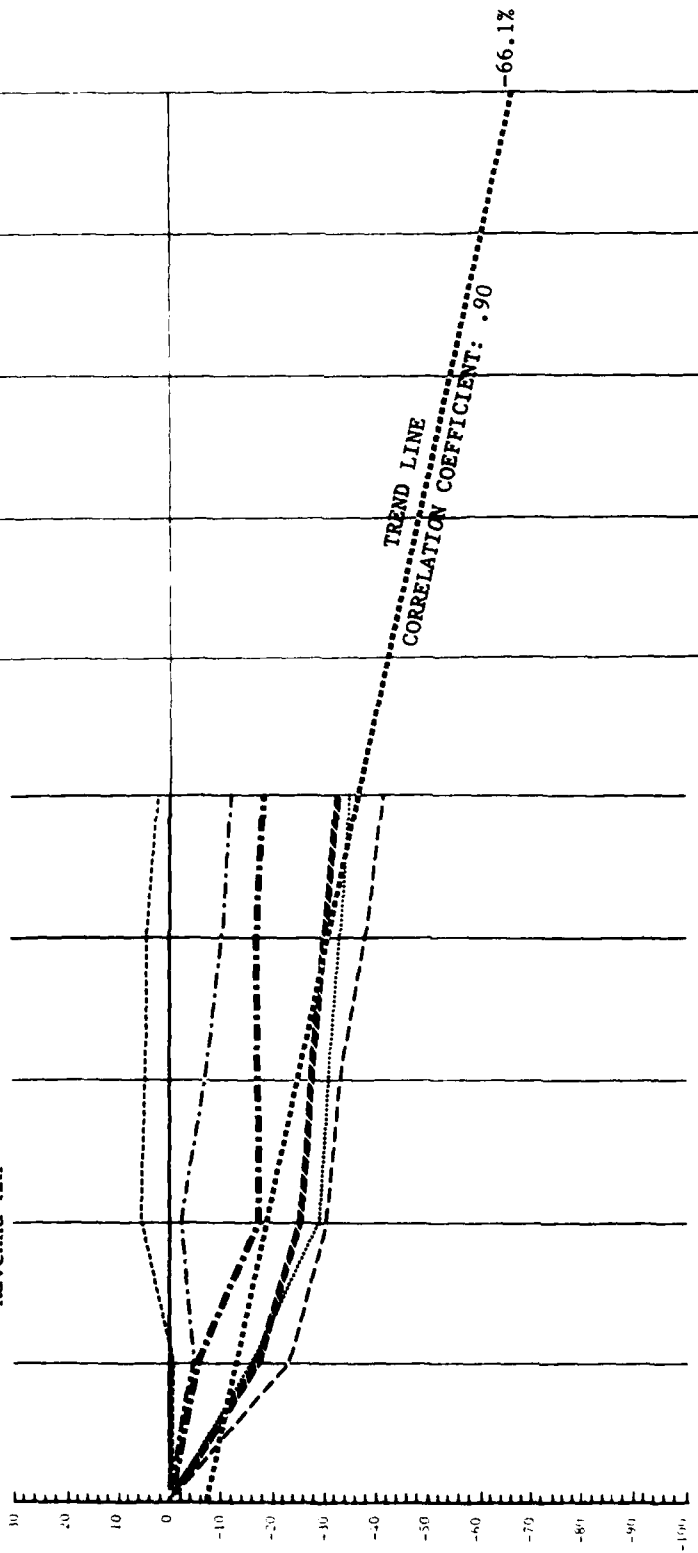
UNITS/TYPE	75	76	77	78	79	80
1 Energy Consumption & PD	5,206,719	1,596,565	1,329,162	1,316,411	1,882,764	1,387,254
2 Thermal En Cons & PD	4,908,100	1,118,550	1,074,400	1,074,400	1,657,900	1,088,050
3 Electrical En Cons & PD	338,619	478,015	254,762	242,011	224,864	299,204
4 Resident Population & PD	4,096	2,441	2,721	2,828	2,673	3,014
5 Non Resident Population & PD	4,167	2,572	2,853	2,886	2,732	3,083
6 Population Served** & PD	1,438	883	1,002	1,001	950	1,074
7 Effective Population*** & PD	1,249.5	1,431.0	1,152.9	1,193.5	1,421.2	1,498.7
8 En Consumption/Pop Served & PD	3,620.8	4,070.9	3,322.7	3,424.0	4,087.1	3,453.9
9 En Consumption/Pop & PD	4,090.7	4,001.7	3,535.6	3,535.6	4,319.7	4,316.7
10 Electric En Consumption/Resident Population	1,260	1,501	1,501	1,501	1,501	1,501
11 Installed Air Cond Capacity & PD	237.0	183.9	169.6	169.6	169.8	199.4
12 Elec Energy/Trm of Air Cond & PD	3,453	3,440	2,716	2,716	3,761	3,030
13 Heat Recovery Inventory kWh & PD	2,40	3,90	2,71	2,76	3,94	2,83
14 HRE/Resident Population	1,507,883	1,044,912	1,225,813	1,254,525	1,037,894	1,112,918
15 Energy Consumption/GSF & PD	1,421,402	984,666	1,132,106	1,165,543	969,767	1,039,138
16 Thermal En Consumption/GSF & PD	85,481	80,246	81,777	81,777	88,177	88,177
17 Electrical En Consumption/GSF & PD	1,879	1,868	1,279	1,233	1,56	1,342
18 kWh by Category	882	871	481	481	485	479
19 Storage	882	871	481	481	485	479
20 Other General Storage	0	0	0	0	0	0
21 Hospital & Medical	0	0	0	0	0	0
22 Administration	319	366	302	302	400	299
23 Bachelor Housing	12	28	65	65	75	62
24 Community Fair Area	20	50	50	50	50	50
25 Family Housing	50	50	50	50	50	50
26 Operational Bldg Group	5	71	18	18	1,843	18
27 Utility Buildings	222	177	191	198	162	203
28 Other	BASE	BASE	BASE	BASE	BASE	BASE

**PD in Percent Deviation from Base Year
 ***Population Served is the total Resident & Non-Resident Population
 ****En Pop & Resident + 1/3 Non-Resident

▼ FY 79 ECIP - Condensate Return Lines - \$206,000 - Completed October 1979

REMARKS

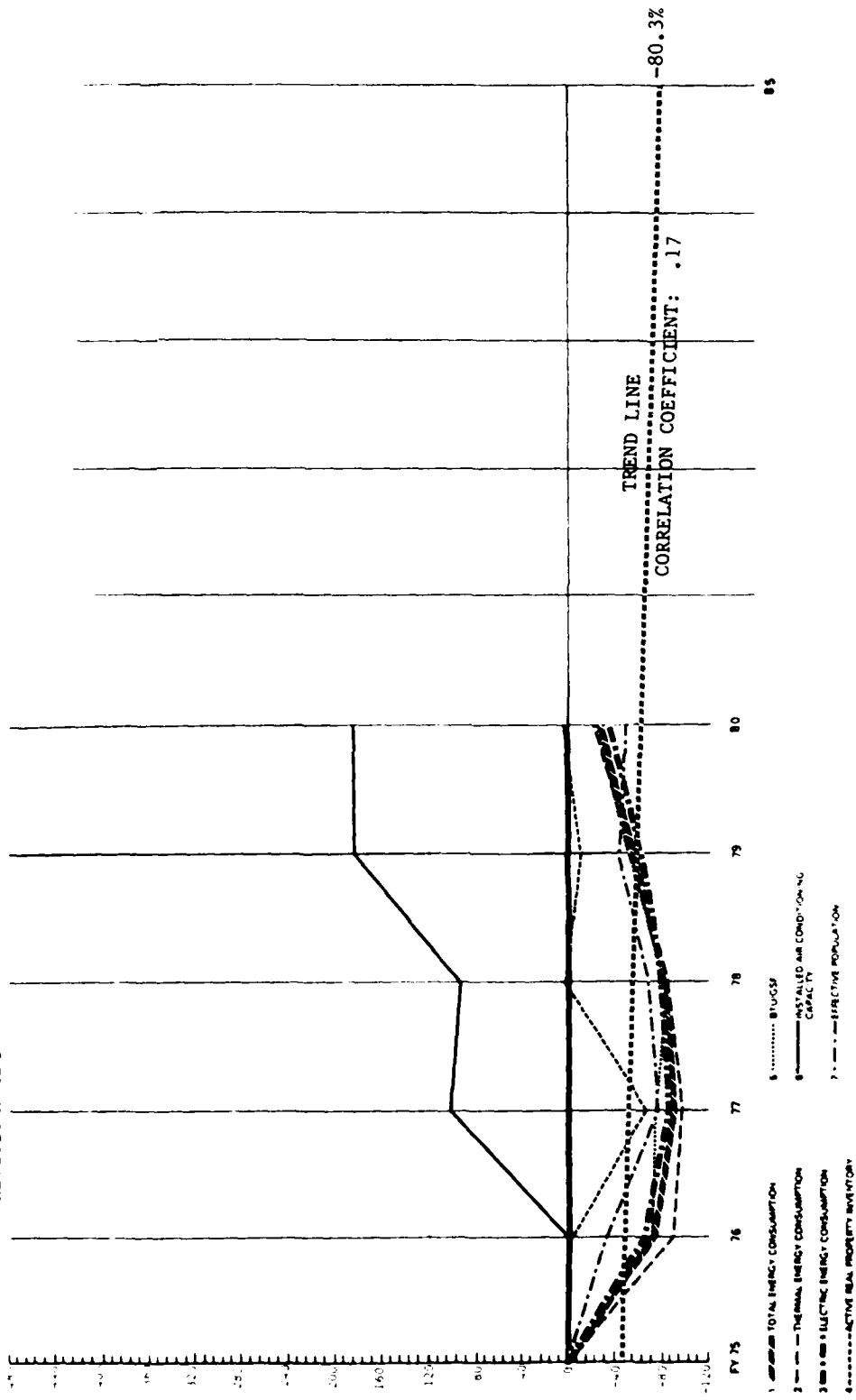
Ravenna AAP



75 76 77 78 79 80

- 1 TOTAL ENERGY CONSUMPTION
- 2 THERMAL ENERGY CONSUMPTION
- 3 ELECTRIC ENERGY CONSUMPTION
- 4 ACTIVE REAL PROPERTY INVENTORY
- 5 EFFECTIVE POPULATION
- 6 INSTALLED AIR CONDITIONING CAPACITY

Riverbank AAP



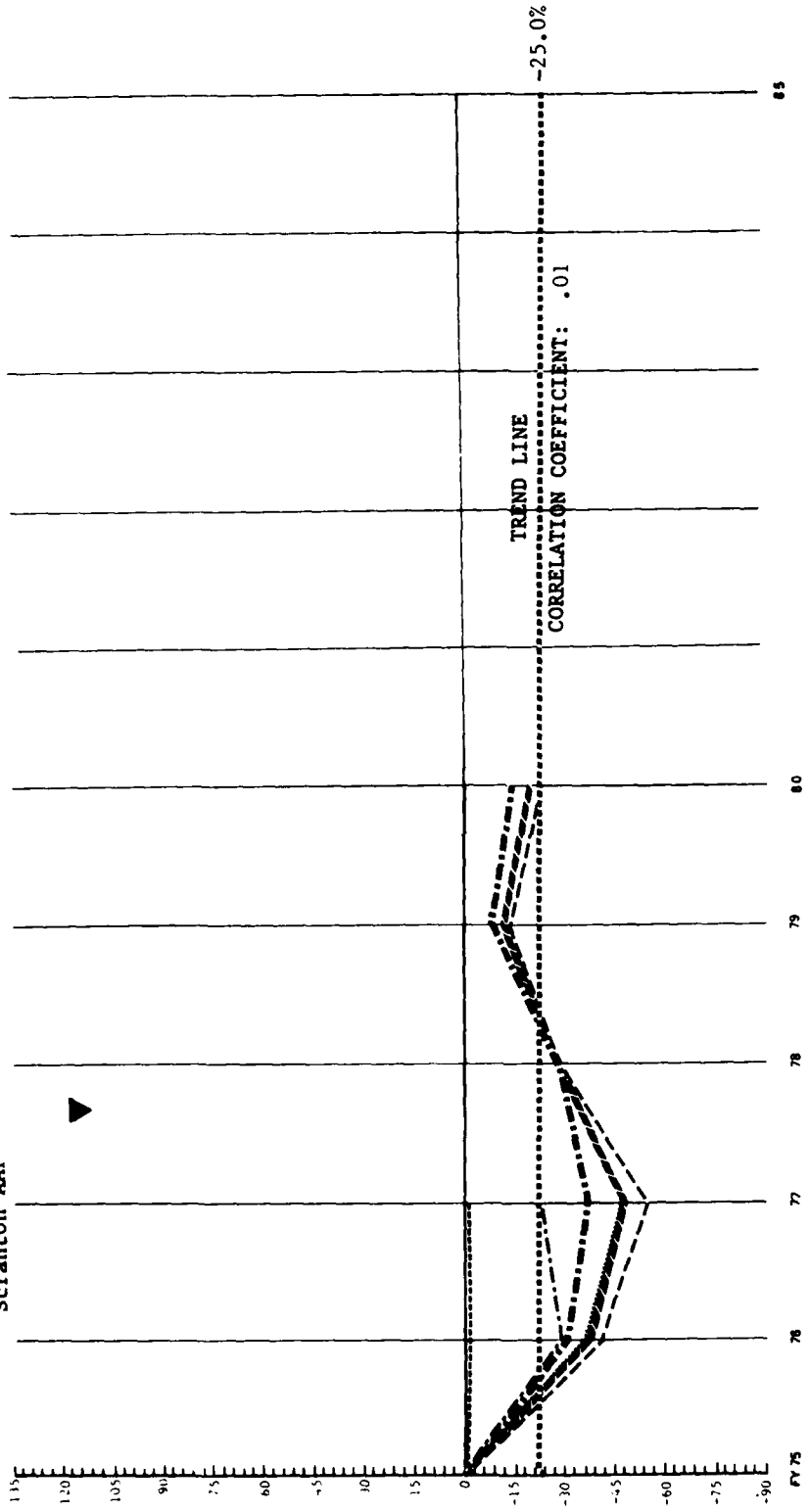
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION BUDGETARY AND CA. MACOM DIVISION CLIMATIC REGION 4 HDD 2,762 CDD 1,566

UNITS/RY	75	76	77	78	79	80
1 Energy Consumption B PD	312,114	92,460	1,023,311	59,570	1,023,311	237,977
2 Thermal En Cons B PD	36,952	14,166	1,023,311	31,272	1,023,311	73,625
3 Electrical En Cons B PD	275,162	78,294	1,023,311	43,098	1,023,311	159,546
4 Resident Population B PD	0	0	0	0	0	0
5 Non-Resident Population B PD	550	321	1,312,21	163	1,312,21	257
6 Population Capacity B PD	550	321	1,312,21	163	1,312,21	257
7 Effective Population B PD	124	124	1,312,21	163	1,312,21	257
8 En Consumption/Pop Served B PD	607.24	248.2	1,023,311	359.3	1,023,311	86
9 En Consumption/Pop B PD	1,023,311	747.3	1,023,311	1,023,311	1,023,311	2,709.0
10 Electric En Consumption/Resident Population	3.9	2.3	1	1	1	1
11 Installed Air Cond Capacity B PD	8,184.9	793	1	793	1	82
12 Elec Energy/Ton of Air Cond B PD	6.33	6.40	1	6.40	1	182.8
13 Real Property Inventory (RPI) B PD	421,581	116,859	1,023,311	73,498	1,023,311	1,086
14 RPI/En Consumption	122,260	12,855	1,023,311	16,803	1,023,311	1,362
15 Energy Consumption/GSF B PD	299,321	106,004	1,023,311	56,583	1,023,311	7,027
16 Thermal En Consumption/GSF B PD						186,916
17 Electrical En Consumption/GSF B PD						55,475
18 RPI by Category						91,781
Training						129,439
Maintenance & Production	529	599		603		505
Research, Development & Training						
Storage	56					
Other Covered Storage						
Hospital & Medical	11					
Administration	12					
Residence Housing						
Community Facilities	13					
Family Housing						
Operational Buildings	2					
Utility Buildings	102					
Other						
Net Available	BASE	BASE	BASE	BASE	BASE	BASE
	102	102	102	102	102	102

**PD is Percent Distribution from Base Year
 **Population Served is not total Residents of Area; Resident Population
 **RPI Pop is Residents 5 1/2 Year-Resident

REMARKS

Scranton AAP

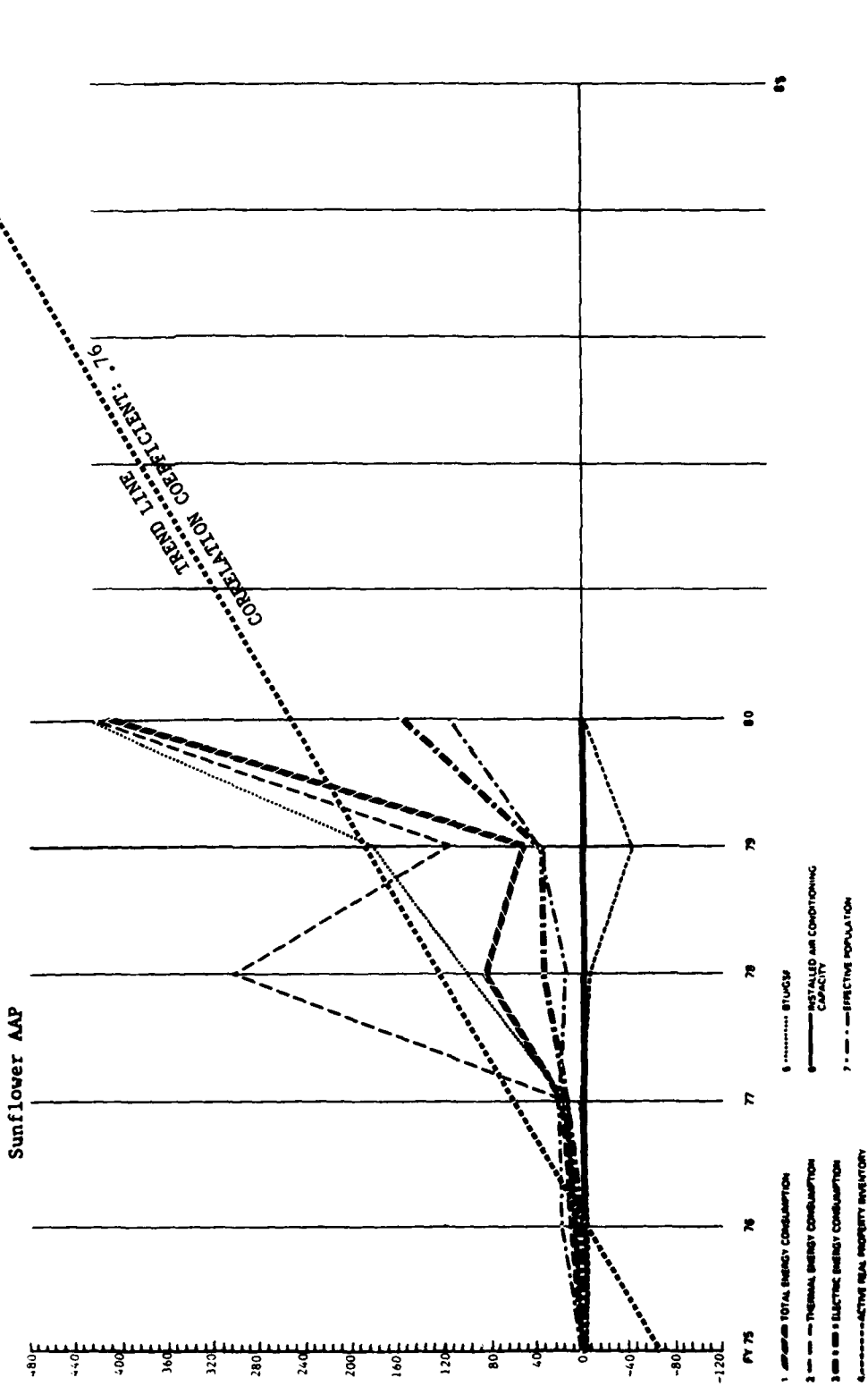


U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - CREATION MAP - DA MACOM - DARGON CLIMATIC REGION 2 - HOD 5-114 CDD 510

UNIT/SPY	75	76	77	78	79	80
1 Energy Consumption & PD	1,014,808	540,515	521,160	518,651	527,611	895,649
2 Thermal En. Cons & PD	629,181	371,492	281,251	281,251	274,611	484,273
3 Electrical En. Cons & PD	385,627	169,023	240,409	237,400	253,000	411,376
4 Fuel Consumption & PD	0	0	0	0	0	0
5 Non-Abundant Population & PD	0	0	0	0	0	0
6 Abundant Population & PD	0	0	0	0	0	0
7 Fuel Consumption & PD	0	0	0	0	0	0
8 En. Consumption/Pop Served & PD	1,451.5	1,286.2	1,108.1	973.6	1,325.1	1,325.1
9 En. Consumption/Pop & PD	4,318.3	1,858.5	1,108.1	973.6	1,325.1	1,325.1
10 Electric En. Consumption/Population	0	0	0	0	0	0
11 Fuelled As Coal Capacity & PD	0	0	0	0	0	0
12 En. Efficiency of As Coal & PD	0	0	0	0	0	0
13 Fuel Quantity Inventory W/W & PD	0	0	0	0	0	0
14 W/W/Effective Population	0	0	0	0	0	0
15 Energy Consumption/GSP & PD	2,615,864	1,685,566	1,369,449	1,480,011	1,546,711	2,111,299
16 Thermal En. Consumption/GSP & PD	1,634,236	972,629	1,400,211	1,346,508	1,346,711	1,346,711
17 Electrical En. Consumption/GSP & PD	1,001,628	707,937	1,290,311	1,346,508	1,346,711	1,346,711
18 En. by Category	0	0	0	0	0	0
Training	0	0	0	0	0	0
Maintenance & Production	0	0	0	0	0	0
Research, Development & Testing	0	0	0	0	0	0
Storage	0	0	0	0	0	0
Other Current Storage	0	0	0	0	0	0
Hospital & Medical	0	0	0	0	0	0
Administration	0	0	0	0	0	0
Beddown Housing	0	0	0	0	0	0
Community En. Area	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0
Operational En. Area	0	0	0	0	0	0
Utility Buildings	0	0	0	0	0	0
Other	0	0	0	0	0	0
Pop Available	10	10	10	10	10	10

- 1 Energy Consumption & PD
- 2 Thermal En. Cons & PD
- 3 Electrical En. Cons & PD
- 4 Fuel Consumption & PD
- 5 Non-Abundant Population & PD
- 6 Abundant Population & PD
- 7 Fuel Consumption & PD
- 8 En. Consumption/Pop Served & PD
- 9 En. Consumption/Pop & PD
- 10 Electric En. Consumption/Population
- 11 Fuelled As Coal Capacity & PD
- 12 En. Efficiency of As Coal & PD
- 13 Fuel Quantity Inventory W/W & PD
- 14 W/W/Effective Population
- 15 Energy Consumption/GSP & PD
- 16 Thermal En. Consumption/GSP & PD
- 17 Electrical En. Consumption/GSP & PD
- 18 En. by Category
- Training
- Maintenance & Production
- Research, Development & Testing
- Storage
- Other Current Storage
- Hospital & Medical
- Administration
- Beddown Housing
- Community En. Area
- Family Housing
- Operational En. Area
- Utility Buildings
- Other

Installation did not submit reports for FY78 - FY79 or FY80.
 FY 77 ECIP - Insulation - \$162,000 - Completed (estimated) June 1978
 **Pop in Percent Division from Base Year
 **Population Served is the total Resident & Non-Resident Population
 ***En. Pop in Resident + 1/3 Non-Resident



A-214

U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION SUNBELTER AFB, TX MACOM 310COM CLIMATIC REGION 1 HDD 5,030 CDD 1,130

UNITS	75	76	77	78	79	80
WBTU	115,938	121,488	135,490	173,602	173,602	588,518
WBTU	21,192	25,911	27,086	93,598	93,598	132,400
WBTU	92,746	95,577	108,404	138,004	138,004	236,118
PEOPLE	20	26	11	0	0	0
PEOPLE	198	243	277	300	369	548
PEOPLE	218	269	290	300	369	548
PEOPLE	86	106	105	100	116	183
WBTUCAP	531.9	442.6	467.2	725.6	497.4	1,073.9
WBTUCAP	1,368.3	1,187.4	1,290.3	2,176.7	1,496.6	3,215.9
TONS	6,638.3	6,097.2	8,337.2	12,933.1	9,111.7	21,101.4
WBTU	1,736	1,714	1,761	3,563	2,009	3,648
WBTU	41.67	33.71	33.87	35.43	17.32	19.37
WBTU	10,873	11,249	16,072	51,436	86,432	161,415
WBTU	6,175	6,175	7,204	26,418	25,060	98,626
WBTU	2,698	2,698	3,818	15,018	61,352	86,761
WBTU	2,464	2,393	2,458	2,292	1,334	2,435
WBTU	276	786	296	296	118	220
WBTU	16	16	11	13	261	469
WBTU	183	183	186	186	100	186
WBTU	76	76	79	77	77	85
WBTU	10	10	10	2	13	13
WBTU	6	16	16	178	139	226
WBTU	273	212	212	34	34	34

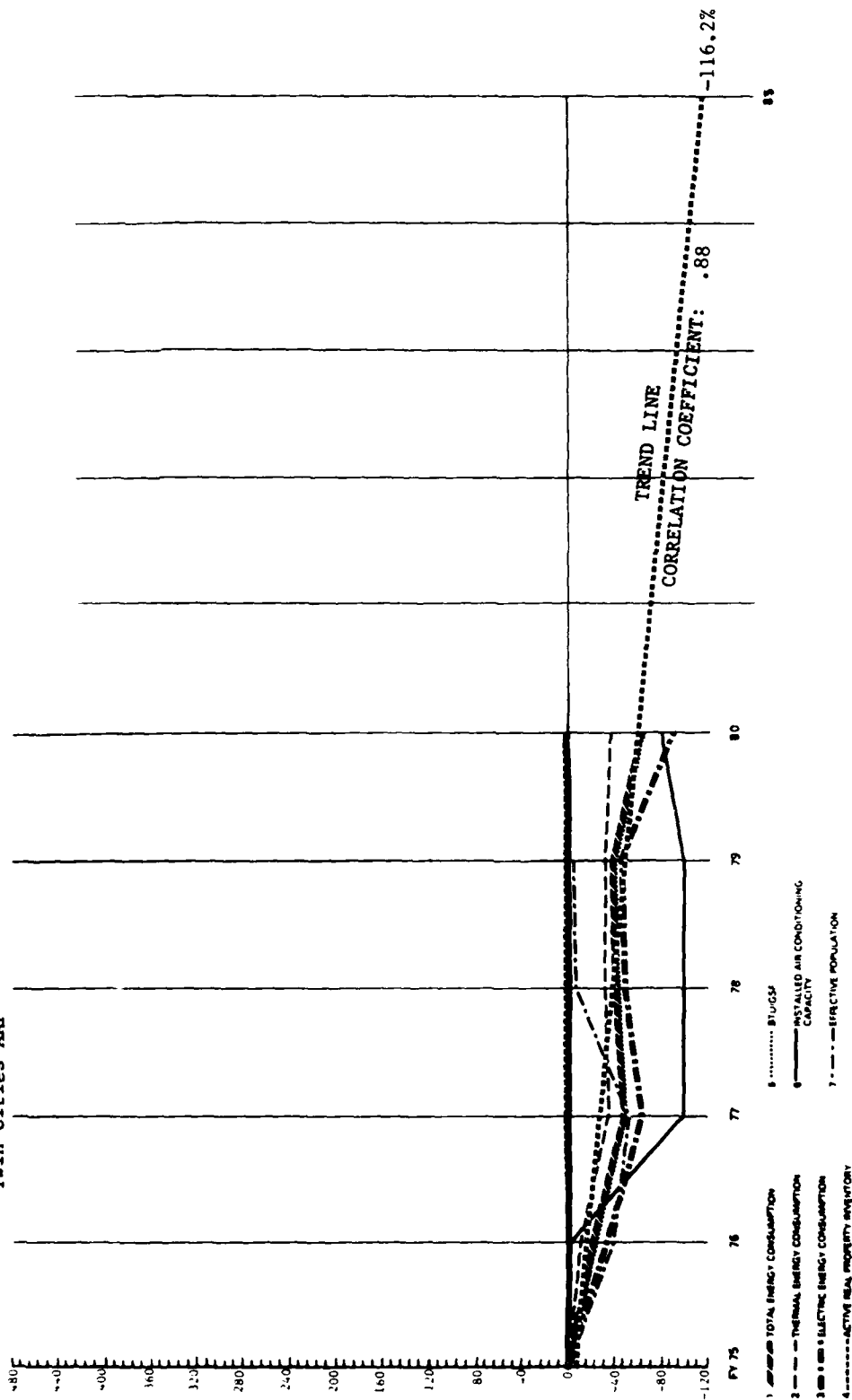
- 1 Energy Consumption & PD
- 2 Thermal En. Cons & PD
- 3 Electrical En. Cons & PD
- 4 Resident Population & PD
- 5 Non-Resident Population & PD
- 6 Population Served** & PD
- 7 Electric Population*** & PD
- 8 En. Consumption Served & PD
- 9 En. Consumption PD & PD
- 10 Electric En. Consumption Resident Population
- 11 Installed Air Cond Capacity & PD
- 12 Elec Energy/Ton of Air Cond & PD
- 13 Real Property Inventory (RPI) & PD
- 14 Inefficient Population
- 15 Energy Consumption GSF & PD
- 16 Thermal En. Consumption GSF & PD
- 17 Electrical En. Consumption GSF & PD
- 18 RPI by Category

Training
Maintenance & Production
Research, Development & Testing
Storage
Other Covered Storage
Hospital & Medical
Administration
Bachelor Housing
Community Facilities
Family Housing
Operational Buildings
Utility Buildings
Other

**Population Served is the total Resident & Non-Resident Population
***RPI Pop is Resident + I/O Non-Resident

REMARKS

Twin Cities AAP



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION THEATER AREA NO. MACOM 1970M CLIMATIC REGION 1 HDD 8,310 CDD 527

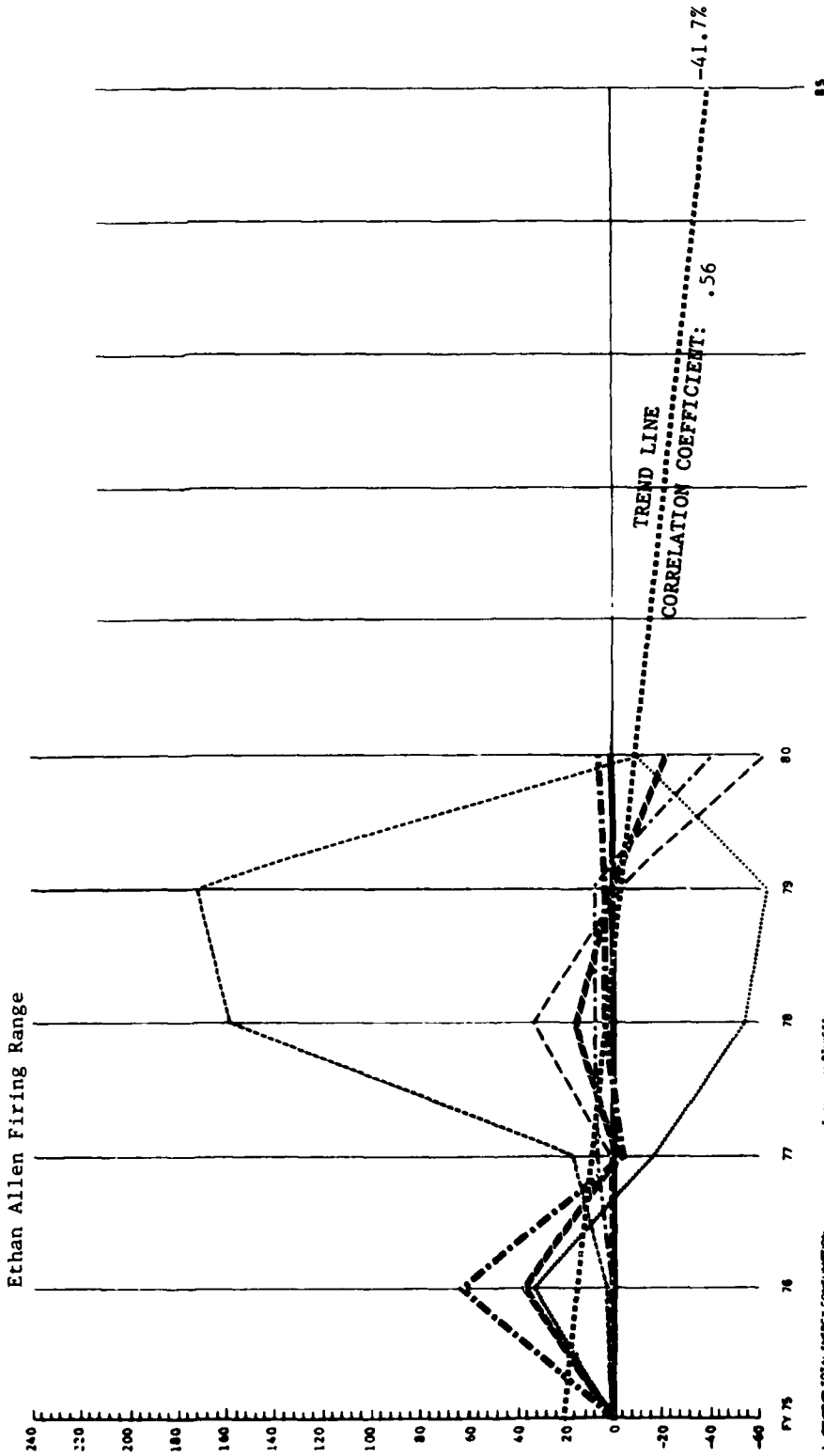
UNITS	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
WRTU	1,408,167	1,093,350	6,377,477	212,067	1,491,111	839,591	1,410,441	840,980	1,410,441	481,297	1,65,811					
WRTU	7,254,635	5,564,954	1,111,111	477,983	1,361,111	503,755	1,321,511	596,185	1,321,511	4,50,325	1,29,711					
WRTU	561,924	2,121,001	1,111,001	216,000	1,66,511	335,816	1,49,311	344,805	1,49,311	30,972	1,95,311					
PEOPLE	50	1,60	1,20,001	84	1,2,011	1,963	1,6,011	1,936	1,6,011	55	1,10,011					
PEOPLE	2,067	1,432	1,24,811	82	1,56,011	1,990	1,5,111	1,993	1,5,111	1,991	1,5,111					
PEOPLE	2,097	1,430	1,24,811	82	1,56,011	1,990	1,5,111	1,993	1,5,111	1,991	1,5,111					
PEOPLE	737	346	1,24,811	82	1,56,011	1,990	1,5,111	1,993	1,5,111	1,991	1,5,111					
MILITARY	671,6	406,8	1,11,511	71,8	1,6,911	921,9	1,17,211	332,0	1,37,211	291,7	1,64,011					
MILITARY	1,974,0	2,451,2	1,27,411	1,950,9	1,1,411	1,278,0	1,37,211	1,198,0	1,37,211	887,6	1,54,111					
MILITARY	1,1,238,6	7,298,4	1,44,911	4,607,4	1,65,211	7,145,4	1,46,011	6,049,2	1,46,011	567,1	1,95,711					
TONS	216	214	1,011	1,011	1,100,1	1,100,1	1,100,1	1,100,1	1,100,1	50	1,81,311					
MILITATION	3,093,1	2,061,5	1,13,911	4,383	1,0,211	4,462	1,2,011	4,461	1,2,011	774,3	1,25,011					
ESF	4,376	4,177	1,7,711	4,383	1,0,211	4,462	1,2,011	4,461	1,2,011	5,461	1,1,911					
ESF	5,99	9,81	1,66,211	12,0	1,00,511	6,421	7,411	6,35	1,6,371	6,371	1,6,911					
BTUGSP	321,839	249,773	1,22,411	367,460	1,49,511	188,165	1,41,511	188,520	1,41,411	107,890	1,66,511					
BTUGSP	170,575	140,866	1,12,111	198,849	1,16,211	132,899	1,33,811	111,227	1,34,811	100,947	1,40,811					
BTUGSP	151,264	99,909	1,16,011	53,611	1,64,611	75,266	1,50,211	77,293	1,48,911	6,941	1,55,411					
ESF																
ESF	3,489	3,487		3,485		3,574		3,630		1,610						
ESF	39	39		39		39		48		48						
ESF	616	613		616		616		616		616						
ESF						BASE		460		460						
ESF																
ESF	130	135		135		135		125		125						
ESF																
ESF	6	8		8		8		8		8						
ESF	32	32		32		32		32		32						
ESF	2	4		4		4		4		4						
ESF	64	57		59		59		58		58						
ESF						BASE		3		3						

