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FINAL COMMUNITY RELATIONS PLAN NAS FORT WORTH TX
9/1/2001
SCIENCE APPLICATIONS INTERNATIONAL CORPORATION



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

**ADMINISTRATIVE RECORD
COVER SHEET**

AR File Number 598



**COMMUNITY
RELATIONS
PLAN**

**NAVAL AIR STATION FORT WORTH
JOINT RESERVE BASE
CARSWELL FIELD, TEXAS**

FINAL
COMMUNITY RELATIONS PLAN
NAVAL AIR STATION FORT WORTH
JOINT RESERVE BASE, CARSWELL FIELD, TEXAS

September 2001

PREPARED FOR:

Air Force Center for Environmental Excellence (AFCEE)
Installation Restoration Program Office/Environmental Restoration Division (ERD)
Brooks Air Force Base, Texas 78235-5363

PREPARED BY:

Science Applications International Corporation
4242 Woodcock Drive, Suite 150
San Antonio, Texas 78228-1253

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PREFACE

This submittal constitutes the Final version of the Community Relations Plan (CRP) for Naval Air Station Fort Worth Joint Reserve Base, Carswell Field (NAS Fort Worth JRB), Texas. This document provides background information on the installation and its history with the surrounding community, explains the environmental programs in progress at NAS Fort Worth JRB, details ongoing community relations activities, and recommends a community relations approach to supplement the current program at NAS Fort Worth JRB.

Community interviews laid the groundwork for developing this CRP. Representatives from the Air Force Center for Environmental Excellence, Aeronautical Systems Center, Science Applications International Corporation, and IT Corporation conducted interviews with individuals from the community surrounding the base, including elected officials, Restoration Advisory Board members, local environmental consultants, media representatives, and other interested individuals. The interviews revealed minimal interest in NAS Fort Worth JRB's environmental program, but considerable concern with the water quality of Lake Worth.

This CRP focuses on and supports the recommended community relations approach presented in Section 6.0. The approach addresses interests, concerns, and preferred outreach options indicated during community interviews (summarized in Section 5.5).

The approach consists of recommended activities that may be implemented by the Air Force Center for Environmental Excellence and/or the Aeronautical Systems Center and the Navy Public Affairs office at NAS Fort Worth JRB. An integral part of the approach is risk communication (explained in Section 4.4) which is vital to effective interaction during community relations activities with the local public.

Community relations programs and activities will change as the environmental program and community concerns change. Therefore, Air Force representatives will revise this CRP, as needed, throughout the progress of the NAS Fort Worth JRB environmental program. The CRP will be reviewed on a biannual basis to evaluate its continued usefulness and to determine if updates or changes are needed.

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ACRONYMS

AFB	Air Force Base
AFBCA	Air Force Base Conversion Agency
AFCEE	Air Force Center for Environmental Excellence
AFP 4	Air Force Plant 4
AOC	Area of Concern
BCT	BRAC Cleanup Team
BRAC	Base Realignment and Closure
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CRP	Community Relations Plan
EPA	U.S. Environmental Protection Agency
ERA	Environmental Restoration Account
FS	Feasibility Study
HRS	Hazard Ranking System
IRP	Installation Restoration Program
JRB	Joint Reserve Base
MOU	Memorandum of Understanding
NAS	Naval Air Station
NPL	National Priorities List
PA	Preliminary Assessment
RAB	Restoration Advisory Board
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facilities Investigation
RI	Remedial Investigation
ROD	Record of Decision
SI	Site Inspection
SWMU	Solid Waste Management Unit
TNRCC	Texas Natural Resource Conservation Commission
TRC	Technical Review Committee
WVRA	Westworth Village Redevelopment Authority

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INTRODUCTION

1.1 Purpose and Objectives. The Air Force has prepared this Community Relations Plan (CRP) as part of the Resource Conservation and Recovery Act (RCRA) Corrective Action Program at Naval Air Station (NAS) Fort Worth Joint Reserve Base (JRB), Carswell Field (formerly Carswell Air Force Base [AFB], hereafter referred to as NAS Fort Worth JRB). The RCRA Corrective Action Program is a federal program that has been incorporated as part of the Air Force Installation Restoration Program (IRP). The CRP addresses IRP community relations activities planned for NAS Fort Worth JRB. A glossary is presented in Appendix A to define technical and legal terms used throughout this CRP.

This CRP has been prepared to guide Air Force communication with local communities likely to be affected by cleanup activities conducted at the installation. It is based on face-to-face personal interviews conducted with NAS Fort Worth JRB, White Settlement, Benbrook, Lake Worth, River Oaks, and Fort Worth community members.

The overall objectives of this Plan are to:

- Identify present community concerns
- Outline community relations efforts conducted in the past and planned for the future
- Encourage community participation in the decision-making processes of the IRP
- Establish an updated community relations program to be implemented at NAS Fort Worth JRB by the Air Force Center for Environmental Excellence (AFCEE) in concert with the host base Public Affairs Office's program.

The CRP will become part of the NAS Fort Worth JRB IRP Administrative Record and Information Repository, and will be available to the public in this manner. It will be reviewed on a biannual basis to evaluate its continued usefulness and to determine if updates or changes are needed.

1.2 Partnering. The U.S. Air Force maintains lead responsibility for investigation and cleanup at NAS Fort Worth JRB under the IRP. To ensure environmental compliance and quality of cleanup efforts, the Air Force has entered into a partnering relationship with the U.S. Environmental Protection Agency (EPA) Region VI, Texas Natural Resource Conservation Commission (TNRCC), and other state agencies. The TNRCC provides primary regulatory oversight under RCRA permit HW-50289, as issued in 1991.

The Air Force and the Navy have signed several Memorandums of Understanding (MOU) outlining general terms under which the Air Force and Navy will conduct the environmental management of NAS Fort Worth JRB. Appendix B contains the June 8-9, 1993 MOU, the September 23, 1994 MOU, the February 26, 1996 amendment to the original MOU, and the June 19, 1996 MOU as attachments to the MOU for Environmental Compliance.

1.3 Responsibility for Environmental Cleanup. The Air Force maintains responsibility for the environmental cleanup of the base and associated property, under the IRP, in cooperation with the Navy. The installation is divided into property being transferred to the Navy and property being transferred to the public by the Department of Defense. Property being transferred to the Navy is being investigated and cleaned up with Environmental Restoration Account (ERA) funds through AFCEE. Property being transferred to the public is being investigated and cleaned up with Base Realignment and Closure (BRAC) funds through the Air Force Base Conversion Agency (AFBCA) using AFCEE as their service center. The conditions for transfer of property to the community is determined by AFBCA in conjunction with the Westworth Village Redevelopment Authority (WVRA).

Air Force Plant 4 (AFP 4) is located west of and adjacent to NAS Fort Worth JRB. AFP 4 is responsible for cleaning up groundwater contamination originating from AFP 4 that has migrated on to NAS Fort Worth JRB property. AFP 4 plays an important role in coordinating cleanup remedies resulting from groundwater contamination that has impacted NAS Fort Worth JRB.

The Navy is responsible for the management of environmental compliance activities such as those associated with hazardous materials, petroleum products, storage tanks, oil/water separators, pesticides, medical waste, asbestos, polychlorinated biphenyls, radon, and lead-based paint. The Navy is also responsible for the cleanup of leaks and spills that occur on designated NAS Fort Worth JRB property since October 1, 1994. The Air Force is responsible for the investigation/cleanup of historical contamination that occurred on the installation prior to October 1, 1994.

The TNRCC is the primary agency responsible for providing regulatory oversight and approval of environmental cleanup activities carried out at NAS Fort Worth JRB. EPA Region VI also provides regulatory oversight for the IRP at the base. Various contractors provide investigation, cleanup, and community relations support to AFCEE and AFBCA. A list of current NAS Fort Worth JRB environmental restoration team members is shown in Table 1-1. AFBCA works closely with the WVRA. The WVRA is currently working to redevelop land for economic benefit to the community. The local community assists the WVRA in this process.

Table I-1 Environmental Restoration Team				
Naval Air Station Fort Worth Joint Reserve Base, Carswell Field, Texas				
Personnel	Organization	Team Responsibility	Phone Number	Electronic Mail Address
H. Don Ficklen	HQ AFCEE/ERD	Remedial Project Manager for NAS Fort Worth JRB	(210) 536-5290	holmes.ficklen@brooks.af.mil
Charles Pringle	HQ AFCEE/ERB	Base Environmental Coordinator (BEC) and Team Chief, Base Closure Restoration Division	(210) 536-4477	charles.pringle@brooks.af.mil
Mike Dodyk	HQ AFCEE/ERD	NAS Fort Worth JRB Field Engineer	(817) 782-7161	mike.dodyk@carswell.af.mil
Randy Varner	301 SPTG/CEV	Air Force Environmental Department Head	(817) 782-6277	randy.varner@carswell.af.mil
Robert Myer	NAS JRB Ft. Worth/PWD	Environmental Director	(817) 782-6470 Ext. 12	myer@cnrf.nola.navy.mil
Mike Hawkins	HQ AFCEE/MSP	AFCEE Chief, Public Affairs	(210) 536-3072	mike.hawkins@brooks.af.mil
Major Clayton Church	301FW/PA	Air Force/PA Representative	(817) 782-7170	clayton.church@fwh.afres.af.mil
Donald Ray	Navy PA	Navy/PA Representative	(817) 782-7816	raydon@cnrf.nola.navy.mil
Ray Risner	TNRCC	TNRCC Project Manager	(512) 239-2333	rrisner@tnrcc.state.tx.us
Gary Miller	EPA Region 6	EPA Project Manager	(214) 665-8306	miller.gary@epamail.epa.gov
Mark Weegar	TNRCC	TNRCC Remedial Manager	(512) 239-2360	mweegar@tnrcc.state.tx.us
Tim Sewell	TNRCC Region 4	TNRCC Field Inspector	(817) 469-6750	tsewell@tnrcc.state.tx.us
George Walters	ASC/ENVR	AFP 4 Remedial Project Manager	(800) 982-7248 Ext. 416	george.walters@wpafb.af.mil
Don Yates	ASC/ENVR	AFP4/PA Representative	(800) 982-7248 Ext. 301	donald.yates@wpafb.af.mil
Leland Clemons	WRA	Executive Director	(817) 377-8061	wrauthority@hotmail.com
AFCEE	Air Force Center for Environmental Excellence	FW	Fighter Wing	
AFP	Air Force Plant	NAS	Naval Air Station	
BRAC	Base Realignment and Closure	PA	Public Affairs	
EPA	U.S. Environmental Protection Agency	SPTG	Support Group	
CEV	Civil Engineering-Environmental	TNRCC	Texas Natural Resource Conservation Commission	
ERB	Base Closure Division	WVRA	Westworth Redevelopment Authority	
ERD	Environmental Restoration Division			

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2.0 NAS FORT WORTH JRB, CARSWELL FIELD BACKGROUND

2.1 NAS Fort Worth JRB, Carswell Field History. The Department of Defense established this military installation as Tarrant Field Airdrome in 1942. The installation was designed to provide mission essential support services for training and heavy bomber operations. Strategic Air Command assumed control of the installation in 1946, and the base served as headquarters for the Eighth Air Force. The installation's role was soon expanded to include training and maintenance of a combat-ready force. The base was renamed Carswell AFB in 1948, in honor of Fort Worth native Major Horace S. Carswell. In 1951, Headquarters 19th Air Division was also located at Carswell where it remained until September 1988.

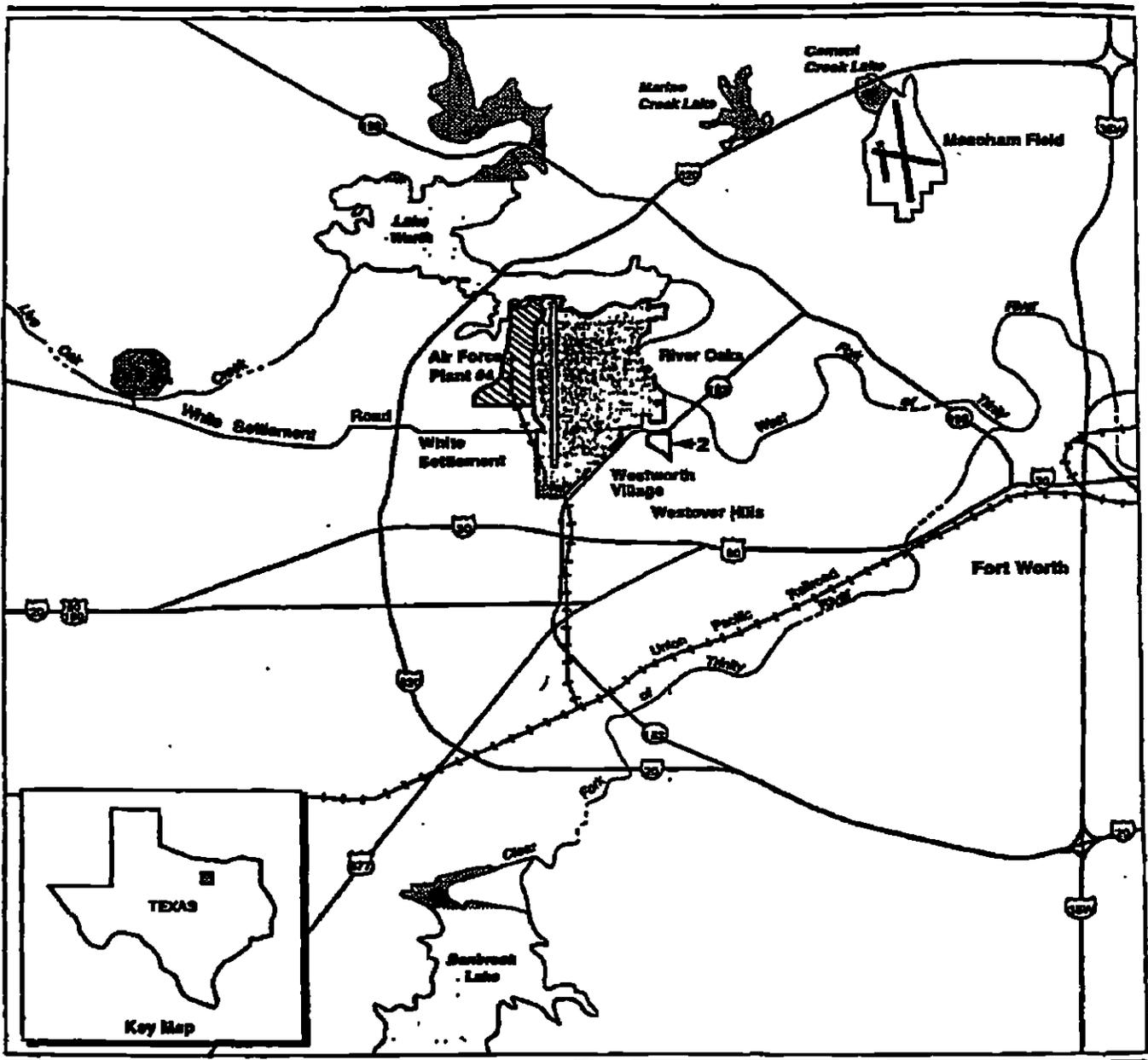
The base grew to its historical maximum size as its role in Strategic Air Command increased. Major capital improvements in the late 1950s included a runway extension, and construction of a weapons storage area, office space, warehouses, and a fuel hydrant system. Construction through the 1970s created new dormitories, engine test cells, base exchange services, and other amenities. In the 1980s, a hospital, maintenance facilities, offices, and a munitions assembly shop were added.

Carswell AFB was selected for closure under the Defense Base Closure and Realignment Act of 1990 during Round II Base Closure Commission deliberations. First-stage closure activities were initiated in 1992; all aircraft were relocated to Barksdale AFB by January 1993. The base ceased operation on September 30, 1993, and was transferred to the AFBCA for property distribution and reuse. The base was realigned and named NAS Fort Worth JRB, Carswell Field on October 1, 1994, when the U.S. Navy assumed control of the property.

2.2 Air Force Plant 4 History. NAS Fort Worth JRB's neighbor west of the main runway is AFP 4. Constructed as a government owned/contractor operated facility, AFP 4 was built to design and manufacture combat aircraft for use by military forces. The current contractor, Lockheed Martin, assumed operational responsibility of the installation from General Dynamics in 1993, to continue production of the F-16 Falcon.

2.3 NAS Fort Worth JRB, Carswell Field Description and Setting. NAS Fort Worth JRB occupies approximately 2,264 acres in Tarrant County, eight miles west of downtown Fort Worth (Figure 2-1). Associated noncontiguous properties consist of an off-site weapons storage area covering 247 acres. A residential parcel (Kings Branch) which comprises 44 acres has been formally transferred to the City of Westworth Village. The weapons storage area is shown in Figure 2-1 and Figure 2-2. Kings Branch Housing area (not depicted in the figures) is located off base just outside the base perimeter to the Southeast of the main gate.

The West Fork of the Trinity River flows along the eastern boundary of the base. Lake Worth, a water supply and recreation reservoir, borders NAS Fort Worth JRB to the north. AFP 4 is located immediately west of the base. NAS Fort Worth JRB shares the runway with AFP 4. Surrounding communities include Westworth Village to the east, Fort Worth to the northeast



EXPLANATION

- | | | | |
|--|--------------------|---|-----------------------|
| | Interstate Highway | | Carswell AFB Property |
| | U. S. Highway | 1 | Main Base |
| | State Highway | 2 | Kings Branch |
| | Base Boundary | 3 | Off-Site WSA |
| | | | Air Force Plant 4 |



Regional Map

Figure 2-1

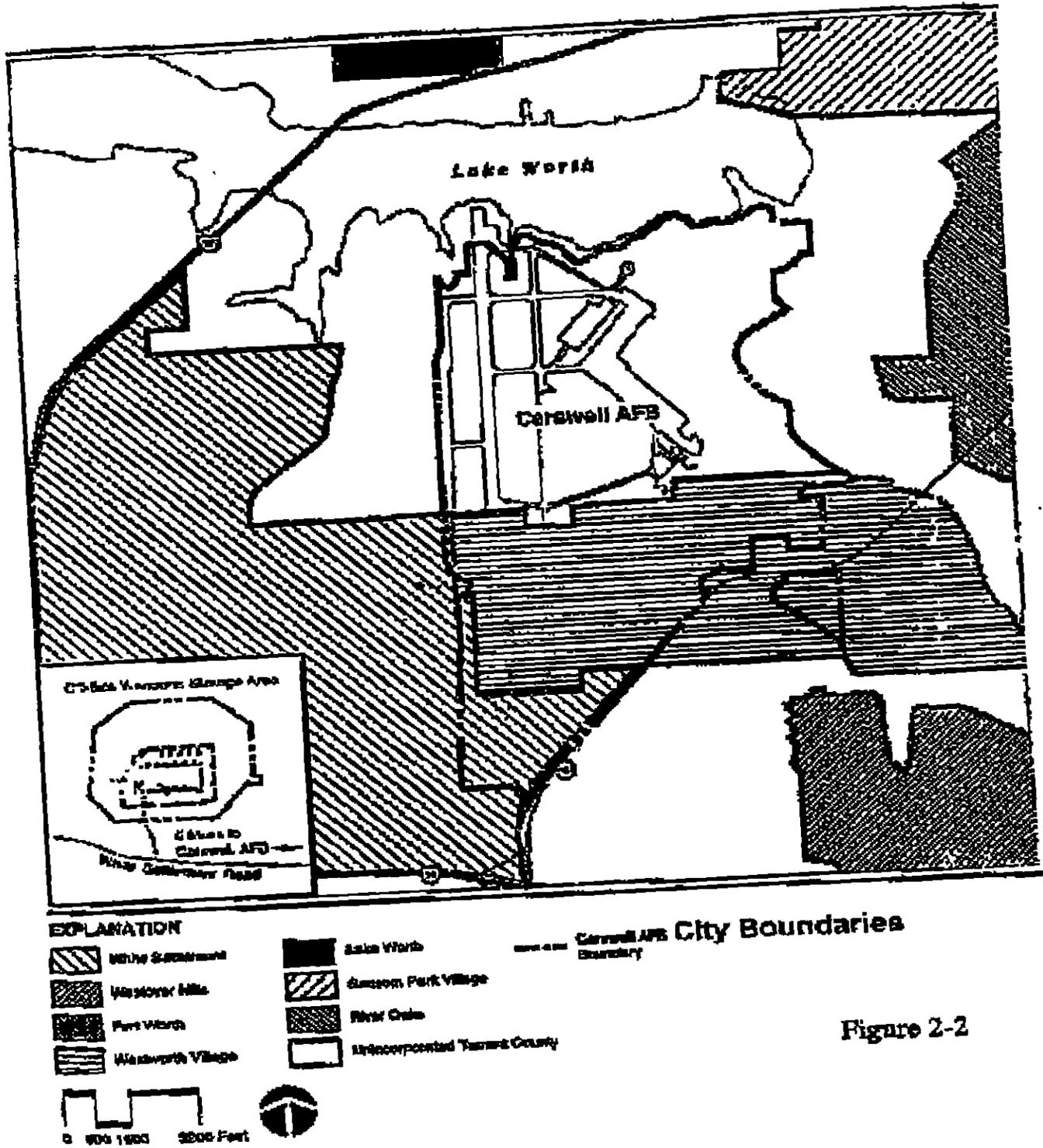


Figure 2-2

and southeast, and White Settlement to the west and southwest. The majority of the base, 58 percent, falls within the jurisdiction of the City of Fort Worth; 34 percent of the base comes under the jurisdiction of the City of Westworth Village; and 8 percent within the boundaries of White Settlement. Figure 2-2 indicates boundaries of cities around the base.

The off-site weapons storage area is bordered primarily by rural property including privately owned homes, ranches, and farms. The storage area is in the Tarrant County jurisdiction.

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3.0 NAS FORT WORTH JRB ENVIRONMENTAL SETTING AND NATURAL RESOURCES

3.1 Geology. The basic geologic formations at NAS Fort Worth JRB include the following strata, in descending order:

Terrace Alluvium - An aquifer in the uppermost soil (approximately 20 feet below land surface) consisting of fine to coarse, with minor amounts of clay, silt, and basal gravel. It represents an important source of water for crop irrigation, industrial, municipal, stock, and domestic supplies.

Goodland Limestone - Goodland Limestone is present just below land surface throughout NAS Fort Worth JRB and AFP 4, except in the northern portion and in deeply eroded meandering bends cut by former courses of the West Fork of the Trinity River. No faults are known to occur in the Goodland Limestone in the vicinity of AFP 4 (U.S. Air Force, 1989).

Walnut Formation - The Walnut Formation underlies most of NAS Fort Worth JRB and AFP 4. The Walnut Formation is generally found between 25 and 35 feet below ground surface, except where significant erosion has occurred. A disconformity separates the base of the Walnut Formation from the top of the Paluxy Formation. No faults are known to occur in the Walnut Formation in the vicinity of NAS Fort Worth JIB (U.S. Air Force, 1989).

Paluxy Formation - The Paluxy Formation underlies all of NAS Fort Worth JRB and AFP 4 and its uppermost part outcrops along the Lake Worth shoreline. The thickness of the Paluxy Formation varies, but generally ranges from 133 to 175 feet (U.S. Air Force, 1989).

3.2 Hydrology. The hydrogeology of NAS Fort Worth JRB consists of three main units: (1) Terrace Alluvium Shallow Aquifer- an aquifer in the uppermost soil and weathered Goodland Limestone (approximately 20 feet below land surface); (2) Aquitard-bedrock of the Goodland Limestone and Walnut Formation; and (3) Paluxy Deep Formation Aquifer-water unit beneath the aquitard.

Geology and hydrogeology are closely related. In many areas, the Goodland Limestone is located at or near the land surface where shallow groundwater is essentially absent. Generally, the Goodland Limestone and the Walnut Formation form a barrier, or aquitard, between the shallow Terrace Alluvial aquifer and the Paluxy Aquifer. In other areas, they are cut by paleo channels which allows the shallow groundwater to reach the Paluxy Aquifer.

Generally, water from local rainfall and infiltration of streams and Lake Worth recharges both the Terrace Alluvium and Paluxy Aquifer. Extensive paved areas and buildings restrict the natural infiltration of precipitation over much of NAS Fort Worth JRB and AFP 4. However, precipitation does infiltrate through several large grassy areas on base.

In Tarrant and Dallas Counties, the Paluxy Aquifer is widely used as a source of water for domestic, municipal, and industrial water supplies. Usage of the Paluxy Aquifer began in the early 1900s with total production in the Tarrant and Dallas County areas reaching a peak in the late 1960s. Declining water levels due to extensive water withdrawal resulted in reduced hydraulic pressure, and the public water supply wells were abandoned. Other groundwater sources outside the immediate base area, such as the Twin Mountain Aquifer, were then used to supplement potable water.

3.3 Surface Water. Primary surface water features in the vicinity of NAS Fort Worth JRB include Lake Worth, Farmers Branch Creek, and, the West Fork of the Trinity River. Lake Worth was created by damming the West Fork of the Trinity River and is part of a system of lakes that provide drinking water to the City of Fort Worth. The Trinity River Corridor is defined as the bed and banks of the river segments from the dams of Lewisville Lake, Grapevine Lake, Lake Worth, Benbrook Lake, Lake Arlington, and Mountain Creek Lake downstream to the point on the main stem of the Trinity River near Post Oak Road in southeast Dallas County, and all of the adjacent land area and all watercourses contained within the boundaries of the river floodplain. Portions of NAS Fort Worth JRB and AFP 4 fall within the floodplain of Lake Worth. The Federal Emergency Management Agency (FEMA) manages the floodplain management plan that is the area defined as the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 100-year flood discharge can be conveyed with out increases of more than a specified amount. Floodplain maps are available in Appendix G.

3.4 Climatology/Meteorology. NAS Fort Worth JRB is located at approximately 32 degrees north latitude and 97 degrees west longitude, in north-central Texas. The climate of the site is typified by hot summers and cool, relatively dry winters. Most precipitation occurs as rain; snowfall accounts for negligible amounts in January and February. Rainfall averages 31.6 inches per year. Monthly precipitation amounts are lowest from November through February. Historical meteorological data for NAS Fort Worth JRB from 1942 through 1990 indicate an average annual temperature of 66°F. During that period, the record high and low temperatures were 110°F and 0°F, respectively.

3.5 Biological Resources. Because of the urban environmental setting, few natural animal communities exist at NAS Fort Worth JRB. Nevertheless, aquatic species such as catfish, sunfish, and numerous varieties of bass exist in the West Fork of the Trinity River. Common birds observed in the area include herons, kestrels, kingfishers, seagulls, mourning doves, meadowlarks, grackles, and starlings (U.S. Air Force, 1994).

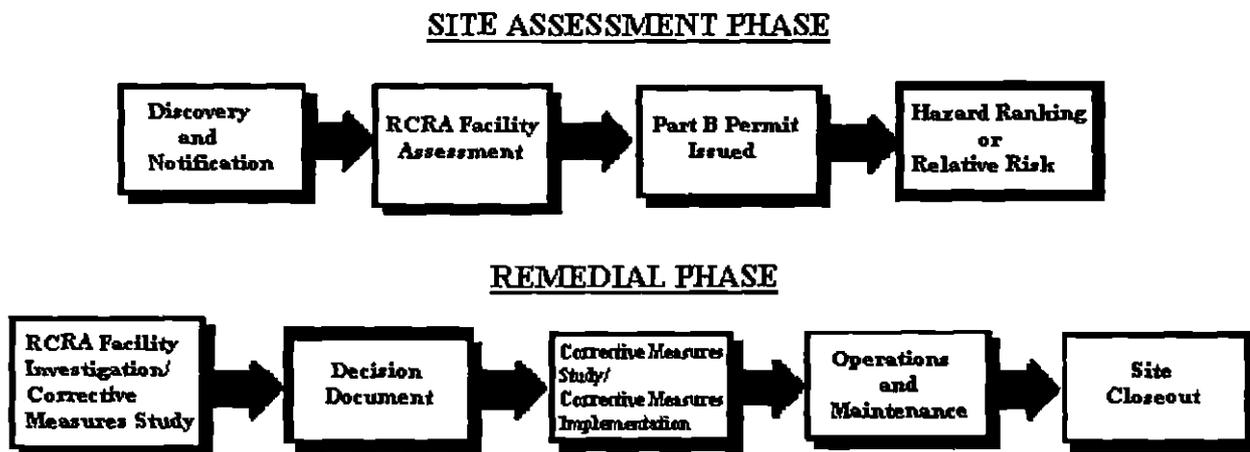
The U.S. Fish and Wildlife Service and the Texas Department of Parks and Wildlife have identified 7 bird, 3 reptile, 1 mammal and 1 sensitive plant species in the Fort Worth area which are threatened and endangered. The birds are the Arctic Peregrine Falcon, Bald Eagle, Henlow's Sparrow, Interior Least Tern, Migrant Loggerhead Shrike, Western Burrowing Owl and the Whooping Crane. The Plains Spotted Skunk is the only mammal. The three reptiles are the Texas Garter Snake, Texas Horned Lizard, and the Timber/Canebrake Rattlesnake. The Auriculate False Foxglove is the only vascular plant listed. None of these species are known to live on NAS Fort Worth JRB property. The closest sensitive habitat to the site is the great blue heron breeding or roosting areas to the north of NAS Fort Worth JRB across Lake Worth.

3.6 Cultural and Architectural Resources. Buck Oaks Farm, a historical structure, exists within the boundaries of NAS Fort Worth JRB. The structure was listed in the National Register of Historic Places in 1987. No significant archaeological or prehistoric sites have been identified within the boundary of NAS Fort Worth JRB. Fossils are present in outcrops at NAS Fort Worth JRB, but have not been identified as a significant paleontological resource.

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4.0 ENVIRONMENTAL PROGRAMS AT NAS FORT WORTH JRB

4.1 The Resource Conservation and Recovery Act Corrective Action Program. RCRA is the main environmental law affecting restoration activities at NAS Fort Worth JRB, as stipulated in the base's RCRA permit. RCRA is a federal law that established a regulatory system to track hazardous wastes and ensure their safe treatment, transport, storage and disposal. The Air Force initiated the RCRA Corrective Action Program at NAS Fort Worth JRB in 1989. In 1991, NAS Fort Worth JRB received a RCRA Part B permit, number HW-50289, from the EPA and TNRCC to store hazardous waste. The portion of the permit written pursuant to the Hazardous and Solid Waste Amendments of 1984 became effective in February 1991. The purpose of the Corrective Action Program is to identify, confirm, and correct problems associated with past releases of hazardous wastes or petroleum products into the environment. As shown on Figure 4-1, the RCRA Corrective Action Program is divided into two phases: assessment (initial study) and remediation (additional study and cleanup). Each of these phases is broken down into the steps described below.



