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NAS FORT WORTH
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ENVIRONMENTAL ASSESSMENT INSTALLATION RESTORATION FOR FIRE TRAINING PIT
NAS FORT WORTH TX
4/1/1991
HEADQUARTERS STRATEGIC AIR COMMAND



**NAVAL AIR STATION
FORT WORTH JRB
CARSWELL FIELD
TEXAS**

**ADMINISTRATIVE RECORD
COVER SHEET**

AR File Number ~~17G~~ 70

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D.B. 17A-23
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ENVIRONMENTAL ASSESSMENT
IRP REMEDIATION, FDTA #2 (FIRE TRAINING PIT)
PROJECT 91-4005
AT
CARSWELL AIR FORCE BASE, TEXAS

APRIL 1991

DEPARTMENT OF THE AIR FORCE
STRATEGIC AIR COMMAND

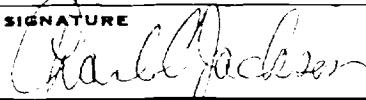
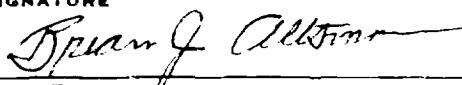
REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS		FOR ENVIRONMENTAL PLANNING USE ONLY
I REQUEST		
1. TO: (Environmental Planning Function) 7 CSG/DEEV	2. FROM: (Organization and Office Symbol) 7CSG/DEEV	3. CONTROL NUMBER
5. REQUESTOR (Name, Office Symbol and Phone No.) Mr Frank Grey, DEEV, ext 6265		4. ESTIMATED COMP DATE
6. TYPE OF ANALYSIS NEEDED		
<input type="checkbox"/> CATEX DETERMINATION	<input type="checkbox"/> PRELIMINARY ENVIRONMENTAL SURVEY	<input checked="" type="checkbox"/> ENVIRONMENTAL ASSESSMENT
7. TITLE OF PROPOSED ACTION IRP Remediation, FDTA #2 (Fire Training Pit) Project 91-4005		
II PROPOSED ACTION AND ALTERNATIVES		
8. PURPOSE OF AND NEED FOR ACTION (Continued on Sheets)		
<p>Fire training site is receiving petroleum hydrocarbon and heavy metal contamination as a result of fire training exercises. Contaminated soil must be removed to meet compliance of Texas Environmental Regulations.</p>		
9. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Continued on Sheets)		
<p>Proposed Action: Excavate contaminated soil, place low density clay cap over area. This action will prevent the groundwater from hydrocarbon contamination.</p> <p>Alternative 1: Install vapor extraction, which is not a good option since some contaminants may continue to migrate to ground water.</p> <p>Alternative 2: Cap entire area, which is not a good option since the contaminated soil must be properly disposed.</p> <p>Alternative 3: No action. This alternative is rejected since action must be taken to comply with state regulations.</p>		
10. ORGANIZATIONAL APPROVAL (Name and Grade of Commander)	SIGNATURE	DATE
CHARLES A. JACKSON, Colonel, USAF		5 Jun 91
III ENVIRONMENTAL PLANNING RESPONSE		
11. RESPONSES ATTACHED		
<input checked="" type="checkbox"/> Preliminary Environmental survey (AF Form 814) attached		
<input type="checkbox"/> Proposed action qualified for Catex (Appropriate Documentation attached)		
<input type="checkbox"/> Proposed action does not qualify for Catex, assessment required		
12. REMARKS		
13. ENVIRONMENTAL PLANNER CERTIFICATION (Name and Grade)	SIGNATURE	DATE
BRIAN J. ALTSBACH, Capt, USAF		25 May 91
14. ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (Name and Grade)	SIGNATURE	DATE
RICHARD CLAPPANSETT, Colonel, USAF		10 JUN 1991

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LIST OF ACRONYMS AND ABBREVIATIONS

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AFB	AIR FORCE BASE
AFR	AIR FORCE REGULATION
CAFB	CARSWELL AIR FORCE BASE
CEQ	COUNCIL ON ENVIRONMENTAL QUALITY
EA	ENVIRONMENTAL ASSESSMENT
EIS	ENVIRONMENTAL IMPACT STATEMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
FONSI	FINDING OF NO SIGNIFICANT IMPACT
IRP	INSTALLATION RESTORATION PROGRAM
NCTCOG	NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS
NEPA	NATIONAL ENVIRONMENTAL POLICY ACT
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
SIP	STATE IMPLEMENTATION PLAN
TX	TEXAS
USDA	UNITED STATES DEPARTMENT OF AGRICULTURE