**Population Served is the total Resident & Non-Resident Population. **ESF Pegs in Numbers + 1/2 Non-People

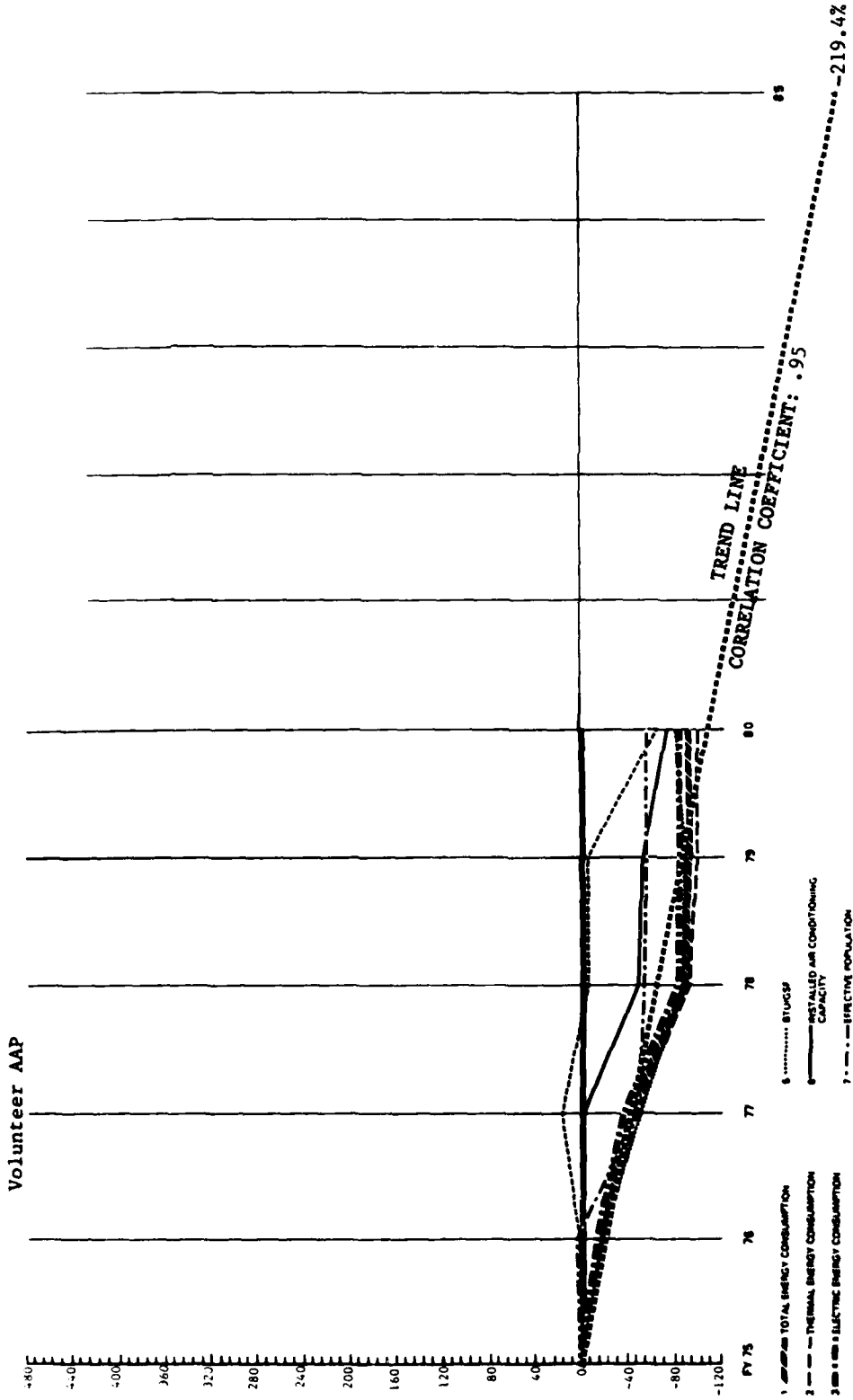
- 1 Energy Consumption by PD
- 2 Thermal En Cons by PD
- 3 Electrical En Cons by PD
- 4 Resident Population by PD
- 5 Non Resident Population by PD
- 6 Population Services by PD
- 7 Effective Population by PD
- 8 En Consumption by PD
- 9 En Consumption by PD
- 10 Electric En Consumption by PD
- 11 Available Air Cond Capacity by PD
- 12 Electric Property Inventory by PD
- 13 Ineffective Population
- 14 Health Consumption by PD
- 15 Thermal En Consumption by PD
- 16 Thermal En Consumption by PD
- 17 Electrical En Consumption by PD
- 18 Btu by Category

- Training
- Maintenance & Production
- Research, Development & Testing
- Storage
- Other Computer Storage
- Medical & Hospital
- Administration
- Recreation
- Community Fire Sites
- Family Housing
- Operational Buildings
- Utility Buildings
- Other

REMARKS



A-218



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION VOLUNTEER AAR - IJ MACOM DABCOM CLIMATIC REGION 4 HDD 3,505 CDD 1,636

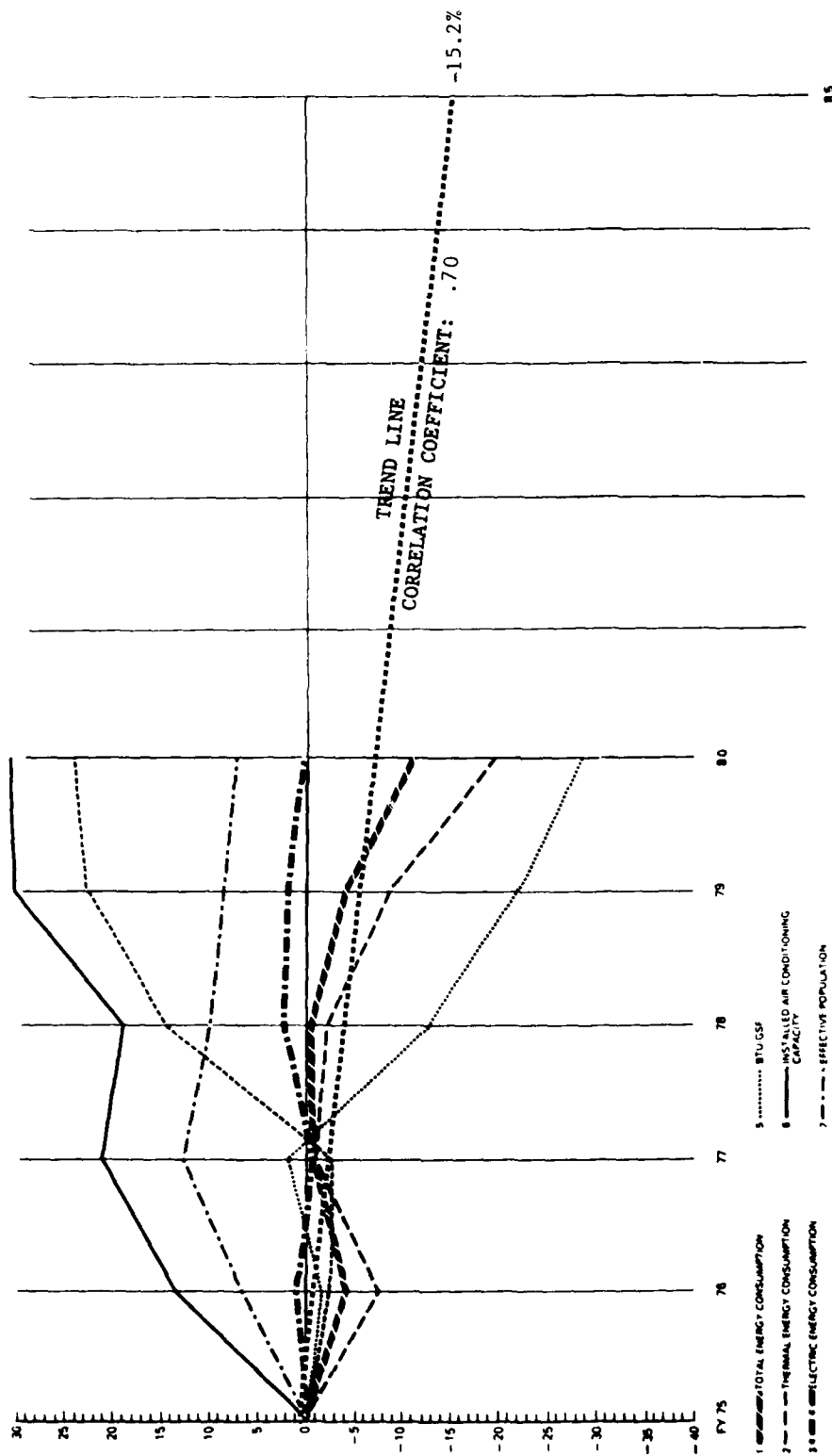
UNIT/STY	75	76	77	78	79	80
1 Energy Consumption (B PD)	1,216,426	1,196,194	1,188,816	1,174,011	1,154,014	1,134,014
2 Thermal En Cons (B PD)	233,820	252,255	250,678	255,611	266,905	274,871
3 Electrical En Cons (B PD)	302,826	410,629	311,156	318,111	87,109	74,785
4 Resident Population (B PD)	0	0	0	0	0	0
5 Non Resident Population (B PD)	470	487	233	233	206	206
6 Population Servd** (B PD)	157	162	233	233	206	206
7 Effective Population*** (B PD)	3,056,7	2,436,1	3,516,3	3,516,3	629,2	361,0
8 En Consumption/Pop Servd (B PD)	9,150,6	7,384,9	10,377,9	10,377,9	1,887,2	1,083,8
9 En Consumption/Pop (B PD)	750	578,2	250	250	375	375
10 Electric En Consumption/Resident Population	670,4	578,2	416,9	416,9	232,3	232,3
11 Installed Air Cond Capacity (B PD)	387	966	1,137	1,137	920	920
12 Elec Energy/Ton of Air Cond (B PD)	6,116	5,98	3,61	3,61	2,51	2,51
13 Real Property Inventory (RPI) (B PD)	1,485,671	722,732	722,732	722,732	145,467	145,467
14 RPI/Electric Population	965,688	790,471	488,474	488,474	50,986	50,986
15 Energy Consumption/GSF (B PD)	519,985	519,985	519,985	519,985	519,985	519,985
16 Thermal En Consumption/GSF (B PD)	187	188	188	188	188	188
17 Electrical En Consumption/GSF (B PD)	662	462	330	330	320	320
18 RPI by Category	9	9	9	9	9	9
Training	187	188	188	188	188	188
Maintenance & Production	2	2	2	2	2	2
Research, Development & Testing	662	462	330	330	320	320
Storage	6	6	6	6	6	6
Other Covered Storage	71	69	70	70	39	7
Hospital & Medical	15	15	16	16	16	7
Administration	35	35	36	36	36	16
Bachelor Housing	9	9	9	9	9	9
Community Facilities	204	201	204	204	201	201
Family Housing	0	0	0	0	0	0
Operational Buildings	0	0	0	0	0	0
Utility Buildings	0	0	0	0	0	0
Other	0	0	0	0	0	0
Not Available	BASE	BASE	BASE	BASE	BASE	BASE

- 1 Energy Consumption (B PD)
- 2 Thermal En Cons (B PD)
- 3 Electrical En Cons (B PD)
- 4 Resident Population (B PD)
- 5 Non Resident Population (B PD)
- 6 Population Servd** (B PD)
- 7 Effective Population*** (B PD)
- 8 En Consumption/Pop Servd (B PD)
- 9 En Consumption/Pop (B PD)
- 10 Electric En Consumption/Resident Population
- 11 Installed Air Cond Capacity (B PD)
- 12 Elec Energy/Ton of Air Cond (B PD)
- 13 Real Property Inventory (RPI) (B PD)
- 14 RPI/Electric Population
- 15 Energy Consumption/GSF (B PD)
- 16 Thermal En Consumption/GSF (B PD)
- 17 Electrical En Consumption/GSF (B PD)
- 18 RPI by Category

**PD is Percent Deviation from Base Year
 ***Population Servd is the total Resident & Non Resident Population
 ****RPI Pop is Resident + 1/3 Non-Resident

REMARKS

"Other" Consolidation DARCOM



A-222

THIS "OTHER" CATEGORY IS MADE UP OF ALL OTHER DATA SERIES WHICH ARE NOT LISTED IN THE REPORT.
NOTE: THE EFFECTIVE POPULATION IS BASED ON THE 1970 CENSUS AND IS ASSUMED TO BE CONSTANT THROUGHOUT THE PERIOD OF THE REPORT.

U.S. Army ANALYSIS OF ENERGY CONSUMPTION

INSTALLATION: MACOM

UNIT/ACTIVITY	75	76	77	78	79	80
1 Energy Consumption & PD	21,272,283	21,272,283	21,272,283	21,272,283	21,272,283	21,272,283
2 Thermal En Cons & PD	1,192,270	1,192,270	1,192,270	1,192,270	1,192,270	1,192,270
3 Electrical En Cons & PD	19,080,013	19,080,013	19,080,013	19,080,013	19,080,013	19,080,013
4 Resident Population & PD	7,872,178	7,872,178	7,872,178	7,872,178	7,872,178	7,872,178
5 Non Resident Population & PD	31,175	31,175	31,175	31,175	31,175	31,175
6 Population Served** & PD	76,402	76,402	76,402	76,402	76,402	76,402
7 Effective Population*** & PD	1,092,634	1,092,634	1,092,634	1,092,634	1,092,634	1,092,634
8 En Consumption/Pop Served & PD	7,809	7,809	7,809	7,809	7,809	7,809
9 En Consumption/Pop & PD	1,997	1,997	1,997	1,997	1,997	1,997
10 Electric En Consumption/Resident Population	1,983	1,983	1,983	1,983	1,983	1,983
11 Isolated Air Cond Capacity & PD	31,175	31,175	31,175	31,175	31,175	31,175
12 Electric En Consumption/Pop & PD	2,114	2,114	2,114	2,114	2,114	2,114
13 Non Property Inventory (MFA & PD)	65,281	65,281	65,281	65,281	65,281	65,281
14 Effective Population	1,092,634	1,092,634	1,092,634	1,092,634	1,092,634	1,092,634
15 Energy Consumption/GSF & PD	327,440	327,440	327,440	327,440	327,440	327,440
16 Thermal En Consumption/GSF & PD	185,767	185,767	185,767	185,767	185,767	185,767
17 Electrical En Consumption/GSF & PD	141,673	141,673	141,673	141,673	141,673	141,673
18 All by Category						
Maintenance & Production						
Research, Development & Testing						
Storage						
Other Counted Storage						
Hospital & Medical						
Administration						
Bachelor Housing						
Community Fire Arms						
Family Housing						
Operational Use Group						
Utility Buildings						
Other						

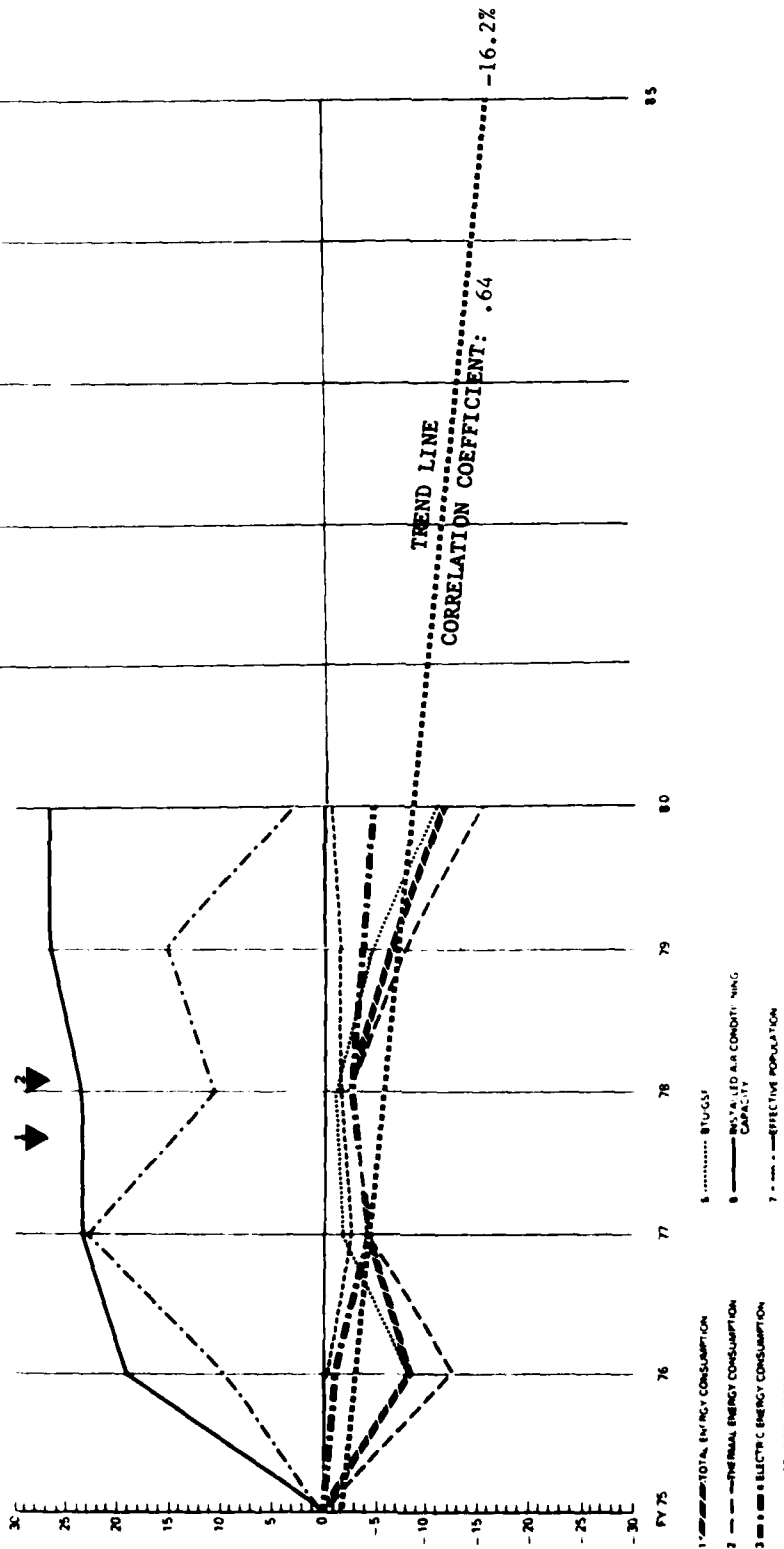
**PD is Not an Exception from Base Use

***Population is the total Resident & Non-Resident Population

****Fig is Resident + 1/3 Non Resident

THIS CONSOLIDATION INCLUDES ALL DARCOM INSTALLATIONS WHICH ARE NOT GRCO OR DEPOSITS. DATA DOES NOT INCLUDE GERRING AREA SUPPORT CENTER FOR FY 75, NOR HANTHORSE AAP OR MCALFSTER AAP FOR FY 75, 76, AND 77. ENERGY CONSUMPTION DATA FOR FRANKFORD ARSENAL FOR FY 78, 79 AND 80 WAS OBTAINED FROM DEIS.

Aberdeen Proving Ground



- 1 - TOTAL ENERGY CONSUMPTION
- 2 - THERMAL ENERGY CONSUMPTION
- 3 - ELECTRIC ENERGY CONSUMPTION
- 4 - ACTIVE REAL PROPERTY INVENTORY
- 5 - BUGS
- 6 - INSTALLED AIR CONDITIONING CAPACITY
- 7 - EFFECTIVE POPULATION

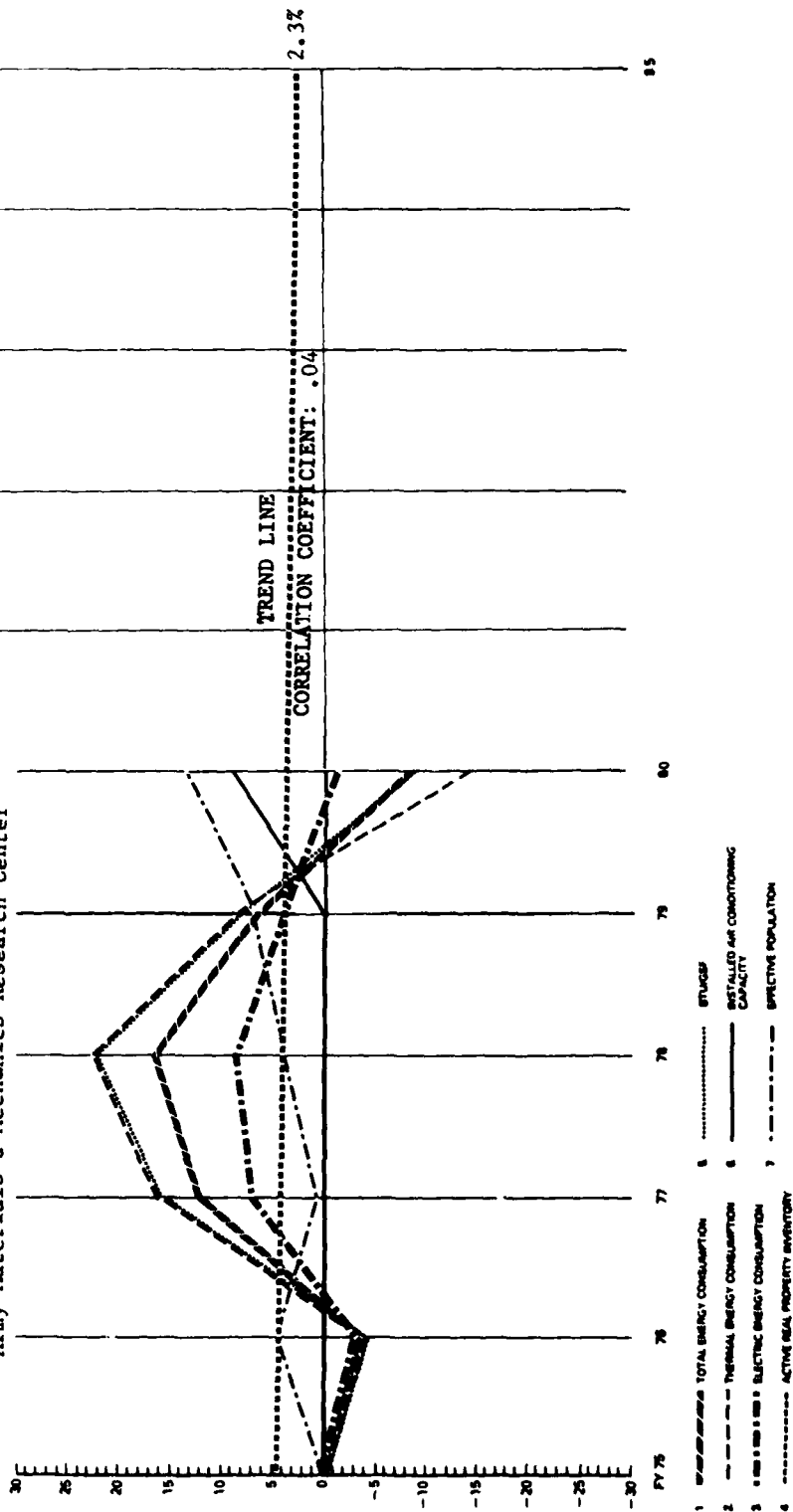
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION ABBREVIATED POINTS (M) MALCOM PARFORM CLIMATIC REGION MOD. S. 184. CDD 1.076

UNIT/TYPE	75	76	77	78	79	80
1 Energy Consumption B PD	1,552,310	1,544,777	1,544,777	1,544,777	1,544,777	1,544,777
2 Thermal En Core B PD	2,462,856	2,462,856	2,462,856	2,462,856	2,462,856	2,462,856
3 Electrical En Core B PD	1,432,652	1,432,652	1,432,652	1,432,652	1,432,652	1,432,652
4 Resident Population B PD	10,315	10,315	10,315	10,315	10,315	10,315
5 Non Resident Population B PD	16,525	16,525	16,525	16,525	16,525	16,525
6 Population Served** B PD	26,035	26,035	26,035	26,035	26,035	26,035
7 Effective Population*** B PD	12,932	12,932	12,932	12,932	12,932	12,932
8 En Consumption/Pop Served B PD	149.5	149.5	149.5	149.5	149.5	149.5
9 En Consumption/Pop B PD	232.2	232.2	232.2	232.2	232.2	232.2
10 Electric En Consumption/Person B PD	131.7	131.7	131.7	131.7	131.7	131.7
11 Ventilated Air Cond Capacity B PD	27,452	27,452	27,452	27,452	27,452	27,452
12 Elec Energy/Ton of Air Cond B PD	64.0	64.0	64.0	64.0	64.0	64.0
13 Real Property Inventory (RPI) B PD	11,725	11,725	11,725	11,725	11,725	11,725
14 RPI/Effective Population	78	78	78	78	78	78
15 Energy Consumption/GSE B PD	110,875	110,875	110,875	110,875	110,875	110,875
16 Thermal En Consumption/GSE B PD	208,420	208,420	208,420	208,420	208,420	208,420
17 Electrical En Consumption/GSE B PD	122,405	122,405	122,405	122,405	122,405	122,405
18 RPI by Category	959	959	959	959	959	959
Training	959	959	959	959	959	959
Maintenance & Protection	959	959	959	959	959	959
Research, Development & Testing	959	959	959	959	959	959
Storage	959	959	959	959	959	959
Other Covered Storage	959	959	959	959	959	959
Hospital & Medical	959	959	959	959	959	959
Administration	959	959	959	959	959	959
Bachelor Housing	959	959	959	959	959	959
Community Etc Area	959	959	959	959	959	959
Family Housing	959	959	959	959	959	959
Operational Bldg Group	959	959	959	959	959	959
Utility Buildings	959	959	959	959	959	959
Other	959	959	959	959	959	959

1 FY 77 ECIP - Storm Sash - \$642,510 - Completed (estimated) June 1974
 2 FY 77 Family Housing ECIP Improvements - \$119,070 - Completed (estimated) October 1974

**Pop in Percent Deviation from Base Year
 ***Population Served is the total Resident & Non-Resident Population

Army Materials & Mechanics Research Center

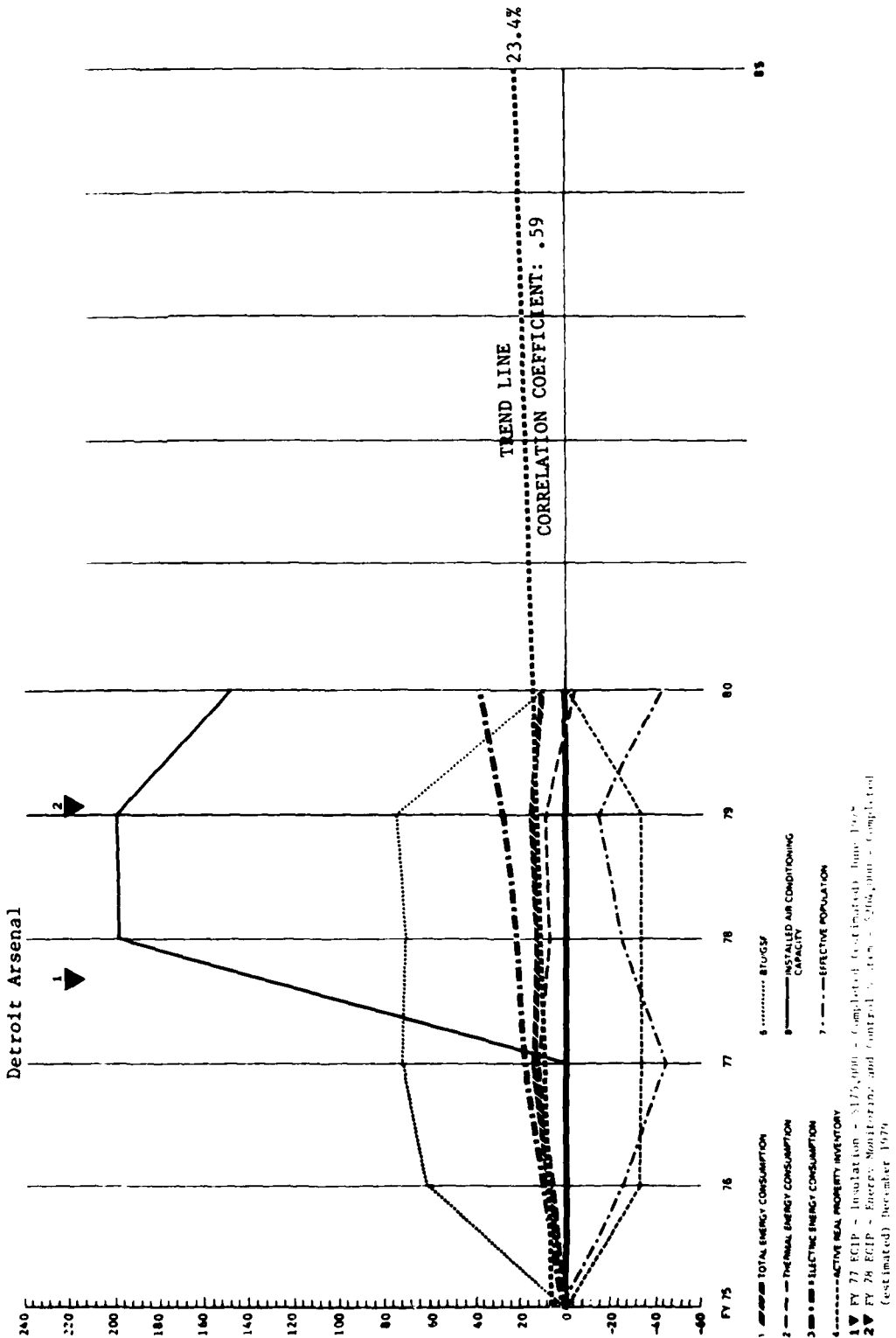


U.S. Army ANALYSIS OF ENERGY CONSUMPTION

UNITS	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
AMTRC	189,919	181,120	181,120	181,120	181,120	181,120	181,120	181,120	181,120	181,120	181,120	181,120	181,120	181,120	181,120
AMTU	106,256	104,379	104,379	104,379	104,379	104,379	104,379	104,379	104,379	104,379	104,379	104,379	104,379	104,379	104,379
AMTU	81,665	78,741	78,741	78,741	78,741	78,741	78,741	78,741	78,741	78,741	78,741	78,741	78,741	78,741	78,741
PEOPLE	13	18	18	18	18	18	18	18	18	18	18	18	18	18	18
PEOPLE	632	651	651	651	651	651	651	651	651	651	651	651	651	651	651
PEOPLE	645	669	669	669	669	669	669	669	669	669	669	669	669	669	669
PEOPLE	224	215	215	215	215	215	215	215	215	215	215	215	215	215	215
AMTUCAP	294.4	271.7	271.7	271.7	271.7	271.7	271.7	271.7	271.7	271.7	271.7	271.7	271.7	271.7	271.7
AMTUCAP	817.8	779.2	779.2	779.2	779.2	779.2	779.2	779.2	779.2	779.2	779.2	779.2	779.2	779.2	779.2
AMTUCAP	6,281.9	4,176.5	4,176.5	4,176.5	4,176.5	4,176.5	4,176.5	4,176.5	4,176.5	4,176.5	4,176.5	4,176.5	4,176.5	4,176.5	4,176.5
AMTUCAP	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855
AMTUCAP	95.5	92.1	92.1	92.1	92.1	92.1	92.1	92.1	92.1	92.1	92.1	92.1	92.1	92.1	92.1
AMTUCAP	685	685	685	685	685	685	685	685	685	685	685	685	685	685	685
AMTUCAP	3,06	2,91	2,91	2,91	2,91	2,91	2,91	2,91	2,91	2,91	2,91	2,91	2,91	2,91	2,91
AMTUCAP	277,254	267,328	267,328	267,328	267,328	267,328	267,328	267,328	267,328	267,328	267,328	267,328	267,328	267,328	267,328
AMTUCAP	158,035	152,378	152,378	152,378	152,378	152,378	152,378	152,378	152,378	152,378	152,378	152,378	152,378	152,378	152,378
AMTUCAP	119,219	114,950	114,950	114,950	114,950	114,950	114,950	114,950	114,950	114,950	114,950	114,950	114,950	114,950	114,950
AMTUCAP	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
AMTUCAP	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
AMTUCAP	382	382	382	382	382	382	382	382	382	382	382	382	382	382	382
AMTUCAP	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66
AMTUCAP	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE
AMTUCAP	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89
AMTUCAP	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
AMTUCAP	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
AMTUCAP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AMTUCAP	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
AMTUCAP	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE

**Population Served in the total Resident & Non-Resident Population
*PD is Percent Deviation from Base Year
***PER Pop in Resident + 1/3 Non-Resident

REMARKS



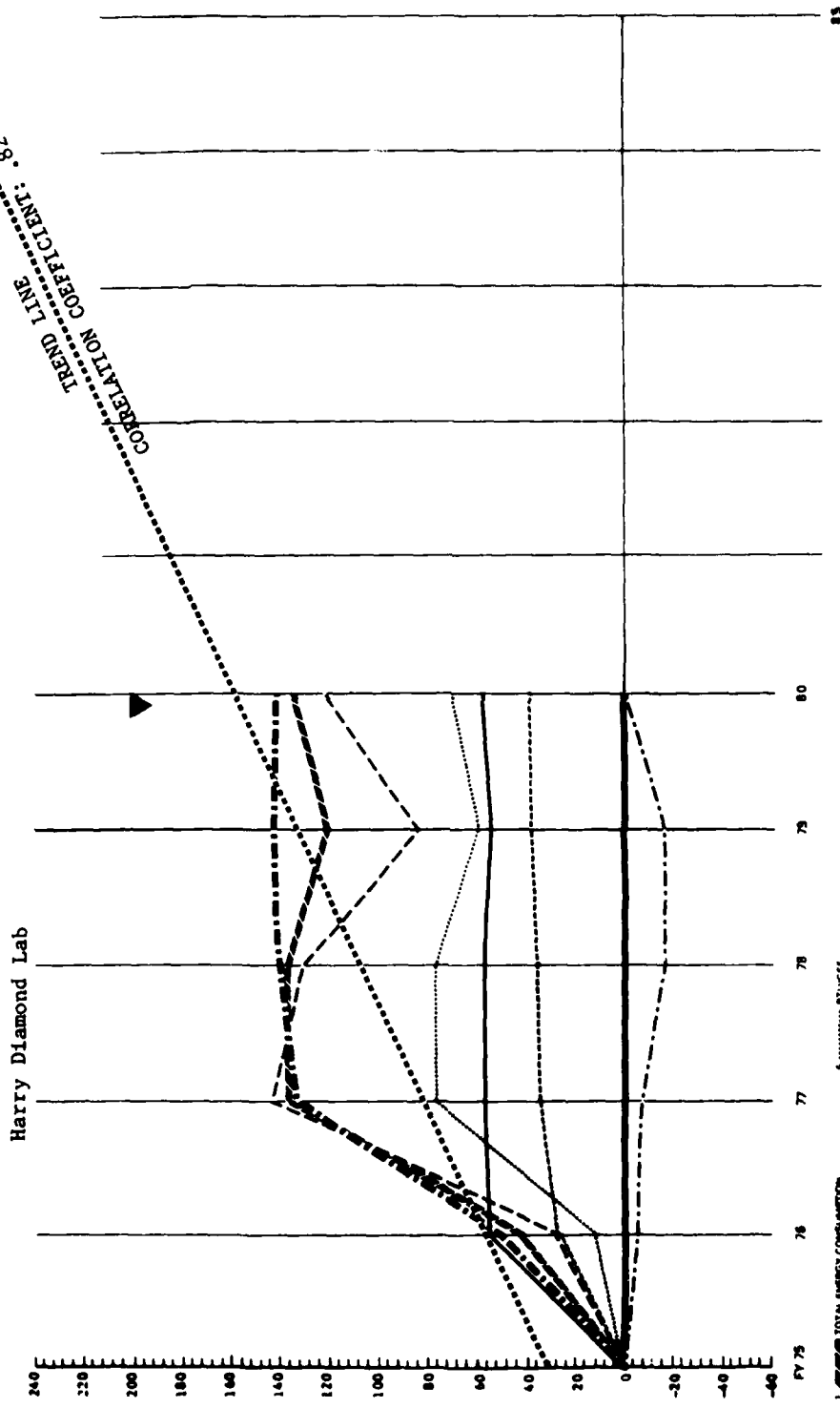
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION DETROIT ARSENALE, MI MACOM DARTM CLIMATIC REGION 2 HDD 6,228 CDD 743

UNITS/yr	75	76	77	78	79	80
1 Energy Consumption & PD	1,276,402	1,156,200	1,426,062	1,413,111	1,441,929	1,311,128
2 Thermal En Cons & PD	800,828	867,968	904,720	904,720	864,918	756,100
3 Electrical En Cons & PD	405,506	488,232	521,342	508,391	576,011	557,028
4 Resident Population & PD	4,403	4,487	4,080	4,231	4,196	4,139
5 Non Resident Population & PD	5,383	5,487	4,081	4,231	4,196	4,139
6 Population Served** & PD	2,348	1,829	1,253	1,253	2,065	1,380
7 Effective Population*** & PD	232,4	257,2	351,9	351,9	232,7	317,7
8 En Consumption/Pop Served & PD	511,2	791,5	1,055,2	1,064,2	698,1	951,6
9 En Consumption/Pop & PD	559,7	2,117	2,117	1,972,1	6,310	5,244
10 Electric En Consumption/Resident Population	2,112,8	2,110,6	2,511,0	1,740,7	91,4	106,2
11 Installed Air Cond Capacity & PD	1,968	1,310	1,308	1,308	1,308	1,966
12 Elec Exemption of Air Cond & PD	80	72	96	96	.63	1,42
13 Heat Recovery Inventory (RPH) & PD	635,875	1,035,267	1,097,906	1,097,906	1,102,086	667,944
14 Heat Recovery Population	408,960	662,570	691,681	660,261	661,252	384,588
15 Energy Consumption/GSF & PD	2,28	3,77	6,06	6,23	440	283
16 Thermal En Consumption/GSF & PD						
17 Electrical En Consumption/GSF & PD						
18 WPI by Category						
Training	31	31	31	31	31	31
Maintenance & Production	186	160	160	160	160	286
Research, Development & Testing	361	346	346	346	346	361
Storage	765	161				
Other Covered Storage						
Household & Multiunit	5	5	5	5	5	8
Administration	553	529	529	529	529	531
Business Housing	10	28	28	28	28	10
Community Fair Hous	19	18	18	18	18	18
Family Housing	3	23	23	23	23	23
Overseas Bar Camp	7	7	7	7	7	7
Utility Buildings						
Other						

**PD is Percent Deviation from Base Year
 ***Population Served is the total Resident & Non-Resident Population
 **Eff Pop is Resident + 1/2 Non-Resident
 1 FY 77 ECIP - Insulation - \$175,000 - Completed (estimated) June 1978
 2 FY 78 ECIP - Energy Monitoring and Control System - \$204,000 - Completed (estimated) December 1979

286.8%

TREND LINE
CORRELATION COEFFICIENT: .82



Harry Diamond Lab

- 1. TOTAL ENERGY CONSUMPTION
- 2. THERMAL ENERGY CONSUMPTION
- 3. ELECTRIC ENERGY CONSUMPTION
- 4. ACTIVE REAL PROPERTY INVENTORY
- 5. BTUGS
- 6. INSTALLED AIR CONDITIONING CAPACITY
- 7. EFFECTIVE POPULATION

▼ FY 78 ECLIP - Energy Control System - \$164,000 - Completed September 1980

U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION ENERGY DIAMETER LAB, MD MACOM DARTCH CLIMATIC REGION 1 HOO-4-483 CDD 1,161

UNITS/FP	75	76	77	78	79	80
MBTU	1,955,676	1,433,117	669,203	1,116,511	1,149,165	1,120,011
MBTU	70,333	27,211	171,016	163,111	1,99,901	1,84,001
MBTU	1,223,071	52,111	291,187	1,132,848	1,140,211	301,660
PEOPLE	1,4316	1,420	1,330	1,414	1,382	1,191
PEOPLE	1,4316	1,420	1,330	1,414	1,382	1,191
PEOPLE	479	441	441	441	441	441
MBTU/CAP	136.1	206.1	347.5	135.4	391.0	361.8
MBTU/CAP	507.9	612.0	1,041.1	1,155.7	1,187.5	1,085.5
TONS	3,063	4,729	1,554.1	1,563.1	1,563.1	1,563.1
MBTU/TON	41.1	40.2	61.2	49.0	61.2	56.0
RSF	559	213	749	34,011	34,311	771
RSF/CAP	1.17	1.56	1.33	1.44	1.90	1.66
BTU/KWH	149,596	192,261	617,093	615,399	538,940	589,754
BTU/KWH	125,855	125,824	228,326	215,390	171,111	167,682
BTU/KWH	211,240	246,216	388,768	400,009	28,811	391,238
RSF						
RSF	22	22	22	24	22	22
RSF	456	456	456	500	500	500
RSF	27	81	73	71	73	71
RSF						
RSF	9	116	114	114	114	114
RSF	33					
RSF						
RSF	18	25	25	25	25	25
RSF						

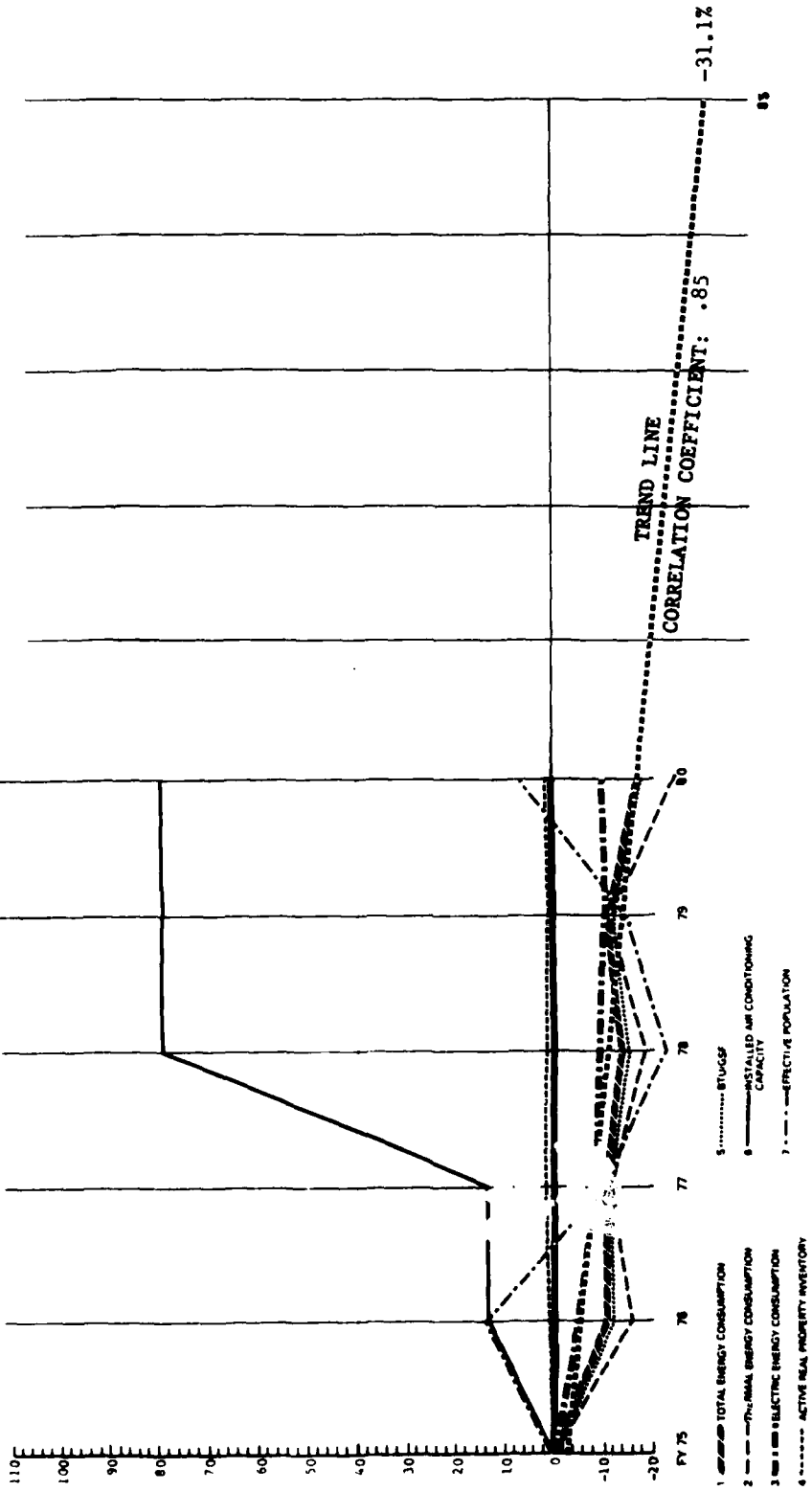
- 1 Energy Consumption @ PD
- 2 Thermal En Cons @ PD
- 3 Electrical En Cons @ PD
- 4 Non-Resident Population @ PD
- 5 Non-Resident Population @ PD
- 6 Population Served @ PD
- 7 Effective Population @ PD
- 8 En Consumption/Pop Served @ PD
- 9 En Consumption/Pop @ PD
- 10 Electric En Consumption/Resident Population
- 11 Insulated Air Cond Capacity @ PD
- 12 Base Energy/Ton of Air Cond @ PD
- 13 Real Energy Inventory, 1978 @ PD
- 14 Real Energy Inventory, 1978 @ PD
- 15 Energy Consumption/GSF @ PD
- 16 Thermal En Consumption/GSF @ PD
- 17 Electrical En Consumption/GSF @ PD
- 18 En by Category
- 19 Training
- 20 Maintenance & Production
- 21 Research, Development & Testing
- 22 Storage
- 23 Other Contract Storage
- 24 Hospital & Medical Administration
- 25 Bachelor Housing
- 26 Community Facilities
- 27 Family Housing
- 28 Operational Buildings
- 29 Utility Buildings
- 30 Other

**Population Served is the total Resident & Non-Resident Population
 **PD is Percent Deviation from Base Year
 ***En Pop @ Resident + 1/3 Non-Resident

▼ FY 78 ECIP - Energy Control System - \$644,000 - Completed September 1980

REMARKS

Dugway Proving Ground



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION DUTY DAY PROCEED, LT MACOM DARCOM CLIMATIC REGION 2 MOD 5, R77 CDD 1, ORR

UNITS	75	76	77	78	79	80
EMTU	476,035	424,168	527,760	470,717	409,174	421,981
EMTU	252,259	212,085	222,435	211,811	206,552	223,650
EMTU	223,776	212,084	205,325	208,906	206,622	198,331
PEOPLE	1,206	1,016	1,574	1,323	1,177	1,367
PEOPLE	316	913	582	1,128	999	999
PEOPLE	2,310	2,849	2,156	1,671	2,176	2,365
PEOPLE	1,966	2,240	1,768	1,071	1,510	1,687
EMTU/PEOPLE	205.1	138.9	198.6	127.1	179.9	158.5
EMTU/PEOPLE	242.1	282.3	243.9	161.1	270.9	251.2
EMTU/PEOPLE	174.7	109.5	130.4	124.1	173.8	147.2
TONS	656	516	516	1,172	818	918
EMTU/TON	725.6	789.9	789.9	1,021	242.5	245.6
ESF	1,919	1,949	1,963	1,421	1,945	1,945
ESF/PEOPLE	1.6	1.9	1.3	1.1	1.7	1.4
EMTU/ESF	245,505	217,634	217,911	127.7	207,984	216,957
EMTU/ESF	130,118	108,817	113,314	12.9	103,992	114,987
EMTU/ESF	115,187	108,817	104,998	9.4	103,992	101,970
ESF	14	14	14	14	14	14
ESF	149	149	149	149	149	149
ESF	192	192	192	192	192	192
ESF	155	162	161	161	162	162
ESF	86	86	86	86	86	86
ESF	174	174	174	174	174	174
ESF	247	247	247	247	247	247
ESF	192	192	192	192	192	192
ESF	666	666	666	666	666	666
ESF	36	36	36	36	36	36
ESF	30	30	30	30	30	30

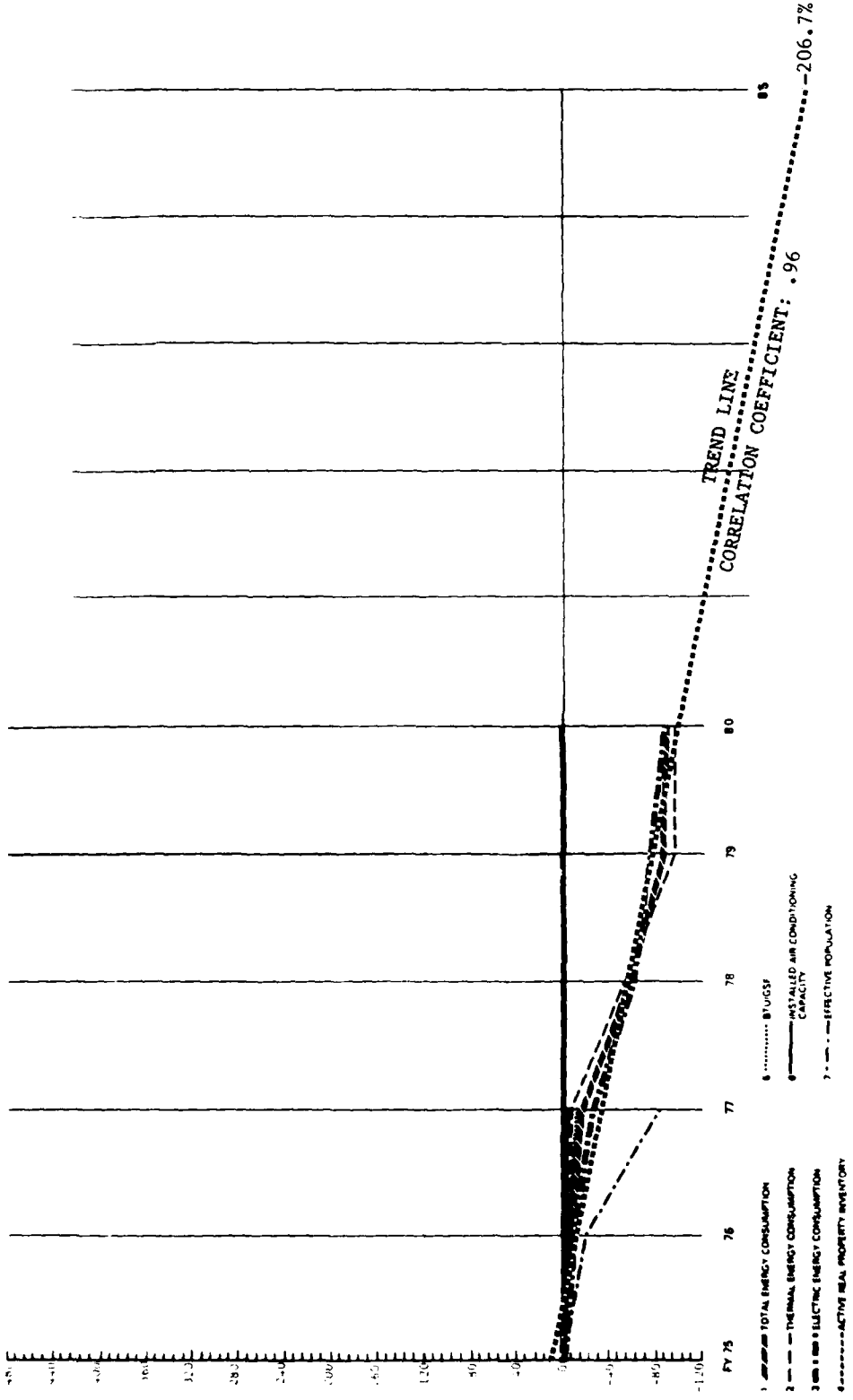
- 1 Energy Consumption & PD
- 2 Thermal En Cons & PD
- 3 Electrical En Cons & PD
- 4 Non Resident Population & PD
- 5 Non Resident Population** & PD
- 6 Population Service** & PD
- 7 Effective Population*** & PD
- 8 En Consumption/Pop Served & PD
- 9 En Consumption/Pop Served & PD
- 10 Electric En Consumption/Resident Population
- 11 Available Air Cond Capacity & PD
- 12 Elec Energy/Pop of Air Cond & PD
- 13 Fuel Program Inventory MTR & PD
- 14 MPE/Effective Population
- 15 Energy Consumption/ESF & PD
- 16 Thermal En Consumption/ESF & PD
- 17 Electrical En Consumption/ESF & PD
- 18 MTR by Category

UNITS	75	76	77	78	79	80
EMTU	476,035	424,168	527,760	470,717	409,174	421,981
EMTU	252,259	212,085	222,435	211,811	206,552	223,650
EMTU	223,776	212,084	205,325	208,906	206,622	198,331
PEOPLE	1,206	1,016	1,574	1,323	1,177	1,367
PEOPLE	316	913	582	1,128	999	999
PEOPLE	2,310	2,849	2,156	1,671	2,176	2,365
PEOPLE	1,966	2,240	1,768	1,071	1,510	1,687
EMTU/PEOPLE	205.1	138.9	198.6	127.1	179.9	158.5
EMTU/PEOPLE	242.1	282.3	243.9	161.1	270.9	251.2
EMTU/PEOPLE	174.7	109.5	130.4	124.1	173.8	147.2
TONS	656	516	516	1,172	818	918
EMTU/TON	725.6	789.9	789.9	1,021	242.5	245.6
ESF	1,919	1,949	1,963	1,421	1,945	1,945
ESF/PEOPLE	1.6	1.9	1.3	1.1	1.7	1.4
EMTU/ESF	245,505	217,634	217,911	127.7	207,984	216,957
EMTU/ESF	130,118	108,817	113,314	12.9	103,992	114,987
EMTU/ESF	115,187	108,817	104,998	9.4	103,992	101,970
ESF	14	14	14	14	14	14
ESF	149	149	149	149	149	149
ESF	192	192	192	192	192	192
ESF	155	162	161	161	162	162
ESF	86	86	86	86	86	86
ESF	174	174	174	174	174	174
ESF	247	247	247	247	247	247
ESF	192	192	192	192	192	192
ESF	666	666	666	666	666	666
ESF	36	36	36	36	36	36
ESF	30	30	30	30	30	30

**PD is Percent Conversion from Base Year
 ***Population Served is the total Resident & Non Resident Population
 ****ESF Pop is Resident + 1/3 Non-Resident

REMARKS

Frankford Arsenal



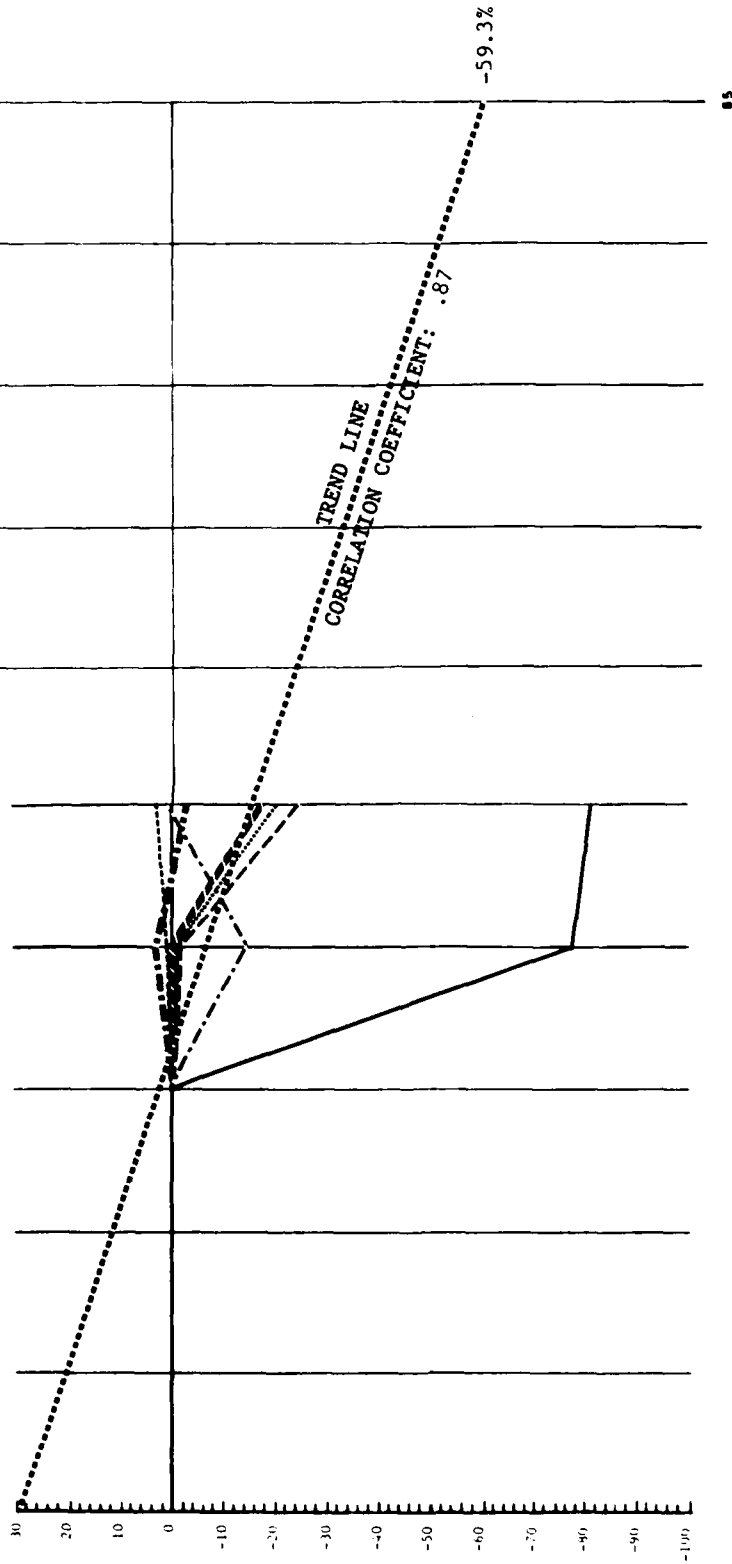
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - BRANTFORD ARSENAL, PA - MACOM BARCODE - CLIMATIC REGION 3 - MOD 4,865 CDD 1,104

UNIT/STY	76	77	78	79	80
1 Energy Consumption B PD	834,502	710,486	349,090	76,094	59,588
2 Thermal En Conv B PD	506,710	468,115	226,509	5,372	22,561
3 Electrical En Conv B PD	332,800	240,545	122,181	70,767	37,027
4 Resident Population B PD	27	1,593.31			
5 Non Resident Population B PD	3,326	563			
6 Population Serv** B PD	3,353	2,667			
7 Effective Population*** B PD	1,115	896			
8 En Consumption/Pop Serv** B PD	2,52.0	2,93.5			
9 En Consumption/Pop B PD	244.1	870.8			
10 Electric En Consumption/Resident Population	12,511.1	28,311.8			
11 Installed Air Cond Capacity B PD	7,702	7,702			
12 Elec Energy/Ton of Air Cond B PD	43.8	60.5			
13 Fuel Property Inventory (MWh) B PD	2,604	2,587			
14 (MWh)/Inventive Population	2.29	2.89			
15 Energy Consumption/GSF B PD	324,310	301,595			
16 Thermal En Consumption/GSF B PD	194,586	180,957			
17 Electrical En Consumption/GSF B PD	129,724	120,638			
18 (MWh) per Category	32	32			
Training	1,052	1,049			
Maintenance & Production	577	577			
Research, Development & Testing	136	135			
Storage	195	180			
Other Covered Storage	6	6			
Hospital & Medical	516	445			
Administration	14				
Bachelor Housing	50	46			
Community En Bldg	96	58			
Family Housing	1	1			
Operational Bldg	64	48			
Utility Buildings					
Other					

**PD is Percent Deviation from Base Year
 ***Effective Population is the total Resident & Non-Resident Population
 **Resident Pop is Resident + 1/2 Non-Resident

REMARKS: No Report for FY 78 as the Installation went into caretaker status in FY 79.

Hawthorne AAP



- 1 TOTAL ENERGY CONSUMPTION
- 2 THERMAL ENERGY CONSUMPTION
- 3 ELECTRIC ENERGY CONSUMPTION
- 4 ACTIVE REAL PROPERTY INVENTORY
- 5 PLUGS
- 6 INSTALLED AIR CONDITIONING CAPACITY
- 7 EFFECTIVE POPULATION

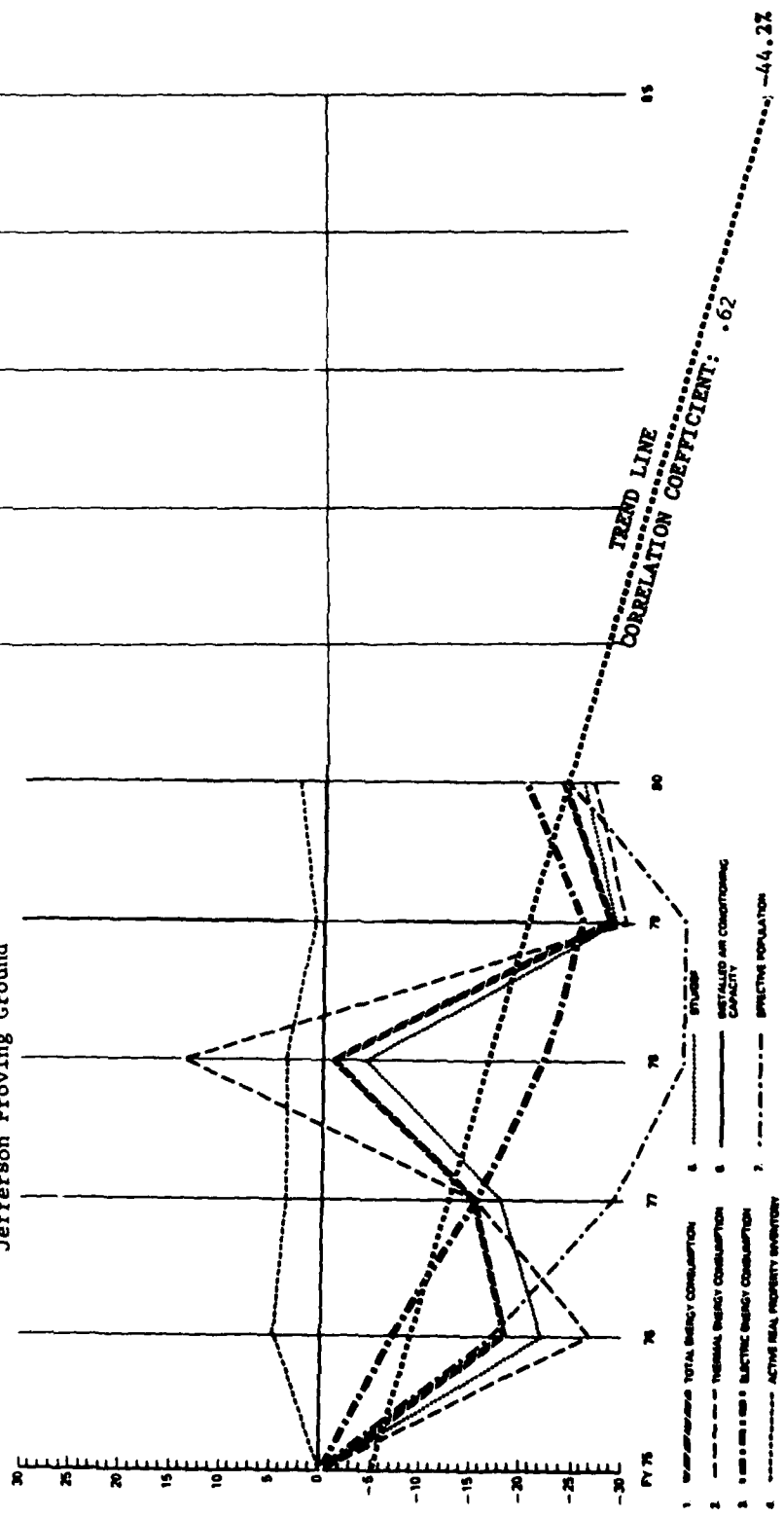
U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION INSTANTANEOUS DATA REPORT MACOM PART 10 CLIMATIC REGION 7 HOD 530R CDD 487

UNIT/TYPE	78	79	80
MRTU	227,108	227,108	227,108
MRTU	202,200	202,200	202,200
MRTU	144,908	144,908	144,908
PEOPLE	518	518	518
PEOPLE	1,488	1,488	1,488
PEOPLE	1,129	1,129	1,129
MRTU/CAP	387.0	387.0	387.0
MRTU/CAP	178.3	178.3	178.3
MRTU/CAP	142.0	142.0	142.0
TONS	309	309	309
MRTU/TON	436.6	436.6	436.6
KSF	9,913	9,913	9,913
KSF	8,78	8,78	8,78
BTUGSF	43,086	43,086	43,086
BTUGSF	29,477	29,477	29,477
BTUGSF	13,609	13,609	13,609
KSF	3	3	3
KSF	779	779	779
KSF	15	15	15
KSF	6,010	6,010	6,010
KSF	2,187	2,204	2,165
KSF	17	16	16
KSF	84	80	79
KSF	54	53	55
KSF	150	174	177
KSF	687	688	729
KSF	92	91	93
KSF	14	14	14
KSF	19	19	19

Net Available Separately Listed Above
 **Population Separates the total Resident & Non-Resident Population
 ***Pop & Resident + 113 Non-Resident

REMARKS: This Installation was transferred from the U.S. Navy as of FY78 and is NOT Contractor operated.