Note: Removal Action and No Further Response Action Decisions may be completed at any stage of either phase

Figure 4-1. RCRA Corrective Action Program Process at NAS Fort Worth JRB

Site Assessment Phase

Discovery and Notification. This initial step identifies areas of potential past releases of hazardous wastes or petroleum products based on detailed record searches and verbal reports of the historical industrial, maintenance, and disposal operations and practices at the site.

RCRA Facility Assessment. As areas of potential releases are identified, an assessment of existing data is performed, the source and nature of releases are described, and the potential threat to human health and the environment is evaluated qualitatively. During the RCRA

Facility Assessment the Air Force, EPA, and TNRCC identify and/or inspect all potential areas likely to be considered Solid Waste Management Units (SWMU) under RCRA. The assessment determines whether the area(s) require further investigation, and recommends any required steps within the RCRA Corrective Action Program.

When further investigation is necessary, an inspection is conducted to begin site characterization by collecting samples for chemical analyses, and to determine whether an immediate removal action is required. Results from the inspection determine whether a RCRA Facility Investigation or cleanup investigation should be conducted.

RCRA Part B Permit. The Hazardous Waste Part B permit issued by the TNRCC in February 1991 and renewed in 2001, establishes requirements and procedures for investigating SWMUs at NAS Fort Worth JRB.

Hazard Ranking System Scoring. The EPA uses the Hazard Ranking System to score and rank sites based on their actual or potential risk to human health and the environment. The hazard ranking scoring system is used to determine if the site should be placed on the National Priorities List.

Relative Risk Categories. The AFCEE and the AFBCA use relative risk site evaluations to rank the SWMUs. The relative risk site evaluation framework uses available site-specific information regarding contaminant chemicals and their toxicity, migration pathways, and the existence of human or ecological receptors to place sites into High, Medium, or Low relative risk categories. The community may provide input into the relative risk site evaluations. The results of these evaluations are used by the Department of Defense to help in the sequencing of cleanup work.

Remedial Phase

RCRA Facility Investigation. A RCRA Facility Investigation (RFI) is a study that examines the type and extent of contamination at a site. The RFI report describes which and at what concentrations contaminants exist in the site environmental media (i.e., water, soil, air), estimates the future fate and transport (migration) of the contaminants, and evaluates potential risks to human health and the environment.

Corrective Measures Study. The Corrective Measures Study is conducted concurrently with the RCRA Facility Investigation. The purpose of the Corrective Measures Study is to develop and compare remedial action alternatives and recommend further actions. During the Corrective Measures Study, treatability tests may be necessary to determine whether proposed remedies will -cost-effectively clean up the site. The draft Corrective Measures Study is released to the public for review and comment. During the review period (usually 30 days), a public meeting is held to present results of the RCRA Facility Investigation, discuss the recommended remedial actions, answer questions, and gather comments.

Decision Document. The Decision Document formalizes the selected remedial actions for the site. It is prepared only after consideration of public comments. The Decision Document also includes a responsiveness summary addressing significant concerns raised or comments made during the public comment period.

Corrective Measures Implementation. The Corrective Measures Implementation phase involves design and implementation of the selected remedial action.

Operation and Maintenance. Long-term operation and maintenance or long-term monitoring may be required at sites where the cleanup method includes ongoing treatment or natural attenuation. Long-term operation, maintenance, and monitoring usually includes sampling and analysis to evaluate and ensure overall effectiveness of the cleanup method and adequate management of site risks.

Site Closeout. Site closeout is achieved when the goals of the cleanup action are reached and the site no longer poses a significant threat to human health or the environment. A Decision Document is prepared and published to notify regulators and the public that the site is closed.

It is not necessary to complete all of the steps described above to accomplish the goals of the RCRA Corrective Action Program. A site can be closed at any time during identification, investigation, characterization, monitoring, or treatment if it is determined that the site poses no significant risks. Potential risks to human health and the environment are continually re-evaluated as the Corrective Action Program progresses and more information is made available about the site. If at any time it is determined that the site poses an imminent threat to human health or the environment, an Interim Remedial (or Removal) Action may be warranted. The Interim Remedial/ Removal Action is not typically intended to be the final action at the site, but it may become the final action if health and ecological risks are adequately reduced.

The RCRA Part B permit regulates the SWMUs and Areas of Concern (AOC) at NAS Fort Worth JRB. RCRA regulations define a SWMU as any unit into which solid wastes have been placed, or any areas onto which solid wastes have been routinely and systematically released (40 Code of Federal Regulations Section 264.501). An AOC is an area of potential contamination. Sixty-eight SWMUs and 19 AOCs exist at NAS Fort Worth JRB. Tables 4-1 and 4-2 provide complete lists of SWMUs and AOCs, respectively. The Hazardous and Solid Waste Amendments portion of the permit requires NAS Fort Worth JRB to conduct corrective actions for potential releases of hazardous substances from these SWMUs.

The Air Force maintains primary responsibility for conducting investigations and clean up of the SWMUs at NAS Fort Worth JRB. AFCEE (with ERA funds) is managing 52 SWMUs and 13 AOCs under ERA, and AFBCA (with BRAC funds) is managing 16 SWMUs and six AOCs under BRAC. The AFCEE and AFBCA share responsibility for one AOC.

**Table 4-1. Solid Waste Management Units
 Naval Air Station Fort Worth Joint Reserve Base
 Carswell Field, Texas**

SWMU	Name	OUs	IRP R/R	*Closed	Assigned	CA Status	IRP Responsibility
1	Pathological Waste Incinerator	7	NA	Yes	2-Mar-95	NFA (3/2/95)	ERA
2	Pathological Waste Storage Shed	7	NA	Yes	2-Mar-95	NFA (3/2/95)	ERA
3	Metal Cans	7	NA	Yes	2-Mar-95	NFA (3/2/95)	BRAC
4	Facility Dumpsters	7	NA	Yes	2-Mar-95	NFA (3/2/95)	BRAC
5	B1628 Waste Accumulation Area	301st	NA	No	22-Apr-94	RFI Ongoing	BRAC
6	B1628 Wash Rack and Drain	301st	NR	No	22-Apr-94	RFI Ongoing	BRAC
7	B1628 O/W Separator	301st	Medium	No	22-Apr-94	NFA (7/19/00)	ERA
8	B1628 Sludge Collection Tank	301st	Medium	No	22-Apr-94	NFA (7/19/00)	ERA
9	B1628 Work Station Waste Accumulation Area	301st	NR	Yes	2-Mar-95	NFA (3/2/95)	ERA
10	B1617 Work Station Waste Accumulation Area	301st	NA	Yes	2-Mar-95	NFA (3/2/95)	ERA
11	B1617 Waste Accumulation Area	301st	NR	No	2-Mar-95	Closure Report with TNRCC (03/01)	ERA
12	B1619 Waste Accumulation Area	301st	NR	No	22-Apr-94	RFI Ongoing	ERA
13	B1710 Waste Accumulation Area	301st	NR	No	2-Mar-95	NFA (4/28/99)	ERA
14	B1060 Bead Blaster Collection Tray	1	NA	Yes	2-Mar-95	NFA (3/2/95)	ERA
15	B1060 Paint Booth Vault	1	NA	Yes	2-Mar-95	NFA (3/2/95)	ERA
16	B1060 Waste Accumulation Area	1	NR	No	Permit	NFA (11/20/00)	ERA
17	Landfill 7	1	Medium	No	2-Mar-95	RFI Ongoing	ERA
18	Fire Training Area 1		NA	Yes	Permit	NFA	ERA
19	Fire Training Area 2	1	Low	No	Permit	RFI Ongoing	ERA
20	Waste Fuel Storage Tank	1	Low	No	Permit	RFI Ongoing	ERA
21	Waste Oil Tank	1	Low	No	Permit	RFI Ongoing	ERA
22	Landfill 4		NA	No	Permit	NFA (3/5/01)	ERA
23	Landfill 5		NA	No	Permit	NFA (3/5/01)	ERA
24	Waste Bunal Area		NA	No	Permit	NFA (3/5/01)	ERA
25	Landfill 8		Medium	No	2-Mar-95	NFA (3/5/01)	BRAC
26	Landfill 3	1	Medium	No	22-Apr-94	RFI Ongoing	ERA
27	Landfill 10	1	NR	No	22-Apr-94	NFA (4/26/00)	ERA
28	Landfill 1	2	Medium	No	Permit	RFI Ongoing	ERA
29	Landfill 2	2	NR	No	22-Apr-94	RFI Ongoing	ERA
30	Landfill 9	2	NR	No	22-Apr-94	RFI Ongoing	ERA
31	B1050 Waste Accumulation Area	1	NR	No	22-Apr-94	RFI Ongoing	ERA
32	B1410 Waste Accumulation Area	1	NR	No	Permit	Closure Report with TNRCC (03/01)	ERA
33	B1420 Waste Accumulation Area	301st	NR	No	22-Apr-94	NFA (11/20/00)	ERA
34	B1194 Waste Accumulation Area	1	NR	No	2-Mar-95	NFA (11/20/00)	ERA
35	B1194 Vehicle Refueling Shop O/W Separation System	1	Low	No	Permit	RFI Ongoing	ERA
36	B1191 Waste Accumulation Area	1	NR	No	Permit	Closure Report with TNRCC (03/01)	ERA
37	B1191 Vehicle Maintenance Shop O/W Separator	1	Low	No	22-Apr-94	RFI Ongoing	ERA
38	B1269 PCB Transformer Building	2	NA	Yes	2-Mar-95	NFA (3/2/95)	ERA
39	B1643 Waste Accumulation Area	301st	NR	No	2-Mar-95	NFA (11/20/00)	ERA

*No further action is planned for the closed sites

Table 4-1. Solid Waste Management Units							Naval
Air Station Fort Worth Joint Reserve Base Carswell Field, Texas							
SWMU	Name	OUs	IRP R/R	* Closed	Assigned	CA Status	IRP Responsibility
40	B1643 O/W Separation System	301st	NR	No	2-Mar-95	RFI Ongoing	ERA
41	B1414 O/W Separation System Field Maintenance Squadron Aerospace Ground Equipment	1	Low	No	22-Apr-94	RFI Ongoing	ERA
42	B1414 Waste Accumulation Area	1	NR	No	22-Apr-94	NFA (11/20/00)	ERA
43	B1414 Non-Destructive Inspection (NDI) Waste Accumulation Area	1	NA	Yes	22-Apr-94	NFA (3/2/95)	ERA
44	B1027 O/W Separation System at the Aircraft Washing Hangar	1	Low	No	2-Mar-95	RFI Ongoing	ERA
45	B1027 Waste Oil Tank Vault at the Aircraft Washing Hangar	1	NR	No	2-Mar-95	NFA (3/9/01)	ERA
46	B1027 Waste Accumulation Area	1	NA	Yes	2-Mar-95	NFA (3/2/95)	ERA
47	B1015 Jet Engine Test Cell O/W Separator	1	Low	No	2-Mar-95	RFI Ongoing	ERA
48	B1048 Fuel System Floor Drains	1	NA	Yes	2-Mar-95	NFA (3/2/95)	ERA
49	Aircraft Washing Area No. 1	1	NR	No	2-Mar-95	RFI Ongoing	ERA
50	Aircraft Washing Area No. 2	1	NR	No	2-Mar-95	RFI Ongoing	ERA
51	B1190 Central Waste Holding Area	1	NR	No	22-Apr-94	Closure Report with TNRCC (03/01)	ERA
52	B1190 O/W Separation System	1	Low	No	22-Apr-94	RFI Ongoing	ERA
53	Storm Water Drainage System	1	Medium	No	Permit	RFI Ongoing	ERA
54	Storm Water Interceptors	2	NR	No	22-Apr-94	RFI Ongoing	BRAC
55	East Gate Oil Water Separator	2	NR	No	22-Apr-94	RFI Ongoing	BRAC
56	B1405 Waste Accumulation Area	1	NA	Yes	2-Mar-95	NFA (3/2/95)	BRAC
57	B1432/1434 Waste Accumulation Area	1	NA	Yes	2-Mar-95	NFA (3/2/95)	BRAC
58	Pesticide Rinse Area	5	NA		2-Mar-95	NFA (8/4/99)	BRAC
59	B8503 WSA Waste Accumulation Area	3	NA		22-Apr-94	RFI Ongoing	BRAC
60	B8503 Radioactive Waste Bunal Site	3	NA		2-Mar-95	(Soils closed) RFI Ongoing	BRAC
61	B1320 Power Production Maintenance Facility Waste Accumulation Area	2	NR	No	Permit	RFI Ongoing	BRAC
62	Landfill 6	1	Medium	No	Permit	RFI Ongoing	BRAC
63	Entomology Dry Well	2	NA	Yes	Permit	NFA (3/2/95)	BRAC
64	French Underdrain System	2	Medium	No	Permit	RFI/CMI Ongoing	BRAC
65	WSA Disposal Site	3	NA	Yes	Permit	NFA (3/2/95)	ERA
66	Sanitary Sewer System	1	NR	No	2-Mar-95	RFI Ongoing	ERA
67	B1340 O/W Separator	2	Medium	No	Permit	BRAC	ERA
68	POL Tank Farm	1	Medium	No	Permit	Closure Report with TNRCC (05/01)	ERA

AFBCA Air Force Base Conversion Agency
 AFCEE Air Force Center for Environmental Excellence
 FTA Fire Training Area
 IRP Installation Restoration Program
 NA Not Applicable/Not Available
 NR Not Rated

OWS Oil/Water Separator
 SWMU Solid Waste Management Unit
 WAA Waste Accumulation Area
 R/R Relative Risk

Table 4-2. Areas of Concern Naval Air Station Fort Worth Joint Reserve Base Carswell Field, Texas							
SWMU	Name	OUs	IRP R/R	* Closed	Assigned	CA Status	IRP Responsibility
AOC 1	B1518 Service Station	2	High	No	2-Mar-95	PST/Plan B Update	AFBCA/AFCEE
AOC 2	Airfield Groundwater Plume	1	Medium	No	2-Mar-95	RFI Ongoing	AFCEE
AOC 3	Waste Oil Dump	1	NA	Yes	2-Mar-95	NFA (3/2/95)	AFCEE
AOC 4	Fuel Hydrant System	1	Medium	No	2-Mar-95	Closure Report with TNRCC	AFCEE
AOC 5	Grounds Maintenance Yard	4	NA	No	2-Mar-95	RFI Ongoing	AFBCA
AOC 6	RV Parking Area	2		No	2-Mar-95	NFA (11/20/00)	AFCEE
AOC 7	Base Refueling Area	2	Medium	No	2-Mar-95	Closure Report with TNRCC (05/01)	AFCEE
AOC 8	SW Aerospace Museum	?	NA	No	2-Mar-95	RFI Ongoing	AFBCA
AOC 9	Golf Course Maintenance Yard	5	NA	No	2-Mar-95	NFA (8/4/99)	AFBCA
AOC 10	B1064 O/W Separator	1	Low	No	2-Mar-95	RFI Ongoing	AFCEE
AOC 11	B1060 O/W Separator	1	Low	No	2-Mar-95	RFI Ongoing	AFCEE
AOC 12	B4210 O/W Separator	1	Low	No	2-Mar-95	RFI Ongoing	AFCEE
AOC 13	B1145 O/W Separator	2	Low	No	2-Mar-95	RFI Ongoing	AFCEE
AOC 14	Unnamed Stream	2	NA	No	2-Mar-95	NFA (Soils closed) (12/99)	AFBCA
AOC 14	Unnamed Stream		NA	No	2-Mar-95	RFI Ongoing	AFBCA
AOC 15	B1190 Storage Shed	1	NR	No	2-Mar-95	NFA (11/20/00)	AFCEE
AOC 16	Fam Camp	5	NA	No	2-Mar-95	NFA (6/23/99)	AFBCA
AOC 17	Suspected Landfill			No	AFCEE-99	NFA (3/7/01)	AFCEE
AOC 18	Suspected Fire Training Area A			No	AFCEE-99	NFA (3/7/01)	AFCEE
AOC 19	Suspected Fire Training Area B			No	AFCEE-99	RFI Ongoing	AFCEE

Tables 4-1 and 4-2 detail responsibility for each site/area and indicate the 17 sites and one AOC that have been closed. The cleanup actions are being conducted in a manner consistent with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Contingency Plan (NCP). The EPA and the TNRCC assist the Air Force in the Corrective Action Program decision-making process.

The ongoing environmental program is operating under a Defense-State Memorandum of Agreement which provides for financial reimbursement between the Department of Defense and the state of Texas. The Defense-State Memorandum of agreement program was established in January 1992.

Generally, the SWMUs include landfills, power production facilities, fire-fighting training areas, sludge disposal areas, and drum disposal areas. Other potential sources of contamination include fuel spills from aircraft, automobiles, and other fuel-powered equipment; fuel leaks from tanks and pipelines; and spills or leaks of solvents from shop areas.

The Air Force closed the on-base treatment, storage, and disposal facility in November 1999. The waste that was handled by the facility was disposed within 90 days of generation, negating the need for a permit. Therefore, the program will focus on cleanup which will be regulated via a Compliance Plan issued by the state

4.2 Installation Restoration Program. One of the primary laws governing the cleanup of hazardous waste is CERCLA. This is a federal law that establishes responsibility for cleanup of hazardous substances. Under the IRP, these contamination source areas are referred to as IRP sites.

The IRP process is completed in several stages, similar to cleanup within the RCRA Corrective Action Program (see Figure 4-3). IRP source areas are identified, studied, cleaned up, and closed out. Under CERCLA, the steps followed and documents produced have different names but the intent and process are almost identical to the RCRA Corrective Action Program, including the requirement for the opportunity for public participation.

The community relations program at NAS Fort Worth JRB is designed to be comprehensive, covering environmental cleanup undertaken not only pursuant to the RCRA Corrective Action Program, but also pursuant to the IRP.

4.3 The Comprehensive Environmental Response, Compensation, and Liability Act Process. CERCLA was passed by Congress in 1980, and was amended by the Superfund Amendments and Reauthorization Act in 1986. It was designed to clean up closed or abandoned hazardous waste sites, and to fund these activities by collecting from "potentially

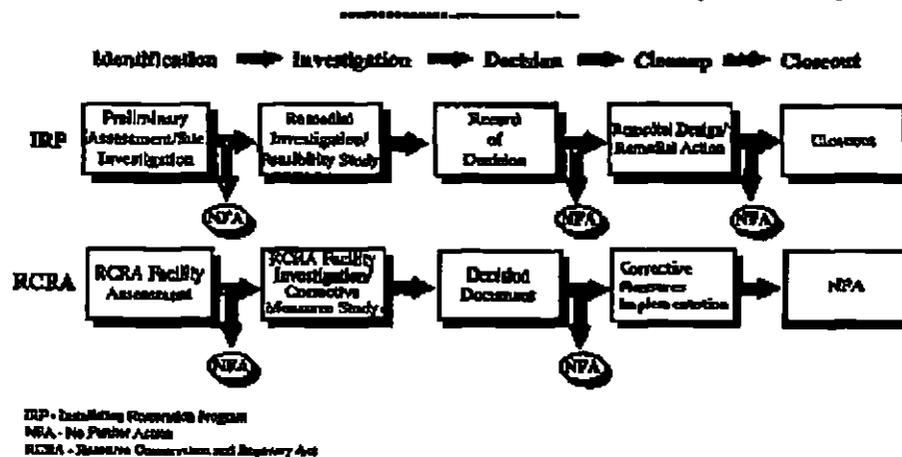


Figure 4-3. Comparison of IRP Remedial Action and RCRA Corrective Action

responsible parties". CERCLA is codified in 42 USC 9601-9675. Executive Order 12580 (52 F.R. 2923, 29 January 1987) delegated responsibility and authority for cleanups at military installations to the Secretary of Defense. Thus, the Department of Defense is the lead agency for CERCLA cleanups involving contaminant releases at facilities under DoD jurisdiction, custody, or control. Besides being the lead agency for the cleanup, DoD was also delegated responsibility for public notice and public participation requirements, as well as cleanup

standards. The process is very detailed, and the complete process can take years before remediation of a site begins. The process is described in the National Contingency Plan.

Preliminary Assessment--As a screening process, the EPA will perform a preliminary assessment (PA) of a site (often a review of data without an actual site visit) to determine if further study is necessary.

Site Inspection--A site inspection is an on-site investigation to find out whether there is a release or potential release and to determine the nature of the associated threats. The purpose is to augment the data collected in the PA and to generate, if necessary, sampling and other field data to determine if further action or investigation is necessary. If deemed necessary, the site is scored using the Hazard Ranking System. Any site which receives a score of 28.50 or above on the HRS will be included on the National Priorities List (NPL).

Remedial Investigation--A remedial investigation (RI) is a process undertaken by the lead agency to determine the nature and extent of the problem presented by the release. The RI emphasizes data collection and site characterization and is generally performed concurrently and in an interactive fashion with the feasibility study. The RI includes sampling and monitoring, as necessary, and the gathering of sufficient information to determine the necessity for remedial action and to support the evaluation of remedial alternatives.

Feasibility Study--A feasibility study (FS) is undertaken by the lead agency to develop and evaluate options for remedial action. The FS emphasizes data analysis, using data gathered during the RI. The RI data is used to define the objectives of the response action, to develop remedial alternatives, and to undertake an initial screening and detailed analysis of the alternatives. The remedial investigation and feasibility study are collectively referred to as the RI/FS.

Proposed Plan--The Proposed Plan outlines the nature and extent of contamination at the site, the alternatives evaluated and the preferred approach to remediation. This activity is a key point in the CERCLA process for formal input from the general public.

Record of Decision--Once the RI/FS is completed, the EPA selects the appropriate cleanup option, following principles set forth in the CERCLA Cleanup Standards and the revised NCP. This selection is described in a public document called a Record of Decision (ROD).

Remedial Design--The remedial design is the technical analysis and procedures that follow the selection of a remedy for a site and results in a detailed set of plans and specifications for implementation of the remedial action.

Remedial Action--The remedial action follows the remedial design and involves the actual construction or implementation of a cleanup.

4.5 The Texas Risk Reduction Program. The TNRCC has new rules designed to improve environmental cleanups at reduced cost. Texas is on track to become one of the first states to develop a comprehensive cleanup program based on risk. The Rule (30 TAC 350) and conforming rule changes became effective on September 23, 1999. It establishes corrective action requirements for the corrective action program areas of the TNRCC. The rule makes better use of available environmental cleanup dollars in both the public and private sectors. It will result in a more streamlined and cost-effective remediation of contaminated sites. It also will accommodate existing standards established by federal rule or state statute and expands public notice and participation in the cleanup process. The performance-based standards of the new rule will allow for exposure prevention techniques as long as exposure prevention is shown to be at least as protective of human health and the environment as pollution cleanup techniques. Exposure prevention techniques often can be employed more immediately and effectively than pollution cleanup techniques. To qualify under the grandfathering provisions of the new rule paragraphs (1) - (4) of this subsection for closure or remediation specified in the regulations for the programs subject to these rules and shall continue to apply.

(1) Any person who stores, processes, or disposes of industrial solid waste or municipal hazardous waste at a facility permitted under §335.2(a) of this title (relating to Permit Required), shall, unless specifically modified by other order of the commission, close the facility in accordance with the closing provisions of the permit.

(2) Any person who stores, processes, or disposes of hazardous waste is also subject to the applicable provisions relating to closure and post-closure in Subchapters E and F of this chapter (relating to Interim Standards for Hazardous Waste Storage, Processing, or Disposal Facilities; and Permitting Standards for Owners and Operators of Hazardous Waste Storage, Processing, or Disposal Facilities, respectively).

(3) Persons who have received approval of closure or remediation plans by the executive director and have either completed or not completed the action prior to June 28, 1993, may either maintain or complete the action, as applicable, according to the approved plan and are not subject to the requirements of this section unless a substantial change in circumstances develops at the facility or area which results in an unacceptable threat to human health or the environment as described in §350.35 of this title (relating to Substantial Change in Circumstances). Plans or reports submitted but not approved prior to June 28, 1993, will be reviewed according to the regulations in effect at the time of document submittal. If the executive director denies approval of the plan or report under those regulations for reasons of technical inadequacy, the person must then comply with the requirements of Chapter 350 of this title upon receipt of written notice from the executive director that the plan or report is not approved. Closure plans approved as part of an industrial solid or municipal hazardous waste permit which was issued prior to June 28, 1993, but not implemented at the time of permit renewal are subject to review for compliance with Chapter 350 of this title as part of the permit renewal process. Persons may resubmit such plans or reports that they have revised voluntarily to conform with the requirements of Chapter 350 of this title, unless such resubmittal would result in noncompliance with a previously approved or imposed schedule of compliance.

(4) The requirements of this section do not apply to substances discharged or spilled from storage tanks regulated by Chapter 334 of this title (relating to Underground and Aboveground Storage Tanks).

At sites where the cleanup process already has started, there will be an option of operating under the new rule, or completing action under old regulations. These use the existing **Risk Reduction Standards** as their basis:

Risk Reduction Standard Number 1. Closure/remediation to background--to remove and/or decontaminate all waste, waste residues, leachate, and contaminated media to background levels unaffected by waste management or industrial activities as further specified in §335.554 of this title (relating to Attainment of Risk Reduction Standard Number 1); or

Risk Reduction Standard Number 2. Closure/remediation to health-based standards and criteria--to remove and/or decontaminate all waste, waste residues, leachate, and contaminated media to standards and criteria such that any substantial present or future threat to human health or the environment is eliminated as further specified in §335.555 of this title (relating to Attainment of Risk Reduction Standard Number 2); or

Risk Reduction Standard Number 3. Closure/remediation with controls--to remove, decontaminate, and/or control all waste, waste residues, leachate, and contaminated media to levels and in a manner such that any substantial present or future threat to human health or the environment is eliminated or reduced to the maximum extent practicable, as further specified in §335.561 of this title (relating to Attainment of Risk Reduction Standard Number 3).

4.5 Other Environmental Programs at NAS Fort Worth JRB. In addition to IRP and RCRA corrective action activities, other environmental programs are in place at NAS Fort Worth JRB to address compliance issues involving other aspects of environmental management. The Air Force has transferred responsibility for these activities to the Navy.

4.6 Risk Communication. Environmental risk communication can be defined as the use of an empirically based system to enhance the effectiveness of information exchange between stakeholders about the nature, magnitude, or control of a risk. Stakeholders include government agencies, corporations, the media, professional organizations, special interest groups, communities, and individual citizens.

Risk communication activities are an integral part of the CRP. Effective risk communication will help NAS Fort Worth JRB to:

- Understand public perception of environmental risks at NAS Fort Worth JRB and more easily predict community response to various concerns
- Earn trust and credibility among the community
- Increase the effectiveness of risk management decisions by involving concerned individuals
- Improve dialog and reduce unwanted tension between the Air Force and nearby communities

- Explain risks more effectively by avoiding outrage during explanation
- Compare environmental risks to other risks
- Alert communities to risk in productive ways
- Decide how to best release information to the public and appropriate ways to handle difficult situations arising from the release of information
- Interact with the community and develop appropriate forums.

Effective risk communication includes promoting meaningful public involvement early in the cleanup process. Risk communication must be 'two-way' to be effective. Although talking to communities is a good start, it is even more important to listen. Improved dialogue with communities will permit a more productive relationship and help avoid negative encounters. In the long term, Air Force personnel and community members working cooperatively can make workable and acceptable decisions.

Risk communication helps individuals understand risk assessment and helps staff comprehend community perceptions and concerns about particular risks. Understanding risk assessment enables community members to better understand Air Force cleanup actions, thereby allowing local citizens to fully participate in the decision-making process. The following rules and guidelines will be used to enhance trust and credibility in the community affected by Air Force activities.

- Accept and involve the public as a legitimate partner from the outset
- Be empathetic to the public's concerns over the cleanup process
- Plan carefully and evaluate performance
- Focus on building trust as well as generating good data
- Pay attention to process
- Listen to your audience
- Avoid offending any group
- Be honest, frank, and open
- Coordinate and collaborate with other credible sources
- Coordinate within the Air Force and its contractors
- Obtain clear facts
- Meet media needs
- Avoid secret meetings
- Make only promises that can be met
- Speak clearly and with compassion
- Follow up with unanswered questions

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5.0 COMMUNITY PROFILE

5.1 General Profile of Fort Worth and White Settlement, Texas. NAS Fort Worth JRB is located within the Fort Worth Metropolitan Area which includes Johnson, Parker, Hood, and Tarrant Counties. The area was established as a military outpost and settled in the mid-1800's with cotton and cattle as the main exports. The fertile soil and thriving wildlife helped the original military outpost attract settlers. Rail lines to the area only increased the advantages of living in "Cowtown" and businesses associated with cattle. Since the cattle boom the Fort Worth economy has been stimulated by two significant industries-oil and aircraft manufacturing.

The area is highly urbanized with a diverse economic base concentrated in the manufacturing, service, and retail industries. With a large number of defense industries and military supply and service businesses, the area has been affected more than most by the reduction in defense expenditures. AFP 4 was a major employer in the area, employing 30,000 local employees annually during the 1980s.

The Fort Worth Metropolitan Area has a population of 1,446,219. As of March, 2001 the retail trade, services, manufacturing, and construction industries provided jobs for Fort Worth Metropolitan Area's civilian work force of 905,780; the jobless rate was steady at 3.2 percent. The major industries of Tarrant County, with a combined industrial work force of approximately 282,430, included (from greatest to least in terms of work force): administrative support; professional specialty; and executive, administrative, managerial, and sales. The largest manufacturing employer was Lockheed Martin with a work force of 12,000, and the largest nonmanufacturing employer was American Airlines with a work force of 30,000 (Fort Worth Chamber of Commerce, Intro Fort Worth 2001).

The City of White Settlement is approximately 10 miles west of downtown Fort Worth. White Settlement is a relatively small town with an estimated 2000 population of 14,831. The major industries of the area with a combined work force of approximately 2,761, included: education, retail, manufacturing, and pharmaceutical support (White Settlement Chamber of Commerce, 2001).

