ENVIRONMENTAL IMPACT ANALYSIS PROCESS

FINAL ENVIRONMENTAL ASSESSMENT

DEACTIVATION OF 6594TH TEST GROUP
HICKAM AIR FORCE BASE
HAWAII

AUGUST 1986

DEPARTMENT OF THE AIR FORCE

Report Documentation Page

Report Date	Report Type	Dates Covered (from... to)
00081986	Final	-

Title and Subtitle Environmental Impact Analysis Process Environmental Assessment Deactivation of 6594th Test Group Hickam Air Force Base, Hawaii	**Contract Number**
	Grant Number
	Program Element Number
Author(s)	**Project Number**
	Task Number
	Work Unit Number
Performing Organization Name(s) and Address(es) HQ Space Division Los Angeles, CA 90009	**Performing Organization Report Number**
Sponsoring/Monitoring Agency Name(s) and Address(es) sponsoring agency and address	**Sponsor/Monitor's Acronym(s)**
	Sponsor/Monitor's Report Number(s)
Distribution/Availability Statement Approved for public release, distribution unlimited	
Supplementary Notes The original document contains color images.	
Abstract	
Subject Terms	
Report Classification unclassified	**Classification of this page** unclassified
Classification of Abstract unclassified	**Limitation of Abstract** UU
Number of Pages 39	

FINDING OF NO SIGNIFICANT IMPACT (FONSI)
DEACTIVATION OF THE 6594TH TEST GROUP
HICKAM AIR FORCE BASE, OAHU, HAWAII

INTRODUCTION

1. The U.S. Air Force proposes to deactivate the 6594th Test Group at Hickam Air Force Base (HAFB), Oahu, Hawaii. The 6594th Test Group was established in 1958 to support U.S. Air Force Systems Command missile and space development operations in the Western Pacific area. It also provided support to the U.S. Coast Guard and Honolulu Joint Rescue Coordination Center on an as-available, non-interference basis.

2. The 6594th Test Group is comprised of 520 Department of Defense personnel, as follows:
   - 95 officers
   - 409 enlisted personnel
   - 16 civilians (U.S. Civil Service)

   Other personnel who support the 6594th include 273 from the 15th Air Base Wing (ABW), as follows:

   - 77 military
   - 196 civilians (U.S. Civil Service)

3. Aircraft assigned to the 6594th are:

NUMBER	TYPE
7	JC-130B
3	JC-130H
5	HH-53C
3	HC-130P

4. Deactivation would involve terminating the mission of the 6594th Test Group, redistributing personnel and aircraft, and modifying the aircraft for other functions.

5. Of the 639 military personnel involved, 500 will be transferred to Air Force Bases outside of Hawaii, and 139 will be reassigned within Hawaii. Of the 210 civilian personnel, 72 will be reassigned, 79 will be changed to a lower grade, and 59 will receive mandatory separations.

6. Deactivation will occur in an optimum and orderly fashion and be complete within three months of T-Day, June 30, 1986.

IMPACTS

1.0 SOCIOECONOMICS

1. The primary impacts will involve personal and municipal economics. The 59 civilians who receive mandatory separations will be without jobs. The 79 who are scheduled to receive a change to a lower grade will be eligible for grade or pay retention and therefore will not receive less income. The impact will be realized in future actions when the employees' pay does not increase as it would had they not been changed to a lower grade.

2. The economic activity of HAFB and its Region of Influence (ROI) will be reduced due to the civilian displacements and by the 500 military personnel who will be departing Hawaii. It is estimated that there will be a decrease in the total economic impact (TEI) of HAFB on its ROI of about 3 %, from $695.5 million (FY 1985) to $671.6 million.

3. There will be a concurrent decrease in economic activity at HAFB, with base retail and commissary sales estimated to decrease 10%, from $78.9 million (FY 1985) to $71 million after deactivation.

4. Housing impacts are reviewed as positive, as 181 on-base and 319 off-base family housing units would become available.

2.0 TRAFFIC

1. Vehicular traffic impacts would likely be beneficial, although negligible, particularly for the area outside HAFB. At least 500 drivers/vehicles would depart the island, which has 500,000 registered vehicles.

2. Air traffic at HAFB would decrease about 25% as a result of deactivation. However, the decrease in total traffic must consider Honolulu International Airport and Barbers Point Naval Air Station. It is estimated that deactivation would reduce total local air traffic by less than 10%.

3.0 AIR QUALITY

These effects would be positive, as there would be some decreases in local vehicular and aircraft activity. However, these effects would be negligible.

4.0 NOISE

These effects would be positive, as there would be some decreases in noise due to a decrease in vehicular and air traffic. However, these effects would be negligible.

MITIGATIONS

1. The 70 separated Civil Service Personnel will be registered in the U.S. Military Priority Placement Program. They also will be given assistance by the 15th ABW civilian personnel office. Also, the Air Force will reduce to the extent possible the total number of mandatory separations.

2. Economics mitigations will be achieved primarily to the extent that mandatory separations are minimized and other Air Force personnel and aircraft are assigned to HAFB.

ALTERNATIVE

This would involve maintaining at HAFB the present configuration of the 6594th Test Group personnel, aircraft, and equipment, plus the 15th ABW military support personnel, even though there is no longer a mission for them to achieve. This would not be feasible.

FINDINGS

1. In view of the above, a finding of no significant impact is made.

2. An Environmental Assessment for the proposed Deactivation of the 6594th Test Group at Hickam Air Force Base, Hawaii, dated June 1986, is on file at:

HQ SPACE DIVISION
Post Office Box 92960
Worldway Postal Center
Los Angeles, California 90009
ATTENTION: Mr. John R. Edwards, SD/DEV

Raphael O. Roig
Chairman, Space Division
Environmental Protection Committee

1 Aug 86
Date

DEACTIVATION OF 6594TH TEST GROUP

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1.0 PROPOSED ACTION AND ALTERNATIVES

1.1 PROPOSED ACTION

The proposed action is the optimum and orderly deactivation of the 659th Test Group at Hickam Air Force Base (HAFB), Oahu, Hawaii. The action will commence June 30, 1986 and be complete by September 30, 1986. The location of HAFB is shown on Figure 1-1, Vicinity Map.

1.1.1 BACKGROUND

1. The 6594th Test Group, a subordinate unit of the Air Force Satellite Control Facility, was established in 1958 to support the United States Air Force Systems Command missile and space development operations in the Western Pacific area.