Jefferson Proving Ground



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION JEFFERSON PROVING GRD., INMACOM MACOMB CLIMATIC REGION 3 HDD 5,132 CDD 1,191

UNITS/STY	76	77	78	79	80
1 Energy Consumption & PD	96,171	81,306	96,827	68,124	73,116
2 Thermal En Cons & PD	55,218	47,158	63,548	38,150	40,259
3 Electrical En Cons & PD	40,953	34,148	33,279	29,974	32,857
4 Resident Population & PD	6	39	28	31	29
5 Non Resident Population & PD	567	398	359	352	467
6 Population Served** & PD	607	437	387	383	496
7 Effective Population*** & PD	421	372	368	348	483
8 En Consumption/Pop Served & PD	1,719	1,166	1,051	1,119	1,274
9 En Consumption/Eff Pop & PD	3,511	4,727	6,000	4,600	5,671
10 Electric En Consumption/Resident Population	6,215	8,755	11,178	9,669	11,168
11 Installed Air Cond Capacity & PD	5	665	665	665	665
12 Elec Energy/Ton of Air Cond & PD	20.7	51.4	47.1	45.1	48.7
13 Real Property Inventory (RPI) & PD	175	697	697	679	690
14 RPI/Reserve Population	2.77	4.05	4.71	4.59	3.73
15 Engr./Construction/CSF & PD	142,76	110,634	136,079	100,330	105,965
16 Thermal En Consumption/CSF & PD	87,317	57,530	91,174	56,186	59,028
17 Electrical En Consumption/CSF & PD	54,839	53,103	44,905	44,144	46,938
18 RPI by Category					
Training	28	28	28	28	28
Maintenance & Production	187	187	187	187	187
Research, Development & Testing	74	74	74	74	74
Storage	194	116	116	116	116
Other Covered Storage		BASE	77	77	77
Hospital & Medical	3	3	3	3	3
Administration	70	70	70	60	70
Technical Housing					
Community Facilities	34	34	34	34	34
Family Housing	61	52	52	44	39
Operational Buildings	10	41	41	41	41
Utility Buildings	14	15	15	15	15
Other					

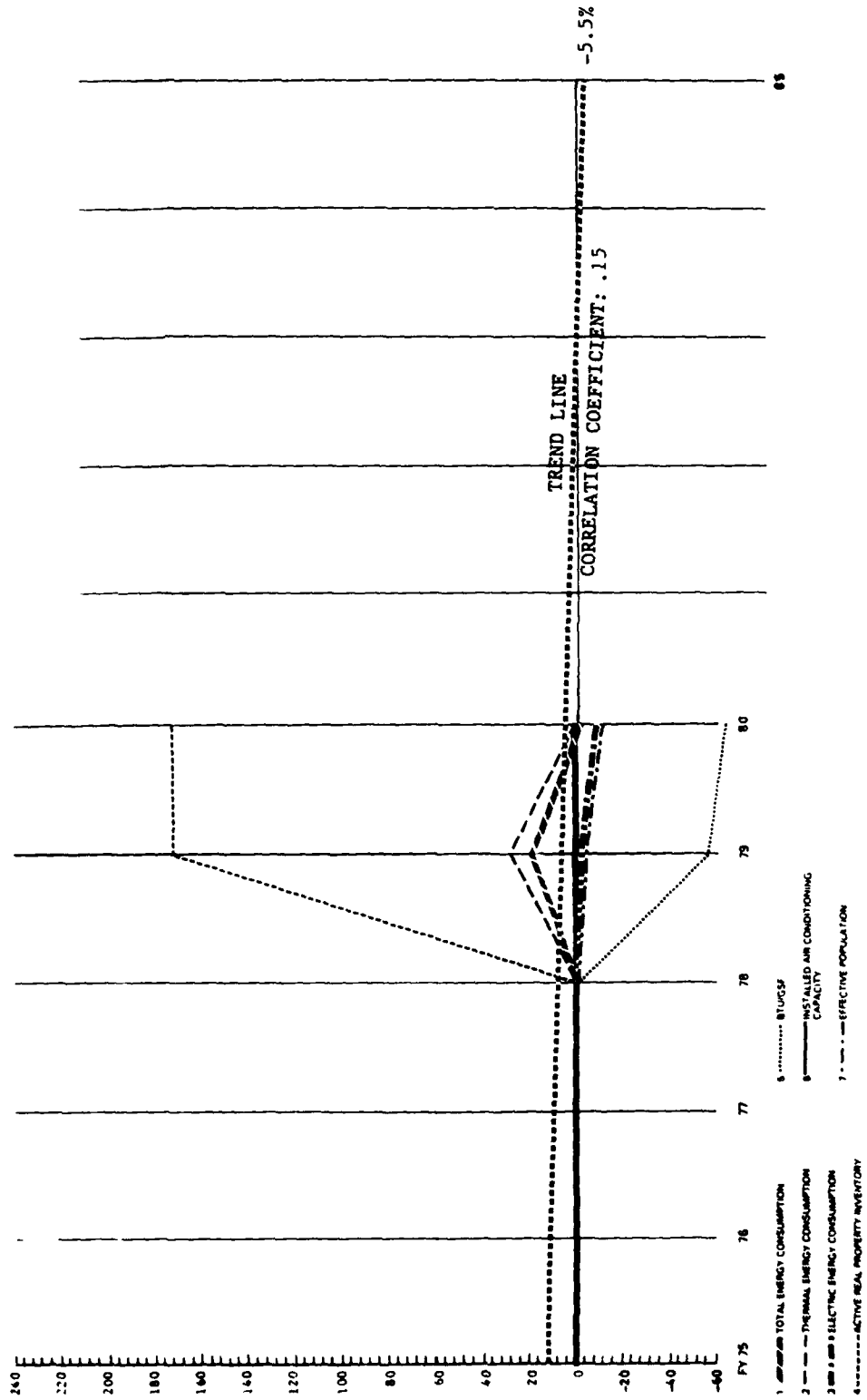
**Population Served is the total Resident & Non Resident Population

***Eff Pop of Resident + (2 Non-Resident

**PD is Percent Deviation from Base Year

REMARKS

McAlester AAP



UNITS/FY	78	79	80
MBTU	312,121	369,370	301,045
MBTU	213,150	272,675	212,525
MBTU	98,971	96,895	88,520
PEOPLE	997	924	857
PEOPLE	34	130	37
PEOPLE	1,027	1,064	894
PEOPLE	1,004	977	869
MBTUCAP	303.9	347.3	336.7
MBTUCAP	310.9	378.3	346.4
MBTUCAP	99.7	103.7	103.3
TONS	1,125	1,125	1,125
MBTLUTON	88.0	86.1	78.7
RSF	3,401	9,315	9,259
RSFCAP	3.39	9.53	10.65
BTUNGFSF	91,773	39,675	32,314
BTUNGFSF	62,673	29,273	22,953
BTUNGFSF	29,100	10,402	9,561
RSF	1	0	0
RSF	972	1,002	1,009
RSF	10	10	10
RSF	1,610	5,963	5,936
RSF	139	1,796	1,801
RSF	7	7	6
RSF	76	56	89
RSF	58	49	42
RSF	252	95	206
RSF	95	61	58
RSF	46	8	38
RSF	36	36	64
RSF	99	97	0

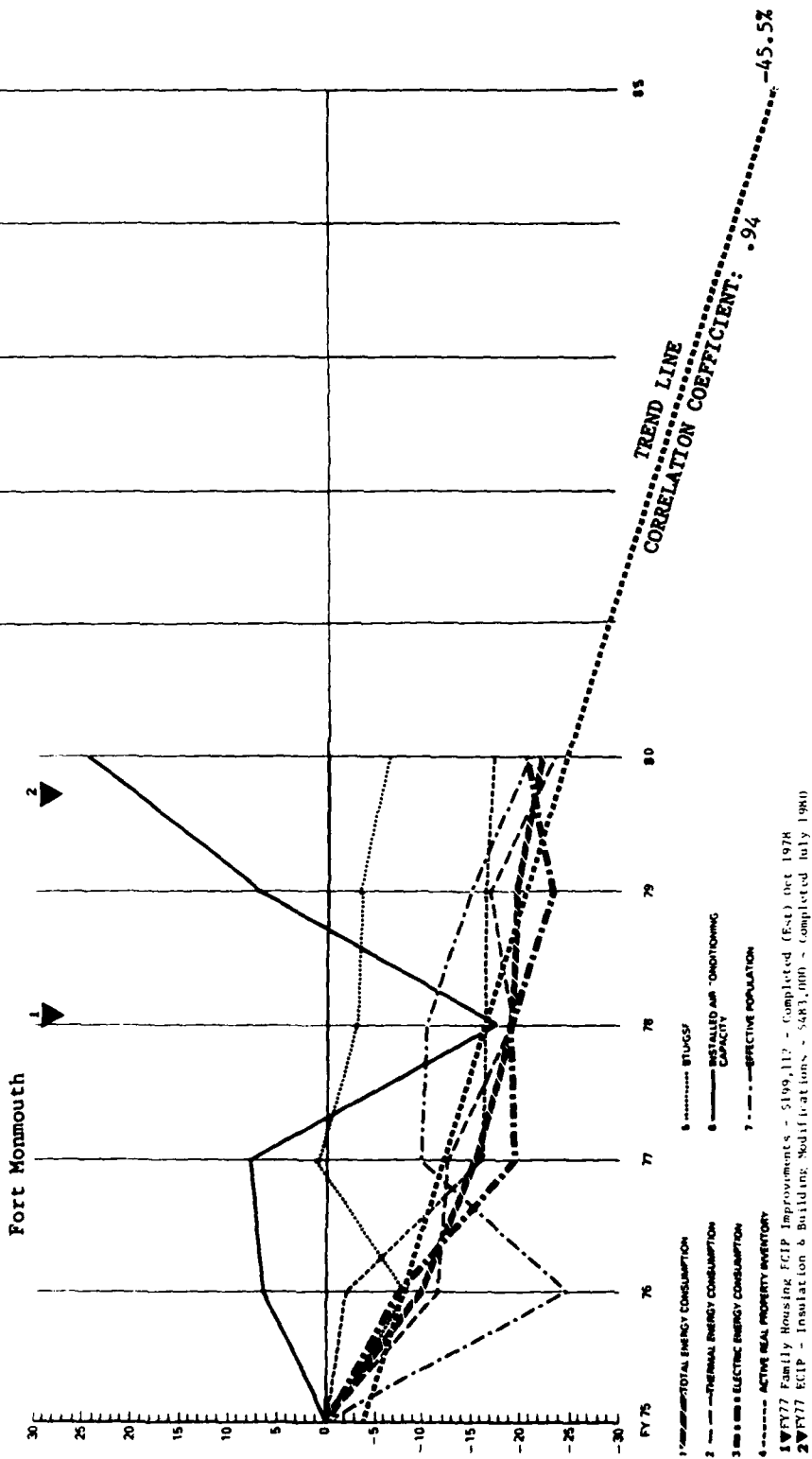
**Population Saved is the total Resident & Non Resident Population
 **EN Pop is Resident + 1/2 Non-Resident

- 1 Energy Consumption & PD
- 2 Thermal En Cons & PD
- 3 Electrical En Cons & PD
- 4 Resident Population & PD
- 5 Non Resident Population & PD
- 6 Population Saved** & PD
- 7 Effective Population*** & PD
- 8 En Consumption/Pop Saved & PD
- 9 En Consumption/EN Pop & PD
- 10 Electric En Consumption/Resident Population
- 11 Installed Air Cond Capacity & PD
- 12 Elec Energy/Ton of Air Cond & PD
- 13 Real Property Inventory (RPI) & PD
- 14 Inefficiency Population
- 15 Energy Consumption/GSF & PD
- 16 Thermal En Consumption/GSF & PD
- 17 Electrical En Consumption/GSF & PD
- 18 RPI by Category

- Training
- Maintenance & Production
- Research, Development & Testing
- Storage
- Other General Storage
- Hotel & Medical
- Administration
- Subsidiary Housing
- Community Est. Areas
- Family Housing
- Operational Bu. Bldgs
- Utility Buildings
- Other

REMARKS

This installation was transferred from the U.S. Navy as of FY78 and is NOT Contractor operated.



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - FT. MONMOUTH, NJ - MACOM - PARCOM - CLIMATIC REGION - HOD 5, 12R CDD 77D

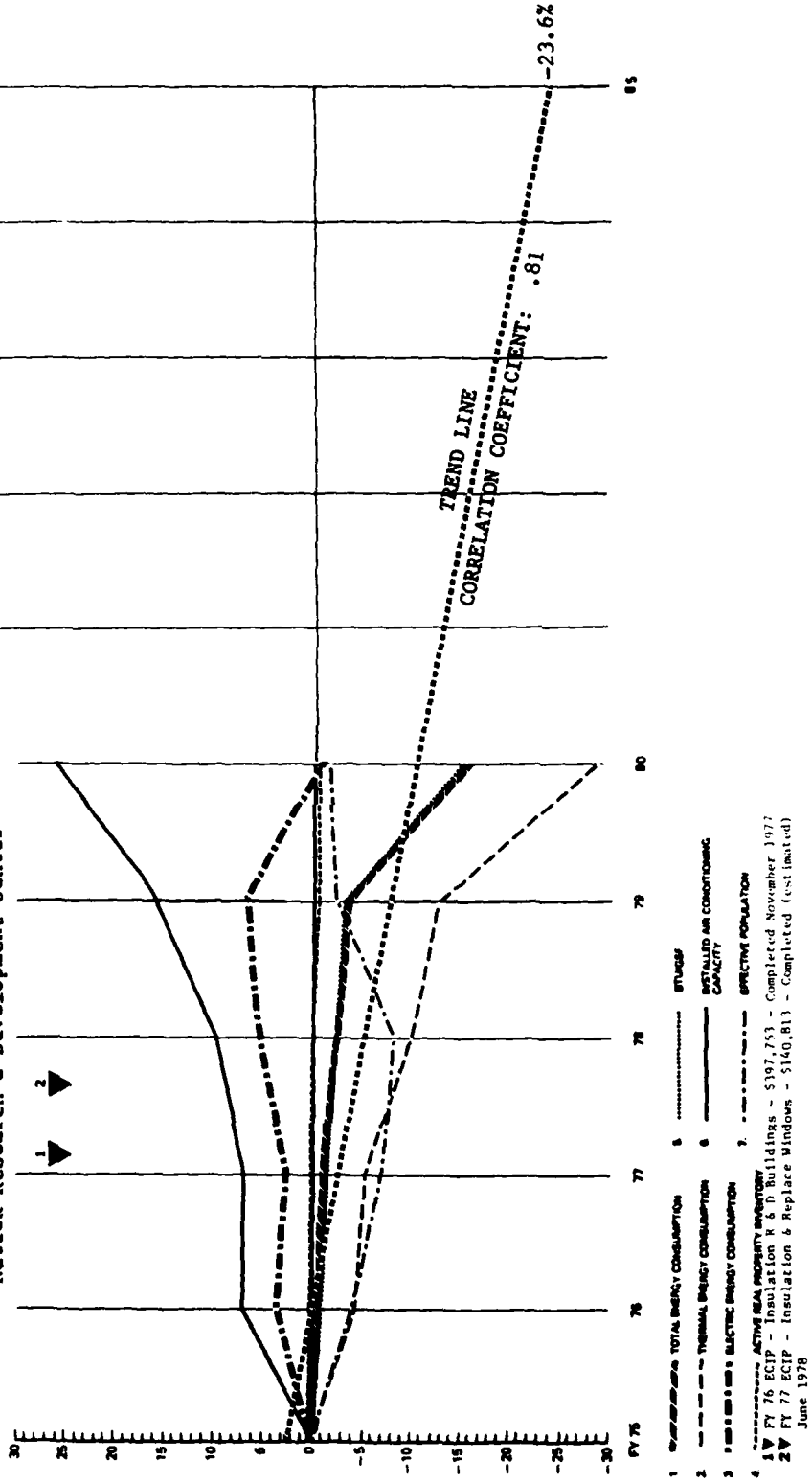
UNITS	75	76	77	78	79	80
Energy Consumption @ PD	1,836,000	1,654,654	1,552,677	1,487,631	1,474,460	1,425,160
Thermal En Cons @ PD	1,066,532	928,607	810,081	827,950	869,932	800,100
Electrical En Cons @ PD	783,468	726,047	742,596	659,681	604,528	624,660
Non Resident Populations @ PD	6,436	3,829	5,382	5,270	5,387	5,244
Resident Populations @ PD	9,587	10,266	8,136	7,126	7,798	7,248
Population Survey** @ PD	16,023	14,095	14,516	13,396	13,383	11,339
Effective Population*** @ PD	9,612	7,251	8,209	8,645	8,186	7,607
En Consumption/Pop Survey @ PD	116.6	117.4	109.8	111.1	110.2	125.7
En Consumption/Pop Survey @ PD	190.6	228.2	178.5	172.1	180.1	187.4
En Consumption/Resident Population	122.7	190.1	106.4	102.0	108.2	108.8
Heated Air Cond Capacity @ PD	5,505	5,870	5,940	4,526	5,894	6,862
Heat Energy of Air Cond @ PD	163.4	126.0	102.2	161.3	102.6	91.0
Heat Property Inventory (Btu) @ PD	7,431	7,274	6,226	6,206	6,205	6,160
INSURCAP	1,000	1,000	1,000	1,000	1,000	1,000
BTUGSF	287,075	227,428	249,386	239,708	237,624	231,390
BTUDSF	150,833	127,384	147,138	136,633	140,198	129,986
BTUSDF	106,242	100,086	109,248	109,074	91,473	101,406
BTUSDF	750	600	121	136	119	235
BTUSDF	374	351	354	354	358	355
BTUSDF	814	811	795	802	802	802
BTUSDF	562	627	2	2	2	2
BTUSDF	158	156	165	165	165	165
BTUSDF	1,558	1,614	1,605	1,339	1,330	1,200
BTUSDF	1,061	972	537	561	561	568
BTUSDF	565	561	552	552	552	562
BTUSDF	1,546	1,685	1,684	1,687	1,688	1,688
BTUSDF	62	57	56	56	56	56
BTUSDF	43	44	41	40	40	41
BTUSDF	BASE	BASE	BASE	BASE	BASE	BASE

PD at Percent Division from Base Year
 **Population Surveyed at the total Number of Non-Resident Population
 ***PD Pop @ Numbers * 1/3 Non-Resident

1 FY 77 Family Housing ECIP Improvements - \$199,112 - Completed (estimated) October 1978
 2 FY 77 ECIP - Insulation & Building Modifications - \$481,000 - Completed July 1980

REMARKS

Natick Research & Development Center



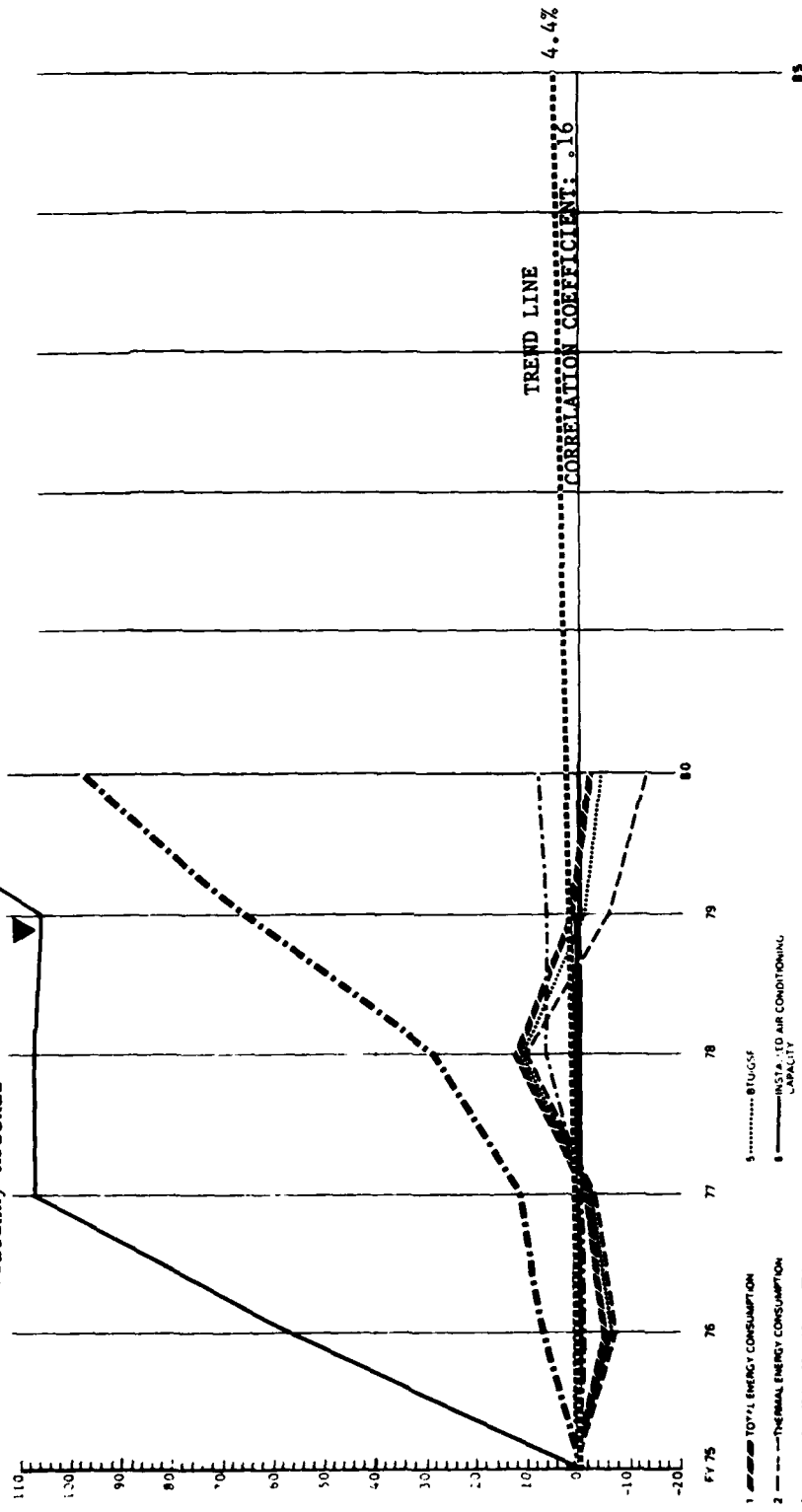
U.S. Army - ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - NATICK RESERVE DET. - MA - MACOM - BARCON - CLIMATIC REGION - 2 - HMO 5,144 CDD 636

UNITARY	76	77	78	79	80
ENERGY CONSUMPTION @ PD	308,772	304,502	299,782	297,133	259,443
TRAINED IN CASE @ PD	161,630	155,297	146,894	142,624	116,072
UNTRAINED IN CASE @ PD	147,142	149,205	152,888	154,509	143,371
NON-RESERVE POPULATION @ PD	334	324	320	316	347
RESERVE POPULATION @ PD	1,322	1,285	1,232	1,213	1,215
PEOPLE	1,732	1,609	1,552	1,529	1,562
PEOPLE	814	779	747	741	802
HEATING @ PD	178.3	188.7	189.5	185.5	160.9
HEATING @ PD	379.3	402.2	401.3	375.6	323.5
HEATING @ PD	508.8	553.5	553.3	400.3	361.1
TONS	894	956	983	1,037	1,128
INSTALLATION	1,62.3	1,57.1	1,55.5	1,49.0	1,27.1
ESP	1,036	1,037	1,036	1,030	1,032
ESP/CAP	1,27	1,33	1,39	1,30	1,29
STRUCRIP	298,043	295,649	289,365	288,479	251,398
STRUCRIP	157,863	150,783	149,736	138,470	112,480
STRUCRIP	140,080	144,866	147,575	150,009	138,919
ESP	70	70	70	70	70
ESP	530	520	532	532	536
ESP	171	167	167	166	166
ESP	56	56	57	56	56
ESP	21	21	21	21	21
ESP	18	18	18	18	17
ESP	118	118	118	112	118
ESP	1	1	1	1	1
ESP	15	16	16	16	10

- 1. Energy Consumption @ PD
- 2. Trained In Case @ PD
- 3. Untrained In Case @ PD
- 4. Non-Reserve Population @ PD
- 5. Reserve Population @ PD
- 6. People
- 7. Heating @ PD
- 8. Heating @ PD
- 9. Heating @ PD
- 10. Tons
- 11. Installation
- 12. ESP
- 13. ESP/CAP
- 14. STRUCRIP
- 15. STRUCRIP
- 16. STRUCRIP
- 17. ESP
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- 60. ESP

1977 76 ECIP - Insulate R & D Buildings - \$397,753 - Completed November 1977
 2077 77 ECIP - Insulation & Replace Windows - \$140,813 - Completed (estimated) June 1978

Picatinny Arsenal



- 1 - TOTAL ENERGY CONSUMPTION
 - 2 - THERMAL ENERGY CONSUMPTION
 - 3 - ELECTRIC ENERGY CONSUMPTION
 - 4 - ACTIVE REAL PROPERTY INVENTORY
 - 5 - BUOYS
 - 6 - INSTALLED AIR CONDITIONING CAPACITY
 - 7 - EFFECTIVE POPULATION
- ▲ FY76 ECTP - Condensate Recovery - 52,537,000 - Completed Sept 1978

U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - PICATINNY ARSENAL, NJ - MACOM - DARGCON - CLIMATIC REGION 2 - HDD 5,304 CDD 4,10

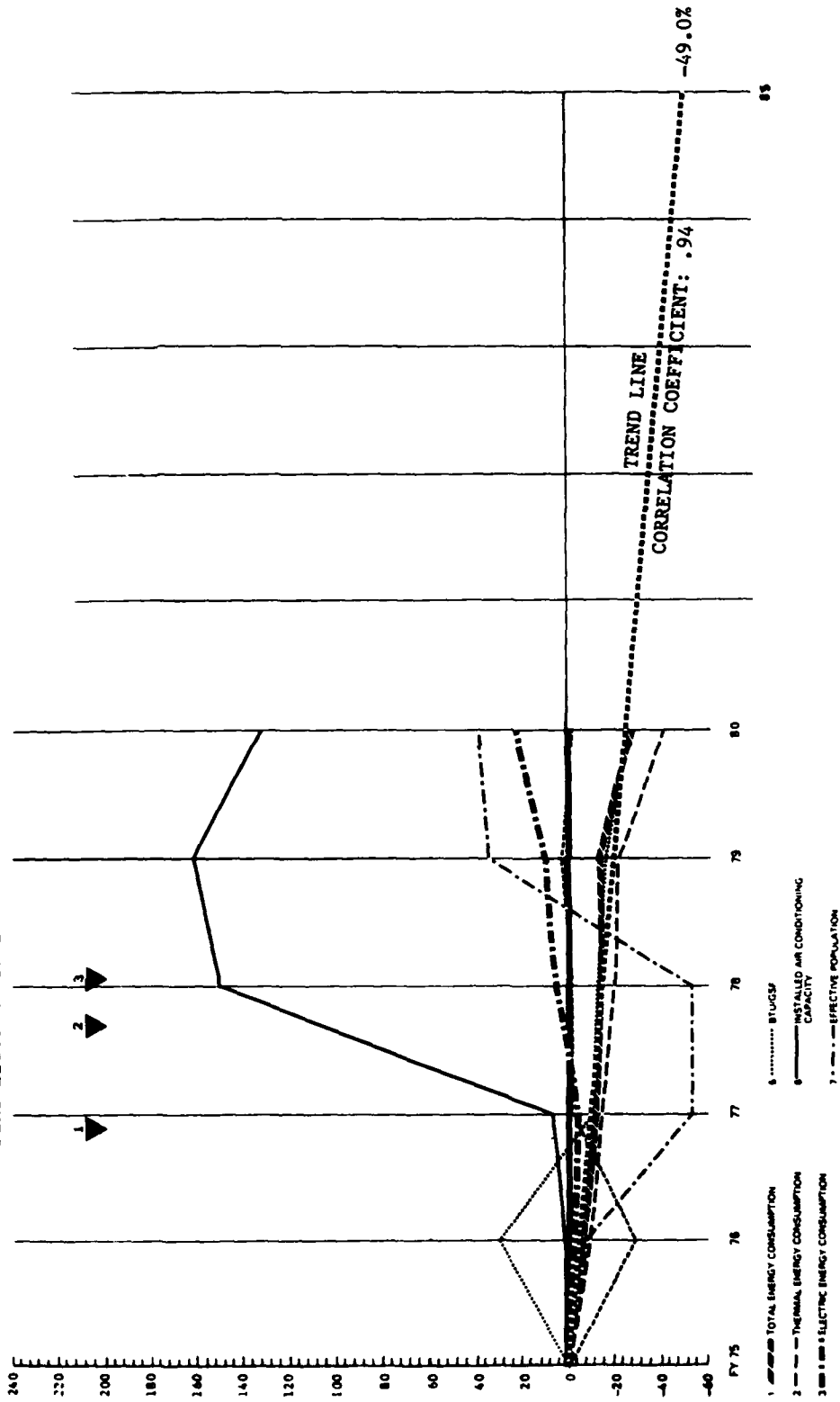
UNITS	76	77	78	79	80
1 Energy Consumption & PD	1,759,556	1,720,057	1,971,261	1,771,624	1,712,443
2 Thermal En Cons & PD	1,585,800	1,534,850	1,746,975	1,483,550	1,369,675
3 Electrical En Cons & PD	173,756	184,992	224,286	288,074	342,768
4 Resident Population & PD	163	374	408	576	624
5 Non Resident Population & PD	5,538	5,555	5,909	5,404	5,829
6 Population Served** & PD	6,001	5,929	6,317	5,980	6,103
7 Electric Population*** & PD	2,242	2,274	2,378	2,377	2,437
8 En Consumption/Pop Served & PD	237.2	261.6	312.1	296.2	274.7
9 En Consumption/El Pop & PD	784.8	747.0	838.9	765.3	708.5
10 Electric En Consumption/Resident Population	478.7	445.5	549.7	500.1	465.5
11 Inhabited Air Cond Capacity & PD	795	1,450	1,650	1,630	1,684
12 Elec Energy/Ton of Air Cond & PD	218.6	147.9	117.7	176.7	173.6
13 Real Property Inventory MPA & PD	3,785	3,822	3,811	3,848	3,886
14 MPE/Elctric Population	1.59	1.71	1.72	1.62	1.61
15 Energy Consumption/GSF & PD	464,876	432,041	517,256	460,401	440,670
16 Thermal En Consumption/GSF & PD	418,970	387,860	458,403	385,538	352,464
17 Electrical En Consumption/GSF & PD	65,906	48,375	58,853	74,863	88,206
18 MPA by Category	70	67	54	54	54
Training	1,048	1,055	1,037	1,028	1,032
Maintenance & Production	580	580	526	569	588
Research, Development & Testing	810	209	185	193	192
Storage	Non Available Separately Included Above		722	723	710
Other Covered Storage	R	8	8	8	8
Household & Medical	663	612	716	712	772
Administration	57	58	56	56	56
Black/White Housing	151	161	161	156	166
Community Fit Sites	189	189	189	189	189
Family Housing	91	90	62	60	62
Operational Bus Stops	80	85	85	88	86
Utility Buildings	Non Available	BASE		9	
Other					

**Population Served is the total Resident & Non-Resident Population
 ***Elct Pop is Resident + 1/3 Non-Resident
 *PD is Percent Derivation from Base Year

FY 76 EICP - Condensate Recovery - \$2,517,036 - Completed September 1979

REMARKS

Pine Bluff Arsenal



A-248

- 1 TOTAL ENERGY CONSUMPTION
- 2 THERMAL ENERGY CONSUMPTION
- 3 ELECTRIC ENERGY CONSUMPTION
- 4 ACTIVE REAL PROPERTY INVENTORY
- 7 EFFECTIVE POPULATION

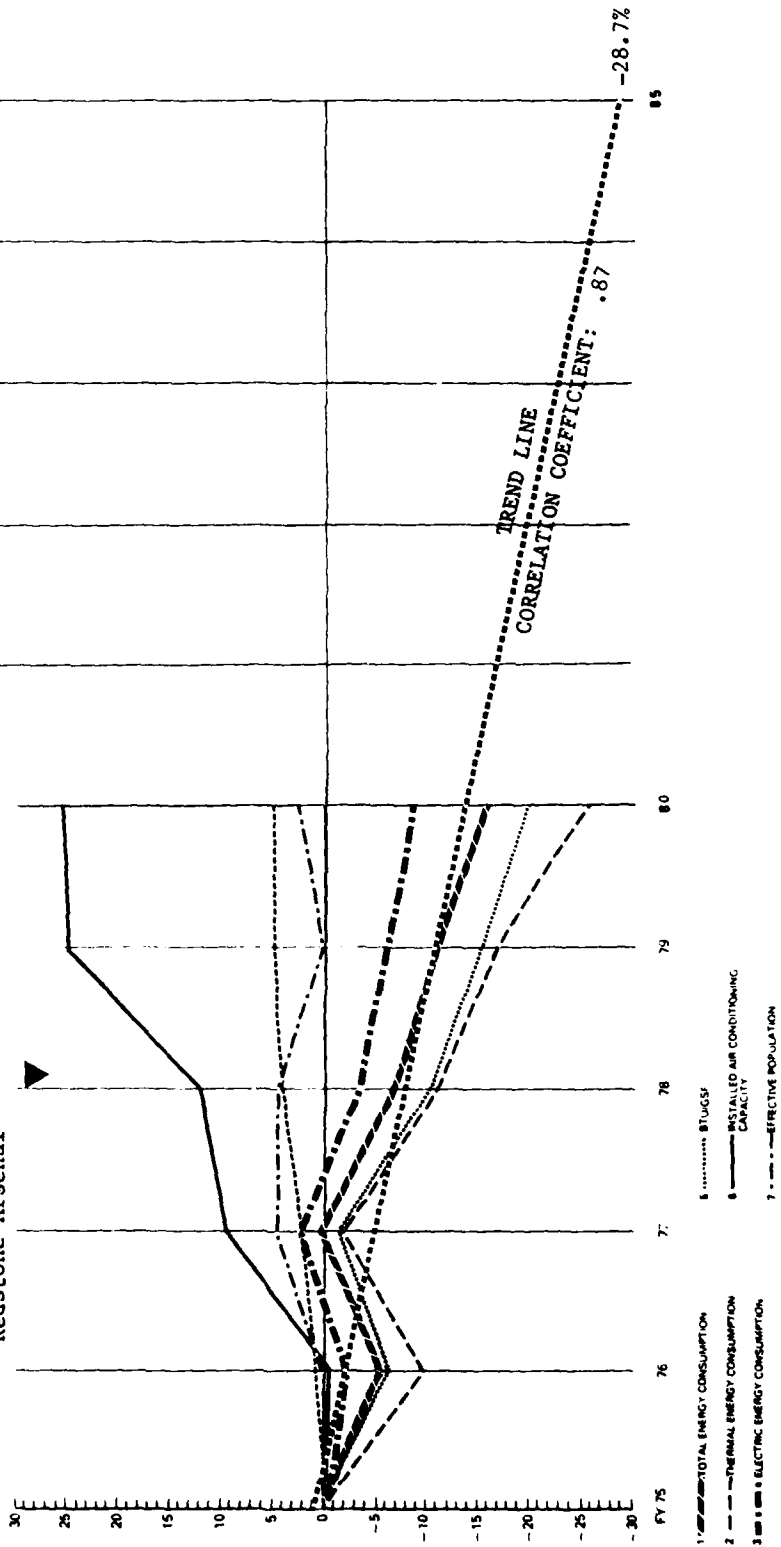
- 1 FY 76 ECIIP - Condensate Return System - \$394,200 - Completed September 1977
- 2 FY 77 ECIIP - Insulation and Attic Fans - \$139,000 - Completed (est limited) June 1978
- 3 FY 77 Family Housing ECIIP Improvements - \$63,600 - Completed (estimated) October 1978