Westworth Village is a small municipality. Most of the citizens living in this town work in Fort Worth, White Settlement, or at NAS Fort Worth JRB.

5.2 General Profile of NAS Fort Worth JRB Vicinity. NAS Fort Worth JRB is a community which employs approximately 10,064 active duty military personnel, reservists, and civilians. The flight line and most of its supporting services are located in the north end of the base. Base offices, services, housing, and shopping areas are located in the developed, northeast corner of the base. Several recreational facilities are also located on the base including the golf course, library, bowling center, and swimming pool.

5.3 Community Involvement History. NAS Fort Worth JRB maintains a good rapport with the local communities of Fort Worth, White Settlement, and Westworth Village. These relationships are strengthened by events such as the biannual air show, which attracts over 200,000 visitors to NAS Fort Worth JRB.

Over the past several years, many events have been organized for Earth Week. Activities have included; tree planting ceremonies, a Special Olympics, a student tour, a 5-kilometer run, and a picnic were held during Earth Week on base. In addition, several information booths were set up in the Ridgmar Mall. The booths were manned by individuals from the Texas Parks and Wildlife Department, foresters from the state and City of Fort Worth, composting and recycling coordinators, AFCEE and AFP 4, the Restoration Advisory Board (RAB), and other environmental organizations.

The Navy Public Affairs office furnishes a general fact sheet (see Appendix C) to NAS Fort Worth JRB visitors. The fact sheet outlines the mission statement of NAS Fort Worth JRB, the installation's history, and on-base commands and units.

5.4 Evaluation of Current Community Relations Program. NAS Fort Worth JRB is not included on the National Priorities List; therefore, the community relations provisions established in RCRA and CERCLA are not directly applicable. Nevertheless, the Air Force works diligently to maintain good relations with community members, and local, state and federal governments in order to increase awareness of the environmental restoration programs at NAS Fort Worth JRB. The central component of the community relations program is the active Joint Restoration Advisory Board (RAB).

The Carswell AFB RAB was created in 1992 to replace the Technical Review Committee (TRC) that had been established in 1991. The RAB was composed of the original TRC members and several new members. During the same period, AFP 4 developed a TRC, which was later changed to a RAB. Since members of the community saw the base and the plant as two components of the same organization, the Air Force, the two RABs were merged to create the current Joint RAB.

The RAB meets every quarter in the Desert Storm Building on NAS Fort Worth JRB. The RAB meetings are well advertised and open to the public. Names of chairpersons, their phone numbers and responsibilities are presented in Table 5-1

The RAB members are active participants who take seriously their responsibilities to ask clarifying questions, communicate with other members of their respective neighborhoods, and participate in other community outreach activities associated with the cleanup. RAB members play an active role in establishing agendas for future meetings based on their perceptions of public concerns.

The Joint RAB currently has an extraordinarily energetic and concerned community co-chair. She allows her name to be published in fact sheets, news releases and handouts that are distributed in the local area. She reasons that some people who would like to know more about the RAB and its activities would feel more comfortable talking with a local community member.

The current NAS Fort Worth JRB/AFP 4 RAB Charter is presented in Appendix G. The Charter sets forth the purpose, membership responsibilities, and operating procedures. The original Charter was signed on August 8, 1996. The effective date of the current Charter is February 8, 2001. The provisions of the Charter shall be satisfied and considered complete when 2/3 of the members agree in writing to terminate the RAB.

The Air Force maintains a mailing list with the names and addresses of the RAB members and other citizens and organizations who have expressed an interest in receiving current information about the cleanups at AFP 4 and Carswell. The list is updated continuously and used at least once each quarter when fact sheets are prepared and distributed to announce RAB meetings and their agendas, address environmental concerns expressed since the last fact sheets, and provide information on other NAS Fort Worth JRB cleanup related community relations activities. The list is also used as necessary to inform the public about other items of interest that need their immediate attention. A fact sheet concerning the NAS Fort Worth JRB RAB is presented in Appendix E.

The Air Force participates in meetings with the WVRA to discuss property and local economic issues. The Director of the WVRA provides updates on the issues discussed at these meetings to the RAB. Cleanup officials hold town meetings as necessary to address specific public concerns as additional sites approach remedial action, removal actions are initiated and completed, or as otherwise necessary. Potential public meeting locations are listed in Section 6.7 of this CRP.

Air Force personnel and environmental regulators from the EPA and TNRCC hold monthly meetings to monitor environmental restoration efforts and to ensure adequate, timely, cost-effective responses. The results of those meetings are briefed at the appropriate RAB to keep citizens fully informed.

RAB members, cleanup officials and public affairs personnel from AFCEE and AFP 4 also take part in the NAS Fort Worth JRB biannual open house. The two-day event draws between 250-300 thousand people, many of whom come by the display dedicated to explaining the ongoing cleanup, the role of the RAB, and public participation opportunities. This is one of the events used to add to the RAB mailing list.

Events at NAS Fort Worth JRB that affect federal funding or the size of the work force are of major interest to government officials and information about them are routinely sent to those officials. A list of federal, state, and local government officials is provided in Appendix D of this CRP.

The Air Force also works with the local news media to provide information of interest to the public. News releases and paid advertisements are sent to the Fort Worth Star Telegram, the North West Tarrant County Times Record and the Suburban Press to announce meetings or events of interest. Both AFCEE and AFP 4 public affairs representatives maintain active relationships with reporters from these news outlets. In addition, NAS Fort Worth JRB public affairs has connections with local radio and television stations and those media are used to provide information about the cleanup or associated activities. A list of media outlets in the Metroplex area is provided as Appendix F to this plan.

NAS Fort Worth JRB houses all documentation concerning decisions for action or closure under the NAS Fort Worth JRB in Information Repositories at the White Settlement and Central Fort Worth Public Libraries. The repositories are updated as new information comes available.

Table 5-1. Restoration Advisory Board Chairpersons Naval Air Station Fort Worth Joint Reserve Base Carswell Field, Texas			
Name	Phone Number	Responsibility	Electronic Mail Address
J'Nell Pate, Ph.D.	(817) 444-4730	Community Co-chairperson	jnellpate@msn.com
Don Ficklen	(210) 536-5290	Government Co-chairperson Representing AFCEE	holmes.ficklen@brooks.af.mil
Charles Pringle	(210) 536-4477	Government Co-chairperson Representing AFBCA	charles.pringle@brooks.af.mil
George Walters	(800) 982-7248 Ext 416	Government Co-chairperson Representing Air Force Plan 4	george.walters@wpafb.af.mil
AFBCA	Air Force Base Conversion Agency		
AFCEE	Air Force Center for Environmental Excellence		

5.5 Community Assessment. In order to ensure that future community outreach activities (Section 6.0) are consonant with the needs of the communities surrounding NAS Fort Worth JRB, interviews with members of those communities were conducted February 5-9, 2001. The interviews also served as a forum for Air Force community relations specialists to meet members of the community and personally encourage open relationships.

For these interviews AFCEE, AFP 4, and Fort Worth JRB Public Affairs worked together to generate a proposed list of interviewees consisting of elected officials, RAB members, members of local environmental groups, news media representatives, and other interested community members. The final interview schedule included 43 participants, 6 of whom defaulted. Most interviews were scheduled at the interviewee's workplace or office; however, a conference room in a local hotel was also available as an alternative off-base interview location.

In general, respondents expressed mild concern regarding Lake Worth (Fort Worth's water supply), environmental cleanup, base housing, air quality, and noise issues. Most interviewees said that sufficient information is available concerning the NAS Fort Worth JRB IRP. The following sections provide more detail about their responses.

5.5.1 Awareness of Potential Environmental Problems at the Installation. Overall, interviews indicate that members in the communities surrounding Ft. Worth JRB are comfortable with the environmental clean up of Carswell/AFP 4. Individuals expressed normal concerns relative to general environmental issues but no one had any serious misgivings about ongoing or future cleanup activities. This was true even among those few interviewees with extremely limited knowledge of the cleanups. The prevailing attitude was one of satisfaction with the information received and the work being done by local RAB members.

The most frequently mentioned environmental concerns surrounded contamination and silting in Lake Worth, particularly among those who fished in the lake. Anticipating this issue, a number of interviewees were deliberately chosen for their homes' proximity to the lake or past participation in RABs where they had expressed concern about fish tissue sampling and sedimentation tests. During the interviews, those people were questioned at some length about their perceptions and concerns. All indicated that while they felt anxious about the state of the lake they were confident that the Air Force was responding to their concerns and would continue to do so in a forthright and timely manner.

White Settlement, Lake Worth, River Oaks, Westworth Village, Sansom Park and Lakeside are primarily residential communities with close ties to both the base and the businesses located there. None of the communities are experiencing any large degree of economic growth or influx of people, though that is expected to change over the next few years. Interest in environmental issues, while present, did not seem to be a strong consideration for most people. Most of those interviewed expressed environmental concern when there was a potential of direct effect. City official's concerns centered on the aquifer, as the cities pump their own drinking water and many residents have private wells, and on Lake Worth.

5.5.2 Communication with the Air Force about the Environmental Program. Very few of the interview participants reported ever having contacted the base regarding environmental and/or public safety issues. Nonetheless, if concerns should arise in the future, one-third of the interviewees indicated that they would contact the installation Commander's office. Others said they would contact base Public Affairs, base Public Works, or the Carswell Redevelopment Authority. Of the three respondents who had contacted the base, two had contacted Public Affairs and the other had contacted the base Public Works office-all were satisfied with the responses they received.

5.5.3 Groups or Media Sources Most Relied on for Information About NAS Fort Worth JRB. The majority of the interview participants said they rely most on the *Fort Worth Star Telegram* for news and information about the metroplex. However many said that for community news, including news about Ft. Worth JRB, they were more likely to read either the North West Tarrant County Times-Record or the Suburban Press, local weekly newspapers. A monthly breakfast meeting sponsored by a local judge was mentioned a number of times as a powerful way to get the word out quickly to influential citizens. In addition, the White Settlement Chamber of Commerce and the Lake Worth School system both offered their web sites as hosts for any cleanup news of community interest.

5.5.4 Awareness of the Information Repositories and Suggested Locations. Approximately one half of the interview respondents are aware of the Information Repositories. However, only a few respondents had ever visited the repositories. All consider the present locations to be convenient and accessible.

5.5.5 Need and Desire for Community Relations Activities to Disseminate IRP-Related Information. Most respondents said they would "like more information about the cleanup" but had no specific concerns and very few agreed to have their names added to the mailing list for fact sheets and RAB meeting information. No one who is not already attending the RAB indicated that they would do so unless there was an issue that came to light and that had a direct impact on them. The consensus of opinion among interviewees is that the cleanup programs at Carswell and AFP 4 are being conducted in an open and honest fashion. They express confidence that there is sufficient public oversight in place via the current RAB members, and that lacking evidence to the contrary, respondents will trust the current process to watch out for their interests.

5.5.6 Involvement in Public Meetings. Four interview participants were RAB members and had attended public meetings related to environmental issues at NAS Fort Worth JRB. In addition, three elected officials had attended a public meeting related to the NAS Fort Worth JRB environmental program. Of the remaining respondents, none had attended a NAS Fort Worth JRB sponsored public meeting either because they were not aware of the meeting or the topic presented at the meeting did not personally or professionally relate to them.

Respondents indicated that they would most likely attend a meeting to hear about environmental progress, risks, and cleanup methods if the topics affected them directly. Some specific topics mentioned included implications of the environmental program on business development, beautification of the base and the impacts that would have on surrounding housing areas.

The overall trend of reduced attendance at recent RAB meetings seems to reflect the comfort level expressed during the interviews. The issue of cleanup at Carswell/AFP 4 is no longer the "hot" issue it once was. People perceive the cleanup as going well and successful and are content to let it progress. They want the Air Force to continue keeping them informed. When asked whether or not a change in location, day or time of day would make it easier for them to attend a RAB meeting, the overwhelming reaction was "perhaps easier" but "no more likely".

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6.0 RECOMMENDED COMMUNITY RELATIONS APPROACH

Below are descriptions of community relations activities which will either continue or supplement the existing NAS Fort Worth JRB community relations program detailed in Section 5.4. The approach was derived from information collected during the community interviews described in section 6.1 below. Table 6-1 shows the activities, recommended frequency, and schedule within the IRP at NAS Fort Worth JRB.

6.1 Community Interviews. Informal community interviews are conducted, by technical and community involvement specialists from AFCEE and AFP 4, whenever the opportunities arise. This sort of qualitative data gathering allows the cleanup teams to stay abreast of concerns while they are "top of mind" issues and respond to them quickly. To enhance this type of communication, community relations specialists for AFCEE and AFP 4 will increase the use of e-mail and instant messaging between community RAB members, news media representatives, local officials and concerned community members. They will also meet informally with local officials, community group representatives, and members of the public around Fort Worth JRB whenever possible to stay connected with the communities' concerns.

6.2 Community Relations and News Media Coordinator. The following persons are points of contact to answer news media and community inquiries concerning environmental investigations and clean-up activities.

Carswell On-Base cleanup: Mike Hawkins, (210) 536-3072 or mike.hawkins@brooks.af.mil

AFP 4 Cleanup: Don Yates, (800) 982-7248 ext. 301 or donald.yates@wpafb.mil

For general information about Ft. Worth JRB: Don Ray, (817) 782-7815 or raydon@cnrf.nola.navy.mil

6.3 Administrative Record File*. The Administrative Record file documents the decision process used for the selection of cleanup actions at NAS Fort Worth JRB. It includes all technical documents, records of public meetings and other outreach activities, and any other documents upon which cleanup decisions are based. The Record file for NAS Fort Worth JRB is in the following location.

White Settlement Library
8215 White Settlement Road
White Settlement, TX 76108
(817) 367-0166

* Identifies activities that are required under the IRP. The other activities in this section are not required, but will be conducted by AFCEE or AFBCA to enhance communication between the installation and surrounding community.

Figure 6-1. Frequency of Recommended Community Relations Activities
 NAS Fort Worth JRB, Carswell Field, Texas

COMMUNITY RELATIONS ACTIVITIES	FREQUENCY							Decision Document
	Quarterly	Semiannually	Biannually	Ongoing Activity	When Necessary	End of Feasibility Study		
Formal Community Interviews			✓					
Informal Community Interviews				✓				
Administrative Record (Updates)	✓							
Information Repository (Updates)	✓							
Fact Sheets	✓				✓			
Restoration Advisory Board (RAB) Interaction				✓				
RAB Meetings	✓							
Other Public Meetings					✓		✓	
Public Comment Period							✓	
Responsiveness Summary								✓
Notification Procedures					✓		✓	✓
Mailing List						✓		
News Media Coordination					✓		✓	
Community Relations Implementation					✓			
Risk Communication (used during all other community relations activities)					✓			
Participate in community outreach event			✓					
Participate in installation open house			✓					
Revision of Community Relations Plan			✓					

The Library is open from 9:30 a.m. to 8:30 p.m. Monday and Thursday; 9:30 a.m. to 6:00 p.m. Tuesday and Wednesday; 9:30 a.m. to 1:30 p.m. Saturday; and closed on Friday, Sunday, and major holidays. The Administrative Record will be updated on a regular basis as documents are completed. The record will be maintained for at least ten years after completion of all remedial actions at NAS Fort Worth JRB.

6.4 Information Repository*. The Information Repository is a project file containing site information, documents on site activities, and general information about the IRP and the RCRA Corrective Action Program at NAS Fort Worth JRB. The purpose of the Information Repository is to allow open and convenient public access to all site-related documents approved by the relevant parties for public disclosure. In September 1991, the Information Repository was established at the following locations:

White Settlement Public Library
8215 White Settlement Road
White Settlement, TX 76108
(817) 367-0166

Central Fort Worth Public Library
300 Taylor Street
Fort Worth, TX 76102
(817) 871-7701

The White Settlement Public Library is open from 9:30 a.m. to 8:30 p.m. Monday and Thursday; 9:30 a.m. to 6:00 p.m. Tuesday and Wednesday; 9:30 a.m. to 1:30 p.m. Saturday; and closed on Friday, Sunday, and major holidays. The Central Fort Worth Public Library is open from 9:00 a.m. to 9:00 p.m. Monday through Thursday; 10:00 a.m. to 6:00 p.m. Friday and Saturday; and 12:00 p.m. to 6:00 p.m. Sunday. The Information Repositories also will be revised and then updated on a continual basis as documents are completed.

6.5 Fact Sheets. Fact sheets are concise, non-technical reports about the IRP. They are distributed to the public to explain regulatory requirements, provide updates and progress reports, explain technical issues, and respond to community concerns or information needs. Fact sheets will be prepared and published on a quarterly basis unless there is a need for a more frequent distribution. Fact sheets are delivered in paper format and by electronic mail.

* Identifies activities that are required under the IRP. The other activities listed in this section are not required, but will be conducted by AFCEE or AFBCA to enhance communication between the installation and surrounding community.

6.6 Restoration Advisory Board*. Regular meetings of the RAB will be held approximately every three months to review progress of the IRP, present NAS Fort Worth JRB and AFP 4 cleanup technologies, and discuss matters of interest. Public notices of all RAB meetings held will be placed as paid ads in the local weekly newspapers. Additionally, flyers announcing the meetings will be placed in local libraries and community centers. Meeting minutes, including comments and recommendations of the RAB, will be placed in the Administrative Record and Information Repository.

6.7 Community Outreach Activities. The Air Force will participate in the biannual Fort Worth JRB Open House and will invite members of the RAB to work with them. At the Open House, displays and exhibits will be presented that inform participants about the cleanups at Carswell and AFP 4. Information about the RAB, its purpose and how citizens can become involved will also be available.

The Air Force will also work with the local school systems to seek opportunities for educational programs at the middle school, junior or senior high school levels. Programs can include hands-on demonstrations of cleanup technologies, demonstrations of groundwater flow and remediation, career fairs or other suitable programs. In any case the information presented will be grade-level appropriate and will be designed in concert with administrators and teachers to ensure curriculum fit.

6.8 Public Meetings*. The opportunity for public meetings must be provided when Remedial Investigation/Feasibility Study and Engineering Evaluation/Cost Analysis reports become available for public review. Public meetings are held to explain the preferred cleanup alternative considered in the remedial reports), to answer citizens' questions, and to accept public comment. Public meetings are usually conducted during the public comment period described below. Date, time, and location of these meetings will be announced in press releases, paid public notices, and general mailings to interested parties. Full transcripts of the meetings will be taken and provided in both the Administrative Record and the Information Repository.

6.9 Public Comment Period*. Generally, a public comment period of at least 30 days will be provided after the preferred cleanup alternative has been published. However, the public comment period may be reduced or eliminated if a delay in the cleanup would adversely impact human health or the environment. The public comment period provides an opportunity for all interested parties to review the cleanup alternatives provided in the Engineering Evaluation/Cost Analysis and other decision documents, as well as other documents in the Information Repository, and to provide comments.

Public comment periods will be announced in press releases, paid public notices, and general mailings. Comments should be made in writing, signed by the sender, and submitted to the appropriate office by the date that the public comment period ends. Public comments will be documented by the Air Force in the responsiveness summary described below.

* Identifies activities that are required under the IRP. The other activities listed in this section are not required, but will be conducted by AFCEE or AFBCA to enhance communication between the installation and surrounding community.

6.10 Responsiveness Summary*. The responsiveness summary documents public comments received during the comment period and their consideration in selection of the final remedial action. The responsiveness summary is prepared as part of the Decision Document, which describes the rationale for the action(s) selected. All responsiveness summaries will be included in the Administrative Record and Information Repository.

6.11 Notification Procedures*. As stated earlier, public notices are required when Decision Documents become available, and at the beginning of public comments periods. Additionally, public notices are required to announce the availability of the Administrative Record, Information Repository, and all public meetings for the IRP sponsored by NAS Fort Worth JRB.

Notices will be published in the *Fort Worth Star Telegram* newspaper at least 30 days before the relevant activity, and as deemed appropriate by the Air Force to remind the community of Administrative Record/ Information Repository availability.

6.12 Mailing List*. The Air Force has compiled an IRP mailing list of concerned citizens, elected officials, and media representatives. The Air Force will expand the list to include the interview participants (as requested) and all other interested parties. The Air Force will make continuing efforts to add interested parties to the mailing list.

AFCEE and AFP 4 will maintain the mailing list and will protect the privacy of all individuals who are not serving in an official capacity. The list will not be released to the public and will be used solely for distribution of information on environmental programs at the base. Fact sheets, newsletters, and other relevant information will be sent to all persons or groups on the mailing list.

6.13 News Media Coordination. The Air Force will disseminate press releases to local newspapers and radio and television stations on the mailing list for all activities, decisions, updates, or milestones connected with the IRP and other cleanup processes. Press releases will be coordinated with the TNRCC, when appropriate. Media inquiries will be directed to the coordinator for disposition. Appendix F contains a list of the media sources in the NAS Fort Worth JRB region and associated with the military. The list is categorized by the type of media. Media visits and requests for interviews will be coordinated with the appropriate Public Affairs office.

6.14 Community Relations Implementation*. The AFCEE and the ASC are responsible for implementing the community relations activities described in this CRP.

- Identifies activities that are required under the IRP. The other activities listed in this section are not required, but will be conducted by AFCEJZ or AFBCA to enhance communication between the installation and surrounding community

6.15 Risk Communication. Risk communication is an empirically based protocol that enhances a communicator's opportunities to establish meaningful dialogue with parties in an atmosphere characterized by low trust and high risk. Typically, the risk communicator finds that their first task is to breach the wall created between themselves and the people they are trying to communicate with. This wall is one result of the highly emotional state that people who feel angry, at risk or in some danger naturally find themselves in. Research indicates that the best way to do this is to listen carefully and with honest empathy. This can lead to a more trusting relationship between parties and thus to the development of a cognitive "space" necessary to successfully apply techniques spelled out in the risk communications literature. Air Force representatives should continually work to hone their risk communications skills.

In all communications with the public they should ensure that scientific and technical matters are conveyed in a manner easily understood by an average person with little environmental or technical background. This is especially important when introducing new information. Communicators should remain sensitive to the needs of their audiences and be prepared to stop, answer questions, and provide examples or analogies that are meaningful to the people who have taken their time to come learn about the issues at hand.

6.16 Revision of Community Relations Plan 3*. Periodic revisions of the CRP are required throughout RCRA Corrective Action Program and IRP processes to address release of Decision Documents and assess changing or new concerns as the program progresses from study to cleanup. The AFCEE is responsible for determining when revisions are necessary. At a minimum, revisions will be accomplished whenever conditions change significantly or when the Air Force identifies more effective community relations activities for achieving the objectives of the CRP. The CRP will be reviewed at least biannually to determine if changes or updates are needed.

* Identifies activities that are required under the IRP. The other activities listed in this section are not required, but will be conducted by AFCEE or AFBCA to enhance communication between the installation and surrounding community

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**APPENDIX A
GLOSSARY**

Glossary

Aboveground Storage Tank	A storage unit, of any size or shape, which is maintained above ground level and is used to store liquids, such as water, kerosene, diesel fuel, and jet propellant fuel. Leaks and spills from these may be sources of contamination.
Administrative Record	Required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 113(k), an administrative record is a combination of documents and other materials which provide the basis for the installation's selection of a response action. The record is required for every response action and may be used for judicial review.
Air Force Base	The agency responsible for coordination of closure activities, management of environmental Conversion cleanup, and interaction of all closing Air Force bases. The phone number for the Naval Air Station Agency (AFBCA) Fort Worth Joint Reserve Base, Carswell Field (NAS Fort Worth) Conversion Agency is (8 17) 73 1-8973. Mr. Olen Long is the Site Manager for NAS Fort Worth.
Air Force Center for Environmental Excellence (AFCEE)	An agency established to provide the Air Force with centralized, in-house support for handling all for aspects of environmental cleanup, planning, and compliance.
Air Force Plant 4	A government-owned/contractor operated Air Force manufacturing facility adjacent to NAS Fort Worth. The host contract, Lockheed Martin, manufactures F-16 fighter planes.
Aquifer	An underground rock formation composed of materials such as sand, soil, or gravel that can store and supply groundwater to wells and springs.
Aquitard	A body of impermeable or distinctly less permeable material which prevents the flow of groundwater.
Archeological Resource	Any material remains of past human life that are capable of contributing to scientific or humanistic understanding of past human behavior, cultural adaptation, and related topics through the application of scientific or scholarly techniques.
Area of Concern	Any discernible unit or area which may have received solid or hazardous wastes or wastes containing hazardous constituents via accidental release or deliberate and intentional disposal. Areas of Concern are investigated to determine the presence and extent of contamination.
Asbestos	A mineral fiber that can pollute air or water and cause asbestosis when inhaled. It was formerly used widely as an insulation material by the construction industry; often found in older buildings. The Environmental Protection Agency (EPA) has banned or severely restricted its use in manufacturing and construction.
Base Environmental Coordinator (BEC)	The Air Force Base Conversion Agency person responsible for the Installation Restoration Program
Bedrock	The rock encountered beneath the soil zone and unconsolidated sediment zone.
Biodiversity	Refers to the variety and variability among living organisms and the ecological complexes in which they occur. Diversity can be defined as the number of different items and their relative frequencies.
BRAC Cleanup Plan (BCP)	A document that serves as a road map to expedite environmental cleanup at closure bases. The plan details all activities required for property disposal, It describes the status, management and response strategy, and action items related to the ongoing environmental restoration and associated compliance programs.

BRAC Cleanup Team (BCT)	A group established to develop and maintain the BRAC Cleanup Plan and to implement environmental restoration activities required for property disposal.
Cleanup	Actions taken to deal with a release of hazardous substances that could affect public health or the environment. The term is often used broadly to describe various response actions or phases of remedial responses, such as the remedial design/remedial action.
Closure	The procedure a landfill operator must follow when a landfill reaches its legal capacity for solid waste ceasing acceptance of solid waste and placing a cap on the landfill site.
Comment Period	A time period for the public to review and comment on various documents and EPA actions. For example, a comment period is provided when EPA proposes to add sites to the National Priorities List (NPL). A minimum 30-day comment period is held to allow community members to review and comment on a draft RI/FS and proposed plan; it must be extended an additional 30 days upon timely request. A comment period is required to amend the ROD. Similarly, a 30-day comment period is provided when EPA proposes to remove a site from the NPL.
Community	In ecology, a group of interacting populations in time or space. Sometimes, a particular sub-grouping may be specified, such as the fish community in a lake or the soil arthropod community in a forest.
Community Cochair	A representative from the community who serves as an equal partner with the Department of Defense (DOD) Co-Chair to lead the Restoration Advisory Board.
Community Relations	The EPA effort to establish two-way communications with the public to create an understanding of EPA programs and related actions, to ensure public input into decision-making processes related to affected communities, and to make certain that the Agency is aware of and responsive to public concerns. Specific community relations activities are required in relation to Superfund and IRP remedial actions.
Community Relations Plan	A formal written proactive public information program prepared and implemented by each installation, regardless of National Priority List status. The plan must take into account the public comment period that precedes final selection of remedial or corrective action. The plan must address/include background and history of community involvement at the site, IRP objectives, community relations activities to be used to reach the objectives, and a mailing list of involved persons. The plan must be based on discussions with State and local authorities, civic and community organizations, interested residents and local news media representatives.
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)	A formal written proactive public information program prepared and implemented by each installation, regardless of National Priority List status. The plan must take into account the public comment period that precedes final selection of remedial or corrective action. The plan must address/include background and history of community involvement at the site, IRP objectives, community relations activities to be used to reach the objectives, and a mailing list of involved persons. The plan must be based on discussions with State and local authorities, civic and community organizations, interested residents and local news media representatives
Concentration	The relative amount of a substance when combined or mixed with other substances.
Conservation	Wise management and use of natural resources to provide the best public benefits for current and future generations.
Contaminant	Any physical, chemical, biological, or radiological substance or matter that has an adverse affect on air, water, or soil.

Contamination	Introduction into water, air, and soil of microorganisms, chemicals, toxic substances, wastes, or wastewater in a concentration that makes the medium unfit for its next intended use. Also applies to surfaces of objects, buildings, and various household and agricultural use products
Cantonment Area	A portion of a military facility that is under the exclusive jurisdiction and complete control of the unit residing there.
Critical Habitat	The specific designated area declared essential for the survival of a protected species under authority of the Endangered Species Act
Cultural Resources	A generic term commonly used to include buildings, structures, districts, sites, and objects of significance in history, architecture, archeology, engineering, or culture.
Cultural Resources Inventory	A detailed descriptive listing of an installation's cultural resources, including evaluation of significance according to National Register criteria.
Decision Document (DD)	A means of recording significant decisions in the IRP. Steps or stages which merit a DD include: selecting a remedial action, initiating long-term monitoring, initiating a removal action, closing out a site, and reactivating a site. These documents may be used for both NPL sites or non-NPL sites.
Defense Environmental Restoration Account (DERA)	A DOD appropriation provided by Congress specifically for environmental restoration efforts.
Defense Environmental Restoration Program (DERP)	A DOD program, mandated in the SARA Section 120, which includes the IRP as a component.
Disposal	Final placement or destruction of toxic, radioactive, or other wastes; surplus or banned pesticides or other chemicals; polluted soils; and drums containing hazardous materials from removal actions or accidental releases. Disposal may be accomplished through use of approved secure landfills, surface impoundments, land farming, deep-well injection, ocean dumping, or incineration.
Endangered or Threatened Species	A species of fauna or flora that has been listed by the Fish and Wildlife Service for special protection and management pursuant to the Endangered Species Act.
Endangered or Threatened Species	An analysis of removal alternatives for a site, similar to a remedial program feasibility study. Upon completion, the EEYCA must be made available for a 30--day public comment period. This comment period must be extended by at least 15 days upon timely request
Environment	The natural and physical environment, excluding social, economic, and aesthetic concerns that are normally included in discussions of environmental actions within the United States.
Environmental Equity/Justice	Equal protection from environmental hazards for individuals, groups, or communities regardless of race, ethnicity, or economic status. This applies to the development, implementation, and enforcement of environmental laws, regulations, and policies, and implies that no population of people should be forced to shoulder a disproportionate share of negative environmental impacts.
Environmental Noise	The intensity, duration, and character of sounds from all sources.