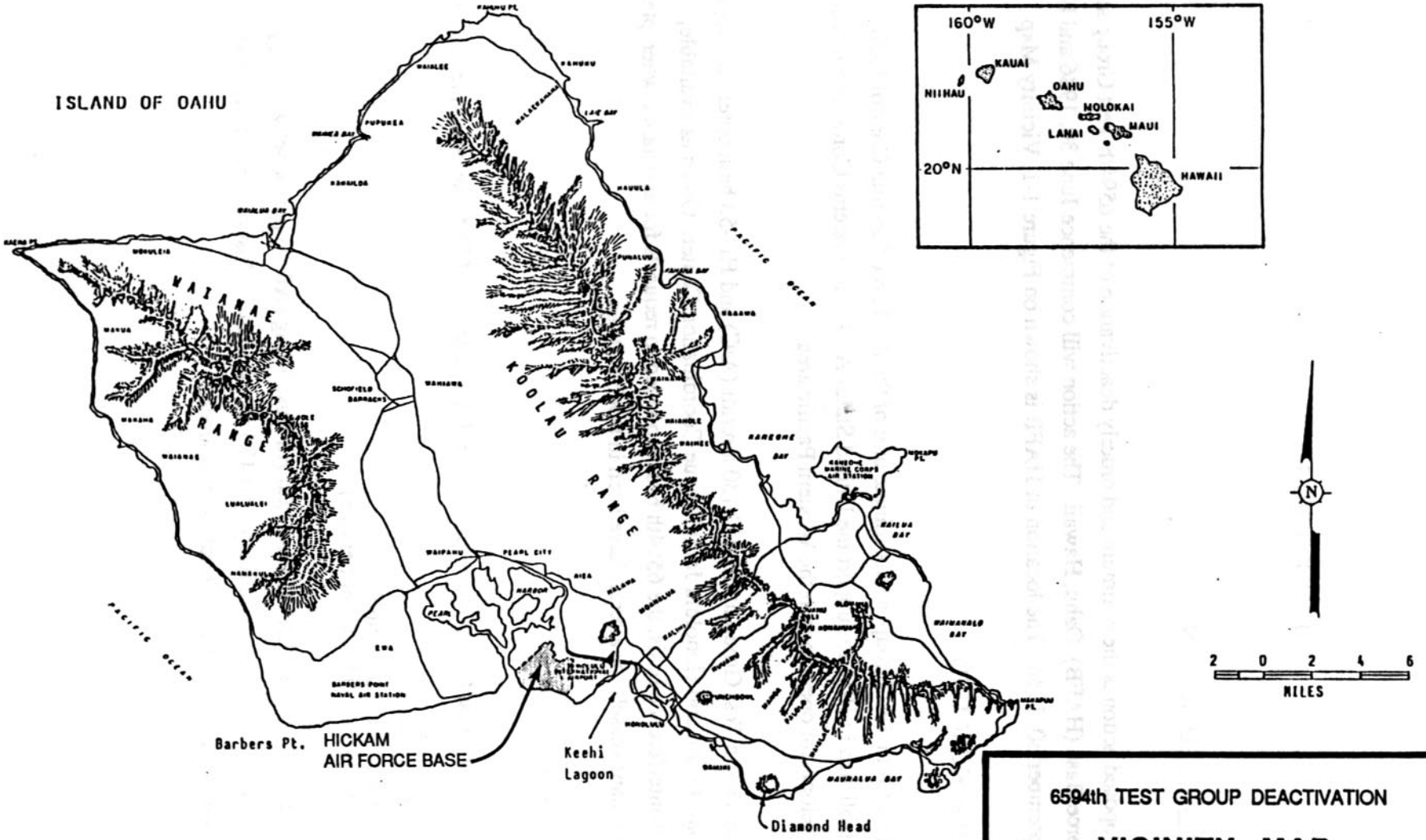
2. The 6594th Test Group utilized C-130 aircraft (A/C) and HH-53 helicopters to support the U.S. Coast Guard and Honolulu Joint Rescue Coordination Center. On an as-available, non-interference basis, the 6594th has responded to requests for assistance when pleasure craft, merchant vessels, or aircraft have been in trouble at sea.

1.1.2 STATUS

1. The 6594th Test Group is comprised of 520 Department of Defense personnel, as follows:

   - 95 officers
   - 409 enlisted personnel
   - 16 civilians (U.S. Civil Service)

There are also 273 other affected 15th Air Base Wing (ABW) personnel who support the 6594th. Of these, 77 are military, and 196 are civilians. Most of these military and civilian personnel are involved in aircraft maintenance.



6594th TEST GROUP DEACTIVATION

VICINITY MAP
ISLAND OF OAHU
HICKAM AIR FORCE BASE

FIGURE 1-1

2. Aircraft resources utilized in carryout out the primary and secondary missions of the 6594th include:

No. of Aircraft	Aircraft Type
7	JC-130B
3	JC-130H
5	HH-53C
3	HC-130P

1.1.3 DEACTIVATION PROCEDURE

1. It is proposed that the 6594th Test Group be totally dissolved and that the Space Division and Air Force Satellite Control Facility missions be changed to delete reference to the Group.

2. The 6594th will maintain its support capability until primary mission termination, or "T-Day." Deactivation will be complete within three months of "T-Day." "T-Day" is June 30, 1986.

3. A detailed Deactivation Implementation Plan was developed, specifically addressing the redistribution of aircraft, equipment, and personnel. This includes a time-phased schedule of events to accomplish the objective in a timely (within three months) and orderly manner.

1.1.3.1 Aircraft

1. Upon termination of its mission, 6594th Test Group will be redistributed throughout the Air Force. The 18 aircraft will be redistributed to other organizations and modified to fit other requirements. Most of the aircraft will be returned to standard configuration.

2. The assumed deployment of aircraft follows:

   Davis-Monthan Air Force Base:

   6 JC-130B (temporary location prior to transfer to Warner-Robins ALC for demodification)

Kirtland Air Force Base:

1 HC-130P
5 HH-53C

McClellan Air Force Base:

1 JC-130H
2 HC-130P

Hill Air Force Base:

1 JC-130B
1 JC-130H

Kadena Air Force Base:

1 JC-130H

1.1.3.2 Personnel

1. Deactivation will involve 793 military and civilian personnel. Of the 581 military personnel, 500 will depart Hawaii, and 81 will be reassigned within Hawaii. Of the 210 civilian personnel, 72 will be reassigned, 79 will be changed to a lower grad, and 59 will receive mandatory separations.

2. Of the 504 military personnel of the 6594th, 423 will be transferred to other Air Force installations outside of Hawaii. The other 81 will be reassigned at Hickam, Wheeler, or Bellows Air Force Bases. There will be reassignment of 13 civilian personnel, two will be changed to a lower grade, and one will be separated.

3. There will be other military and civilian 15th ABW personnel directly affected by the deactivation. Seventy-seven military personnel will be reassigned outside of Hawaii.

4. Altogether, 500 military personnel will be transferred to Air Force Bases outside of Hawaii. Of these, 423 will be from the 6594th Test Group, and 77 will be from the 15th ABW support group.