U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION LINE BLUJE ARSENA...AR MACOM DARGON CLIMATIC REGION 7 HOD 2 SBR CDD 2.315

	76	77	78	79	80				
1 Energy Consumption @ PD	524,328	483,287	1-2,81	647,761	1-15,61	444,081	1-15	374,943	1-28,51
2 Thermal En Conv @ PD	419,463	381,797	1-9,01	555,364	1-15,31	332,071	1-20,81	328,621	1-22
3 Electrical En Conv @ PD	104,865	101,490	1-3,21	100,225	1-4,41	110,690	1-5,61	115,461	1-10
4 Resident Population @ PD	190	183	1-7,1	63	1-66,81	63	1-66,81	190	1-3,71
5 Non Resident Population @ PD	1,040	911	1-10,51	568	1-47,31	552	1-46,91	1,592	1-53,11
6 Population Street** @ PD	1,210	1,116	1-9,41	611	1-50,31	615	1-50,01	1,482	1-48,51
7 Effective Population*** @ PD	537	493	1-8,21	246	1-56,21	247	1-56,01	740	1-37,91
8 En Consumption/Pop Served @ PD	426,3	433,8	1-8,1	246,6	1-74,91	219,9	1-68,91	248,2	1-41,81
9 En Consumption/Pop @ PD	976,4	980,3	1-0,41	1,851,9	1-89,71	1,292,6	1-83,61	615,9	1-36,91
10 Electric En Consumption/Resident Population	551,9	554,6	1-0,51	1,590,9	1-88,21	1,256,9	1-81,31	607,7	1-30,11
11 Heated Air Capd Capacity @ PD	531	534	1-0,91	583	1-8,91	1,383	1-33,1	1,432	1-80,1
12 Elec Energy/Ton of Air Coad @ PD	190,1	182,5	1-4,11	170,2	1-10,61	80,0	1-37,81	80,6	1-37,71
13 Heat Property Inventory (Btu) @ PD	5,95	2,253	1-29,51	3,162	1-1,31	3,153	1-1,31	3,266	1-2,21
14 Effective Population	164,160	224,508	1-30,71	144,076	1-12,21	140,425	1-16,41	135,971	1-17,21
15 Energy Consumption/GSF @ PD	131,328	163,462	1-29,01	112,380	1-16,41	105,319	1-19,81	100,619	1-23,31
17 Electrical En Consumption/GSF @ PD	37,837	45,046	1-17,21	31,696	1-3,41	35,106	1-6,91	35,152	1-7,11
18 (Btu) by Category									
Training									
Maintenance @ Production									
Research, Development & Testing									
Storage									
Other Convent Storage									
Hospital @ Medical									
Bachelor Housing									
Community Fea Area									
Family Housing									
Operational Bu dings									
Utility Buildings									
Other									
REMARKS									
1 FY 76 ECIP - Condensate Return System - \$394,200 - Completed September 1977									
2 FY 77 ECIP - Insulation and Attic Fans - \$139,000 - Completed (estimated) June 1978									
3 FY 77 Family Housing ECIP Improvements - \$43,400 - Completed (estimated) October 1978									

PD is Percent Decrease from Base Year **Population Served is the total Resident & Non-Resident Population *EEF Pop @ Resident + 1/3 Non-Resident

Redstone Arsenal



▲ FY77 Family Housing EEP Improvements - 24,000 sq. ft. Completed (FSC) Oct 1978

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COMPUTER SCIENCES CORP FALLS CHURCH VA SYSTEMS DIV
ARMY ENERGY DATA ANALYSIS, FY 80 UPDATE. (U)
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U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION - REDSTONE ARSENAL, ALA. - MACOM - DARCOM - CLIMATIC REGION 4 - MOD 3,302 CDD 1,118

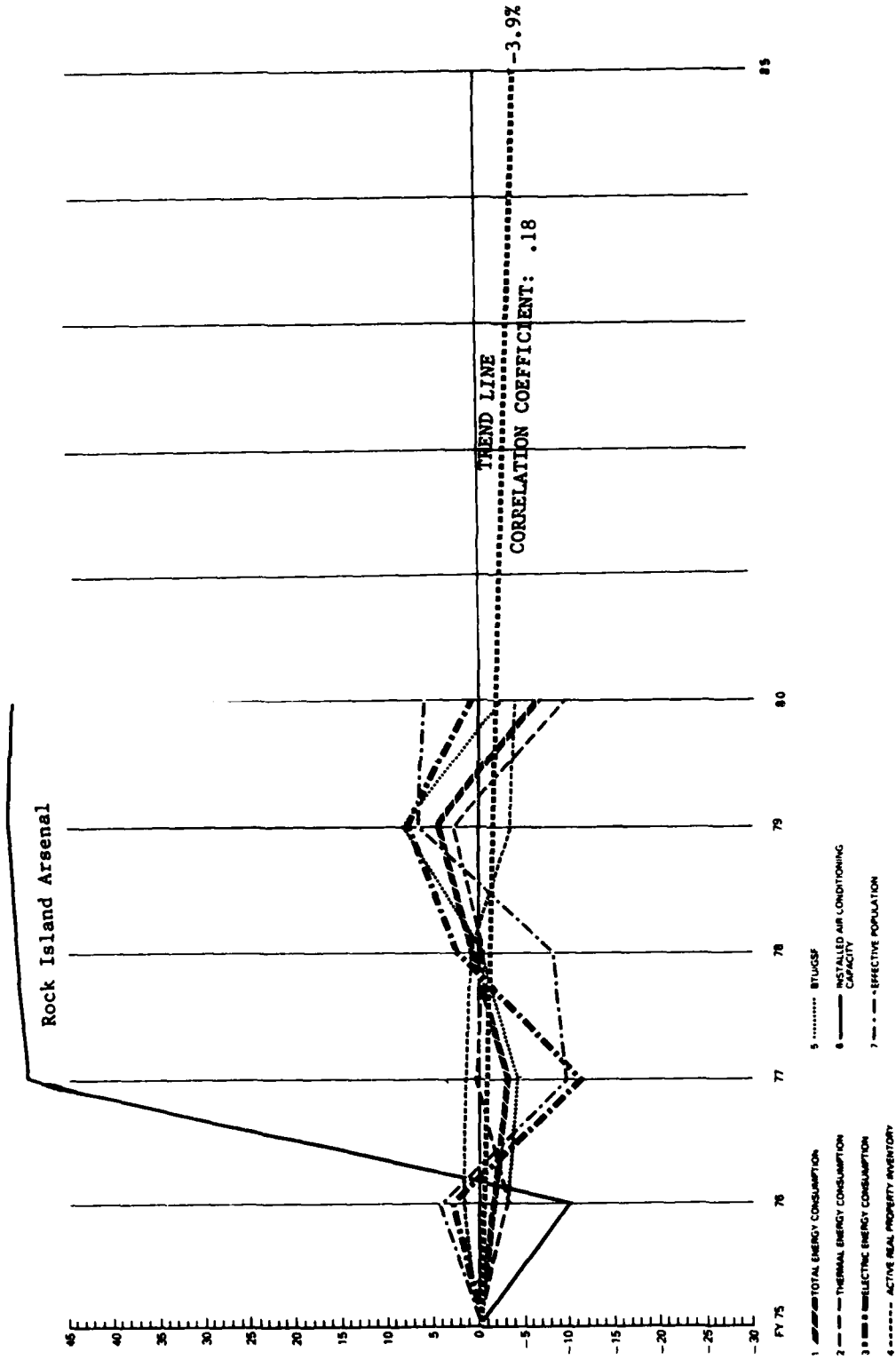
UNITARY	76	77	78	79	80
1 Energy Consumption & PD	5,478,603	5,498,689	5,106,128	4,886,814	4,603,089
2 Thermal En Cons & PD	2,410,586	2,364,437	2,144,574	2,092,174	1,791,110
3 Electrical En Cons & PD	3,068,017	3,134,252	2,961,554	2,882,040	2,811,979
4 Resident Population & PD	6,157	6,379	6,355	6,085	6,466
5 Non-Resident Population & PD	17,218	18,837	18,835	17,973	17,632
6 Population "Server" & PD	23,875	25,216	25,190	24,058	24,098
7 Electric Production*** & PD	12,083	12,658	12,633	12,076	12,343
8 En Consumption/Pop Served & PD	229.5	218.1	202.7	203.0	191.0
9 En Consumption/El Pop & PD	454.2	438.4	404.2	408.5	372.2
10 Electric En Consumption/Person	498.3	491.3	466.0	473.6	434.3
11 Installed Air Cond Capacity & PD	19,189	21,026	21,326	24,130	24,130
12 Elec Energy/Ton of Air Cond & PD	159.9	149.1	137.6	119.4	116.5
13 Fuel Property Inventory (Btu) & PD	9,090	9,284	9,436	9,538	9,561
14 Distribution Population	75	73	75	79	77
15 Energy Consumption/El Pop & PD	602.707	592.276	539.988	512.142	482.454
16 Thermal En Consumption/El Pop & PD	265.191	237.332	226.795	209.978	187.728
17 Electrical En Consumption/El Pop & PD	337.516	357.944	313.193	302.164	294.726
18 En by Category	675	675	675	675	675
Training	588	571	563	565	564
Maintenance & Production	532	517	517	525	525
Research, Development & Testing	1,212	1,217	1,217	1,216	1,216
Storage	2,653	813	813	816	816
Other Contract Storage	78	1,807	1,807	1,857	1,854
Hospital & Medical	1,312	1,088	228	223	211
Administration	586	1,342	1,353	1,358	1,368
Residence Housing	389	586	586	579	578
Community Facilities	1,486	1,520	1,520	1,520	1,520
Family Housing	120	126	126	126	126
Operational Buildings	93	105	92	92	92
Utility Buildings	12	12	12	11	11
Other					

**PD is Percent Deviation from Base Year
 ***Population Served is the total Resident & Non-Resident Population
 **77 Pop & Resident + 10 Non-Resident

W 77 Family Housing ECIP Improvements - \$31,096 - Completed (estimated) October 1978

REMARKS

- 1 Energy Consumption & PD
- 2 Thermal En Cons & PD
- 3 Electrical En Cons & PD
- 4 Resident Population & PD
- 5 Non-Resident Population & PD
- 6 Population "Server" & PD
- 7 Electric Production*** & PD
- 8 En Consumption/Pop Served & PD
- 9 En Consumption/El Pop & PD
- 10 Electric En Consumption/Person
- 11 Installed Air Cond Capacity & PD
- 12 Elec Energy/Ton of Air Cond & PD
- 13 Fuel Property Inventory (Btu) & PD
- 14 Distribution Population
- 15 Energy Consumption/El Pop & PD
- 16 Thermal En Consumption/El Pop & PD
- 17 Electrical En Consumption/El Pop & PD
- 18 En by Category



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION ROCK ISLAND ARSENAL, ILL. MACOM DARCOC CLIMATIC REGION 2 HDD 5,961 CDD 1,007

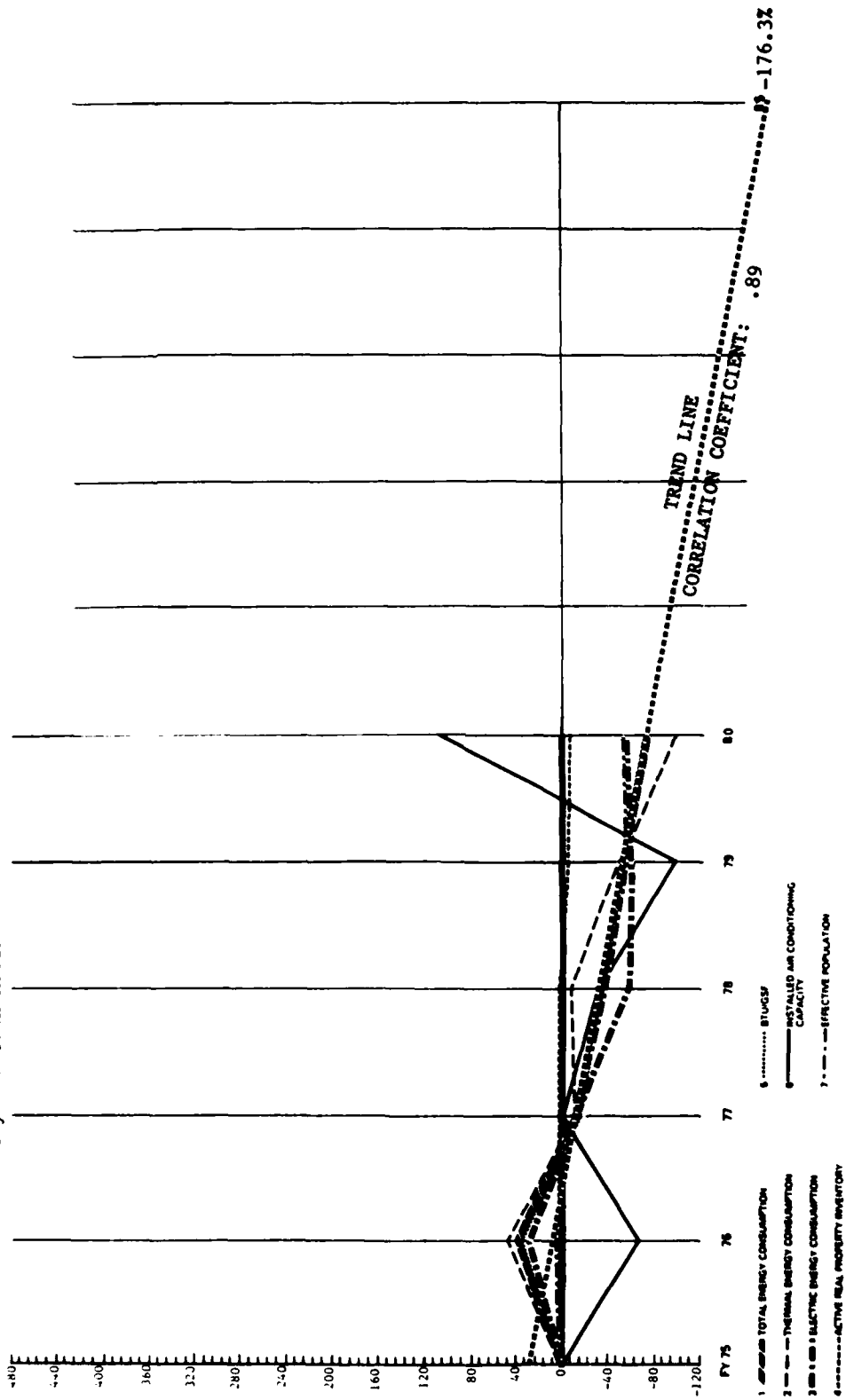
UNIT/SPY	76	77	78	79	80
1 Energy Consumption & PD	1,363,693	1,370,307	1,368,989	1,419,473	1,274,197
2 Thermal En Cons & PD	921,100	972,725	967,525	998,525	879,275
3 Electrical En Cons & PD	392,103	347,582	401,464	422,948	394,922
4 Non-Resident Population & PD	239	235	229	240	260
5 Non-Resident Population*** & PD	7,276	6,974	7,107	8,208	8,211
6 Population Served** & PD	8,015	7,209	7,336	8,548	8,474
7 Effective Population*** & PD	2,831	2,560	2,598	3,009	2,997
8 En Consumption/Pop Served & PD	170.1	183.1	186.6	166.1	150.4
9 En Consumption/Pop Served** & PD	481.7	513.7	526.9	471.7	425.2
10 Electric En Consumption/Person & PD	1,641.8	1,731.4	1,753.1	1,762.3	1,518.9
11 Installed Air Cond Capacity & PD	2,159	1,940	1,493	3,273	3,265
12 Elec Energy/Ton of Air Cond & PD	181.7	207.9	149.7	129.2	121.0
13 Real Property Inventory (RPI) & PD	6,174	6,245	6,222	5,949	5,933
14 Population Inventory (PI) & PD	2,18	2,44	2,39	1,981	1,98
15 Energy Consumption/GSF & PD	220,877	213,688	220,024	238,607	216,764
16 Thermal En Consumption/GSF & PD	157,321	149,366	155,501	167,511	148,201
17 Electrical En Consumption/GSF & PD	63,556	64,322	64,523	71,096	68,564
18 RPI by Category					
Training	68	165	133	128	123
Maintenance & Production	2,184	2,126	2,183	2,177	2,174
Research, Development & Testing	2,066	247	247	13	13
Storage	2,023	7	7	8	7
Other Covered Storage	9	9	9	10	10
Hospital & Medical	1,111	1,127	1,212	1,210	1,217
Administration	1	6	6	6	5
Bachelor Housing	215	219	204	234	232
Community Facilities	178	178	178	178	178
Family Housing	27	31	31	215	217
Operational Use Group	77	94	100	100	103
Utility Buildings		24	24	22	
Other					

PD is Percent Deviation from Base Year **Population Served is the total Residents & Non-Resident Population *RPI by Category

- 1 Energy Consumption & PD
- 2 Thermal En Cons & PD
- 3 Electrical En Cons & PD
- 4 Non-Resident Population & PD
- 5 Non-Resident Population*** & PD
- 6 Population Served** & PD
- 7 Effective Population*** & PD
- 8 En Consumption/Pop Served & PD
- 9 En Consumption/Pop Served** & PD
- 10 Electric En Consumption/Person & PD
- 11 Installed Air Cond Capacity & PD
- 12 Elec Energy/Ton of Air Cond & PD
- 13 Real Property Inventory (RPI) & PD
- 14 Population Inventory (PI) & PD
- 15 Energy Consumption/GSF & PD
- 16 Thermal En Consumption/GSF & PD
- 17 Electrical En Consumption/GSF & PD
- 18 RPI by Category

REMARKS

Rocky Mountain Arsenal



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION ROCKY MOUNTAIN ARSENAL, MACOM, DABCOH CLIMATIC REGION 2 HDD 6,016 CDD 625

	PH	PS	PH	PS	PH	PS	PH	PS	PH	PS	PH	PS	PH	PS
UNITS/PSY														
UNITU	680,028	615,850	415,296	413,711	318,363	313,711	207,371	157,1	97,816	79,64				
UNITU	256,615	178,676	220,107	212,405	187,711	172,369	152,1	850	98,71					
UNITU	225,613	197,374	195,189	185,958	161,911	152,1	85,022	52,1	96,986	57,02				
PEOPLE	110	116	79	79	57	57	19	19	84	84				
PEOPLE	258	258	238	238	216	216	204	204	168	168				
PEOPLE	868	870	817	817	588	588	423	423	468	468				
PEOPLE	363	366	325	325	227	227	154	154	161	161				
UNITUCAP	353,0	276,8	258,3	258,3	181,1	181,1	140,2	140,2	141	141				
UNITUCAP	1,372,4	1,266,6	1,272,8	1,272,8	1,011,1	1,011,1	746,6	746,6	607,5	607,5				
UNITUCAP	2,031,0	2,008,5	2,000,7	2,000,7	1,528,9	1,528,9	1,118,2	1,118,2	1,118,1	1,118,1				
TONES	89	30	30	30	33	33	33	33	183	183				
UNITURDIN	2,515,0	9,912,5	2,911,0	2,911,0	1,436,9	1,436,9	464,2	464,2	529,9	529,9				
ESP	1,865	1,874	1,877	1,877	1,877	1,877	1,877	1,877	1,877	1,877				
ESP	5,214	5,372	5,372	5,372	5,278	5,278	5,278	5,278	5,278	5,278				
BTWUSP	257,188	160,666	140,311	140,311	122,255	122,255	122,255	122,255	122,255	122,255				
BTWUSP	136,416	201,666	117,265	117,265	123,817	123,817	123,817	123,817	123,817	123,817				
BTWUSP	120,972	158,684	103,990	103,990	85,796	85,796	85,796	85,796	85,796	85,796				
ESP	80	80	80	80	80	80	80	80	80	80				
ESP	685	685	686	686	686	686	686	686	686	686				
ESP	771	771	766	766	766	766	766	766	766	766				
ESP	18	18	18	18	18	18	18	18	18	18				
ESP	84	84	84	84	84	84	84	84	84	84				
ESP	68	68	68	68	68	68	68	68	68	68				
ESP	37	37	37	37	37	37	37	37	37	37				
ESP	35	35	35	35	35	35	35	35	35	35				
ESP	7	7	7	7	7	7	7	7	7	7				
ESP	78	78	78	78	78	78	78	78	78	78				
ESP	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE	BASE				
ESP	11	11	11	11	11	11	11	11	11	11				

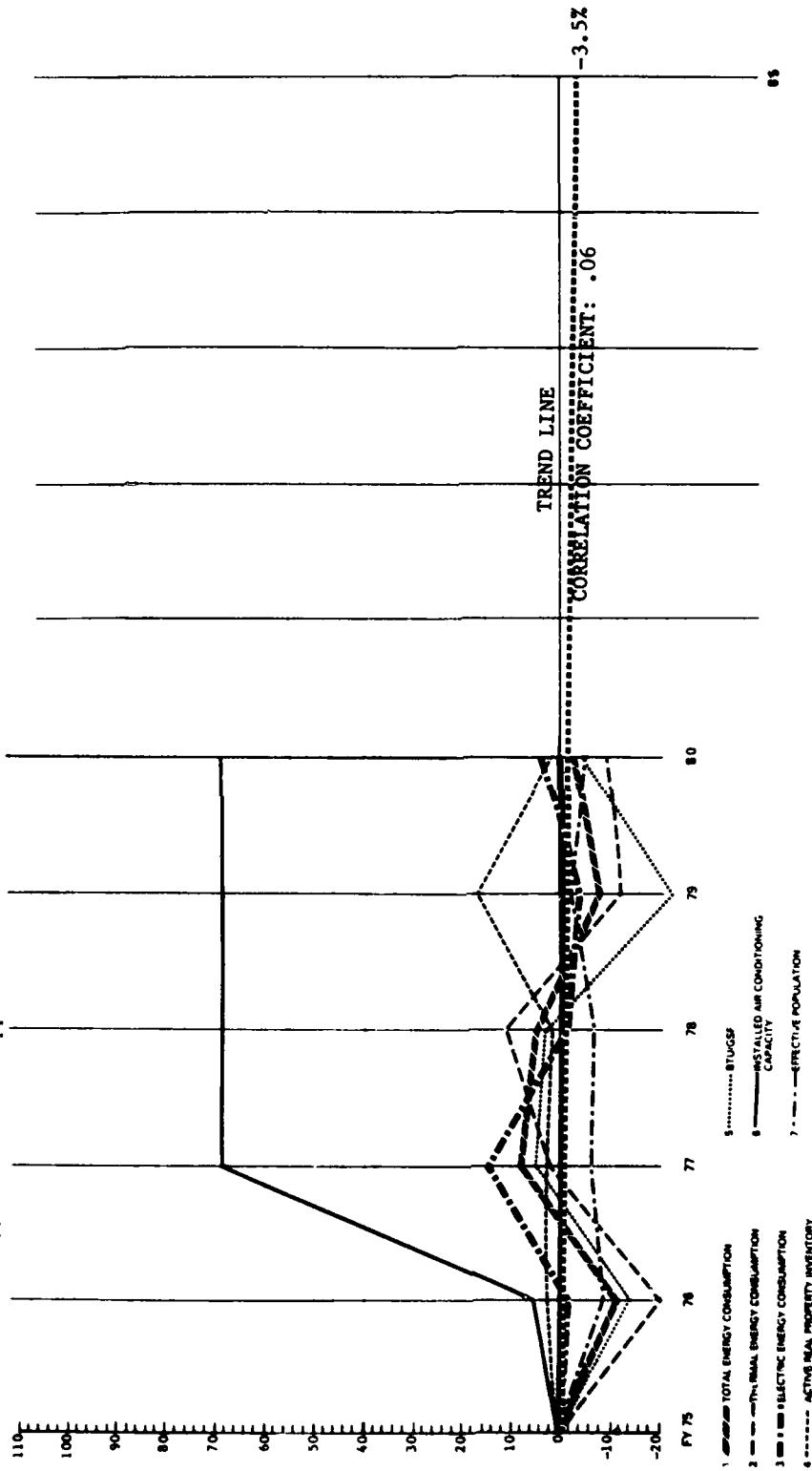
- 1 Energy Consumption to PD
- 2 Thermal En Conv to PD
- 3 Electrical En Conv to PD
- 4 Electrical Power to PD
- 5 Non Resident Population to PD
- 6 Resident Population to PD
- 7 Effective Population to PD
- 8 En Consumption to PD
- 9 En Consumption to PD
- 10 Electric En Consumption to PD
- 11 Thermal En Conv to PD
- 12 Elec Consumption to PD
- 13 Fuel Power to PD
- 14 Fuel Power to PD
- 15 En Consumption to PD
- 16 Thermal En Conv to PD
- 17 Electrical En Conv to PD
- 18 Fuel Power to PD

- 19 Heating
- 20 Refrigeration & Production
- 21 Research, Development & Testing
- 22 Storage
- 23 Other General Storage
- 24 Hospital & Medical
- 25 Administration
- 26 Recreation
- 27 Community Facilities
- 28 Family Housing
- 29 On-Site Housing
- 30 Utility Buildings
- 31 Other

PD in Percent Conversion from Base Year **Population Saved in the Total Resident to Non-Resident Population *EPI Pop to Resident + 1/2 Non-Resident

REMARKS

St. Louis Area Support Center



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION ST. LOUIS AREA SEL. CTB. JIMACOM DARGOM CLIMATIC REGION 1 MDD 4,486 CDD 1,640

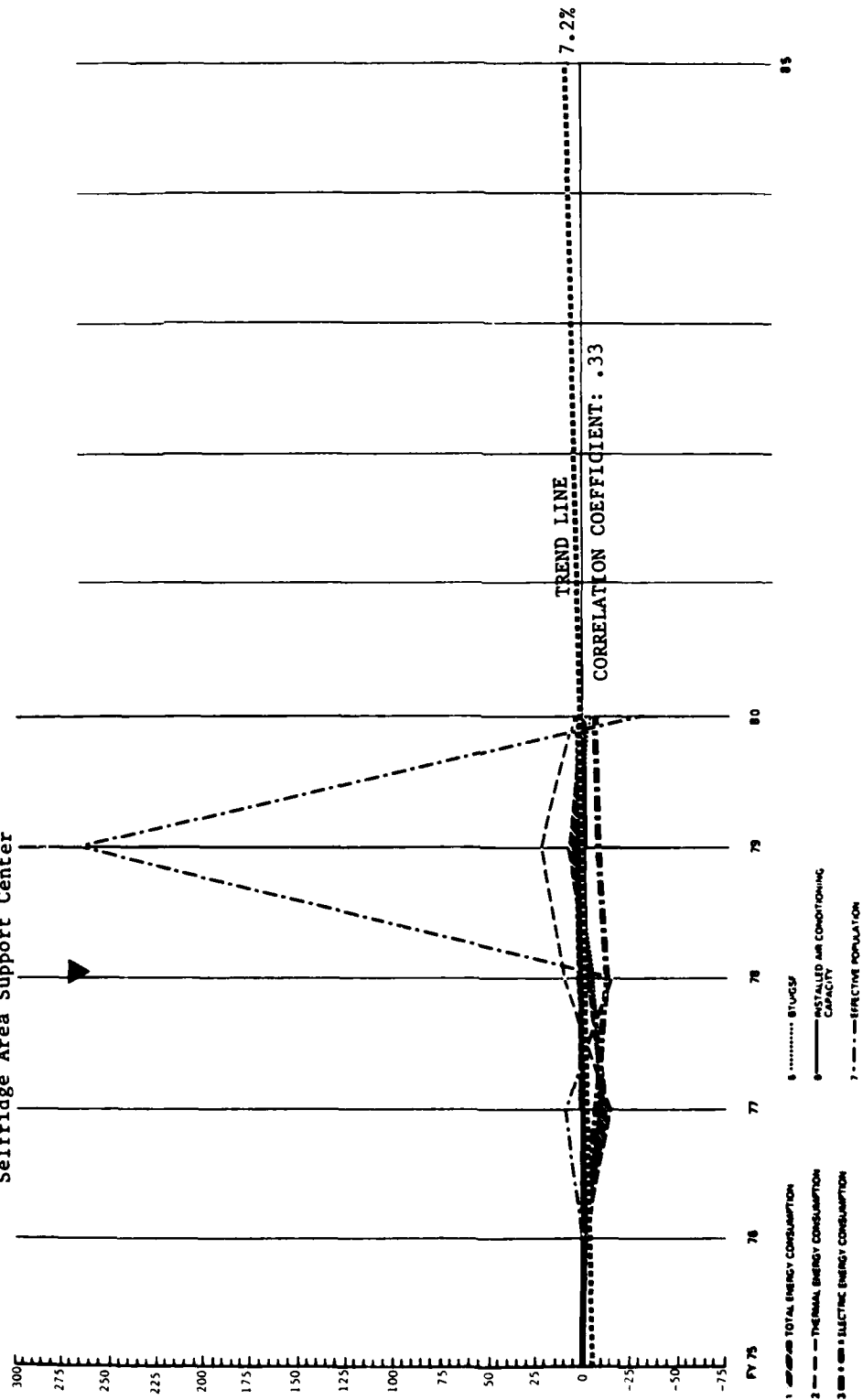
UNIT/SPY	76	77	78	79	80
EMTU	262,429	231,453	284,700	276,745	260,751
EMTU	161,712	113,412	144,642	157,745	125,191
EMTU	120,717	118,041	139,258	139,000	115,560
PEOPLE	634	576	661	650	689
PEOPLE	1,190	1,082	1,271	1,271	1,019
PEOPLE	819	748	769	762	799
EMTU/CAP	220.5	212.0	288.8	236.3	244.2
EMTU/CAP	320.4	304.4	368.6	353.2	327.7
EMTU/CAP	190.4	204.9	210.7	183.1	167.7
TONS	754	798	1,271	1,271	1,271
INSTALLATION	160.1	167.9	109.6	93.6	90.9
ESP	2,698	2,773	2,772	2,755	3,161
ESP/CAP	3.29	3.71	3.60	3.62	3.96
BTU/CAP	97,268	83,467	102,525	100,452	76,163
BTU/CAP	52,525	40,899	52,288	57,258	39,605
BTU/CAP	44,163	62,568	50,237	43,196	36,538
ESP	167	127	127	132	131
ESP	30	30	30	23	12
ESP	2,058	2,058	2,058	2,040	2,437
ESP	7	7	7	7	7
ESP	50	50	50	64	93
ESP	77	77	77	77	77
ESP	145	199	195	179	183
ESP	206	206	206	212	211
ESP	8	8	8	8	8
ESP	10	10	10	10	10
ESP	10	10	10	10	10

- 1 Energy Consumption @ PD
- 2 Thermal En Conv @ PD
- 3 Electrical En Conv @ PD
- 4 Resident Population @ PD
- 5 Non Resident Population @ PD
- 6 Population Service @ PD
- 7 Effective Population @ PD
- 8 En Consumption/Pop Served @ PD
- 9 En Consumption/Pop @ PD
- 10 Electric En Consumption/Resident Population
- 11 Installed Air Cond Capacity @ PD
- 12 Elec Energy/Ton of Air Cond @ PD
- 13 Real Property Inventory (RPI) @ PD
- 14 RPI/Population
- 15 Energy Consumption/CF @ PD
- 16 Thermal En Consumption/CF @ PD
- 17 Electrical En Consumption/CF @ PD
- 18 RPI by Category

PD is Percent Derivation from Base Year *Population Served is the total Resident & Non-Resident Population **ESP Pop & Number & 100 Non-Resident

08000003

Selfridge Area Support Center



A-258

- 1 - TOTAL ENERGY CONSUMPTION
- 2 - THERMAL ENERGY CONSUMPTION
- 3 - ELECTRIC ENERGY CONSUMPTION
- 4 - ACTIVE REAL PROPERTY INVENTORY
- 5 - INSTALLED AIR CONDITIONING CAPACITY
- 7 - EFFECTIVE POPULATION

▼ FY 77 Family Housing ECIIP Improvements - 7126,370 - Completed (Estimated) on 1-1-1978