Environmental Protection Agency (EPA)	See USEPA.
Feasibility Study (FS)	The second part of a two-part study called a Remedial Investigation/Feasibility Study, which usually begins as soon as the Remedial Investigation is underway. It is a description and analysis of the potential cleanup alternatives for a site or and NPL site. The restoration phase identifies the means for development, evaluation, selection and description of remedial action alternatives. A Feasibility Study involves identifying and evaluating the most appropriate technical approaches for addressing contamination problems. The alternatives are evaluated for their effectiveness in protecting human health and the environment.
Fish and Wildlife Management	Fish and wildlife management includes marine mammal protection, anadromous fish protection, game and nongame species management, migratory bird management, endangered species protection, and animal damage control.
Floodplain	The 100-year floodplain is the lowland area adjoining inland and coastal waters, including flood-prone areas of offshore islands that would be inundated by the base (100-year) flood. The critical actions (or 500-year) floodplain is the area that would be inundated by a 500-year flood.
Fungicide	Any substance that kills or inhibits the growth of fungi.
Groundwater	Water found beneath the earth's surface that fills spaces between materials such as sand, rock, soil, or gravel. Rain water that does not evaporate or drain to streams, rivers, ponds, or lakes slowly seeps into the ground forming a groundwater reservoir. Groundwater flows much more slowly than surface water, often along routes that lead to streams, rivers, ponds or lakes. In aquifers, groundwater occurs in sufficient quantities such that it can be withdrawn and used for drinking water, irrigation, and other purposes.
Habitat	An area where a plant or animal species lives, grows, and reproduces, and the environment that satisfies any of these life requirements.
Hazardous Material or Hazardous Substance	Any material that because of its quantity, concentration, or physical, chemical, or infectious characteristics may pose a substantial hazard to human health or the environment when released or spilled.
Hazardous Waste	A solid waste, or combination of solid wastes, which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. It possesses at least one of four characteristics (ignitability, corrosivity, reactivity or toxicity), or appears on special EPA lists. Regulated under the Resource Conservation and Recovery Act (KIM).
Hazardous Waste Landfill	An excavated or engineered area on which hazardous waste is deposited and covered; proper protection of the environment from the materials to be deposited in such a landfill requires careful site selection, good design, proper operation, leachate collection and treatment, and thorough closure and post-closure care.
Hazardous Waste Management	Systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous wastes.
Historic Property or Resource	Physical remains of any prehistoric or historic district, site, building, structure, or object significant in U.S. history, architecture, archeology, engineering, or culture and included on, or eligible for, the National Register. The term includes artifacts, records, and remains that are related to such a district, site, building, structure, or object.

Historical and Archeological Resources Protection	Identification, evaluation, recordation, documentation, curation, acquisition, protection, rehabilitation, restoration, management, stabilization, maintenance, and reconstruction of cultural resources, or any combination of the foregoing.
Human Health Risk	The likelihood that a given exposure or series of exposures may have or will damage the health of individuals.
Hydrogeologic	A word used in reference to the science of hydrogeology, which studies the interactions among surface water, groundwater, and the earth.
Infiltration	The flow of fluid into a substance through pores or small openings. The word is commonly used to denote the flow of water into soil material
Information Repository	A file containing current information, technical reports and reference documents related to under the IRP and/or Superfund. The repository is usually located in a public building such as a school, public library, or city hall which is conveniently located for access by local residents. The Information Repositories for both AFP 4 and NAS Fort Worth are located in the Fort Worth Central Public Library Main Branch and in the White Settlement Library.
Insecticide	A chemical product used to kill and control nuisance insect species (also see pesticide).
Installation Restoration Program	A DOD program to identify the location of former hazardous waste disposal sites, to determine if any contamination releases have occurred, and to minimize the associated hazards of public health.
Interim (Permit) Status	Period during which treatment, storage and disposal facilities coming under RCRA in 1980 are temporarily permitted to operate while awaiting denial or issuance of a permanent permit. Permit issued under these circumstances are usually called Part A or Part B permits.
Long-Term Monitoring	A program of water, soil, or sediment analysis intended to track the migration (or non-migration) of contaminants. Monitoring is implemented without concurrent implementation of remedial action
Monitoring	Periodic or continuous surveillance or testing to determine the level of compliance with statutory requirements and/or pollutant levels in various media or in humans, animals, and other living things.
Monitoring Wells	Special wells drilled at specific locations on or off a hazardous waste site where groundwater can be sampled at selected depths and studied to determine the direction of groundwater flow and the types and amounts of contaminants present.
National Priority List (NPL)	A list of the most serious hazardous waste sites identified for possible long-term remedial response. These sites (federal and state) contain hazardous materials that may cause an unreasonable risk to the health and safety of individuals, property, or the environment. Each site on the list qualifies for an in-depth investigation and possible cleanup action. This list is based primarily on the score a site receives via the Hazard Ranking System. This list is updated yearly. AFP 4 is listed on the NPL. NAS Fort Worth is not on this list.
Natural Resources	Land, water, and their associated flora and fauna.
Natural Resources Management	Action taken to manipulate, alter, or conserve environmental, human, and natural resources in harmony with each other to meet present and future needs.
Naval Air Station Fort Worth Joint Reserve Base, Carswell Field (NAS Fort Worth)	Formerly Carswell Air Force Base. The Navy assumed operations of the base on 1 October 1994. Reserve units from the Air Force, Army, Marines, Coast Guard, and Navy train on the base

No Further Action	This term has been replaced by the term "site close-out." Site close-outs may occur during several different stages of the cleanup process, depending upon the particular site.
No Further Remedial Action Planned	Determination made by EPA following a preliminary assessment that a site does not pose a significant risk and so requires no further activity under CERCLA.
Oil/Water Separator	A wastewater pretreatment device or fuel-recovery device installed to remove oil from water before the water is released to the environment.
Ordnance	Military material such as combat weapons of all kinds with ammunition and equipment required for their use. Ordnance includes all things that make up a ship's or aircraft's armament - guns, ammunition, and all equipment needed to control, operate, and support weapons. It includes combustion products that do not initially react with the surroundings, and pollution products formed by the reaction of combustion products with surrounding air.
Paleochannel	Older stream channel that has been filled with recent alluvium.
Parts Per Billion (ppb)/Parts Per Million (ppm)	Units commonly used to express contamination ratios, as in establishing the maximum permissible amount of a contaminant in water, land, or air.
Pesticides	Any substance, organic or inorganic, used to destroy or inhibit the action of plant or animal pests; the term thus includes insecticides, herbicides, fungicides, rodenticides, miticides, fumigants, and repellents. All pesticides are toxic to humans to a greater or lesser degree. Pesticides vary in biodegradability.
Petroleum System	Petroleum, including crude oil or any fraction thereof, that is liquid at standard conditions of temperature and pressure (60 degrees F and 14.7 psia).
Petroleum UST	A UST system that contains petroleum or a mixture of petroleum with de minimis quantities of other regulated substances. Such systems include those containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.
Plume	A visible or measurable discharge of a contaminant from a given point of origin. A three-dimensional zone of contamination in an aquifer or soil. A plume may extend downgradient for some distance depending on site hydrogeologic and geochemical conditions. The major plume discussed at NAS Fort Worth is the AFP4 TCE plume.
Precipitation	Removal of hazardous solids from liquid waste to permit safe disposal; removal of particles from airborne emissions.
Preferred Alternative	The detailed cleanup alternative that is selected by a Major Command for review and concurrence by the Air Force Installation Restoration Management committee. After review and acceptance by Air Force, regulatory agencies, and the public, the preferred alternative becomes the Remedial Action outlined in the Remedial Action Plan.
Preliminary Assessment (PA)	Part of the IRP, it is the process of collecting and reviewing available information about a known or suspected hazardous waste site or release. The Air Force, EPA, or State uses this information to (PA) determine if the site requires further study. If further study is needed, a site inspection is done.

Proposed Plan	A public participation requirement of CERCLA in which EPA summarizes for the public the preferred cleanup strategy, rationale for the preference, alternatives presented in the detailed analysis of the remedial investigation/feasibility study, and waivers to cleanup standards of Section 121(d)(4) that may be proposed. This may be prepared either as a fact sheet or a separate document. In either case, it must actively solicit public review and comment on all alternatives under consideration.
Public Affairs	Installation personnel who are responsible for maintaining proper communication channels with the Office public regarding site restoration activities.
Public Comment Period	A designated time period (usually coinciding with the release of the Remedial Investigation/Feasibility Study draft report or revision of the Record of Decision) when comments from citizens about environmental activities are invited.
Public Hearing	A formal meeting at which EPA officials hear the public's views and concerns about an EPA action or proposal. EPA is required to consider such comments when evaluating its actions. Public hearings must be held upon request during the public comment period.
Public Meetings	Meetings organized by the agency that are open to the public. Experts are available to present information and answer questions. Citizens are encouraged to ask questions and offer comments.
Public Notices	Advertisements published in major local newspapers, broadcast via local radio stations or mailed to community members. These medium announce Air Force decisions, major project milestones, public meetings or to solicit public comment on Air Force actions.
RCRA Part A Permit	Interim permit of treatment, storage, and disposal facilities of hazardous waste prior to 1981 (RCRA usage).
RCRA Part B Permit	Final permit for treatment, storage, and disposal facilities of hazardous waste prior to 1981 (RCRA usage).
Recharge	The process by which water is added to a zone of saturation, usually by percolation from the soil surface.
Recharge Area	A land area in which water reaches the zone of saturation from surface infiltration, e.g., where rainwater soaks through the earth to reach an aquifer
Record of Decision (ROD)	A public document that explains which cleanup alternative(s) will be used. The record of decision is based on information and technical analysis generated during the remedial investigation/feasibility study and consideration of public comments and community concerns.
Remedial Action (RA)	The construction or implementation phase that follows approval of the remedial design of the selected cleanup alternatives at a site
Remedial Action (RD)	An engineering phase that follows the record of decision when technical drawings and specifications are developed for the subsequent remedial action.
Remedial Investigation	The first part of the two-part Remedial Investigation/Feasibility Study. The Remedial Investigation involves collecting and analyzing information about a site to determine the nature and extent of contamination that may be present. The investigation also determines how conditions at the site may affect human health or the environment

Remedial Investigation/Feasibility Study (RI/FS)	Investigative and analytical studies usually performed at the same time in an interactive, iterative process, and together referred to as the "RI/IS." They are intended to gather the data necessary to determine the type and extent of contamination; establish criteria for cleaning up the site; identify and screen cleanup alternatives for remedial action; and analyze in detail the technology and costs of the alternatives.
Remedial Project Manager (RPM)	The DOD, EPA, or state official responsible for overseeing remedial response activities
Remediation	Cleanup or other methods used to remove or contain a toxic spill or hazardous materials from a Superfund site.
Removal Action	Short-term, immediate actions taken over the short-term to address a release or threatened release of hazardous substances.
Resource Conservation and Recovery Act (RCRA)	A federal law that established a regulatory system to track hazardous substances from generation to disposal. RCRA regulations detail safe and secure procedures to be used in treating, transporting, storing, and disposing of hazardous substances. RCRA is designed to prevent the creation of new, uncontrolled hazardous waste sites.
Restoration	The act or process of accurately recovering the form and details of property and its setting as it appeared at a particular period of time.
Restoration Advisory Board (RAB)	A group of interested and concerned community volunteers, which functions as an advisory body for open exchange of information between Air Force installations and local residents on restoration issues. Restoration Advisory Board meetings are open to the public.
Risk	A measure of the probability that damage to life, health, property, and/or the environment will occur as a result of a given hazard.
Risk Communication	The exchange of information about health or environmental risks among risk assessors and managers, the general public, news media, and interest groups.
Site Investigation (SI)	A technical phase that follows a preliminary assessment and is designed to collect more extensive information on a hazardous waste site. The information is used to score the site using the Hazard Ranking System to determine whether response action is needed.
Solid Waste	Any garbage, refuse, trash, rubbish, sludge, or waste from commercial, agricultural, industrial, or residential activities. Does not include any of those materials that are classified as hazardous waste as determined in this glossary.
Solid Waste Management Unit (SWMU)	Any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility into which solid wastes have been routinely and systematically released.
Solvent	A substance that can dissolve another substance
Storage	When used in connection with hazardous waste, means the containment of hazardous waste, either on a temporary basis or for a period of years, in such a manner as not to constitute disposal of such hazardous waste.
Storage Facility	Any facility used for the retention of hazardous waste prior to shipment or usage, except generator facilities (under Title 40 CFR 262.34) which are used to store wastes for less than 90 days, prior to transport to an approved facility for proper management

Superfund	The common name for the CERCLA; also referred to as the Trust Fund. The Super-fund law authorizes EPA to investigate and clean up the nation's most serious hazardous waste sites. NAS Fort Worth is not a Superfund site. AFP 4 is a Superfund site.
Superfund Amendments and Reauthorization Act (SARA)	Modifications to CERCLA enacted on October 17, 1986.
Surface Waters	Bodies of water that are above ground, such as rivers, lakes, and streams.
Texas Natural Resource Conservation Commission (TNRCC)	The state environmental regulatory agency, responsible for oversight at non-NPL sites, such as NAS Fort Worth. Often referred to as "the State."
Treatment Storage, and Disposal Facility	Any building, structure, or installation where a hazardous substance has been treated, stored, or disposed. Treatment, storage, and disposal facilities are regulated by EPA and States under the Resource Conservation and Recovery Act.
Trichloroethylene (TCE)	A non-flammable organic solvent used in dry cleaning and for removing grease from metals. It is frequently used to clean airplanes engines.
U.S. Environmental Protection Agency (EPA)	The independent federal agency, established in 1970, that regulates environmental matters and oversees the implementation of environmental laws.
Underground Storage Tank (UST)	All tanks containing regulated substances in which the tank volume, including piping, is 10 percent or more beneath the surface of the ground.
Water Table	The depth at which groundwater is present beneath the ground surface.

APPENDIX B

**MEMORANDUM OF UNDERSTANDING
FOR ENVIRONMENTAL COMPLIANCE
AT NAVAL AIR STATION FORT WORTH JOINT RESERVE BASE
CARSWELL FIELD, TEXAS**

**MEMORANDUM OF UNDERSTANDING
FOR ENVIRONMENTAL COMPLIANCE
AT NAVAL AIR STATION FORT WORTH, JOINT RESERVE BASE
CARSWELL FIELD**

A. PREAMBLE

1. Parties to this Agreement: For purposes of this Memorandum of Understanding (MOU), "Navy" will identify those parties affiliated with the Department of the Navy and "Air Force" will identify those parties affiliated with the Department of the Air Force.

2. Background: A Memorandum of Understanding (MOU) was signed by the acting Secretaries of the Air Force and Navy on 08 and 09 June 1993 (Attachment 1) outlining the general terms under which the Air Force would transfer responsibility for portions of the former Carswell Air Force Base (Carswell AFB) to the Navy. These portions of the former Carswell AFB have been identified as Naval Air Station (NAS) Fort Worth Joint Reserve Base (JREI) (Attachment 2). A final target date of 30 September 1994 for the transfer of host responsibilities from the Air Force to the Navy was established in that original MOU. On 23 September 1994, the Navy and Air Force executed another MOU (Attachment 3) to amend the earlier MOU. The Navy assumed "host responsibilities" for NAS Fort Worth JRB, on 1 October 1994, but did not assume several key environmental program responsibilities.

In a 26 February 1996 letter (Attachment 4) to the Deputy Assistant Secretary of the Navy (Environment and Safety), the Deputy Assistant Secretary of the Air Force (Environment, Safety, and Occupational Health) interpreted and amended the original MOU. That amendment confirmed the Air Force's acceptance of funding and management responsibility for the final remediation of all environmental restoration requirements which are attributable to Carswell AFB operations which occurred prior to 1 October 1994. In an MOU dated 19 June 1996 (Attachment S), the parties reached agreement on the cleanup of NAS Fort Worth JRB (Carswell Field). The 19 June 1996 Cleanup MOU will control in the event that it conflicts on cleanup issues with this Compliance MOU.

3. Applicability: This Compliance MOU applies only to NAS Fort Worth JRB as depicted in Attachment 2. Notwithstanding the provisions of this MOU, Navy and Air Force may negotiate alternative terms in an Inter-Service Support Agreement (ISSA).

B. GENERAL PROVISIONS AND PROGRAM ADMINISTRATION

- 1 . Navy will be the focal point for all environmental compliance matters and provide advice and consultation on all environmental laws, regulations and policies. Navy will recommend the appropriate course of action to resolve environmental discrepancies and interface with regulatory agencies and the public on behalf of Air Force. Specifically, upon accepting full responsibility for the environmental compliance program at NAS Fort Worth JRB, Navy will be the single point of formal contact to environmental regulators, federal and state, for all environmental compliance activities at NAS Fort Worth JRB, including the interpretation of regulations and the coordination of inspections, reports and correspondence. Navy will act as the central repository for all environmental records required to be maintained by law or regulation and will be the lead environmental compliance agency at NAS Fort Worth JRB, responsible for all compliance programs. There will be no areas on NAS Fort Worth JRB which are independent of Navy's control as lead environmental compliance agency. Except as otherwise specified in this MOU, there will be no environmental programs on NAS Fort Worth JRB which are independent of Navy's control as lead environmental compliance agency.
- 2 Navy will provide general operational environmental policy guidance, e.g. OPNAVINST 5090.1 B, as well as detailed requirements and procedures for environmental document processing, coordination, and approval for Air Force actions.
- 3 . Navy will make reasonable efforts to accommodate mission needs of Air Force when implementing environmental programs.
4. On the date this MOU is executed, Navy will assume full responsibility for funding all environmental compliance expenses and managing the NAS Fort Worth JRB environmental compliance program, except as otherwise specified in this MOU. Air Force will provide Navy with the environmental compliance budget information (for prior year, current year, and any future years available), as well as a list of current contractors/contracts utilized for environmental compliance services to insure a smooth transition of the program. Air Force agrees to allow Navy to utilize current Air Force contractors/contracts, on a reimbursable basis, until Navy can obtain its own contractors/contracts for environmental compliance services. Navy and Air Force will work together to apportion financial responsibility for current environmental compliance expenses while the execution of this MOU is pending.
5. Navy and Air Force will work together to expeditiously obtain the recognition of the transfer of the pertinent environmental compliance programs to Navy by the regulators of NAS Fort Worth JRB .

6. Within 30 days of the execution of this MOU, Navy will request by letter that Air Force transfer to Navy all of the records required to be maintained by law and regulation for all of the environmental compliance programs at NAS Fort Worth JRB. Within 30 days of the request from Navy, Air Force will transfer the requested records and do so by preparing a formal letter of transmittal for each group of records being transferred which verifies the content of the records, certifying that all compliance records maintained by Air Force have been transferred. Air Force will identify in this letter any records known to be missing at the time of transfer.
7. Air Force will reimburse Navy to the extent penalties for violations of environmental laws or regulations are attributable to Air Force conduct. If noncompliance with an environmental law or regulation is attributable to Air Force activities, Air Force will take all necessary actions to bring the activity into compliance.
8. Air Force will comply with applicable environmental laws, standards, rules, regulations, permit conditions, and policies. Air Force will make environmental compliance requirements that pertain to its mission known to Navy's property use planning function.
9. Air Force is responsible for the actions of its contractors and will require its contractors to understand and comply with the provisions herein.
10. Air Force will participate in applicable Navy environmental programs.
11. Air Force will grant Navy's environmental management personnel and its authorized contractors access to Air Force facilities. Regulators, who are performing official duties, will be granted access to Air Force facilities after coordinating their access with Navy. However, the access of Regulators shall be managed in conformity with Air Force and Navy regulations and security requirements, as well as in a manner minimizing interference with any military operations at NAS Fort Worth JRB.
12. Air Force environmental standards for facilities shall apply to Air Force owned facilities. For example, Air Force asbestos and lead-based paint standards would apply to renovations funded by Air Force at facilities owned by Air Force.

C. ENVIRONMENTAL MONITORING, AUDITING & PLANNING

1. Navy will develop a comprehensive environmental monitoring program and perform environmental monitoring as required. Navy will provide sampling and analysis support on a reimbursable basis. Navy will provide sample results to Air Force in a timely manner.

2. Navy will include Air Force in its Environmental Compliance Evaluation (ECE) program and forward the findings to the Commander of the Air Force activity for action concerning Air Force deficiencies. Air Force will assist Navy as necessary during internal and external ECEs and will respond to any noted deficiencies in a timely manner.
3. Navy will coordinate applicable environmental plans with Air Force prior to publication. Site approval and master-planning authority resides with the Navy.

D. TRAINING

1. Navy will invite Air Force personnel to attend environmental training required by law or regulation and that is offered locally. When the cost of the training is on a per student basis, Air Force will reimburse Navy for its proportionate share of the expense. Navy will provide and coordinate a training schedule to the mutual satisfaction of Navy and Air Force.
2. Air Force will ensure that its personnel and contractors are properly trained in accordance with applicable statutes and regulations. Air Force will identify to Navy environmental training requirements applicable to Air Force activities and personnel.

E. WASTE AND HAZARDOUS MATERIAL MANAGEMENT

1. At NAS Fort Worth JRB, Navy will develop and manage a solid waste disposal and recycling program, a hazardous material management program, a hazardous waste management program, and an infectious waste management program.
2. Navy will regulate introduction of new hazardous material onto and onboard the installation. Navy will provide-waste minimization guidance and assistance.
3. Unless agreed otherwise, Air Force will reimburse Navy for solid, hazardous, and infectious waste disposal and waste stream characterization costs.
4. Air Force will participate in Navy's Consolidated Hazardous Material Reutilization and Inventory Management Program (CHRIMP)/pharmacy and pollution prevention programs. Air Force will comply with all Navy policies and procedures for waste minimization and -recycling. Specifically, Air Force will provide any data required to allow Navy to operate a hazardous material Central Distribution Center (CDC), and thereby allow Navy to implement a CHRIMP at NAS Fort Worth JRB.
5. Air Force will provide information to assist Navy in determining waste disposal requirements and provide a scheduled forecast for disposal requirements.

6. Navy and Air Force will cooperate in developing and implementing a base wide, pollution prevention program, in furtherance of E.O. 12856 and E.O. 12873. Air Force will participate in Navy's recycling program to the mutual benefit of both parties.

F. MEDIA AND STATUTORY SPECIFIC PROVISIONS

1. Asbestos: All asbestos work (non-BRAC) associated with renovations of facilities owned by Air Force shall be funded by Air Force. Air Force will provide copies of all documentation of such renovations to Navy. Based upon Air Force's documentation, Navy will make the necessary notification to the appropriate environmental regulators and verify such notification to Air Force.
2. Lead-based Paint: All lead-based paint work (non-BRAC) associated with renovations of facilities owned by Air Force shall be funded by Air Force. Air Force will provide copies of all documentation of such renovations to Navy. Based upon Air Force's documentation, Navy will make the necessary notification to the appropriate environmental regulators and verify such notification to Air Force.
3. EPCRA: Air Force will provide any data required by the Emergency Planning and Community Right-To-Know Act (EPCRA) and Navy will submit all reports for NAS Fort Worth JRB.
4. Underground and Aboveground Storage Tanks: Attachment 6 consists of a list provided by Air force, which identifies the location, size, contents and physical and regulatory condition of, all well as the party responsible for, all the underground storage tanks at NAS Fort Worth JRB. Attachment 7 consists of a list provided by Air Force, which identifies the location, size, contents, and physical and regulatory condition of all the aboveground storage tanks at NAS Fort Worth JRB. Within 30 days of the execution of this MOU, Navy and Air Force will determine in writing which party will be appended to or otherwise reflected on Attachment 7. Air Force will be responsible for closing the tank sites, at which the tanks have been removed prior to the execution of this MOU, in accordance with Texas Natural Resource Conservation Commission (TNRCC) standards, to include the investigation and necessary restoration of soil, groundwater, and surface water contamination. Navy will be responsible for maintaining the compliance status of the remaining tanks identified in Attachment 6, as well as for those specified in the updated version of Attachment 7. In accordance with the 19 June 1996 Cleanup MOU, Air Force will be responsible for the investigation, cleanup, and closure of tanks not already identified in Attachments 6 and 7. Air Force and Navy will work together to transfer tank registration from Air Force to Navy.
5. Noise: Air Force will comply with Navy requirements related to noise. Navy will prepare all Air Installation Compatible Use Zone (AICUZ) studies. Air Force will coordinate all significant changes in flight activities with Navy prior to implementation.
6. Radon: Navy will fund future radon studies. All abatement work (non-BRAC) associated with facilities owned by Air Force shall be funded by Air Force.

7. NEPA and CAA Conformity: Both Navy and Air Force will prepare their own documentation in accordance with their own respective regulations in order to comply with the National Environmental Policy Act (NEPA) and the conformity provisions of the Clean Air Act (CAA). Each party will act as cooperating agency for the other party's actions to the extent required by law and regulation. Air Force will provide copies of the appropriate environmental planning documents, for example the AF Forms 813, 814, and 815, as well as any associated documents, to Navy upon completion of such forms or documents.

G. PERMITTING

1. Navy will submit required permit applications and be the formal point of contact regarding all environmental compliance actions, maintain any necessary environmental permits, and ensure that Air Force is aware of all permit requirements, unless specified otherwise in this MOU.
2. Air Force shall, in a timely manner, provide Navy all necessary information required by Navy to obtain; maintain, and substantiate compliance with environmental permits or permit exemptions covering Air Force operations. Environmental permits required by law or regulation will be obtained prior to start of Air Force activities, including construction. Air Force will immediately notify Navy of actual or potential permit violations.
3. Specific Permits:
 - 3.1 Air: In light of the U.S. EPA Major Source Determination for Military Installations – Memorandum of 2 August 1996 (Attachment 8), Navy and Air Force will cooperate in developing an overall strategy for compliance with permit requirements under the Clean Air Act. For example, it may be in the best interests of the parties for Air Force to maintain the air permit for the existing jet engine test cell it controls.
 - 3.2 Water: Air Force Base Conversion Agency (AFBCA) will transfer the National Pollutant Discharge Elimination System (NPDES) permit to Navy upon divestiture of the three AFBCA controlled outfalls. Until the date of permit transfer or until Navy has established its own sampling capability, whichever occurs last, Navy will reimburse Air Force for sampling expenses incurred to satisfy the NPDES permit requirements within NAS Fort Worth JRB and for the White Settlement inflow.
 - 3.3 Waste: AFBCA will close the Treatment, Storage, and Disposal (TSD) facility in accordance with TNRCC standards and provide Navy with the closure documents. Within the boundaries of NAS Fort Worth JRB, Navy will be identified to TNRCC as the owner and Air Force as the tenant of Navy for all waste generation and waste management activities after the execution of this MOU. Air Force shall be responsible for executing the TNRCC Compliance Plan in a manner consistent with the 19 June 1996 Cleanup MOU.

- 3.4 Potable Water: Within 30 days of the execution of this MOU, AFBCA will submit a modification of its Potable Water permit to exclude NAS Fort Worth JRB, and Navy will apply for a Potable Water permit for NAS Fort Worth JRB. Until Navy receives its Potable Water permit, AFBCA will continue to provide water sampling and analytical services to Navy on a reimbursable basis.
- 3.5 Sanitary Sewer: Within 30 days of the execution of this MOU, AFBCA, in coordination with Navy, will request modification of the existing Sanitary Sewer permit to exclude NAS Fort Worth JRB, and Navy will verify it has applied for a Sanitary Sewer permit for NAS Fort Worth JRB.
- 3.6 Tank Registration: Within 30 days of the execution of this MOU, Air Force and Navy will submit a request to change the tank registration for the tanks indicated to be transferred to Navy in Attachments 6 and 7. Until Navy obtains the appropriate contract services, AFBCA will continue to provide tank sampling and monitoring services to Navy on a reimbursable basis.

H. EMERGENCY RESPONSE

1. Air Force is responsible for initial response and clean-up of all releases attributable to its activities that are within its capabilities of response. Air Force will immediately report to –Navy all hazardous substance releases in accordance with Navy plans and directives.
2. Navy will provide emergency response support and necessary follow-up for releases attributable to Air Force and, in particular, will be the lead agency for emergency response programs. Except as otherwise required by law or regulation or specified in this agreement, Navy will notify the appropriate regulatory agencies and submit reports of reportable releases as required by law or regulation. Navy will provide Air Force with verification that Navy has made the appropriate notifications.
3. Navy will complete spill response plans for NAS Fort Worth JREL Navy will include Air Force in exercise scenarios as appropriate.
4. Notwithstanding the above, Air Force will maintain the Hydrazine Spill Response capability for its operations at NAS Fort Worth JRB. In addition, Air Force will complete the Hydrazine Spill Plan for its operations at NAS Fort Worth JRB.
5. Upon execution of this MOU, Navy will assume responsibility for performing emergency responses at NAS Fort Worth JRB, as described in this section.

I. NOTIFICATION

1. Navy will immediately notify, Air Force, in writing, of enforcement actions taken by environmental regulators which may impact Air Force operations or which are attributable to the action or inaction of Air Force or its contractors. For purposes of this MOU, "enforcement actions" includes but is not limited to: notices of violation, notices to comply, and letters of warning. Navy will immediately notify Air Force, in writing if time permits, of any regulator visits and pertinent requests for information. Navy will immediately notify-Air Force, in writing, of any new or changed environmental requirements that may impact Air Force operations.
2. Air Force will immediately notify Navy, in writing, of enforcement actions taken by environmental regulators which may impact Navy operations or which are attributable to the action or inaction of Air Force or its contractors. Air Force will notify Navy, in writing, of any action or event which either results in, or may result in, environmental, natural resource, or cultural resource degradation, or that has a potential for controversy.
3. Air Force will immediately notify Navy, in writing, of any regulator visits and requests for information. Air Force will coordinate with Navy on all new, modified, or decommissioned pollution sources or regulated activities on the installation used or performed by Air Force or its contractors. Examples include well closures, tank removals, and the USC of temporary -sources, such as generators.
4. Air Force and its contractors will not disturb any historical, archeological, or cultural artifacts. In the event such items are discovered on the installation, Air Force will immediately notify Navy and protect the site and material from further disturbance until clearance is provided to proceed.