2.0 ENVIRONMENTAL IMPACTS OF THE PROPSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

2.1.1 POPULATION

1. The State of Hawaii has exhibited a phenomenal rate of growth since the mid-19th Century, increasing in population from 84,165 in 1850 to 494,794 in 1950. During the past 35 years, the State of Hawaii population has increased 112%, to 1,057,800 in 1985 (projected).

2. Due to its strategic location and recent history, the State of Hawaii, particularly the Island of Oahu, is host to a significant military presence. Due to increases in the civilian population, that presence has been decreasing relative to total population for at least the past 15 years; a decline projected to continue for at least the next 20 years (2005).

3. In 1970, the U.S. Armed Forces and dependents in Hawaii represented 14.3% of the population. In 1985, this had decreased to 11.5%, with the forecast for 2005 being 9.3%. The number of military personnel has remained relatively stable, with 111,000 in 1970 increasing to 122,000 in 1980, where it is projected to remain, at least to 2005. These trends and projections are shown on Table 2-1, Resident Population Projections.

2.1.2 GROWTH

1. For many years, this growth rate, and the implications of its unmitigated continuance, has fostered a concern among elected officials and other citizens for the changing quality of life in the Hawaiian Islands and a desire to manage the State's growth.

2. Much has been said and published relative to this concern. In 1973, a temporary commission on Statewide Environmental Planning produced a report on the danger of growth-induced overloads on the State's resources and environmental and infrastructure systems.

TABLE 2-1

RESIDENT POPULATION PROJECTIONS

1970-2005

Year	City/County of Honolulu	State of Hawaii	Excluding armed forces and dependents	Armed forces and dependents as percent of total
1970 (est.)…	634.7	776.0	665.0	14.3%
1975 (est.)…	714.3	884.0	761.4	13.8%
1980 (est.)…	765.0	969.0	847.0	12.5%
1985……..	815.3	1,057.8	935.8	11.5%
1990……..	859.3	1,138.4	1,016.4	10.7%
1995……..	896.9	1,211.5	1,089.5	10.0%
2000……..	925.7	1,267.8	1,145.8	9.6%
2005……..	954.5	1,310.0	1,188.0	9.3%

NOTE: As of July 1, 1984, the resident population is defined as the number of persons whose usual place of residence is in an area, regardless of physical location on the census or estimate date. It includes armed forces stationed or homeported in an area, but excludes persons of local origin attending school or in military service outside the area.

SOURCE: Department of Planning and Economic Development 1984, Environmental Solutions 1986.

3. In response to the report, the legislature passed resolutions requesting that criteria be established to limit, restrain, or re-direct the State's growth. Five priority growth-related issues were identified:

   - water supply
   - water quality in Kaneohe Bay
   - economic growth
   - transportation/air quality
   - urban land use.

4. In 1977, the concern about growth and quality of life was expressed by Governor George Ariyoshi in his State-of-the-State address: "Hawaii…can easily be destroyed by overpopulation and excessive demands on its resources…"

5. A 1979 legislative study, "Preserving the Quality of Life in Hawaii: A Strategy for Population Growth Control," reflected the same concerns. The growth pattern for the island of Oahu can be seen on Figure 2-1, Population Density. This shows the area of greatest population density to be in and around the City of Honolulu and spreading to the north.

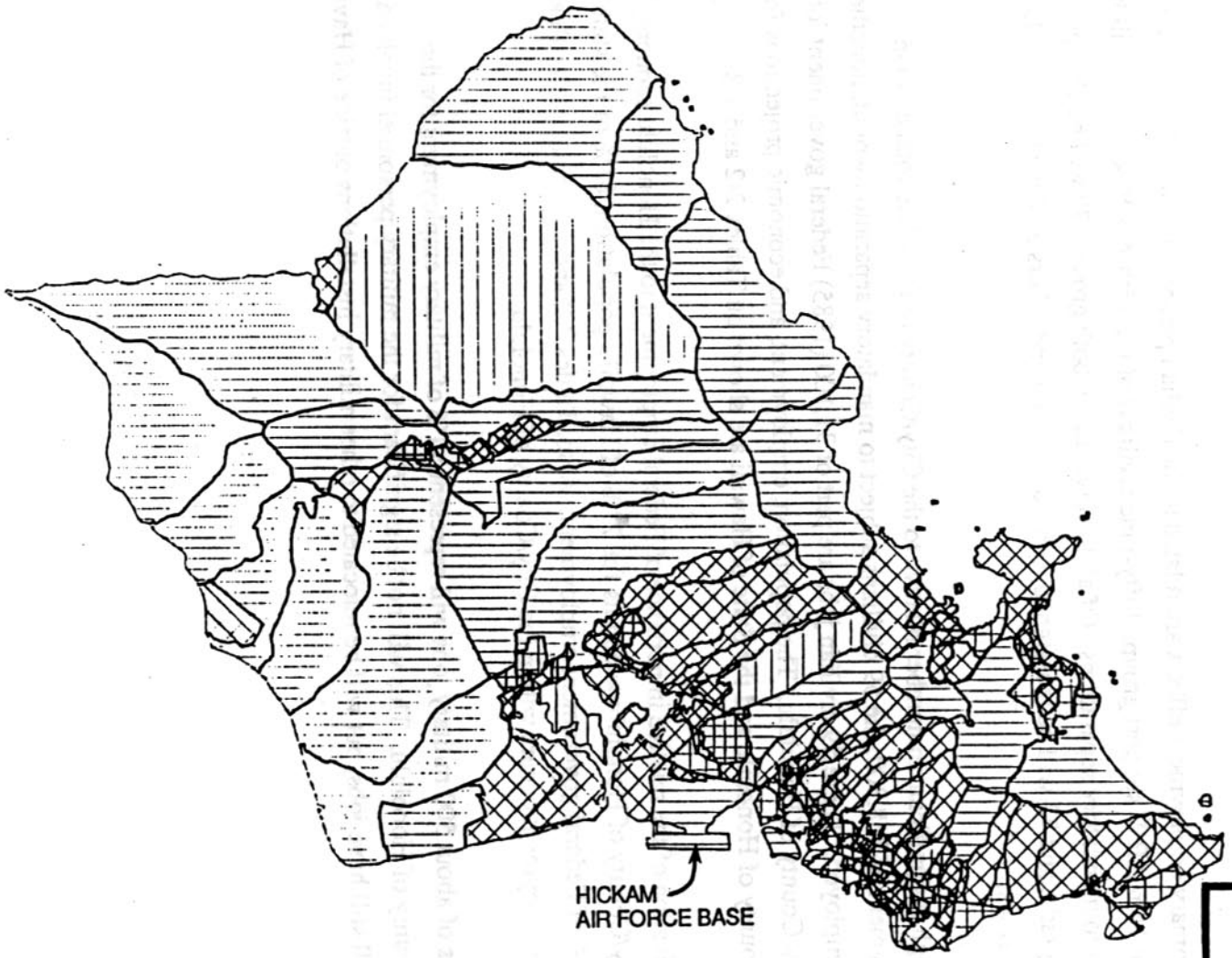
2.2 PROPOSED ACTION

1. The proposed project, deactivation of the 6594th Test Group, will produce both adverse and, given the concern for growth, some minimal beneficial effects. There will be some adverse employment and economic impacts.