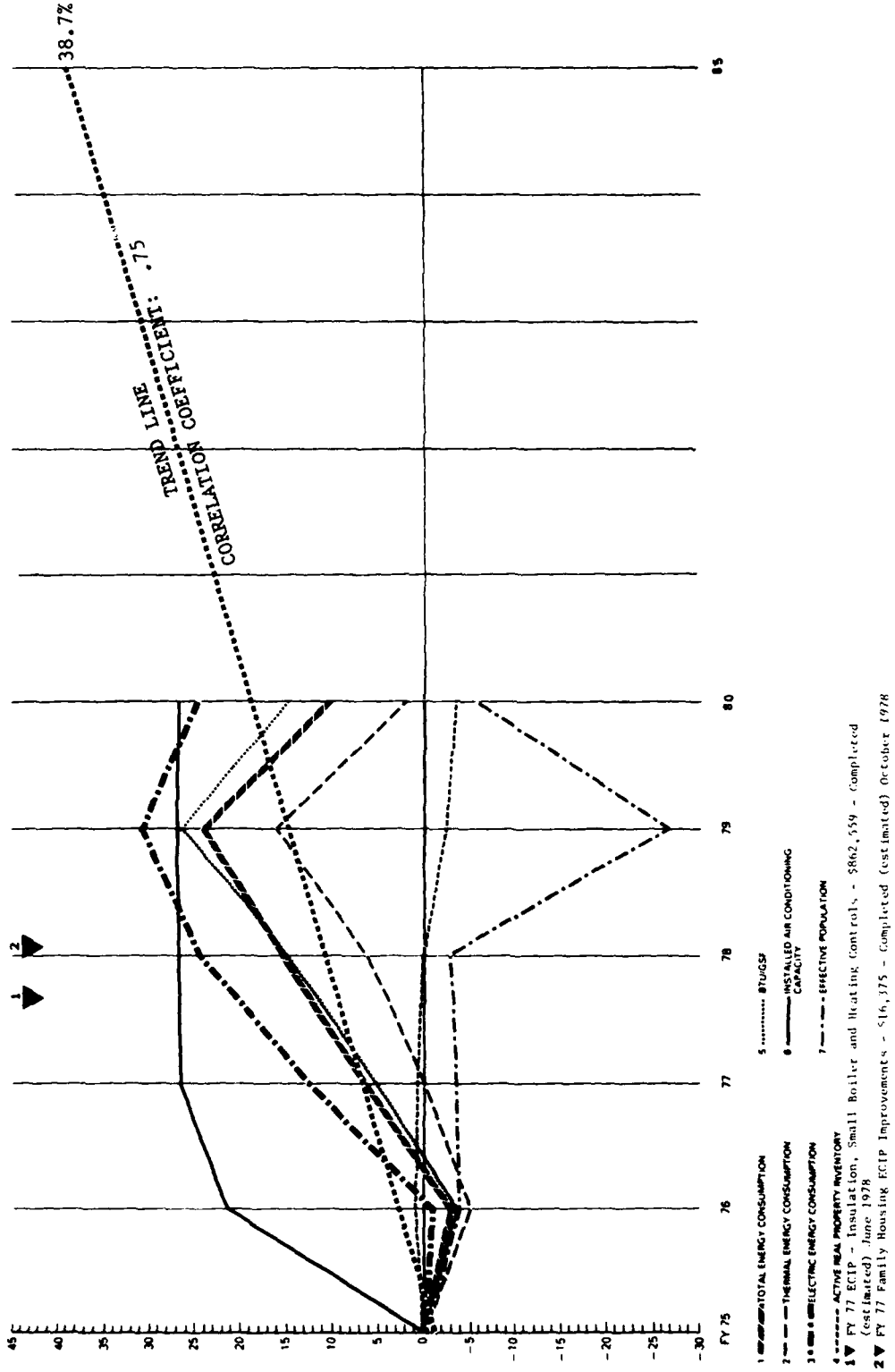
U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION SELFRIDGE AREA SET CTR. ILL. MACOM DARGOCH CLIMATIC REGION 2. HDD 6,665 CDD 661

UNITS/FY	75	76	77	78	79	80
1 Energy Consumption & PD	117,000	117,000	106,389	-10,911	115,483	-1,311
2 Thermal En. Cons & PD	58,500	58,500	50,959	-16,441	64,671	-10,511
3 Electrical En. Cons & PD	58,500	58,500	55,430	-7,311	50,812	-13,111
4 Resident Population & PD	6,000	6,000	6,100	1,100	2,198	-262,91
5 Non Resident Population & PD	1,500	1,500	1,313	-187	2,725	1,316,01
6 Population Served** & PD	7,500	7,500	7,413	-2,187	8,923	1,485,91
7 Effective Population*** & PD	6,500	6,500	6,538	9,011	5,106	-14,911
8 En. Consumption/Pop Served & PD	-	18,5	16,1	-27,81	12,9	-133,61
9 En. Consumption/PH Pop & PD	-	19,5	15,0	-18,21	27,6	-16,01
10 Electric En. Consumption/Residence Population	2,58	2,58	2,58	0	2,61	1,21
11 Installed Air Cond Capacity & PD	2,000	2,000	2,102	-1,731	1,947	-14,111
12 Elec. Equip/Tran of Air Cond & PD	-	331	1,972	-1,441	2,078	-1,311
13 Heat Property Inventory BPH & PD	-	-	-	-	-	-
14 HPH Reserve Population	-	-	-	-	-	-
15 Energy Consumption/GSF & PD	58,500	58,500	52,985	-16,415	55,574	-1,311
16 Thermal En. Consumption/GSF & PD	29,250	29,250	25,495	-13,211	31,122	-6,411
17 Electrical En. Consumption/GSF & PD	29,250	29,250	27,490	-5,911	24,452	-1,611
18 HPH by Category	10	10	10	10	10	10
Training	51	51	51	51	51	51
Maintenance & Production	33	33	33	33	33	33
Storage	23	23	23	23	23	23
Other General Storage	25	25	25	25	25	25
Hospital & Medical	16	16	16	16	16	16
Administration	166	166	166	166	166	166
Bachelor Housing	1,662	1,662	1,662	1,662	1,662	1,662
Community Fm Hous	4	4	4	4	4	4
Family Housing	10	10	10	10	10	10
Operational Bus Bngs	10	10	10	10	10	10
Utility Buildings	10	10	10	10	10	10
Other	10	10	10	10	10	10

REMARKS In FY 75, Selfridge was a sub-activity of Ft Sheridan, IL and all data pertaining to Selfridge was included in the Ft Sheridan report. In FY 76, Selfridge was transferred to DARGOCH and has been reported separately since then. The FY 75 data shown hereon is estimated only and FY76 data has been used as the base year. Population data for FY78 & FY79 appear- to be in error.

▼ FY 77 Family Housing ECIP Improvements - \$126,320 - Completed (estimated) October 1978

Watervliet Arsenal



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION WATERLIL ARSENAL, NY MACOM PARSONS CLIMATIC REGION, 77 HOD 6,191 CDD 651

UNIT/TYPE	76	77	78	79	80
1 Energy Consumption & PD	216,255	795,564	850,803	912,868	812,763
2 Thermal En Cons & PD	376,965	377,071	399,878	438,177	361,825
3 Electrical En Cons & PD	362,162	408,491	450,925	474,691	450,938
4 Residential Population & PD	2,665	2,591	2,651	2,534	2,887
5 Non Resident Population & PD	2,565	2,600	2,502	2,808	2,468
6 Residential Service** & PD	1,120	1,126	1,131	1,131	1,103
7 Effective Population*** & PD	2,505	2,476	2,482	2,465	2,235
8 En Consumption/Pop Served & PD	616.4	321.6	342.6	353.6	363.2
9 En Consumption/Pop & PD	1,311.3	637.7	727.2	787.7	726.3
10 Electric En Consumption/Residential Population	1,087.1	1,138	1,238	1,238	1,136
11 Installed Air Cond Capacity & PD	403.7	329.5	358.6	397.9	397.0
12 Elec Energy/Ton of Air Cond & PD	2,138	2,174	2,160	2,105	2,075
13 Heat Property Inventory (Btu) & PD	1.85	1.93	1.91	2.46	1.88
14 Annual Recycle Population	342,436	329,313	393,890	433,667	391,693
15 Energy Consumption/GSF & PD	174,673	173,446	185,129	208,160	174,373
16 Thermal En Consumption/GSF & PD	167,823	162,899	168,763	175,507	171,370
17 Electrical En Consumption/GSF & PD	1,206	1,201	1,200	1,195	1,142
18 Btu by Category	2,000	2,000	2,000	1,894	1,899
Training	319	319	319	249	282
Maintenance & Production	151	152	152	152	164
Research, Development & Testing	38	45	45	39	49
Storage	176	176	176	176	176
Other Covered Storage	19	19	19	18	15
Hospital & Medical	37	36	36	36	37
Administration	1.6	1.6	1.6	1.6	1.6
Residence Housing	1.6	1.6	1.6	1.6	1.6
Community Facilities	1.6	1.6	1.6	1.6	1.6
Family Housing	1.6	1.6	1.6	1.6	1.6
Operational Buildings	1.6	1.6	1.6	1.6	1.6
Utility Buildings	1.6	1.6	1.6	1.6	1.6
Other	1.6	1.6	1.6	1.6	1.6

- 1 Energy Consumption & PD
- 2 Thermal En Cons & PD
- 3 Electrical En Cons & PD
- 4 Residential Population & PD
- 5 Non Resident Population & PD
- 6 Residential Service** & PD
- 7 Effective Population*** & PD
- 8 En Consumption/Pop Served & PD
- 9 En Consumption/Pop & PD
- 10 Electric En Consumption/Residential Population
- 11 Installed Air Cond Capacity & PD
- 12 Elec Energy/Ton of Air Cond & PD
- 13 Heat Property Inventory (Btu) & PD
- 14 Annual Recycle Population
- 15 Energy Consumption/GSF & PD
- 16 Thermal En Consumption/GSF & PD
- 17 Electrical En Consumption/GSF & PD
- 18 Btu by Category
- Training
- Maintenance & Production
- Research, Development & Testing
- Storage
- Other Covered Storage
- Hospital & Medical
- Administration
- Residence Housing
- Community Facilities
- Family Housing
- Operational Buildings
- Utility Buildings
- Other

**PD is Percent Deviation from Base Year
 ***En Pop is Non-Resident Population
 **En Pop is Resident + 1/3 Non-Resident

1 FY 77 ECIP - Insulation, Small Boiler and Heating Controls - \$862,559 - Completed (estimated) June 1978
 2 FY 77 Family Housing ECIP Improvements - \$16,375 - Completed (estimated) October 1978

White Sands Missile Range



U.S. Army ANALYSIS OF ENERGY CONSUMPTION - INSTALLATION WHITE SANDS MISSILE RANGE, N.M. MACOM, DARCON CLIMATIC REGION 2 MOD 2, 524 CDD 2, 211

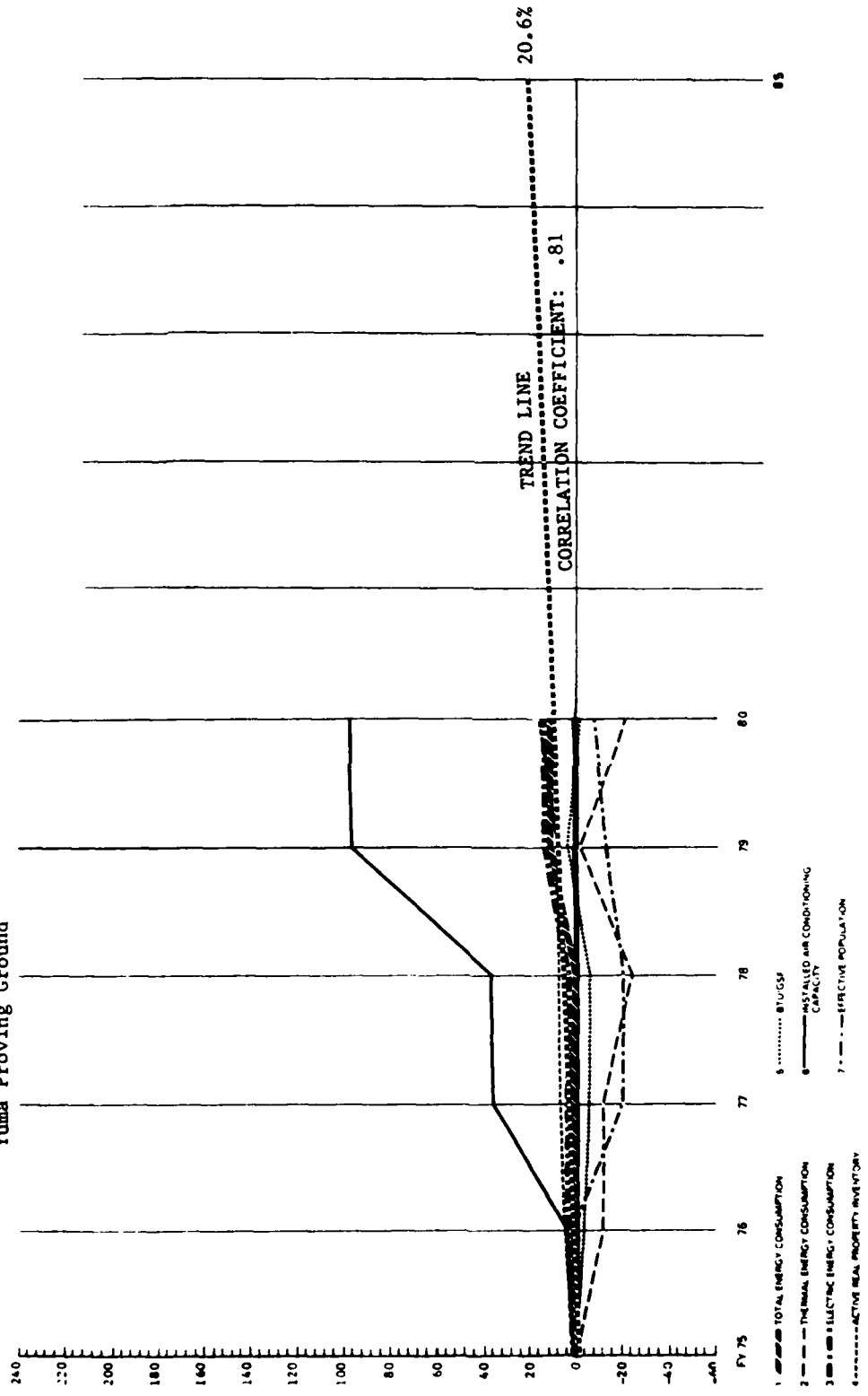
UNIT/TYPE	75	76	77	78	79	80
WRTTU	1,321,251	1,094,275	1,200,739	1,166,080	1,275,706	1,103,231
WRTTU	556,926	351,111	714,836	326,755	1,071,592	1,001,623
WRTTU	766,325	743,164	485,903	839,325	204,114	101,608
PEOPLE	3,620	1,375	3,323	3,025	3,010	3,220
PEOPLE	2,000	5,512	5,627	1,814	5,269	1,188
PEOPLE	5,620	6,887	8,950	6,531	8,259	8,988
PEOPLE	4,087	3,212	5,129	4,805	4,926	5,143
WRTTU/CAP	243.8	138.9	155.2	140.6	139.9	122.8
WRTTU/CAP	323.3	360.7	250.0	271.4	338.4	249.1
WRTTU/CAP	224.1	533.2	176.0	141.1	284.9	216.6
TONS	9,340	13,210	13,210	13,210	16,210	16,210
WRTTU/TON	82.2	53.5	44.3	49.3	62.9	69.3
WRTTU/TON	1.24	1.51	1.21	1.21	1.01	1.21
WRTTU/TON	5,070	4,816	4,932	4,932	4,493	4,949
WRTTU/TON	2,602	2,627	2,627	2,627	2,714	2,714
WRTTU/TON	1,095	74,671	1,095	1,095	81,814	60,967
WRTTU/TON	151,149	151,608	118,110	169,271	190,900	187,079
WRTTU/TON	32	32	32	32	32	32
WRTTU/TON	323	323	326	323	311	326
WRTTU/TON	1,462	1,438	1,438	1,436	1,014	1,326
WRTTU/TON	468	468	437	437	407	427
WRTTU/TON	61	61	61	61	61	61
WRTTU/TON	454	454	454	454	471	471
WRTTU/TON	160	167	167	167	167	167
WRTTU/TON	257	282	282	276	272	272
WRTTU/TON	1,173	1,175	1,287	1,287	1,288	1,288
WRTTU/TON	453	164	163	163	163	167
WRTTU/TON	21	16	15	15	14	15
WRTTU/TON	BASE	BASE	BASE	BASE	BASE	BASE

- 1 Energy Consumption by PD
- 2 Thermal En. Cons. by PD
- 3 Electrical En. Cons. by PD
- 4 Resident Population by PD
- 5 Non Resident Population by PD
- 6 Population Served** by PD
- 7 Effective Population*** by PD
- 8 En. Consumption/Pop Served by PD
- 9 En. Consumption/Pop by PD
- 10 Electric En. Consumption/Resident Population
- 11 Installed Air Cond Capacity by PD
- 12 Elec. Efficiency of Air Cond by PD
- 13 Fuel Inventory Inventory by PD
- 14 APPE/Effective Population
- 15 Energy Consumption/GSF by PD
- 16 Thermal En. Consumption/GSF by PD
- 17 Electrical En. Consumption/GSF by PD
- 18 WPI by Category
- 19 Training
- 20 Maintenance & Production
- 21 Research, Development & Testing
- 22 Storage
- 23 Other Covered Storage
- 24 Hospital & Medical
- 25 Administration
- 26 Bachelor Housing
- 27 Community Fire Bases
- 28 Family Housing
- 29 Quartermaster Buildings
- 30 Utility Buildings
- 31 Other

**Population Served is the total Resident & Non-Resident Population

REMARKS

Yuma Proving Ground

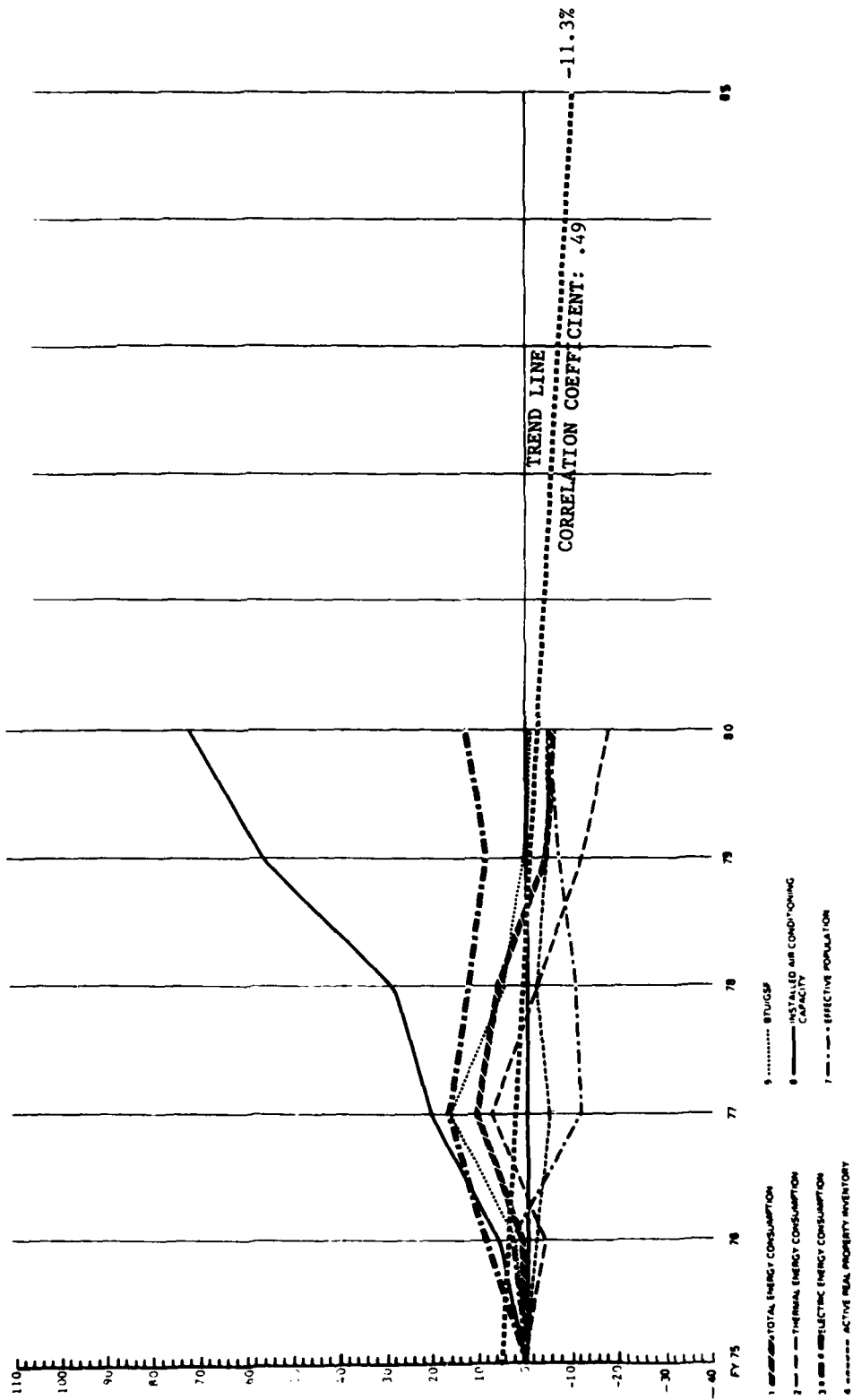


UNIT/TYPE	75	76	77	78	79	80
1 Energy Consumption & PD	109,095	106,978	110,331	108,006	107,017	108,931
2 Thermal En. Cons & PD	23,278	21,690	21,252	18,520	24,082	19,200
3 Electrical En. Cons & PD	285,367	284,279	292,079	290,486	319,935	319,731
4 Resident Population & PD	3,625	3,650	3,695	3,731	3,719	3,723
5 Non Resident Population & PD	285	290	279	283	276	281
6 Population Served** & PD	1,960	1,970	2,064	2,014	2,135	2,278
7 Effective Population*** & PD	1,270	1,277	1,411	1,397	1,524	1,608
8 En. Consumption/Pop Served & PD	157.7	157.3	150.5	153.4	148.8	148.8
9 En. Consumption/Pop & PD	174.6	174.4	172.2	174.1	175.7	174.1
10 Electric En. Consumption/Resident Population	169.8	171.4	174.3	176.7	184.6	184.9
11 Installed Air Cond Capacity & PD	3,000	3,029	3,083	3,093	3,164	3,212
12 Electric En. Cons/Capacity	94.8	94.2	93.5	93.5	96.4	96.4
13 Heat Property Inventory RPH & PD	1,311	1,311	1,404	1,409	1,498	1,590
14 RPH/Effective Population	74	77	80	81	92	93
15 Energy Consumption/GSF & PD	235,770	227,925	221,318	219,302	244,330	227,470
16 Thermal En. Consumption/GSF & PD	18,862	15,955	15,403	13,158	17,104	12,886
17 Electrical En. Consumption/GSF & PD	216,908	211,970	205,915	206,144	227,226	214,585
18 RPH by Category						
Training						
Maintenance & Production						
Research, Development & Testing						
Storage						
Other Covered Storage						
Hospital & Medical						
Administration						
Bachelor Housing						
Community Facilities						
Family Housing						
Operational Bar Berge						
Utility Buildings						
Other						
ESF	166	137	136	136	140	214
ESF	272	281	280	281	281	286
ESF	118	135	60	60	60	60
ESF	BASE	BASE	BASE	BASE	BASE	BASE
ESF	11	13	110	108	105	108
ESF	76	104	109	113	113	114
ESF	173	176	176	170	170	170
ESF	109	130	132	132	132	132
ESF	160	158	360	360	360	360
ESF	21	21	20	25	23	23
ESF	3	7	7	10	10	10
ESF	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

**Population Served is the total Resident & Non-Resident Population
 ***RPH by Category

REMARKS

Eighth US Army-Korea



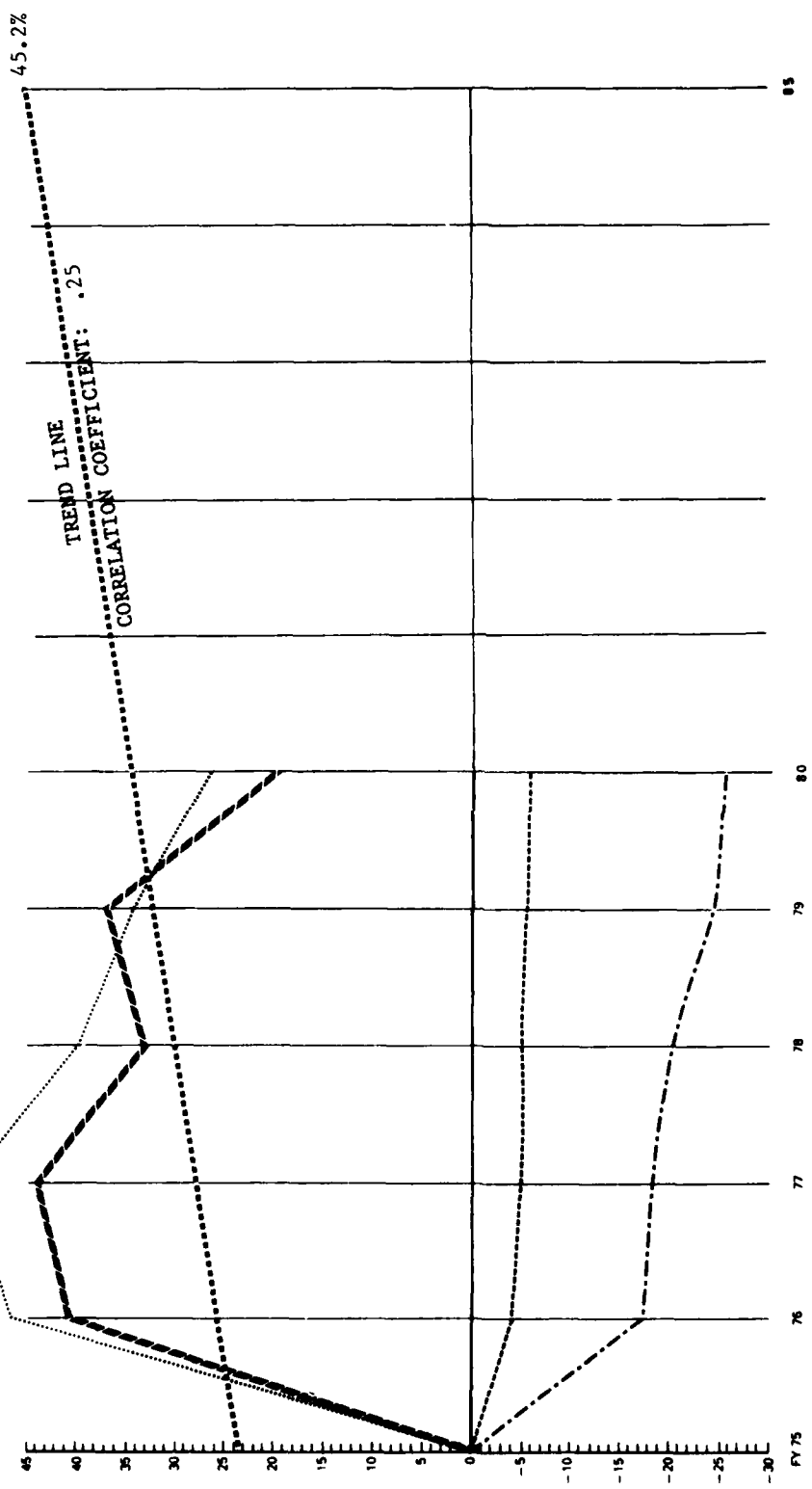
U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION EGRESS MACOM EUSA

UNITS/FY	75	76	77	78	79	80
1 Energy Consumption Is PD	6,835,497	6,901,397	7,581,506	7,054,968	6,520,759	6,401,956
2 Thermal En Cons Is PD	4,291,675	4,120,575	4,607,950	4,178,075	3,757,825	3,517,175
3 Electrical En Cons Is PD	2,543,822	2,780,822	2,973,556	2,876,893	2,762,934	2,884,781
4 Resident Population Is PD	44,157	40,316	37,611	33,411	30,345	31,895
5 Non Resident Population Is PD	72,987	81,887	73,052	72,728	74,417	75,184
6 Population Served** Is PD	56,014	51,965	49,432	50,457	51,987	52,995
7 Electric Population*** Is PD	85.0	85.0	101.8	97.2	10.0	1.51
8 En Consumption/Pop Served Is PD	122.0	119.1	153.4	139.8	13.4	125.4
9 En Consumption/Pop Is PD	57.6	60.0	79.1	73.0	26.7	68.2
10 Installed Air Cond Capacity Is PD	6,015	6,424	7,289	7,764	9,455	10,361
11 Elec Energy/Ton of Air Cond Is PD	422.9	432.9	408.0	370.5	12.4	52.2
12 Heat Property Inventory WWS Is PD	23,326	22,852	22,126	22,842	22,210	22,022
13 Heat Property Inventory WWS & PD	.42	.39	.45	.45	.43	.42
14 APPEX/En Consumption	293,042	302,004	342,652	308,860	293,596	290,707
15 Energy Consumption/GSF Is PD	183,987	180,316	208,260	182,912	169,195	169,195
16 Thermal En Consumption/GSF Is PD	109,055	121,688	136,392	122,948	124,401	130,985
17 Electrical En Consumption/GSF Is PD						
18 IPI by Category						
Training	162	151	163	163	160	176
Maintenance & Production	2,250	2,329	2,388	2,359	2,319	2,219
Research, Development & Testing	11	14	14	19	16	19
Storage	4,503	3,967	353	579	137	122
Other Covered Storage						
Hospital & Medical						
Administration						
Residence Housing						
Community Facilities						
Family Housing						
Government Buildings						
Utility Buildings						
Other						

**Population Served is the total Resident & Non-Resident Population
 ***En Pop'n Resident + 1/3 Non-Resident
 *PD is Percent Deviation from Base Year

884444

Ballistic Missile Defense Systems Command



- 1 TOTAL ENERGY CONSUMPTION
- 2 THERMAL ENERGY CONSUMPTION
- 3 ELECTRIC ENERGY CONSUMPTION
- 4 ACTIVE REAL PROPERTY INVENTORY
- 5 BTU/GSF
- 6 INSTALLED AIR CONDITIONING CAPACITY
- 7 EFFECTIVE POPULATION

U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION OVERSEAS MACOM BHDSC

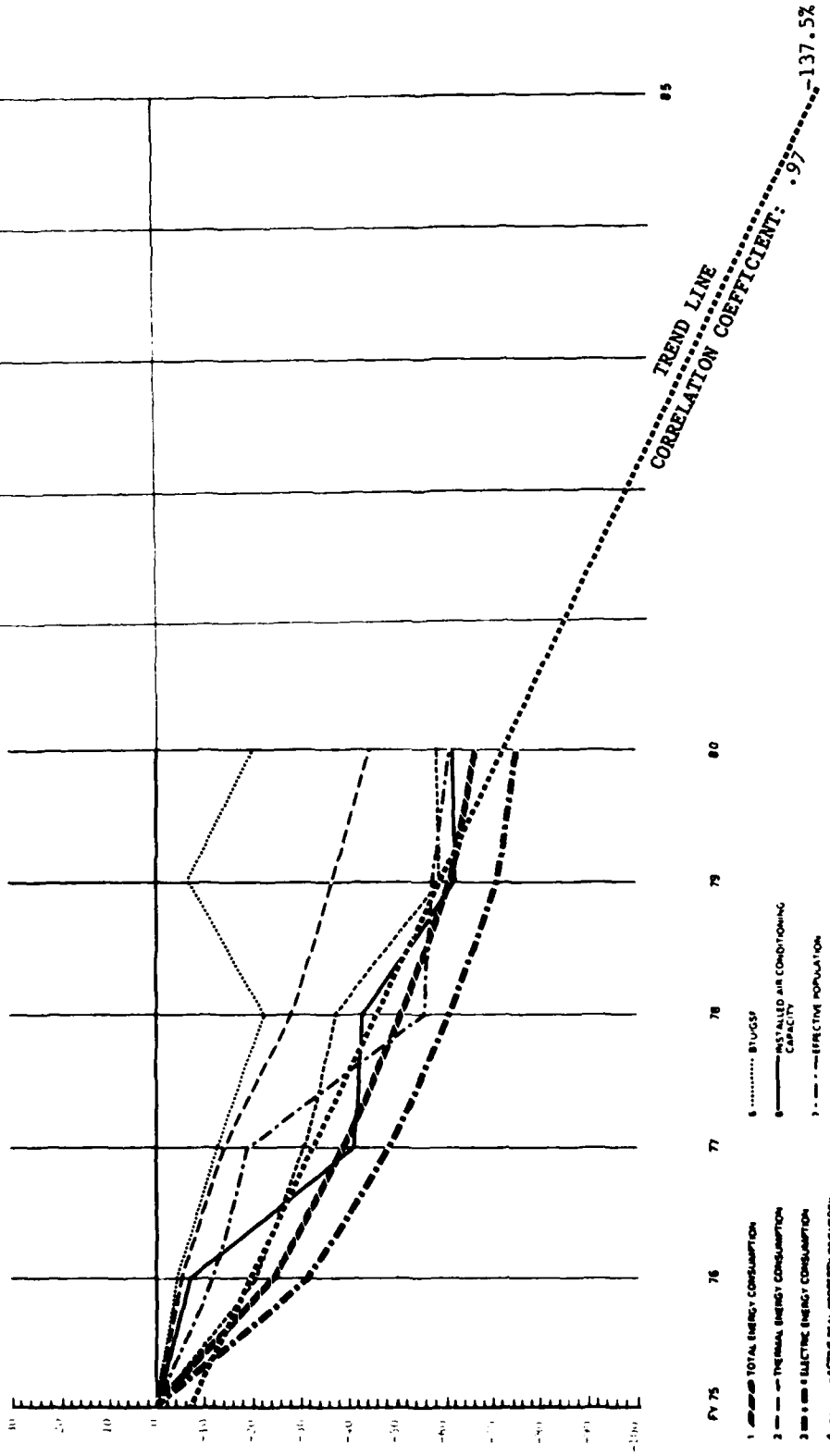
UNITS/yr	75	76	77	78	79	80
1 Energy Consumption @ PD	31,950	44,900	45,975	42,500	40,500	38,225
2 Thermal En Conv @ PD	31,950	44,900	45,975	42,500	40,500	38,225
3 Electrical En Conv @ PD	0	0	0	0	0	0
4 Resident Population @ PD	3,905	3,236	3,193	3,120	2,955	2,913
5 Non-Resident Population @ PD	35	19	22	25	25	22
6 Population Served** @ PD	3,940	3,255	3,215	3,145	2,980	2,935
7 Electrical Population*** @ PD	3,917	3,242	3,200	3,128	2,963	2,920
8 En Consumption/Pop Served @ PD	8.1	13.8	14.3	13.5	13.5	13.5
9 En Consumption/EF Pop @ PD	8.2	13.8	14.4	13.6	13.7	13.7
10 Electric En Consumption/Resident Population	0	0	0	0	0	0
11 Installed Air Cond Capacity @ PD	0	0	0	0	0	0
12 Elec Energy/Ton of Air Cond @ PD	2,646	2,539	2,520	2,520	2,500	2,500
13 Total Property Inventory (RFR) @ PD	.68	.78	.79	.81	.84	.86
14 Installation Population	12,075	17,684	18,244	16,865	16,200	15,290
15 Energy Consumption/GSF @ PD	12,075	17,684	18,244	16,865	16,200	15,290
16 Thermal En Consumption/GSF @ PD	0	0	0	0	0	0
17 Electrical En Consumption/GSF @ PD	0	0	0	0	0	0
18 En by Category						
Thinking						
Information & Production						
Research, Development & Testing						
Storage						
Other Covered Storage						
Hospital & Medical						
Administration						
Bachelor Housing						
Community For Bachelors						
Family Housing						
Operational Buildings						
Utility Buildings						
Other						
Net Available						
BASE						

**PD is Percent Decrease from Base Year **Population Served is the total Resident & Non-Resident Population **EF Pop is Resident & Non-Resident

Electric Energy is Generated On-Site

REMARKS

US Army-Japan



U.S. Army ANALYSIS OF ENERGY CONSUMPTION, INSTALLATION CONSOLIDATIONS MALCOM FTSART

UNITS/FY	75	76	77	78	79	80
1 Energy Consumption & PD	4,280,228	1,252,989	2,612,383	2,094,553	1,666,224	1,452,486
2 Thermal En. Cons. & PD	1,239,175	1,171,275	1,048,400	889,155	778,225	686,600
3 Electrical En. Cons. & PD	1,041,253	2,071,714	1,563,983	1,205,428	887,899	766,886
4 Resident Population & PD	19,176	16,498	14,777	6,356	6,231	6,172
5 Non Resident Population & PD	20,123	18,886	18,178	15,560	14,272	12,275
6 Population Serviced** & PD	39,299	35,384	33,155	21,916	20,505	18,447
7 Effective Population*** & PD	25,884	22,793	20,903	11,543	10,290	10,264
8 En. Consumption/Pop Serviced & PD	108.9	91.7	78.8	95.6	81.3	78.4
9 En. Consumption/Pop & PD	165.4	142.3	125.0	181.5	151.6	140.8
10 Electrical En. Consumption/Resident Population	158.6	125.7	104.5	149.6	142.5	123.0
11 Installed Air Cond Capacity & PD	17,813	155.7	10,658	10,318	6,820	6,964
12 Elec Energy/Ton of Air Cond & PD	29,027	125.4	16,742	15,147	13,002	10,175
13 Real Property Inventory (RPI) & PD	.93	.83	14.0	15,147	9,976	10,175
14 Ineffective Population	178,151	170,531	156,038	138,282	161,023	143,062
15 Energy Consumption/GSF & PD	51,574	61,591	63,816	58,713	78,020	67,479
16 Thermal En. Consumption/GSF & PD	126,527	108,940	92,222	79,569	89,000	74,583
17 Electrical En. Consumption/GSF & PD						
18 RPI by Category						
Training		57	43	28	25	25
Research & Production		1,767	1,715	1,679	1,253	1,240
Research, Development & Testing		9	19	18	28	29
Storage		6,543	1,126	1,158	2,072	689
Other General Storage				5,630	2,564	2,553
Hospital & Medical				295	276	308
Administration		567	602	421	1,125	1,139
Bachelor Housing		1,710	1,528	1,421	1,125	1,000
Community for Base		1,866	1,578	1,476	960	1,409
Family Housing		1,960	1,707	1,543	1,124	1,409
Operational Bus Stops		2,918	1,832	1,116	1,133	1,173
Utility Buildings		532	623	461	599	618
Other		370	270	275	160	163
		218	126	47	160	163

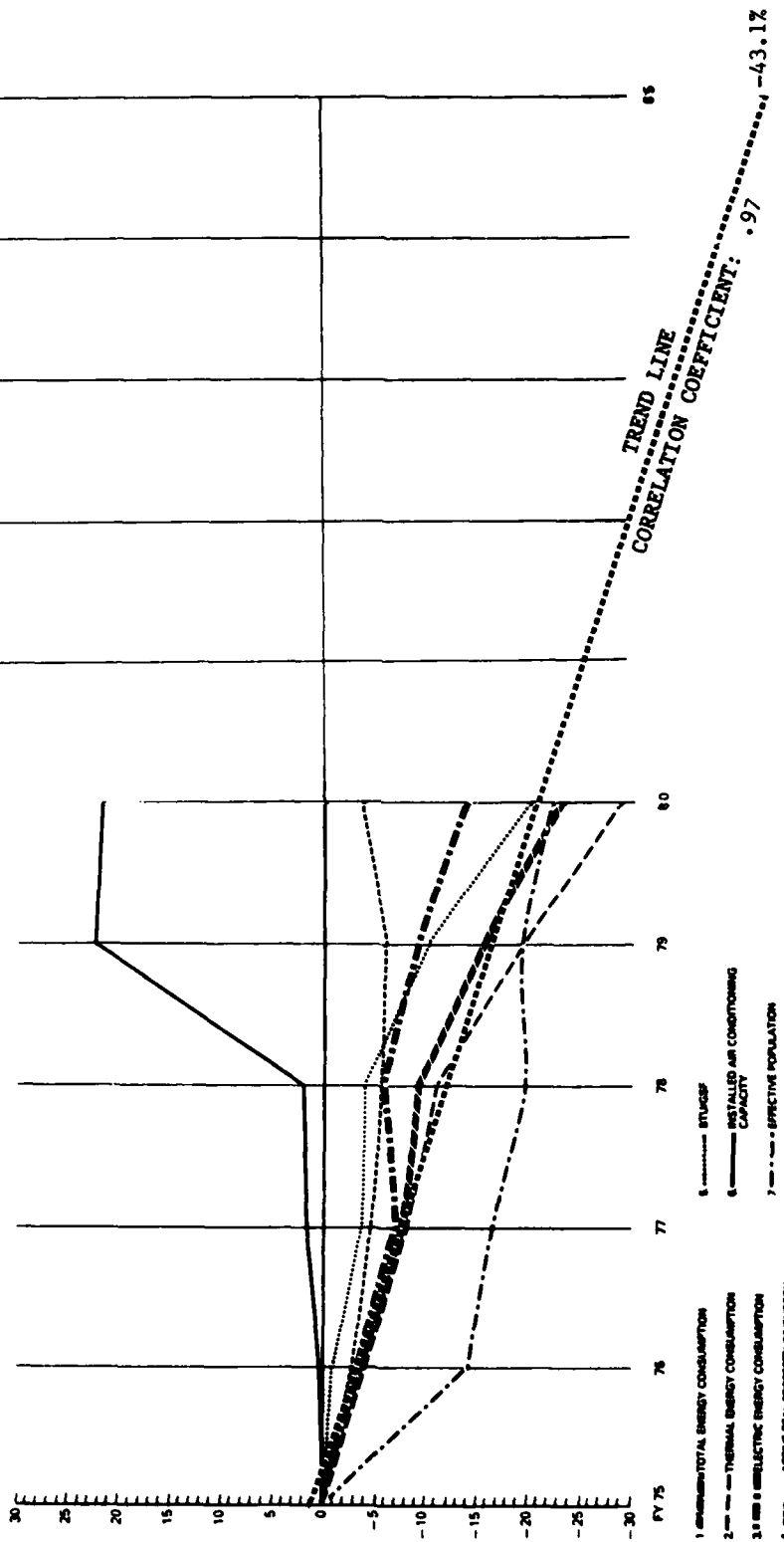
**Population Serviced is the total Resident & Non Resident Population

***En Pop in Resident + 1/3 Non-Resident

USARJ Was an Integral Part of USARPAC in FY 1975

REMARKS

US Army Garrison-Honshu



U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION Honshu MACOM USARI

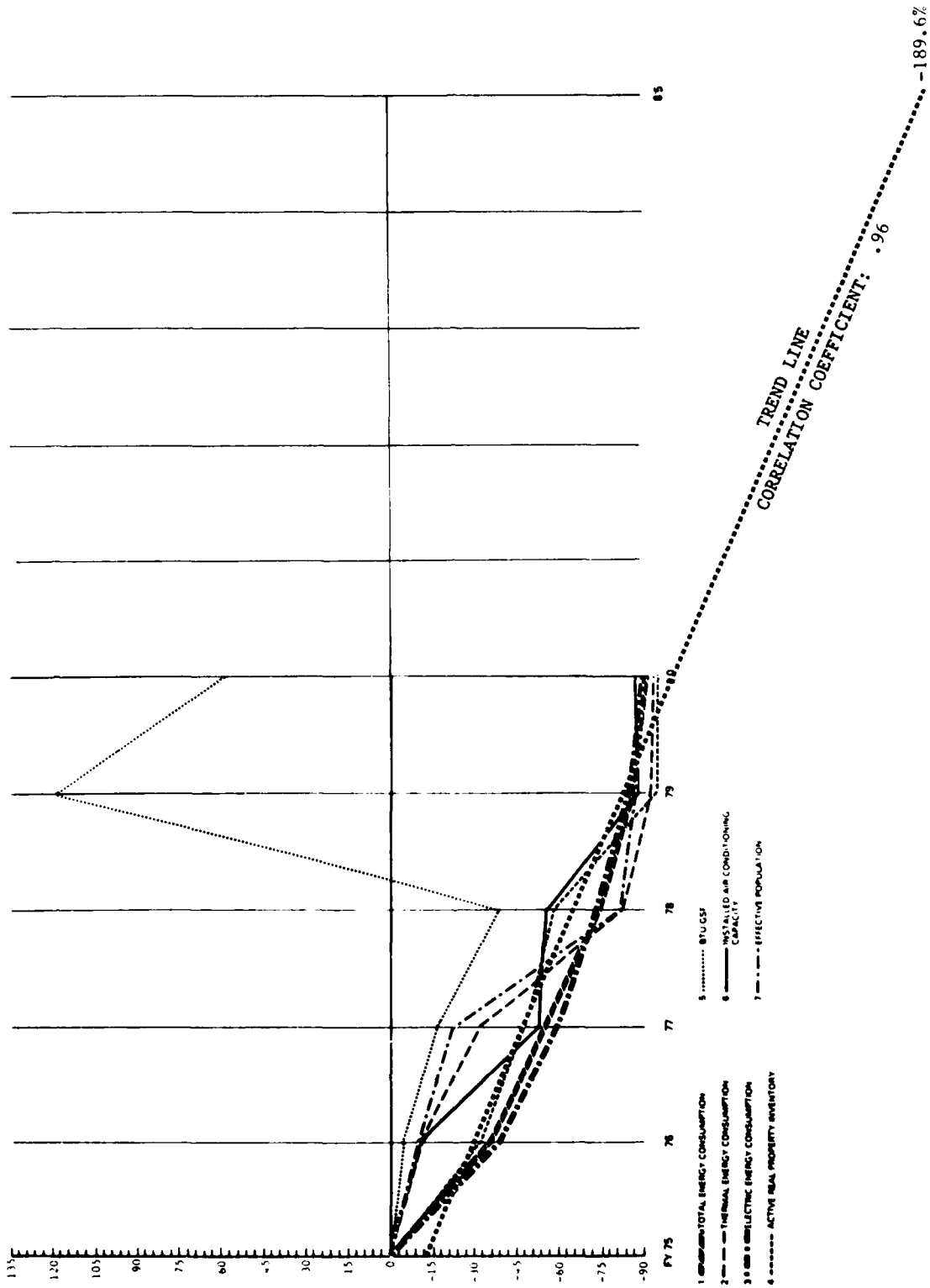
UNITARY	75	76	77	78	79	80
1 Energy Consumption @ PD	1,519,362	1,461,609	1,400,724	1,381,305	1,281,130	1,162,696
2 Thermal En Conv @ PD	919,350	902,250	864,050	836,175	754,200	664,000
3 Electrical En Conv @ PD	580,012	559,259	536,674	515,130	526,930	698,696
4 Resident Population @ PD	7,950	6,549	6,740	5,480	5,166	5,622
5 Non Resident Population @ PD	9,928	9,349	10,040	10,836	11,050	9,915
6 Population Serviced** @ PD	17,878	15,898	16,780	16,316	16,216	15,537
7 Effective Population*** @ PD	11,259	9,665	9,387	9,025	9,047	8,727
8 En Consumption/Pop Served @ PD	85.0	91.9	87.1	85.7	78.1	75.8
9 En Consumption/Pop @ PD	134.9	151.2	149.2	153.1	141.6	133.2
10 Electrical En Consumption/Pop @ PD	73.0	85.4	88.9	99.5	98.2	92.0
11 Thermal En Consumption/Pop @ PD	4,223	4,228	4,281	4,308	5,163	5,133
12 Elec Energy/Ton of Air Cooled @ PD	137.3	132.3	125.4	126.5	102.1	97.2
13 Fuel Property Inventory (MPS) @ PD	9,622	9,342	9,193	9,107	9,052	9,242
14 avg/Person Population	.85	.97	.98	1.01	1.00	1.08
15 Energy Consumption/GSP @ PD	157,905	156,456	152,368	151,675	141,530	125,806
16 Thermal En Consumption/GSP @ PD	97,625	96,591	91,990	91,817	83,319	71,846
17 Electrical En Consumption/GSP @ PD	60,280	59,865	58,378	59,858	58,211	53,960
18 Btu by Category						
Training	6	42	35	25	25	25
Maintenance & Production	1,103	1,139	1,137	1,140	1,138	1,125
Research, Development & Testing	1	1	16	15	28	29
Storage	3,384	3,272	722	717	706	688
Other Controlled Storage				2,556	2,305	2,315
Hospital & Medical	276	276	272	272	272	304
Administration	1,275	1,110	1,075	1,073	1,054	1,069
Bachelor Housing	928	827	757	757	732	752
Community Facilities	1,014	1,037	1,030	1,030	1,051	1,126
Family Housing	1,099	1,104	1,103	1,112	1,129	1,169
Quartermaster Buildings	222	276	291	263	463	681
Utility Buildings	254	218	129	128	130	133
Other						
Net Available	254	218	129	128	130	133
Net Available	254	218	129	128	130	133
Net Available	254	218	129	128	130	133

- 1 Energy Consumption @ PD
- 2 Thermal En Conv @ PD
- 3 Electrical En Conv @ PD
- 4 Resident Population @ PD
- 5 Non Resident Population @ PD
- 6 Population Serviced** @ PD
- 7 Effective Population*** @ PD
- 8 En Consumption/Pop Served @ PD
- 9 En Consumption/Pop @ PD
- 10 Electrical En Consumption/Pop @ PD
- 11 Thermal En Consumption/Pop @ PD
- 12 Elec Energy/Ton of Air Cooled @ PD
- 13 Fuel Property Inventory (MPS) @ PD
- 14 avg/Person Population
- 15 Energy Consumption/GSP @ PD
- 16 Thermal En Consumption/GSP @ PD
- 17 Electrical En Consumption/GSP @ PD
- 18 Btu by Category

**Pop is Percent Deviation from Base Year
***Pop is Resident + Non Resident Population

REMARKS

US Army Garrison-Okinawa



U S Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION (LEADERS) MALCOM USARI

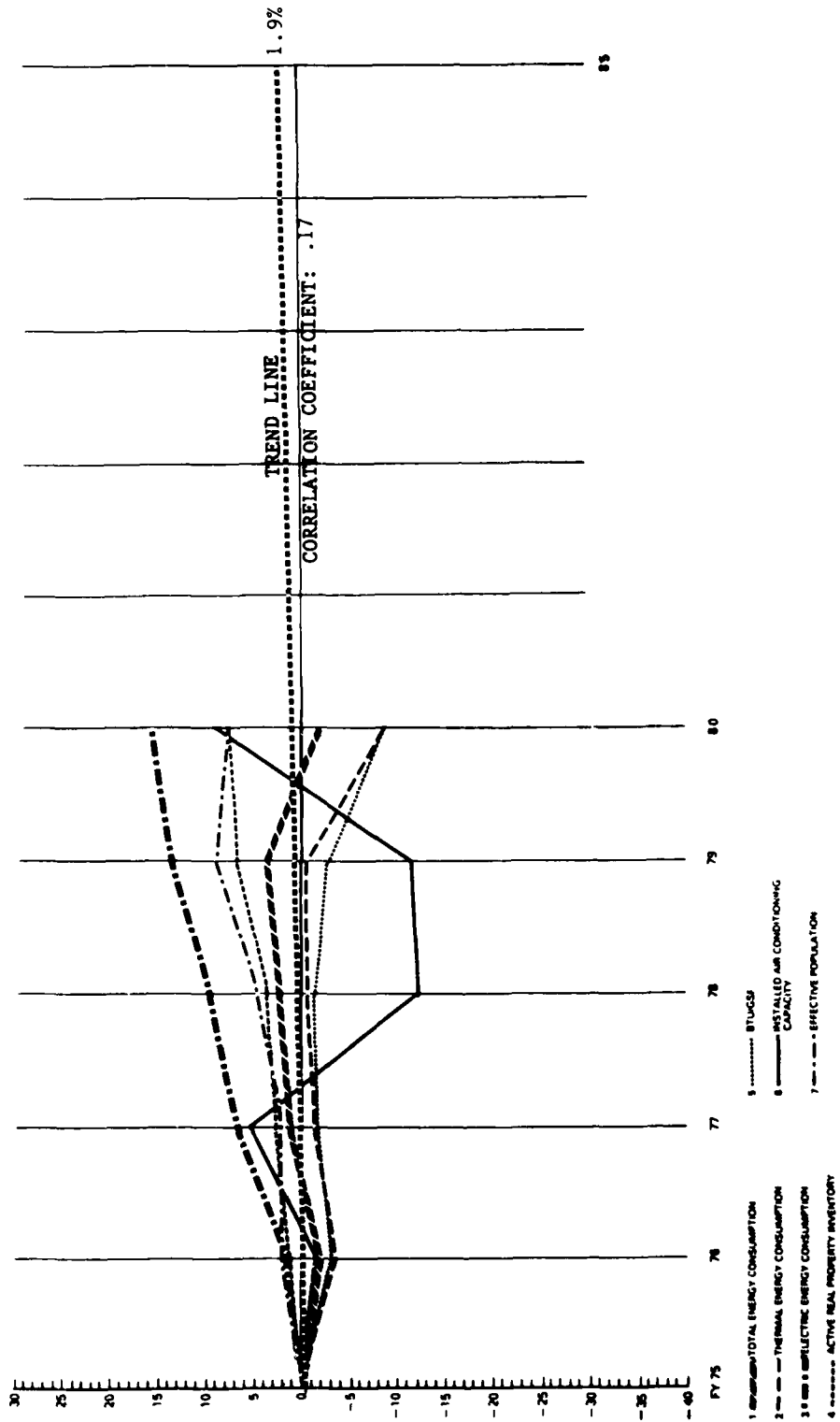
UNIT/TYPE	75	76	77	78	79	80
MBTU	2,761,067	1,281,179	1,211,659	711,248	385,094	287,788
MBTU	2,298,825	1,068,925	1,006,350	511,150	241,125	227,600
MBTU	2,461,262	1,512,454	1,007,399	660,098	360,989	260,188
PEOPLE	11,226	9,949	8,717	876	869	730
PEOPLE	10,195	9,537	8,338	5,924	3,222	2,360
PEOPLE	21,421	19,686	17,075	5,800	4,091	3,110
PEOPLE	14,624	13,128	11,516	2,517	1,963	1,537
MBTU/CAP	128.9	91.4	71.0	123.0	96.1	80.2
MBTU/CAP	188.8	135.7	105.2	283.4	138.2	184.0
MBTU/CAP	219.2	152.0	115.3	753.5	415.4	359.9
TONS	13,590	12,287	6,377	6,010	1,659	1,811
MBTU/TON	183.1	123.1	157.9	109.8	217.6	162.1
ASF	34,605	9,675	7,569	6,040	924	933
ASF-CAP	99	74	66	2,401	48	61
BTU/GSF	191,674	184,122	160,506	118,087	416,786	303,095
BTU/GSF	201,814	27,796	27,070	8,800	26,109	24,223
BTU/GSF	170,580	136,249	133,436	109,287	190,659	218,877
RSF	20	15	8	3	115	115
RSF	797	628	578	539	1	1
RSF	8	8	3	3	1	1
RSF	3,506	3,271	3,168	1,074	239	238
RSF	Not Available Separately Included Above	BASE	BASE	23	4	4
Other Covered Storage	823	291	130	23	71	70
Hospital & Medical Administration	1,982	380	453	348	248	248
Bachelor Housing	1,878	1,039	821	219	248	248
Community Fr Bldg	3,334	923	676	513	73	83
Family Housing	1,123	1,814	729	6	6	6
Operational Bldg	BASE	BASE	332	198	136	137
Utility Buildings	BASE	BASE	161	147	10	10
Other	BASE	BASE	108	24	21	21

- 1 Energy Consumption to PD
- 2 Thermal En. Cons. to PD
- 3 Electrical En. Cons. to PD
- 4 Resident Population to PD
- 5 Non-Resident Population to PD
- 6 Population Served** to PD
- 7 Effective Population*** to PD
- 8 En. Consumption/Pop. Served to PD
- 9 En. Consumption/Pop. to PD
- 10 Electric En. Consumption/Person
- 11 Installed Air Cond Capacity to PD
- 12 Elec. Energy/Ton of Air Cond to PD
- 13 Heat Recovery Inventory (HPI) to PD
- 14 HPI/Effective Population
- 15 Energy Consumption/GSF to PD
- 16 Thermal En. Consumption/GSF to PD
- 17 Electrical En. Consumption/GSF to PD
- 18 RFI by Category

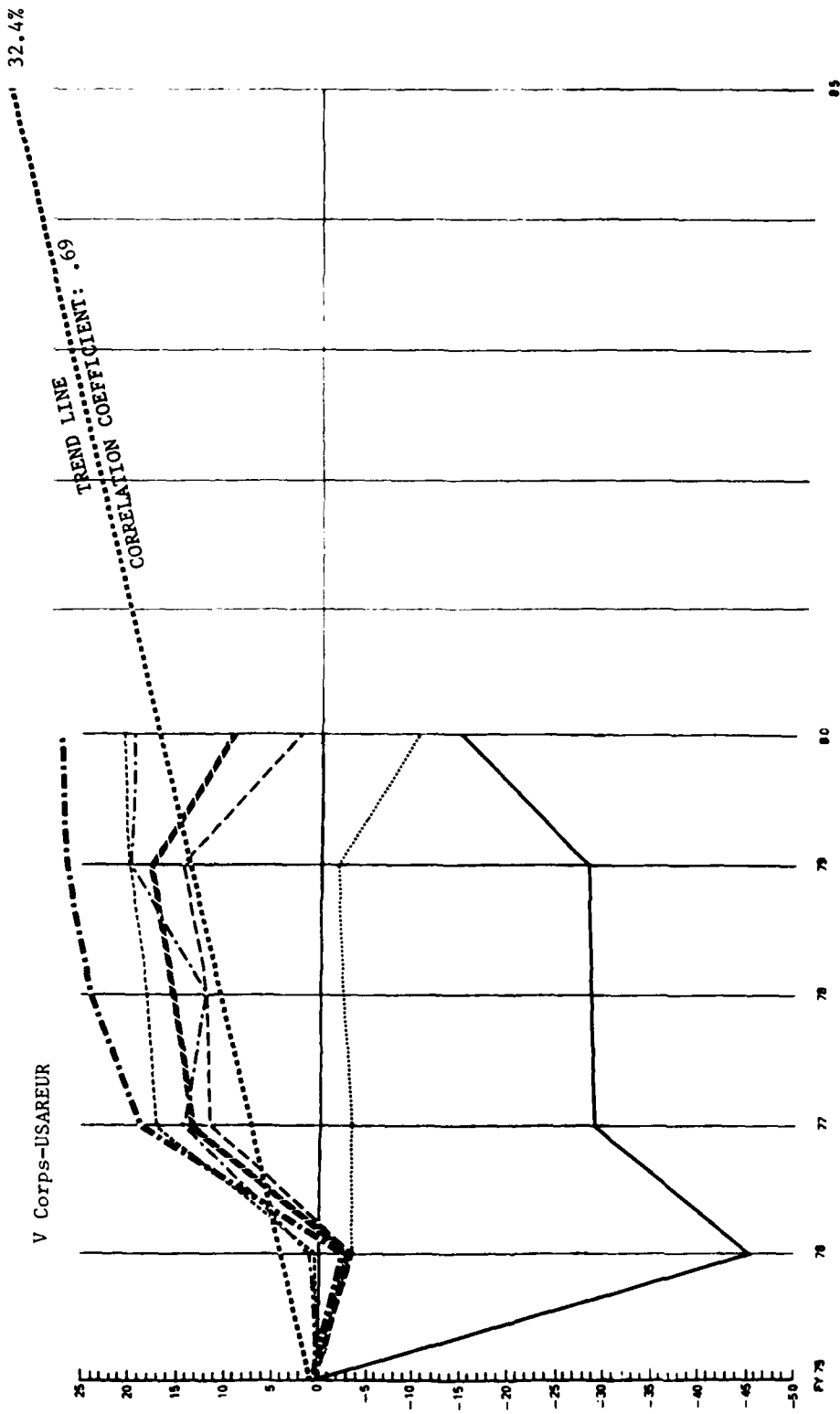
**Population Served is the total Resident & Non-Resident Population
 ***RFI Pop & Resident + 1/2 Non-Resident

REMARKS

US Army Europe Consolidation



V Corps-USAREUR



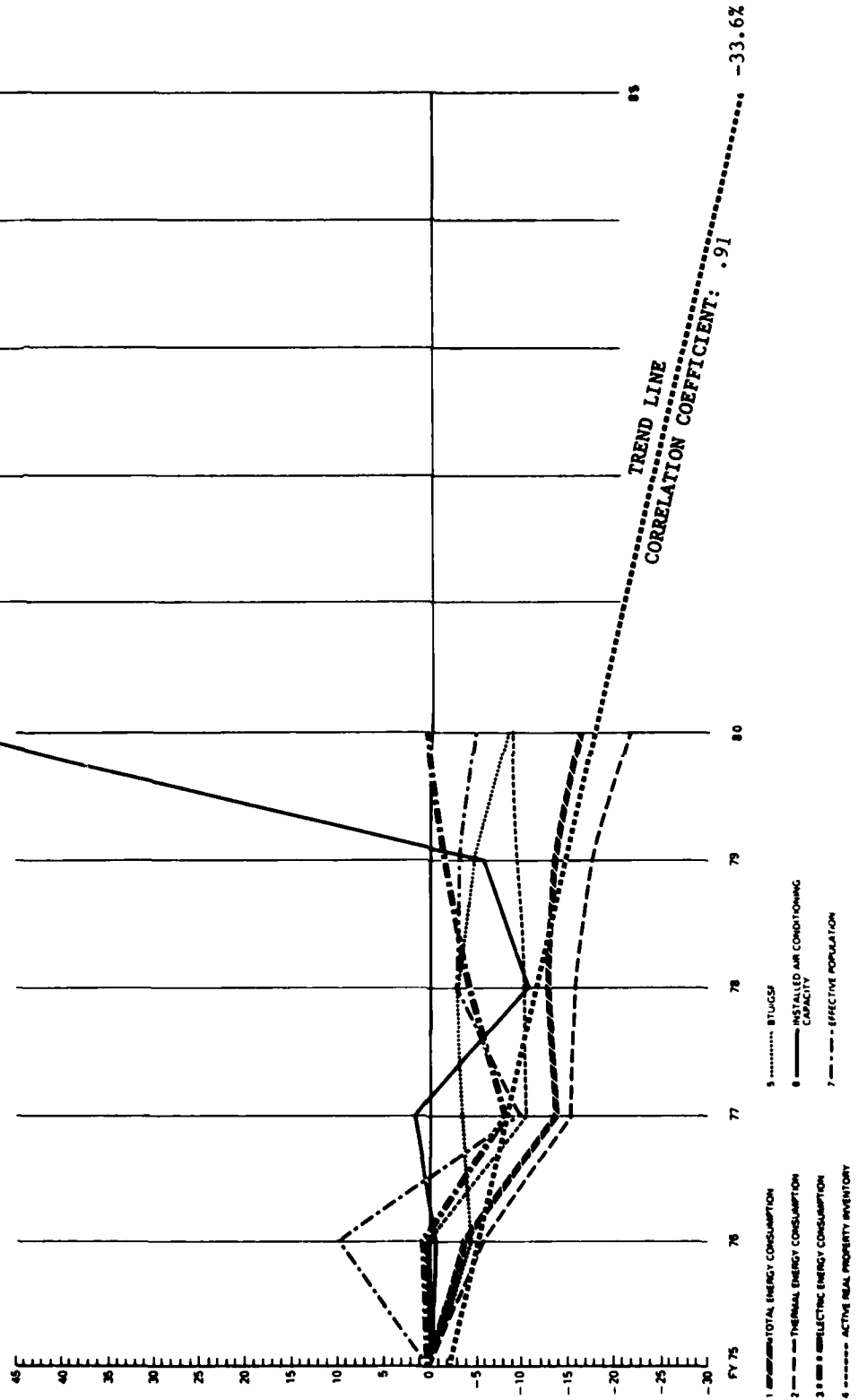
U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION : (urtp) MACOM : (SAR) : F

UNITS	15	16	17	18	19	20	21	22
1 Energy Consumption & PD	12,532,572	12,130,644	13,300,000	14,496,846	15,400,000	14,791,115	18,000	13,658,712
2 Thermal En. Cons & PD	9,132,925	8,825,700	9,170,075	10,331,779	11,000	10,466,600	14,600	9,319,825
3 Electrical En. Cons & PD	3,399,647	3,304,944	4,065,419	4,235,067	4,400	4,324,515	27,200	4,338,887
4 Resident Population & PD	109,217	109,231	125,488	126,943	16,200	132,419	21,200	131,728
5 Non-Resident Population & PD	34,899	37,398	37,164	37,173	6,500	38,536	10,400	38,636
6 Population Servant** & PD	144,116	146,739	162,532	164,106	13,900	170,955	18,600	170,314
7 Effective Population*** & PD	120,850	121,734	137,876	139,324	15,300	145,264	20,200	144,613
8 En. Consumption/Pop. Servant & PD	87.0	82.7	87.4	88.2	1.4	86.5	-0.6	80.2
9 En. Consumption/Pop. & PD	103.7	99.6	103.1	103.8	0.4	101.8	-1.8	94.5
10 Electric En. Consumption/Resident Population	31.1	30.3	32.2	32.4	0.2	31.4	-0.1	32.9
11 Resident Air Cond Capacity & PD	4,235	2,360	3,094	3,067	-28.8	3,105	-28.4	3,494
12 Basic Energy/Pop. of Air Cond & PD	784.2	1,400.4	1,320.3	1,371.9	74.9	1,192.8	72.6	1,174.6
13 Heat Property Inventory (Btu) & PD	66,495	66,635	78,990	78,592	18.2	79,895	20.2	80,766
14 Btu/Electric Population	55	55	57	56	1.8	55	0.1	56
15 Energy Consumption/GSF & PD	188,474	182,073	182,077	184,076	-2.3	185,132	-1.8	169,115
16 Thermal En. Consumption/GSF & PD	137,348	132,468	130,252	130,189	-5.2	131,004	-4.6	115,393
17 Electrical En. Consumption/GSF & PD	51,126	49,605	51,811	53,887	5.4	54,128	5.9	53,722
18 (Btu) by Category	194	192	236	271	100	261	100	314
Maintenance & Production	5,628	5,643	6,068	6,304	6,207	6,288	6,207	6,207
Research, Development & Testing	74	74	74	74	74	74	74	74
Storage	7,021	6,897	848	864	864	864	864	864
Other General Storage	1,569	1,508	6,797	6,958	6,958	6,958	6,958	6,958
Medical & Medical	2,741	2,961	1,963	2,112	2,071	2,071	2,071	2,071
Administration	15,267	15,005	3,796	3,752	3,967	3,967	3,967	3,967
Recreation	6,963	7,113	16,137	15,930	15,852	15,758	15,758	15,758
Community Facilities	24,788	24,917	8,717	8,995	9,568	9,568	9,568	9,568
Family Housing	1,340	1,314	30,619	30,471	31,152	31,152	31,152	31,152
Operational Buildings	910	913	1,666	1,698	1,693	1,693	1,693	1,693
Utility Buildings	310	311	1,066	1,098	1,102	1,102	1,102	1,102
Other	48	48	48	48	48	48	48	48

**Pop. Servant is the total Resident & Non-Resident Population. **Pop. is Resident & Non-Resident.

REMARKS

VII Corps-USAREUR



MACOM USAREUR

INSTALLATION VII Corps

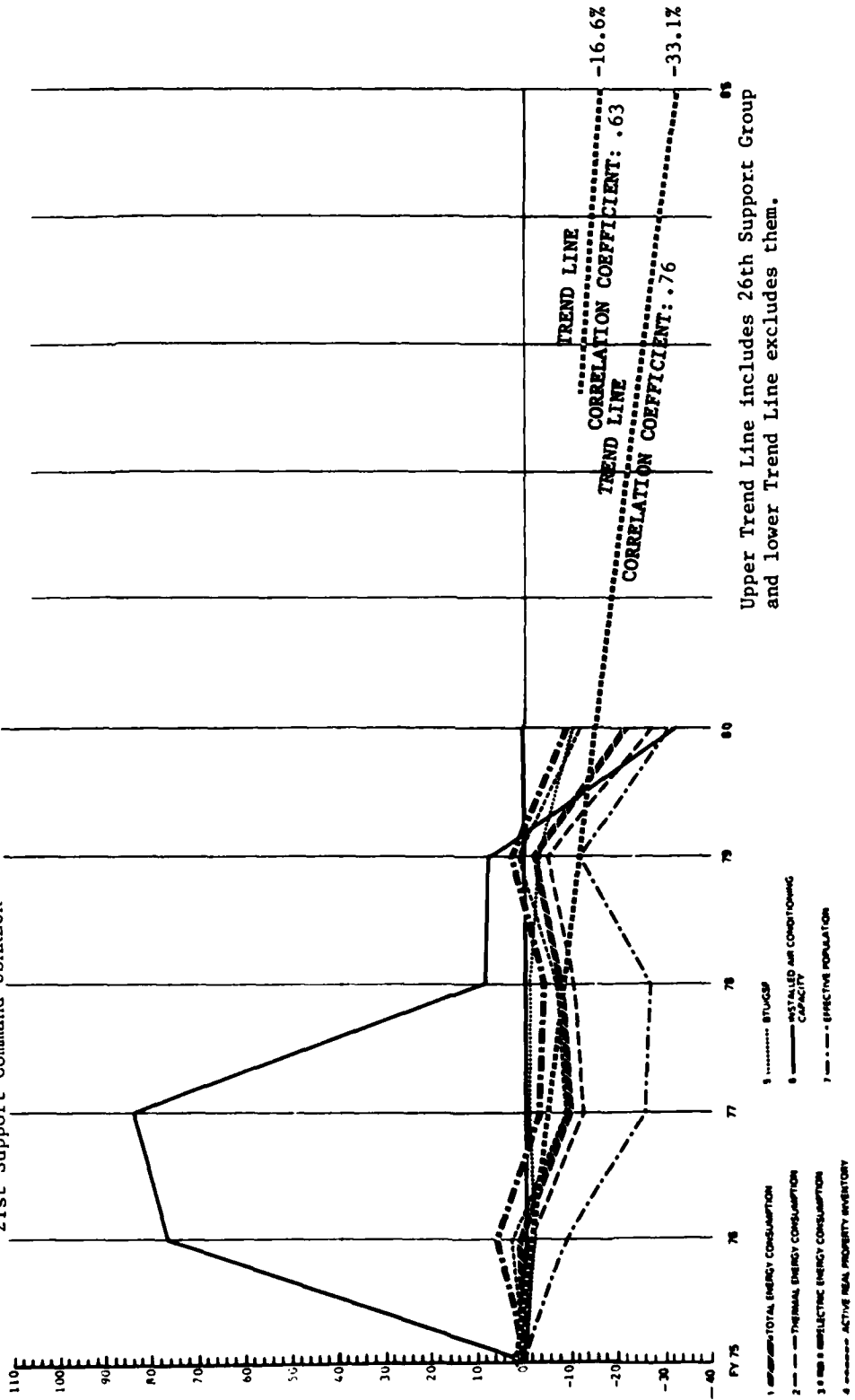
U.S. Army ANALYSIS OF ENERGY CONSUMPTION

UNITS/yr	75	76	77	78	79	80
1 Energy Consumption & PD	19,728,643	18,935,256	17,087,232	17,191,687	17,020,335	16,311,539
2 Thermal En Cons & PD	14,814,800	14,011,450	12,594,250	12,498,350	12,195,825	11,609,750
3 Electrical En Cons & PD	4,893,843	4,923,806	4,492,982	4,693,337	4,824,510	4,701,789
4 Non-Resident Population & PD	146,663	159,504	127,988	143,254	139,211	135,310
5 Non-Resident Population	39,549	47,880	20,832	35,697	46,970	49,937
6 Population Storage & PD	186,212	207,384	177,920	178,931	186,181	185,247
7 Effective Population*** & PD	159,846	175,464	146,932	135,133	134,868	151,956
8 En Consumption/Pop Served & PD	105.9	91.3	96.0	96.1	91.4	89.1
9 En Consumption/Pop Served	123.4	107.9	118.6	110.8	109.9	108.7
10 En Consumption/Pop Served	33.4	30.9	35.4	32.8	34.7	36.2
11 Incubated Air Cond Capacity & PD	2,141	3,148	3,188	2,810	2,937	2,753
12 Heat Energy/Ton of Air Cond & PD	1,558.1	1,579.2	1,409.3	1,670.2	1,611.6	1,031.3
13 Heat Property Inventory (Btu) & PD	109,473	1,092,663	98,034	98,217	99,050	99,737
14 Air Pollution Population	180,215	172,668	174,299	175,038	171,836	165,551
15 Energy Consumption/GSP & PD	135,511	127,768	128,668	127,252	123,128	116,704
16 Thermal En Consumption/GSP & PD	64,104	64,900	65,831	67,780	68,708	67,167
17 Electrical En Consumption/GSP & PD	71,407	62,868	62,837	59,472	54,420	49,537
18 Btu by Category	582	624	752	829	869	833
19 Heating	9,173	9,874	8,715	8,363	8,473	8,660
20 Manufacturing & Production	7,628	7,612	1,506	1,478	1,505	1,349
21 Research, Development & Testing	1,960	1,757	5,117	5,129	5,222	5,168
22 Other General Storage	4,640	4,878	1,678	1,703	1,692	1,617
23 Hospital & Medical	31,084	30,743	4,544	4,604	4,717	4,854
24 Administration	14,888	14,631	25,306	25,027	24,886	24,666
25 Bookstore Housing	35,574	35,522	33,834	34,214	33,754	33,853
26 Community Facilities	2,290	2,317	1,982	1,927	1,914	1,918
27 Family Housing	1,852	1,411	1,381	1,381	1,452	1,403
28 Quarantined Buildings	BASE	BASE	1,170	201	275	314
29 Utility Buildings	BASE	BASE	BASE	BASE	BASE	BASE
30 Other	BASE	BASE	BASE	BASE	BASE	BASE

PD is Percent Deviation from Base Year
 ***Population Served is the total Resident & Non-Resident Population
 **1st Pop is Resident + 1/2 Non-Resident

REMARKS

21st Support Command-USAREUR



Upper Trend Line includes 26th Support Group and lower Trend Line excludes them.

U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION 21st Spt Cmd MACOM USAREUR

UNITS	15	16	17	18	9	80
1 Energy Consumption & PD	10,919,788	11,037,575	9,885,621	10,001,861	10,572,327	8,513,886
2 Thermal En Core & PD	7,438,650	7,352,475	6,532,200	6,696,830	7,021,750	5,384,600
3 Electrical En Core & PD	3,481,138	3,685,100	3,353,421	3,304,991	3,544,577	3,129,286
4 Resident Population & PD	99,646	90,319	72,011	70,068	83,058	93,386
5 Non Resident Population & PD	36,704	35,135	34,127	35,752	44,767	38,732
6 Population Served** & PD	136,350	125,454	106,138	105,820	127,825	100,138
7 Effective Population*** & PD	111,881	102,031	83,387	81,985	97,980	75,037
8 En Consumption/Pop Served & PD	80.1	88.0	93.1	94.5	82.7	85.0
9 En Consumption/Pop Served & PD	97.6	108.2	118.6	122.0	107.9	112.6
10 Electric En Consumption/Resident Population	34.7	40.8	46.6	47.2	42.7	49.4
11 Electric En Consumption/Resident Population	2,338	4,146	4,305	4,352	2,532	1,566
12 Heat Energy/Ton of Air Cond & PD	1,480.4	888.8	778.9	851.1	1,409.4	1,988.3
13 Heat Energy/Ton of Air Cond & PD	70,124	72,402	63,621	65,089	79,443	61,420
14 APPE/Effective Population	153,721	152,448	155,383	153,664	150,083	138,817
15 Energy Consumption/GSF & PD	104,364	101,550	102,674	102,888	99,765	87,668
16 Thermal En Consumption/GSF & PD	49,357	50,898	52,709	50,776	50,318	30,949
17 Electrical En Consumption/GSF & PD	54,967	50,652	52,965	52,092	49,447	56,719
18 MP by Category	111	94	102	101	126	74
Training	4,611	4,388	4,415	4,597	4,562	4,285
Maintenance & Production	15	15	15	15	21	21
Research, Development & Testing	17,999	19,399	5,774	5,958	5,886	5,941
Storage	1,496	1,497	1,470	1,360	1,276	1,251
Other Covered Storage	3,976	4,169	4,656	5,131	1,516	1,171
Headquarters & Medical	11,529	11,117	4,964	5,216	5,006	5,069
Administration	6,175	6,402	2,964	3,232	3,086	3,069
Community Housing	20,954	21,229	16,155	16,844	19,935	19,337
Community Frs Clubs	2,218	2,063	1,983	1,887	2,202	2,130
Family Housing	1,040	867	952	957	1,001	957
Operating Non-Storage	1,040	867	952	957	1,001	957
Utility Buildings	1,040	867	952	957	1,001	957
Other	1,040	867	952	957	1,001	957

- (1) FY 75 Includes: (2) FY 76 Includes: (3) FY 77 Includes: (4) FY 78 Includes: (5) 26th Spt Gp Reported Separately in FY 80
- HQ 1st BDE - Germany; USAERMAE Pipeline System
- NATO SHAPE Spt Gp; Management Ctr
- Germany's Army Depot; Burtonwood, Cacerment, HTHE - USAERMAE
- 6 NATO - SHAPE Spt. Gp.

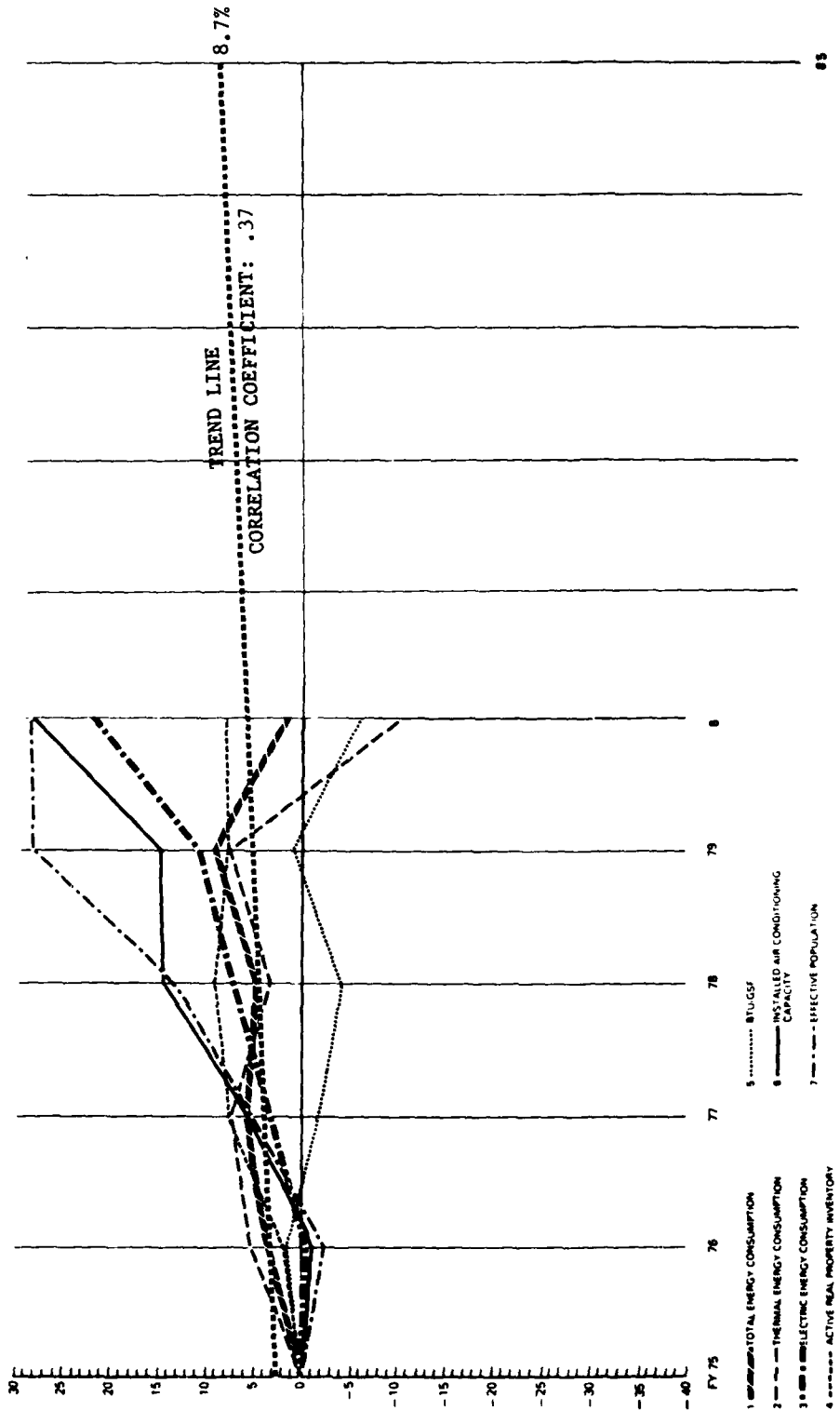
**PD is Percent Deviation from Base Year
 ***En Pop is Resident
 ****En Pop is Non Resident

U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION 26th Spt Gp (Heidelberg) MACOM USAREUR

UNITS/FY	75	80
1. Energy Consumption & PD	1,482,613	1,454,910
2. Thermal En Core & PD	1,000,761	930,300
3. Electrical En Core & PD	481,852	524,610
4. Resident Population & PD		36,206
5. Non-Resident Population & PD		9,055
6. Population Served** & PD		23,261
7. Effective Population*** & PD		17,224
8. En Consumption/Pop Served & PD		62.5
9. En Consumption/ER Pop & PD		84.5
10. Electric En Consumption/Resident Population		36.9
11. Installed Air Cond Capacity & PD		817
12. Elec Energy/Ton of Air Cond & PD		642.1
13. Heat Property Inventory (Btu) & PD		9,294
14. IP/Efficiency Population		54
15. Energy Consumption/GSF & PD		156,543
16. Thermal En Core (includes GSF & PD)		100,087
17. Electrical En Core (includes GSF & PD)		56,456
18. IP by Category		6
Training		255
Maintenance & Production		60
Research, Development & Testing		359
Storage		331
Other Covered		1,027
Hospital & Medical		1,032
Administration		1,254
Bachelor Hous 9		6,656
Community Fc Hous		103
Family Housing		67
Operational Bn Sigs		164
Utility Buildings		
Other		
BASE	Not Available	Not Available
Not Available Separately Included Above		

REMARKS
 **PD is Percent Deviation from Base Year
 **Population Served is the total Resident & Non Resident Population
 ***ER Pop is Resident + 1/3 Non Resident
 Separated from 21st Spt CMD as of FY 1980. Energy Consumption for Heidelberg Military Community for FY 1975 is used as a Base for Comparison Purposes.

Berlin-USAREUR



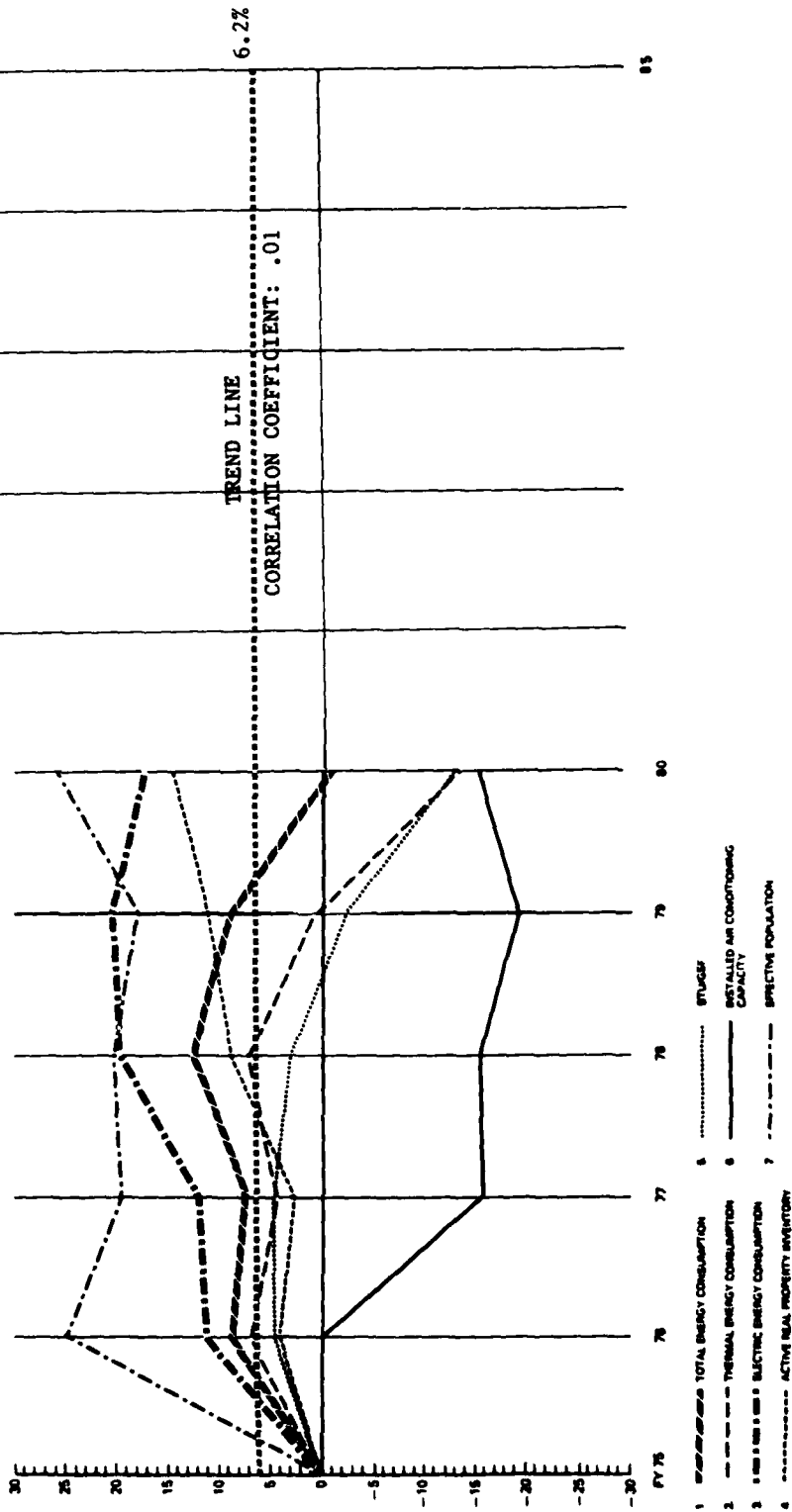
U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION Berlin MATCOM USAREUR

UNIT/KEY	75	76	77	78	79	80
1 Energy Consumption & PD	1,907,469	1,964,215	2,013,093	1,991,275	2,070,806	1,928,025
2 Thermal En Cons & PD	1,203,125	1,266,375	1,288,000	1,240,975	1,293,850	1,075,425
3 Electrical En Cons & PD	701,344	699,840	725,093	750,300	776,956	852,600
4 Resident Population & PD	11,875	11,628	12,635	13,495	15,284	15,284
5 Non Resident Population & PD	1,525	1,473	1,110	1,360	1,772	1,772
6 Population Serviced** & PD	13,410	13,101	13,745	15,055	17,056	17,056
7 Effective Population*** & PD	1,378	1,219	1,005	1,015	1,585	1,585
8 En Consumption/Pop Served & PD	141.9	149.9	146.5	132.3	121.6	133.2
9 En Consumption/Pop & PD	153.7	162.1	154.8	142.1	130.6	121.6
10 Electric En Consumption/Resident Population	59.1	60.2	57.4	55.6	50.9	55.9
11 Installed Air Cond Capacity & PD	724	733	745	826	831	827
12 Elec Energy/Ton of Air Cond & PD	968.7	954.8	967.8	908.4	935.0	919.7
13 Real Property Inventory (RPI) & PD	11,287	11,478	12,115	12,298	12,175	12,183
14 Intermittent Population	91	95	93	88	77	77
15 Energy Consumption/GSF & PD	168,643	171,129	166,165	161,919	170,087	138,235
16 Thermal En Consumption/GSF & PD	110,310	110,157	106,714	100,909	106,271	88,273
17 Electrical En Consumption/GSF & PD	57,333	60,972	59,451	61,010	63,816	69,962
18 RPI by Category	56	56	122	119	139	140
Maintenance & Production	365	366	366	366	366	365
Research, Development & Testing	809	821	55	55	55	55
Storage	156	157	467	467	467	467
Other Covered Storage	1,171	1,094	1,086	1,082	1,071	1,072
Hospital & Medical	2,480	2,480	2,475	2,475	2,476	2,472
Administration	1,614	1,420	1,603	1,604	1,527	1,524
Sanitary Facilities	4,382	4,569	4,636	4,852	4,858	4,868
Family Housing	236	236	234	230	230	230
Operational Buildings	220	185	186	185	184	183
Utility Buildings	BASE	BASE	BASE	BASE	BASE	BASE
Other	BASE	BASE	BASE	BASE	BASE	BASE

**Population Served is the total Resident & Non Resident Population
 ***En Pop in Resident + 1/3 Non Resident

REMARKS

SETAF-USAREUR



U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION SETAF

MACOM USAREUR

UNIT/KEY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
MRTU	586,881	638,127	8.7	630,909	7.5	659,805	12.4	638,744	8.8	581,160	-0.9									
MRTU	342,875	366,525	6.9	357,625	4.3	367,125	7.1	344,800	0.6	295,675	-13.4									
MRTU	246,006	271,602	11.3	273,284	12.0	292,680	19.9	293,944	20.5	285,685	12.1									
PEOPLE	3,800	5,596	47.2	4,768	26.9	5,362	40.6	4,810	29.7	5,307	19.1									
PEOPLE	7,188	6,437	-10.6	7,982	11.0	4,366	-41.6	7,150	-0.7	7,517	4.6									
PEOPLE	10,999	12,031	9.4	12,740	13.8	11,708	-8.4	12,060	8.8	12,824	16.1									
PEOPLE	6,199	7,740	24.9	7,412	19.6	7,466	20.4	7,313	18.0	7,813	26.0									
MRTUCAP	53.4	53.0	-0.7	49.5	-7.3	56.4	5.6	52.9	-0.9	53.3	1.5									
MRTUCAP	94.7	82.4	-13.0	85.1	-10.1	88.4	-6.7	87.3	-2.8	94.4	12.1									
MRTUCAP	64.2	48.6	-24.3	57.6	-10.3	54.8	-14.6	59.6	-2.7	57.8	-21.2									
TONS	1,253	1,253	0	1,058	-15.6	1,058	-15.6	1,013	-4.9	1,058	-15.6									
MRTUTION	196.7	216.8	11.4	258.3	32.7	274.6	42.1	290.2	48.0	270.0	-18.7									
KSF	3,075	3,858	25.7	3,805	24.7	4,040	9.0	4,118	11.1	4,243	14.5									
BTUGSF	158,402	165,604	4.4	165,810	5.1	163,318	-3.1	155,110	-2.1	137,016	-13.3									
BTUGSF	92,344	95,004	2.7	93,988	1.7	90,872	-1.8	83,210	-8.5	69,685	-24.7									
BTUGSF	65,858	70,400	6.8	71,822	9.1	74,446	10.0	74,890	8.1	67,311	-10.1									
KSF	57	56	-1.7	6	-6.7	9	9	9	9	9	9									
KSF	284	284	0	301	5.9	301	5.9	256	-12.6	246	-16.5									
KSF	986	987	0.1	177	-17.7	411	41.1	531	53.1	454	-13.2									
KSF	100	102	2.0	97	-3.0	97	-3.0	92	-5.1	76	-17.7									
KSF	319	318	-0.3	310	-3.1	310	-3.1	311	0.3	267	-14.1									
KSF	651	664	2.0	501	-23.1	708	8.5	696	-1.7	861	23.1									
KSF	683	683	0	685	0.3	708	0.3	806	17.7	902	30.6									
KSF	658	781	19.3	803	21.7	110	-16.7	85	-23.6	119	37.3									
KSF	102	81	-20.6	110	7.8	53	-47.3	53	-47.3	57	7.4									
KSF	10	51	410.0	33	230.0	330.0	330.0	33	330.0	330.0	330.0									

- 1 Energy Consumption & PD
- 2 Thermal En Cons & PD
- 3 Electrical En Cons & PD
- 4 Resident Population & PD
- 5 Non Resident Population & PD
- 6 Population Served** & PD
- 7 Effective Population*** & PD
- 8 En Consumption Top Served & PD
- 9 En Consumption 1st Pop & PD
- 10 Electrical En Cons. Capacity & PD
- 11 Installed Air Cons. Capacity & PD
- 12 Elec Energy/Ton. of Air Cooled & PD
- 13 Heat Property Inventory (HP) & PD
- 14 HVAC/Refrigeration Population
- 15 Energy Consumption/GSF & PD
- 16 Thermal En Cons. per/GSF & PD
- 17 Electrical En Cons. per/GSF & PD
- 18 HP by Category
- 19 Training
- 20 Maintenance & Production
- 21 Research, Dev. Support & Testing
- 22 Storage
- 23 Other Command Support
- 24 Hospital & Med. Ctr.
- 25 Administration
- 26 Bachelor Housing
- 27 Community Facilities
- 28 Family Housing
- 29 Operational Support
- 30 Utility Buildings
- 31 Other

**PD is Percent Derivation from Base Year

***Population Served is the total Resident & Non Resident Population

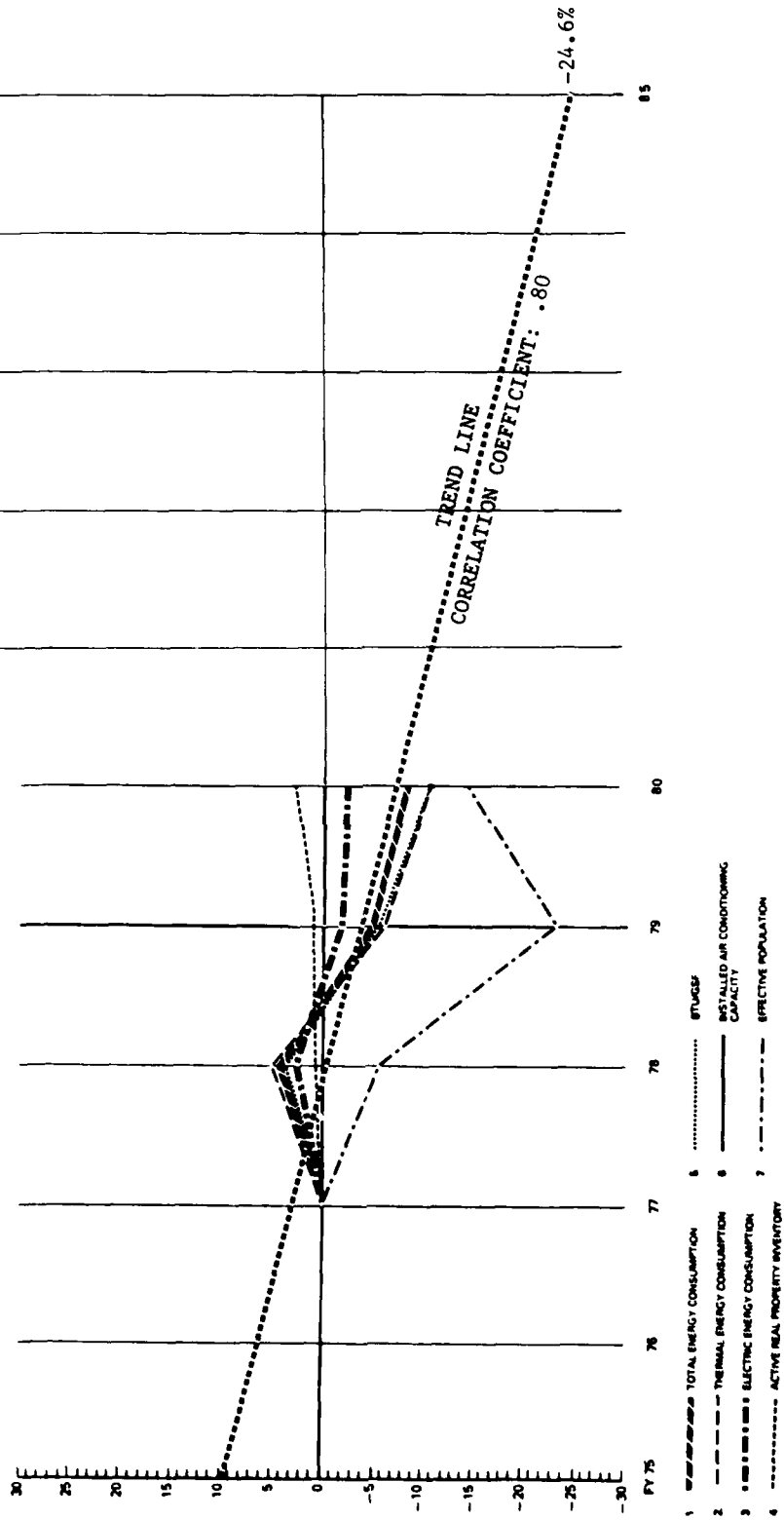
PT 1975 Includes
8th Log Cmd-Italy
& Support Group-Italy

PT 1976 Includes
Support Gp.--SETAF
& 8th Support Gp.

PT 1977 Includes
8th SPTG (SETAF)
& 8th Spt. Gp. V-V-HI

REMARKS

7th Army Training Command-USAREUR



U.S. Army ANALYSIS OF ENERGY CONSUMPTION INSTALLATION 7th Army Twp. (cont) MACOM INAMEIR

UNITS	75	76	77	78	79	80
1 Energy Consumption & PD	2,744,918		2,744,918	2,762,344	2,153,032	2,075,491
2 Thermal En. Cons & PD	1,615,550		1,615,550	1,696,875	1,516,575	1,441,400
3 Electrical En. Cons & PD	649,368		649,368	665,469	636,457	634,091
4 Resident Population & PD	31,217		31,217	29,125	23,190	26,457
5 Non Resident Population & PD	6,870		6,870	7,628	6,839	6,776
6 Population Served** & PD	38,107		38,107	36,753	30,029	33,233
7 Effective Population*** & PD	33,527		33,527	31,668	25,670	28,716
8 En. Consumption/Pop Served & PD	59.4		59.4	64.3	71.2	62.5
9 En. Consumption/Pop & PD	67.6		67.6	74.6	83.8	72.3
10 Electric En. Consumption/Pop & PD	20.8		20.8	22.8	27.2	24.0
11 Installed Air Cond Capacity & PD	13		13	16	16	16
12 Elec Energy/Ton of Air Cond & PD	NA		NA	NA	NA	NA
13 Fuel Property Inventory (RHS) & PD	12,433		12,433	12,694	12,561	12,777
14 RHP Inactive Population	37		37	39	49	44
15 Energy Consumption/GSF & PD	182,170		182,170	189,078	171,679	162,440
16 Thermal En. Consumption/GSF & PD	129,940		129,940	135,815	120,929	112,812
17 Electrical En. Consumption/GSF & PD	52,230		52,230	53,263	50,750	49,628
18 kWh by Category						
Training	316		316	321	336	354
Maintenance & Production	202		202	203	913	920
Research, Development & Training	59		59	106	136	133
Storage	956		956	978	975	1,062
Other Covered Storage	102		102	102	102	102
Hospital & Medical	379		379	390	399	449
Administration	5,303		5,303	5,274	5,134	4,959
Bachelor Housing	1,509		1,509	1,509	1,532	1,532
Community Facilities	2,469		2,469	2,518	2,518	2,651
Family Housing	257		257	234	342	362
Operational Buildings	113		113	116	117	119
Utility Buildings	41		41	41	19	50
Other						

**PD is Percent Deviation from Base Year
 Was part of VIII Corps & Other Activities
 Prior to FY 1977. FY 1977 Data Used as Base for Percent Deviations

**Population Served is the total Resident & Non Resident Population
 ***EN Pop & Resident + 1/3 Non Resident

REMARKS

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US Military Academy
ATTN: Library
West Point, NY 10996

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HQDA (DAEN-ASI-L) (2)
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HQDA (DAEN-MPR-A)
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HQDA (DAEN-MPO-U)
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Cameron Station
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USA Science & Technology
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Fort Benning
Fort Benning, GA 31905

Facilities Engineer
Fort Bliss
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Facilities Engineer
Carlisle Barracks
Carlisle Barracks, PA 17013

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Fort Chaffee
Fort Chaffee, AR 72902

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Fort Dix, NJ 08640

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Fort Jackson, SC 29207

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Fort Lee
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Facilities Engineer
Fort McClellan
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Fort Monroe
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Facilities Engineer
Presidio of Monterey
Presidio of Monterey, CA 93940

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Fort Pickett
Blackstone, VA 23824

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Fort Story
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Facilities Engineer
Lone Star Army Ammunition Plant
Texarkana, TX 75501

Facilities Engineer
Picatinny Arsenal
Dover, NJ 07801

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West Point, NY 10996

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Granite City, IL 62040

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Fort Monmouth, NJ 07703

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Facilities Engineer
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Warren, MI 48039

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Madison, IN 47250

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Sparta, WI 54656

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Fort Stewart
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Texarkana, TX 75501

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Sacramento Army Depot
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Facilities Engineer
Sharpe Army Depot
Lathrop, CA 95330

Facilities Engineer
Seneca Army Depot
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Facilities Engineer
Fort Ord
Fort Ord, CA 93941

Facilities Engineer
Presidio of San Francisco
Presidio of San Francisco, CA 94129

Facilities Engineer
Fort Sheridan
Fort Sheridan, IL 60037

Facilities Engineer
Holston Army Ammunition Plant
Kingsport, TN 37662

Facilities Engineer
Baltimore Output
Baltimore, MD 21222

Facilities Engineer
Bayonne Military Ocean Terminal
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Facilities Engineer
Bay Area Military Ocean Terminal
Oakland, CA 94626

Facilities Engineer
Gulf Output
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Facilities Engineer
Fort Huachuca
Fort Huachuca, AZ 86513

Facilities Engineer
Letterkenny Army Depot
Chambersburg, PA 17201

Facilities Engineer
Michigan Army Missile Plant
Warren, MI 48089

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USA Engr Dist, Far East
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APO New York, NY 09757

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