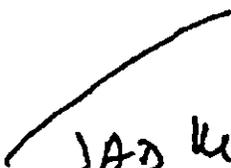
J. ENFORCEMENT ACTION

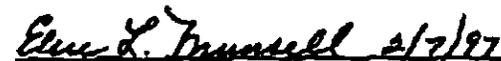
1. Navy will notify the Air Force commander, or the equivalent, immediately of any enforcement actions taken by environmental regulators in which the violation may be attributed to the action or inaction of Air Force or its contractors either attached to, assigned to, or providing services on NAS Fort Worth JRB. Navy will provide Air Force with a copy of the enforcement action, with all supporting documentation, and a brief synopsis of reasons for concluding that Air Force or its contractor is responsible for the statutory or regulatory violation.
2. If a civil fine or penalty is sought in connection with an alleged violation, Navy shall request that the regulatory agency provide a breakdown of the civil fine or penalty for each violation. Based upon the breakdown received, or the enforcement policies of the relevant agencies, Navy will identify to Air Force that portion of the civil fine or penalty that it believes is attributable to violations of law or regulation by Air Force or its contractors, along with a brief statement of reasons in support of that conclusion.
3. Navy will provide Air Force a reasonable opportunity to review and coordinate the proposed fine or penalty, and to participate in preparing any response to the enforcement action which involves Air Force operations, facilities, or contractors.

4. When there is an alleged Air Force violation, Navy will coordinate with Air Force all strategies to resolve enforcement actions, fines, or penalties, including negotiation and litigation.
5. Upon conclusion of an enforcement action, which results in the imposition of a fine or penalty for violations attributable to Air Force operations, facilities, or contractors, Navy will coordinate with Air Force to ensure the proper transfer to Navy of an amount equal to Air Force's attributable portion of the fine or penalty.
6. Air Force will transfer funds for all civil fines or penalties that are attributable to Air Force operations or facilities, or the operations or facilities of its contractors, as provided above. Air Force will provide Navy with timely comments or positions on the propriety of any enforcement action including civil fines and penalties. Air Force will assist Navy as needed, in all efforts to resolve enforcement actions, including civil fines or penalties. Air Force will take appropriate action to correct the violation that led to, or contributed to, the enforcement action. Where resolution of civil fines or penalties involve implementation of supplemental environmental projects (SEPs), Air Force will provide Navy with a list of all projects which may qualify as a SEP.

K. MISCELLANEOUS

1. Duration: This MOU will remain in effect & less terminated, in writing, by the mutual consent of the parties.
2. Changes: The parties will make changes to this MOU in writing and by mutual consent.
3. Dispute Resolution: Any disagreement which may arise regarding the terms of this MOU shall be elevated through respective command channels until resolved. All disagreements the lowest level possible.


 JAD McCou 2/25/97
 Deputy Assistant Secretary of the Air Force
 (Environment, Safety, and Occupational Health)


 Ellen L. Trussell 2/27/97
 Deputy Assistant Secretary of the Navy
 (Environment and Safety)

**MEMORANDUM OF UNDERSTANDING (MOU)
BETWEEN THE UNITED STATES AIR FORCE (USAF)
AND THE UNITED STATES NAVY (USN)
ON TRANSFER OF RESPONSIBILITY FOR
CARSWELL AIR FORCE BASE (A.FB), TEXAS**

The Department of Defense (DoD) recommended to the 1993 Defense Base Closure and Realignment Commission (DBCRC) that a DoD reserve area be established at Carswell AFB. In an 18 May 93 letter to DBCRC, signed by the acting Secretary of the Air Force and the acting Secretary of the Navy, it was agreed that the Navy Reserve would assume the responsibilities as host and operator of the airfield at Carswell AFB should the DoD recommendations to the DBCRC concerning Carswell AFB be adopted.

The purpose of this MOU is to establish an overarching agreement to be used to set the ground rules for the transition of responsibilities from the Air Force to the Navy. The agreement will establish general guidelines and a timetable for the transfer of responsibilities. This MOU will ensure this transfer is implemented without interruption in service or mission degradations. We envision other MOUs being established between the Air Force and Navy covering the transfer of specific areas of responsibilities, such as Air Traffic Control Services.

Assuming the DoD recommendations to the DBCRC are adopted, and after the office closure of Carswell AFB on September 30, 1993, the Air Force Reserve will assume the responsibilities as host and operator of Carswell AFB until the Navy Reserve can assume the responsibilities. By mutual agreement, the Air Force Reserve will incrementally transfer host responsibilities to the Navy Reserve, with the final transfer of responsibilities target for 30 September 1994.

Frank B. Kelso, Jr.
FRANK B. KELSO, Admiral, USN
Acting Secretary of the Navy

09 JUN 1993

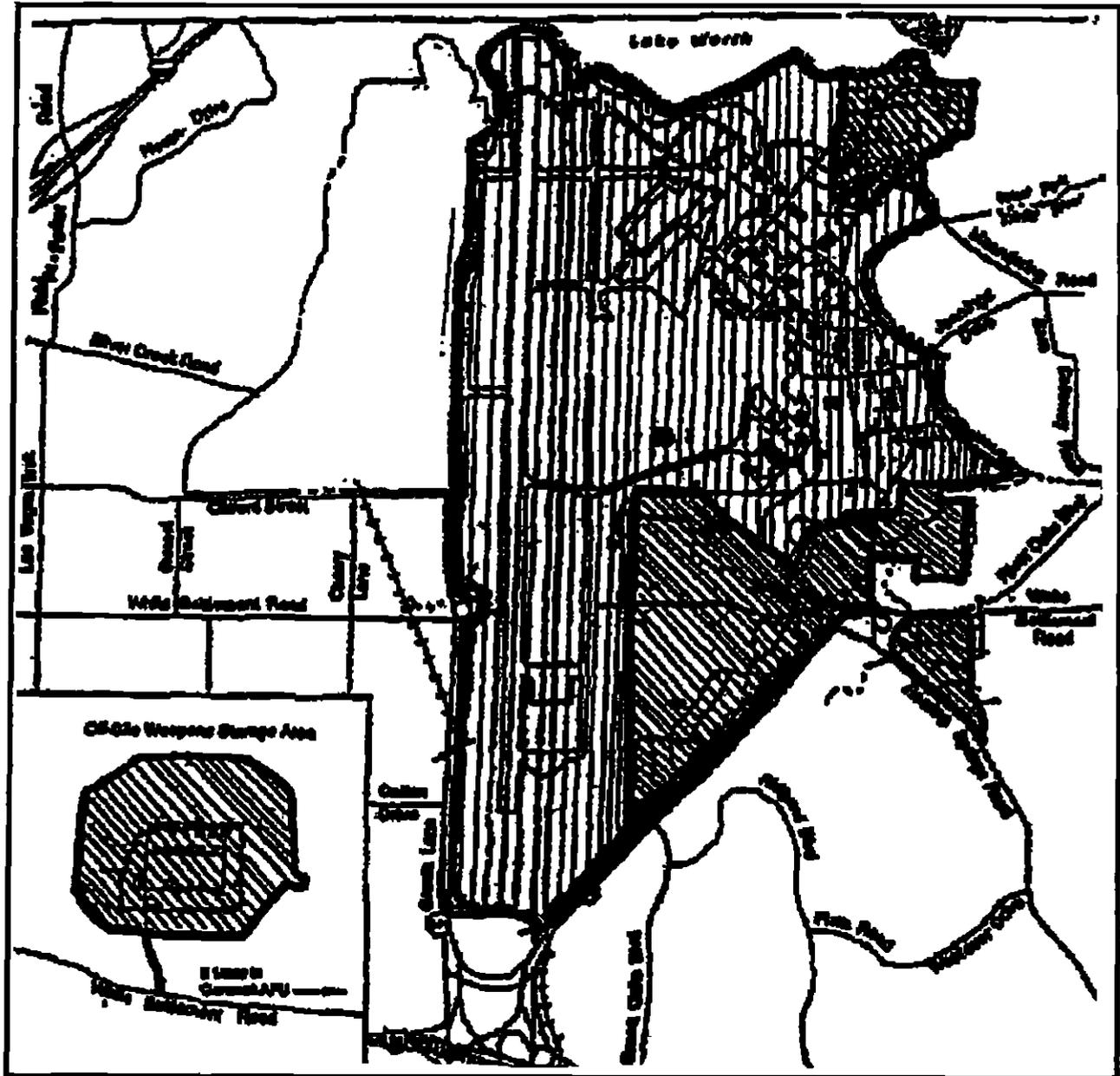
Michael B. Donley
MICHAEL B. DONLEY
Acting Secretary of the Air Force

09 JUN 1993

*** Best Available Copy ***

Atch 1

NAVAL AIR STATION FORT WORTH JOINT RESERVE BASE
(FORMER CARSWELL AIR FORCE BASE, TEXAS)



-  Proposed NAS Ft Worth Joint Reserve Base Cantonment Area
-  BRAC Area

**MEMORANDUM OF UNDERSTANDING (MOU)
BETWEEN THE UNITED STATES AIR FORCE (USAF)
AND THE UNITED STATES NAVY (USN)
ON THE TRANSFER OF RESPONSIBILITY FOR CARSWELL AIR FORCE BASE**

A Memorandum of Understanding (MOU) was signed by the acting Secretaries of the Air Force and Navy on 8 and 9 Jan 93 outlining the general terms under which the Air Force would transfer responsibility for Carswell Air Force Base (AFB) and the final target date of 30 September 1994 for the transfer of host responsibilities from the Air Force to the Navy.

The purpose of this document is to amend the above referenced 9 Jun 93 MOU transferring Carswell AFB from the Air Force to the Navy, to allow for the continuation of certain contract and caretaker cooperative agreement responsibilities for essential base support by the Air Force until the Navy can assume these responsibilities. Continued Air Force funding and administration of these essential base support contracts during the transition period will ensure the smooth transfer of Carswell AFB from the Air Force to the Navy without loss of operational capability or needed base services. The Air Force agrees to continue funding of the essential base contracts/caretaker support listed at attachment 1 until the Navy assumes these responsibilities, or October 1, 1995, whichever occurs first.

The Navy will assume host responsibilities at Carswell AFB on 1 October 1994, at which time the base will be recognized as Naval Air Station Fort Worth, Joint Reserve Base, Carswell Field (NAS Fort Worth). The Air Force will transfer all property within the DoD boundary area known as NAS Fort Worth to the Navy. The map at attachment 3 depicts the area to be transferred from the Air Force to the Navy. Also depicted on the map is an area to be permitted back to the Air Force for use by the Air Force Reserve (AFRIG) and the Texas Air National Guard (TANG). The exact delineation of joint airfield activities within the permitted area and the use of other facilities by the AFRIG and the TANG in the joint use area of NAS Fort Worth will be as agreed to locally and documented through local support agreements.

The Air Force accepts the responsibility for final remediation of all environmental conditions requiring action which are attributable to past Carswell AFB operations prior to 1 Oct 94. Prior to 1 Oct 95, the Air Force and Navy shall agree to final environmental program management responsibilities for these past conditions with the following goals:

(1) The Air Force and the Navy mutually agree to a set amount of funds required for final remediation of environmental compliance conditions. The Air Force will transfer the agreed funding amount to the Navy along with all environmental program management responsibilities.

(2) The Air Force and the Navy will continue to explore options for final remediation of environmental installation restoration conditions with an objective of a final decision on Air Force and Navy long-term program management and funding responsibilities. Should an agreement not be reached by 1 Oct 95, the Air Force will retain environmental restoration program responsibilities, to include funding, until final remediation.

During the Navy's NAS Dallas to NAS Fort Worth transition period, the Commanding Officer, NAS Dallas will provide host oversight of NAS Fort Worth through the employment of a Navy Captain (06) as a site commander.

The AFRES civilian personnel billets excess to the 301st Fighter Wing (FW) and required by the Navy to support host functions as NAS Forth Worth, may be employed by the Navy beginning 1 October 1994. Reduction in force actions will be determined in accordance with appropriate civilian personnel regulations.

Identification of the specific support functions which will become the responsibility of the Navy as host of NAS Fort Worth will be based on applicable interservice support directives and policy decided at the local level.

The Navy and Air Force will continue to work cooperatively in the development of local support agreements which ensure continuity and full satisfaction of support requirements for all affected activities in Fiscal Year 1995 and beyond.


PATRICK W. DENSON, RADM, CEC, USN
Director, Facilities and Engineering
Division (NCE)
Office of the Chief of Naval
Operations

9/23/94


JAMES F. SCHRIENER
Deputy Assistant Secretary
of the Air Force
(Installations)

9/23/94

Attachments:
Contract listings
Map

★ Best Available Copy ★

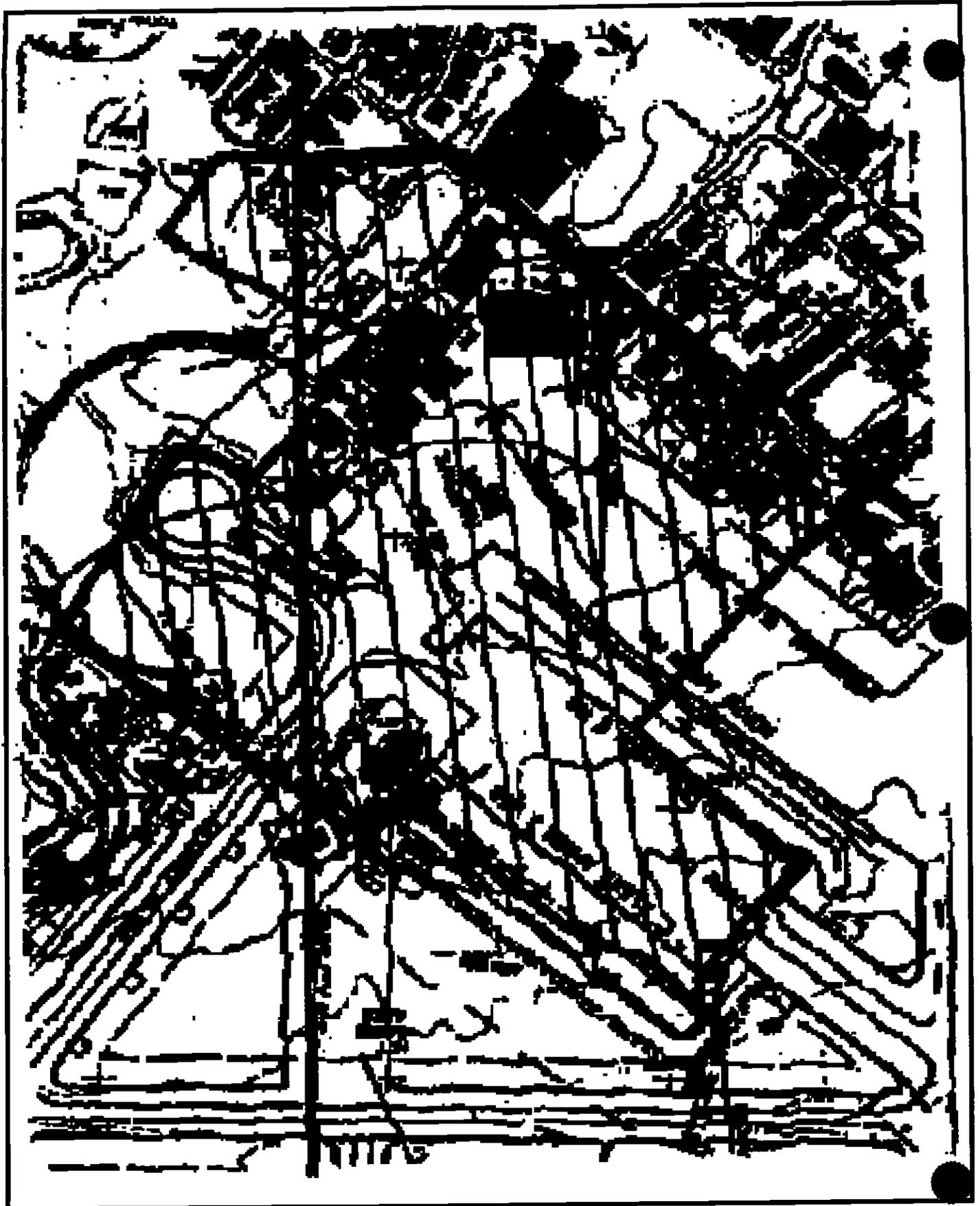
CONTINUING AIR FORCE CONTRACTSCategory I: Contracts managed and paid by AFBCA from 1 Oct 94 to 1 Oct 95.

Function	<u>Cost (3K)</u>
Building Maintenance	255
Electrical System Maintenance	86
Water/Waste Water System Maintenance	99
Heating and A/C System Maintenance	66
Natural Gas System Maintenance	84
Cathodic Protection System Maintenance	21
Fire Protection System Maintenance	40
Airfield Lighting Maintenance	81
Environmental Permit	2
Hazardous Waste Management	1
Spill Prevention and Response	1
UST Monitoring	1
Storm Water Runoff Monitoring	10
Oil/Water Separator Maintenance	16
Laboratory Sampling and Analysis	8
Potable Water Monitoring	20
Disaster Response	4
Road, Street, Parking Lot Maintenance	45
Airfield Pavement Maintenance	<u>105</u>
Total AFBCA Expense	945

Category II: Support contracts managed and paid by AFRES from 1 Oct 94 to 1 Oct 95.

Function	<u>Cost (3K)</u>
Transient Alert Contract	309
Telephone Switch Contract	324
Telephone Cable Plant Contract	158
Total AFRES Expense	782
Total Category I and II Air Force Expense	\$1,727K

Best Available Copy





WASHINGTON, DC



Office of the Assistant Secretary

FEB 25 1996

MEMORANDUM FOR Deputy Assistant Secretary of the Navy
(Environment and Safety)

FROM: SAF/MIQ

SUBJECT: Carswell/Fort Worth Environmental Cleanup (Your memo, same subject, 8 Feb 96)

The Air Force intends to meet its requirements as stated in the Memorandum of Understanding (MOU) between the Navy and the Air Force entitled "Transfer of Responsibility for Carswell Air Force Base" that was signed on 23 Sep 94.

As no agreement could be reached by the 1 Oct 95 deadline, we will assume both funding and management responsibilities for the cleanup of contamination at the former Carswell Air Force Base attributable to Air Force operations prior to 1 Oct 94. My intention is that this program be strictly developed and executed within the Air Force allocation under the Defense Environmental Restoration Program using the Defense Environmental Restoration Account or any subsequent cleanup program.

A handwritten signature in black ink that reads "T. AD McCall".

THOMAS W. L. MCCALL
Deputy Assistant Secretary of the Air
Force
(Environment, Safety and Occupational
Health)

cc: SAFIGCN
AFBCA/DR
AF/CEV

Atch 4

**MEMORANDUM OF UNDERSTANDING FOR ENVIRONMENTAL CLEANUP
OF NAVAL AIR STATION FORT WORTH JOINT RESERVE BASE,
CARSWELL FIELD**

19 June 1996

1. PARTIES TO THIS AGREEMENT

Headquarters United States Air Force - HQ USAF/CEV
Air Force Base Conversion Agency – AFBCA
Headquarters Air Force Center for Environmental Excellence - HQ AFCEE/ER
Headquarters Air Force Materiel Command - HQ AFMCKEV
Headquarters Air Force Reserve - HQ AFRESKEV
Naval Air Station Fort Worth Joint Reserve Base - Environmental Office
Naval Facilities Engineering Command - NAVFACENCOM

2. BACKGROUND

On 8 and 9 June 1993, the Air Force and Navy signed a Memorandum of Understanding (MOU) (Attachment 1) outlining the general terms for the transfer of the former Carswell Air Force Base from the Air Force to the Navy. The parties amended the MOU on 23 September 1994 (Attachment 2). One objective of the amended MOU was that the Air Force and the Navy work toward agreement on long-term program management and funding responsibilities for the Carswell AFB restoration program. The amended MOU specified that unless the Air Force and Navy could reach agreement on joint cleanup of the installation, the Air Force would 'retain environmental restoration program responsibilities, to include funding, until final remediation.' The Air Force and Navy were unable to reach such agreement. In a letter to the Deputy Assistant Secretary of the Navy dated 26 Feb 1996 (Attachment 3), Mr. Thomas McCall (SAF/MIQ) confirmed that the Air Force "will assume both funding and management responsibilities for the cleanup of contamination at the former Carswell AFB attributable to Air Force operations prior to 1 Oct 94." As such, SAF/GC specified that BRAC funds could not legitimately be used for environmental cleanup for these areas at the former Carswell AFB that may remain active. HQ USAFKEV has assumed responsibility for management of the cleanup program at Carswell AFB within the Air Force allocation under the Defense Environmental Restoration Program (DERP) using the Defense Environmental Restoration Account (DERA). HQ USAFCEV has chosen HQ AFCEE/ER to act as Major Command (MAJCOM) and sole service center for execution of the program.

The parties to this agreement have specific responsibility for cleanup of areas in and around the Naval Air Station (NAS):Fort Worth Joint Reserve Base (JRB), Carswell Field (formerly Carswell AFB). HQ USAFKEV has responsibility for cleanup of sites within the boundaries of NAS Fort Worth JRB. AFBCA has responsibility for cleanup of sites outside the boundaries of NAS Fort Worth JRB. HQ AFMCKEV has responsibility for cleanup of Air Force Plant 4. It is the intent of this MOU to meld the various Air Force cleanup strategies into a single, coordinated Air Force program. .

3. PURPOSE

The purpose of this MOU is to specify the working relationship among all DOD parties involved in conducting the Installation Restoration Program (IRP) at NAS Fort Worth JRB. This MOU establishes the roles and responsibilities of each organization for managing all IRP projects at NAS Fort Worth JRB.

This agreement is limited to roles and responsibilities related to environmental cleanup. As such, it does not delineate the Air Force, Navy, or tenant obligations to maintain ongoing environmental compliance for NAS Fort Worth JRB.

4. ROLES AND RESPONSIBILITIES The following responsibilities are agreed to by the parties as they apply to IRP efforts at NAS Fort Worth JRB.

a. HO USAF/CEV HQ USAFKEV will provide funding to HQ AFCEE/ER for sites which require investigation or cleanup contaminated prior to 1 October 1994 which are listed in Appendix A, Listing of Sites and Areas of Concern. HQ USAF/CEV will provide funding for those sites listed in the appendix as "DERA" (which meet the DERA eligibility requirement of being contaminated prior to January 1984). For contamination within NAS Fort Worth JRB whose source is located outside NAS Fort Worth JRB, HQ USAFXEV will seek an arrangement with the responsible or potentially responsible party, and program responsibility for the contamination. Non-DERA-eligible sites (those sites contaminated after January 1984 and prior to 1 October 1994) will require other sources of Air Force funding. Currently all sites are believed to be DERA-eligible.

HQ USAFCEV will also provide funding for manpower, Restoration Advisory Board (RAB) support, Management Action/Community Relation plan revisions and training as necessary to effect an efficient program. Funding will be distributed in accordance with the regulations and DERA program guidance (or subsequent program guidance) in effect at the time funding is provided. HQ USAFKEV will also provide sufficient guidance to HQ AFCEE/ER for the proper execution of the program.

b. AFBCA AFBCA holds the corporate knowledge for the NAS Fort Worth JRB Base Realignment and Closure (BRAC) program. AFBCA will continue to manage the cleanup of sites outside NAS Fort Worth JRB. The sites are listed in Appendix A as "B&X." For those sites within the area of NAS Fort Worth JRB, AFBCA will act in a support capacity to HQ AFCEE/ER and HQ USAFCEV since the responsibility for cleanup of the majority of sites now rests with HQ USAFCEV. AFBCA, through the BEC and Site Manager, will do the following:

1) Provide HQ AFCEE/ER with historical, programming and related documents and electronic files to facilitate a smooth transition of the IRP program. All records, reports and other IRP documentation relating to the NAS Fort Worth JRB shall be transferred to HQ AFCEELER as of 1 Oct 96. The local AFBCA office will provide other parties to this MOU with electronic data and reports relating to the investigation and/or cleanup of BRAC sites as they are produced if AFBCA is requested to do so.

2) Coordinate BRAC regulatory and public meetings with other parties to this MOU.

3) Coordinate BRAC investigative and/or cleanup activities having an impact on Navy activities, 301 Fighter Wing (FW) activities, the NAS Fort Worth JRB IRP or Air Force Plant 4 IRP.

4) Allow the Air Force and its IRP contractors to operate under permits which remain under the control of the local AFBCA office provided permit requirements are met. The local AFBCA office maintains a RCR4 storage permit, a National Pollution Discharge Elimination System (NPDES) permit and a sanitary sewer discharge permit, among others.

5) Allow the Air Force and its IRP contractors the use of government equipment, property and office space under the control of AFBCA so that government cost-savings can be realized.

6) Coordinate BRAC projects with other parties to this MOU so that government resources are conserved. A goal of frequent communication shall be established to ensure a good working relationship with other parties to this MOU.

c. HO AFCEE/ER HQ AFCEE/ER will act as MAJCOM and Service Center for the NAS Fort Worth JRB IRP and as such will assume the following responsibilities:

1) MAJCOM RESPONSIBILITIES

a) Appoint a Remedial Program Manager (RPM) in writing to execute all phases of the IRP for HQ USAFCEV's sites.

b) Coordinate the NAS Fort Worth JRB IRP with regulatory agencies, the restoration advisory board (RAB) and other parties to this MOU.

c) Schedule, budget and set program resource priorities as well as establish project goals and completion schedules.

2) RPM RESPONSIBILITIES

a) Execute the IRP strategy contained in the Management Action Plan and other execution plans. Load historical IRP data into HQ AFCEE's Installation Restoration Management Program Management System (IRPIMS) database as appropriate.

b) Ensure that the IRP complies with all applicable laws and regulations. Identifies cleanup criteria and accomplishes tasks in accordance with regulatory agreements.

c) Assume final approval authority as NAS Fort Worth JRB RPM on all technical matters for the NAS Fort Worth JRB IRP.

d) Coordinate IRP regulatory and public meetings with other parties to this MOU.

e) Maintain, as of 1 Oct 96, both the Administrative Record (AR) and the Information Repository (IR) for the NAS Fort Worth JRB IRP and former Carswell AFB (BRAC) programs. This is because the DERA program will be producing the bulk of AR/IR documentation in the future. The AFBCA local office will provide HQ AFCEE/ER with documents and electronic files for inclusion in the AR/IR as they are produced. HQ AFCEE/ER will provide other parties to this MOU with electronic data and reports relating to the investigation and/or cleanup of NAS Fort Worth JRB IRP sites as they are produced if HQ AFCEE/ER is requested to do so.

f) Coordinate IRP investigative and/or cleanup activities having an impact on Navy operations, 301 FW operations, former Carswell AFB (BRAC) sites or Air Force Plant 4 sites.

g) Coordinate IRP projects beneficial to other parties to this MOU so that government resources are conserved. A goal of frequent communication shall be established to ensure a good working relationship with other parties to this MOU.

3) SERVICE CENTER RESPONSIBILITIES

a) Provide technical, legal, contracting and contract management support for the NAS Fort Worth JRB IRP.

b) Act as Air Force Contracting Officer's Representative (COR) for all IRP delivery orders. The RPM will develop IRP requirements and award and execute delivery orders with the assistance of HQ HSC/PKVB. The RPM will ensure that day-to-day operations by contractors are performed within the scope of work (SOW).

c) Provide oversight and technical direction of IRP field activities.

d. HO AFMCKEY Air Force Plant 4 contains a TCE plume site. Remediation of this plume and any other plume attributable to Air Force Plant 4 operations may impact the NAS Fort Worth JRB IRP and BRAC programs. The Air Force should strive to avoid duplication of program requirements and lessons learned. Therefore HQ AFMCXEV will assume the following responsibilities: as

1) Coordinate Air Force Plant 4 regulatory and public meetings with other parties to this MOU.

2) Coordinate Air Force Plant 4 investigative and/or cleanup activities having an impact on Navy activities, 301 FW activities, the NAS Fort Worth JRB IRP or former Carswell AFB (BRAC) program.

3) Provide other parties to this MOU with electronic data and reports relating to the investigation and/or cleanup of Air Force Plant 4 sites as they are produced if HQ AFMCKEY is requested to do so.

4) Coordinate Air Force Plant 4 projects beneficial to other parties to this MOU so that government resources are conserved. A goal of frequent communication shall be established to ensure a good working relationship with other parties to this MOU.

e. NAS Fort Worth JRB The Navy will assume the responsibility of the following aspects of the NAS Fort Worth JRB IRP:

1) Restore all sites contaminated after 1 Oct 94 attributable to Navy operations on NAS Fort Worth JRB property.

2) Provide all contractor logistical support as documented in Interservice Support Agreements (base support letters) that are- applicable to specific HQ AFCEE/ER IRP and BRAC delivery orders. The Navy shall also allow the Air Force and its IRP contractors to operate under permits which will eventually be under the control of NAS Fort Worth JRB provided permit requirements are met. The NAS Fort Worth JRB Public Works Officer and Resident Officer in Charge of Construction (ROICC) will coordinate with the HQ AFCEE/ER RPM on activities such as Navy construction which may use or disturb any NAS Fort Worth JRB IRP site.

3) Communicate frequently information on Navy projects pertinent to the NAS Fort Worth JRB IRP, BRAC or Air Force Plant 4 programs.

4) The Navy currently does not administer a cleanup program. In the event they do become responsible for any sites, the Navy shall provide other parties to this MOU with electronic data and reports relating to the investigation and/or cleanup of sites as they are produced if the Navy is requested to do so.

5) NAVFACENCOM will participate and be involved to the extent required with installation restoration planning, programming and execution to support the NAS Fort Worth JRB IRP.

f. 301 Fighter Wing The 301 FW (Air Force Reserve) will assume the responsibility of the following aspects of the NAS Fort Worth JRB IRP:

1) Provide all contractor logistical support as documented in base support letters that are applicable to specific HQ AFCEE/ER IRP and BRAC delivery orders. Generally this includes, if available, providing access to potable water, access to electrical hook-ups, providing parking for contractor work trailers, providing vehicle and personal passes, and clearing drilling locations. The 301 FW civil engineering office will coordinate with the HQ AFCEE/ER RPM on activities such as Air Force construction which may use or disturb any NAS Fort Worth JRB IRP site.

2) Communicate when necessary on 301 FW projects pertinent to the goals of or which may impact the NAS Fort Worth JRB IRP or BIL4C or Air Force Plant 4 programs. A goal of frequent communication shall be established to ensure a good working relationship with other parties to this MOU.

3) Provide other parties to this MOU with electronic data and reports relating to the investigation and/or cleanup of NAS Fort Worth JRB sites as they are produced if the 301 FW is requested to do so.