2. There will also be some minor decreases in other areas of environmental concern, which will be considered beneficial, i.e., water use (water supply, water quality), urban land use, air/ground transportation and, hence, air quality and noise, and the generation of waste petroleum products and hazardous waste.

3. Other potential environmental concerns will not be affected by the proposed project and so are not addressed in this report:

   - vegetation and wildlife
   - cultural resources
   - aesthetics
   - geology.



LEGEND

POPULATION DENSITY
PER SQUARE MILE

- UNDER 100
- 100 - 999
- 1,000 - 2,499
- 2,500 - 4,999
- 5,000 - 9,999
- 10,000 - 24,999
- 25,000 - 49,999
- 50,000 AND OVER

6594th TEST GROUP DEACTIVATION

POPULATION DENSITY
OAHU, HAWAII

FIGURE 2-1

2.2.1 SOCIOECONOMICS

2.2.1.1 Employment

1. This is the area which would be most affected by the deactivation, as there would be 793 military and civilian personnel involved. Of these, 520 are members of the 6594th Test Group, and 273 are members of the 15th ABW. There are 504 military and 16 civilian personnel in the 6594th, and there are 77 military and 196 civilian personnel in the affected 15th ABW support group. Most of the civilians are in aircraft maintenance at the WG-10 level.

2. The primary employment effects are related to the civilian personnel of the 6594th Test Group and the 15th ABW support group. Fifty-nine civilians of the 15 the ABW personnel will be subject to mandatory separations. Of all the civilians in both groups, 79 will be changed to a lower grade, and 72 will be reassigned, some at Hickam and others at Wheeler and Bellows Air Force Base.

3. Although insignificant in number relative to the City/County of Honolulu total civilian employment of 368,300, the 59 civilians subject to mandatory separation would, nonetheless, be unemployed. These 59 civilian jobs are part of 31,100 (1985) Federal government jobs in the City/County of Honolulu. The population, employment, and economic projections for the City/County of Honolulu and the Sate of Hawaii are shown on Tables 2-2 and 2-3.

4. An indication of the relative importance of Federal employment to the Honolulu economy is that the City/County of Honolulu accounts for 77% of Hawaii's population, 81% of the state's jobs, and 96% of Federal government employment. Also, Tables 2-2 and 2-3 indicate that all armed forces employment occurs within the City/County of Honolulu.

5. The loss of about 500 military jobs will represent >1 % of military employment for the City/County of Honolulu. This will not be significant for the military personnel involved, as they will still have jobs, but will be relocated to other military installations outside of Hawaii.

TABLE 2-2

CITY/COUNTY OF HONOLULU
POPULATION, EMPLOYMENT, AND ECONOMIC PROJECTIONS
1980-2005

CITY/COUNTY OF HONOLULU	1980 (est.)	1985	1990	1995	2000	2005
Resident population (000)	765.0	815.3	859.3	896.9	925.7	954.5
Total jobs (000)	411.7	426.7	452.4	475.9	493.3	506.8
Armed forces	58.4	58.4	58.4	58.4	58.4	58.4
Civilian jobs	353.3	368.3	394.0	417.5	434.9	448.4
Self-employed	18.8	20.6	21.8	22.9	23.7	24.5
Wage and salary jobs by sector						
Agriculture	3.8	2.6	2.4	2.2	2.1	2.0
Manufacturing	17.5	16.8	17.0	17.2	17.3	17.2
Construction	19.5	16.8	18.2	19.7	20.8	21.7
Transportation, communication, and utilities	25.7	26.2	28.4	30.0	31.0	31.2
Trade (except eating and drinking)	59.0	62.5	69.0	75.1	80.1	84.2
Eating and drinking places	28.6	31.5	33.3	34.9	35.4	35.5
Finance, insurance, and real estate	27.0	28.5	30.6	32.4	33.8	34.9
Hotels	15.2	15.1	16.2	16.8	17.0	17.1
Other services	62.6	68.7	75.0	81.1	85.8	89.4
State and local government	46.7	47.9	50.3	52.6	54.5	56.5
Federal government*	28.9	31.1	31.8	32.6	33.3	34.1
Personal income (millions of 1980 dollars)	$8,107.0	$8,900.7	$10,123.8	$11,398.6	$12,655.6	$13,943.3
Per capita personal income (1980 dollars)	$10,599	$10,917	$11,781	$12,709	$13,671	$14,608

*Includes civilian employees of the armed forces.
Source: Department of Planning and Economic Development 1984.

TABLE 2-3

STATE OF HAWAII
LABOR FORCE AND JOB PROJECTIONS
1980-2005
(000)

STATE OF HAWAII	1980 (est.)	1985	1990	1995	2000	2005
Civilian labor force	439.0	488.4	533.4	575.6	607.9	627.7
Persons employed	417.0	461.5	503.9	544.2	574.7	593.7
Total jobs	499.5	529.0	572.3	613.4	644.5	663.9
Armed Forces	58.4	58.4	58.4	58.4	58.4	58.4
Civilian jobs	441.1	470.6	513.8	554.9	586.1	605.4
Self-employed	28.9	32.0	34.9	37.7	39.8	41.1
Wage and salary jobs by sector	412.2	438.6	478.9	517.3	546.3	564.3
Agriculture	11.5	11.0	11.1	10.6	10.2	9.8
Food processing	11.5	11.1	11.0	10.8	10.5	10.3
Miscellaneous manufacturing	12.2	11.7	12.1	12.6	12.9	13.1
Construction	24.1	21.2	23.4	25.8	27.7	28.9
Transportation, communication, and utilities	30.9	32.1	35.5	38.3	40.2	40.6
Trade (except eating and drinking)	71.0	76.3	85.6	94.9	102.1	108.2
Eating and drinking places	34.5	39.1	43.6	47.8	50.6	51.9
Finance, insurance, and real estate	31.1	33.7	36.8	39.7	41.9	43.5
Hotels	24.8	28.3	31.8	35.0	36.9	37.1
Other services	71.7	79.9	88.4	96.8	103.5	108.0
State and local government	59.0	62.0	66.6	71.1	74.6	77.4
Federal government*	30.0	32.3	33.1	33.9	34.7	35.4

*Includes civilian employees of the armed forces.
Source: Department of Planning and Economic Development 1984.