1.0 INTRODUCTION

This EA examines the excavation of contaminated soil at the Fire Department Training Area (FDTA) site #2 per project 91-4005 and the potential consequences of this action on the physical, natural, and socioeconomic environments. The EA was prepared in compliance with AFR 19-2, NEPA, and CEQ regulations. Conclusions drawn from this EA shall result in either a FONSI, an EIS, or a decision to take no further action.

2.0 PURPOSE AND NEED

The fire training site is contaminated with hydrocarbon and heavy metal as a result of fire training exercises. Contaminated soil must be removed to meet compliance of Texas environmental regulations.

3.0 PROPOSED ACTION AND ALTERNATIVES

PROPOSED ACTION - Excavate contaminated soil, place low density clay cap over area. This action will prevent the ground water from hydrocarbon contamination.

ALTERNATIVE 1 - Install vapor extraction, which is not a good option since some contaminants may continue to migrate to ground water.

ALTERNATIVE 2 - Cap entire area, which is not a good option since the contaminated soil must be properly disposed.

ALTERNATIVE 3 - No action. This alternative is rejected since action must be taken to comply with state regulations.

CONCLUSION - As stated above, the best action is the proposed action.

4.1 Mission

The mission of the 7th Bombardment Wing (7 BMW) assigned at CAFB is to: (1) maintain assigned units in a state of readiness permitting immediate operations against adversaries of the United States; (2) train bombardment, air refueling crews, and support units to perform global bombardment operations; (3) be prepared to perform tasks assigned in current war orders and related operations orders; (4) implement maintenance and logistic procedures according to higher headquarters plans ensuring combat readiness of assigned units; (5) train and administer assigned reserve personnel and units; (6) participate in disaster relief and other domestic emergencies as required; and (7) perform special missions as directed.

4.2 History

The history of CAFB and the growth of Fort Worth as a national center for the aerospace industry have a mutual beginning dating back to the spring of 1940. At that time the Chamber of Commerce and other civic groups of Fort Worth contacted various aircraft companies, advising them of available sites in the area.

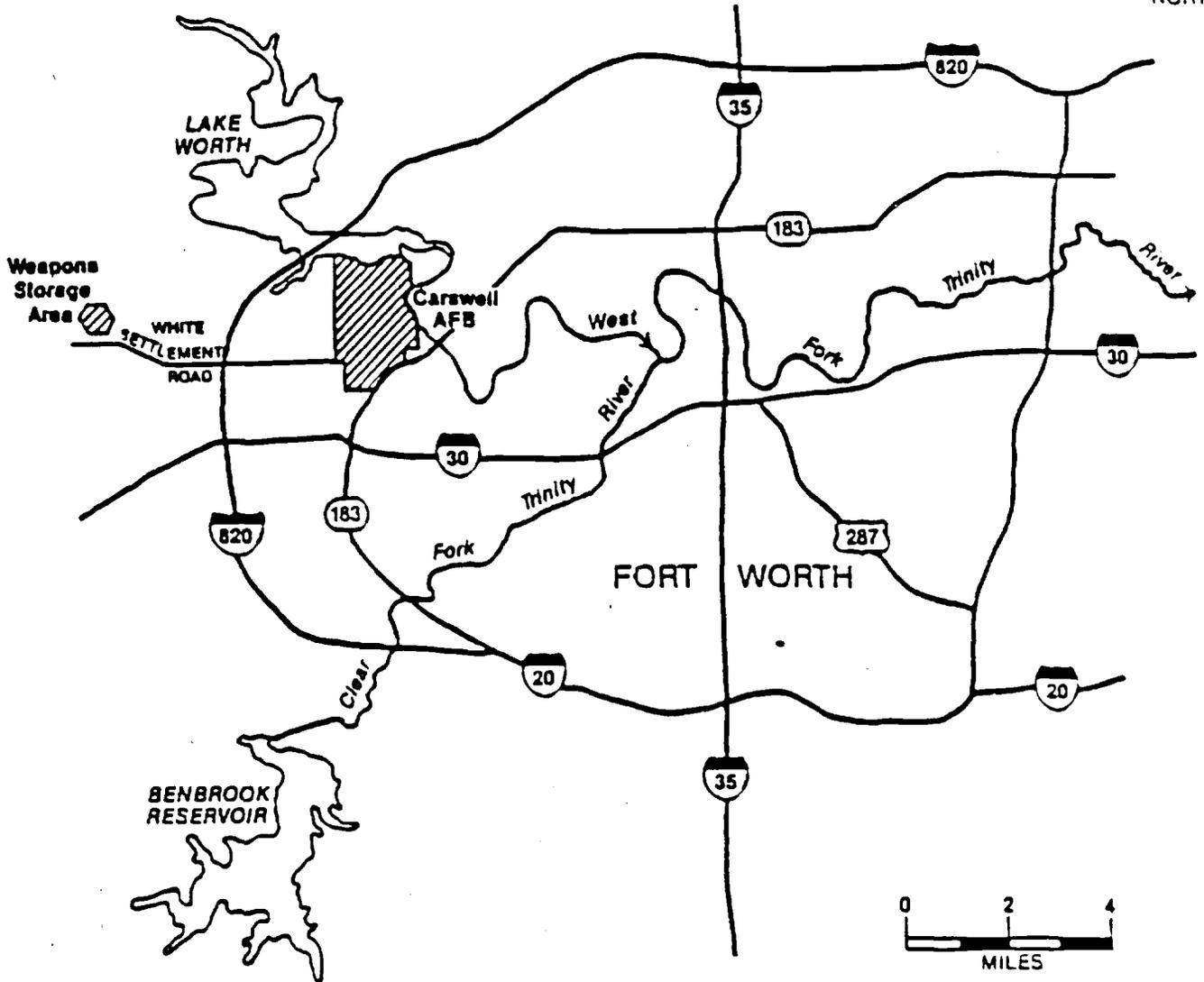
One of the first to reply was the Consolidated Vultee Aircraft Corporation which was interested in an inland site. Six months later, the War Department authorized the company to build a plant for manufacturing B-24 bombers. From a bomber assembly plant with a modest dirt runway, the area has grown into a venerable air power complex. It became the livelihood of thousands of Fort Worth residents as bigger bombers and more sophisticated designs and systems followed. Today it is known as General Dynamics/Fort Worth Division, builders of the swept-wing F-111 and F-16 aircraft.

The initial mission of the base was to provide transition training for the B-24 heavy bombers and it has served as a heavy bomber base ever since. CAFB's current host unit is a descendant of one of 45 bomb groups equipped with the B-24 Liberator. The 7th Bomb Group flew legions of the four-engined bombers throughout the China-Burma-India theater in World War II. When the Strategic Air Command (SAC) assumed control of the installation on 21 March 1946, the first assigned aircraft was the B-29. In June 1948, the first B-36 arrived, and ten years later CAFB became home base for the B-52s and KC-135s which are still assigned. In 1958 it became the test base for the B-58, then the FB-111 in 1968.

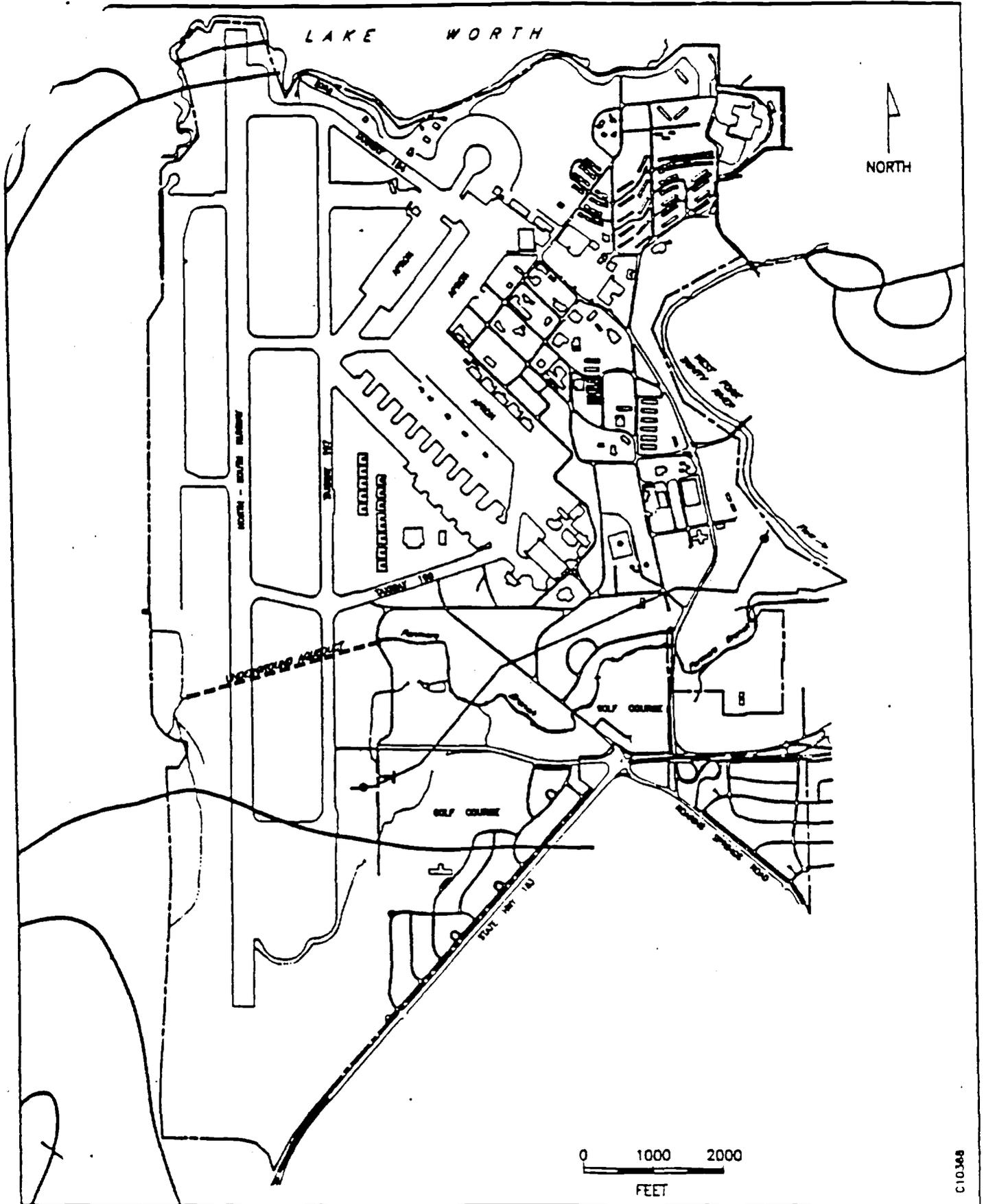
In January 1985, CAFB received its first Air Launched Cruise Missile and then in July 1985, the wing received its first Cruise Missile Integration B-52H bomber as part of the B-52 conversion program.

4.3 Physical Setting

CAFB is located in north-central Texas in Tarrant County, six miles west of downtown Fort Worth. The base is bordered by Lake Worth to the north, the West Fork of the Trinity River and the community of Westworth Village to the east and southeast, the community of White Settlement to the south and southwest, and Air Force Plant 4 to the west. The majority of Carswell AFB is located within the Grand Prairie section of the Central Lowlands Physiographic Province. This area is characterized by broad terrace surfaces sloping gently eastward, interrupted by westward-facing escarpments. The topography of the base is fairly flat except for areas near Farmers Branch Creek and the Trinity River. The land is typically grass covered and treeless, except for isolated stands of upland timber. The northwestern part of CAFB is within the Western Cross Timbers Physiographic Province that is characterized by rolling topography and a heavy growth of post and blackjack oaks. See the regional map at page 4 and the base map at page 5.



Regional Setting of Carswell AFB, Texas



Map of Carswell AFB, Texas

4.4 Soils

The USDA Soil Conservation Service has identified four soil associations at CAFB. The soils range in thickness from 8-80 inches and are predominantly composed of clay loam. The surficial soils of the installation are nearly level to gently sloping clay soils of the Sanger-Purves-Slidell and Aledo-Bolar-Sanger Associations. In addition to the above, the clay soil of the Frio-Trinity Association and the loamy soil of the Bastsil-Silawa Association occur on the floodplain and stream terraces of the West Fork of the Trinity River. See the soils association map at page 7.

4.5 Vegetation

The area is mostly grass covered with a variety of species of trees. Forested areas occur primarily on lower land and along the banks of streams. Common native woody species include Oak, Elm, Pecan, Hackberry, and Sumac. Several non-native species such as catalpa and china-berry are common. High ground is dominated by native and cultivated grasses such as Little Bluestem, Indian Grass, Big Bluestem, Side Oats, Grains, and Buffalo Grass. None of the federally-listed endangered plant species for Texas are known to occur within 100 miles of Tarrant County. CAFB has never been surveyed to identify special interest on animal species.

4.6 Wildlife

Typical wildlife on the base include Black-Tail Jack Rabbits in the grassy areas along the runway. In addition, there are Cotton-Tail Rabbits, Gray Squirrels, and Opossums in the wooded areas. Common birds include Morning Doves, Meadowlarks, Grackels, and Starlings. Reported game fish include Black Bass, Sunfish, and Catfish, all of which can be found in Lake Worth, Farmers Branch, and one small pond at the base golf course. According to the United States Fish and Wildlife Service, there are no threatened or endangered species known to occur on CAFB. Only the Peregrine Falcon, Bald Eagle, and Whooping Crane are known to occasionally migrate through the area. No hunting occurs on or near the base. The installation is located outside the major flyways for migratory birds, therefore, relatively few waterfowl migrate through the area; the more common ducks being Mallard, Pintail, Golden Eyes, and Mergansers. The most common duck living along the lake is the Wood Duck.

4.7 Land Use

CAFB is surrounded by residential areas on the east side, commercial areas to the south, recreational (Lake Worth) on the north, and industrial areas to the west. The most intensive activities are the Air Force Plant Number 4 just west of the base and a regional shopping center just southeast of the runway. The areas impacted by CAFB's noise contours are very intensely developed and have been for years. There are still isolated areas capable of new development which would conform to existing land use activities.

4.8 Air Quality

Tarrant and Dallas Counties have developed a plan known as the "Corrective State Implementation Plan (SIP) Revision" which was submitted to the EPA by the State for the purpose of attainment of all federal air quality standards, including ozone. The Fort Worth-Dallas metroplex has been designated by the EPA as a non-attainment area for ozone. All other criteria pollutants are within established EPA standards, according to the NCTCOG. Based on this, the EPA has rescinded the threat of economic sanctions against Tarrant and Dallas Counties. CAFB is operating under a compliance agreement with the EPA for Volatile Organic Compound (VOC) emission from aircraft refueling operations; we are required under the agreement to submit a monthly emission inventory.

4.9 Water Resources

The water-bearing geologic formations located in the CAFB area may be divided into the following five hydrogeologic units, listed from the shallowest to deepest: (1) an upper perched-water zone occurring in the alluvial terrace deposits associated with the Trinity River; (2) an aquitard of predominantly dry limestone of the Goodland and Walnut Formations; (3) an aquifer in the Paluxy Sand; (4) an aquitard of relatively impermeable limestone in the Glen Rose Formation; and (5) an aquifer in the sandstone of the Twin Mountains Formation. Groundwater quality data for the alluvial deposits is not available, but various past and present activities at the base have the potential for affecting groundwater and are being addressed by the IRP now underway. Recharge to the Paluxy Aquifer occurs where the formation outcrops west of CAFB in the Air Force Plant Number 4 area and in the bed of Lake Worth. Regional groundwater flow is southeastward in direction but locally is more southerly. The lake represents a significant recharge point for the aquifer and creates a potentiometric high in its vicinity. The water quality of the Trinity River Basin is satisfactory. There are three stormwater discharge points on base that are subject to NPDES permits and are monitored. Discharge points exceed compliance criteria less than five percent of the time. Surface waters on the base are limited to Farmers Branch Creek in the extreme southern portion of the base and a few ponds on the base golf course. Potable water and sewage treatment are provided by the City of Fort Worth. No water treatment facilities exist on CAFB. All industrial wastewater is channeled through oil/water separators into either the sanitary or storm sewer system.

4.10 Cultural Resources

The Hospital Commander's house located at the golf course has been placed on the National Register of Historic Places. There are no other known historic or archaeological resources on CAFB. The base has been surveyed for historic properties by the Historic Preservation Council of Tarrant County. No archaeological survey has been conducted, however, a package is being prepared for submittal to the State Historical Preservation Office asking for a determination of archaeological significance.

4.11 Socioeconomics

In 1988, the City of Fort Worth had a population of 446,300 and a population density of 1,743 people per square mile. Tarrant County had a population of approximately 1.1 million. The economy of Fort Worth is highly diversified, being geared primarily toward manufacturing, agribusiness, and wholesale distribution. Total economic impact of CAFB on the local communities is \$722,000,000. On-base housing is inadequate to support authorized personnel; the latest housing survey showing a deficit of 507 units with 518 names on the housing waiting list. Housing space available off-base is adequate to support any projected increase in personnel. Sufficient schools exist within the commuting area to provide educational opportunities at all levels.

5.0 ENVIRONMENTAL CONSEQUENCES

5.1 Soils

As a result of the contaminated soil removal, the soil's qualities will improve. No adverse impacts are expected.

5.2 Vegetation

Vegetation will greatly improve after the contaminated soil is removed. No adverse impacts are expected.

5.3 Wildlife

Wildlife will not be impacted.

5.4 Land Use

After the project is completed the land will sit vacant and unused. No impacts are expected.

5.5 Air Quality

The air quality will improve as the present fuel odors will be removed. The only impacts will be positive ones.

5.6 Water Resources

Water resources will be saved from possible contamination.

5.7 Cultural Resources

No significant impacts to archaeological or historic resources are anticipated since none are known to exist on the site.

5.8 Socioeconomics

The proposed site is on Air Force property at CAFB. The project will not impact the regional economy.

LIST OF PREPARERS

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Contract Programmer
Environmental and Contract Planning Section
7 CSG/DEEV
Carswell AFB, TX 76127-5000

REFERENCES

Environmental Impact Analysis Process Handbook, Air Force Institute of Technology.

Soil Survey of Tarrant County, Texas, USDA Soil Conservation Service, 1981.

"1988 Current Population Estimates," Your Region, May 1988, North Central Texas Council of Governments.

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Air Installation Compatible Use Zone (AICUZ) Study, Carswell AFB, 1986.

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"EPA Defers Sanctions for DFW Area," Your Region, March 1989, North Central Texas Council of Governments.

"Improvements for Better Air Quality on Schedule," Your Region, November 1988, North Central Texas Council of Governments.

"Clean Air Continues as High Priority," Your Region, February 1988, North Central Texas Council of Governments.

FINDING OF NO SIGNIFICANT IMPACT

FOR

IRP REMEDIATION, FIRE TRAINING AREA, SITE #2

This EA is an analysis of the environmental impacts associated with the removal of contaminated soil in the Fire Department Training Area (FDTA) site #2. The first alternative to install vapor vents was not recommended because contaminants could still reach ground water. The second alternative to cap the entire area does not correct the problem. The "no action" alternative will not provide compliance to state regulations. The EA found that few adverse impacts are to be expected and that none could be assessed as significant. The following is a list of attributes and findings.

Soils. Soil will be returned to its proper state with the removal of the contaminated soil and the replacement with new soil. No adverse impacts are expected.

Vegetation. Vegetation will greatly improve after the soil removal. No negative impacts should occur.

Wildlife. Wildlife will not be impacted.

Endangered Species. No threatened or endangered species (state or federal) are known to inhabit the area.

Land Use. After project completion, the land will sit vacant and unused. No impacts are expected.

Air Quality. Air quality will improve as fuel odors will be removed when the contaminated soil is removed.

Water Resources. Water resources will be saved from possible contamination.

Cultural Resources. There are no known archaeological or historic sites in the vicinity.

Socioeconomics. No significant impacts are anticipated.

An analysis of the alternatives indicated the proposed action is needed and will result in minimal impacts.

The conclusions in the EA were measured against the requirements established by the CEQ, therefore justifying the FONSI. The regional and local impacts were evaluated and found to be negligible. No broad social or environmental impacts were established in the EA. Thus, an EIS is not required.


RICHARD SZAFRANSKI, Colonel, USAF
Chairman, Environmental Protection Committee

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