4) Provide facilities on base for HQ AFCEE/ER staff on an as-needed basis.

5. COMMUNICATION Communication is critical to the success of any program. The parties to this MOU pledge themselves to full and open communication. In addition to specific entries under section-4, the following initiatives will be undertaken as part of this MOU:

a) RPMs will combine the RABs for Air Force Plant 4, NAS Fort Worth IRB IRP and former Carswell AFB (BRAC). Specific program elements will be discussed separately, but the same community members should be invited. The responsibility for government co-chairperson will rotate each meeting between Air Force Plant 4, NAS Fort Worth JRB and the former Carswell AFB (BRAC).

b) RPM meetings for NAS Fort Worth IRB IRP, Air Force Plant 4 IRP and former Carswell AFB (BRAC) programs will be scheduled as closely together as possible (preferably on the same day) to facilitate communication with regulators common to both programs.

c) All parties to this MOU are invited to attend any regularly-scheduled regulatory or RAB meetings in order to keep abreast of program developments. Adequate notification of scheduled meetings shall be provided and meeting minutes shall be distributed to all parties to this agreement.

d) All parties to this MOU should strive to hold frequent management meetings to keep each other abreast of developments in or impacts to the NAS Fort Worth JRB IRP, and to discuss program execution.

e) Semi-annual coordination meetings shall be held by HQ AFMC/CEV, AFBCA and HQ AFCEE/ER. The purpose of the meetings shall be to review current and planned projects for Air Force Plant 4, NAS Fort Worth JRB and former Carswell AFB (BRAC) programs. Attendance at the meetings shall be limited to the Air Force Plant 4 RPM, the NAS Fort Worth JRB RPM, and AFBCA's on-site manager.

6. **DURATION OF AGREEMENT** This agreement will remain in effect unless terminated sooner by mutual consent of the parties.

7. **CHANGES** The parties will make changes to this agreement only by mutual consent.

Pages 8 through 15 have been deleted from Appendix B. The pages contain signature blocks for various Air Force and Naval representatives.

APPENDIX A
LISTING OF SITES AND AREAS OF CONCERN

Table 4-1. Solid Waste Management Units Naval Air Station Fort Worth Joint Reserve Base Carswell Field, Texas							
SWMU	Name	OUs	IRP R/R	Closed	Assigned	CA Status	IRP Responsibility
1	Pathological Waste Incinerator	7	NA	Yes	2-Mar-95	NFA (3/2/95)	ERA
2	Pathological Waste Storage Shed	7	NA	Yes	2-Mar-95	NFA (3/2/95)	ERA
3	Metal Cans	7	NA	Yes	2-Mar-95	NFA (3/2/95)	BRAC
4	Facility Dumpsters	7	NA	Yes	2-Mar-95	NFA (3/2/95)	BRAC
5	B1628 Waste Accumulation Area	301st	NA	No	22-Apr-94	RFI Ongoing	BRAC
6	B1628 Wash Rack and Drain	301st	NR	No	22-Apr-94	RFI Ongoing	BRAC
7	B1628 O/W Separator	301st	Medium	No	22-Apr-94	NFA (7/19/00)	ERA
8	B1628 Sludge Collection Tank	301st	Medium	No	22-Apr-94	NFA (7/19/00)	ERA
9	B1628 Work Station Waste Accumulation Area	301st	NR	Yes	2-Mar-95	NFA (3/2/95)	ERA
10	B1617 Work Station Waste Accumulation Area	301st	NA	Yes	2-Mar-95	NFA (3/2/95)	ERA
11	B1617 Waste Accumulation Area	301st	NR	No	2-Mar-95	Closure Report with TNRCC (03/01)	ERA
12	B1619 Waste Accumulation Area	301st	NR	No	22-Apr-94	RFI Ongoing	ERA
13	B1710 Waste Accumulation Area	301st	NR	No	2-Mar-95	NFA (4/28/99)	ERA
14	B1060 Bead Blaster Collection Tray	1	NA	Yes	2-Mar-95	NFA (3/2/95)	ERA
15	B1060 Paint Booth Vault	1	NA	Yes	2-Mar-95	NFA (3/2/95)	ERA
16	B1060 Waste Accumulation Area	1	NR	No	Permit	NFA (11/20/00)	ERA
17	Landfill 7	1	Medium	No	2-Mar-95	RFI Ongoing	ERA
18	Fire Training Area 1		NA	Yes	Permit	NFA	ERA
19	Fire Training Area 2	1	Low	No	Permit	RFI Ongoing	ERA
20	Waste Fuel Storage Tank	1	Low	No	Permit	RFI Ongoing	ERA
21	Waste Oil Tank	1	Low	No	Permit	RFI Ongoing	ERA
22	Landfill 4		NA	No	Permit	NFA (3/5/01)	ERA
23	Landfill 5		NA	No	Permit	NFA (3/5/01)	ERA
24	Waste Bunal Area		NA	No	Permit	NFA (3/5/01)	ERA
25	Landfill 8		Medium	No	2-Mar-95	NFA (3/5/01)	BRAC
26	Landfill 3	1	Medium	No	22-Apr-94	RFI Ongoing	ERA
27	Landfill 10	1	NR	No	22-Apr-94	NFA (4/26/00)	ERA
28	Landfill 1	2	Medium	No	Permit	RFI Ongoing	ERA
29	Landfill 2	2	NR	No	22-Apr-94	RFI Ongoing	ERA
30	Landfill 9	2	NR	No	22-Apr-94	RFI Ongoing	ERA
31	B1050 Waste Accumulation Area	1	NR	No	22-Apr-94	RFI Ongoing	ERA
32	B1410 Waste Accumulation Area	1	NR	No	Permit	Closure Report with TNRCC (03/01)	ERA
33	B1420 Waste Accumulation Area	301st	NR	No	22-Apr-94	NFA (11/20/00)	ERA
34	B1194 Waste Accumulation Area	1	NR	No	2-Mar-95	NFA (11/20/00)	ERA
35	B1194 Vehicle Refueling Shop O/W Separation System	1	Low	No	Permit	RFI Ongoing	ERA
36	B1191 Waste Accumulation Area	1	NR	No	Permit	Closure Report with TNRCC (03/01)	ERA
37	B1191 Vehicle Maintenance Shop O/W Separator	1	Low	No	22-Apr-94	RFI Ongoing	ERA
38	B1269 PCB Transformer Building	2	NA	Yes	2-Mar-95	NFA (3/2/95)	ERA
39	B1643 Waste Accumulation Area	301st	NR	No	2-Mar-95	NFA (11/20/00)	ERA

APPENDIX A
LISTING OF SITES AND AREAS OF CONCERN

Table 4-1. Solid Waste Management Units							Naval
Air Station Fort Worth Joint Reserve Base Carswell Field, Texas							
SWMU	Name	OUs	IRP R/R	* Closed	Assigned	CA Status	IRP Responsibility
40	B1643 O/W Separation System	301st	NR	No	2-Mar-95	RFI Ongoing	ERA
41	B1414 O/W Separation System Field Maintenance Squadron Aerospace Ground Equipment	1	Low	No	22-Apr-94	RFI Ongoing	ERA
42	B1414 Waste Accumulation Area	1	NR	No	22-Apr-94	NFA (11/20/00)	ERA
43	B1414 Non-Destructive Inspection (NDI) Waste Accumulation Area	1	NA	Yes	22-Apr-94	NFA (3/2/95)	ERA
44	B1027 O/W Separation System at the Aircraft Washing Hangar	1	Low	No	2-Mar-95	RFI Ongoing	ERA
45	B1027 Waste Oil Tank Vault at the Aircraft Washing Hangar	1	NR	No	2-Mar-95	NFA (3/9/01)	ERA
46	B1027 Waste Accumulation Area	1	NA	Yes	2-Mar-95	NFA (3/2/95)	ERA
47	B1015 Jet Engine Test Cell O/W Separator	1	Low	No	2-Mar-95	RFI Ongoing	ERA
48	B1048 Fuel System Floor Drains	1	NA	Yes	2-Mar-95	NFA (3/2/95)	ERA
49	Aircraft Washing Area No. 1	1	NR	No	2-Mar-95	RFI Ongoing	ERA
50	Aircraft Washing Area No. 2	1	NR	No	2-Mar-95	RFI Ongoing	ERA
51	B1190 Central Waste Holding Area	1	NR	No	22-Apr-94	Closure Report with TNRCC (03/01)	ERA
52	B1190 O/W Separation System	1	Low	No	22-Apr-94	RFI Ongoing	ERA
53	Storm Water Drainage System	1	Medium	No	Permit	RFI Ongoing	ERA
54	Storm Water Interceptors	2	NR	No	22-Apr-94	RFI Ongoing	BRAC
55	East Gate Oil Water Separator	2	NR	No	22-Apr-94	RFI Ongoing	BRAC
56	B1405 Waste Accumulation Area	1	NA	Yes	2-Mar-95	NFA (3/2/95)	BRAC
57	B1432/1434 Waste Accumulation Area	1	NA	Yes	2-Mar-95	NFA (3/2/95)	BRAC
58	Pesticide Rinse Area	5	NA		2-Mar-95	NFA (8/4/99)	BRAC
59	B8503 WSA Waste Accumulation Area	3	NA		22-Apr-94	RFI Ongoing	BRAC
60	B8503 Radioactive Waste Burial Site	3	NA		2-Mar-95	(Soils closed) RFI Ongoing	BRAC
61	B1320 Power Production Maintenance Facility Waste Accumulation Area	2	NR	No	Permit	RFI Ongoing	BRAC
62	Landfill 6	1	Medium	No	Permit	RFI Ongoing	BRAC
63	Entomology Dry Well	2	NA	Yes	Permit	NFA (3/2/95)	BRAC
64	French Underdrain System	2	Medium	No	Permit	RFI/CMI Ongoing	BRAC
65	WSA Disposal Site	3	NA	Yes	Permit	NFA (3/2/95)	ERA
66	Sanitary Sewer System	1	NR	No	2-Mar-95	RFI Ongoing	ERA
67	B1340 O/W Separator	2	Medium	No	Permit	BRAC	ERA
68	POL Tank Farm	1	Medium	No	Permit	Closure Report with TNRCC (05/01)	ERA

APPENDIX A
LISTING OF SITES AND AREAS OF CONCERN

Table 4-2. Areas of Concern Naval Air Station Fort Worth Joint Reserve Base Carswell Field, Texas							
SWMU	Name	OUS	IRP R/R	* Closed	Assigned	CA Status	IRP Responsibility
AOC 1	B1518 Service Station	2	High	No	2-Mar-95	PST/Plan B Update	AFBCA/AFCEE
AOC 2	Airfield Groundwater Plume	1	Medium	No	2-Mar-95	RFI Ongoing	AFCEE
AOC 3	Waste Oil Dump	1	NA	Yes	2-Mar-95	NFA (3/2/95)	AFCEE
AOC 4	Fuel Hydrant System	1	Medium	No	2-Mar-95	Closure Report with TNRCC	AFCEE
AOC 5	Grounds Maintenance Yard	4	NA	No	2-Mar-95	RFI Ongoing	AFBCA
AOC 6	RV Parking Area	2		No	2-Mar-95	NFA (11/20/00)	AFCEE
AOC 7	Base Refueling Area	2	Medium	No	2-Mar-95	Closure Report with TNRCC (05/01)	AFCEE
AOC 8	SW Aerospace Museum	?	NA	No	2-Mar-95	RFI Ongoing	AFBCA
AOC 9	Golf Course Maintenance Yard	5	NA	No	2-Mar-95	NFA (8/4/99)	AFBCA
AOC 10	B1064 O/W Separator	1	Low	No	2-Mar-95	RFI Ongoing	AFCEE
AOC 11	B1060 O/W Separator	1	Low	No	2-Mar-95	RFI Ongoing	AFCEE
AOC 12	B4210 O/W Separator	1	Low	No	2-Mar-95	RFI Ongoing	AFCEE
AOC 13	B1145 O/W Separator	2	Low	No	2-Mar-95	RFI Ongoing	AFCEE
AOC 14	Unnamed Stream	2	NA	No	2-Mar-95	NFA (Soils closed) (12/99)	AFBCA
AOC 14	Unnamed Stream		NA	No	2-Mar-95	RFI Ongoing	AFBCA
AOC 15	B1190 Storage Shed	1	NR	No	2-Mar-95	NFA (11/20/00)	AFCEE
AOC 16	Fam Camp	5	NA	No	2-Mar-95	NFA (6/23/99)	AFBCA
AOC 17	Suspected Landfill			No	AFCEE-99	NFA (3/7/01)	AFCEE
AOC 18	Suspected Fire Training Area A			No	AFCEE-99	NFA (3/7/01)	AFCEE
AOC 19	Suspected Fire Training Area B			No	AFCEE-99	RFI Ongoing	AFCEE

Carswell AFB Underground Storage Tanks
Active Tanks

Tank ID	Facility	Install	Gallons	Substance	Registered	Site Status	Comments	Navy/Air Force
1015-1	Eng Test Cell	1967	3000	JP-4	Yes		Upgraded 4-96	Navy
1027-0	Oil/Water Separator		3000	OW	No	SWMU 44, 45	Oil/Water Separator, Not a Tank!	Navy
1050-1	A/C Maint Hanger	1982	15000	Heating Oil	No		Exempt	Navy
1064-1	Vehicle Fueling Station	1988	10000	Diesel	Yes			Navy
1064-2	Vehicle Fueling Station	1988	10000	Diesel	Yes			Navy
1064-3	Vehicle Fueling Station	1988	10000	Mogas	Yes			Navy
1064-4	Vehicle Fueling Station	1988	10000	Mogas	Yes			Navy
1145-1	Auto Hobby Shop	1990	1000	O/W	No			Navy
1170-1	POL Pump Station	1961	2000	O/W	Yes	ST-13, ST-14	Should be 1168-1	Navy
1170-2	POL Pump Station	1961	2000	O/W	Yes	ST-13, ST-14	Should 1169-1	Navy
1191-2	Vehicle Maint Shop	1983	500	O/W	Yes		Conditionally exempt	Navy (AFRES)
1194-1	Refueling Maint Shop	1983	2000	O/W	Yes		Conditionally exempt	Navy (AFRES)
1420-1	AGE Shop	1983	2000	Heating Oil	No		Exempt	Navy
1423-1	Air Freight Terminal	1985	500	O/W	No			Navy
1425-1	Fire Station	1955	1000	Diesel	Yes			Navy
1628-4	Oil/Water Separator	1981	1000	O/W	Yes		Conditionally exempt	Navy (AFRES)
1643-1	301 A/C Maint Hangar	1982	8500	Heating Oil	No		Exempt	AF (AFRES)
1655-1	301 A/C Maint Shop	1991	550	O/W	Yes		Conditionally exempt	Navy (AFRES)

1656-1	301 A/C Maint Dock	1991	1000	N-Hydrazine	No			AF (AFRES)
3000-1	Hospital DEG	1985	15000	Diesel	Yes			AF (AFBCA)
3000-2	Hospital DEG	1985	15000	Diesel	Yes			AF (AFBCA)
3001-1	Hospital Boiler Fac	1958	10000	Diesel	Yes		Upgraded 5-96	AF (AFBCA)
3001-2	Hospital Boiler Fac	1959	20000	Heating Oil	No		Exempt	AF (AFBCA)
3190-1	Youth Center	1980	2000	Heating Oil	No		Exempt	Navy
3359-1	Reserve Fire Team Fac	1979	2000	Diesel	Yes			Navy
3360-1	Electric Pwr Gen Plant	1978	5000	Diesel	Yes			Navy
4111-1	Electric Pwr Gen Plant	1979	500	Diesel	Yes		Upgraded 4/96	Navy
4127-1	Electric Pwr Gen Plant	1959	500	Diesel	Yes		Upgraded 4/96	Navy
4136-2	TACAN Station DEG	1991	300	Diesel	Yes		Upgraded 5/96	Navy
4141-1	Electric Pwr Gen Plant	1958	250	Diesel	Yes		Upgraded 4/96	Navy
4143-1	Comm Transmitter DEG	1964	500	Diesel	Yes		Upgraded 4/96	Navy
4145-1	Electric Pwr Gen Plant	1981	500	Diesel	Yes		Upgraded 4/96	Navy
4155-1	Airfield Lighting DEG	1955	1000	Diesel	Yes		Upgraded 4/96	Navy
4171-1	Electric Pwr Gen Plant	1976	5000	Diesel	Yes		Upgraded 4/96	Navy
4205-1	Rocket Assy Storage	1985	550	Slop	No		Floor drain holding tank	Navy
4210-4	Missile Assy Storage	1985	6000	Heating Oil	No		Exempt	Navy

Carswell AFB Underground Storage Tanks
Active Tanks

4210-6	Missile Assy Shop	1985	1000	OMW	No		Navy
4215-1	Special Webs Shop	1985	2000	Heating Oil	No	Exempt	Navy
4216-1	Electric Pwr Gen Plant	1983	5000	Diesel	Yes	Upgraded 4/96	Navy

CARSWELL AFB HISTORY

Facility	Installed	Gallons	Substance	Regulated	Registered	Status	Contacts	REMARKS
Boat House		500	Mogas?	N	N	4		Removed 7/93
233	74	250	Butane	N	N	1	N	
234	93	500	Mogas	N	N	1	Y	Double Wall Tank
234	93	500	Diesel	N	N	1	Y	Double Wall Tank
262	89	250	Mogas	N	N	1	Y	Curb
262	89	250	Diesel	N	N	1	Y	Curb
262	74	250	Propane	N	N	3	N	Disconnected, not in service
262	74	250	Propane	N	N	3	N	Disconnected, not in service
262	79	250	Propane	N	N	3	N	Disconnected, not in service
1000	89	275	Diesel	N	N	2	N	
1002	84	250	Diesel	N	N	2	N	Inside Bldg
1002	84	250	Diesel	N	N	2	N	Inside Bldg
1002	84	250	Diesel	N	N	2	N	Inside Bldg
1002	84	250	Diesel	N	N	2	N	Inside Bldg
1015	68	5000	CO2	N	N	2	N	
1026	93	5000	LOX	N	N	1	Y	Double Wall Tank
1026	90	2000	LN2	N	N	1	Y	Double Wall Tank
1026	85	400	LN2	N	N	1	Y	Double Wall Tank
1026	85	400	LN2	N	N	1	Y	Double Wall Tank
1027	86	5000	Detergent	N	N	2	Y	MIL L 87916
1027	86	8000	Heating Oil	N	N	2	Y	
1040	94	500	Diesel	N	N	1	Y	Double Wall Tank
1050	83	55	Diesel	N	N	2	N	22 KW DEG
1058	86	750	JP-8	N	N	1	N	JP-8 reclaim trailer
1058	86	750	JP-8	N	N	1	N	JP-8 reclaim trailer
1062	86	25	Diesel	N	N	1	N	10 KW DEG
1082	89	75	Diesel	N	N	1	N	100 KW DEG
1156	53	840000	JP-8	N	N	1	Y	Dike
1157	54	840000	JP-8	N	N	1	Y	Dike
1159	85	4920000	JP-8	N	N	1	Y	Dike
1161	87	2000	AFFF	N	N	1	N	Inside Bldg
1161	87	2000	AFFF	N	N	1	N	Inside Bldg
1170	89	75	Diesel	N	N	1	N	100 KW DEG, loc near 1189
1194	87	275	Waste Oil	N	N	1	Y	Sandbag containment
1202	80	250	Propane	N	N	1	N	
1202	93	55	Various	N	N	1	N	4 Drums on cradles
1212	93	55	Various	N	N	1	N	4 Drums on cradles
1215	83	25	Diesel	N	N	1	N	6 KW DEG
1256	55	5000	Mogas	Y	Y	4		Removed 2/94
1259	42	11580	Mogas	Y	Y	4		Removed 2/94
1261	42	11580	Mogas	Y	Y	4		Removed 2/94
1263	50	11580	Diesel	Y	Y	4		Removed 2/94
1264	75	11580	Mogas	Y	Y	4		Removed 2/94
1265	42	11580	Mogas	Y	Y	4		Removed 2/94
1320		55	Various Oils	N	N	4		Removed (6 drums)
1320	95	55	Various	N	N	1		10 drums on cradle
1418	84	50	Diesel	N	N	1	N	5 KW DEG
1423	89	100	Diesel	N	N	1	N	30 KW DEG, inside Bldg

CARSWELL AFB PAST HISTORY

Facility	Installed	Gallons	Substance	Regulated	Registered	Status	Contacts	REMARKS
1425	88	37	Diesel	N	N	1	N	150 KW DEG, Inside Bldg
1425	91	100	Diesel	N	N	1	N	175 KW DEG
1504	90	25	Diesel	N	N	1	N	10 KW DEG
1510	86	275	Diesel	N	N	1	N	100 KW DEG
1658	83	55	Diesel	N	N	1	N	15 KW DEG
1631A	94	500	Mogas	N	N	1	Y	Double Wall Tank
1631B	94	2000	Diesel	Y	Y	1	Y	Double Wall Tank
1631C	94	4000	JP-8	N	N	1	Y	Double Wall Tank
1720	89	300	Diesel	N	N	1	N	80 KW DEG
1730	83	275	Diesel	N	N	1	N	100 KW DEG
1750	86	110	Diesel	N	N	2	N	650 KW DEG, removed 1994
1750	86	110	Diesel	N	N	2	N	650 KW DEG, removed 1994
1765	85	25	Diesel	N	N	2	N	40 KW DEG
1807	N/A		Chlorine	N	N	2	N	Swim Pool, cov pad Cl bottle
3000	87	275	Diesel	N	N	1	Y	950 KW DEG, Inside Bldg
3000	87	275	Diesel	N	N	1	Y	950 KW DEG, Inside Bldg
3001A	95	2000	Diesel	Y		0		Double Wall Tank
3001B	95	4000	Mogas	Y		0		Double Wall Tank
3106	N/A		Chlorine	N	N	3	N	Swim Pool, cov pad Cl bottle
4101	UNK	500	Diesel	N	N	4		Removed
4114	90	6	Diesel	N	N	1	N	Air field arresting gear engine
4114	90	6	Diesel	N	N	1	N	Air field arresting gear engine
4120	90	6	Diesel	N	N	1	N	Air field arresting gear engine
4120	90	6	Diesel	N	N	1	N	Air field arresting gear engine
4141	83	25	Diesel	N	N	1	N	15 KW DEG, Inside Bldg
4141	83	25	Diesel	N	N	1	N	15 KW DEG, Inside Bldg
4146	92	2500	JP-8	N	N	1	Y	Trailer
4150	88	275	Diesel	N	N	2	N	150 KW DEG
4152	88	275	Diesel	N	N	2	N	150 KW DEG
4153	88	275	Diesel	N	N	2	N	150 KW DEG
4154	88	275	Diesel	N	N	2	N	150 KW DEG
4156	86	30	Diesel	N	N	1	N	200 KW DEG, Inside Bldg
4155	86	275	Diesel	N	N	1	N	150 KW DEG
4175	84	275	Diesel	N	N	2	N	135 KW DEG
4205	84	5000	CO2	N	N	2	N	
8503	89	1000	Propane	N	N	2	N	
8503	89	1000	Propane	N	N	2	N	
NOTE:								
	STATUS	1	Facility Active					
		2	Facility Inactive					
		3	Tank Disconnected, but still at facility					
		4	Tank and/or facility removed					
This list contains all above ground "Tanks" including LPG, CO2 and small bay tanks.								

August 2, 1996

MEMORANDUM

SUBJECT: Major Source Determinations for Military Installations under the Air Toxics, Newsroom Review, and Title V Operating Permit Programs of the Clean Air Act (Act)

FROM: John S. Seitz, Director /s/
Office of Air Quality Planning and Standards (MD-IO)

TO: See Addressees

Purpose of Guidance

The purpose of this memorandum is to provide guidance on implementing the section 112 air toxics, title I (Part D) nonattainment new source review (nonattainment NSR), title I (Part C) prevention of significant deterioration (PSD), and title V operating permit programs with regard to "major source" determinations at Federal military installations. (The nonattainment NSR and PSD programs together are hereafter referred to as the new source review (NSR) program.) The attachment to this -memorandum, entitled "Guidance for Major Source Determinations at Military . Installations under the Air Toxics, New Source Review; and Title V Operating Permit Programs of the Clean Air Act (Act)," outlines today's guidance in greater detail.

For the purposes of this guidance, the term "military installation" refers to a stationary source, or group of stationary sources, located on one or more contiguous or adjacent properties that are owned, operated, supervised, or controlled by one or more Department of Defense (DOD) components which include the military services, the defense agencies, and the National Guard (Defense agencies are components of the DOD that are established by the Secretary of Defense to perform a supply or service activity common to more than one military department. For example, the Defense Finance and Accounting Service handles the payroll for all the military services.) This definition of the term military installation has been developed solely for the purpose of providing a starting point in the analytical process for making major source determinations that is described in this guidance. It is not intended to be equivalent to the term "major source."

Background

Atch 8

In recent months, the requirement for sources to prepare and submit title V operating permit applications has led to greatly increased interest in understanding how to make “major source” determinations. At issue are questions about which pollutant-emitting activities at stationary sources must be aggregated for the purpose of determining the applicability of emission control and permitting requirements under the Act.

In particular, given the wide variety of functions performed at military bases and the array of “control” arrangements associated with them, the DOD has requested that the Environmental Protection Agency (EPA) issue guidance addressing how determinations of major sources may be made at military installations. Compared to most industrial sources, military installations include a wider variety of functions and activities including residential housing, schools, churches, recreational parks, shopping centers, industrial operations, training ranges, airports, gas stations, utility plants, police and fire departments, and hospitals. In addition, military installations include a variety of tenant activities, including other DOD service, non-DOD Federal agency, contractor, and leased commercial activities.

Section 118(a) of the Act states that each department, agency, and instrumentality of the Federal government is subject to and must comply with all Federal, State, and local requirements in the same manner and to the same extent as any nongovernmental entity. The EPA believes that the effect of today’s guidance is to assure that military installations are treated consistently with how the Agency’s regulations and policies are applied at nonmilitary stationary sources.

Summary of Guidance

Common Control Determinations

When making major source determinations at a military installation, the Agency believes it is appropriate to consider pollutant-emitting activities that are under the control of different military services not to be under common control. In other words, all pollutant-emitting activities at an installation under the control of the Army could be considered under separate control from those activities “owned or operated” by the Navy, the Air Force, or the Marine Corps. In addition, activities under the control of the National Guard may be considered under separate control from activities under the control of military services, as can activities under the control of the defense agencies; however, the defense agencies are considered under common control with each other.

While separate military controlling entities may be treated as under separate control, determinations for military installations should be made on a case-specific basis after examining the operations and interactions at those sites. Consequently, there may be situations in which the air pollution control agency or the permitting authority determines that it is appropriate to consider a military installation a single source, notwithstanding the presence of multiple controlling entities at that military installation. Nothing in this guidance precludes such a finding by an agency or permitting authority.

In general, leased activities at military installations may be considered under separate control from activities under the control of the military controlling entities at that installation. These leased activities would be considered “tenants” on military bases. In contrast, contract-for-service (or contractor-operated) activities-at military installations usually would be considered under the control

of the military controlling entity that controls the contract. Thus, leased activities may be considered under common control when they also have a contract-for-service relationship to provide goods or services to a military controlling entity at that military installation. Given the variety and complexity of leased and contract-for-service activities at , military bases, the Agency expects that case-by-case determinations will often be necessary for such situations.

Industrial Grouping and Support Facility Determinations

Historically, all activities at a military installation have been grouped under the Standard Industrial Classification (SIC) Manual Major Group 97, "National Security and International Affairs" (or, more specifically, within Major Group 97, Industry Number 9711, "National Security"). Upon evaluating the application of the SIC-code approach to classifying military installations, the EPA has determined that Major Group 97 is inappropriate for major source determinations at some military installations. In these instances, the 97 Major Group inappropriately aggregates activities at a military installation with the result that portions of the installation could be subject to requirements under the Act that would not otherwise apply if a comparable source determination were made as if for a nonmilitary facility.

The EPA believes it is appropriate to think of military installations as combinations of functionally distinct groupings of pollutant-emitting activities that may be identified and distinguished the same way that industrial and commercial sources are distinguished, that is, on the basis of a "common sense notion of a plant." Thus, the following approach may be used to determine how military facilities should be aggregated in making major source determinations: the "industrial groupings" at a military installation may be assigned appropriate 2-digit SIC codes (as if they were nonmilitary facilities) and classified into "primary" and "support" activities. As is now done for nonmilitary sources, support activities at military bases would be aggregated with their associated primary activity regardless of dissimilar 2-digit SIC codes.

The EPA also believes that certain personnel-related activities at military installations may appropriately be considered not to be support facilities to the primary military activities of a base and, therefore, they can be considered separate sources. Examples of these types of activities include residential housing, schools, day care centers, churches, recreational parks, theaters, shopping centers, grocery stores; gas stations, and dry cleaners. These activities may be treated as separate sources for all purposes for which an industrial grouping distinction is allowed, but they should be separately evaluated for common control, SIC code, and support facility linkages to determine if a major source is present.

Title V Pertaining

After determining that stationary sources at a military installation are subject to title V permitting, permitting authorities have discretion to issue more than one title V permit to each major source at that installation, so long as the collection of permits assures that all applicable requirements would be met that otherwise would be required under a single permit for each major source. In other words, all stationary sources that are subject to title V permitting within a major source must be covered by one of these permits, and a major source may not be divided in a way that changes how it would be subject to or comply with applicable requirements compared 'I with what would otherwise occur if a single title V permit were issued to that major source.

Permitting authorities may accept multiple permit applications for each major source, provided that each permit application is certified by a responsible official who is selected in accordance with the requirements of 40 CFR 70.2 or 71.2. The EPA recommends that military

controlling entities that wish to obtain multiple title V permits for major sources under their control meet with their permitting authorities well in advance of permit application submission deadlines to discuss how their major sources may be divided to receive separate title V permits. Where military installations have already filed title V permit applications and these submittals are being processed for permit issuance, these applications should be reevaluated in light of the approaches described in this guidance, if appropriate. .