2.2.1.2 Economics

1. The most recent available information indicates that there were $1.3 billion in defense expenditures in Hawaii in 1980. These expenditures are estimated to have generated $1.6 billion in household income. This results in a multiplier of about $1.2 in total household income for every $1 of defense expenditure.

2. The total annual economic impact (TEI) of Hickam Air Force Base on its Region of Influence (ROI) is $695.5 million (FY 1985), based on various factors, including 7,096 paid military and civilian personnel, a total annual permanent party active duty military income (Mp) of $159.5 million (30% of the TEI), and $54.7 million annual civilian income. An indication of the number and type of personnel generating this income is shown on Table 2-4.

3. The proposed deactivation of the 6594th Test Group will decrease the number of active duty personnel by about 500, more that 10%, and the number of civilian personnel by 100 (assumed), about 5%. The Mp would decrease an estimated $16.5 million to about $143 million. The total annual civilian income would decrease an estimated $2.7 million, to about $51.9 million. There would be an estimated overall decrease in TEI of about 3%, or approximately $23.9 million to about $671.6 million.

4. There may also be a decrease in economic activity at Hickam Air Force Base (HAFB) as a result of reassignments and separations. The 500 military members of the 659th Test Group and 15th ABW who would depart Hawaii as a result of the deactivation represent 10% of the 5,170 military personnel stationed at HAFB. Therefore, the loss of their purchasing power could decreases base retail and commissary sales by 10%, from $78.9 million (FY 1985), to about $71 million after deactivation.

5. An indication of income which may be lost due to deactivation is shown on Table 2-5, State of Hawaii Income Projections. If 559 military and civilian personnel depart Hawaii or are separated, there could be an estimated loss of about $12.4 million in income (see Appendix A).

6. Given the status of the military in the State and local economic systems, loss of the 559 jobs (500 military departing Hawaii plus 59 civilian mandatory separations) may be noticed locally. This would occur particularly with commercial establishments which rely on the military, such as those in the vicinity of HAFB.

TABLE 2-4

USAF PERSONNL
15 ABW AND SUPPORTED UNITS LOCATED IN HAWAII

Assigned Strength	Military	Civilian (U.S. Civil Service)	Total
Hickam AFB (15 ABW)	1,891	1,137	3,028
Supported Units	3,279	789	4,068
TOTAL	5,170	1,926	7,096
Other 15 ABW Located in Hawaii*			
15 ABW	245	32	277
Supported Units	1,316	103	1,419
	1,561	135	1,696
Total 15 ABW	2,136	1,169	3,305
Total Supported Units	4,595	892	5,487
TOTAL	6,731	2,061	8,792

*Wheeler AFB, Bellow AFS, Other.
Source: Hickam AFB 1985.

TABLE 2-5

STATE OF HAWAII

INCOME PROJECTIONS

1980 – 2005

Year	Gross state product (millions)	Personal income (millions)	Disposal personal income (millions)	Per capita personal income (dollars)	City/County of Honolulu per capita income (1980 dollars)
1980 (est.)…	$11,336.2	$ 9,862.0	$ 8,385.0	$ 10,188	$ 10,599
1985 ……	12,106.4	11,127.8	9,514.3	10,520	10,917
1990 ……	14,061.8	12,896.3	11,026.3	11,328	11,781
1995 ……	16,192.3	14,774.3	12,632.0	12,195	12,709
2000 ……	18,264.4	16,611.9	14,203.1	13,103	13,671
2005 ……	20,180.8	18,336.8	15,678.0	13,998	14,608

Source: Department of Planning and Economic Development 1984.

2.2.1.3 Housing

1. Of the 500 military personnel of the 6594th Test Group and 15 ABW who will be departing Hawaii, 181 are living on-base in family quarters, and the rest are living in off-base housing. Therefore, as a result of the deactivation, an estimated 319 housing units in the vicinity of HAFB will be vacated.

2.2.2 TRAFFIC

2.2.2.1 Vehicular

1. Deactivation of the 6594th would mean that 570 military and civilian Air Force personnel will depart Hawaii or be reassigned. With all of the civilian and 319 of the affected military personnel living off-base, there will be an estimated decrease in commuter traffic to HAFB of about 389 vehicles.

2. There are more than 500,000 registered vehicles on the Island of Oahu, an area of 589 square miles with 200 miles of State highways. The effects of decreased traffic associated with deactivation of the 6594th will occur primarily along H-1, one of Hawaii's three interstate highways being built to link the state's strategic military bases through a network of modern interconnecting, high-speed highways (51.2 miles when completed). The H-1 links Pearl Harbor and Hickam Air Force Base with Barbers Point Naval Air Station and the other two interstate freeways (H-2, H-3).

3. Traffic effects resulting from deactivation will occur primarily along segments of H-1 which are among the busiest in the State of Hawaii, due to commuter, airport, and military traffic. Maximum traffic in the vicinity occurs at two stations (4-6-P, H-6-Q) located to the south and north of the Pearl Harbor Interchange, with 24-hour volumes of about 67,000 and peak morning volumes of about 7,000 (see Table 2-6, Selected Traffic Volumes in Vicinity of Hickam AFB). Effects of the deactivation will not be significant.

4. The area of least traffic in the likely affected area is along Kamehameha Highway at the Makalapa Gate, where 24-hour volumes are about 18,500, and peak a.m. traffic is about 1,500 (Station 5-B, Table 2-6). As a worst case, if all of the potential vehicles were to access

TABLE 2-6

SELECTED TRAFFIC VOLUMES
IN VICINITY OF HICKAM AFB

STATION NUMBER	LOCATION	NUMBER OF VEHICLES		
		PEAK-HOUR		24-HOUR TOTAL
		AM	PM	
1. 3-C	Kamehameha and Nimitz Highways at Elliot Street	7:00-8:00 2,155	3:30-4:30 2,359	26,074
2. H-6-P	H-1 Freeway at Elliot Street (between Airport [Keehi] Interchange and Pearl Harbor Interchange)	6:30-7:30 6,906	3:30-4:30 5,867	67,412
3. C-5-N	Nimitz Highway (600' southeast of Center Drive - east leg)	6:00-7:00 3,222	3:30-4:30 3,898	23,996
4. 5-B	Kamehameha Highway at Redford Drive (Makalapa Gate – inbound/outbound)	11:00-12:00 1,532	3:30-4:30 1,707	18,485
5. H-6-Q	H-1 Freeway (1.0 mile southwest of Aiea on-ramp-total volumes)	6:45-7:45 7,232	3:30-4:30 6,685	67,058

Source: State of Hawaii Department of Transportation 1984.

HAFB from the north, via the Kamehameha Highway and Redford Drive (Makalapa Gate) during peak a.m. traffic, their contribution would be 389 of 1,532, or 25%. Or, if all affected vehicles were to access HAFB from the south, via the intersection of the Kamehameha and Nimitz Highways at Elliott Street, they would account for 18% of the 2,155 vehicles. However, neither of these scenarios would likely occur. The mission and assigned duties of the civilian and military personnel associated with the 6594th resulted in work schedules which were irregular, as were contributions to the local traffic mix.

5. There will be some secondary decreases in traffic, primarily associated with decreased deliveries of goods an supplies, due to the estimated 8% decrease in the number of base personnel and 25% decrease in HAFB aircraft operations (see Section 2.2.2.2). This secondary effect may be noticeable on base, but not within the Honolulu-Pearl City area, given the existing traffic volumes.

2.2.2.2 Aircraft

1. There will be some decrease in local air traffic resulting from the deactivation. There will be an approximate 25% decrease in the number of sorties flown out of HAFB, from 11,150 to 8,350. Over a 365-day year, this is a mathematical decrease from 30.5 to 22.8 flights daily, which may represent a noticeable decrease in base flight operations (see Table 2-7, Flying Hours/Sorties-FY 1985).

2. Hickam Air Force Base is adjacent to Honolulu International Airport (HIA) which has about 85 flights out on a daily basis, an average of one flight every 17 minutes. Together, HAFB and HIA will account for about 115 daily flights before deactivation and about 108 daily flights after deactivation, a decrease of about 10%. As a contributor to total local air traffic, which also includes air operations at Barbers Point, the operational decrease at HAFB may be noticed by air traffic controller personnel, but is not likely to be significant.

2.2.3 AIR QUALITY

1. Prior to February 1971, ambient air quality monitoring was performed on a continuing basis at only one site in the State of Hawaii. Since that time, the air quality monitoring network has been expanded to include 11 sites throughout the State. Three of these stations, Pearl

TABLE 2-7

FLYING HOURS/SORTIES – FY 1985
15 ABW
HICKAM AIR FORCE BASE

TYPE AIRCRAFT	FLYING HOURS*	SORTIES FLOWN*
C-135C	1,300	270
EC-135J	2,000	400
T-33A	2,100	1,500
OV-10A	5,500	2,300
C-130B**	3,600	1,200
HC-130H**	1,400	500
HC-130P**	1,100	400
HH-53C**	2,200	700
F-4C	3,800	3,500
C-130A	320	380
TOTAL	23,320	11,150
6594th Aircraft	8,300	2,800
6594th Percent of Total	36%	25%

*Numbers are approximate.
**6594th TG A/C.
Source: Hickam AFB 1985.

City, Sand Island, and Kalihi Kai, are the closest to Hickam Air Force Base (see Table 2-8, Air Quality Monitoring Sites and Summary of Pollutants Sampled, and Figure 2-2, Air Sampling Stations, Oahu, Hawaii).

2. There are limited data available; Kalihi Kai (#4) was discontinued as of January 1, 1984, and the other two stations monitor only particulates, photochemical oxidants, or sulfur dioxide (SO_2). Results of this monitoring indicate that, for the pollutants sampled between January 1982 and December 1984, emissions were mostly within the limits of State and Federal standards. The State standard for particulate matter was exceeded one time at Kalihi Kai, and the State standard for ozone was exceeded five times at Sand Island. No Federal standard was exceeded during that time (see Table 2-9, Federal, Primary, and State Air Quality Standards Exceeded: Number of Times and Locations).

3. Deactivation will likely result in some decrease in vehicular and aircraft emissions. It is unlikely that any effects would be measurable, given the extent of other vehicular and aircraft activity in the vicinity of HAFB.

2.2.4 NOISE

1. There will be an incremental decrease in both vehicular and aircraft noise attributable to deactivation of the 6594th Test Group. However, this is not likely to be noticeable, given the relatively small contribution of vehicular traffic associated with the 6594th to the total vehicle mix. Also, vehicular noise apparently is not of great public concern, based on noise complaints made to the Department of Health (DOH). During the eight-month period of January through August 1985, DOH received 262 complaints of excessive noise. Of these, 185 (70%) were related to construction, stationary equipment, and refuse collection, while only 14 (5%) were related to vehicular noise. Other areas which generated more complaints than vehicular noise were animals and liquor establishments.

2. If each of the affected military personnel has a registered vehicle, the contribution of the 6594th deactivation could be to reduce the number of registered vehicles by 500, a decrease of 0.1%. The decrease in noise due to 500 fewer vehicles is not likely to be noticeable, given the background noise generated by the high traffic volumes in the area.