Effect of Guidance

This guidance explains the EPA's interpretations of what is minimally required under its regulations; it is not intended to supersede or replace more stringent approaches taken by any particular agency or permitting authority. State and local agencies may choose to implement the approaches described here, or they may exercise their discretion to implement more stringent approaches provided there is a rational basis for the treatment of military installations compared with other types of facilities. The EPA recommends that military installations consult with their permitting authorities to determine the application of this guidance to their installations.

For major stationary source determinations under the NSR program, this guidance applies prospectively only and it does not affect any preexisting major source determination made by a permitting authority (e.g., one that resulted in the issuance of a major NSR permit or one that resulted in a determination that major NSR was not applicable). Such determinations generally would continue to be valid, provided they were made in accordance with relevant State and Federal requirements that applied at the time they were made.

The interpretations and policies set forth in this document are intended solely as ' guidance, do not represent final Agency action, and cannot be relied upon to create rights enforceable by any party. The EPA will continue to evaluate the need for guidance on major source determinations for military installations and may issue additional guidance in the future.

Distribution/Further Information

The Regional Offices should send this memorandum, including the attachment, to State and local air pollution control agencies within their jurisdictions. Regional Offices should distribute these materials promptly because title V permit application deadlines are approaching for military installations in numerous locations. Questions concerning specific issues and cases should be directed to the appropriate Regional Office. In addition, copies of cited materials that are not otherwise readily available may be obtained from the air permitting contacts at the Regional Offices. Regional Office staff may contact Michele Dubow of the Integrated Implementation Group at (919) 541-3803. This document is also available on the technology transfer network (TTN) bulletin board, under "Clean Air Act" - "Title V" - "Policy Guidance Memos." (Readers unfamiliar with this bulletin board may obtain access by calling the TTN help line at (919) 541-5384.)

Attachment**Addressees:**

Director, Office of Ecosystem Protection, Region I
Director, Division of Environmental Planning and Protection, Region II
Director, Air, Radiation and Toxics Division, Region III
Director, Air, Pesticides and Toxics Management Division, Region IV
Director, Air and Radiation Division, Region V
Director, Multimedia Planning and Permitting Division, Region VI
Director, Air, RCRA, and TSCA Division, Region VII
Assistant Regional Administrator, Office of Pollution Prevention,
State and Tribal Assistance, Region VIII
Director, Air and Toxics Division, Region IX
Director, Office of Air, Region X

cc: Air Branch Chiefs, Regions I-X
Regional Air Toxics, NSR, and Title V Contacts, Regions I-X
Michele Dubow (MD- 12)
Bruce Jordan (MD-13)
Bob Kellam (MD-12)

ATTACHMENT

Guidance for Major Source Determinations at Military
Installations under the Air Toxics, New Source Review,
and Title V Operating Permit Programs of the Clean Air Act (Act)

I. Introduction

The relevant programs to which this guidance applies are the section 112 air toxics, title I (Part D) nonattainment new source review (nonattainment NSR), title I (Part C) prevention of significant deterioration (PSD), and title V operating permit programs. (The nonattainment NSR and PSD programs are hereafter referred to collectively as the new source review (NSR) program.) Regulations implementing these programs are found, respectively, in 40 CFR parts 63, 51 and 52, and 70 and 71.¹ This guidance explains the Environmental Protection Agency's (EPA) interpretation of what is minimally required under these regulations; it is not intended to supersede or replace more stringent approaches taken by any particular air pollution control agency or permitting authority provided there is a rational basis for the treatment of military installations compared with other types of facilities. The EPA recommends that military installations consult with their agencies or permitting authorities to determine the application of this guidance to their installations.

For the purposes of this document, the term "military installation" refers to a stationary source,² or group of stationary sources, that are located on one or more contiguous or adjacent properties that are owned, operated, supervised, or controlled by one or more Department of Defense (DoD) components which include the- military services, the defense agencies, and the National Guard.³

¹ The use of this guidance in determining what constitutes a major source does not affect the scope of what constitutes a "Federal action" for the purposes of the General Conformity Rule (40 CFR 93.150-160).

² The term "stationary source" is used here with its meaning under 40 CFR part 70: "any building, structure, facility, or installation that emits or may emit any regulated air pollutant or any pollutant listed under section 112(a) of the Act." § 70.2 "Stationary source."

³ This definition has been developed solely for the purpose of providing a starting point in the analytical process for making major source determinations that is described in this guidance. It is not intended to be equivalent to the term "major source," nor is it used to define the "source" that is the basis for a major source determination at a military facility. (See footnote 4 for an explanation of how the term "source" is used in this document in relation to major source determinations.)

The interpretations and policies set forth in this document are intended solely as guidance, do not represent final Agency action, and cannot be relied upon to create rights enforceable by any party. Furthermore, this guidance applies prospectively only for major stationary source determinations under the NSR program and it does not affect any preexisting major source determination made by a permitting authority (e.g., one that resulted in the issuance of a major NSR permit or one that resulted in a determination that major NSR was not applicable). Such determinations generally would continue to be valid, provided they were made in accordance with the relevant State and Federal requirements that applied at the time they were made.

II. Background

Many stationary source requirements of the Act apply only to “major sources” (or “major stationary sources” as they are defined under the NSR program). Therefore, the determination of whether a stationary source, or group of stationary sources considered together, is a major source is critical to determining whether a particular requirement under the Act applies to that “source.”⁴ Major sources (or major stationary sources) are those stationary sources that emit or have the potential to emit air pollutants in excess of threshold emission levels specified in the Act (or established by regulation by the EPA) and that meet other criteria defined by regulation.

The definitions that appear in parts 51, 52, 63, 70, and 71 consider a stationary source, or group of stationary sources considered together, to be a major source if the stationary source (or group of stationary sources) is located on one or more contiguous or adjacent properties and is under “common control” of the same person (or persons under common control).^{5,6} In making major source determinations under the relevant programs, sources and permitting authorities generally would, first, determine which pollutant-emitting activities that are located on one or more contiguous or adjacent properties are under common control of the same persons (or persons under common control) and, second, determine whether the initial “source” may be disaggregated into two or more “sources” based on appropriate industrial groupings and support facility relationships.

⁴ “Source” is not a defined term in the EPA’s regulations for the programs addressed by this guidance. It is used in today’s guidance to refer generically to the collection of pollutant-emitting activities (i.e., to the stationary source or group of stationary sources considered together) that, when aggregated appropriately under the regulations and policy of a particular program, forms the basis for the “major source” determination. Depending upon the context, “source” also is used here as it is colloquially to refer to entire facilities or plant sites that emit air pollutants.

⁵In addition, for making major source determinations under NSR and title V, these programs provide that sources can be aggregated on the basis of industrial groupings and support facility relationships, but this approach is not available under the section 112 air toxics regulations. This topic is addressed in the next section of this guidance.

⁶ The EPA believes that Congress intended the term “located within a contiguous area,” as it is used to define major source in section 112 and 40 CFR 63.2, to have the same meaning as the term “located on one or more contiguous or adjacent properties,” as it is used to define major source in 40 CFR 70.2. The Agency’s policy on the meaning of “contiguous or adjacent” property was addressed in the preamble to the proposed General Provisions for part 63 (58 FR 42767, August 11, 1993). The Agency interprets and applies this term the same way under the air toxics, NSR, and title V programs.

III. Guidance for Military Installations

A . Common Control Determinations

1. Activities Under the Control of Different Military Services, Defense Agencies, or the National Guard

Applicability:

Section 112, NSR, and title V.

Summary

Pollutant-emitting activities under the control of the following entities may be considered under separate control when making major source determinations at military installations: the Army, the Navy, the Air Force, the Marine Corps, the National Guard, and the defense agencies taken collectively (i.e., all the defense agencies at a military installation would be considered under common control).

Discussion:

Because “control” of all Executive Branch entities resides with the Office of the President, a literal approach to determining common control would result in a finding of common control among every Federal government entity not in the Judicial or Congressional branches. To the EPA’s knowledge, this has never been the EPA’s practice. Similarly, a literal approach to determining common control at military installations would result in a finding of common control among all the DOD components at an installation. While such an approach has been taken in the past, the EPA believes it is appropriate to settle on an approach to common control for the military that is reasonable as the minimum approach required to implement the relevant Clean Air Act requirements.

There are four separate military services within the DOD: the Army, the Navy, the Air Force, and the Marine Corps. The administrative functions of these services, including

⁷This step is sometimes referred to as a “site determination.” It may also be referred to as an initial “source” determination.

management control over facility operations, are the province of the separate military services. Effectively, there is no “control” relationship among these services regarding facility operation below the Secretary of Defense: In addition, there are a number of defense agencies and defense field activities established by the Secretary of Defense as necessary to perform a supply or service activity common to more than one military department. Overall supervision of each agency or field activity is assigned to the Office of the Secretary of Defense or to the Chairman of the Joint Chiefs of Staff.

National Guard units have a dual mission: while Army and Air National Guard units are reserve components of the U.S. Army and U.S. Air Force, the National Guard is also the official State militia of individual States and is under the control of the State governors unless called to active Federal duty. State Guard units support the Federal missions of the Army and Air Force and use Federal resources to meet these missions; however, Army and Air Guard commanders report to a State’s Adjutant General, who is appointed by the governor of the State.

When different military services control separate groups of pollutant-emitting activities at a single military installation, the Agency believes it is appropriate to consider these activities not to be under common control when making major source determinations. In other words, all pollutant-emitting activities at a military installation under the control of the Army could be considered under separate control from those activities “owned or operated” by the Navy, the Air Force, or the Marine Corps. In addition, activities under the control of the National Guard may be considered under separate control from activities under the control of the military services, as can activities under the control of the defense agencies; however, as mentioned above, the defense agencies are considered under common control with each other.

Because the National Guard is controlled by States, the EPA believes it is appropriate to treat National Guard units located at military installation as being under separate control from the military services. Moreover, because the States may vary in the control relationships between Air and Army National Guard units, the EPA believes that control determinations for Air and Army National Guard units that are present together at a military installation should be made by permitting authorities.

Hereafter, for the purposes of this guidance, the term “military controlling entities” is used to refer to the controlling entities at a military installation that are considered under separate control. Figure 1 includes a complete list of the military controlling entities that may be considered under separate control under this guidance. Figure 2 includes a complete list of the defense agencies that are considered under common control with each other.

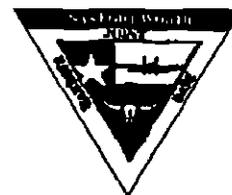
Under this approach, all portions of a military installation under the control of a military controlling entity are considered to be under common control regardless of their actual contiguity at that military installation, i.e., regardless of whether they share a reasonably continuous border. In other words, at this stage of the major source determination process, all portions of an installation that are part of a separate military service, the National Guard, or one or more defense agencies taken together are considered the same “source” on the basis of being located on the same property or on contiguous or adjacent properties.

Nevertheless, while separate military controlling entities may be treated as under separate control, determinations for military installations should be made only after examining the specific operations and interactions at those sites. Consequently, there may be situations in which the air pollution control agency or the permitting authority determines that it is appropriate to consider a military installation a single "source," notwithstanding the presence of multiple controlling

APPENDIX C
PUBLIC AFFAIRS FACT SHEET

FACT SHEET

NAVAL AIR STATION JOINT RESERVE BASE FORT WORTH, TEXAS



Mission statement

The mission of Naval Air Station Joint Reserve Base Fort Worth is to provide a quality training environment for Reserve components of all branches of the Armed Services, carrying out the Goldwater/Nicholas Act to improve interoperability among all four military services; to reduce redundancy and overhead by developing joint doctrine and operating procedures that create seamless functionality amongst host and tenant commands in base support and community service programs.

The beginning: Carswell Air Force Base

NAS JRB Fort Worth is located at the site of the former Carswell Air Force Base. In 1941, the installation was known as the Tarrant Field Airdrome, which served the Consolidated Vultee Aircraft Corporation. The airdrome became Fort Worth Army Air Field on January 2, 1942, following the attack on Pearl Harbor. A variety of aircraft were produced at what became "Air Force Plant 4," including the B-24, B-36, B-58, F-111 and F-16.

The airfield was renamed Carswell AFB in 1948 to honor Fort Worth native Major Horace Seaver Carswell Jr. While returning from a bombing strike against a Japanese convoy, the 1939 graduate of Texas Christian University continued to fly his severely damaged B-24, enabling his crew to jump from the bomber. This unselfish act cost Carswell his life. He was posthumously awarded the Medal of Honor for this extraordinary act of heroism.

Carswell AFB was one of the first Strategic Air Command bases, hosting B-29, B-36, B-58 and B-52 bombers from the 7th Bomb Wing, which maintained a longstanding vigil during the Cold War. Carswell AFB was also the site of the James Stewart classic movie *Strategic Air Command*.

Winds of change: Air Force realignment

As part of the Department of Defense's 1991 consolidation efforts, the decision was made to relocate the 7th Bomb Wing from Carswell AFB. During a 1992 Air Force-wide reorganization, the famed Strategic Air Command was officially disestablished. On October 1, 1993, the Air Force Reserve 301st Fighter Wing assumed base responsibilities, establishing Carswell as an Air Reserve Base. In 1993, Congress directed the establishment of the nation's first joint reserve base under the Base Realignment and Closure authority.

"Jointness: A way of life; a model for all services"

NAS JRB Fort Worth was officially established on October 1, 1994, as the first joint-service reserve base. It is the result of the DoD's 1993 BRAC recommendation to relocate NAS Dallas and its tenant commands to the former Carswell ARB. Additional tenant commands from other closing installations were also directed to relocate to NAS JRB Fort Worth, such as U.S. Marine Corps Reserve squadrons from Memphis, Tenn., and Glenview, Ill., in July/August 1994. The 1993 BRAC proceedings also placed the Navy, as the host of what has become a new joint military reserve base - a model for future consolidations.

The relocation of commands from NAS Dallas continues in stages, as renovation or new construction is completed at NAS JRB Fort Worth. Although not all units and facilities are fully in place, NAS JRB Fort Worth has already established itself as a hub for advanced joint training for pilots, aircrews and ground personnel. Since NAS JRB Fort Worth's establishment, the efforts expended to create this model base not only have increased Reserve readiness and training capabilities, but also have significantly enhanced the total capability of the U.S. military.

Commands/units at NAS JRB Fort Worth:

- 10th Air Force
- 301st Fighter Wing (Air Force)
- Marine Aircraft Group 41 (MAG 41)
- Fighter Squadron 201 (VF 201) (Navy)
- Fleet Logistics Support Squadron 59 (VR 59) (Navy)
- Marine Aerial Refueler Transport Squadron 234 (VMGR 234)
- Marine Fighter Attack Squadron 112 (VMFA 112)
- Marine Air Control Squadron 24 (MACS 24)

Commands/units at NAS Dallas:

- Commander, Fleet Logistics Support Wing (Navy)
- 14th Marines
- 136th Tactical Airlift Wing of the Texas Air National Guard (TANG)
- Army National Guard

APPENDIX D
FEDERAL, STATE, AND LOCAL GOVERNMENT OFFICIALS

FEDERAL ELECTED OFFICIALS - DALLAS/FORT WORTH

Office	District	Name	Address	City, State	Zip Code	Telephone
U.S. Senator	Texas	Mr. Phil Gramm	2323 Bryan, Suite 1500	Dallas, Texas	75201	(214) 767-3000
U.S. Senator	Texas	Ms. Kay Bailey Hutchison	10440 N. Central Expressway, Suite 1160	Dallas, Texas	75231	(214) 361-3500
U.S. Congressman	26th	Richard "Dick" Armev	9901 Valley Ranch Parkway East, Suite 3050	Irving, Texas	75063	(214) 556-2500
U.S. Congressman	24th	Mr. Martin Frost	NCNB Bank Tower-Oak Cliff 400 S. Zang Blvd., Suite 506	Dallas, Texas	75208	(214) 948-3401
U.S. Congressman	13th	William M. "Mac" Thornberry	2515 McKinney Avenue, Suite 1565	Dallas, Texas	75201	(214) 922-8885
U.S. Congressman	6th	Mr. Joe L. Barton	303 West Knox, Suite 101	Ennis, Texas	75119	(817) 543-1000
U.S. Congressman	12th	Kay Granger	1600 West 7th Street, Suite 740	Forth Worth, Texas	76102	(817) 338-0909

D Democrat R Republican

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**STATE ELECTED OFFICIALS - TEXAS
AND
TEXAS HOUSE OF REPRESENTATIVES OF TARRANT COUNTY**

Office	District	Name	Address	City, State	Zip Code	Telephone
Governor		Mr. Rick Perry	State Capitol Room 2S.1	Austin, Texas	78701	(512) 463-2000
Secretary of State		Mr. Antonio O Garza, Jr.	State Capitol Room 1E.8 P.O. Box 12697	Austin, Texas	78711	(512) 463-5701
Lieutenant Governor		Mr. Bill Ratliff	P.O. Box 12068	Austin, Texas	78711-2068	(512) 463-0001
Senator	10	Chris Harris	1309-A W. Abram	Arlington, Texas	76013	(817) 261-5396
Senator	12	Mr. Mike Moncrief	1701 River Run Rd., Suite 504, Box 54	Fort Worth, Texas	76107	(817) 338-9240
Senator	9	Ms. Jane Nelson	900 Parker Square, Suite 200	Flower Mound, Texas	75028	(972) 724-0066
Senator	22	Mr. David Sibley	801 Austin Avenue, Suite 1020	Waco, Texas	76710	(254) 756-0122
Senator	23	Mr. Royce West	5787 S. Hampton Road, Suite 385	Dallas, Texas	75232	(214) 467-0123
Representative	96	Ms. Kim Brimer	300 Alta Mesa Blvd, #145	Fort Worth, Texas	76113	(817) 361-7855
Representative	91	Mr. Bill G. Carter	3525 Denton Hwy, Suite A	Fort Worth, Texas	76117	(817) 834-1144
Representative	89	Mr. Charlie Geren	1011 Robert's Cutoff	River Oaks, Texas	76114	(817) 738-8333
Representative	93	Mr. Toby Goodman	1600 E Lamar, Suite 250	Arlington, Texas	76011	(817) 460-8290
Representative	94	Mr. Kent Grusendorf	1221 W. Nathan Lowe Road	Arlington, Texas	76017	(817) 456-9411
Representative	95	Mr. Glenn Lewis	1100 Circle Drive, Suite 200	Fort Worth, Texas	76119	(817) 536-6772

D Democrat R Republican

**STATE ELECTED OFFICIALS - TEXAS
AND
TEXAS HOUSE OF REPRESENTATIVES OF TARRANT COUNTY
(continued)**

Office	District	Name	Address	City, State	Zip Code	Telephone
Representative	98	Ms. Vicki Truitt	1256 Main Street, #248	Westlake, Texas	76092	(817) 488-4098
Representative	97	Ms. Anna Mowery	6421 Camp Bowie Blvd., #310	Fort Worth, Texas	76116	(817) 732-1372
Representative	92	Ms. Todd Smith	2725-A Central Drive	Bedford, Texas	76021	(817) 283-3131
Representative	90	Mr. Lon Burnam	1305 W. Magnolia	Fort Worth, Texas	76104	(817) 924-1997

D Democrat R Republican

LOCAL ELECTED OFFICIALS
Tarrant County, Texas

Office	Name	Term Expires	Address	City, State	Zip Code	Telephone
County Judge	Tom Vandergriff	1998	100 E Weatherford	Fort Worth, Texas	76196	(817) 884-1441
Commissioner, Precinct 1	Dionne Babsby	1996	6550 Dan Dancier	Fort Worth, Texas	76133	(817) 370-4500
Commissioner, Precinct 2	Marti VanRavenswaay	1998	724 East Border Street, Suite 103	Arlington, Texas	76010	(817) 548-3900
Commissioner, Precinct 3	Glen Whitley	1996	645 Grapevine Hwy	Hurst, Texas	76054	(817) 581-3600
Commissioner, Precinct 4	J. D Johnson	1998	6713 Telephone Road	Fort Worth, Texas	76135	(817) 238-4400
County Clerk	Suzanne Henderson	NA	Tarrant County Administration Building 100 East Weatherford	Fort Worth, Texas	76196	(817) 884-1067
District Clerk	Tom Wilder	NA	Tarrant County Administration Building 100 East Weatherford	Fort Worth, Texas	76196	(817) 884-1574
Tax Collector	June Garrison	NA	Tarrant County Administration Building 100 East Weatherford	Fort Worth, Texas	76196	(817) 884-1850
Sheriff	David Williams	NA	Tarrant County Administration Building 100 East Weatherford	Fort Worth, Texas	76196	(817) 884-1547
Criminal District Attorney	Tim Curry	NA	Tarrant County Administration Building 100 East Weatherford	Fort Worth, Texas	76196	(817) 884-1620

NA Not Applicable

LOCAL ELECTED OFFICIALS
City of Benbrook, Texas

Office*	Term Expires	Name	Address	City	State	Zip Code
Mayor	2001	Felix T. Hebert	911 Winscott Road P.O. Box 26569	Benbrook	Texas	76126
Place 2	2002	Al Grner	911 Winscott Road P.O. Box 26569	Benbrook	Texas	76126
Place 3	2001	Kevin Gahagan	911 Winscott Road P.O. Box 26569	Benbrook	Texas	76126
Place 4	2002	Rick Allison	911 Winscott Road P.O. Box 26569	Benbrook	Texas	76126
Mayor Pro Term	2001	John VanderPan	911 Winscott Road P.O. Box 26569	Benbrook	Texas	76126
Place 5	2001	Jerry B. Dittrich	911 Winscott Road P.O. Box 26569	Benbrook	Texas	76126
Place 6	2002	Jerry B. Dittrich	911 Winscott Road P.O. Box 26569	Benbrook	Texas	76126
Place 7	2001	Pamela Brandenburg	911 Winscott Road P.O. Box 26569	Benbrook	Texas	76126

*Telephone number for all offices is (817) 249-3000.

LOCAL ELECTED OFFICIALS
Town of Lakeside, Texas

Office*	Term Expires	Name	Address	City	State	Zip Code
Mayor		Raymond Beck	Town of Lakeside 9830 Confederate Park Road	Fort Worth	Texas	76108
Place 1		John Garrison	Town of Lakeside 9830 Confederate Park Road	Fort Worth	Texas	76108
Place 2		Kay Forames	Town of Lakeside 9830 Confederate Park Road	Fort Worth	Texas	76108
Place 3		Bill Walker	Town of Lakeside 9830 Confederate Park Road	Fort Worth	Texas	76108
Place 4		Gaspac Laduca	Town of Lakeside 9830 Confederate Park Road	Fort Worth	Texas	76108
Mayor Pro Term		Carroll G. Smith	Town of Lakeside 9830 Confederate Park Road	Fort Worth	Texas	76108
Place 5		Carroll G. Smith	Town of Lakeside 9830 Confederate Park Road	Fort Worth	Texas	76108

*Telephone number for all offices is (817) 237-1234

LOCAL ELECTED OFFICIALS City of Lake Worth, Texas						
Office*	Term Expires	Name	Address	City	State	Zip Code
Mayor		Walter Bowen	6720 Telephone Road	Lake Worth	Texas	76135
Place 1		Eugene B. Brooks	6720 Telephone Road	Lake Worth	Texas	76135
Place 2		Billy J. Humphreys	6720 Telephone Road	Lake Worth	Texas	76135
Place 3		Scott McCarty	6720 Telephone Road	Lake Worth	Texas	76135
Place 4		Paul Harmon	6720 Telephone Road	Lake Worth	Texas	76135
Place 5		Curtis McKay, Jr.	6720 Telephone Road	Lake Worth	Texas	76135
Mayor Pro Tem, Place 6		Geoffrey White	6720 Telephone Road	Lake Worth	Texas	76135
Place 7		Ronny Parsely	6720 Telephone Road	Lake Worth	Texas	76135

*Telephone number for all offices is (817) 237-1333.

LOCAL ELECTED OFFICIALS City of River Oaks, Texas						
Office*	Term Expires	Name	Address	City	State	Zip Code
Mayor		Jack Adkison	4900 River Oaks Blvd.	Fort Worth	Texas	76114
Mayor Pro Tem		Bob Minter	4900 River Oaks Blvd.	Fort Worth	Texas	76114
		Robert C. Brown Jr.	4900 River Oaks Blvd.	Fort Worth	Texas	76114
		Clint Williams	4900 River Oaks Blvd.	Fort Worth	Texas	76114
		Royce Shields	4900 River Oaks Blvd.	Fort Worth	Texas	76114
		Steve Holland	4900 River Oaks Blvd.	Fort Worth	Texas	76114

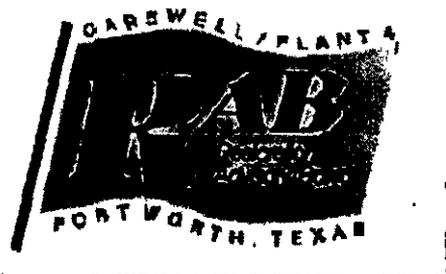
*Telephone number for all offices is (817) 626-5421

LOCAL ELECTED OFFICIALS
City of Saginaw, Texas

Office*	Term Expires	Name	Address	City	State	Zip Code
Mayor		Frankie Robbins	333 West McLeroy Blvd P.O. Drawer 79070	Saginaw	Texas	79070
Place 1		David Flory	333 West McLeroy Blvd P.O. Drawer 79070	Saginaw	Texas	79070
Place 2		Gary Brunkley	333 West McLeroy Blvd P.O. Drawer 79070	Saginaw	Texas	79070
Mayor Pro Term		Judy Bevell	333 West McLeroy Blvd P.O. Drawer 79070	Saginaw	Texas	79070
Place 3		Delbert Sedberry	333 West McLeroy Blvd P.O. Drawer 79070	Saginaw	Texas	79070
Place 4		Gerry Davis	333 West McLeroy Blvd P.O. Drawer 79070	Saginaw	Texas	79070
Place 5		Tim Dennis	333 West McLeroy Blvd P.O. Drawer 79070	Saginaw	Texas	79070
Place 6						

*Telephone number for all offices is (817) 232-4640.

APPENDIX E
RESTORATION ADVISORY BOARD FACT SHEET



CARSWELL/PLANT 4 RESTORATION ADVISORY BOARD

Fact Sheet #12
May 10, 2001

NAS FORT WORTH JOINT RESERVE BASE INSTALLATION RESTORATION PROGRAM

This is the twelfth in a series of fact sheets focusing on the Installation Restoration Program (IRP) at the Naval Air Station Fort Worth Joint Reserve Base (NAS Fort Worth JRB). The NAS Fort Worth JRB, formerly Carswell Air Force Base (AFB), is in the process of planning and conducting activities for the identification, remediation, and closure of contaminated sites at the base.

The IRP is the Department of Defense's (DoD) primary mechanism for environmental response actions on U.S. Air Force installations. IRP activities are governed by provisions of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), and other applicable federal and state regulations. These activities are being conducted through the combined efforts of the Air Force Center for Environmental Excellence (AFCEE) and the Air Force Base Conversion Agency (AFBCA). Under provisions of RCRA, the Air Force identified 68 solid waste management units (SWMU) and 19 areas of concern (AOC) at NAS Fort Worth JRB for further study and clean up, if necessary.

CARSWELL ON-BASE

RCRA FACILITY INVESTIGATION OF SOLID WASTE MANAGEMENT UNITS 49 AND 50

SWMUs 49 and 50 are former aircraft washing areas 1 and 2, respectively. Because of the nature and location of these units, work on SWMU 49 is contingent on the findings of potential contamination at SWMU 50. Therefore, work plans were prepared for the sampling at SWMU 50 only. The Final Work Plan for SWMU 50 was submitted to AFCEE in September 2000, and the first round of field work was conducted at this location in December 2000. Initial results from the December 2000 sampling event have been validated, and it was determined that further soil sampling is necessary at SWMU 50. In addition, a groundwater investigation also will be conducted to determine to what extent, if any, groundwater has been impacted.

SITE INVESTIGATION OF AREAS OF CONCERN 17 AND 18

The first round of field sampling activities was completed in May 2000 for the Site Investigations (SI) at a suspected former landfill (AOC 17) and suspected former fire training area (AOC 18). Based on the sampling results, it does not appear as though a release of hazardous constituents has occurred from either of these units. Therefore, an SI report recommending closure of these units was submitted to the regulators in December 2000. Closure of these sites was received on March 7, 2001.

LIMITED RCRA FACILITY INVESTIGATION OF SOLID WASTE MANAGEMENT UNITS 45, 54, AND 55

The Final Work Plans to conduct a limited RCRA Facility Investigation (RFI) were completed in September 2000 for the following areas: Building 1027 Waste Oil Tank Vault (SWMU 45), Storm Water Interceptors (SWMU 54), and the East Gate Oil/Water Separator (SWMU 55). As-built drawings obtained for the oil/water separator serving Building 1027 indicate that a waste oil tank vault associated with the oil/water separator does not exist. Archival research produced legible photographs identifying SWMU 45 in the RCRA Facility Assessment (RFA) conducted in 1989. It is evident from these photographs that a sanitary sewer lift station was mistakenly identified as SWMU 45. Based on this information, a report recommending closure was prepared and submitted to Texas Natural Resource Conservation Commission (TNRCC) in January 2001. Subsequently, in a letter dated March 9, 2001, the TNRCC granted closure of SWMU 45.

Soil sampling was conducted for SWMUs 54 and 55 to determine if these units have released hazardous constituents to the environment. The first round of fieldwork was conducted in December 2000. Based on the results from the first round, a second round of soil, sediment, and surface water sampling is necessary. The second round of sampling is planned for late May or early June.

BASEWIDE GROUNDWATER MONITORING CONTINUES

The Air Force collects groundwater samples at basewide locations four times a year to monitor the status of the contaminant plumes and to provide information for establishing trends. The current program (called Basewide Quarterly Groundwater Sampling and Analysis Program, or GSAP) has been in place since April 1995. Quarterly events occur in January, April, July, and October of each year. The GSAP Plan was updated for the year 2001's sampling events. Based on the data collected over the past 5 years, it was recommended that groundwater monitoring activities be reduced from four to two times per year. Therefore, the last round of sampling was conducted in April 2001, and the next round will be conducted in October 2001.