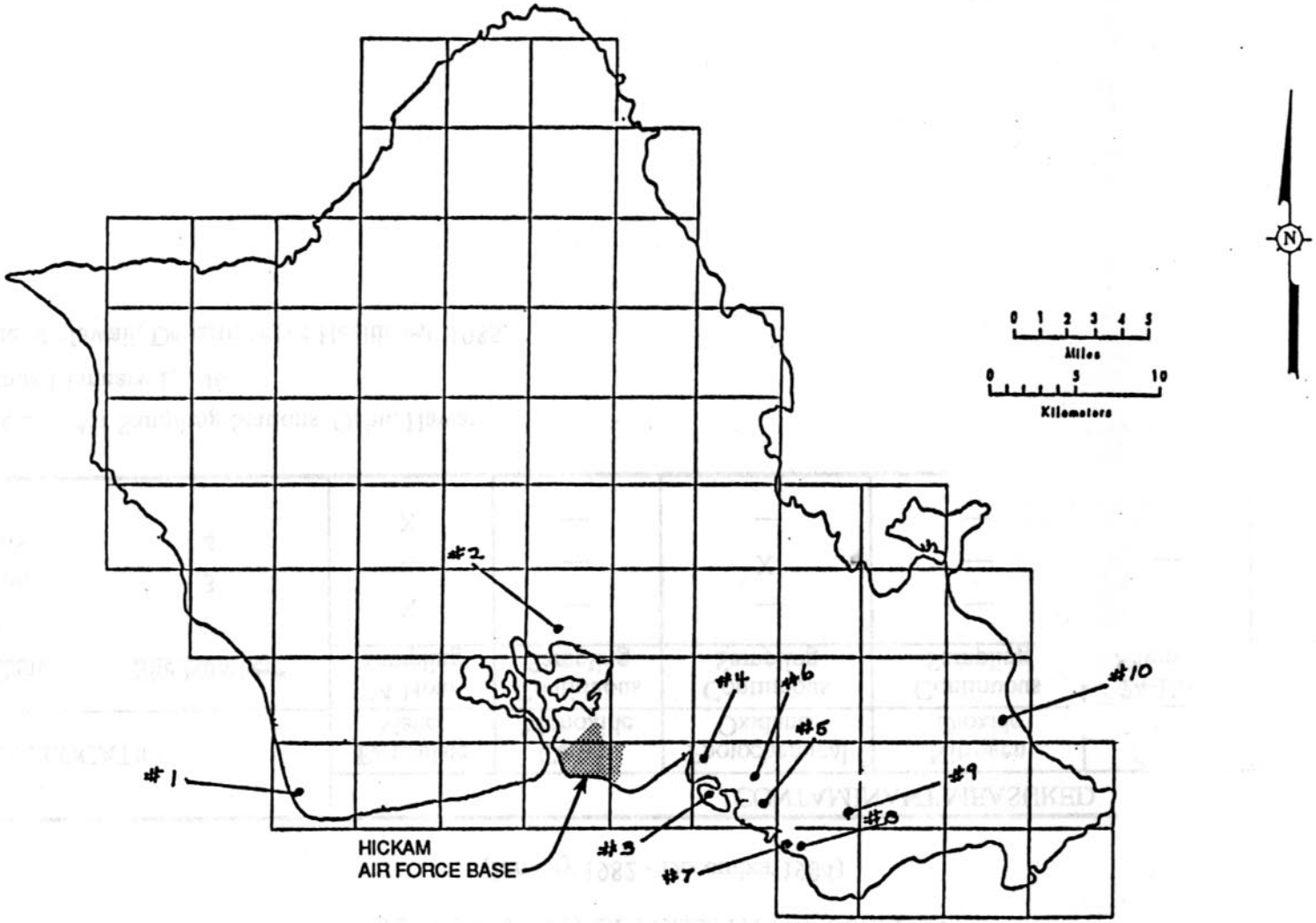
TABLE 2-8

AIR QUALITY MONITORING SITES
AND SUMMARY OF POLLUTANTS SAMPLED

(January 1982 - December 1984)

SITE LOCATION		CONTAMINATED MEASURED					
		Particular Matter	Carbon Monoxide	Photochemical Oxidants	Nitrogen Dioxide	Sulfur Dioxide	Lead
Island of Oahu	Site Number*	24-Hour Sampling	Continuous Sampling	Continuous Sampling	Continuous Sampling	24-Hour Sampling	24-Hour Sampling
Pearl City	2	X	–	–	–	X	–
Sand Island	3	–	–	X	–	–	–
Kalihi Kai**	4	X	–	–	–	X	–

* See Figure 2-2, Air Sampling Stations, Oahu, Hawaii.
** Discontinued January 1, 1984.
Source: State of Hawaii, Department of Health, est. 1985.



6594th TEST GROUP DEACTIVATION

AIR SAMPLING STATIONS
OAHU, HAWAII

FIGURE 2-2

TABLE 2-9

FEDERAL, PRIMARY, AND STATE AIR QUALITY STANDARDS EXCEEDED
NUMBER OF TIMES AND LOCATIONS

(January 1982 – December 1984)

	Pearl City, Oahu	Sand Island, Oahu	Kalihi Kai, Oahu**
CARBON MONOXIDE (1-Hr. Standard)			
1. No. of samples	NS*	NS	NS
2. No. of times Federal standard exceeded	NS	NS	NS
3. No. of times State standard exceeded	NS	NS	NS
PARTICULATE MATTER (24-Hr. Standard)			
1. No. of samples	164	NS	94
2. No. of times Federal standard exceeded	0	NS	0
3. No. of times State standard exceeded	0	NS	1
SULFUR OXIDES (24-Hr. Standard)			
1. No. of samples	135	NS	46
2. No. of times Federal standard exceeded	0	NS	0
3. No. of times State standard exceeded	0	NS	0
OZONE (1-Hr. Standard)			
1. No. of samples	NS	979	NS
2. No. of times Federal standard exceeded	NS	0	NS
3. No. of times State standard exceeded	NS	5	NS

*NS — That pollutant is not sampled at that site.
** Discontinued January 1, 1984.
Source: State of Hawaii, Department of Health, est. 1985.

3. The contribution of air traffic associated with the 6594th to the total aircraft mix in the vicinity of Honolulu International Airport is such that the resultant decreased noise is not likely to be discernible.

2.3 NO ACTION ALTERNATIVE

1. This alternative would involve maintaining the 6594th Test Group personnel, aircraft, and equipment plus the 15 ABW military support personnel at Hickam Air Force Base. The aircraft would be maintained in their present configuration.

2. There will no longer be the function of or reference to the 6594th in Space Division and Air Force Satellite Control Facility Missions in that region. Therefore, there would be no military use for the aircraft, given their present configuration and instrumentation. Some of the aircraft would still be suitable for rescue functions and Coast Guard Assistance. However, maintaining Air Force personnel and equipment for such activity is unlikely to represent their most cost-effective use.

3. Therefore, for military and economic reasons, the No Action Alternative is not feasible.

3.0 UNAVOIDABLE ADVERSE EFFECTS AND MITIGATION MEASURES

3.1 INTRODUCTION

1. Most effects of the proposed deactivation of the 6594th Test Group will be either non-significant or positive. However, the elimination of 59 civilian jobs will incremently, but adversely, affect total employment opportunities within the City/County of Honolulu. Therefore, the Air Force will participate in efforts to re-employ those affected persons, some of whom are highly skilled, trained in sophisticated technology, with security clearances.

2. Other potential environmental effects on housing, air quality, and noise will be negligible. Therefore, they are not addressed in this section.

3.2 EMPLOYMENT

1. The 59 separated Civil Service personnel will be registered in a computerized, system-wide Priority Placement Program available to all of the U.S. Military Services and Department of Defense installations. They also will be registered in the Air Force Central Skills Bank. The assistance of federal departments and agencies will be solicited. These 59 persons will be registered with agencies such as the Department of Labor and the Hawaii Office of Employment Security.

2. Additionally, assistance will be offered by the 15th ABW civilian personnel office. This will include attempts to identify other, appropriate employment at Hickam Air Force Base, other Air Force installations in Hawaii, or elsewhere within the Air Force system. The desirability of re-training for other positions which utilize similar skills, knowledge, and training also will be pursued. Also, the other military installations on Oahu and other Hawaiian islands will be notified of the separation of these 59 civilian personnel and of their training and qualifications.

3. Certain private contractors, who require highly trained personnel with special qualifications, will be notified by Air Force placement personnel. This includes contractors on the mainland, as well as Oahu. Positions for aircraft maintenance personnel may be available elsewhere on base or within the Air Force system, at one of the several other military installations on Oahu, or at Honolulu International Airport.

4. Each of the 16 civilian members of the 6594th Test Group will be notified of the deactivation schedule at least three months prior to the last day of employment. This will enable those being displaced to purposefully seek other employment, knowing when they will be available to report to new jobs.

5. Other efforts being made by the Air Force include attempts to reduce the total number of mandatory separations and reductions to lower grade classifications. To the extent these reductions can be achieved, they will mitigate the direct adverse employment effects of deactivation.

3.3 ECONOMICS

1. It is anticipated that deactivation would result in $23.9 million lost to the local economy, based upon the total economic impact of HAFB. Additionally, this will include losses from the reduction in Air Force purchases relative to maintenance of the personnel, aircraft, and other equipment associated with the 6594th Test Group. There will also be some loss in state income tax revenues. These adverse effects are unavoidable.

2. The adverse effects would, however, be mitigated to the extent that other Air Force personnel and aircraft were assigned to HAFB subsequent to deactivation of the 6594th. Should such action occur, the extent of mitigation would depend primarily upon the number of new personnel and aircraft who would be assigned. The timing of such assignment might also affect final disposition of 15th ABW support personnel. There are, however, no plans to bring new personnel into Hawaii at this time.

3. Reductions in the total number of mandatory separations and lower grade classifications would also mitigate the associated economic effects, including a lack of income and, therefore, purchasing power of those who are separated.

4. Adverse economic impacts would be offset by reassigning personnel to other military installations on Oahu and/or elsewhere in Hawaii.

4.0 PESONS AND ORGANIZATIONS CONTACTED

- Airport Operations Office
  Honolulu International Airport
  Honolulu, Hawaii

- State of Hawaii
  Department of Planning and Economic Development
  Office of Planning and Population
  250 S. King Street
  Honolulu, Hawaii

- 15 ABW Civilian Personnel, Mr. Bigmy, Chief
  Hickam AFB, Hawaii

- 15 ABW Military Personnel, Capt. Norwood
  Hickam AFB, Hawaii

- 6594th Test GP/RM, Capt. Dowling
  Hickam AFB, Hawaii

- Office of Environmental Quality Control
  465 S. King Street, #115
  Honolulu, Hawaii 96813

- 15 ABW/DEEV
  Gaylord Higa
  Hickam AFB, Hawaii 96853

- Department of Health
  Pollution Investigation and Enforcement Branch
  645 Hale Kauwila Street
  Honolulu, Hawaii

- Art Bauckaham
  Department of Health
  Environmental Protection and Health Services Division
  645 Hale Kauwila Street
  Honolulu, Hawaii

- Kenneth Miyazono
  Hawaii State Department of Transportation
  Planning Traffic Division
  600 Kapiolani Boulevard, #304
  Honolulu, Hawaii

- Department of Planning and Economic Development
  Research and Economic Analysis Division
  P.O. Box 2359
  Honolulu, Hawaii 96804

5.0 BIBLIOGRAPHY

Air Force Engineering and Services Center 1980. The Implications of Alternative Aviation Fuels on Airbase Air Quality. Final Report, November 1977 – August 1980. Engineering and Services Laboratory, AFESC, Tyndall Air Force Base, Florida 32403 (August).

Air Force Engineering and Services Center 1985. Aircraft Emissions Estimator. Final Report, January 1983 – September 1985. Engineering and Services Laboratory, AFESC, Tyndall Air Force Base, Florida 32403 (November).

Department of the Navy 1979. Environmental Impact Statement: Military Use of Kahoolawe Training Area, Hawaiian Archipelago. Prepared by Environment Impact Study Corp., Honolulu, Hawaii (September).

Hickam AFB 1985. Hickam Air Force Base Economic Resource Impact Statement FY 1985. Prepared by Cost and Management Analysis Branch, Comptroller Division, Hawaii.

Keith, K. M. 1985. Jobs for Hawaii's People: Fundamental Issues in Economic Development. Department of Planning and Economic Development. By K. M. Keith, Director of Planning and Economic Development (July).

Legislative Reference Bureau/State of Hawaii 1979. Preserving the Quality of Life in Hawaii: A Strategy for Population Growth Control. C. Kugisaki, Researcher, assisted by C.K. Hetherington, M. C. Davis. Report No. 2, 1979.

Office of Environmental Quality Control 1986. Hawaii's Environment 1985. Annual report of the Environmental council, Honolulu, Hawaii.

Renaud, B. M. 1973. Population Dynamics in Hawaii. Economic Research Center, University of Hawaii, Honolulu, Hawaii, with the research assistance of Tu Doc Pham (January).

State of Hawaii, Department of Health 1985 (est.). Hawaii Air Quality Data for the Period of January 1982 – December 1984. Environmental Protection and Health Services Division, Staff Services.

State of Hawaii, Department of Planning and Economic Development 1984. Hawaii Population and Economic Projection and Simulation Model, Updated State and County Forecasts. Prepared by the Research and Economic Analysis Division (July).

State of Hawaii, Department of Planning and Economic Development 1984. Population and Economic Projections for the State of Hawaii 1980 – 2005. Research and Economic Analysis Division (July).

State of Hawaii, Department of Planning and Economic Development 1985. The State of Hawaii Data Book 1985: A Statistical Abstract (November).

State of Hawaii, Department of Transportation, Highways Division 1984. Traffic Survey Data (individual stations), Island of Oahu. Prepared by the Traffic Branch, in cooperation with the U.S. Department of Transportation, Federal Highway Administration.

State of Hawaii, Department of Transportation 1986. "H-1 Is Pau After 34 Years." The Honolulu Advertiser, Friday, May 30, 1986.

U.S. Department of Houseing and Urban Development 1978. Carrying Capacity Action Research: A Case Study in Selective Growth Management, Oahu, Hawaii. Prepared by the State of Hawaii Department of Planning and Economic Development, Contract No. H-2554, for the Office of Policy Development and Research.

APPENDIX A

METHODOLOGY FOR COMPUTING DIRECT LOSSES OF PER CAPTA INCOME DUE TO DEACTIVATION OF 6594TH TEST GROUP

APPENDIX A

METHODOLOGY FOR COMPUTING
DIRECT LOSSES OF PER CAPITA INCOME
DUE TO DEACTIVATION OF 6594TH TEST GROUP

Military personnel departing Hawaii	-	500
Civilian personnel receiving mandatory separations	-	59
TOTAL		559

Population = 559 x 2 = 1,118

Per capita income (1985, City/County of Honolulu) = $10,917

Population (1,118) x Per capita income ($10,917) = $12,205,206

Notes:

1. The per capita income fro the City/County of Honolulu is consistently about 4% above that for the state as a whole.

2. These results underestimate the economic impact when compared to military economic methodologies (see Hickam AFB, Hawaii, Economic Resource Impact Statement, FY 1985).