RCRA FACILITY INVESTIGATION OF LANDFILLS CONTINUES

RFIs continue at six former landfills, also referred to as SWMUs. These landfills include Landfill 7 (SWMU 17), Landfill 3 (SWMU 26), Landfill 1 (SWMU 28), Landfill 2 (SWMU 29), Landfill 9 (SWMU 30), and Landfill 6 (SWMU 62). The results of the RFIs will determine if a source of potential contamination exists and if the source has impacted the soil, groundwater, surface water, or sediments at or near each landfill. Work plans were prepared for the fourth phase of investigations at Landfills 1, 2, 3, 6, 7, and 9, and fieldwork for the fourth phase was completed in February 2001. Sample data collected during the fourth phase has been analyzed, validated, and evaluated. Based on this evaluation, interim remedial actions, also referred to as "hot spot removals," will be necessary prior to the completion of the RFI. These hot spot removals will likely be conducted this summer.

WASTE ACCUMULATION AREA RCRA FACILITY INVESTIGATION

An RFI of 16 Waste Accumulation Areas (WAA) was completed in June 1999. Based on the results of the initial investigation, an RFI report recommending regulatory closure was prepared for 7 of the 16 WAAs and submitted to the regulators in July 2000. Closure of these seven WAAs was approved by the TNRCC in November 2000. A Phase II soil and groundwater investigation was performed on the remaining nine WAAs in May 2000. Based on the results of the Phase II investigation, a Final RFI Report recommending site closure was submitted to TNRCC for four additional sites in March 2001. [Please refer to Executive Summary #27 for more information regarding the Final RFI Report for these former sites.] Additional investigations and/or remedial actions will be required at the remaining five WAAs. Work plans for additional soil and groundwater sampling were submitted to AFCEE in January 2001.

RCRA FACILITY INVESTIGATION OF SOLID WASTE MANAGEMENT UNITS 19, 20, 21, AND 53 AND AREA OF CONCERN 19

The first round of field sampling activities was completed in May 2000 for RCRA Facility Investigations of the following areas: former Fire Training Area No. 2 (SWMU 19), former aboveground waste fuel storage tank (SWMU 20), former underground storage tank (SWMU 21), former fire training area (AOC 19), and the storm water drainage system (SWMU 53). Based on the results of the data collected, further sampling is necessary at each of these units. The additional fieldwork was conducted for SWMU 53 in December 2000, and based on these sampling results, an RFI Report was submitted to the TNRCC recommending closure in March 2001. [Please refer to Executive Summary #28 for more information regarding the Final RFI Report for SWMU 53.]

A geophysical survey was completed at SWMUs 19, 20, and 21 and AOC 19 in February 2001. Monitoring wells were installed at these sites in February, and groundwater sampling was conducted in February and April. Based on the results of this survey, several areas of buried metal will be excavated. Based on the outcome of these excavations, additional soil sampling will be conducted. After the sampling is complete, the Draft RFI Report will be prepared.

UNDERGROUND STORAGE TANK PROGRAM

Soil samples collected at the location of the former Underground Storage Tank (UST) 1427-1 during the initial UST investigations indicated that a release to the environment had occurred from the UST. As a result, the site was determined to meet the TNRCC definition of a Leaking Petroleum Storage Tank (LPST) site. A Final Release Determination Report for UST 1427-1 was submitted to the TNRCC in July 2000 presenting this discovery and requesting a TNRCC LPST site identification number. A Plan A Site Assessment was completed for the LPST at Building 1427, and this information was presented in a Draft Site Assessment Report that was submitted for AFCEE review in April 2001.

Additional sampling of groundwater at AOC 1, the Base Service/Gas Station, and the delineation of contaminants further downgradient of AOC 1 were requested by the TNRCC in January 2000. The delineation consisted of the installation and sampling of three downgradient off-base wells and the continued groundwater monitoring of existing on-base wells. Three off-base wells were installed and sampled in May 2000, and the first semi-annual groundwater sampling at seven existing on-base wells was performed in April 2000. The most recent semi-annual sampling event occurred in October 2000. A Draft Annual Groundwater Monitoring Report was submitted to AFCEE for review in April 2001.

The Final 1999 Annual Groundwater Sampling Report for AOC 4, the Fuel Hydrant System, was submitted to the TNRCC in July 2000, fulfilling the TNRCC reporting requirements for an LPST site undergoing a long-term monitoring program. This report presents four quarters of groundwater sampling that was performed in 1999. For the year 2000, groundwater monitoring at this site was reduced to a semi-annual (April and October) sampling schedule. Product removal activities from two wells at AOC 4 continue on a weekly to monthly basis depending on the occurrence of free product. A Final 2000 Annual Groundwater Monitoring Report and a Site Closure Request form was submitted to TNRCC in March 2001. [Please refer to Executive Summary #30 for more information regarding the Final 2000 Annual Groundwater Monitoring Report and Site Closure Request for AOC 4.]

The TNRCC requested a historical review in the form of a Site Assessment Report for SWMU 68 (the Petroleum, Oil, and Lubricants Tank Farm) and AOC 7 (the former Base Refueling Area). The final Site Assessment Report for SWMU 68 and AOC 7 was submitted to the TNRCC in October 2000. Product removal activities at four wells associated with SWMU 68 and AOC 7 have continued on a weekly to monthly basis depending on the occurrence of free product. Semi-annual groundwater sampling to monitor the stability of groundwater contaminants began in April 2000 with the most recent semi-annual sampling-taking place in October 2000. A Draft Annual Groundwater Monitoring Report and a Site Closure Request form was submitted to AFCEE for review in March 2001.

A second round of soil and/or groundwater samples was collected in May 2000 at six individual UST sites to investigate potential release points discovered during the initial UST investigation. A Draft Site Investigation Summary for the six UST (non-LPST) sites was prepared in January 2001 and submitted for AFCEE review. The comments were incorporated in the final version and submitted to the TNRCC in February 2001.

CORRECTIVE MEASURES CONDUCTED AT AREA OF CONCERN 13

Field work for the removal and replacement of the oil/water separator (OWS) system associated with Building 1145, the Auto Hobby Shop, was performed in May 2000. This OWS system is referred to as AOC 13. The removal activities consisted of the over excavation of soils around the system, the removal and disposal of one OWS and one UST, and the excavation of soils beneath and around the system that appeared to be affected as the result of the system. Confirmation soil sampling was conducted at the limits of the excavation along the walls of the pit. A review of the analytical data from the soil sampling was performed, and it was determined that further investigation is necessary at this site. The last round of sampling was conducted in December 2000. An RFI report was prepared and submitted to AFCEE in April 2001.

RCRA FACILITY INVESTIGATION OF OIL/WATER SEPARATORS

An RFI is being conducted on 21 OWS sites at NAS Fort Worth JRB. Based on the results of the initial investigation, one OWS (SWMU 7) received closure in July 2000 based on evidence that a release of hazardous constituents to the environment has not occurred from this unit. An RFI Report for five additional OWS sites at Buildings 1101, 1320, 1423, 1656, and 4160 was submitted to the regulators for closure, also based on evidence of no release, in December 2000. The TNRCC granted No Further Action status for these five sites in a letter dated March 23, 2001.

Investigations will continue at the remaining 15 sites before closure can be requested. Phase III Work Plans for 14 OWS sites were submitted in November 2000, and the fieldwork was completed soon thereafter. A draft RFI report requesting closure for 13 of these sites at Buildings 1015, 1027, 1060, 1064, 1190, 1191, 1194, 1414, 1602, 1643, 3358, 4146, and 4210 was submitted to AFCEE for review in February 2001, and comments were received in early April 2001. The Final RFI report will be submitted to the TNRCC in May 2001. The one remaining OWS site (Building 1655) requires additional investigation. The OWS at Building 1145 (AOC 13) has been removed and will be closed under a separate header (see "Corrective Measures Conducted at Area of Concern 13" above).

ONLINE DOCUMENTS FOR CARSWELL

All documents published in the Carswell Administrative Record/Information Repository can be obtained from the web site hosted by AFCEE for the Carswell AFB Restoration Advisory Board. The address is <http://www.afcee.brooks.af.mil/er/carswell/nasfw/>.

CARSWELL OFF-BASE

RCRA FACILITY INVESTIGATION OF LANDFILLS

Fieldwork was completed at four former landfills in September 2000. These landfills include Landfills (LF) No. 4, 5, and 8 and Waste Pile (WP) 07. Installation of earthen caps at LFs 4 and 5 were completed, and the Final Cover System Evaluation Reports were issued to the TNRCC for approval in September 2000. The hot spot removal from LF 8 also was completed in 2000, as was drum and hot spot removal at WP07. A post removal geophysical survey verified that the removal of drums was complete. Final disposal of the hazardous waste from WP07 was completed in October 2000. All data was provided for the completion of the RCRA Facility Investigation Closure Report for these sites and has been submitted to TNRCC for review and approval. In summary, all work at these landfills is complete, and in a letter dated 5 March 2001, the TNRCC stated that LFs 4, 5, 8 and WP07 have been granted closure under the Risk Reduction Standard 2.

SANITARY SEWER SYSTEM RFI

Results from Phase II soil and groundwater sampling in March 2000 have verified that most sections of the Sanitary Sewer may be recommended for closure. However, a Phase III RCRA Facility Investigation is required to complete confirmation and/or delineation of some contaminants. The Phase III RFI also will involve collecting samples from Sanitary Sewer areas with questionable structural integrity as identified in a camera survey. The results of the RFI will be used to determine which TNRCC Risk Reduction Standard is appropriate for closure of the unit. If the analytical results are below background, then a closure with No Further Action will be requested. If the sites have contaminants above background level concentrations, then additional efforts will be accomplished that may include remediation of the sites. The Phase III RFI began on 14 February 2001 and is currently in progress. All soil samples have been collected and are awaiting laboratory results. Once the results have been received groundwater sampling will begin, if necessary.

OFF-SITE WEAPON STORAGE AREA

All fieldwork has been completed, and areas of previous excavation have been filled and re-graded. The RFI site closure report was submitted to the regulators in July 2000, and U.S. EPA comments were received August 2000. The Draft Final Closure Report was submitted to the regulators in September 2000. TNRCC approval for closure under Risk Reduction Standard 2 was received on 5 February 2001. Final closure of three underground storage tanks under the TNRCC Petroleum Storage Tank Division will be completed within the next quarter.

GROUNDS MAINTENANCE YARD AND AEROSPACE MUSEUM SITE

- The regulatory agencies have stated that they have no additional comments and concur on closure of the Grounds Maintenance Yard under RRS2.
- As per TNRCC requirement for closure, deed certification for the Grounds Maintenance Yard was submitted on 5 April 2001.
- The results of this sampling are contained in the draft Aerospace Museum Site Investigation Report submitted to AFCEE on 20 April 2001.

PROPERTY TRANSFERS

- Property transfer for the Kings Branch Housing Area was completed in October 2000.
- Property transfer for the Federal Bureau of Prisons was completed on 15 December 2000.

- Property transfer for the Stables will be completed by 1 May 2001.

RCRA PERMIT RENEWAL UPDATE

The RCRA permit was signed by the TNRCC on 2 May 1990 and became effective 7 February 1991. It is required to be updated and renewed every 10 years. The permit renewal application was submitted to the regulatory agency on 1 February 2001 with application approval projected by 1 August 2001. Permit approval could take an additional 12 months. Since the issuance of the permit, the Container Storage Area has been closed (4 November 1999) and an additional 48 SWMUs and 19 Areas of Concern (AOC) have been identified and have undergone or are undergoing RFIs. Twenty-seven SWMUs and six AOCs have so far been closed. Currently, no hazardous waste is stored at the base for more than 90 days. The permit renewal with amendment is a vehicle to ensure Corrective Actions continue until sites are closed. This permit also serves to request formally the removal of the Container Storage Area (CSA) and the SWMUs and AOCs that have achieved site closure and/or No Further Action (NFA).

On 14 March 2001, the permit application was declared administratively complete by the TNRCC and required a public notice of the proposed activity. This requires the application to be placed in a public place for review and copying. A public notice was placed in the Fort Worth Star-Telegram on 13 April 2001 stating that the permit renewal application was placed in the City of White Settlement Public Library.

TETRACHLOROETHENE (PERC) SITE

PERC contamination previously was detected in the soil in the vicinity of the Unnamed Stream and along Farmer ' s Branch Creek. In order to confirm the nature and extent of previously detected PERC contamination in the soil, additional soil sampling is being conducted at previous soil gas survey and soil boring locations. Sampling was conducted in March 2001. Once the samples have been analyzed, the data will be provided to the TNRCC for review and approval under the RRS 2. In addition, selected groundwater monitoring wells are being sampled as part of the Air Force Plant 4 long-term monitoring program.

GLOSSARY OF TERMS

Area of Concern (AOC) – an area identified as a potential environmental concern

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – Also known as “Superfund,” this law was enacted in 1980 and requires the identification, investigation, and clean up of contaminated sites.

Oil/Water Separator (OWS) – an oil water separator is used to separate the oil from waste water. Oil water separators are used commonly with service stations, maintenance shops, and surface water drainage systems where surface water run off may collect oil drippings or small spills.

Resource Conservation and Recovery Act (RCRA) – a law enacted to identify active hazardous waste generating facilities, investigate past site contamination, and initiate cleanup and pollution prevention measures.

RCRA Facility Assessment (RFA) – an assessment of a unit used for storing wastes and the potential for this unit to release hazardous constituents into the environment.

RCRA Facility Investigation (RFI) – an investigation of soil and groundwater contamination resulting from a release of contaminants from a storage unit regulated under RCRA.

Risk Reduction Standard (RRS) – a risk-based cleanup standard for soil and groundwater defined by the Texas Natural Resource Conservation Commission.

Site Investigation (SI) – a preliminary environmental study of a site possibly contaminated by an underground storage tank used for storing petroleum products such as gasoline or aviation fuels.

Solid Waste Management Unit (SWMU) – a defined area used for storage or disposal of hazardous wastes as defined by RCRA.

Trichloroethene (TCE) – an industrial solvent used to dissolve or disperse another substance such as oil; often used in degreasing metal parts.

Underground Storage Tank (UST) – a tank installed beneath the ground surface used for storing liquids such as gasoline, aviation fuels, and waste oils.

Waste Accumulation Area (WAA) – a specified area used for temporary storage of hazardous wastes.

FOR MORE INFORMATION

If you would like more information, please see our web site at <http://www.afcee.brooks.af.mil/er/carswell/nasfw/> or contact the following individuals:

Carswell On-Base: Michael Dodyk, HQ AFCEE, at (817) 782-7167 or via e-mail at Mike.Dodyk@carswell.af.mil or Don Ficklen, HQ AFCEE, at (210) 536-5290 or via e-mail at Holmes.Ficklen@HQAFCEE.brooks.af.mil

AFP 4: George Walters, the Aeronautical Systems Center, Wright-Patterson Air Force Base, OH, at (800) 982-7248 Ext. 416 or via e-mail at George.Walters@wpafb.af.mil

Carswell Off-Base: Charles Pringle, AFCEE ERB, at (210) 536-4477 or via e-mail at Charles.Pringle@HQAFCEE.brooks.af.mil

What Is a RAB?

A Restoration Advisory Board, or a RAB, is an advisory board made up of interested and concerned community members who reflect the diverse interests of the local community as well as representatives of state, local and federal agencies. The RAB is designed to serve as a focal point for the exchange of information between Naval Air Station (NAS) Fort Worth, Joint Reserve Base (JRB), Carswell Field and the community regarding those restoration activities presently underway as well as those planned for future studies and remediation.

Through the RAB, the community receives increased understanding of the clean-up issues and the progress being made. The RAB allows community representatives early participation in the planning and decision making process. It also increases NAS Fort Worth, JRB, Carswell Field's responsiveness to the community's environmental restoration concerns.

The RAB allows for early and continued two-way flow of information, concerns, values and needs between the Fort Worth community and those at Carswell Field who are responsible for the Installation Restoration Program, or IRP.

Installation Restoration Program

The US Department of Defense, or DOD, has instated an environmental clean-up program at military properties known as the Installation Restoration Program (IRP). The purpose of the IRP is to identify, evaluate, and cleanup past environmental contamination. It establishes a process by which past disposal sites, migration of contaminants, and potential hazards to human health and the environment are reviewed, analyzed and documented for cleanup.

Acronyms

AFBCA	Air Force Base Convention Agency
DOD	Department of Defense
IRP	Installation Restoration Program
JRB	Joint Reserve Base
NAS	Naval Air Station
RAB	Restoration Advisory Board

The responsibility for all environmental issues at Carswell remains with the Department of Defense, specifically the Air Force, until the cleanup is complete.

An fundamental aspect of the IRP is the involvement of the community. The Restoration Advisory Board (RAB), has been established for this reason. The RAB provides a forum in which community members can be involved in the restoration process. Through the RAB they are given the opportunity to learn more about the restoration process, ask questions about the procedures for cleanup and advise those responsible for the restoration.

What Do RAB Members Do?

RAB members, serving in an advisory capacity, meet on a regular basis with the Base Environmental Coordinator and others involved with the IRP to:

- review, evaluate and comment on plans relating to the Air Force Base Convention Agency's ongoing environmental studies and restoration activities
- identify project requirements
- recommend priorities among sites or projects

Through the RAB, members can have an effect on clean-up activities that accelerate the restoration process.

RAB members act as liaison with their individual community groups to keep others informed of the IRP. They may also be available to meet and discuss the IRP activities with various community groups. Technical and administrative support staff is available to RAB members to provide informational explanations and support.

A community member serves as co-chairman for the RAB with a representative from Carswell Field. All RAB meetings are open to the public. One need not be an official member of the RAB to attend.



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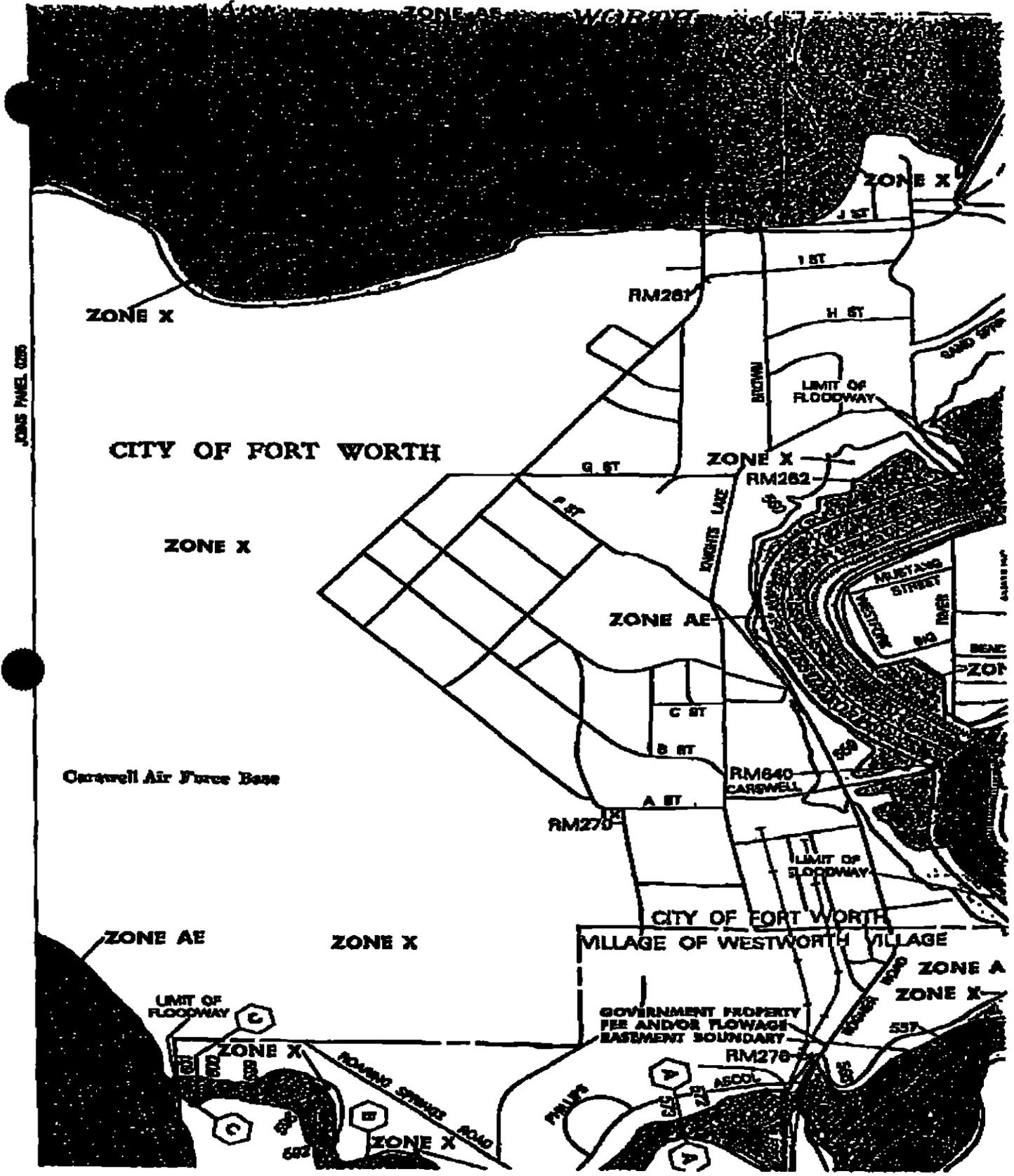
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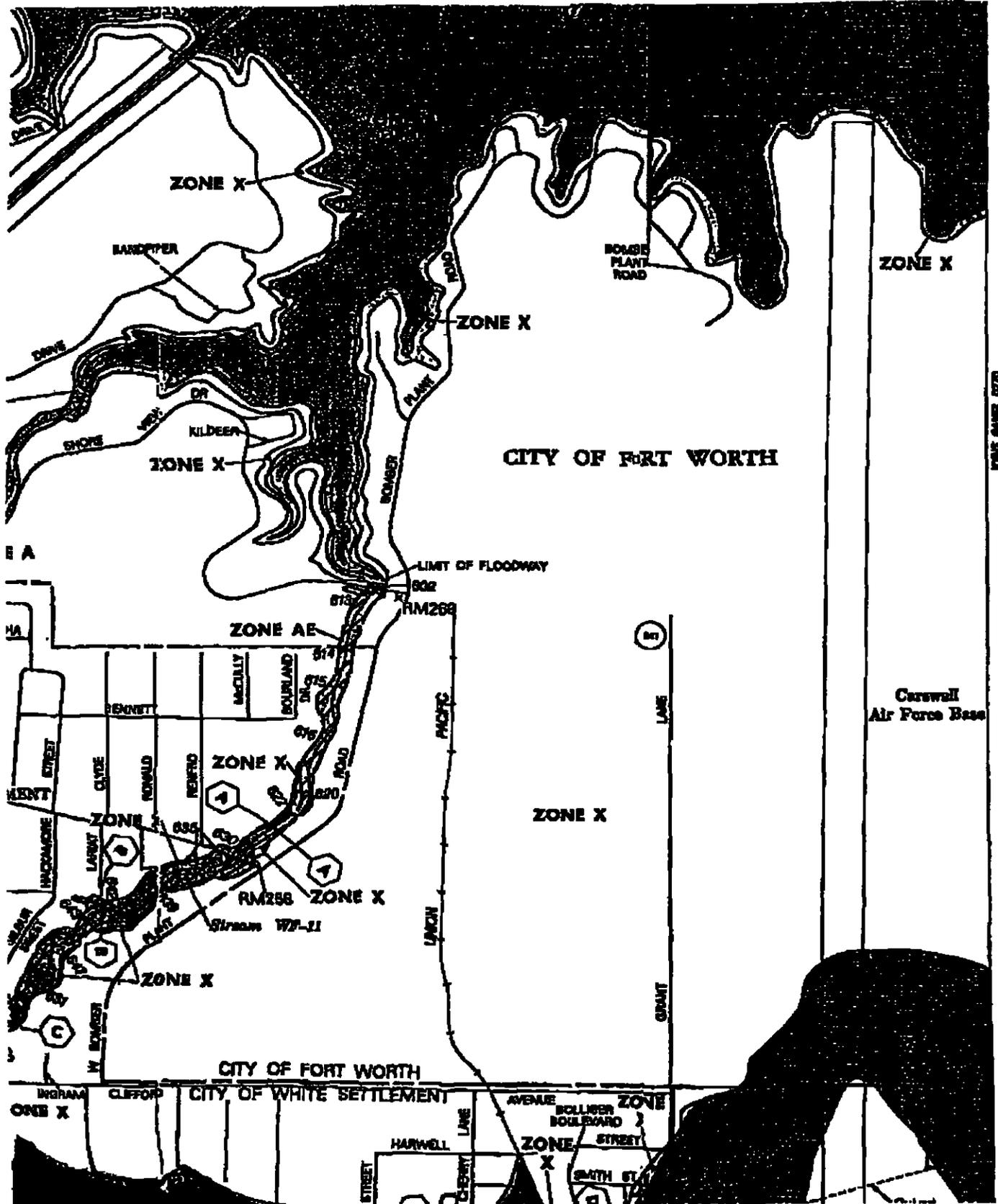
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APPENDIX G
CITY OF FORT WORTH 100 YEAR FLOODPLAIN MAPS



City of Fort Worth 100 Year Floodplain Map



City of Fort Worth 100 Year Floodplain Map

APPENDIX H
JOINT RESTORATION ADVISORY BOARD CHARTER

**CHARTER OF THE CARSWELL/PLANT 4
RESTORATION ADVISORY BOARD**

I. NAME

This organization shall be known as the Carswell/Plant 4 Restoration Advisory Board (RAB). The Carswell/Plant 4 RAB will fulfill all requirements of 10 USC Section 2705 0 for the Technical Review Committee at Department of Defense Installations.

II. PURPOSE

- A. Provide an opportunity for the community affected by the environmental cleanup at Carswell and Air Force Plant 4 (AFP 4) to participate in the decision-making process for the cleanup. This Board shall help identify the environmental issues at Carswell and AFP 4 and help resolve those issues in a manner satisfactory to the community.
- B. Provide a direct line of communication between the community and the regulators who are involved in oversight of the Carswell and AFP 4 environmental cleanup program. Create a communication process between the U.S. Air Force and the local community that will promote community awareness of local environmental issues and educate community members to the issues that affect them.
- C. Create a communication process between the U.S. Air Force and the local community that will promote community awareness of the local environmental issues and educate community members to the issues that affect them.

III. AUTHORITY

The basis and authority for this charter is the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), particularly Sections 120 (a), 120 (f), and 121 (f) and 10 USC 2705, enacted by Section 211 of CERCLA.

IV. MEMBERSHIP AND RESPONSIBILITIES OF MEMBERS

- A. The RAB shall consist of the representatives from the community who have volunteered to serve on the RAB and have signed this charter. These shall be the voting members of the IUB.

The following shall serve as ex-office members and shall not have voting privileges:

Government Cochairpersons – Rotated among the Carswell On-Base, Carswell Off-Base and AFP 4 Remedial Project Managers (RPMs)
USEPA Project Coordinator(s)
TNRCC Project Manager(s)

- B. Members shall serve without compensation. All expenses incident to travel shall be borne by the respective member's organization, if appropriate.
- C. RAB membership shall be periodically reviewed by the RAB. The RAB may vote to include new members, remove inactive members, or solicit new members to represent groups not currently

represented on the RAB. Nominations shall be reviewed and approved by a majority of the voting members of the RAB present at the meeting.

- D. Voting membership shall not exceed 20 in number. Members shall serve a term of 3 years. A member may be asked by the board to remain for subsequent three-year terms.
- E. Members must be willing to communicate with the local community members and interest groups concerning specific cleanup issues and bring local concerns to the attention of the RAB. Members shall serve as a direct and reliable conduit for communication between the public and agencies responsible for cleanup activities. RAB members' names and telephone numbers will be made available to the public.

V. STRUCTURE AND OPERATING PROCEDURES

- A. Carswell On-Base, Carswell Off-Base and AFP 4 RPMs shall serve as the rotating Government Cochairperson of the RAB. A voting member, to be chosen by majority vote of the RAB members present at the meeting when the election is held, shall serve as the Community Cochairperson for one year from the signing of this charter. The Community Cochair may serve more than one term if so elected by the RAB. The RAB membership is responsible for terminating a cochair who is ineffective or detrimental to progress of the RAB. Cochair removal is determined by a majority vote of RAB voting membership at the meeting where removal is addressed.
- B. The community cochair shall be responsible for presiding at each meeting; if unavailable, the government cochair shall preside. The IW3 cochairpersons shall be responsible for coordinating an agenda for each meeting. AFP 4 will provide administrative support to disseminate meeting minutes and agendas for each meeting to the membership at least one week prior to each scheduled meeting. Agenda items for the next meeting will be decided on at the conclusion of each meeting and/or submitted to the cochairs at least two weeks prior to a scheduled meeting. Carswell Off-Base shall take minutes at each meeting and provide the minutes to AFP 4 for distribution to all members and other interested parties who may request the minutes. Appropriate background materials for meeting topics shall be provided by each government entity as appropriate.
- C. Meetings shall be held quarterly, on a second Thursday, or as otherwise directed by the RAB. Additional meetings may be held as determined by the cochairpersons or by a request of a majority of the RAB membership.
- D. All meetings shall be open to the public and announced by a press release to the local newspapers. This shall be accomplished by the AFP 4.

- E. Each meeting shall follow the agenda as determined by the cochair-s and submitted to the members prior to the meeting. Meetings shall be conducted according to Robert's Rules of Order or similar format. Observers at the meetings may ask questions related to the agenda item under discussion, but other questions and comments shall be held until the Open Discussion part of the meeting that will be included on each agenda.
- F. A quorum shall consist of the RAB voting members present. General business conducted during meetings that warrants voting shall be determined by a simple majority Vote (50% + 1) of the RAB members present. The RAB, in attempting to resolve issues and problems that may arise during the course of the cleanup process activities, shall use consensus whenever possible. When dissenting opinions exist, they will be noted in the meeting minutes.

VI. EFFECTIVE DATE AND MODIFICATION

- A. The effective date of this charter is the date of the first signature.
- B. This charter may be amended by a 2/3 vote of the voting members present at the meeting where the amendment is presented for vote. All amendments must be in writing and placed on the meeting agenda for one meeting prior to voting on the amendment.

VII. DISSOLUTION OF THE RAB

The provisions of the Charter shall be satisfied and considered complete when 2/3 of the members agree in writing to terminate the RAB.

IT IS SO AGREED

SIGNATURES OF MEMBERS AS OF AUGUST 8, 1996.

William A. Christopherson
Bill Owen
J. Nell L. Pate
Doug Hendrickson
Michael Ross
Edwin Pruss-Kahn

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE