

# **Final Environmental Assessment for Implementation of Defense BRAC Commission Recommendations Dyess AFB, Texas**

**May 2007**



Prepared for:

7 CES/CEV  
Dyess Air Force Base, Texas

and

HQ Air Combat Command  
Langley Air Force Base, Virginia



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## **FINDING OF NO SIGNIFICANT IMPACT**

### **1.0 NAME OF THE PROPOSED ACTION**

Implementation of Defense Base Realignment and Closure (BRAC) Commission recommendations for Dyess Air Force Base (AFB), Texas.

### **2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES**

The U.S. Air Force (AF) proposes to implement the 2005 Base Realignment and Closure (BRAC) Commission's mandated relocation of four Army National Guard (ARNG) Readiness Centers (Abilene, TX, Coleman, TX, Snyder, TX, and Texas ARNG Field Maintenance Shop, Abilene, TX) and associated Army Reserve units. The relocation would establish an Armed Forces Reserve Center (AFRC) at Dyess AFB, providing a training facility with administrative, educational, assembly, library, learning center, vault, weapons simulator, barracks, physical fitness areas, and vehicle maintenance shop. Construction at Dyess AFB would start in fiscal year 2009 with closure of the existing facilities by April 2011.

The proposed location of the AFRC was selected due to its central location; access to established roads, utilities, and base facilities; secure location on base; and because it best fits the needs of the Army and AF.

The no-action alternative was also evaluated to provide a baseline for comparison with the proposed action. Under the no-action alternative, the AF would maintain the environmental status quo, but the Army and AF would not comply with the decisions of the BRAC round in 2005.

### **3.0 SUMMARY OF ENVIRONMENTAL CONSEQUENCES**

The environmental assessment (EA) provides an analysis of the potential environmental consequences associated with the proposed action and the no-action alternative. Eight resource categories received thorough evaluation to identify potential environmental consequences. Four resource categories, including air space management, noise, land management, and health and safety would not be impacted by the proposed action and did not require an evaluation. As summarized below, each of the impact categories assessed during the EA process resulted in either a "minor" or "negligible" impact classification.

**Air Quality:** Emissions during the construction and infrastructure improvement period would be temporary in nature and would end when the construction and upgrade activities were complete. In general, fugitive dust and combustive emissions would produce localized, short-term, elevated air pollution, which would not result in long-term impacts on the air quality.

**Soils and Water Resources:** Soil erosion would be minimal because of the flat nature of the site. Potential for stormwater runoff during construction would be minimized with Best Management Practices such as silt fencing to reduce transport of sediment.

**Biological Resources:** The proposed action would pose a potential impact to bird habitat protected by the Migratory Bird Treaty Act of 1918 if appropriate measures are not implemented. To eliminate such impact, honey mesquite trees on the property would be removed outside of the normal nesting season, or the site would be inspected to ensure active nests are not on the property during construction.

**Cultural Resources:** No significant impacts on cultural resources would be expected as a result of the proposed action. The site has been disturbed and previous surveys have not provided evidence of historical significance.

**Environmental Justice:** There would be no disproportionately high or adverse human health or environmental effects on minority or low-income populations. Appropriate measures would be taken to ensure the construction area would not be accessible to children.

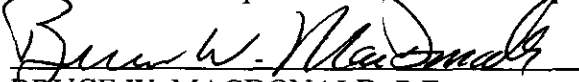
**Hazardous Materials and Solid Waste:** The proposed action would not be expected to generate hazardous waste or solid waste that negatively impacts human health or the environment. Waste handling will be performed in accordance with current Dyess AFB practices.

**Transportation:** There would be no significant impacts on transportation as a result of the proposed action. Traffic would increase temporarily during construction activities and on weekends when part-time reservists report for training.

**Infrastructure:** There would be no significant impacts on infrastructure as a result of the proposed action. All utilities, with the exception of communication lines, would be easily tied into existing utilities. The current utilities are capable of handling the additional demand from the new AFRC.

#### 4.0 CONCLUSION

Based on the findings of the EA, which was conducted in accordance with the requirements of the National Environmental Policy Act Council on Environmental Quality regulations, Air Force Environmental Impact analysis Process, as promulgated in Title 32 of the Code of Federal Regulations Part 989, and after review of the potential impacts, I conclude that implementation of the proposed action or the no-action alternative would result in no significant impacts to the quality of the human or natural environment. For these reasons, a Finding of No Significant Impact is warranted, and an Environmental Impact Statement is not required.

  
BRUCE W. MACDONALD, P.E.  
Acting Chief, Programs Division (A7P)

  
DATE

# **Final Environmental Assessment Implementation of Defense BRAC Commission Recommendations for Dyess AFB, Texas**

**Responsible Agency:** United States (U.S.) Air Force (AF), Air Combat Command (ACC)

**Proposed Action:** In 2005, The Defense Base Realignment and Closure (BRAC) Commission issued recommendations that included specific recommendations at Dyess Air Force Base (AFB), Texas (TX). These recommendations were approved by the President on September 15, 2005 and forwarded to Congress. Congress did not alter any of the Commission's recommendations, and on November 9, 2005, the recommendations became law. The Commission's recommendations must now be implemented as provided for in the Defense Base Realignment and Closure Act of 1990 (Public Law 101-510), as amended.

The commission made the following recommendations concerning Dyess AFB, Project Number (No.) 64854:

- a. The Grimes U.S. Army Reserve Center, Abilene, TX will be closed, and B Company of the 413th Civil Affairs Battalion and the Area Maintenance Support Activity 11 Sub-Shop will be relocated to a new Armed Forces Reserve Center (AFRC) with a Field Maintenance Shop on Dyess AFB no later than 30 Sept 09.
- b. The new AFRC will also have the capability to accommodate Texas National Guard Units from the following Texas Army National Guard (ARNG) Readiness Centers:
  - Abilene, TX
  - Coleman, TX
  - Snyder, TX
  - Texas ARNG Field Maintenance Shop, Abilene, TX

**Designation:** Final Environmental Assessment (EA)

**Abstract:** To comply with the Defense BRAC Act of 1990 (Public Law 101-510), as amended, the U.S. AF proposes to expand the current Dyess AFB facilities to accommodate four ARNG Readiness Centers (Abilene, TX, Coleman, TX, Snyder, TX, and Texas ARNG Field Maintenance Shop, Abilene, TX) and one Army Reserve unit (Grimes U.S. Army Reserve Center, Abilene, TX). This AFRC would provide a training facility with administrative, educational, assembly, library, learning center, vault, weapons simulator, barracks, and physical fitness areas. A new vehicle maintenance shop would provide work bays and maintenance administrative support. The project would also provide for unit storage and adequate parking space for all military and privately owned vehicles.

An initial site survey evaluated five possible locations for the new AFRC; however, only one site was selected as the optimal location because of location, logistics, infrastructure, security, and the needs of both the Army and ACC. This site was selected as the location of the proposed action. The no-action alternative would maintain the environmental status quo; however, it would not allow the Army to comply with the decisions of BRAC 2005. The current schedule shows construction start at Dyess AFB in fiscal year (FY) 2009 and closure of the existing facilities by April 2011.

This EA analyzes the potential environmental consequences of the proposed action and no-action alternative and addresses the following resources: air quality, soils and water resources, biological resources, cultural resources, environmental justice, hazardous materials and solid waste, transportation, and infrastructure. Findings indicate that the proposed action would result in minor or negligible impact to resources. There are no significant cumulative impacts from the interaction of the Dyess AFB expansion and other past, present, or reasonably foreseeable actions.

**Final Environmental Assessment  
Implementation of Defense BRAC Commission  
Recommendations  
Dyess AFB, Texas**

**Unites States Air Force  
Air Combat Command  
and  
Dyess AFB, Texas**

**May 2007**

# Executive Summary

## Introduction

The 2005 Base Realignment and Closure (BRAC) Commission recommended the closure and realignment actions that would close the Grimes United States (U.S.) Army Reserve Center, Abilene, Texas (TX) and relocate the B Company of the 413<sup>th</sup> Civil Affairs Battalion and the Area Maintenance Support Activity 11 Sub-Shop to a new Armed Forces Reserve Center (AFRC) with a Field Maintenance Shop on Dyess Air Force Base (AFB), TX, Project Number (No.) 64854.

This report provides an environmental assessment (EA) of potential environmental impacts resulting from implementing the proposed action.

## Proposed Action and No-Action Alternative

The U.S. Air Force (AF) proposes to expand the current Dyess AFB facilities to accommodate the following Army Reserve and Army National Guard (ARNG) units:

- a. B Company of the 413th Civil Affairs Battalion and the Area Maintenance Support Activity 11 Sub-Shop
- b. The Texas National Guard Units from the following Texas ARNG Readiness Centers:
  - Abilene, TX
  - Coleman, TX
  - Snyder, TX
  - Texas ARNG Field Maintenance Shop, Abilene, TX

The project would provide a training facility with administrative, educational, assembly, library, learning center, vault, weapons simulator, barracks, physical fitness areas, and vehicle maintenance shop. The current schedule shows construction start at Dyess AFB in fiscal year (FY) 2009 and closure of existing facilities by April 2011.

An initial site survey evaluated five possible locations for the new AFRC at Dyess AFB. Alternative A – Proposed action (bordered by Avenue D to the north, Avenue E to the south, 4<sup>th</sup> Street to the east, and 3<sup>rd</sup> Street to the west) was selected because it is more centrally located; has better access to established roads, utilities, and base facilities; is secured because of its location on base; and best fits the needs of the Army and Air Combat Command (ACC).



The no-action alternative would maintain the environmental status quo; however, it would not allow the Army and AF to comply with the decisions of BRAC 2005.

## **Summary of Potential Environmental Impacts**

Eight resource areas were analyzed in the EA to assess potential environmental impacts:

- Air quality
- Soils and water resources
- Biological resources
- Cultural resources
- Socioeconomics, environmental justice, and protection of children
- Hazardous materials and solid waste
- Transportation
- Infrastructure

Four resource categories, including air space management, noise, land management, and health and safety would not be impacted by the proposed action and do not require a detailed analysis. Table ES-1 provides a summary of the impacts that would be expected for the proposed action on the eight resources that were evaluated.

**Table ES-1**  
**Summary of Impact**

Impact Category				Approval Requirements	
	Major	Minor	Negligible	Proposed Action	No-Action Alternative
Air Quality			X	Minor short-term increased emissions would result from construction activities; long-term operations not expected to change the attainment status of the base.	Construction and operations activities would not occur. Air quality would not change.
Soils and Water Resources			X	Soil erosion would be minimal because of the flat nature of the site. Potential for stormwater runoff to diversion ditch during construction should be mitigated with Best Management Practices (BMPs), such as silt fencing to reduce transport of sediment.	Under the no-action alternative, new facilities would not be constructed and the site would not be altered from its current state. Any soil erosion that currently occurs at the site due to stormwater runoff would continue at the same rate.
Biological Resources		X		Proposed action poses risk of impact to bird habitat protected by the Migratory Bird Treaty Act (MBTA) of 1918. Mesquite trees on property will be removed outside of the normal nesting season, or the site will be inspected to ensure active nests are not on the property during construction. Relocation of active nests requires permit from U.S. Fish and Wildlife Service (FWS).	Under the no-action alternative, construction activities would not be initiated and the existing trees would not be removed. Migratory bird habitats would not be affected.
Cultural Resources			X	No significant impacts on cultural resources are expected as a result of the proposed action. The site has been disturbed and previous surveys have not provided evidence of historical significance.	Cultural and historical resources would not be impacted by the no-action alternative.
Environmental Justice			X	There are no disproportionately high or adverse human health or environmental effects on minority or low-income populations. Appropriate measures would be taken to ensure the construction area is not accessible to children.	Under the no-action alternative, new facilities would not be constructed and the site would not be altered from its current state. This alternative would not impact minority or low-income populations or the safety of children.
Hazardous Materials and Solid Waste			X	The proposed action is expected to generate small amounts of hazardous and solid wastes. These would have a negligible impact on human health and the environment. Waste handling will be performed using current Dyess AFB practices.	Hazardous material and solid waste would not be generated or stored on site as a result of the no-action alternative.

**Table ES-1 Continued**  
**Summary of Impact**

Impact Category	Major	Minor	Negligible	Approval Requirements	
				Proposed Action	No-Action Alternative
Transportation			X	There would be no significant impacts on transportation as a result of the proposed action. Traffic would increase temporarily during construction activities and on weekends when part-time reservists report for training.	Under the no-action alternative, new facilities would not be constructed and operated at the site. This alternative would not impact traffic at the proposed site.
Infrastructure			X	There would be no significant impacts on infrastructure as a result of the proposed action. All utilities, with the exception of communication lines, would be easily tied into existing utilities. The current utilities are capable of handling the additional demand from the new AFRC.	Under the no-action alternative, new facilities would not be constructed and the current infrastructure would not be affected.

## Mitigation Measures

Evaluation of each of the impact categories examined during this EA process resulted in either a “minor” or “negligible” impact classification. There are no mitigation measures regarding implementation of the proposed action.

## Conclusion

Based upon the findings of this EA, the implementation of the proposed action would not have a significant adverse direct, cumulative, or secondary impact on the quality of the environment, either human or natural, in the area of potential effect for this action. The proposed action would use the available land for the construction of a new AFRC.

Because there would be no significant impact resulting from the implementation of the proposed action, a Finding of No Significant Impact (FONSI) has been prepared to accompany this EA and concludes that the next higher level of environmental impact investigation under National Environmental Policy Act (NEPA) for this action, an environmental impact statement, is not required.

# Table of Contents

## Executive Summary

### Section 1 - Purpose and Need for the Proposed Action

1.1	Introduction.....	1-1
1.2	Location .....	1-2
1.3	The Environmental Review Process .....	1-5

### Section 2 - Description of the Proposed Action and Alternatives

2.1	Alternative Identification Process.....	2-1
2.2	Proposed Action.....	2-2
2.3	Alternatives .....	2-2
2.3.1	Alternative A – Locations Considered but not Selected .....	2-4
2.3.2	Alternative A – Selected Location for Proposed Action .....	2-4
2.3.3	Alternative B – No Action .....	2-4
2.4	Evaluation of Alternatives .....	2-4

### Section 3 - Description of the Affected Environment and Environmental Consequences

3.1	Analysis Approach.....	3-1
3.1.1	Resource Analysis.....	3-1
3.1.2	Resource Eliminated from Further Analysis.....	3-2
3.2	Air Quality .....	3-3
3.2.1	Affected Environment.....	3-4
3.2.2	Environmental Consequences .....	3-5
3.3	Soils and Water Resources.....	3-7
3.3.1	Affected Environment.....	3-7
3.3.2	Environmental Consequences.....	3-9
3.4	Biological Resources .....	3-10
3.4.1	Affected Environment.....	3-10
3.4.2	Environmental Consequences.....	3-12
3.5	Cultural Resources .....	3-13
3.5.1	Affected Environment.....	3-13
3.5.2	Environmental Consequences.....	3-15
3.6	Socioeconomics, Environmental Justice, and Protection of Children ...	3-16
3.6.1	Affected Environment .....	3-16
3.6.2	Environmental Consequences .....	3-20
3.7	Hazardous Materials and Solid Waste .....	3-21
3.7.1	Affected Environment .....	3-21
3.7.2	Environmental Consequences .....	3-22

3.8	Transportation .....	3-23
3.8.1	Affected Environment.....	3-23
3.8.2	Environmental Consequences .....	3-24
3.9	Infrastructure.....	3-25
3.9.1	Affected Environment.....	3-25
3.9.2	Environmental Consequences.....	3-27
 <b>Section 4 – Cumulative Effects and Irreversible and Irretrievable Commitment of Resources</b>		
4.1	Cumulative Effects.....	4-1
4.2	Scope of Cumulative Effects Analysis .....	4-1
4.3	Past, Present, and Reasonably Foreseeable Actions .....	4-2
4.4	Irreversible and Irretrievable Commitment of Resources.....	4-3
 <b>Section 5 – References .....</b>		<b>5-1</b>
 <b>Section 6 – Persons and Agencies Contacted.....</b>		<b>6-1</b>
 <b>Section 7 – List of Preparers and Contributors .....</b>		<b>7-1</b>
 <b>Appendices</b>		
<i>Appendix A – Interagency and Intergovernmental Coordination for Environmental Planning Correspondence</i>		
<i>Appendix B – Environmental Data Resources, Inc.</i>		
<i>Appendix C – Interview Records</i>		
<i>Appendix D – Air Emissions Data</i>		
<i>Appendix E – ERP Site Information</i>		

## Tables

Table 1-1	Other Major Environmental Statutes, Regulations, and Executive Orders Applicable to Federal Projects .....	1-6
Table 2-1	Summary of Impact.....	2-5
Table 3-1	Resources Considered in the Environmental Impact Analysis Process .....	3-2
Table 3-2	Dyess AFB Emissions.....	3-4
Table 3-3	Comparison of Construction Emissions to Title V Threshold Limits .....	3-5
Table 3-4	Comparison of Operations Emissions to Title V Threshold Limits .....	3-6
Table 3-5	Race, Ethnicity, and Poverty Status for Taylor County, Texas and the United States .....	3-19
Table 3-6	Children Status for Taylor County, Texas and the United States .	3-19
Table 3-7	Modified Table of Organization and Equipment .....	3-24

## Figures

Figure 1-1	Proposed Action Site Map .....	1-3
Figure 1-2	Site Location Map.....	1-4
Figure 2-1	Armed Forces Reserve Center Siting Options .....	2-3

# Acronyms

AAFES	Army and Air Force Exchange Service
ACC	Air Combat Command
AF	Air Force
AFB	Air Force Base
AFI	Air Force Instruction
AFPD	Air Force Policy Directive
AFRC	Armed Forces Reserve Center
AIRFA	American Indian Religious Freedom Act
ARNG	Army National Guard
ARPA	Archeological Resources Protection Act
AS	accumulation sites
AST	aboveground storage tank
BMP	Best Management Practices
BRAC	Base Realignment and Closure
BX	Base Exchange
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CES/CEV	Civil Engineer Squadron, Environmental Flight
CFR	Code of Federal Regulations
CO	carbon monoxide
CWA	Clean Water Act
DoD	Department of Defense
DRMO	Defense Reutilization Marketing Office
EA	environmental assessment
EDR	Environmental Data Resources, Inc.
EIAP	Environmental Impact Analysis Process
ELC	Environmental Literacy Council
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ERP	Environmental Restoration Program
ESOH	Environmental Safety and Occupational Health
FONSI	Finding of No Significant Impact
FWPCA	Federal Water Pollution Control Act
FWS	U.S. Fish and Wildlife Service
FY	fiscal year
HAP	hazardous air pollutants
HEMTT	heavy equipment mobile transport truck
HET	heavy equipment trailer

HVAC	heating, ventilation, and air-conditioning
HWMP	hazardous waste management plan
IAP	initial accumulation points
ICRMP	integrated cultural resource management plan
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
INRMP	integrated natural resource management plan
MBTA	Migratory Bird Treaty Act
MFH	military family housing
MRF	Material Recovery Facility
MSA	metropolitan statistical area
msl	mean sea level
MSW	municipal solid waste
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NFRAP	no further remedial action planned
NHPA	National Historic Preservation Act
No.	number
NO <sub>2</sub>	nitrogen dioxide
NRHP	National Register of Historic Places
O <sub>3</sub>	ozone
ODC	ozone depleting compounds
Pb	lead
PCB	polychlorinated biphenyl
PM <sub>10</sub>	particulate matter less than 10 microns
PME	precision measurement equipment
POL	petroleum, oil, and lubricant
POV	privately owned vehicle
PVC	polyvinyl chloride
QD	quantity distance
RCRA	Resource Conservation and Recovery Act
ROI	region of influence
SDWA	Safe Drinking Water Act
sf	square feet
SIP	state implementation plan
SO <sub>2</sub>	sulfur dioxide
SWPPP	storm water pollution prevention plan
TCEQ	Texas Commission on Environmental Quality
TPWD	Texas Parks and Wildlife Department
TSCA	Toxic Substances Control Act
TX	Texas
U.S.	United States



USACE	U.S. Army Corps of Engineers
USCB	U.S. Census Bureau
USDL	U.S. Department of Labor
UST	underground storage tank
VOC	volatile organic compound
%	percent

# Section 1

## Purpose and Need for the Proposed Action

### 1.1 Introduction

During the base realignment and closure (BRAC) process completed in 2005, the Department of Defense (DoD) sought to reorganize its installation infrastructure to most efficiently support its forces, increase operational readiness, and facilitate new ways of doing business. Thus, BRAC represents more than cost savings. It supports advancing the goals of transformation, improving military capabilities, and enhancing military value.

The 2005 BRAC Commission recommendations included the closure of Grimes United States (U.S.) Army Reserve Center, Abilene, Texas (TX) and relocation of B Company of the 413<sup>th</sup> Civil Affairs Battalion and the Area Maintenance Support Activity 11 Sub-Shop to a new Armed Forces Reserve Center (AFRC) with a Field Maintenance Shop on Dyess Air Force Base (AFB), TX, Project Number (No.) 64854.

These recommendations were approved by the President on September 15, 2005 and forwarded to Congress. Congress approved the BRAC Commission's recommendations, and on November 9, 2005, the recommendations became law. The BRAC Commission recommendations must now be implemented as provided for in the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended.

The U.S. Air Force (AF) proposes to expand the current Dyess AFB facilities to accommodate the following Army Reserve and Army National Guard (ARNG) units:

- a. B Company of the 413th Civil Affairs Battalion and the Area Maintenance Support Activity 11 Sub-Shop
- b. The Texas National Guard Units from the following Texas ARNG Readiness Centers:
  - Abilene, TX
  - Coleman, TX
  - Snyder, TX
  - Texas ARNG Field Maintenance Shop, Abilene, TX

The AFRC would provide a training facility with administrative, educational, assembly, library, learning center, vault, weapons simulator, barracks, and physical fitness areas. The maintenance shop would provide work bays and maintenance administrative support. The project would also provide for unit storage and adequate parking space for all military and privately owned vehicles. The current schedule shows construction start at Dyess AFB in fiscal year (FY) 2009 and closure of existing facilities by April 2011.

This environmental assessment (EA) analyzes the potential environmental consequences associated with implementation of the BRAC recommendations concerning Dyess AFB according to the requirements of the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) Regulation of 1978, and 32 Code of Federal Regulations (CFR) Part 989, titled “the Environmental Impact Analysis Process (EIAP).” 32 CFR Part 989 addresses the implementation of NEPA and directs the AF officials to consider the environmental consequences of any proposal as part of the decision-making process.

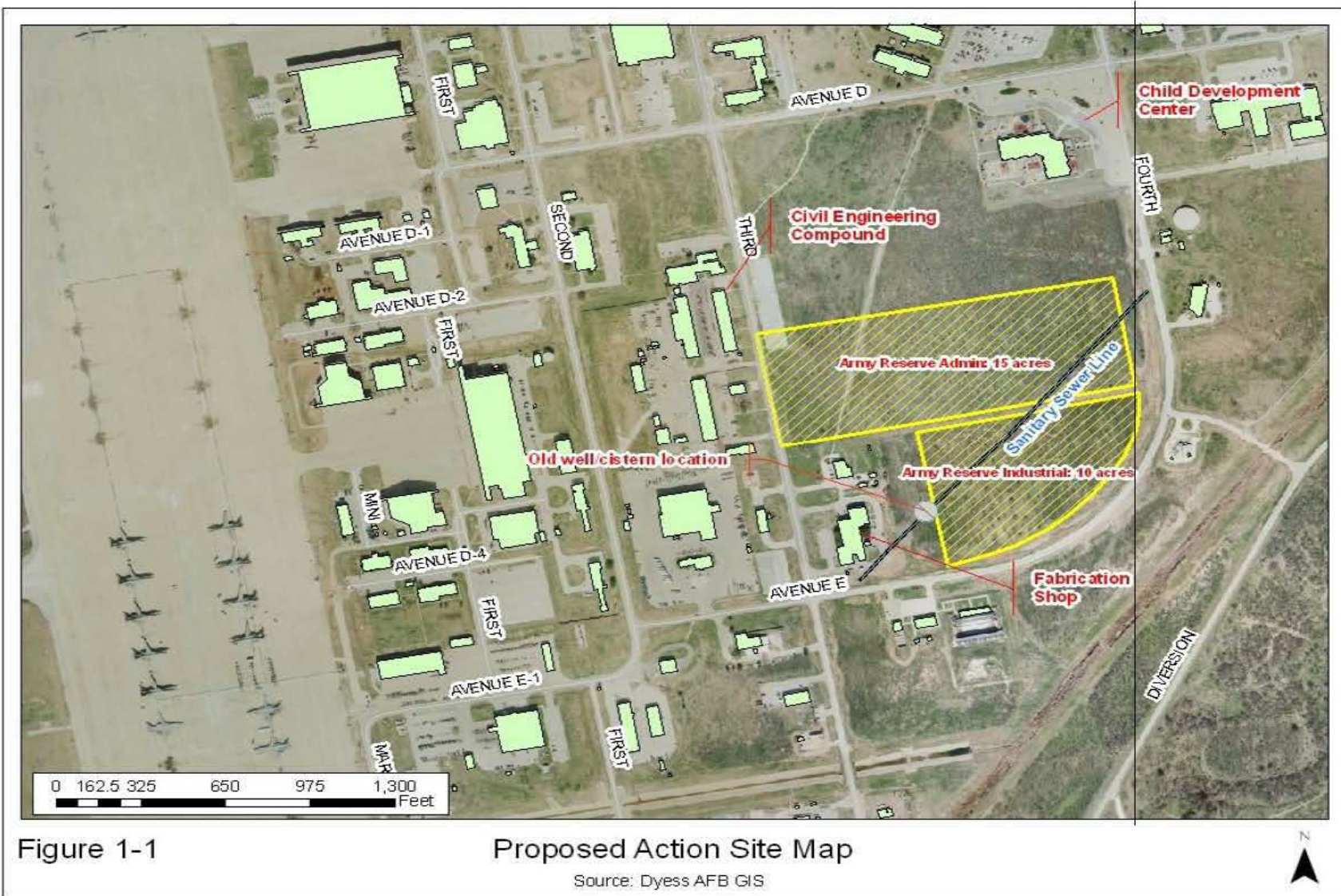
## **1.2 Location**

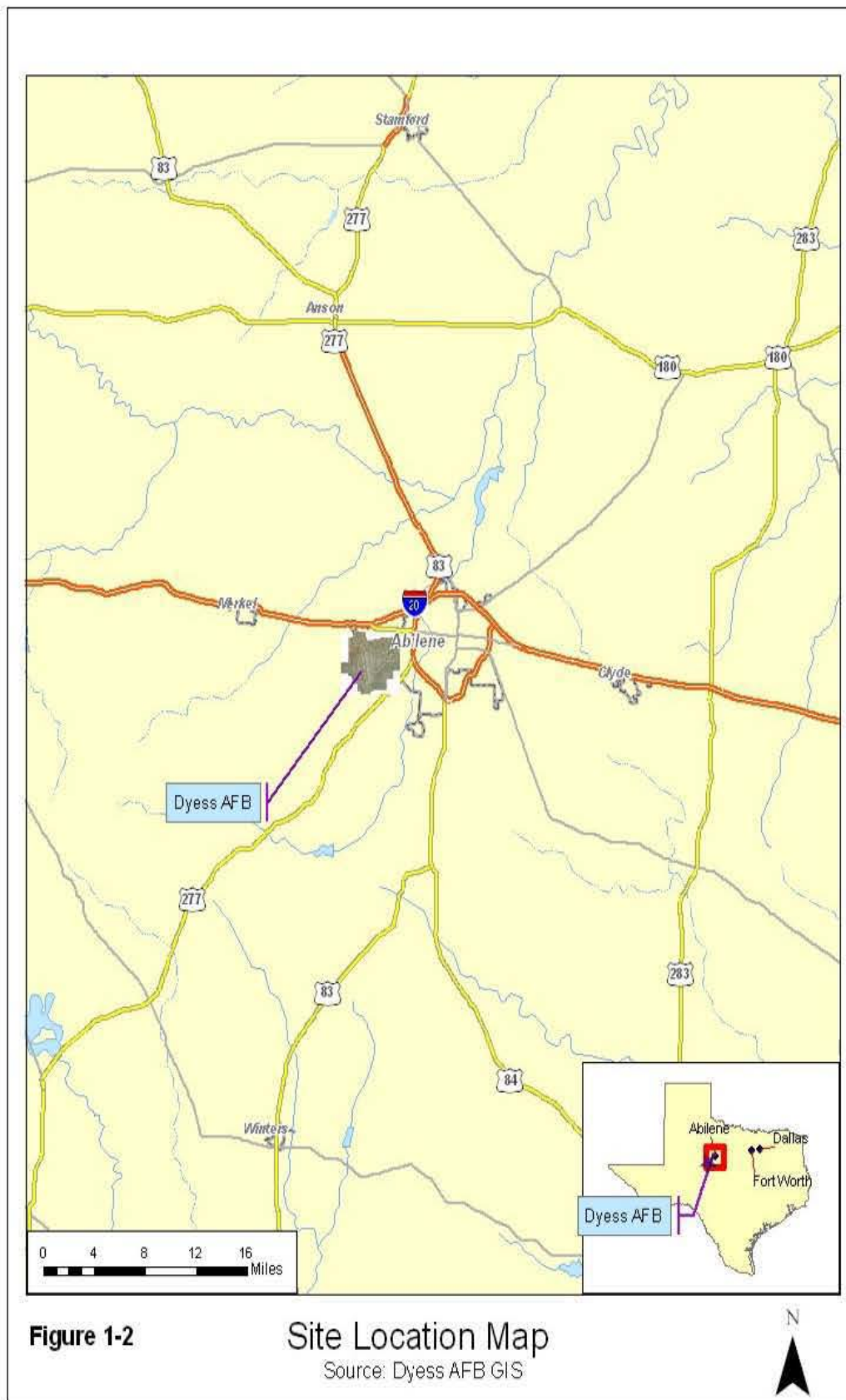
The proposed site for the new AFRC is a 25-acre patch of open land located east of the air field within Dyess AFB (Figure 1-1). The geographic coordinates for the site are latitude 32° 24’ 54.43” N and longitude 99° 50’ 14.61” W. This site is bordered by Avenue D to the north, Avenue E to the south, 4<sup>th</sup> Street to the east, and 3<sup>rd</sup> Street to the west.

Dyess AFB is located on the west side of the City of Abilene in Taylor County, TX (Figure 1-2). Dyess AFB, originally known as Abilene AFB, was established in 1956. Later that same year the base was renamed Dyess AFB after Lt. Col. William Edwin Dyess, a decorated AF pilot from Texas. Today the base is the home of the 7<sup>th</sup> Bomb Wing and the 317<sup>th</sup> Airlift Group, which includes three B-1 Bomber squadrons and two C-130 squadrons. The 7<sup>th</sup> Bomb Wing is under the command of the 12<sup>th</sup> Air Force.

The airfield area lies parallel to the western perimeter of the base and is separate from the cantonment, administrative, unaccompanied housing, and community facility/service land uses areas. Military family housing (MFH) is situated well to the east of the cantonment area, as is the Dyess Clinic. The Munitions Storage Area is centered on the base near the northern perimeter. Other industrial activities are scattered throughout the cantonment area and along the flight line. The base encompasses a total of 6,432 acres of land.

Abilene is the only large population center near the base. Several small communities exist within the area, including Tye, which lies adjacent to the base on the north side, and Caps, which is located just to the south of the base.





### **1.3 The Environmental Review Process**

The AF initiated early public and agency involvement in the environmental analysis of the implementation of the BRAC recommendations for Dyess AFB. The AF distributed Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) letters to solicit agency input on the proposal. Appendix A includes copies of the coordination letters sent by the Air Force. The AF published an advertisement in the Abilene Reporter News announcing the availability of the draft EA for a 30-day public review. Copies of the draft EA were available to the public at the Abilene Public Library and the Dyess AFB Library. The draft EA was also available on the World Wide Web at [www.acplanning.org](http://www.acplanning.org) and [www.dyess.af.mil](http://www.dyess.af.mil). There were no comments received from the general public. There were three letters received from the following agencies: National Guard Bureau, Texas Historical Commission, and Texas Parks and Wildlife. In accordance with NEPA guidelines, agency comments were reviewed and incorporated into this final EA, and the AF considered these comments in their decision-making process. These letters are included in Appendix A.

NEPA is our basic national charter for protection of the environment. It establishes policy, sets goals, and provides means for carrying out the policy. NEPA procedures must ensure that environmental information is available to public officials and citizens before decisions are made and before actions are taken (CEQ 1978a). Resources used to contribute to this EA are listed in Table 1-1.

In accordance with 32 CFR 989.22, Dyess AFB must indicate if any mitigation measures would be needed to implement the proposed action or whether the no-action alternative would be selected as the preferred alternative under this EA. There are no mitigation measures needed to implement the proposed action and this is the preferred alternative under this EA.



**Table 1-1**  
**Other Major Environmental Statutes, Regulations, and Executive Orders**  
**Applicable to Federal Projects**

<b>Environmental Resource</b>	<b>Statutes</b>
Air	<ul style="list-style-type: none"> <li>▪ Clean Air Act (CAA) of 1970 (PL 95-95), as amended in 1977 and 1990 (PL 91-604) U.S. Environmental Protection Agency (EPA), Subchapter C-Air Programs (40 CFR 52-99)</li> </ul>
Water	<ul style="list-style-type: none"> <li>▪ Federal Water Pollution Control Act (FWPCA) of 1972 (PL 92-500) and Amendments</li> <li>▪ Clean Water Act (CWA) of 1977 (PL 95-217)</li> <li>▪ EPA, Subchapter D-Water Programs (40 CFR 100-145)</li> <li>▪ Water Quality Act of 1987 (PL 100-4)</li> <li>▪ EPA, Subchapter N-Effluent Guidelines and Standards (40 CFR 401-471)</li> <li>▪ Safe Drinking Water Act (SDWA) of 1972 (PL 95-923) and Amendments of 1986 (PL 99-339)</li> <li>▪ EPA, National Drinking Water Regulations and Underground Injection Control Program (40 CFR 141-149)</li> </ul>
Biological Resources	<ul style="list-style-type: none"> <li>▪ Migratory Bird Treaty Act (MBTA) of 1918</li> <li>▪ Fish and Wildlife Coordination Act of 1958 (PL 85-654)</li> <li>▪ Sikes Act of 1960 (PL 86-97) and Amendment of 1986 (PL 99-561) and 1997 (PL 105-85 Title XXIX) Endangered Species Act of 1973 (PL93-205) and Amendments of 1988 (PL 100-478)</li> <li>▪ Fish and Wildlife Conservation Act of 1980 (PL 96-366)</li> <li>▪ Lacey Act Amendments of 1981 (PL 101-233)</li> </ul>
Wetlands and Floodplains	<ul style="list-style-type: none"> <li>▪ Section 401 and 404 of the FWPCA of 1972 (PL 92-500)</li> <li>▪ EPA, Subchapter D-Water Programs 40 CFR 100-149 (105 ref)</li> <li>▪ Floodplain Management – 1977 (Executive Order [EO] 11990);</li> <li>▪ Emergency Wetland Resources Act of 1986 (PL 99-645)</li> <li>▪ North American Wetlands Conservation Act of 1989 (PL 101-233)</li> </ul>
Cultural Resources	<ul style="list-style-type: none"> <li>▪ National Historic Preservation Act (NHPA) of 1966 (16 USC 470 et seq.)(PL 89-865) and Amendments of 1980 (PL 96-515) and 1992 (102-575)</li> <li>▪ Protection and Enhancement of the Cultural Environment – 1971 (EO 11593)</li> <li>▪ Indian Sacred Sites-1966 (EO 13007)</li> <li>▪ American Indian Religious Freedom Act (AIRFA) of 1978 (PL 94-341)</li> <li>▪ Antiquities Act of 1906</li> <li>▪ Archaeological Resources Protection Act (ARPA) of 1979 (PL 96-95)</li> <li>▪ Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (PL 101-601)</li> </ul>
Solid/Hazardous Materials and Waste	<ul style="list-style-type: none"> <li>▪ Resource Conservation and Recovery Act (RCRA) of 1976 (PL 94-5800), as Amended by PL 100-582</li> <li>▪ EPA, Subchapter I-Solid Wastes (40 CFR 240-280)</li> <li>▪ Comprehensive Environmental Response Compensation and Liability Act (CERCLA) of 1980 (42 USC 9601)(PL 96-510)</li> <li>▪ Toxic Substances Control Act (TSCA) (PL 94-496)</li> <li>▪ EPA, Subchapter R-TSCA (40-CFR 702-799)</li> <li>▪ Federal Insecticide, Fungicide, and Rodenticide Control Act (40 CFR 162-180)</li> <li>▪ Emergency Planning and Community Right to Know Act (40 CFR 300-399)</li> </ul>
Environmental Justice	<ul style="list-style-type: none"> <li>▪ Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations (EO 12898)</li> <li>▪ Protection of Children from Environmental Health Risks and Safety Risks (EO 13045)</li> </ul>

## **Section 2**

# **Description of the Proposed Action and Alternatives**

This section describes the proposed action and various other alternatives taken into consideration by the Air Force (AF) and Air Combat Command (ACC) to accommodate the four Army National Guard (ARNG) and the Army Reserve units moving onto the Dyess Air Force Base (AFB).

### **2.1 Alternative Identification Process**

As established by the purpose and need in the previous section, the construction of a new Armed Forces Reserve Center (AFRC) and other support facilities is required to comply with the 2005 Base Realignment and Closure (BRAC) recommendations signed into law on November 9, 2005. Two alternatives were considered: Alternative A, which includes relocating the Army Reserve and ARNG units into a new AFRC at Dyess AFB; and Alternative B, which is a no-action alternative. These alternatives are discussed further in Section 2.3.

The recommendation to consolidate to an existing higher value installation was geographically feasible because it meets the requirements of the Army's Stationing Strategy for Reserve Component installation. Implementation includes both the staffing transformation and infrastructural development to support the realigned staff. The closing facilities do not have sufficient capacity for consolidation or expansion and do not meet current force structure or unit design requirements. The gaining installation has sufficient capacity to support the proposed action. The land requirement for construction of the new facilities is estimated to be approximately 25 acres. New facilities required to house the AFRC are summarized below:

- 92,312 square feet (sf) AFRC (including administrative, educational, assembly, library, learning center, vault, weapons simulator, barracks, and physical fitness areas)
- 250 sf Flammable Material Facility
- 300 sf Controlled Waste Facility
- 2,400 sf Unheated Metal Storage Bldg
- 23,436 sf Field Maintenance Shop (including work bays and maintenance administrative support)

(Source: FY 2009 Guard and Reserve Military Construction Form DD 1390-91)



## 2.2 Proposed Action

The proposed action would close the Grimes U.S. Army Reserve Center, Abilene, Texas (TX) and relocate B Company of the 413<sup>th</sup> Civil Affairs Battalion and the Area Maintenance Support Activity 11 Sub-Shop to a new AFRC with a Field Maintenance Shop on Dyess AFB, TX no later than September 2009.

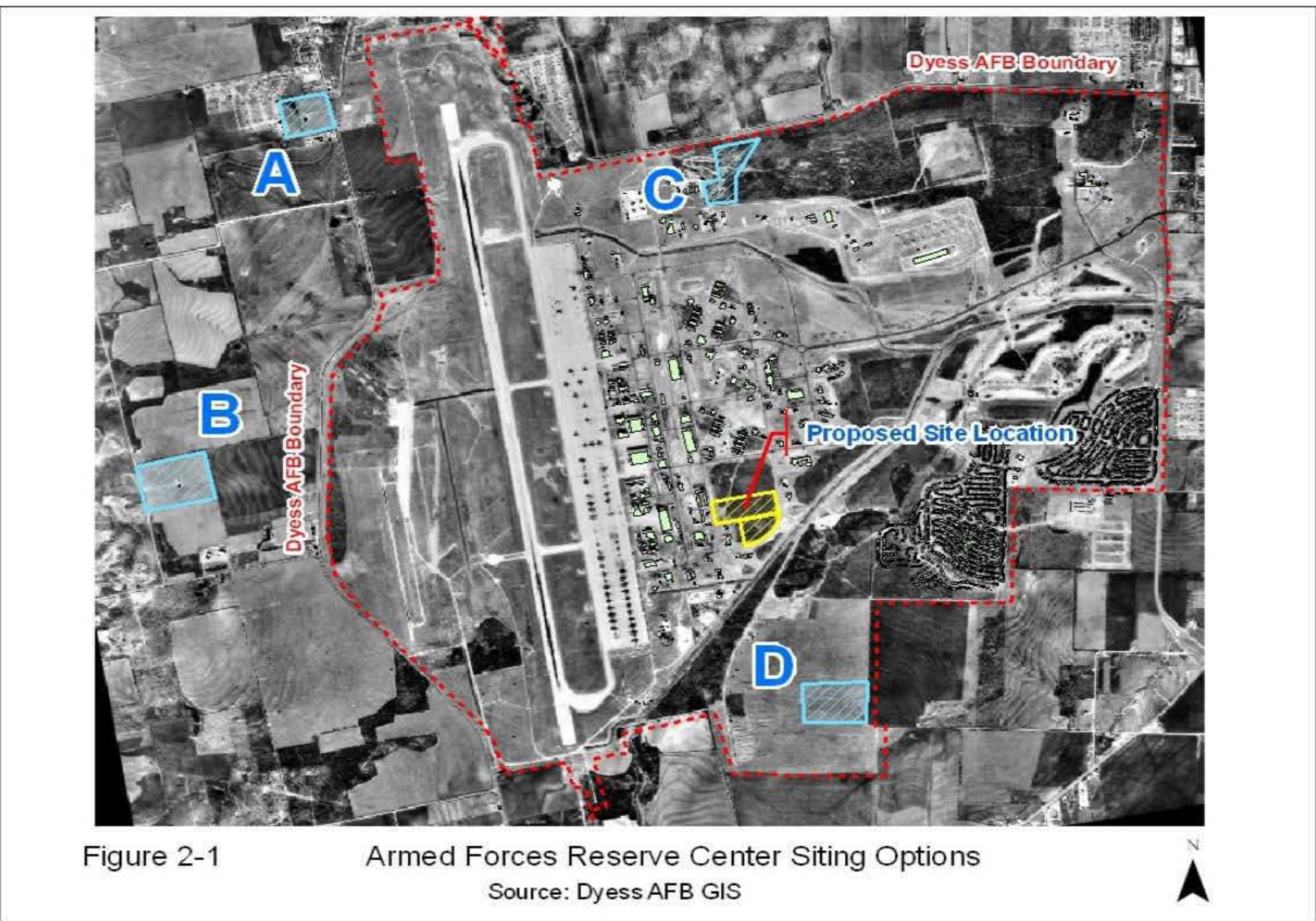
The initial site survey looked at five possible locations for the new AFRC at Dyess AFB. The site for the proposed action (bordered by Avenue D to the north, Avenue E to the south, 4<sup>th</sup> Street to the east, and 3<sup>rd</sup> Street to the west) was selected because it is more centrally located; has better access to established roads, utilities, and base facilities; is secured because of its location on base; and best fits the needs of the Army and AF.

## 2.3 Alternatives

Two alternatives were considered to carry out the BRAC 2005 recommendations. Alternative A, which includes relocating the Army Reserve and ARNG units into a new AFRC at Dyess AFB, and Alternative B, which is the no-action alternative. Five possible locations (Options A through D and the proposed action site) were considered for Alternative A. Four of the locations were eliminated during an initial site survey because they did not meet all the requirements for selection. The following is a discussion of the selection process. The location of each option is shown in Figure 2-1.

### 2.3.1 Alternative A - Locations Considered but not Selected

- Option A – Site located at the northwest side of the runway. The option was not chosen because:
  - Security issues related to the site being located off base.
  - Site did not meet minimum size requirement.
  - Utility upgrades with an estimated cost of \$670,000 would be required.
- Option B – Site located at the west side of the runway. The option was not chosen because:
  - Security issues related to the site being located off base.
  - Access roads required upgrades.
  - Numerous infrastructure upgrades with an estimated cost of \$2,500,000 would be required.
- Option C – Site located at the northeast side of the runway, within the Dyess AFB. The option was not chosen because:
  - Site did not meet minimum size requirement.
  - Limits Quantity Distance (QD) Arc growth (refers to the distance required around a munitions facility).
  - Numerous utility extensions with an estimated cost of \$220,000 would be required.



- Option D – Site located at the southeast side of the runway, within the Dyess AFB. The option was not chosen because:
  - Required reorientation of existing grenade range.
  - Access roads required upgrades.
  - Utility extensions with an estimated cost of \$1,500,000 would be required.

### **2.3.2 Alternative A – Selected Location for Proposed Action**

- Site bordered by Avenue D to the north, Avenue E to the south, 4<sup>th</sup> Street to the east, and 3<sup>rd</sup> Street to the west. This option was selected for the proposed action as discussed in Section 2.2.
  - Site meets minimum size requirements.
  - Centrally located.
  - Could be secured because of its location on base.
  - Has better access to established roads, utilities, and base facilities than other options.
  - Estimated utility costs would total \$600,000 (Army 2007).

### **2.3.3 Alternative B – No Action**

Section 1502.14(d) of National Environmental Policy Act (NEPA) requires an EA to analyze the no-action alternative. Analysis of the no-action alternative provides a benchmark for decision-makers to compare the magnitude of the environmental effects of the proposed action. Under the no-action alternative, new facilities would not be constructed at the site and proposed operations would not be implemented at Dyess AFB, and the environmental status quo would remain unchanged. However, under the no-action alternative, the 2005 BRAC Commission recommendations would not be implemented as provided for in the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended.

## **2.4 Evaluation of Alternatives**

This EA examines the potential environmental impacts from the construction of a new AFRC at the Dyess AFB site as discussed under the proposed action (Section 2.2). Under the no-action alternative, the project area would remain unimproved; therefore, there would be no impacts to the environment at Dyess AFB.

In accordance with Council on Environmental Quality (CEQ) regulation 1502.14, eight resource areas were analyzed to assess potential environmental impacts and are summarized in Table 2-1. Four resource categories, including air space management, noise, land management, and health and safety would not be impacted by the proposed action and do not require a detailed analysis (CEQ 1978b).

**Table 2-1  
Summary of Impact**

Impact Category				Approval Requirements	
	Major	Minor	Negligible	Proposed Action	No-Action Alternative
Air Quality			X	Minor short-term increased emissions would result from construction activities; long-term operations not expected to change the attainment status of the base.	Construction and operations activities would not occur. Air quality would not change.
Soils and Water Resources			X	Soil erosion would be minimal because of the flat nature of the site. Potential for stormwater runoff to diversion ditch during construction should be mitigated with Best Management Practices (BMPs), such as silt fencing to reduce transport of sediment.	Under the no-action alternative, new facilities would not be constructed and the site would not be altered from its current state. Any soil erosion that currently occurs at the site due to storm water runoff would continue at the same rate.
Biological Resources		X		Proposed action poses risk of impact to bird habitat protected by the Migratory Bird Treaty Act (MBTA) of 1918. Mesquite trees on property will be removed outside of the normal nesting season, or the site will be inspected to ensure active nests are not on the property during construction. Relocation of active nests requires permit from U.S. Fish and Wildlife Service (FWS).	Under the no-action alternative, construction activities would not be initiated and the existing trees would not be removed. Migratory bird habitats would not be affected.
Cultural Resources			X	No significant impacts on cultural resources are expected as a result of the proposed action. The site has been disturbed and previous surveys have not provided evidence of historical significance.	Cultural and historical resources would not be impacted by the no-action alternative.
Environmental Justice			X	There are no disproportionately high or adverse human health or environmental effects on minority or low-income populations. Appropriate measures would be taken to ensure the construction area is not accessible to children.	Under the no-action alternative, new facilities would not be constructed and the site would not be altered from its current state. This alternative would not impact minority or low-income populations or the safety of children.
Hazardous Materials and Solid Waste			X	The proposed action is expected to generate small amounts of hazardous and solid wastes. These would have a negligible impact on human health and the environment. Waste handling will be performed using current Dyess AFB practices.	Hazardous material and solid waste would not be generated or stored on site as a result of the no-action alternative.

**Table 2-1 Continued**  
**Summary of Impact**

Impact Category				Approval Requirements	
	Major	Minor	Negligible	Proposed Action	No-Action Alternative
Transportation			X	There would be no significant impacts on transportation as a result of the proposed action. Traffic would increase temporarily during construction activities and on weekends when part-time reservists report for training.	Under the no-action alternative, new facilities would not be constructed and operated at the site. This alternative would not impact traffic at the proposed site.
Infrastructure			X	There would be no significant impacts on infrastructure as a result of the proposed action. All utilities, with the exception of communication lines, would be easily tied into existing utilities. The current utilities are capable of handling the additional demand from the new AFRC.	Under the no-action alternative, new facilities would not be constructed and the current infrastructure would not be affected.

## **Section 3**

# **Description of the Affected Environment and Environmental Consequences**

The proposed site location consists of 25 acres of undeveloped land. The property is bordered on the south by Avenue E, on the east by 4<sup>th</sup> Street, on the west by 3<sup>rd</sup> Street, and on the north by Avenue D. The property is located in the southwest portion of Dyess Air Force Base (AFB) and is currently owned by the Department of Defense (DoD). Historical aerial photos dating back to 1940 indicate the proposed site location was never developed (Appendix B). Beginning in 1964, the site was maintained and a walking path through the site was established (Environmental Data Resources [EDR] 2006a). In the early 1990s, the area was downgraded in land management classification from semi-improved area (mowed) to unimproved (natural) (Walton 2006). The area has become overgrown with honey mesquite trees and cacti.

### **3.1 Analysis Approach**

National Environmental Policy Act (NEPA) requires focused analysis of the areas and resources potentially affected by an action or alternative. It also indicates that an environmental assessment should consider, but not analyze in detail, those areas or resources not potentially affected by the proposal. Therefore, an environmental assessment (EA) should not be encyclopedic; rather, it should try to be succinct. This EA focuses on those resources that would be affected by the proposed construction and operations activities that would occur at Dyess AFB to implement the proposed action.

Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508) for NEPA also require an EA to discuss impacts in proportion to their significance and present only enough discussion of other non significant issues to show why more study is not warranted. The analysis approach in this EA considers the current conditions of the affected environment and compares those to conditions that might occur should either the proposed action or the no-action alternative be implemented.

#### **3.1.1 Resource Analysis**

Evaluation and analysis of the potential impacts at Dyess AFB reveal the construction activities and operation of the maintenance facility define the affected environment. Construction would be short term and site specific. No new personnel would be permanently housed at the base in conjunction with the proposed action. Facilities would be constructed to provide part-time housing to reserve units. The new Armed Forces Reserve Center (AFRC) would have training and a maintenance facility that would support light vehicle repairs. The activities conducted at the new facility would be consistent with the activities currently conducted at Dyess AFB. For purposes of this assessment, the following resources were evaluated; air quality, soils and water resources, biological resources, cultural resources, socioeconomics, environmental justice and protection of children, hazardous materials and solid waste, and transportation. Table 3-1 presents the results of the resource evaluation.

**Table 3-1**  
**Resources Considered in the Environmental Impact Analysis Process**

Resource	Potentially Affected by		Analyzed in EA	
	Construction	Operations	Yes	No
Air Quality	X	X	X	
Soils and Water Resources	X	X	X	
Biological Resources	X		X	
Cultural Resources	X		X	
Airspace Management and Use				X
Noise				X
Socioeconomics, Environmental Justice, and Protection of Children	X		X	
Land Management and Use, Recreation, and Visual Resources				X
Health and Safety				X
Hazardous Materials and Solid Waste		X	X	
Transportation	X	X	X	
Infrastructure		X	X	

### 3.1.2 Resources Eliminated from Further Analysis

Due to the nature of the proposed action, numerous resources would not be affected by the construction or operations of the proposed facility. These resources were eliminated from further analysis and are not included in the EA.

#### Airspace Management and Use

Airspace management would not be affected by the proposed action. No part of the proposed action employs or influences airspace operations or air traffic management. All elements of the action would occur on the ground and would not conflict with overlying airspace activities. Therefore, airspace management was eliminated from further analysis.

#### Noise

Any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, diminishes the quality of the environment, or is otherwise annoying is defined as noise. Response to noise varies by the type of noise source, distance from the source, receptor sensitivity, and time of day. Noise can be intermittent or continuous, steady or impulsive, and it may be generated by stationary or mobile sources. The proposed location for the AFRC is near the flight line and adjacent to the firing range. The temporary noise from construction activities would be generated in an area already affected by louder, more consistent noise from aircraft operations and intermittent noise from the firing range. No new noise sources would be introduced to the area; therefore, this resource has been eliminated from further analysis.

### **Land Management and Use, Recreation, and Visual Resources**

The proposed action would locate the new AFRC in a central portion of the base where the adjacent land has been developed and is currently used for military-related activities. Implementing the proposed action would not change current land management. Recreation resources would not be affected by the proposed action because recreational use of these lands is restricted at Dyess AFB and would continue to be restricted under the proposed action. Visual resources would not be affected because the training and maintenance facilities proposed for the site are similar to the facilities that currently exist in that area. Therefore, visual resources would remain consistent with existing conditions. Since the proposed action would not impact land management and use, recreation, or visual resources, they warrant no further analysis.

### **Health and Safety**

The construction activities and subsequent training and maintenance operations associated with the proposed action are standard activities that occur at Dyess AFB. There are no specific aspects of the construction, operations, or maintenance that would create a unique or extraordinary health and safety issue. Existing health and safety procedures would be followed at the new facility. Aircraft safety would not be an issue since current operation and safety procedures in the overlying airspace would not change.

## **3.2 Air Quality**

Air quality in a given location is described by the concentration of various pollutants in the atmosphere. The significance of the pollution concentration is determined by comparing it to the federal and state ambient air quality standards. The Clean Air Act (CAA) and its subsequent amendments established the National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: ozone (O<sub>3</sub>) (the precursors of which are volatile organic compounds [VOCs]), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter less than 10 microns (PM<sub>10</sub>), and lead (Pb). These standards represent the maximum allowable atmospheric concentrations that may occur while ensuring protection of public health and welfare, with a reasonable margin of safety. The state of Texas has adopted these standards.

Based on measured ambient criteria pollutant data, the United States (U.S.) Environmental Protection Agency (EPA) designates all areas of the U.S. as having air quality better than (attainment) or worse than the NAAQS (non-attainment). An area that is currently in attainment but was formerly a non-attainment area is termed a maintenance area. An area is often designated as unclassified when there is insufficient ambient criteria pollutant data for EPA to form a basis for attainment status. Unclassified areas are typically rural or remote, with few sources of air pollution.

The CAA requires each state to develop a state implementation plan (SIP), which is its primary mechanism for ensuring that the NAAQS are achieved and maintained within the state. According to plans outlined in the SIP, designated state and local agencies implement regulations to control sources of criteria pollutants. The CAA provides that federal action in non-attainment and maintenance areas do not hinder future attainment within the NAAQS



and conform to the applicable SIP. There are no specific requirements for federal actions in unclassified or attainment areas. However, all federal actions must comply with state and local regulations.

Pollutants considered in the analysis for this EA include the criteria pollutants measured by state and federal standards. These include SO<sub>2</sub> and other compounds (i.e., oxides of sulfur or SO<sub>x</sub>); VOCs, which are precursors to (or indicators of) O<sub>3</sub>; nitrogen oxides (NO<sub>x</sub>), which are also precursors to O<sub>3</sub> and include NO<sub>2</sub> and other compounds; CO; and PM<sub>10</sub>. These criteria pollutants would be generated by the types of activities associated with the proposed action (e.g., minor construction and maintenance shop activities).

### 3.2.1 Affected Environment

The criteria used to determine the significance of increased air emissions are based on federal, state, and local air pollution standards and regulations. The emissions would be considered significant if they (1) increase ambient pollutant concentrations above the applicable NAAQS, (2) contribute to an existing violation of the NAAQS, or (3) result in nonconformance with the CAA or SIP.

A formal conformity determination is not required because Dyess AFB is located within an attainment area in Taylor County. Its air quality is under the jurisdiction of the Texas Commission on Environmental Quality (TCEQ). Stationary source emissions at Dyess AFB include jet engine testing, external and internal combustion sources, degreasing operations, storage tanks, fueling operations, solvent usage, surface coating, firefighter training, and miscellaneous general process operations. Mobile source emissions include aircraft operations and ground source equipment. A summary of current Dyess AFB emissions and Title V threshold levels for Dyess AFB are provided in Table 3-2. The total emission output for each individual source is provided in Appendix D (Dyess 2005b).

**Table 3-2**  
**Dyess AFB Emissions (tons/year)**

<b>2005</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>x</sub></b>	<b>VOC</b>	<b>PM<sub>10</sub></b>	<b>HAP</b>
Total Emissions*	70	55	15	72	31	22.5
Title V Thresholds	100	100	100	100	100	25

\* Total emissions reported to TCEQ on APD-Cert Form (Dyess 2005b)

The Title V threshold values listed above indicate the quantity of emissions that, if exceeded, would classify the facility as a major source and thus require a Title V permit. For hazardous air pollutants (HAPs), the facility is a major source if it has the potential to emit more than 10 tons per year of a single HAP or 25 tons per year of two or more HAPs.

### 3.2.2 Environmental Consequences

The proposed action does not involve the addition of any high output sources of air emissions. To determine the effects of the proposed action and no-action alternative on the local air quality, the Title V threshold limits were compared with the expected emissions from the activities associated with the action. These activities include construction and operations of the proposed facility.

Air pollution from construction activities would be localized and temporary in nature. Emissions from construction equipment and fugitive dust would be the primary contributors. Fugitive dust will be minimized by wetting down the soil during construction activities. Construction of the new AFRC would consist of one reserve center building (92,312 square feet [sf]), three storage buildings (250 sf, 300 sf, and 2,400 sf), and one field maintenance shop (23,436 sf). A point source emissions study for construction activities is not available since construction details have not been finalized. However, a conservative estimate was generated using typical air emissions data for construction equipment that were generated for another project. The results of this estimate were used to determine if the air emissions that would be generated during construction are significant enough to warrant a more detailed study. For comparison purposes, the estimated point source emissions data of construction equipment from a sample project are provided in Appendix D. The sample air quality data provided are part of a study to estimate the emissions output on a construction project for Creech Air Force (AF) Base (Creech 2006). Construction activities were to take place over the course of 2 years and included the construction of a 20,000 gallon water tank, trenching and post holes for utilities, excavation for a leach field and tank, a maintenance building (8,000 sf), a training facility (6,400 sf), and 2 miles of road improvements. The data provided in this study were used to estimate the emissions output of construction machinery to be used for construction of the new AFRC at Dyess AFB. This comparison is shown in Table 3-3 below.

**Table 3-3**  
**Comparison of Construction Emissions to Title V Threshold Limits\* (tons/year)**

	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	PM <sub>10</sub>
Title V Thresholds	100	100	100	100	100
2005 Reported Emissions**	70	55	15	72	31
FY06 Annual Totals (sample project)	0.05	0.02	0.01	0.01	0.00
FY07 Annual Totals (sample project)	0.57	0.19	0.06	0.05	0.22
Estimated Emissions Increase	0.62	0.21	0.07	0.06	0.22
Total Estimated Emissions	70.62	55.21	15.40	72.06	31.22
Percent Increase	0.88	0.38	0.47	0.08	0.65

\* The data presented in this table are from a similar sample project. Details are provided in Appendix D.

\*\* Total emissions reported to TCEQ on APD-Cert Form (Dyess 2005b).

While this comparison does not represent the actual estimated emissions of the proposed construction activities, it does provide enough information to conclude that construction activities would not affect the air permit status of the base. Furthermore, the temporary nature of the construction activities provides additional evidence that construction activities will not have a long-term effect on this resource.

The maintenance facility would provide light vehicle maintenance for the reserve center. The current Army National Guard (ARNG) maintenance facility does not have equipment that would be expected to produce excessive levels of air emissions (e.g. paint booths). Instead of a solvent type parts cleaner, a steam degreaser is used to clean parts. The steam cleaner uses steam, water, and detergent to clean parts and eliminates any emissions from solvents. To reduce aerosol emissions, a can puncturing operation is used on spent aerosol cans. The emissions output of the current maintenance facility is considered minor.

There are no air emissions studies available on the current ARNG maintenance facility in Abilene. To estimate the potential emissions of the proposed facility, a comparison was made to a similar facility using an air emissions inventory report (Geomet 2003). This report was produced for a Texas ARNG facility in Dallas consisting of an armory and a vehicle maintenance shop. The results of this study are provided in Appendix D. Sources of emissions at this facility include water heaters, space heaters, aerosol paint cans, brake cleaner, and welding. It should be noted that welding does not occur often in this type of shop, and the emissions from this source are negligible. The data provided in this report were used to estimate the potential emissions of the proposed facility and compare it to Title V threshold limits at Dyess AFB. Table 3-4 below provides a comparison of potential site emissions to the threshold limits at the base.

**Table 3-4**  
**Comparison of Operations Emissions to Title V Threshold Limits\* (tons/year)**

	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	PM <sub>10</sub>	Pb
Title V Thresholds	100	100	100	100	100	100
2005 Reported Emissions**	70	550	15	72	31	NA
Estimated Amory Emissions* (sample project)	1.60	0.69	0.01	0.095	0.13	8.6x10 <sup>-6</sup>
Estimated Maintenance Shop Emissions*	0.16	0.07	0.001	0.11	0.01	8.6x10 <sup>-7</sup>
Estimated Emissions Increase	1.76	0.76	0.01	0.20	0.14	9.5x10 <sup>-6</sup>
Total Estimated Emissions	71.76	55.76	15.011	72.20	31.14	9.5x10 <sup>-6</sup>
Total Percent Increase	2.45	1.36	0.07	0.28	0.45	NA

NA = Not Applicable

\* The data presented in this table are from a sample project. Details are provided in Appendix D.

\*\* Total Emissions reported to TCEQ on APD-Cert Form (Dyess 2005b).

While this comparison does not represent the actual estimated emissions of the proposed maintenance facility, it does provide enough information to conclude that the air emissions of the proposed facility would be negligible compared to the allowable limits. A detailed study of the long term projected emissions output of the proposed facility is not required to demonstrate that operation of the maintenance facility would not affect this resource.

In summary, the elements of the proposed action that could affect air quality are construction and operations. Both were evaluated to determine if a more detailed analysis of this resource was warranted. In comparing air emission studies of similar sites to the Title V threshold limits, it was determined that the short-term impact of construction activities and the long-term impact of operations are negligible and do not require further quantification. The effects of construction are expected to be short term and localized. Although fugitive dust could create minor short-term effects on this resource, these effects will be minimized through dust suppression measures. Construction equipment is expected to create minor short-term emissions, and the operation of the facility is expected to have minor long-term effects on air quality. These minor effects on emissions, when compared to the Dyess AFB allowable limits, are considered negligible.

### **No-Action Alternative**

Under the no-action alternative, new facilities would not be constructed at the site, and proposed operations would not be implemented. The site would remain undeveloped and, consequently, the no-action alternative would not affect the air quality of the site or surrounding area.

## **3.3 Soils and Water Resources**

### **3.3.1 Affected Environment**

#### **Soils**

Dyess AFB is located on approximately 6,400 acres of land in the Osage Plains division of the Great Plains physiographic province. This area is characterized by broad flat plains and very gently rolling hills. Soil types at Dyess AFB fall into two broad categories: alluvial soils and residual soils. The thickness of these soils can reach 10 feet in some areas, and the soils are locally underlain by permeable sand and gravel. The alluvial soils have a permeability ranging from very low to moderate. The residual soils have developed from the weathering of the Permian Vale Formation (bedrock at Dyess AFB). The residual soils generally occur on topographic highs. They are usually less than 3 feet thick, clayey, and demonstrate a very low to low permeability (Dyess 2004).

Much of the near surface material throughout the base consists of a mixture of soils and alluvium as a result of grading and resurfacing. This mixture, referred to as fill, occurs in varying thicknesses throughout the base. Soils are predominantly of the Tabosa series, which consist of deep, nearly level to gently sloping, well-drained, clayey soils and uplands. Permeability is very slow in these soils. Internal drainage is very slow. The risk of soil erosion is not high but can result if construction activities are not properly managed (Dyess 2003).

The base is underlain by bedrock deposits from the Permian Clear Fork Group and overlying Quaternary Alluvium. Bedrock under the base consists of silty mudstones, thin to very thinly bedded, with some blue gray shale near the base, and a few fossil plant fragments. These deposits make up the upper Permian Vale Formation (valley) of the Clear Fork Group. Bedrock is 100 feet to 200 feet thick and generally slopes toward the

northeast. It appears the bedrock controls shallow groundwater flow, with the flow in the shallow alluvium mimicking the bedrock contours (Dyess 2003).

The Quaternary Alluvium (stream deposits) consists of gravel, sand, silt, and clay. They are found in historic and modern channels and the floodplains of Little Elm Creek and its tributaries. The alluvium deposits range in thickness up to 30 feet and generally have a permeability that ranges from very low to moderate (Dyess 2004). The average depth to groundwater is about 22 feet but fluctuates throughout the base (Dyess 2003).

### **Surface Water**

There are several surface water bodies on Dyess AFB, including the Little Elm Creek system, one permanent lake, and two effluent water holding ponds. None of these are located on the subject property.

Wetlands are “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3). The Dyess AFB Environmental Flight manages wetlands via the Wetlands Management Plan, a component plan of the Integrated Natural Resource Management Plan (INRMP). Significant federal statutes and orders relative to wetlands management for Dyess AFB include Sections 401 and 404 of the Clean Water Act (CWA) of 1977, as amended; Executive Order (EO) 11990, Protection of Wetlands; and EO 12372, Intergovernmental Review of Federal Programs. The U.S. Army Corps of Engineers (USACE) regulates impacts to wetlands under Section 404 of the CWA. No city, county, or state wetland ordinances or regulations are applicable (Dyess 2003).

There are 12 sites on Dyess AFB identified as jurisdictional wetlands, covering a total of 3.2 acres. Two of these sites are naturally occurring playas, or intermittent lakes, and the remaining 10 are manmade wetlands. None of these wetlands are located within the proposed construction area.

In accordance with EO 11988, action should be taken to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities. A 100-year flood plain is considered an area with a 1 percent chance of inundation in any given year. Floodplains provide for the natural control and conveyance of floodwaters and provide a number of water quality maintenance, cultural resources, and living resources values. Alteration or reduction of floodplains can lead to higher flow velocities and increased erosion. Portions of the base, specifically in the south and east, are currently in the 100-year floodplain. This floodplain is associated with the Little Elm Creek and the diversion ditches. The leading edge of the floodplain extends to the southeast edge of the subject property. The subject property is not in the floodplain.

## **Water Quality Management**

The base lies in a relatively flat alluvial plain that drains into Little Elm Creek and its tributaries east of the base. The topography slopes gently downward to the north and east. Elevations at the base range from 1,796 feet above mean sea level (msl) at the southwest corner to approximately 1,733 feet msl at the northeast corner. The area is drained by a series of intermittent and perennial streams (Dyess 2004). Most stormwater flow on the base is diverted into two manmade ditches and channeled to Little Elm Creek. The site of the proposed action is nearly flat, and drainage is southeast toward the drainage ditch located approximately 400 feet away. Off base, Elm Creek joins Fort Phantom Lake, the principal source of potable water supply for Abilene and Dyess AFB. A total of 20.5 acres of channelized and intermittent streams exist on the base, all under the jurisdiction of USACE as Waters of the U.S. (Dyess 2003).

Any release of a hazardous material into the storm drain system is covered under the TCEQ General Stormwater Permit. Dyess AFB maintains a Storm Water Pollution Prevention Plan (SWPPP), which is in compliance with the TCEQ General Stormwater Permit. Construction projects over 5 contiguous acres are required to have a SWPPP in place and obtain a stormwater permit.

### **3.3.2 Environmental Consequences**

The proposed action would result in construction and ground-disturbing activities over approximately 25 acres on Dyess AFB. These activities could result in minor short-term effects on the soil and water resources. Disturbed soil could be exposed to stormwater runoff during construction, resulting in the potential for the runoff to carry sediments or contaminants into the nearby stormwater system. The potential for impact to these resources, however, is minimal because of the type of soil and relatively level grade of the site. Since this project would disturb over 5 acres of soil, a site-specific SWPPP and stormwater permit will be required. Compliance with the permit would require the use of Best Management Practices (BMPs) developed to minimize potential impacts associated with increased runoff. BMPs can be divided into two categories: structural and non-structural BMPs. Structural BMPs include silt fences, sedimentation ponds, erosion control blankets, and temporary or permanent seeding while non-structural BMPs include picking up trash and debris, sweeping up nearby sidewalks and streets, maintaining equipment, and training site staff on erosion and sediment control practices (EPA 2007).

The proposed action is not expected to alter flooding conditions. The site would be designed with appropriate grading and leveling to prevent flooding from occurring on and off site. Construction activities would increase runoff that may require making improvements to the stormwater infrastructure to further reduce the potential for floods. Since the site is not located within any jurisdictional wetlands or the 100-year floodplain, no effect on these resources is expected.

Minor long-term effects are expected on surface water during operations. The project would involve the construction and use of approximately 2 acres of parking lot for privately owned vehicles and additional parking for military vehicles. Long-term minor effects on surface water quality due to the increased presence of petroleum hydrocarbons in

the runoff water are expected with the use of the parking lots. Operation of the proposed maintenance facility is not expected to have long-term effects on this resource. The wash bay at the current TX ARNG facility is equipped with a three stage grit trap. Any grit traps or floor drains installed at the new AFRC would be required to comply with the Dyess SWPPP. Any spills of hazardous materials would be handled utilizing the base SWPPP and would not be released to the stormwater system or the environment.

### **No-Action Alternative**

Under the no-action alternative, the project area would remain unimproved; therefore, no impacts on the soil or water resources would be expected.

## **3.4 Biological Resources**

### **3.4.1 Affected Environment**

Biological resources include living, native or naturalized plant and animal species, and the habitats within which they occur. Resources analyzed for this report include vegetation, urban forestry, sensitive habitat, and special status species identified in the Dyess Integrated Natural Resources Management Plan (INRMP) (Dyess 2006c). The current INRMP, dated December 2006, has been fully coordinated with and signed by the Executive Director of the Texas Parks and Wildlife Department and the Region 2 Regional Director of the U.S. Fish and Wildlife Service. This analysis addresses each category separately and examines the impacts from implementing the proposed action and no-action alternative.

#### **Vegetation**

Vegetation includes all existing upland terrestrial plant communities with the exception of wetlands or special-status species. Wetlands were discussed in Section 3.3. The affected environment for vegetation includes those areas subject to ground disturbance activities. The proposed action would occur on a developed portion of the base where buildings exist on the land adjacent to the site in all directions. The site has been regraded during development of the base and was classified as semi-improved and mowed on a regular basis. During the early 1990s, the site was downgraded to unimproved and is now overgrown with mesquite trees. The wooded area consists of dense, even-aged (mostly young) stands of honey mesquite. Shade-tolerant Texas wintergrass or speargrass is the dominant groundcover plant within the woodlands; however, groundcover on the proposed building site is somewhat sparse due to the dense tree cover.

#### **Urban Forestry**

Urban forestry is addressed in the Urban Forestry Plan and the Dyess AFB Landscape Plan, both components of the INRMP. These documents discuss restrictions on development activities that affect forested areas on base. According to the Urban Forestry Plan, the honey mesquite is an invader species and as such is not subject to development restrictions.

#### **Sensitive Habitats**

Database searches (EDR 2006b), the Dyess INRMP, literature reviews, site visits, and personnel interviews indicate that endangered or threatened habitats do not exist on the

subject property. A search of the Texas Parks and Wildlife Department (TPWD) natural diversity database by the TPWD found no records that rare, threatened, or endangered species have been documented in the immediate area of the project site (TPWD 2007). However, the subject property is overgrown with honey mesquite trees, the preferred nesting tree of the Shrike and Bell's Vireo. While these are not endangered species, they are migratory birds and, as such, are protected by the Migratory Bird Treaty Act (MBTA) of 1918. Destruction of these birds or their habitat is prohibited under the Migratory Bird Treaty Act of 1918. No other sensitive habitats were identified during this assessment.

### **Special-Status Species**

Special-Status species are defined as those plant and animal species listed as threatened, endangered, or proposed as such by the U.S. Fish and Wildlife Service (FWS). The database search and literature review indicates that no currently listed federal threatened and endangered species regularly occur on the base. The Texas horned lizard, a state threatened species, has occasionally been seen on base. The harvester ant, a primary food source for the lizard, was observed adjacent to the walkway that crosses the site during the site visit in November 2006; however, the Dyess natural resource manager indicated this was because of the maintained nature of the soil near the walkway. There was no indication of the Texas horned lizard, its habitat, or harvester ants in the undeveloped portions of the proposed site. If a Texas horned lizard was encountered during construction, it would need to be relocated by a state certified biologist.

Several federal-and state-listed species are occasional migrants through the area. These species of concern include the following:

- Arctic peregrine falcon (*Falcon peregrinus tundrius*) – a regular migrant or winter visitor on Dyess AFB (federal delisted, state threatened)
- Bald eagle (*Haliaeetus leucocephalus*) – occasional migrant through Taylor County (federal threatened, proposed federal delisting, state threatened)
- Interior least tern (*Sterna antillarum athalassos*) – rare migrant through Taylor County (federal endangered, state endangered)
- Mountain plover (*Charadrius montanus*) – rare migrant through Taylor County (federal proposed threatened)
- Piping plover (*Charadrius melodus*) – rare migrant through Taylor County (federal threatened, state threatened)
- Texas horned lizard (*Phrynosoma cornutum*) – suitable habitat is present at Dyess AFB; lizard is seen sporadically by base employees (federal candidate, state threatened)
- White-faced ibis (*Plegadis chihi*) – occasional migrant through Taylor County (state threatened)



- Zone-tailed hawk (*Buteo albonotatus*) – occasional migrant through Taylor County (state threatened) (EDR 2006b)

### 3.4.2 Environmental Consequences

The proposed action poses a potential impact to biological resources if appropriate construction measures are not implemented. While not a threatened or endangered species, the Shrike and Bell's Vireo are migratory birds that could nest in the mesquite trees located on the subject property. These habitats are protected by the MBTA of 1918. To prevent the destruction of this protected habitat, one of the following measures will be implemented before the start of construction activities.

- Clearing of these trees will be done outside of the migration nesting season (March through August).
- The site will be inspected to determine if any active nests exist on the property. An active nest is defined as a nest that contains eggs, hatchlings, or other signs of activity.

In cases where a nest is no longer active (i.e. no evidence of the species using the site for nesting purposes), the old nests may be destroyed at any time without the need for a permit (FWS 2000). Removal of partially or fully active nests (one with eggs or hatchlings) must be done by trained Wildlife Service personnel. A permit is required for relocation of a nest if one is encountered; therefore, removal of the trees is recommended to be completed outside of the nesting season of March through August or an inspection of the tree should be conducted to identify any nests. The FWS suggests consulting with a state certified biologist to determine what species of concern would be affected and submitting a permit application ahead of time to alleviate construction interruptions.

Research conducted in support of this EA indicates there are no threatened or endangered species identified on the subject property. Therefore, implementation of the proposed action would not result in significant impacts to endangered or threatened species. The Texas horned lizard, a state threatened species, has been seen on the base, but there is no evidence of Texas horned lizard habitat on the proposed site.

The trees on the site are young honey mesquite trees. These trees are found in abundance throughout the region. Clearing and grubbing of the honey mesquite trees are not subject to development restrictions since this is listed as an invader species. There are no jurisdictional wetlands on or near the proposed site.

Only minor short-term and long-term effects on biological resources would occur in the study area as a result of the proposed action. Construction-related activities would result in long-term minor impacts to grassland and woodland habitat. Wildlife species associated with the honey mesquite would be lost or displaced from the 25-acre project area, and foraging and burrowing habitat would be lost. The impact of this action would be minimal because of the previously disturbed nature of the site and the age of the trees. Displacement of wildlife habitat in the honey mesquite trees would be minimal because of the abundant

nature of the trees in adjacent areas of the base. Short-term minor impacts to wildlife could result from construction activities. Potential impacts to wildlife from construction noise would be temporary and limited to the vicinity of the construction site. Individual animals may be affected for a short time by noise disturbances. Reactions may vary but could include leaving the immediate vicinity or coming out of hibernation. This impact would be minimal because of the pre-disturbed nature of the site and the low number of wildlife currently in the region.

Short-term impacts to jurisdictional wetlands or waters of the U.S. are not expected because none exist on the proposed construction site. However, minor long-term impacts to waters of the U.S. are expected as a result of increased traffic and parking. These minor long-term impacts are discussed in Section 3.3.2.

As previously discussed, the affected area consists of previously disturbed locations. These locations are not likely to support threatened or endangered species or other species of concern. Impacts to such species would most likely be minimal. Since the Texas horned lizard has not been identified on the subject property, implementation of the proposed action would not be expected to impact this species. However, the construction team will be provided information on Texas horned lizard habitat to assist in identification. The Dyess natural resource manager will be consulted for positive identification if a Texas horned lizard is potentially observed. Identification of a Texas horned lizard on the proposed site during construction would require the services of a state-certified biologist to relocate the lizard.

#### **No-Action Alternative**

Under the no-action alternative, there would be no change to current site conditions and no construction would occur. There would be no change in the level of impacts to vegetation. Wetland and waters of the U.S. would not be impacted because parking lots would not be constructed. No impact to threatened, endangered, or special-status species would occur since new construction would not occur.

## **3.5 Cultural Resources**

### **3.5.1 Affected Environment**

The AF is mandated by federal law to manage and protect cultural resources. Section 106 of the National Historic Preservation Act (NHPA) of 1966 requires that federal agencies take into account the effects of their undertakings on historic properties, which are locations, features, and objects eligible for nomination to the National Register of Historic Places (NRHP). Cultural resources are historic properties as defined by the NHPA, cultural items as defined by the Native American Graves and Repatriation Act (NAGPRA), archaeological resources as defined by the Archaeological Resources Protection Act (ARPA), sacred sites as defined in EO 13007 to which access is afforded under the American Indian Religious Freedom Act (AIRFA), and collections and associated records as defined in 36 CFR 79.

Cultural resources are evaluated by archaeologists and historians to determine if they meet one or more criteria in 36 CFR 60.4 and, as such, are eligible for nomination to the NRHP. The Integrated Cultural Resource Management Plan (ICRMP) documents cultural resource management practices and inventories significant sites at Dyess AFB. The plan is reviewed and updated every 5 years (Dyess 2006b).

In support of this assessment, a database search was conducted to identify landmarks, historical sites, and archeological sites located within 1 mile of the proposed action site. This search included databases from the NRHP, Texas Historical Commission, and the United States Geological Survey. No records were found within the search area (EDR 2006b). According to Dyess AFB records, there are no sites at Dyess AFB listed on the NRHP. In addition, there are no sites currently eligible for the NRHP, and there is no indication of any future eligibility of any other site presently on the base. Several internal and external inspections have revealed no buildings of general historical significance (Dyess 2006b).

In addition to the database search, a site inspection was conducted to identify cultural resources and other environmental concerns on the subject property. During the inspection, the project team identified evidence of an old well or cistern located in the southeastern portion of the site (location identified on Figure 1-1). The structure was approximately 3 feet in diameter at ground surface and constructed of orange brick in a circular fashion without the use of mortar. As shown in the photo below, the structure has weathered and filled in with soil.

Mr. Kim Walton, Dyess natural resource manager, identified the brick as Abilene Brick, a building material common to the region. The lack of mortar is evidence that the structure is more likely to be an old well rather than a cistern. Based on evidence of other similar wells and cisterns in the area, this structure does not appear to have historical significance. Other wells and cisterns were identified during an



**Old well/cistern discovered during site visit**

archeological survey conducted at the base in May and August 1988. Evidence consisted of brick, ceramics, and glass near a brick cistern and a concrete chimney foundation located south of the proposed action site. The report of the survey concluded that “the level of disturbance observed through the present study area suggests that none of the recorded sites contain significant archeological research potential.” None of the sites appeared to meet the criteria for nomination to the NRHP, and no further work was recommended (Powell and Creel 1989). A letter was received from the Texas Historical Commission on March 16, 2007 that stated, “Our staff, led by Ed Baker, has completed a review of the above referenced project. We determine that the Dyess AFB cistern is not eligible for listing in the National Register of Historic Places” (Appendix A).

Three intensive surveys have found no archeological sites of significance located on the base property. There are no known Native American burial sites or other sacred areas on base property. The entire base has been highly disturbed by previous agriculture and AF activity, and the probability of finding a significant archeological site is extremely unlikely (Dyess 2006b). The AF has consulted with tribal groups according to the Presidential Memorandum on Government-to-Government Relations with American Indian Tribal Governments, EO 13084, and DoD Policy on American Indian and Native Alaskan Consultation. Groups contacted include federally recognized tribes who live in the vicinity of the affected environment or those who lived there in the past and who have been contacted by the base and expressed interest in the base's resources. While there are no current tribes within the project area, groups with historic ties to the area include the Apache tribe of Oklahoma, the Cheyenne-Arapaho tribes of Oklahoma, the Caddo tribe of Oklahoma, the Comanche tribe of Oklahoma, the Kiowa tribe of Oklahoma, and the Wichita and Affiliated Tribes. Letters were sent to each of these tribes on May 12, 2006, describing the proposed action and requesting associated comments and/or concerns. In a letter dated May 30, 2006, the Jicarilla Apache Nation indicated that they do not have cultural interests at the site. Dyess AFB attempted to contact the remaining tribes by telephone and did not receive a response. This lack of response is considered confirmation they have no cultural resource concerns on base. Documentation of this correspondence is provided in Appendix A.

### **3.5.2 Environmental Consequences**

Regulations for assessing the effects to cultural resources are covered by 36 CFR Part 800 of the NHPA. An action results in adverse effects to a cultural resource when it alters the resource characteristics that qualify it for inclusion in the register. In the case of the proposed action, potential effects to cultural resources could result from ground disturbing activities associated with construction.

Under the proposed action, construction of facilities and infrastructure upgrades would occur. An archeological survey was conducted at the base in 1988, and no significant archaeological sites or artifacts were recorded within the study areas (Powell and Creel 1989). No archaeological survey has been conducted within the proposed project site; however, no evidence of historic or archaeological resources was identified during the site inspection, and no archaeological resources have been recorded on or near the site. The proposed facilities would be constructed on a predisturbed site, and the probability of finding a significant archeological site or Native American sacred area is extremely unlikely. Should implementation of the proposed action reveal any such evidence, all activities would cease pending a proper investigation.

#### **No-Action Alternative**

Under the no-action alternative, new facilities would not be constructed and the site would not be regraded or disturbed. Therefore, there would be no impact to NRHP-eligible or NRHP-listed resources.

## **3.6 Socioeconomics, Environmental Justice, and Protection of Children**

### **3.6.1 Affected Environment**

This section is a discussion of the socioeconomic conditions of the region of influence (ROI), including economic development, demographics, housing, quality of life, environmental justice, and protection of children. The ROI for the proposed action is the City of Abilene and Dyess AFB, located in Taylor County, TX.

The primary source for data obtained for this section was the U.S. Census Bureau's (USCB) website. The most current data that were available for the City of Abilene was from 2000. Data for Taylor County were available for 2004 and 2005. Because the Taylor County data are more recent, these data were used to compare to the State of Texas and the United States. Taylor County is considered part of the Abilene Metropolitan Statistical Area (MSA).

#### **Economic Development**

In October 2006, the unemployment rate in the Abilene MSA was 3.9 percent. The civilian labor force was 83,800 people, with the majority of people in non-farm employment. There are 14,500 people in the educational and health services category; 12,700 people employed by the government; and 12,100 people in the trade, transportation, and utilities employment category. The remaining population is employed by various other categories (U.S. Department of Labor [USDOL] 2006b). In 1999, the per capita personal income for Taylor County was \$17,176, and in 2003 the median household income was \$33,529 (USCB 2006).

#### **Demographics**

The 2005 population estimate for Taylor County was 125,039. This is a 1.2 percent decrease from the 2000 Census (USCB 2006).

#### **Housing**

##### ***On Base***

According to interview records with Mr. Gerald Walsh, Project Engineer for the Engineering Contracts with Dyess AFB, there are currently 258 housing units on base. An additional 326 housing units are currently under construction. There are 90 units proposed for construction in 2008.

##### ***Off Base***

According to the 2000 Census, there are 52,056 housing units in the Abilene MSA, with 47,274 being occupied and 4,782 vacant. The number of homes that are owner-occupied is 29,099, and the number that are renter-occupied is 18,175 (USCB 2006).

## **Quality of Life**

### ***Law Enforcement***

The 7<sup>th</sup> Security Forces Squadron protects operational resources on the flight line and patrols the entire base in a law enforcement role. They conduct law enforcement and force protection for a population of 8,500 on the 7,016-acre base. The squadron also functions as a base and local community support agency providing services, such as pass and registration, combat arms training, armory, investigations, military working dogs, and drug abuse resistance education for students (Dyess 2006a).

### ***Fire Protection Services***

Most buildings on Dyess AFB have manual fire alarm pull stations while other buildings have heat detectors or sprinklers. All buildings are equipped with a fire alarm that activates a strobe light and/or a warning bell. All newer buildings have both a strobe and a bell. The base has a Monaco brand central transmitter system that monitors the transmitter located in each building. The signal receiving center and dispatch are located in the fire department, Building 4003. A backup receiver is located in Building 8008. Military and civil service personnel staff the single fire station on base. The base can also obtain assistance from the Abilene Fire Department if necessary (Dyess 2003).

### ***Medical Services***

The 7<sup>th</sup> Medical Group provides personalized health care through five military TRICARE Prime teams staffed by board-certified medical personnel. The Main Clinic (Building 9201) provides several specialty clinics for optometry, mental health, general surgery, and gynecology. Obstetrical services are provided through a local civilian TRICARE network and additional medical services. The 7<sup>th</sup> Aeromedical-Dental Squadron provides the full scope of dental care for active-duty members (Dyess 2003).

### ***Schools***

There are approximately 16 elementary schools located in the Abilene area, including one on Dyess AFB. There are approximately six middle schools and two high schools located in the Abilene area (Abilene 2006).

### ***Family Support Services***

On base, there are base chapels, family support center, skills development center, auto skills development center, library, and an education center (Dyess 2003).

### ***Shops and Services***

There is a variety of well-known department stores, shopping centers, restaurants, and other shops within the Abilene area. At Dyess AFB, there is an Army and Air Force Exchange Service (AAFES) Mini Mall, Post Office, and Base Exchange (BX)/Shopping Center (Dyess 2003).

### **Recreation**

Abilene State Park covers 500 acres and has a modern campground and recreational facility. Abilene operates five year-round recreation centers and two public swimming pools seasonally. There are seven golf courses in the area. Texas wildlife is abundant; however, many prime hunting and fishing areas are on private land and require permission to gain access.

In addition to off-base attractions, there are many leisure and recreational facilities on base. Examples include the library, theater, bowling alley, athletic fields, clubs, Mesquite Grove Golf Course, and the base fitness center. The outdoor adventure center provides vacation trip opportunities to the Dyess community. Dyess AFB also has stables and a riding club. The Dyess Visitor's Center features displays, videos, interactive computer programs, and handouts on the mission and history of Dyess AFB. The Dyess Linear Air Park is a 1.2-mile long outdoor exhibit showcasing over 30 aircraft (Dyess 2003).

### **Environmental Justice**

On February 11, 1994, President Clinton issued EO 12898 mandating that EPA establish an Office of Environmental Justice. In April 1998, EPA defined environmental justice as fair treatment, meaning that "no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies." According to the EPA definition, deliberate discrimination need not be involved. Any siting that disadvantages protected groups more than proportionately is in violation of EPA's rule (Environmental Literacy Council [ELC] 2006).

With the exception of the Hispanic or Latino ethnic groups, the ROI has a lower or similar percentage of minorities represented compared with Texas and the United States. The Hispanic or Latino groups are higher than the national percentage but are significantly lower when compared to the State of Texas. In 2004, 16.3 percent of the residents of Taylor County reported living below the poverty level. This is higher than the percentages for the United States but similar to the percentages for the State of Texas (USCB 2006). Table 3-5 summarizes these data.

**Table 3-5**  
**Race, Ethnicity, and Poverty Status for Taylor County, Texas and the United States**

	<b>Taylor County</b>	<b>Texas</b>	<b>United States</b>
White	89.0%	83.3%	80.4%
Black or African American	7.0%	11.7%	12.8%
American Indian and Alaska Native	0.8%	0.7%	1.0%
Asian	1.4%	3.2%	4.2%
Native Hawaiian and Other Pacific Islander	0.1%	0.1%	0.2%
Hispanic or Latino	19.8%	34.6%	14.1%
Persons Living in Poverty	16.3%	16.2%	12.5%

Source: U.S. Census Bureau 2004a, 2004b, 2003

Note: Although data were available for the City of Abilene, data were from 2000 and were therefore not used in this comparison.

### Protection of Children

On April 21, 1997, President Clinton issued EO 13045 mandating that each federal agency shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children and shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks. “Environmental health risks and safety risks” mean risks to health or safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air we breathe, the food we eat, the water we drink or use for recreation, the soil we live on, and the products we use or are exposed to). Children may suffer disproportionately from environmental health risks and safety risks because children’s neurological, immunological, digestive, and other bodily systems are still developing; children eat more food, drink more fluids, and breathe more air in proportion to their body weight than adults; children’s size and weight may diminish their protection from standard safety features; and children’s behavior patterns may make them more susceptible to accidents because they are less able to protect themselves (NEPA 1997).

In 2004, the number of children less than 5 years old and less than 18 years old in the ROI was higher than population percentages in the United States but lower than population percentages in the State of Texas (USCB 2006). These data are summarized in Table 3-6.

**Table 3-6**  
**Children Status for Taylor County, Texas and the United States**

	<b>Taylor County</b>	<b>Texas</b>	<b>United States</b>
Population	125,039	22,859,968	296,410,404
Persons under 5 years old	7.9%	8.2%	6.8%
Persons under 18 years old	26.5%	27.9%	25.0%

Source: U.S. Census Bureau 2004

Note: Although data were available for the City of Abilene, data were from 2000 and were therefore not used in this comparison.



## **3.6.2 Environmental Consequences**

### **Economic Development**

The proposed action would result in a temporary, minor increase in jobs and spending in the area during construction of the proposed facilities. Minor long-term economic development could possibly result from additional personnel relocating from other areas.

### **Demographics**

There are no long-term impacts expected on demographics in the ROI. At least half of full-time personnel who would work at the proposed facilities are being transferred from within the Abilene area.

### **Housing**

There are no long-term impacts expected on housing in the ROI. At least half of full-time personnel who would work at the proposed facilities are being transferred from within the Abilene area. The remaining 10 to 20 families transferring from other units (i.e. Snyder, TX or Coleman, TX) would not place a burden on housing. Barracks would be included as part of the proposed action for the part-time reservists who would be reporting to Dyess AFB on weekends.

### **Quality of Life**

The proposed action would have long-term, minor impacts by increasing the demand on law enforcement, medical services, family support services, recreation, or other special programs because of the part-time reservists on weekends. No impact is expected on schools at Dyess AFB because families would not be coming with the part-time reservists. Only minor impacts are expected in the Abilene schools because at least half of full-time personnel who would work at the proposed facilities are being transferred from within the Abilene area.

### **Environmental Justice**

Environmental justice is not an issue as a result of the proposed action, as there would be no disproportionately high or adverse human health or environmental effects on minority or low-income populations.

### **Protection of Children**

The proposed action would have short-term, minor effects on children. Potential safety hazards exist for children living on-post during the construction process. A day-care facility is located at the north end of the proposed site and military family housing (MFH) units are located approximately ½-mile to the east. Appropriate measures would be taken to secure the construction area and prevent entry by unauthorized personnel.

### **No-Action Alternative**

Under the no-action alternative, there would be no impact to the socioeconomic conditions of the ROI because there would be no additional personnel.

## **3.7 Hazardous Materials and Solid Waste**

The primary objective of the waste management program is to support the base mission while protecting public health and the environment. This plan implements Air Force Instructive (AFI) 32-7042, Solid and Hazardous Waste Compliance and Air Force Policy Directive (AFPD) 32-70, Environmental Quality. The waste management program at Dyess AFB includes management of all wastes generated on Dyess AFB, except radioactive waste, and implements procedures for all units, including tenant and associate units. Specific procedures follow the more restrictive standard of federal, state, or local requirements. The 7<sup>th</sup> Civil Engineer Squadron Environmental Flight (CES/CEV) manages this program, as approved by the Environment, Safety, and Occupational Health (ESOH) Leadership Council (formerly the Environmental Protection Committee).

Individual operational units are responsible for conducting their activities in accordance with the hazardous waste management plan (HWMP). These units, including tenant, associate units, and contractors, will provide necessary documentation to the installation commander through the CEV, as approved by the base ESOH Leadership Council for permit applications, as well as required reports and recordkeeping, and ensure compliance with Resource Conservation and Recovery Act (RCRA) regulations at Dyess AFB (Dyess 2005a).

### **3.7.1 Affected Environment**

#### **Hazardous Materials**

The most abundant types of hazardous wastes at Dyess AFB are jet wash wastes, sealants and adhesives, epoxy resins, paints and paint-related solids and filters, and contaminated fuel. After generation, hazardous wastes are contained at 1 of nearly 100 initial accumulation points (IAPs). An IAP is an area at or near the point of generation where waste is accumulated for the organization generating the waste. After the hazardous waste containers are full, they are sent within 72 hours to one of two active accumulation sites (ASs) for up to 90-day storage prior to disposal. An AS provides an all-weather accumulation area not subject to stormwater events with an impermeable base or containment system capable of preventing environmental contamination due to container overfilling, spills, leakage, or other improper releases. Before expiration of the 90-day storage period, all wastes are sent for offsite disposal (Dyess 2003).

There are no Environmental Restoration Program (ERP) sites located on the proposed site. Since groundwater flow is toward the southeast near the proposed site, areas to the north and west are of greatest concern for the potential of migrating contaminants. There are three active ERP sites and two no further remedial action planned (NFRAP) sites located near the proposed site. There has not been any contaminant migration from these sites onto the proposed site (Dyess 2005c). Appendix E contains a letter response from Dyess AFB to the TCEQ that provides additional information on these ERP sites (Overbey 2007).

Currently, the ARNG facility in Abilene, TX is a conditionally exempt small quantity waste generator. Hazardous waste generated at this facility is sent to the Dyess Defense Reutilization and Marketing Office (DRMO) for disposal. Universal waste generated at this facility is processed by ARNG personnel at the facility in accordance with Army procedures. The following materials and how they are disposed of are examples of universal waste at the site:

- Waste batteries are recycled.
- Used light bulbs and used absorbents are taken to the ARNG Fort Worth Support Shop for disposal.
- Waste fuel and waste oil is recycled.

### **Solid Waste**

The municipal solid waste (MSW) on base is generated from various sources, including MFH, non appropriated fund activities, administrative offices, commercial areas, and operational squadrons. Dyess AFB has implemented a Pollution Prevention Program that embraces the concept of reducing the generation of wastes through source reduction and environmentally sound recycling. There are no on-base disposal facilities for MSW. Approximately 20 percent of the total waste generated on Dyess AFB is sent to the local landfill owned and operated by Browning-Ferris Industries. Ninety percent of the remaining waste is recycled at an on-base recycling center, or Material Recovery Facility (MRF), where recyclables are sorted, processed, and baled for eventual sale (Dyess 2003). Other solid waste includes scrap metal and used tires, which are taken to the Dyess DRMO.

### **Fuel Storage Tanks**

Dyess AFB is currently free of underground storage tanks (USTs). To minimize the risk to human health and the environment, any new tanks installed on base will be aboveground storage tanks (ASTs) with secondary containment or below ground vaults. The EPA One Plan is used to outline protocols for confirming suspected releases, reporting releases, and implementing corrective actions (EPA 2005).

## **3.7.2 Environmental Consequences**

### **Hazardous Materials**

No short-term impact on the environment is anticipated regarding asbestos-containing materials, lead/chromate-containing paints, polychlorinated biphenyls (PCB)-containing transformers, or Ozone Depleting Compound (ODC) using Heating, Venting, and Air-Conditioning (HVAC) equipment since the project would prohibit those materials from being used for construction.

There are short-and long-term minor adverse impacts anticipated because of the increase of petroleum, oils, and lubricants (POLs) and other materials generated on base as a result of operations. Short-term effects would be due to an increased risk of fuel spills during construction from the extra construction and worker vehicles. Long-term effects would be due to an increased number of privately owned vehicles (POVs) as well as major

equipment that will be transferred from ARNG units relocating to Dyess AFB. In addition, there would be an increase in waste material generated from the daily operations of the maintenance shop. Long-term operations would involve the same type of maintenance activities that the ARNG currently conducts at its Abilene facility. Hazardous waste generated during operation of the maintenance shop would be incorporated into AF waste streams and would be covered under current AF disposal permits. The waste disposal status of Dyess AFB would not change as a result of the proposed action.

### **Solid Waste**

There are short-and long-term minor adverse impacts anticipated because of construction of the new AFRC. Short-term effects would be due to increased solid waste generated from construction debris. Long-term effects would be due to increased solid waste generated from daily operation activities at the administrative office, barracks, and maintenance facility.

### **Fuel Storage Tanks**

There would be no impacts to the environment because it is not anticipated that any fuel storage tanks would be installed as part of the proposed action.

### **No-Action Alternative**

Under the no-action alternative, there would be no impact on the environment because of hazardous materials or solid waste since construction of the new facilities would not occur.

## **3.8 Transportation**

### **3.8.1 Affected Environment**

The major artery through Abilene is I-20, which provides access to the entire Abilene area with five major local interchanges. Additional highways serving the region are U.S. Highway 80, U.S. Highway 83/84, and U.S. Highway 277. Dyess AFB is serviced from the public road system through entrance gates along Dub Wright Boulevard, Jennings Drive, and Military Drive.

Roads and streets are functionally classified into three basic categories: arterial, collectors, and local streets. Each of these classifications can be further stratified (typically into major and minor) according to need and circumstance. Criteria such as average daily traffic, speed limits, adjacent land uses, and roadway lengths are also considered when roadway functional classifications are determined.

Major arterials in the vicinity of Dyess AFB are Arnold Boulevard and Dub Wright Boulevard. The major collectors on Dyess AFB include 3rd Avenue/Street, Texas Drive, Avenue B, and Avenue D. Minor collectors on Dyess AFB include Avenue A, Avenue C, Avenue E, Second Avenue/Street, 4th Avenue/Street, 5th Avenue/Street, Ammo Road, and Hospital Road. Three guarded gates provide vehicular access to Dyess AFB. Most traffic enters the base through the Main Gate. Traffic from the Main Gate passes through the only signalized intersection on base and continues alongside Dyess Air Park to a traffic circle,

which keeps traffic moving steadily and disperses it to 5<sup>th</sup> Avenue, Avenue B, and 5<sup>th</sup> Street (Dyess 2003).

The subject property consists of 25 acres of undeveloped land. The property is bordered on the south by Avenue E, east by 4<sup>th</sup> Street, west by 3<sup>rd</sup> Street, and north by Avenue D. Major collectors are located to the north and west, with minor collectors to the south and east.

### 3.8.2 Environmental Consequences

There would be short-term and long-term minor adverse impacts on traffic and transportation with the implementation of the proposed action.

Short-term minor adverse impacts on traffic are expected from the workers and the construction equipment during construction. These impacts would be temporary and would only occur for the length of construction. No streets are anticipated to be closed while construction activities are in progress; however, construction-related traffic is likely to increase.

Long-term minor adverse impacts on traffic would occur due to several factors:

- The new AFRC personnel would consist of 36 permanent employees (12 officers, 14 enlisted, and 10 civilians) (AF 2006). A ratio of one POV is assumed per person. The additional 36 POVs entering the base every morning will increase during the peak hours of 6:30am to 8:30am, from 2,595 to 2,631, an increase of 1.4 percent (Daniel 1996).
- The new AFRC would support approximately 633 part-time reservists (66 officers and 556 enlisted) who would come to the AFRC facility for a 2-day training assembly one weekend per month (AF 2006). These reservists would be training at Dyess AFB from various locations split between 2 to 3 different weekends each month. It is assumed that each reservist would have their own POV; therefore, an increase of approximately 211 to 317 vehicles two to three times per month on weekends is expected.
- The BRAC realignment actions will transfer ARNG major equipment to Dyess as summarized in Table 3-7:

**Table 3-7**  
**Modified Table of Organization and Equipment**

Type	Number of Vehicles
Wheeled	118
Trailers	64
Tracked	68
Equipment > 30 feet	18
Fuel and M977 HEMTT	38
HEMTT PLS/HET	3

HET = Heavy Equipment Trailer

HEMTT = Heavy Equipment Mobile Transport Truck

Source: AF 2006

The proposed action would slightly increase the number of vehicles on the roadways during the week, with a greater impact on the weekends. Avenues D, 3<sup>rd</sup> Street, and 4<sup>th</sup> Street are the primary roads leading to the proposed site. Tracked vehicles would be transported onto base using trailers and would not be driven on the Dyess AFB streets. The additional traffic from the proposed action would bring minor long-term adverse impacts for these streets. These streets are all in good condition, and the increased traffic flow would add minimal wear to these streets.

### **No-Action Alternative**

Under the no-action alternative, there would be no impacts to traffic or transportation because no new personnel, associated POVs, or military vehicles would be assigned to Dyess AFB.

## **3.9 Infrastructure**

### **3.9.1 Affected Environment**

#### **Water Supply and Distribution System**

The water supply for Dyess AFB is provided by the City of Abilene Water Department, which relies on surface water from Lake Abilene, Kirby Lake, Fort Phantom Lake, and Hubbard Creek Reservoir. The most significant limitation to the water supply system is the region's susceptibility to drought. The Abilene area has been in a drought period for the last 8 years, and Dyess AFB is subject to drought contingency requirements, as issued by the City of Abilene.

There are two post-treatment facilities on base: one in Building 8215 (across the street to the east from the proposed site) and a backup in Building 9919. These plants serve to boost treatment chemicals, such as chlorine, ammonia, aquamag, and fluoride to meet federal water quality standards. This treated water is then distributed throughout the base to supply both domestic and fire protection demands (Dyess 2003).

#### **Sanitary Sewer System**

The sanitary sewage collection system on Dyess AFB is divided into seven sub-basins. The general direction of flow follows the topography, which is from west to east across the base. No septic tanks are currently located on the base. The City of Abilene collection system accepts the inflow from Dyess AFB through one 21-inch vitrified clay pipe at the eastern edge of the base (Dyess 2003).

#### **Stormwater Collection System**

The stormwater collection system on Dyess AFB consists of both constructed storm sewers and open collection ditches. The storm sewers and collection ditches all drain to one of the two main conveyance channels on the base, referred to as the north diversion ditch and the south diversion ditch. The direction of flow is generally west to east across the base. There is a large detention pond by the housing area, referred to as Lake Totten. Containment dams are located on the north and south diversion ditches just east of the airfield as part of a control system to prevent fire-fighting chemicals potentially used on the airfield from entering the stormwater collection system (Dyess 2003).

## **Heating and Cooling Systems**

There are four central heat plants on Dyess AFB located in Buildings 9202, 7413, 7223, and 6130. Most of the hot and chilled water pipes are 4-inch steel pipes running underground between buildings. All heat plants are fueled by natural gas while the Main Clinic plant has diesel fuel capability for emergencies (Dyess 2003).

## **Electrical Distribution System**

Electrical power for Dyess AFB is supplied solely by contract with AEP-West Texas Utilities Company. There are no on-base power plants, but certain buildings do have back-up generators. There are three substations on base, referred to as Alpha, Bravo, and Charlie. Each substation services a different area of the base. There are approximately 400 pad-mounted transformers, typically in the new housing areas, and approximately 1,100 pole-mounted transformers, typically in the older housing and other areas. The distribution system is looped, with approximately 26 percent of the primary and 53 percent of the secondary lines underground. The remainder of the lines is overhead, many on poles more than 40 years old (Dyess 2003). Currently, the base utilizes approximately 13 mega watts of power during peak hours, and capacity for the base is approximately 30 mega watts. Therefore, the base has room for up to 50 percent expansion on its power use (Denslow 2007).

## **Natural Gas Distribution System**

The primary heating source on Dyess AFB is natural gas, which is supplied by TXU Electric & Gas via one 4-inch and one 6-inch coated and wrapped steel transmission lines. The 4-inch transmission line feeds the eastern system, and the 6-inch transmission line feeds the western system. Shutoff valves between the eastern and western systems allow maintenance to keep the systems separate and provide the capability to backfeed from either side if necessary. The gas service is non interruptible (Dyess 2003). Natural gas consumption data are not currently available for Dyess AFB. However, an interview with Dyess AFB maintenance engineer Tom Denslow indicates that the base currently operates at less than 50 percent of capacity.

## **Liquid Fuels**

The major liquid fuel utilized at Dyess AFB is JP-8 fuel, which is supplied via two 6-inch carbon steel pipelines from the FINA refinery and the Pride refinery. Fuel is held in the bulk storage area near Tye Gate and distributed through buried carbon steel lines to the operating storage tanks that directly supply the hydrants. The bulk storage yard houses five ASTs with concrete containment dikes surrounding the storage tank areas. In addition to the bulk storage tank and operating storage tanks, there are four POL areas on base listed as follows: the base service station, the AAFES service station, and two aerospace ground equipment service stations. Fuels are trucked, rather than piped, to these locations (Dyess 2003).

### **3.9.2 Environmental Consequences**

An existing sanitary sewer line crosses the proposed site location, running northeast to southwest from the sewer main along 4<sup>th</sup> Street near the Precision Measurement Equipment (PME) Lab, toward the south end of the Fabrication Shop (shown in Figure 1-1). Electric lines cross the proposed site location and serve as the boundary line between where the administrative area and the industrial area of the new AFRC will be located. Electric substation Charlie is located across the street from the site to the southeast.

The proposed action would result in long-term minor impacts on water, wastewater, natural gas, and electricity since the usage for each of these utilities would increase with the additional full-time staff and part-time weekend reservists.

The water supply and treatment systems are adequate to meet the future demand of the proposed action. However, the water distribution system has been recommended for upgrades to meet the future needs of the base. The base has completed upgrades of the sanitary sewer mains throughout the base. The lateral lines are in the process of being upgraded from vitrified clay pipes to polyvinyl chloride (PVC) or polyethylene pipes and are waiting further funding for completion.

The 7<sup>th</sup> CES/CEV would not be able to support the beddown of the AFRC without additional communications infrastructure. This action would require manhole and duct systems as well as copper and fiber cabling from Building 7318 (located approximately 2 blocks to the northeast of the site) to the proposed AFRC beddown location.

All other utilities are located in close proximity to the site, and the new AFRC would tie into existing utilities. Utility services are capable of handling the additional demand.

#### **No-Action Alternative**

Under the no-action alternative, there would be no impact to the existing infrastructure because additional utilities would not be necessary if the proposed action would not occur.



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## **Section 4**

# **Cumulative Effects and Irreversible and Irretrievable Commitment of Resources**

### **4.1 Cumulative Effects**

A cumulative effects analysis should consider the potential environmental impacts resulting from “the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions” (40 Code of Federal Regulations [CFR] 1508.7). Assessing cumulative effects involves defining the scope of the other actions and their interrelationship with the proposed actions if they overlap in space and time. Cumulative effects are most likely to arise when a proposed action is related to other actions that could occur in the same location or at a similar time. Actions geographically overlapping or close to the proposed action would likely have more potential for a relationship than those farther away. Similarly, actions coinciding in time with the proposed actions would have a higher potential for cumulative effects.

To identify cumulative effects, the analysis needs to address three questions:

- Could affected resource areas of the proposed actions interact with the affected resource areas of past, present, or reasonably foreseeable actions?
- If one or more of the affected resource areas of the proposed actions and another action could interact, would the proposed actions affect or be affected by impacts of the other action?
- If such a relationship exists, are there any potentially significant impacts not identified when the proposed actions are considered alone?

### **4.2 Scope of Cumulative Effects Analysis**

The scope of the cumulative effects analysis involves both the geographic extent of the effects and the time in which the effects could occur. This cumulative effects analysis includes the site of the proposed action and the surrounding area. Actions not occurring within or near these areas were not considered. The time frame for cumulative effects starts in 2009 when construction activities under the proposed action would start. For purposes of this analysis, public documents prepared by federal, state, and local government agencies were the primary sources of information for identifying reasonably foreseeable actions. In addition, information was obtained from other environmental assessments (EAs), management plans, land use plans, and interviews with key personnel.

### **4.3 Past, Present, and Reasonably Foreseeable Actions**

The area surrounding the site of the proposed action has been extensively developed and numerous activities exist in the affected area. The activities described here are not all inclusive but do serve to highlight the major influences in the area and to provide perspective on the contribution to any impacts generated by the proposed action. The following discussion describes how the impacts of other past, present, and reasonably foreseeable actions might be affected by those resulting from the proposed action at Dyess and whether such relationships would result in potentially significant impacts not identified when the proposed action is considered alone.

Currently, a child development center is located at the northeast corner of the proposed site. This facility is fenced in and separated from the proposed construction site by a field. The close proximity of the existing site could result in short-term effects on resources in the form of dust and noise pollution. Best management practices would be implemented to mitigate these effects as much as possible. The effects are expected to be temporary and are not expected to significantly impact the existing facility.

Industrial complexes located primarily west of the site are generally well positioned and will not require significant changes to existing land use patterns. Minor land use changes could include the construction of a new civil engineering complex that would consolidate all seven civil engineer squadron (CES) operations. This action could create minor short-term impacts to the proposed site during construction activities (Dyess 2003).

Figures provided by the Dyess Planning Department indicate base-wide upgrades to the utilities are in the short term development plans. These improvements would likely include the gas mains, Electrical District Area C, Electrical District Area D, and Water Lines Phase 3. Any of these future improvements could result in cumulative impacts to resources if they are located in close proximity to the site. These figures also indicate that further development of the small arms range is in the long term development plans. The small arms range is located adjacent to the proposed site on the south side of the road. Potential cumulative effects could impact that area depending on the nature of the proposed action.

Long term improvement plans include a proposal to create a pedestrian friendly dorm/administration area by linking the dorm area with the administrative and community campuses. Avenue B, currently a major collector, would be changed to parking and a pedestrian walkway. A portion of the street would be turned into a pedestrian mall. Avenue C would also be closed, creating pedestrian only access. The area would be zoned into dorm, recreational, administrative, and service districts. The entire area from the dorms north of Avenue B to the administrative area south of Avenue C would be pedestrian only. A traffic engineering analysis of potential impacts indicates that major impact to the flow would result from closing Avenues B and C between 3<sup>rd</sup> and 4<sup>th</sup> Streets (Dyess 2007). This traffic would be diverted to Avenue A to the north and Avenue D to the south. The study indicated the four key intersections that would experience the greatest potential for impact are Avenue A/3<sup>rd</sup> Street, Avenue D/4<sup>th</sup> Street, Avenue D/5<sup>th</sup> Street, and Avenue B/5<sup>th</sup> Street. The intersection of 4<sup>th</sup> Street and Avenue D, located northeast of the proposed site, would experience a moderate increase in traffic volume. Other areas would experience more severe congestion problems. These problems could be mitigated with improvements to the lanes.

## **4.4 Irreversible and Irretrievable Commitment of Resources**

The National Environmental Policy Act (NEPA) requires that environmental analysis include identification of "...any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented." Irreversible effects result primarily from the use of non-renewable resources and the effects that the uses of these resources have on future generations. Irreversible effects result primarily from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., the disturbance of a cultural site).

Under the proposed action, most resource commitments are neither irreversible nor irretrievable. Most impacts are short term and temporary or long lasting but negligible. The proposed construction at Dyess AFB would require the consumption of fuels as well as building materials, such as concrete, sand, bricks, steel, insulation, wiring, and paint. An undetermined amount of energy would be expended and irreversibly lost during construction and operations of the facilities. The proposed construction site does not have any cultural significance.

Although minor changes with regard to land use, stormwater runoff, traffic, and visual resources are expected with the implementation of the proposed action, no significant cumulative or secondary impacts to the quality of the environment, either human or natural, in the area of potential effect for this action have been identified. Because there would be no significant impact resulting from the implementation of the proposed action, a Finding of No Significant Impact has been prepared to accompany this EA and concludes that the next higher level of environmental impact investigation under NEPA for this action, an environmental impact statement, is not required.

The no-action alternative would not be expected to create cumulative or secondary impacts to the quality of the environment, either human or natural, in the area of potential effect.

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## **Section 6**

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## Section 7

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## **Appendix A**

### **Interagency and Intergovernmental Coordination for Environmental Planning Correspondence**

**Final Environmental Assessment  
Distribution List**

**Dyess Air Force Base  
Final Environmental Assessment  
Distribution List**

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Attn: Winona Henry, Regional Director

Texas Historical Commission  
P.O. Box 12276  
Austin TX 78711-2276  
Attn: F. Lawrence Oaks, SHPO

Mayor Norm Archibald  
City of Abilene  
717 Byrd Drive  
Abilene TX 79601

Tye City Council Members  
City of Tye  
205 North Street  
Tye, TX 79563

Governor's Division of Emergency Management  
Texas Department of Public Safety  
5805 North Lamar Blvd.  
Austin, TX 78752  
Attn: Jack Colley, Chief

USDA-Natural Resources Conservation Service  
101 South Main  
Temple, TX 76501  
Attn: James Greenwade, Soil Scientist

Texas Parks and Wildlife  
4200 Smith School Road  
Austin, Texas 78744-3291  
Attn: Celeste Brancel/Wildlife Habitat Assessment Program

Abilene Public Library  
1401 S. Danville Drive  
Abilene, TX 79605

Dyess AFB Library  
349 Third Ave. (Building 6142)  
Dyess AFB, TX 79607

Jim Wheeler  
United States Army Reserve  
8000 Camp Robinson Road  
North Little Rock, AR 72118-2205

Alisa Dickson, REM  
NGB ACUB Program Manager  
NEPA Central Region Program Manager  
Readiness Center, NGB-ARE-C  
111 South George Mason Drive  
Arlington, VA 22204

Dave Boucher  
Compliance/NEPA Project Manager  
JFTX-GAR-EV  
2210 W 35<sup>th</sup> Street  
Austin, TX 78703

LTC Thomas Starr  
Texas Army National Guard  
2210 West 35<sup>th</sup> Street, Building 1  
Austin, TX 78703

## **II CEP Correspondence**





## DEPARTMENT OF THE AIR FORCE

HEADQUARTERS AIR COMBAT COMMAND  
LANGLEY AIR FORCE BASE, VIRGINIA

MEMORANDUM FOR: U.S. Fish and Wildlife Service  
Ecological Services Field Office  
711 Stadium Drive, Suite 252  
Arlington TX 76011  
Attn: Tom Cloud, Field Supervisor

FROM: HQ ACC/A7ZP  
129 Andrews Street, Suite 102  
Langley AFB, VA 23665-2969

SUBJECT: Closure of Grimes U.S. Army Reserve Center, Abilene, TX, and  
Relocation of B Company of the 413<sup>th</sup> Civil Affairs Battalion and the Area  
Maintenance Support Activity 11 Sub-Shop to Dyess AFB, TX

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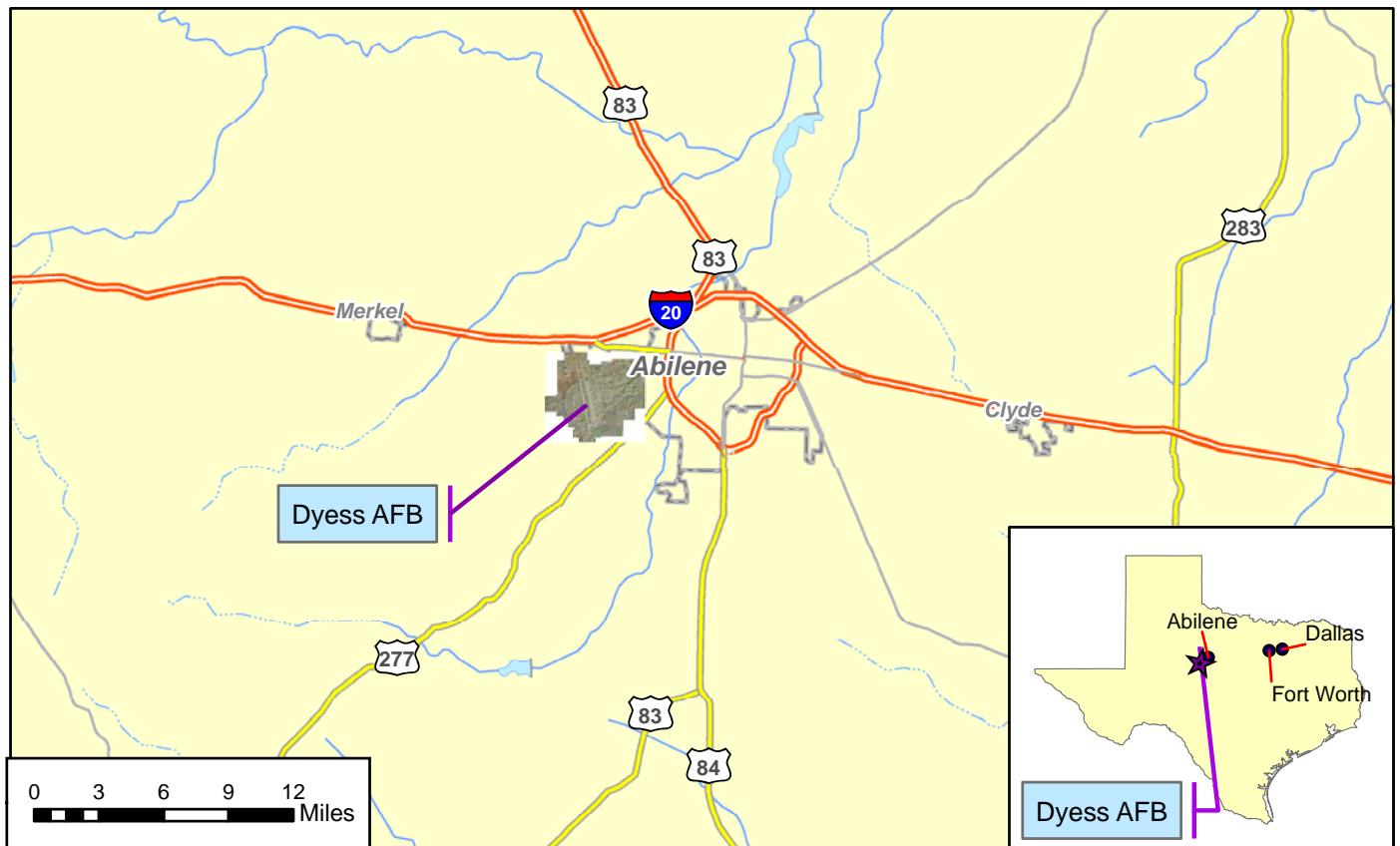
3. Please forward any identified issues or concerns to Mr. Mike Jones, the HQ ACC/A7ZP Project Manager, at the above address. Though we will consider comments received at any time during the environmental process to the extent possible, we would appreciate comments by 1 December 2006.

A handwritten signature in black ink, appearing to read "Larry H. Dryden", with a long horizontal flourish extending to the right.

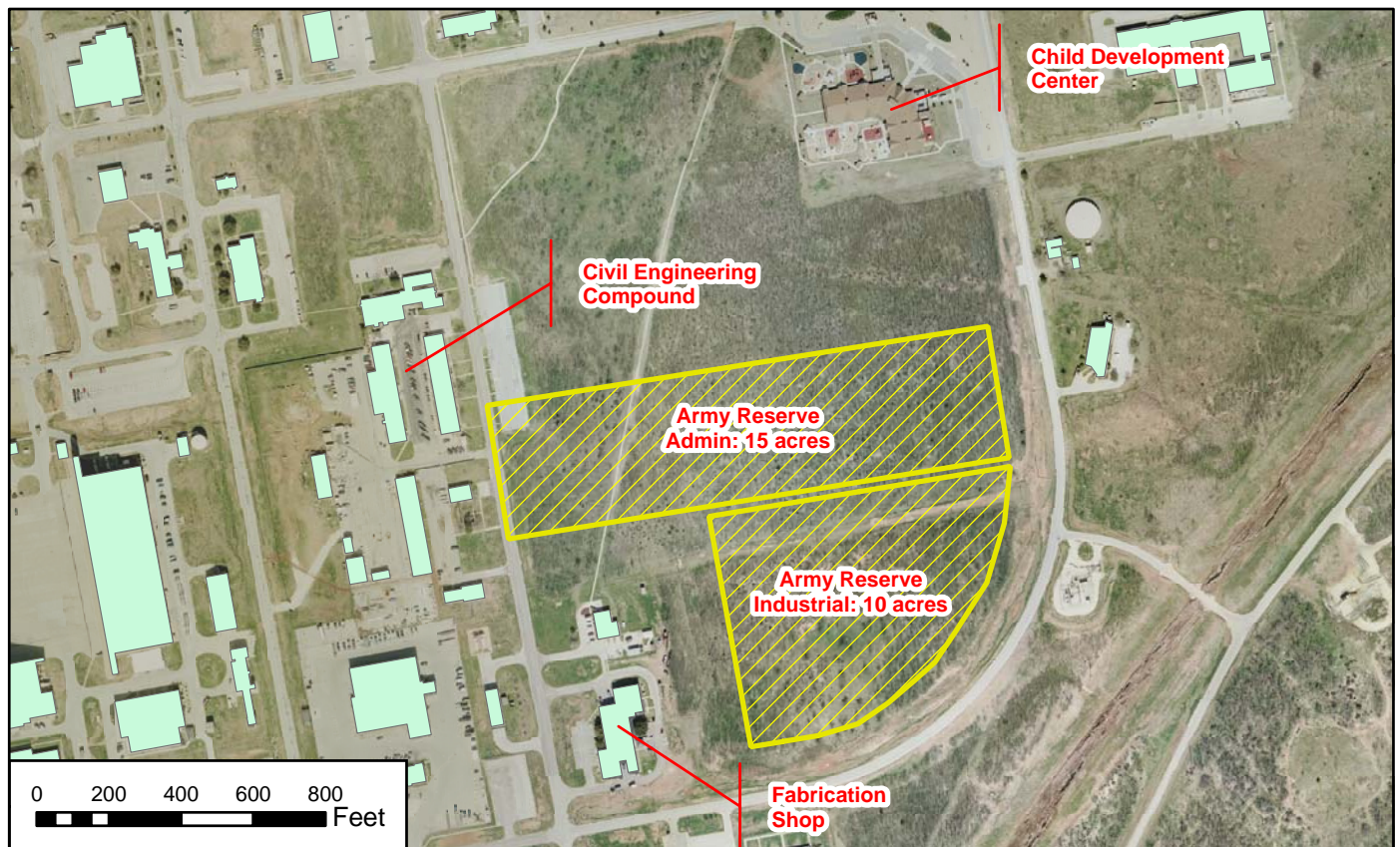
LARRY H. DRYDEN, P.E.  
Chief, Planning Branch (A7ZP)

Attachment: Vicinity Map

## Vicinity Map



## Proposed Site for New Army Reserve Center



Dyess AFB, Texas  
Site Vicinity Map



## **Dyess Air Force Base Preliminary Draft Environmental Assessment IICEP Distribution List**

**The preceding letter was also sent to the following individuals or agencies:**

U.S. Fish and Wildlife Service  
Ecological Services Field Office  
711 Stadium Drive, Suite 252  
Arlington TX 76011  
Attn: Tom Cloud, Field Supervisor

Budget Planning and Policy Office  
1100 San Jacinto  
Austin TX 78701  
Attn: Wendy Wyman, Environmental Policy Director

U.S. Environmental Protection Agency Region VI  
1445 Ross Avenue, Suite 1200  
Dallas TX 75202-2733  
Attn: Richard Green, Regional Administrator

Texas Parks and Wildlife  
4200 Smith School Road  
Austin TX 78744  
Attn: Robert L. Cook, Executive Director

Texas Commission on Environmental Quality  
1977 Industrial Boulevard  
Abilene TX 79602-7833  
Attn: Winona Henry, Regional Director

Texas Historical Commission  
P.O. Box 12276  
Austin TX 78711-2276  
Attn: F. Lawrence Oaks, SHPO

Texas Parks and Wildlife Department  
3000 IH-35 South, Suite 100  
Austin TX 78704  
Attn: Celeste Brancel, Environmental Review Coordinator

Mayor Norm Archibald  
City of Abilene  
717 Byrd Drive  
Abilene TX 79601

Abilene City Council Members  
City Hall  
555 Walnut Street  
Abilene TX 79601

Tye City Council Members  
City of Tye  
P.O. Box 369  
Tye TX 79563

Troy Fraser  
State Senator, District 24  
P.O. Box 12068  
Austin TX 78711

Robert L. Duncan  
State Senator, District 28  
1500 Broadway, Suite 902  
Lubbock TX 79401

Bob Hunter  
State Representative, District 71  
P.O. Box 1498  
Abilene TX 79604

James "Pete" Laney  
State Representative, District 85  
P.O. Drawer 900  
Hale Center TX 79041

Bureau of Land Management - Amarillo Field Office  
801 S. Fillmore Street, Suite 500  
Amarillo, TX 79101-3545

Larry Gilley - The City Manager  
555 Walnut Street, Suite 203  
PO Box 60  
Abilene, Texas 79604-0060

Jack Turner, Commissioner Precinct-1  
Taylor County Courthouse  
300 Oak St  
Abilene, TX 79602

Nowlin Cox, Commissioner Precinct-2  
Taylor County Courthouse  
300 Oak St  
Abilene, TX 79602

Stan Egger, Commissioner Precinct-3  
Taylor County Courthouse  
300 Oak St  
Abilene, TX 79602

Chuck Statler, Commissioner Precinct-4  
Taylor County Courthouse  
300 Oak St  
Abilene, TX 79602

George A Newman, County Judge  
Taylor County Courthouse  
300 Oak St  
Abilene, TX 79602

Taylor County Local Emergency Planning Committee  
400 Oak, Suite 107  
Abilene, Texas 79602

Ms. Jessica Tipton - Risk Manager  
Taylor County CSCD  
Old Taylor County Courthouse  
301 Oak - 2<sup>nd</sup> Floor  
Abilene, TX 79602

Governor's Division of Emergency Management  
Texas Department of Public Safety  
5805 North Lamar Blvd.  
Austin, Texas 78752

Jim Bryan - Emergency Management Coordinator  
PO Box 60  
Abilene, Texas 79604-0060

USDA-Natural Resources Conservation Service  
101 South Main  
Temple, TX 76501

Texas Commission on Environmental Quality  
Winona Henry - Regional Director  
1977 Industrial Blvd.  
Abilene, TX 79602-7833



## DEPARTMENT OF THE AIR FORCE

HEADQUARTERS AIR COMBAT COMMAND  
LANGLEY AIR FORCE BASE, VIRGINIA

MEMORANDUM FOR: Texas Historical Commission  
P.O. Box 12276  
Austin, TX 78711-2276  
Attn: F. Lawrence Oaks, SHPO

FROM: HQ ACC/A7ZP  
129 Andrews Street, Suite 102  
Langley AFB, VA 23665-2969

SUBJECT: Closure of Grimes U.S. Army Reserve Center, Abilene, TX, and  
Relocation of B Company of the 413<sup>th</sup> Civil Affairs Battalion and the Area  
Maintenance Support Activity 11 Sub-Shop to Dyess AFB, TX

1. The United States Air Force Air Combat Command (Air Force) is preparing an Environmental Assessment (EA) to assess the potential environmental impacts of relocating B Company of the 413<sup>th</sup> Civil Affairs Battalion and the Area Maintenance Support Activity 11 Sub-Shop to a new Armed Forces Reserve Center with a Field Maintenance Shop on Dyess AFB, TX. The new Reserve Center would have the capability to accommodate Texas Army National Guard Units from the Abilene, Coleman, and Snyder readiness centers and the Texas Army National Guard Field Maintenance Shop currently located in Abilene, TX. This action is being proposed in accordance with the Defense Base Closure and Realignment Act of 1990 (P.L. 101-510) as amended (BRAC). In support of the EA process, we request your input in identifying general or specific issues or areas of concern you feel should be addressed in the environmental analysis.
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3. Please help us initiate the Section 106 process of the National Historic Preservation Act of 1966. Please review the enclosed map to identify the potentially affected area. Our EA will consider the proposal's potential impacts on historic or culturally significant properties, and we will coordinate related information with your office according to the steps outlined in 36 CFR 800.3 through 36 CFR 800.7.
4. Please forward any identified issues or concerns to Mr. Mike Jones, the HQ ACC/A7ZP Project Manager, at the above address. Though we will consider comments received at any time during the environmental process to the extent possible, we would appreciate comments by 1 December 2006.

A handwritten signature in black ink, appearing to read "Larry Dryden", with a long horizontal flourish extending to the right.

LARRY H. DRYDEN, P.E.  
Chief, Planning Branch (A7ZP)

Attachment: Vicinity Map





DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS AIR COMBAT COMMAND  
LANGLEY AIR FORCE BASE, VIRGINIA

NOV 08 2008

**MEMORANDUM FOR:** The Honorable John Cornyn  
517 Hart Senate Office Building  
Washington, DC 20510

**FROM:** HQ ACC/A7  
129 Andrews Street, Suite 102  
Langley AFB, VA 23665-2969

**SUBJECT:** Closure of Grimes U.S. Army Reserve Center, Abilene, TX, and  
Relocation of B Company of the 413<sup>th</sup> Civil Affairs Battalion and the Area  
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A handwritten signature in black ink, appearing to read 'M. D. Wright', with a stylized flourish at the end.

MARK D. WRIGHT, Colonel, USAF  
Deputy Director of Installations  
for Civil Engineers (A7-2)

Attachment: Vicinity Map



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS AIR COMBAT COMMAND  
LANGLEY AIR FORCE BASE, VIRGINIA

NOV 08 2006

**MEMORANDUM FOR:** The Honorable Kay Bailey Hutchinson  
284 Russell Senate Office Building  
Washington, DC 20510

**FROM:** HQ ACC/A7  
129 Andrews Street, Suite 102  
Langley AFB, VA 23665-2969

**SUBJECT:** Closure of Grimes U.S. Army Reserve Center, Abilene, TX, and  
Relocation of B Company of the 413<sup>th</sup> Civil Affairs Battalion and the Area  
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MARK D. WRIGHT, Colonel, USAF  
Deputy Director of Installations  
for Civil Engineers (A7-2)

Attachment: Vicinity Map



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS AIR COMBAT COMMAND  
LANGLEY AIR FORCE BASE, VIRGINIA

NOV 08 2006

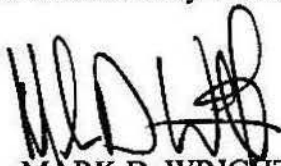
**MEMORANDUM FOR:** The Honorable William Thornberry  
2457 Rayburn House Office Building  
Washington, DC 20515

**FROM:** HQ ACC/A7  
129 Andrews Street, Suite 102  
Langley AFB, VA 23665-2969

**SUBJECT:** Closure of Grimes U.S. Army Reserve Center, Abilene, TX, and  
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MARK D. WRIGHT, Colonel, USAF  
Deputy Director of Installations  
for Civil Engineers (A7-2)

Attachment: Vicinity Map



**DEPARTMENT OF THE AIR FORCE**

HEADQUARTERS AIR COMBAT COMMAND  
LANGLEY AIR FORCE BASE, VIRGINIA

NOV 08 2006

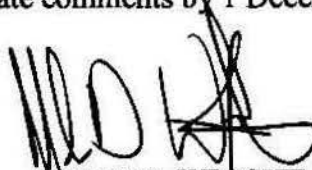
**MEMORANDUM FOR:** The Honorable Randy Neugebauer  
429 Cannon House Office Building  
Washington, DC 20515

**FROM:** HQ ACC/A7  
129 Andrews Street, Suite 102  
Langley AFB, VA 23665-2969

**SUBJECT:** Closure of Grimes U.S. Army Reserve Center, Abilene, TX, and  
Relocation of B Company of the 413<sup>th</sup> Civil Affairs Battalion and the Area  
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MARK D. WRIGHT, Colonel, USAF  
Deputy Director of Installations  
for Civil Engineers (A7-2)

Attachment: Vicinity Map





**DIVISION OF EMERGENCY MANAGEMENT**  
**Office of the Governor**

**RICK PERRY**  
Governor

Mailing Address:  
PO Box 4087  
Austin, Texas 78773-0220

Contact Numbers:  
512-424-2138 Duty Hours  
512-424-2277 Non-Duty Hours  
512-424-2444 Fax

Physical Address:  
5805 N. Lamar Blvd.  
Austin, Texas 78752

**STEVEN McCRAW**  
Director  
Office of Homeland Security

**JACK COLLEY**  
Chief

November 22, 2006

Mr. Mike Jones  
Project Manager  
ACC/A7ZP  
Department of the Air Force  
Headquarters Air Combat Command  
129 Andrews Street, Suite 102  
Langley AFB, VA 23665-2969

Dear Mr. Jones:

With regard to the Environmental Assessment (EA) of potential impacts for the relocation of B Company of the 413<sup>th</sup> Civil Affairs Battalion and the Area Maintenance Support Activity 11 Sub-Shop to a new Armed Forces Reserve Center on Dyess AFB, TX, I have the following comments:

- 1) Request that a review of the Dyess AFB Installation Management Plan be conducted to check the location of Installation Restoration Program (IRP) sites subject to institutional controls, including post-closure maintenance when choosing the site of the Armed Forces Reserve Center and provide the results to the Texas Commission on Environmental Quality (TCEQ), Attn: Kelly Cook, MC172, P.O. Box 13087, Austin, Texas 78711-3087.
- 2) With these controls and processes in place, a significant environmental impact is not anticipated by the State of Texas, at this time, and
- 3) The TCEQ should be notified of the closure and evacuation of the present maintenance facilities to allow the State of Texas the opportunity to monitor the existing facilities for any environmental impact that may be left at the sites from the maintenance unit is moving from.

Should you have any questions, please call James H. Ogden, Jr., Supervising Planner – Technological Hazards Group, Governor's Division of Emergency Management, at 512/424-5677, or Kelly Cook, Office of Compliance and Enforcement, Texas Commission on Environmental Quality, at 512/239-0044.

Sincerely,

A large, stylized handwritten signature in black ink, appearing to read "Jack Colley".

Jack Colley  
Chief

United States Department of Agriculture



Natural Resources Conservation Service  
101 South Main Street  
Temple, TX 76501-7602

---

November 30, 2006

Department of the Air Force.  
HQ ACC/A7ZP  
129 Andrews Street, Suite 102  
Langley AFB, VA 23665-2969

**Attention: Larry H. Dryden, P. E., Chief, Planning Branch**

Subject: LNU-Farmland Protection-  
Relocation of B Company 413<sup>th</sup> Civil Affairs to Dyess AFB, Texas  
Taylor County, Texas

We have reviewed the information provided concerning the proposed Relocation of B Company of the 413th Civil Affairs Battalion and Area Maintenance Support to Dyess AFB, Texas as outlined in your letter of November 13, 2006. This is part of NEPA evaluation for the Department of Defense, U.S. Air Force. We have evaluated the proposed site as required by the Farmland Protection Policy Act (FPPA).

The proposed project may contain Important Farmland Soils; however it is exempt from the FPPA law because the area is considered as already converted to National Defense uses by the Farmland Protection Policy Act. The FPPA law excludes from the definition of "farmland" areas that are used for National Defense in section 658.3, (b). We have completed an AD-1006 form indicating the exemption.

I have attached the completed AD-1006 (Farmland Conversion Impact Rating) form for this project. Thanks for the resource materials you submitted to evaluate this project. If you have any questions please call James Greenwade at (254)-742-9960, Fax (254)-742-9859.

Thanks,

A handwritten signature in black ink, appearing to read "James M. Greenwade", is written over the typed name.

James M. Greenwade  
Soil Scientist  
Soil Survey Section  
USDA-NRCS, Temple, Texas

**FARMLAND CONVERSION IMPACT RATING**

<b>PART I</b> (To be completed by Federal Agency)		Date Of Land Evaluation Request 11-13-2006				
Name of Project Relocation of B Company 413 Civil Affairs		Federal Agency Involved USAF				
Proposed Land Use Office Space USAF		County and State Taylor County, Texas				
<b>PART II</b> (To be completed by NRCS)		Date Request Received By NRCS 11-15-2006		Person Completing Form: James Greenwade		
Does the site contain Prime, Unique, Statewide or Local Important Farmland? (If no, the FPPA does not apply - do not complete additional parts of this form)		YES <input type="checkbox"/>	NO <input type="checkbox"/>	Acres Irrigated	Average Farm Size	
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Amount of Farmland As Defined in FPPA Acres: %7				
Name of Land Evaluation System Used	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS				
<b>PART III</b> (To be completed by Federal Agency)		Alternative Site Rating				
		Site A	Site B	Site C	Site D	
A. Total Acres To Be Converted Directly						
B. Total Acres To Be Converted Indirectly						
C. Total Acres In Site						
<b>PART IV</b> (To be completed by NRCS) Land Evaluation Information						
A. Total Acres Prime And Unique Farmland						
B. Total Acres Statewide Important or Local Important Farmland						
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted						
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value						
<b>PART V</b> (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)						
<b>PART VI</b> (To be completed by Federal Agency) Site Assessment Criteria (Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)		Maximum Points	Site A	Site B	Site C	Site D
1. Area In Non-urban Use		(15)				
2. Perimeter In Non-urban Use		(10)				
3. Percent Of Site Being Farmed		(20)				
4. Protection Provided By State and Local Government		(20)				
5. Distance From Urban Built-up Area		(15)				
6. Distance To Urban Support Services		(15)				
7. Size Of Present Farm Unit Compared To Average		(10)				
8. Creation Of Non-farmable Farmland		(10)				
9. Availability Of Farm Support Services		(5)				
10. On-Farm Investments		(20)				
11. Effects Of Conversion On Farm Support Services		(10)				
12. Compatibility With Existing Agricultural Use		(10)				
TOTAL SITE ASSESSMENT POINTS		160				
<b>PART VII</b> (To be completed by Federal Agency)						
Relative Value Of Farmland (From Part V)		100				
Total Site Assessment (From Part VI above or local site assessment)		160				
TOTAL POINTS (Total of above 2 lines)		260				
Site Selected:	Date Of Selection	Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>				
Reason For Selection:						
Name of Federal agency representative completing this form:						
Date:						

**Guggenberger, Monica**

---

**From:** Cynthia Guillen [Cynthia.Guillen@thc.state.tx.us]  
**Sent:** Wednesday, December 20, 2006 10:13 AM  
**To:** Guggenberger, Monica  
**Subject:** RE: Dyess Air Force Base  
**Importance:** High

Monica,

We did receive it in November and the reviewer was Bob Brinkman, but he had no comments for the project.

---

**From:** Guggenberger, Monica [mailto:GuggenbergerMM@cdm.com]  
**Sent:** Thursday, December 14, 2006 4:27 PM  
**To:** Cynthia Guillen  
**Subject:** Dyess Air Force Base

Ms. Guillen,

Please find attached the letter we previously attempted to send to your office regarding the BRAC closures in Abilene and relocation to Dyess AFB. Feel free to e-mail me or call me with any questions. Thank you for help.

<<SHPO IICEP letter.pdf>>

Monica M. Guggenberger  
Environmental Technician  
**CDM**  
9200 Ward Parkway  
Suite 500  
Kansas City, MO 64114  
(816) 444-8270  
guggenbergermm@cdm.com

12/29/2006



DEPARTMENT OF THE AIR FORCE  
REGIONAL CIVIL ENGINEER - BALLISTIC MISSILE SUPPORT (AFESC)  
NORTON AIR FORCE BASE, CALIFORNIA 92409

28 JUL 1989

James E. Bruseth, PhD  
Deputy State Historic Preservation Program  
Texas Historical Commission  
P.O. Box 12276  
Austin, TX 78711

Dear Dr Bruseth

Please find enclosed for your review the final report for the recent cultural resources investigation at Dyess AFB, Texas. The study was conducted in support of the Environmental Impact Statement for the proposed Peacekeeper Rail Garrison Program. For the reasons enumerated in the report, we believe none of the recorded archaeological sites are eligible for the national Register of Historic Places. Therefore, the proposed Rail Garrison program should not affect any significant cultural resources at Dyess AFB. We request your concurrence with this finding.

If there are any questions, please contact Dr John Sabol at Norton Air Force Base, (714) 382-3804, or Dr David Carmichael at Tetra Tech, Inc, San Bernardino California, (714) 381-1674.

*Mary L. Vroman*

MARY L. VROMAN, Maj, USAF  
Deputy Director  
Programs and Environmental Division

1 Atch  
Report

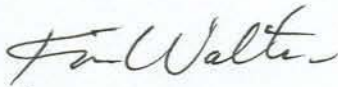
cc: 96 CES/DED (Mr Ball)

### Tribal Coordination

Documentation: Letters were sent out to tribes identified in the ICRMP with potential the potential of having traditional cultural ties to Dyess AFB managed lands in the past.

Letters were sent out to the Wichita, Jicarilla Apache, Kiowa, and Comanche on 12 May 2006 by Kim Walton, Cultural Resources Manager.

Copies of sent letters are located in H:\7 CES Flights\CEV\CEVA\Kim\CULTURAL RESOURCES\Tribal Contacts>Contact Folder.



7<sup>th</sup> CES/CEVN  
Mr. Kim Walton  
710 3<sup>rd</sup> Street  
Dyess AFB, TX, 79607-1670

Jicarilla Apache Nation  
Attention: Levi Pesata, President  
P.O. Box 507  
Dulce, NM 87528

Wichita and Affiliated Tribes  
Attention: Gary McAdams, President  
P.O. Box 729  
Anadarko, OK 73005

Kiowa Indian Tribe of Oklahoma  
Attention: Billy E. Horse, Chairman  
PO Box 369  
Carnegie, OK 73015

Comanche Nation  
Attention: Wallace Coffey, Chairman  
HC32 – Box 1720  
Lawton, OK 73502



Date: 27 July, 2006

The base has received no response from letters sent May 12, 2006 from the following tribal entities.

Follow up phone calls to tribal contacts.

Wichita and Affiliated Tribes  
Attention: Gary McAdams, President  
P.O. Box 729  
Anadarko, OK 73005  
405-247-2425

Secretary stated the letter was forwarded to VP Williams. She redirected my call to his office and got his voice mail, left a message to call me. Time: 0940

Kiowa Indian Tribe of Oklahoma  
Attention: Billy E. Horse, Chairman  
PO Box 369  
Carnegie, OK 73015  
580-654-2300  
Phone system run around. Did not speak to or contact anyone.

Comanche Nation  
Attention: Wallace Coffey, Chairman  
HC32 - Box 1720  
Lawton, OK 73502  
Cultural Affairs contact

Called BIA archaeologist and received possible POC's for Kiowa and Comanche  
Kiowa: Joe Hunter, no number  
Comanche: Fred Nahwooksy, 580-355-2250

( Dyess AFB will consider a lack of response from the above Native American tribes with historic affiliation to this general area as having no cultural resource concerns. )

*Kim Walter 27 July 2006*  
*Place in permanent file*



## THE JICARILLA APACHE NATION

P.O. BOX 507 • DULCE, NEW MEXICO • 87528-0507

May 30, 2006

**Jicarilla Apache  
Traditional  
Culture  
Committee**

Wainwright Velarde  
President

Raymond Tafoya, Sr.  
Vice President

Dr. Wilhelmina Phone  
Secretary

Bryan F. Vigil  
Treasurer

*"dedicated to the  
preservation  
and  
perpetuation  
of the  
Jicarilla Apache  
culture  
and  
traditions"*

7<sup>th</sup> CES/CEVN  
Attention: Mr. Kim Walton  
710 3<sup>rd</sup> Street  
Dyess AFB, TX 79607-1670

RE: Cultural Resource Status of Dyess AFB

Dear Mr. Walton,

Thank you for contacting the Jicarilla Apache Nation early in the process regarding the above referenced project. I have been given the responsibility to address all National Historical Preservation Act's Section 106 tribal consultations on behalf of the Jicarilla Apache Nation.

Your letter of May 11, 2006 was referred to my office by President Levi Pesata. The project area is outside the Jicarilla Apache's area of concerns. Although the Jicarilla Apache has cultural affiliation to the Lipan Apaches, we are deferring decisions or comments to the surrounding tribes that have interest. Please remove our tribe from your list of cultural affiliated tribes.

Attached is a list of counties that we are requesting consultation.

Please feel free to call me at 505-759-1343 if you have questions.

Sincerely,

Lorene Willis, Director  
Jicarilla Apache Cultural Affairs

Cc: President Levi Pesata





**Comments Received during  
Public Review Period**



TEXAS  
HISTORICAL  
COMMISSION

*The State Agency for Historic Preservation*

RICK PERRY, GOVERNOR

JOHN L. NAU, III, CHAIRMAN

F. LAWERENCE OAKS, EXECUTIVE DIRECTOR

March 16, 2007

Bob Kaspzyk  
Geologist  
CDM Inc.  
9200 Ward Parkway, Suite 500  
Kansas City, MO 64114

*Re: Cistern discovered near Avenue E, site of proposed Army Reserve Industrial 10-acre site,  
Dyess AFB, Taylor County, Texas.*

Dear Mr. Kaspzyk:

Thank you for your correspondence describing the above referenced project. This letter serves as comment on the proposed undertaking from the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission.

Our staff, led by Ed Baker, has completed a review of the above referenced project. We determine that the Dyess AFB cistern is **not eligible** for listing in the National Register of Historic Places.

Thank you for your cooperation in the federal review process, and for your efforts to preserve the irreplaceable heritage of our nation. If you have any questions concerning this review or if we can be of further assistance, please contact Ed Baker at 512/463-5866

Sincerely,

A handwritten signature in black ink, appearing to read "William McWhorter".

for: F. Lawrence Oaks  
State Historic Preservation Officer



DEPARTMENTS OF THE ARMY AND THE AIR FORCE  
NATIONAL GUARD BUREAU  
111 SOUTH GEORGE MASON DRIVE  
ARLINGTON, VA 22204-1382

NGB-ARE-C

05 APR 2007

MEMORANDUM FOR The Adjutant General, Texas Joint Forces Headquarters (JFTX-GAR-EV/MAJ Bryant)), PO Box 5218, Austin, Texas 78763-5218

SUBJECT: Environmental Assessment (EA) for Implementation of Defense Base Realignment and Closure (BRAC) Commission Recommendations, Dyess Air Force Base (AFB), Texas

1. The Air Force has prepared an EA for BRAC actions at Dyess AFB to include construction of a new Armed Forces Reserve Center and Field Maintenance Shop to accommodate the Texas National Guard Units for the following Readiness Centers: Abilene, Coleman, Snyder, and the Field Maintenance Shop in Abilene.
2. The EA has been reviewed and received legal sufficiency by the National Guard Bureau on 8 Feb 07. The National Guard Bureau requests a copy of the signed Finding of No Significant Impact and final EA for our files.
3. If there is a delay in implementation of this project or project conditions change, ensure that the EA adequately addresses the action to be taken. If the EA does not address the action, new environmental documentation must be approved prior to initiation of the project.
4. The point of contact is Ms. Alisa Dickson, DSN 327-9620, (703) 607-9620, or via email at Alisa.Dickson@us.army.mil.

A handwritten signature in black ink, reading "Eric N. Andersen", is positioned above the printed name and title.

ERIC N. ANDERSEN  
Chief, Conservation Branch



March 9, 2007

Mr. Mike Jones  
HQ ACC/A7ZP  
129 Andrews Street, Suite 102  
Langley AFB, VA 23665-2969

RE: Proposed Relocation of B Company of the 413<sup>th</sup> Civil Affairs Battalion  
and the Area Maintenance Support Activity 11 Sub-Shop to Dyess,  
AFB, Taylor County

Dear Mr. Jones:

Texas Parks and Wildlife Department (TPWD) has received the request for information regarding the relocation activity referenced above at Dyess Air Force Base. TPWD staff has reviewed the information provided and offers the following comments for consideration in preparation of the Environmental Assessment (EA).

#### Project Description

The proposed project is in accordance with the Defense Base Closure and Realignment Act and would entail the construction of facilities to accommodate permanently authorized and Guard/Reserve personnel. New construction would include the Armed Forces Reserve Center, a maintenance facility, storage facilities, a multi-use classroom/barracks building, and required utility services. The project area consists of approximately 25 previously undeveloped acres.

Detailed information outlining the requirements and expectations of this Department concerning EA documents is attached in a document entitled "*Texas Parks and Wildlife Suggested Guidelines for Preparation of Environmental Assessment Documents.*"

**Recommendation:** Activities leading to direct or indirect losses of the state's fish and wildlife resources and habitat are strongly discouraged. Losses should be minimized using site planning and construction techniques designed to avoid and preserve existing native trees, shrubs, grasses and forbs, wetland and aquatic systems. Natural buffers contiguous to wetlands and aquatic systems should remain undisturbed to

*To manage and conserve the natural and cultural resources of Texas and to provide hunting, fishing and outdoor recreation opportunities for the use and enjoyment of present and future generations.*

#### COMMISSIONERS

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CHAIRMAN-EMERITUS  
FORT WORTH

ROBERT L. COOK  
EXECUTIVE DIRECTOR



Take a kid  
hunting or fishing

• • •

Visit a state park  
or historic site

Mr. Mike Jones  
Page Two

preserve wildlife cover, food sources, and travel corridors. Should any losses be determined as unavoidable, it is recommended that native plant and forage species that are beneficial to fish and wildlife endemic to the project area be used in mitigation and landscaping plans.

#### Rare and Protected Species

A list of rare, threatened, and endangered species that could potentially occur in Taylor County is attached for your reference.

**Recommendation:** Please review this list, as rare species could be present depending upon habitat availability. If during construction, the project area is found to contain rare species, natural plant communities, or special features, TPWD recommends that precautions be taken to avoid impacts to them. The US Fish and Wildlife Service (FWS) should be contacted for species occurrence data, guidance, permitting, survey protocols, and mitigation for federally listed species. Please include the results of any surveys for rare or protected species in the EA.

According to a search of the TPWD Natural Diversity Database (NDD), no records of rare, threatened, or endangered species have been documented in the immediate area of the project site. However, given the small proportion of public versus private land in Texas, the NDD does not include a representative inventory of rare resources in the state. Although it is based on the best data available to TPWD regarding rare species, the data from the NDD do not provide a definitive statement as to the presence, absence, or condition of special species, natural communities, or other significant features within your project area. These data cannot substitute for an on-site evaluation by your qualified biologists.

The Migratory Bird Treaty Act (MBTA) implicitly prohibits intentional and unintentional take of migratory birds, including their nests and eggs, except where permitted. Additional information regarding the MBTA may be obtained through the Southwest Regional Office (Region 2) Division of Migratory Birds, FWS, at (505) 248-7882.

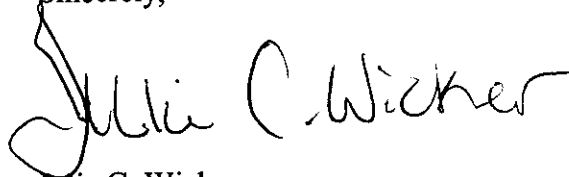
**Recommendation:** Proposed project areas should be surveyed for migratory bird nests, including ground nesting species, prior to construction. Measures should be taken to ensure that migratory bird species within and near the project area are not adversely impacted by clearing and construction activities. TPWD recommends avoiding vegetation removal during the primary breeding season, March through

Mr. Mike Jones  
Page Three

August, for migratory bird species to help minimize impacts to this group.

I appreciate the opportunity to provide preliminary information on this project and I look forward to reviewing the EA. Please call me at (512) 389-4579 if we may be of further assistance.

Sincerely,

A handwritten signature in black ink, reading "Julie C. Wicker". The signature is fluid and cursive, with the first name "Julie" being more prominent and the last name "Wicker" following in a similar style.

Julie C. Wicker  
Wildlife Habitat Assessment Program  
Wildlife Division

JCW:gg.12156

Attachments

## TAYLOR COUNTY

### BIRDS

Federal Status      State Status

<b>Arctic Peregrine Falcon</b>	<i>Falco peregrinus tundrius</i>	DL	T
currently potential migrant through most of state, winters along gulf coast			
<b>Baird's Sparrow</b>	<i>Ammodramus bairdii</i>		
shortgrass prairie with scattered low bushes and matted vegetation; mostly migratory in western half of State, though winters in Mexico and just across Rio Grande into Texas from Brewster through Hudspeth counties			
<b>Bald Eagle</b>	<i>Haliaeetus leucocephalus</i>	LT-PDL	T
found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds			
<b>Black-capped Vireo</b>	<i>Vireo atricapilla</i>	LE	E
oak-juniper woodlands with distinctive patchy, two-layered aspect; shrub and tree layer with open, grassy spaces; requires foliage reaching to ground level for nesting cover; return to same territory, or one nearby, year after year; deciduous and broad-leaved shrubs and trees provide insects for feeding; species composition less important than presence of adequate broad-leaved shrubs, foliage to ground level, and required structure; nesting season March-late summer			
<b>Ferruginous Hawk</b>	<i>Buteo regalis</i>		
open country, primarily prairies, plains, and badlands; nests in tall trees along streams or on steep slopes, cliff ledges, river-cut banks, hillsides, power line towers; year-round resident in northwestern high plains, wintering elsewhere throughout western 2/3 of Texas			
<b>Mountain Plover</b>	<i>Charadrius montanus</i>		
breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous			
<b>Peregrine Falcon</b>	<i>Falco peregrinus</i>	DL	E T
subspecies (F p tundrius) potential migrant through most of state, winters along coast; subspecies (F p anatum) resident, nests in west Texas			
<b>Snowy Plover</b>	<i>Charadrius alexandrinus</i>		
formerly an uncommon breeder in the Panhandle; potential migrant			
<b>Western Burrowing Owl</b>	<i>Athene cunicularia hypugaea</i>		
open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows			
<b>Western Snowy Plover</b>	<i>Charadrius alexandrinus nivosus</i>		
uncommon breeder in the Panhandle; potential migrant; winter along coast			
<b>Whooping Crane</b>	<i>Grus americana</i>	LE	E

## TAYLOR COUNTY

### BIRDS

Federal Status      State Status

potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties

### MAMMALS

Federal Status      State Status

**Black-tailed prairie dog**      *Cynomys ludovicianus*

dry, flat, short grasslands with low, relatively sparse vegetation, including areas overgrazed by cattle; live in large family groups

**Cave myotis bat**      *Myotis velifer*

colonial and cave-dwelling; also roosts in rock crevices, old buildings, carports, under bridges, and even in abandoned Cliff Swallow (*Hirundo pyrrhonota*) nests; roosts in clusters of up to thousands of individuals; hibernates in limestone caves of Edwards Plateau and gypsum cave of Panhandle during winter; opportunistic insectivore

**Gray wolf**      *Canis lupus*      LE      E

extirpated; formerly known throughout the western two-thirds of the state in forests, brushlands, or grasslands

**Plains spotted skunk**      *Spilogale putorius interrupta*

catholic; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie

**Red wolf**      *Canis rufus*      LE      E

extirpated; formerly known throughout eastern half of Texas in brushy and forested areas, as well as coastal prairies

### MOLLUSKS

Federal Status      State Status

**Pistolgrip**      *Tritogonia verrucosa*

stable substrate, rock, hard mud, silt, and soft bottoms, often buried deeply; east and central Texas, Red through San Antonio River basins

**Texas fawnsfoot**      *Truncilla macrodon*

little known; possibly rivers and larger streams, and intolerant of impoundment; flowing rice irrigation canals, possibly sand, gravel, and perhaps sandy-mud bottoms in moderate flows; Brazos and Colorado River basins

### REPTILES

Federal Status      State Status

**Spot-tailed earless lizard**      *Holbrookia lacerata*

central and southern Texas and adjacent Mexico; moderately open prairie-brushland; fairly flat areas free of vegetation or other obstructions, including disturbed areas; eats small invertebrates; eggs laid underground

**Texas horned lizard**      *Phrynosoma cornutum*      T



## TAYLOR COUNTY

### REPTILES

Federal Status      State Status

open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September

### PLANTS

Federal Status      State Status

**Warnock's coral-root**

*Hexalectris warnockii*

leaf litter and humus in oak-juniper woodlands in mountain canyons in the Trans Pecos but at lower elevations to the east, often on narrow terraces along creekbeds

Notes for  
County Lists of Texas' Special Species

The Texas Parks and Wildlife (TPWD) county lists include:

**Vertebrates, Invertebrates, and Vascular Plants** identified as being of conservation concern by TPWD within Texas. These special species lists are comprised of species, subspecies, and varieties that are federally listed; proposed to be federally listed; have federal candidate status; are state listed; or carry a global conservation status indicating a species is critically imperiled, very rare, vulnerable to extirpation, or uncommon.

The TPWD county lists **do not include**:

**Natural Plant Communities** such as Little Bluestem-Indiangrass Series (native prairie remnant), Water Oak-Willow Oak Series (bottomland hardwood community), Saltgrass-Cordgrass Series (salt or brackish marsh), Sphagnum-Beakrush Series (seepage bog).

**Other Significant Features** such as bird rookeries, migratory songbird fallout areas, comprehensive migratory bird information, bat roosts, bat caves, invertebrate caves, and prairie dog towns.

**These lists are not all inclusive for all rare species distributions.** The lists were compiled, developed, and are updated based on field guides, staff expertise, scientific publications, and the TPWD Natural Diversity Database (NDD) (formerly the Biological and Conservation Data System) occurrence data. Historic ranges for some state extirpated species, full historic distributions for some extant species, accidentals and irregularly appearing species, and portions of migratory routes for particular species are not necessarily included. Species that appear on county lists do not all share the same probability of occurrence within a county. Some species are migrants or wintering residents only. Additionally, a few species may be historic or considered extirpated within a county.

TPWD includes the Federal listing status for your convenience and makes every attempt to keep the information current and correct. However, the US Fish and Wildlife Service (FWS) is the responsible authority for Federal listing status. The TPWD lists do not substitute for contact with the FWS and federally listed species county ranges may vary from the FWS county level species lists because of the inexact nature of range map development and use.

**Status Key:**

- LE, LT - Federally Listed Endangered/Threatened
- PE, PT - Federally Proposed Endangered/Threatened
- E/SA, T/SA - Federally Listed Endangered/Threatened by Similarity of Appearance
  - C - Federal Candidate for Listing; formerly Category 1 Candidate
- DL, PDL - Federally Delisted/Proposed for Delisting
  - NL - Not Federally Listed
- E, T - State Listed Endangered/Threatened
- NT - Not tracked or no longer tracked by the State
- "blank" - Rare, but with no regulatory listing status

This information is specifically for your assistance only; due to continuing data updates, **please do not redistribute the lists**, instead refer all requesters to the web site at:  
[http://www.tpwd.state.tx.us/landwater/land/maps/gis/ris/endangered\\_species.phtml](http://www.tpwd.state.tx.us/landwater/land/maps/gis/ris/endangered_species.phtml) or to our office for the most current information available. For questions regarding county lists, please call (512) 912-7011.

Please use the following citation to credit the source for this county level information:

Texas Parks and Wildlife Department, Wildlife Division, Diversity and Habitat Assessment Programs. County Lists of Texas' Special Species. [county name(s) and revised date(s)].

## **Texas Parks and Wildlife Department Suggested Guidelines for Preparation of Environmental Assessment Documents**

Following is an outline of categories of information needed to evaluate a proposed project or action. Every effort should be made to supply quantified data. If subjective data is all that can be supplied, documentation verifying the credentials of the data collector should be provided.

Categories considered essential for adequate biological review by this agency are noted by an asterisk (\*). Depending on the complexity and scope of the proposed project or action, or requirements by other agencies, all the items listed below may be required.

Whenever practical, environmental documents should be supported by aerial photography, topographic maps, schematics, charts, tables, etc. with minimum narrative sufficient to describe, quantify, and qualify the data.

### **A. Project Description**

- \* • Identify who is proposing the project.
- \* • Identify who is conducting the assessments and provide credentials of this person(s).
- \* • Describe the purpose of the project.
- \* • Define the scope of work.
- \* • Identify the project area and study area (total acres, miles of r-o-w, etc.)
- \* • Identify the time table projected for the entire project.
- \* • Describe any required coordination and review for the project.
- \* • List or describe any required public input.
- Provide historical information significant to the project.

### **B. Description of the Affected Environment**

#### **1. Natural Resources**

- Describe the geology within the study area.
- \* • Describe the soils present and their characteristics.
- \* • Describe the landform (topography) and the natural processes impacting the present landform.
- Describe the climatic factors affecting the study area.
- \* • Describe the supply and quality of surface water resources in the study area.
- \* • Describe the supply and quality of groundwater resources including aquifer recharge zones occurring within the study area.
- \* • Describe natural hazards affecting the study area, i.e. tidal influences, flood activity, etc.).
- Describe the quality of the air in the study area.

- \* • Describe the vegetation communities (cover type) specifically impacted by the project to include: dominant plant species, estimated height of trees, woody shrubs or brush; and estimated canopy coverage of woody vegetation. Total acreage of each cover type disturbed by the project should also be listed.

- \* • Describe the fauna that would be associated with the dominant vegetation cover types identified above.

- \* • Identify "sensitive" ecosystems which occur in the study area such as: springs, streams, rivers, floodplains, vegetation corridors, bottomland hardwoods, wetlands, bays, estuaries, native grasslands, etc.

- \* • Describe the occurrence of threatened/endangered species (or their habitats) and unique or rare natural communities which occur in the study area.

- a. On site inspection of the study area for permanent or seasonal occurrence.

- b. On site inspection of the study area for occurrence of habitat.

- c. Interviews with recognized experts on all species with a potential of occurrence.

- d. Literature review of data applicable to a potential occurring species concerning species distribution, habitat needs, and biological requirements.

## 2. Cultural Resources

- \* • Identify public use and open space areas in the vicinity of the proposed project such as parks, natural areas, wildlife preserves and management areas.

- \* • Identify previous, present, and proposed land uses within the study area.

- Identify significant archeological features within the study area.

- Identify significant historical features in the study area with special consideration of "National Register of Historic Places" properties.

- Identify rights-of-ways, easements, public utilities, and transportation features within the study area.

- Identify noise pollution sources and current noise levels within the study area.

- Identify existing and proposed public health and hazardous waste facilities which exist in the study area such as land fills, hazardous waste sites, wastewater treatment facilities, septic tanks, etc.

- Identify socioeconomic factors, if applicable.

### \*C. Project Alternatives

List and describe project alternatives (including "no action") and associated impacts (direct and indirect) to described resources. If the project is potentially large in scope, cumulative effects with other similar projects may be required.

### \*D. Mitigation

A major responsibility of TPWD is to conserve and protect the state's fish, wildlife, and plant resources. Certain categories of these biotic resources warrant special consideration. These include habitats that are locally and regionally scarce, habitats

supporting unique species or communities, stream and river ecosystems, bays, estuaries, wetlands, bottomland hardwoods, and native grasslands. All projects which could adversely affect these resources should be fully evaluated, and where possible, implementation of less damaging alternatives undertaken. If it is determined that a project or action will potentially affect fish, wildlife or plant resources, a process for adverse impact reduction should be initiated. Mitigation measures should be developed and implemented sequentially as follows:

1. **AVOIDANCE:** Avoiding adverse impacts through changes in project location, design, operation, or maintenance procedures, or through selection of other less damaging alternatives to the project or action.
2. **MINIMIZATION:** Minimizing impacts and by project modification or rectification to restore or improve impacted habitat to pre-project condition; or through reducing the impacts over time by preservation and maintenance operations during the life of the project or action.
3. **COMPENSATION:** Compensating for unavoidable impacts by providing replacement or substitute resources (including appropriate management) for losses caused by project construction, operation, or maintenance.

Mitigation should be an integral part of any action or project which adversely affects fish, wildlife, and habitats upon which they depend. Failure to adequately avoid or minimize adverse impacts or to adequately compensate for unavoidable losses of natural resources is a serious deficiency in any project plan and may cause delays in this Department's review and assessment of the adverse impacts upon fish & wildlife resources. In assessing project impacts, reasonable foreseeable secondary and cumulative impacts should be included.

**\*E. Coordination**

Provide copies of pertinent coordination correspondence.

**\*F. Document Preparers and Their Qualifications**

**\*G. Bibliography**

(references: 40 CFR Parts 1500-1508 and various EPA handouts concerning Environmental Assessment documentation.)



April 30, 2007

Mr. Mike Jones  
Department of the Air Force  
HQ ACC/A7ZP  
129 Andrews Street, Suite 102  
Langley AFB, VA 23665-2969

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CHAIRMAN-EMERITUS  
FORT WORTH

ROBERT L. COOK  
EXECUTIVE DIRECTOR

Dear Mr. Jones:

This letter is in response to a review request from Mr. Larry Dryden, HQ-ACC, received November 14, 2006, for potential impacts to rare, threatened, and endangered species from the proposed relocation of B Company of the 413<sup>th</sup> Civil Affairs Battalion, and the Area Maintenance Support Activity 11 Sub-shop to Dyess AFB in Abilene, Taylor County, Texas.

Based on the project as presented, when suitable habitat is present, the following species and special feature could potentially be impacted by the proposed project:

**State Listed Threatened**

Texas horned lizard (*Phrynosoma cornutum*)

**Species of Concern**

Western Burrowing Owl (*Athene cunicularia hypugaea*)

Black-tailed prairie dog (*Cynomys ludovicianus*)

**Special Features**

Prairie Dog Towns

Determining the actual presence of a species in a given area depends on many variables including daily and seasonal activity cycles, environmental activity cues, preferred habitat, transiency and population density (both wildlife and human). The absence of a species can be demonstrated only with great difficulty and then only with repeated negative observations, taking into account all the variable factors contributing to the lack of detectable presence.

Currently, TPWD has no on-site or nearby data available for your immediate project area from the TPWD Natural Diversity Database (NDD). However, prairie dog towns and associated species do occur in the general area. Data from



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hunting or fishing

• • •

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or historic site

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AUSTIN, TEXAS 78744-3291  
512.389.4800

[www.tpwd.state.tx.us](http://www.tpwd.state.tx.us)

*To manage and conserve the natural and cultural resources of Texas and to provide hunting, fishing, and outdoor recreation opportunities for the use and enjoyment of present and future generations.*

the NDD is intended to assist users in avoiding harm to rare species or significant ecological features. Absence of information in an area does not imply that a species is absent from that area.

Given the small proportion of public versus private land in Texas, the NDD does not include a representative inventory of rare resources in the state. Although it is based on the best data available to TPWD regarding rare species, the data from the NDD do not provide a definitive statement as to the presences, absence or condition of special species, natural communities, or other significant features within your project area. These data are not inclusive and **cannot be used as presence/absence data**. They represent species that could potentially be in your project area. This information cannot be substituted for on-the-ground surveys by your qualified biologists. The NDD is updated continuously, based on new, updated, and previously undigitized information. For future projects, please contact [Stephanie.Shelton@tpwd.state.tx.us](mailto:Stephanie.Shelton@tpwd.state.tx.us) for the most current NDD information.

TPWD recommends you contact the US Fish and Wildlife Service (FWS) for additional species occurrence data, guidance, permitting, survey protocols, and mitigation for federally listed species. For FWS county lists of rare species access <http://www.fws.gov/southwest/es/EndangeredSpecies/lists/>. Also, please review the most current TPWD county list, as other rare species could be present depending upon habitat availability. These TPWD county lists are now available on-line at [http://www.tpwd.state.tx.us/landwater/land/maps/gis/ris/endangered\\_species.phtml](http://www.tpwd.state.tx.us/landwater/land/maps/gis/ris/endangered_species.phtml). If during construction, the project area is found to contain rare species, natural plant communities, or special features, TPWD recommends that precautions be taken to avoid impacts to them.

TPWD recommends on-site habitat assessments be conducted by your qualified biologists for the above species and special feature. The Black-tailed prairie dog is a keystone species for the shortgrass prairie ecosystem and only occurs in North America. As a keystone species they are a primary prey for raptors, carnivorous mammals, and some snakes; their constant feeding on the vegetation surrounding their towns maintains a short grass habitat necessary for many grassland bird species, and their burrows provide shelter for numerous species.

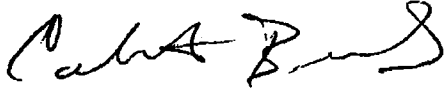
TPWD recommends excluding clearing activities during the general bird nesting season, March through August, to avoid adverse impacts to this group, including ground nesting species. Most native bird species may not be disturbed and must be dealt with in a manner consistent with the Migratory Bird Treaty Act (MBTA). The MBTA implicitly prohibits intentional and unintentional take of nearly all native birds, except when authorized under a FWS permit. Additional information regarding the MBTA may be obtained through the FWS Region 2 Migratory Bird Permit Office at (505) 248-7882.

TPWD strives to respond to requests for project review within a 45 day comment period. Responses may be delayed due to workload and lack of staff. Failure to meet the 45 day review timeframe does not constitute concurrence from TPWD that the proposed project will not adversely impact fish and wildlife resources.

Mr. Mike Jones, Langley AFB, VA  
Dyess AFB, Abilene, TX  
Page 3

Thank you for the opportunity to comment on this project. Please contact me if you have any questions or need additional assistance (512) 912-7021.

Sincerely,

A handwritten signature in black ink, appearing to read 'Celeste Brancel', with a stylized flourish at the end.

Celeste Brancel  
Wildlife Habitat Assessment Program  
Threatened and Endangered Species



## **Appendix B**

**Environmental Data Resources, Inc.**

**EDR NEPA Check®**



**EA Site  
3RD Street/Avenue E  
Dyess Air Force Base, TX 79607**

**Inquiry Number: 1797106.8s**

**November 16, 2006**

**The Standard in  
Environmental Risk  
Management Information**

440 Wheelers Farms Road  
Milford, Connecticut 06461

**Nationwide Customer Service**

Telephone: 1-800-352-0050  
Fax: 1-800-231-6802  
Internet: [www.edrnet.com](http://www.edrnet.com)

## TABLE OF CONTENTS

<b><u>SECTION</u></b>	<b><u>PAGE</u></b>
<b>EDR NEPACheck® Description.....</b>	<b>1</b>
<b>Map Findings Summary.....</b>	<b>2</b>
<b>Natural Areas.....</b>	<b>3</b>
<b>Historic Sites.....</b>	<b>6</b>
<b>Flood Plain.....</b>	<b>12</b>
<b>Wetlands.....</b>	<b>14</b>
<b>Wetlands Classification System.....</b>	<b>16</b>
<b>FCC &amp; FAA Sites.....</b>	<b>20</b>
<b>Key Contacts and Government Records Searched.....</b>	<b>25</b>

***Thank you for your business.***  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

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## EDR NEPACheck® DESCRIPTION

The National Environmental Policy Act of 1969 (NEPA) requires that Federal agencies include in their decision-making processes appropriate and careful consideration of all environmental effects and actions, analyze potential environmental effects of proposed actions and their alternatives for public understanding and scrutiny, avoid or minimize adverse effects of proposed actions, and restore and enhance environmental quality as much as possible.

The EDR NEPACheck provides information which may be used, in conjunction with additional research, to determine whether a proposed site or action will have significant environmental effect.

The report provides maps and data for the following items (where available). Search results are provided in the Map Findings Summary on page 2 of this report.

### Section

### Regulation

#### Natural Areas Map

- Federal Lands Data:
  - Officially designated wilderness areas
  - Officially designated wildlife preserves, sanctuaries and refuges
  - Wild and scenic rivers
  - Fish and Wildlife
- Threatened or Endangered Species, Fish and Wildlife, Critical Habitat Data (where available)

47 CFR 1.1307(1)  
47 CFR 1.1307(2)  
  
40 CFR 6.302(e)  
40 CFR 6.302  
47 CFR 1.1307(3); 40 CFR 6.302

#### Historic Sites Map

- National Register of Historic Places
- State Historic Places (where available)
- Indian Reservations

47 CFR 1.1307(4); 40 CFR 6.302

#### Flood Plain Map

- National Flood Plain Data (where available)

47 CFR 1.1307(6); 40 CFR 6.302

#### Wetlands Map

- National Wetlands Inventory Data (where available)

47 CFR 1.1307(7); 40 CFR 6.302

#### FCC & FAA Map

- FCC antenna/tower sites, AM Radio Towers, FAA Markings and Obstructions, AM Radio Interference Zones, Airports, Topographic gradient

47 CFR 1.1307(8)

#### Key Contacts and Government Records Searched

# MAP FINDINGS SUMMARY

The databases searched in this report are listed below. Database descriptions and other agency contact information is contained in the Key Contacts and Government Records Searched section on page 25 of this report.

## TARGET PROPERTY ADDRESS

EA SITE  
3RD STREET/AVENUE E  
DYESS AIR FORCE BASE, TX 79607

Inquiry #: 1797106.8s  
Date: 11/16/6

## TARGET PROPERTY COORDINATES

Latitude (North): 32.412899 - 32° 24' 46.4"  
Longitude (West): 99.839500 - 99° 50' 22.2"  
Universal Tranverse Mercator: Zone 14  
UTM X (Meters): 421059.2  
UTM Y (Meters): 3586325.0

Applicable Regulation from 47 CFR/FCC Checklist	Database	Search Distance (Miles)	Within Search	Within 1/8 Mile
<b><u>NATURAL AREAS MAP</u></b>				
1.1307a (1) Officially Designated Wilderness Area	US Federal Lands	1.00	YES	YES
1.1307a (2) Officially Designated Wildlife Preserve	US Federal Lands	1.00	YES	YES
1.1307a (3) Threatened or Endangered Species or Critical Habitat	County Endangered Species	County	YES	N/A
<b><u>HISTORIC SITES MAP</u></b>				
1.1307a (4) Listed or eligible for National Register	National Register Hist. Places	1.00	NO	NO
1.1307a (4) Listed or eligible for National Register	TX Historic Sites	1.00	NO	NO
	Indian Reservation	1.00	NO	NO
<b><u>FLOODPLAIN MAP</u></b>				
1.1307 (6) Located in a Flood Plain	FLOODPLAIN	1.00	NO	NO
<b><u>WETLANDS MAP</u></b>				
1.1307 (7) Change in surface features (wetland fill)	NWI	1.00	NO	NO
	TX COASTAL ZONE	20.00	NO	NO
<b><u>FCC &amp; FAA SITES MAP</u></b>				
	FCC Cellular	1.00	NO	NO
	FCC Antenna	1.00	NO	NO
	FCC Tower	1.00	NO	NO
	FCC AM Tower	1.00	NO	NO
	FAA DOF	1.00	NO	NO
	Airports	1.00	YES	YES
	Power Lines	1.00	YES	YES



# Natural Areas Map



- ★ Target Property
- ≡ Roads
- ≡ County Boundary
- ≡ Waterways
- Water
- ✈ Airports

- ⊕ Locations
- ▨ Federal Areas
- ▨ Federal Linear Features
- ▨ State Areas
- ▨ State Linear Features



SITE NAME: EA Site  
 ADDRESS: 3RD Street/Avenue E  
 Dyess Air Force Base TX 79607  
 LAT/LONG: 32.4129 / 99.8395

CLIENT: CDM Federal Programs  
 CONTACT: Monica Guggenberger  
 INQUIRY #: 1797106.8s  
 DATE: November 16, 2006



## NATURAL AREAS MAP FINDINGS

### Endangered Species Listed for: TAYLOR County, TX.

Source: EPA Endangered Species Protection Program Database

BIRD: VIREO, BLACK-CAPPED

### Endangered Species

Source: Texas Threatened and Endangered species Database

Region: Rolling Plains

Sub Region: Mesquite Plains

#### BIRDS

##### Raptors

Common Name: AMERICAN PEREGRINE FALCON  
Scientific Name: FALCO PEREGRINUS ANATUM

State Status: Endangered  
Federal Status: Not reported

Common Name: BALD EAGLE  
Scientific Name: HALIAEETUS LEUCOCEPHALUS

State Status: Threatened  
Federal Status: Threatened; Proposed Delisting

Common Name: PEREGRINE FALCON  
Scientific Name: FALCO PEREGRINUS

State Status: Endangered/Threatened  
Federal Status: Not reported

##### Shorebirds

Common Name: INTERIOR LEAST TERN  
Scientific Name: STERNA ANTILLARUM ATHALASSOS

State Status: Endangered  
Federal Status: Endangered

Common Name: MOUNTAIN PLOVER  
Scientific Name: CHARADRIUS MONTANUS

State Status: Not reported  
Federal Status: Proposed Threatened

##### Waterbirds

Common Name: WHITE-FACED IBIS  
Scientific Name: PLEGADIS CHIH

State Status: Threatened  
Federal Status: Not reported

#### FISHES

##### Minnows

Common Name: ARKANSAS RIVER SHINER  
Scientific Name: NOTROPIS GIRARDI

State Status: Threatened  
Federal Status: Threatened

#### MAMMALS

##### Carnivores

Common Name: BLACK-FOOTED FERRET  
Scientific Name: MUSTELA NIGRIPES

State Status: Endangered  
Federal Status: Endangered

Common Name: GRAY WOLF  
Scientific Name: CANIS LUPUS

State Status: Endangered  
Federal Status: Endangered

##### Rodents

Common Name: TEXAS KANGAROO RAT  
Scientific Name: DIPODOMYS ELATOR

State Status: Threatened  
Federal Status: Not reported

#### PLANTS

##### Wildflowers

Common Name: TEXAS POPPY-MALLOW  
Scientific Name: CALLIRHOE SCABRIUSCULA

State Status: Endangered  
Federal Status: Endangered

#### REPTILES

##### Lizards

Common Name: TEXAS HORNED LIZARD  
Scientific Name: PHRYNOSOMA CORNUTUM

State Status: Threatened  
Federal Status: Not reported

## NATURAL AREAS MAP FINDINGS

### Snakes

Common Name: BRAZOS WATER SNAKE  
Scientific Name: NERODIA HARTERI

State Status: Threatened  
Federal Status: Not reported

Common Name: CONCHO WATER SNAKE  
Scientific Name: NERODIA PAUCIMACULATA

State Status: Not reported  
Federal Status: Threatened

**Map ID**  
**Direction**  
**Distance**  
**Distance (ft.)**

**EDR ID**  
**Database**

1 North 0-1/8 mi 0	Feature1: Feature2: Feature3: Agbur: Url: Name1: Name2: Name3: State: State fips:	Air Force DOD Not Reported Not Reported Department of Defense. Not Reported Dyess Air Force Base Not Reported Not Reported TX 48	CUSA046047 US Federal Lands
-----------------------------	--	---	--------------------------------



# Historic Sites Map



- |                   |                          |
|-------------------|--------------------------|
| ★ Target Property | ◆ Historic Sites         |
| ≡ Streets         | ▨ Federal Historic Areas |
| ≡ County Boundary | ▨ State Historic Areas   |
| ≡ Waterways       | ▨ US Indian Reservations |
| ■ Water           | ≡ Scenic Trail           |
| ✈ Airports        |                          |



**SITE NAME:** EA Site  
**ADDRESS:** 3RD Street/Avenue E  
 Dyess Air Force Base TX 79607  
**LAT/LONG:** 32.4129 / 99.8395

**CLIENT:** CDM Federal Programs  
**CONTACT:** Monica Guggenberger  
**INQUIRY #:** 1797106.8s  
**DATE:** November 16, 2006

TC1797106.8s Page 6 of 30

## HISTORIC SITES MAP FINDINGS

Map ID  
Direction  
Distance  
Distance (ft.)

EDR ID  
Database

No mapped sites were found in EDR's search of available government records within the search radius around the target property.

## UNMAPPABLE HISTORIC SITES

Due to poor or inadequate address information, the following sites were not mapped:

Status  
EDR ID  
Database

Atlas num:	5441012214	Unmappable
Marker:	12214	TX5441012214
Name:	45th Infantry Division at Camp Barkeley	TX Historic Sites
Address:	old county courthouse grounds, 3rd and 4th St. at Oak St.	
City:	Abilene	
County:	Taylor	
Tcode:	ML; WW	
Yr erected:	Not Reported	
Rthl:	0	
Lotsize:	27" x 42"	
Comments:	Job # 30697	
Repaircomp:	Not Reported	
Rthlcond:	Not Reported	
Keywords:	Not Reported	
Comments:	<p>The 45th Infantry Division, comprised of National Guard units from Arizona, Colorado, New Mexico, and Oklahoma, was one of the first four divisions ordered into federal service by Congress' joint resolution in 1940. Initially stationed at Fort Sill in Oklahoma, the 45th was relocated to Camp Barkeley in early 1941. The "Thunderbirds" found Abilene's citizens welcoming, but Camp Barkeley was as yet little more than a tent city on undrained prairie. The new arrivals nicknamed their quarters "Camp Smokey Okie" and began rigorous training at once. In April 1942 the 45th was ordered to Fort Devens, Massachusetts. After another year of training in three more states they departed for North Africa and Sicily. World War II took the 45th far from Taylor County. They saw fierce combat in Sicily, Italy, France, and Germany, culminating in the liberation of the concentration camp at Dachau in April 1945. After 511 days in combat and 3,650 men lost, the 45th Infantry was one of the most distinguished military units of the war. Eight Congressional Medals of Honor were awarded to its members, who won the admiration of Allies and Axis powers alike. The division was released from active duty in November 1945. Hundreds of 45th Infantry soldiers came back to Abilene to marry and make their homes, their love for the city recorded in their letters and their lives. The 45th was again called to active duty during the Korean conflict, suffering 834 casualties. One "Thunderbird" was posthumously awarded a Congressional Medal of Honor for his Korean service. (1998)</p>	

Atlas num:	5441012215	Unmappable
Marker:	12215	TX5441012215
Name:	Abilene Municipal Cemetery	TX Historic Sites
Address:	N. 10th and Cottonwood	
City:	Abilene	
County:	Taylor	
Tcode:	GY	
Yr erected:	Not Reported	
Rthl:	0	
Lotsize:	27" x 42"	
Comments:	Job # 18398	
Repaircomp:	Not Reported	
Rthlcond:	Not Reported	
Keywords:	Not Reported	
Comments:	Abilene Municipal Cemetery is composed of five different burial	

# UNMAPPABLE HISTORIC SITES

Due to poor or inadequate address information, the following sites were not mapped:

Status  
EDR ID  
Database

grounds. The oldest documented grave is that of Florence Phillips, who was buried in the Masonic section in 1881 shortly before the establishment of the local Masonic Lodge in 1882. Among the notables buried here are Mary Houston Morrow, Abilene postmistress and daughter of General Sam Houston, and C. W. Merchant, who gave land for the burial ground and helped establish Abilene. The oldest recorded burial in the city cemetery, that of Oliver Bailey, occurred in 1882. Another grave of interest is that of Dr. W. H. Butler, an African American physician. The first deed verifying the establishment of the Independent Order of Odd Fellows (IOOF) Cemetery was dated August 1906. Several early Abilene businessmen including James Radford and H. O. Wooten are interred here, as is Mrs. Jewel Scarborough, a prominent citizen and active woman suffragist. The city of Abilene purchased the 20-acre Cedar Hill Cemetery in 1920. The Cedar Hill Cemetery Association bought it from the city in 1923. The city took over care of the Masonic and IOOF cemeteries in 1928 and the Cedar Hill Cemetery in 1934. Abilene founder K. K. Legett and railroad legend Morgan Jones, as well as veterans of major American and international wars and conflicts, are interred here. In 1945 the city bought an additional tract of land; the first burial in Cedar Hill Flats was in 1969. More than 26,000 people are believed to be buried in the graveyard. A chronicle of the city's past, Abilene Municipal Cemetery continues to serve the area.

. (1998)

Atlas num: 5441012220  
 Marker: 12220  
 Name: Claiborne Walker Merchant  
 Address: Abilene Municipal Cemetery, 10th & Cottonwood  
 City: Abilene  
 County: Taylor  
 Tcode: CV; ML; RN  
 Yr erected: Not Reported  
 Rthl: 0  
 Lotsize: Grave Marker  
 Comments: Job # 21498  
 Repaircomp: Not Reported  
 Rthlcond: Not Reported  
 Keywords: Not Reported  
 Comments: (August 31, 1836 - March 9, 1926) Clairborne W. Merchant and his twin, John, were born in Nacogdoches. "Clabe" married Frances Bell in 1856. He served in the Confederate Army and later became a cattle rancher. Merchant established his first ranch in 1874 in Callahan County and began acquiring land in neighboring Taylor County prior to the arrival of the railroad in 1881. When Abilene was established, Merchant, a city founder, named the new town after Abilene, Kansas. For many years he contributed his time and money to the development of Abilene. He is lauded as a respected benefactor and beloved citizen. (1999)

Unmappable  
TX5441012220  
TX Historic Sites

## UNMAPPABLE HISTORIC SITES

Due to poor or inadequate address information, the following sites were not mapped:

		Status EDR ID Database
Atlas num:	5441001014	Unmappable
Marker:	1014	TX5441001014
Name:	Company I, 7th Texas Infantry	TX Historic Sites
Address:	S. 7th and Larkin St.	
City:	Abilene	
County:	Taylor	
Tcode:	ML; WI	
Yr erected:	Not Reported	
Rthl:	0	
Lotsize:	18" x 28"	
Comments:	Not Reported	
Repaircomp:	None	
Rthlcond:	Not Reported	
Keywords:	Not Reported	
Comments:	<p>Mustered into service during World War I, July 16, 1917, at Abilene with officers, Captian R. M. Wagstaff; 1st Lt. A. J. McDavid; 2nd Lt. E. B. Sayles; and 1st Sgt. Elmer C. Stearns. Company had 139 enlisted men from the area who trained here at the West Texas Fair Grounds (now Rose Park) until September 1, then transferred to Camp Bowie at Fort Worth. It became part of HQ. CO., 142nd Infantry, 36th Division. The unit saw action in France October 8-28, 1918, with the 4th French army, and was mustered out of service in June, 1919. (1968)</p>	
Atlas num:	5441003085	Unmappable
Marker:	3085	TX5441003085
Name:	Lindbergh in West Texas	TX Historic Sites
Address:	SH 36 & US 83	
City:	Abilene	
County:	Taylor	
Tcode:	AV	
Yr erected:	Not Reported	
Rthl:	0	
Lotsize:	27" x 42"	
Comments:	Not Reported	
Repaircomp:	Not Reported	
Rthlcond:	Not Reported	
Keywords:	Not Reported	
Comments:	<p>Four months after his record-setting trans-Atlantic solo flight, Charles Augustus Lindbergh (1902-1974) landed here for one hour and thirty-six minutes during a nationwide publicity tour. Touching down at Kingsolving Field (now the site of Abilene Zoo) after an almost nine-hour flight from Santa Fe, "Lucky Lindy" was given a hero's welcome by thousands of West Texans. His famous Ryan Monoplane, "Spirit of St. Louis," was taxied into a fenced area and surrounded by National Guard Troops for protection. An escort plane landed later. Heading a parade into Abilene were seventy-one mayors and countless officials. Lindbergh was escorted by Mrs. Mildred Moody (1897-1983), wife of Governor Dan Moody and an Abilene native; Mayor Thomas Edward Hayden (1891-1949); and Chamber of Commerce president Charles William Bacon (1871-1947). The young pilot reportedly balked at a "throne" rigged for him in an open Nash automobile, and rode with Mrs. Moody through the town to Federal lawn. Lindbergh d</p>	

## UNMAPPABLE HISTORIC SITES

Due to poor or inadequate address information, the following sites were not mapped:

Status  
EDR ID  
Database

delivered a brief speech over loud speakers praising the ideal terrain and weather in Texas for developing civil and military aviation. He was escorted back to this plane and flew two hours and forty-two minutes to his next stop in Fort Worth. Texas  
Sesquicentennial 1836-1986.

Atlas num:	5441012218	Unmappable
Marker:	12218	TX5441012218
Name:	Morgan Jones	TX Historic Sites
Address:	Abilene Municipal Cemetery, 10th & Cottonwood	
City:	Abilene	
County:	Taylor	
Tcode:	RR	
Yr erected:	Not Reported	
Rthl:	0	
Lotsize:	Grave Marker	
Comments:	Job # 18198	
Repaircomp:	Not Reported	
Rthlcond:	Not Reported	
Keywords:	Not Reported	
Comments:	<p>Welsh-born Morgan Jones arrived in the U.S. in 1866. As a contractor for numerous railroad lines, he became a railroad legend by laying tracks spanning more than 1,000 miles across Texas and the West. He was president of the Fort Worth and Denver City Railway Company by 1884, and in 1906 began to construct the Abilene and Northern Railway. In 1908 Jones moved to Abilene, continuing railroad expansion by completing the Abilene and Southern Railway. He made extensive investments throughout Texas and contributed to Abilene's growth until his death. (1998)</p>	

# Flood Plain Map



- |  |                 |  |             |  |                                    |
|--|-----------------|--|-------------|--|------------------------------------|
|  | Major Roads     |  | Power Lines |  | Water                              |
|  | Contour Lines   |  | Pipe Lines  |  | 100-year flood zone                |
|  | Waterways       |  | Fault Lines |  | 500-year flood zone                |
|  | County Boundary |  |             |  | Electronic FEMA data available     |
|  | Airports        |  |             |  | Electronic FEMA data not available |

**SITE NAME:** EA Site  
**ADDRESS:** 3RD Street/Avenue E  
 Dyess Air Force Base TX 79607  
**LAT/LONG:** 32.4129 / 99.8395

**CLIENT:** CDM Federal Programs  
**CONTACT:** Monica Guggenberger  
**INQUIRY #:** 1797106.8s  
**DATE:** November 16, 2006

TC1797106.8s Page 12 of 30

## FLOOD PLAIN MAP FINDINGS

Source: FEMA Q3 Flood Data

County

FEMA flood data electronic coverage

TAYLOR, TX

NO

Flood Plain panel at target property:

None Reported

Additional Flood Plain panel(s) in search area:

None Reported



# National Wetlands Inventory Map



- |                 |             |                                   |
|-----------------|-------------|-----------------------------------|
| Major Roads     | Power Lines | Water                             |
| Contour Lines   | Pipe Lines  | National Wetland Inventory        |
| Waterways       | Fault Lines | Electronic NWI data available     |
| County Boundary |             | Electronic NWI data not available |
| Airports        |             |                                   |



**SITE NAME:** EA Site  
**ADDRESS:** 3RD Street/Avenue E  
 Dyess Air Force Base TX 79607  
**LAT/LONG:** 32.4129 / 99.8395

**CLIENT:** CDM Federal Programs  
**CONTACT:** Monica Guggenberger  
**INQUIRY #:** 1797106.8s  
**DATE:** November 16, 2006

TC1797106.8s Page 14 of 30

## WETLANDS MAP FINDINGS

Source: Fish and Wildlife Service NWI data

NWI hardcopy map at target property: Abilene West

Additional NWI hardcopy map(s) in search area:  
Not reported in source data

Map ID

Direction

Distance

Distance (ft.)

Code and Description\*

Database

No Sites Reported.

\*See Wetland Classification System for additional information.

# WETLANDS CLASSIFICATION SYSTEM

National Wetland Inventory Maps are produced by the U.S. Fish and Wildlife Service, a sub-department of the U.S. Department of the Interior. In 1974, the U.S. Fish and Wildlife Service developed a criteria for wetland classification with four long range objectives:

- to describe ecological units that have certain homogeneous natural attributes,
- to arrange these units in a system that will aid decisions about resource management,
- to furnish units for inventory and mapping, and
- to provide uniformity in concepts and terminology throughout the U.S.

High altitude infrared photographs, soil maps, topographic maps and site visits are the methods used to gather data for the productions of these maps. In the infrared photos, wetlands appear as different colors and these wetlands are then classified by type. Using a hierarchical classification, the maps identify wetland and deepwater habitats according to:

- system
- subsystem
- class
- subclass
- modifiers

(as defined by Cowardin, et al. U.S. Fish and Wildlife Service FWS/OBS 79/31. 1979.)

The classification system consists of five systems:

1. marine
2. estuarine
3. riverine
4. lacustrine
5. palustrine

The marine system consists of deep water tidal habitats and adjacent tidal wetlands. The riverine system consists of all wetlands contained within a channel. The lacustrine systems includes all nontidal wetlands related to swamps, bogs & marshes. The estuarine system consists of deepwater tidal habitats and where ocean water is diluted by fresh water. The palustrine system includes nontidal wetlands dominated by trees and shrubs and where salinity is below .5% in tidal areas. All of these systems are divided in subsystems and then further divided into class.

National Wetland Inventory Maps are produced by transferring gathered data on a standard 7.5 minute U.S.G.S. topographic map. Approximately 52 square miles are covered on a National Wetland Inventory map at a scale of 1:24,000. Electronic data is compiled by digitizing these National Wetland Inventory Maps.

# SYSTEM

## MARINE

### SUBSYSTEM

#### 1 - SUBTIDAL

#### 2 - INTERTIDAL

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	RF-REEF	OW-OPEN WATER / Unknown Bottom	AB-AQUATIC BED	RF-REEF	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 3 Rooted Vascular 5 Unknown Submergent	1 Coral 3 Worm		1 Algal 3 Rooted Vascular 5 Unknown Submergent	1 Coral 3 Worm	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic

# SYSTEM

## E - ESTUARINE

### SUBSYSTEM

#### 1 - SUBTIDAL

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	RF-REEF	OW-OPEN WATER / Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	2 Mollusk 3 Worm	

### SUBSYSTEM

#### 2 - INTERTIDAL

CLASS	AB-AQUATIC BED	RF-REEF	SB - STREAMBED	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE	EM-EMERGENT	SS-SCRUB SHRUB	FO-FORESTED
Subclass	1 Algal 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	2 Mollusk 3 Worm	1 Cobble- Gravel 2 Sand 3 Mud 4 Organic	1 Bedrock 2 Rubble	1 Cobble- Gravel 2 Sand 3 Mud 4 Organic	1 Persistent 2 Nonpersistent	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen

## SYSTEM

## R - RIVERINE

### SUBSYSTEM

1 - TIDAL		2 - LOWER PERENNIAL		3 - UPPER PERENNIAL		4 - INTERMITTENT		5 - UNKNOWN PERENNIAL	
RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	*SB-STREAMBED	AB-AQUATIC BED	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE	**EM-EMERGENT	OW-OPEN WATER/ Unknown Bottom		
1 Bedrock	1 Cobble-Gravel	1 Bedrock	1 Algal	1 Bedrock	1 Cobble-Gravel	2 Nonpersistent			
2 Rubble	2 Sand	2 Rubble	2 Aquatic Moss	2 Rubble	2 Sand				
	3 Mud	3 Cobble-Gravel	3 Rooted Vascular		3 Mud				
	4 Organic	4 Sand	4 Floating Vascular		4 Organic				
		5 Mud	5 Unknown Submergent		5 Vegetated				
		6 Organic	6 Unknown Surface						
		7 Vegetated							

\* STREAMBED is limited to TIDAL and INTERMITTENT SUBSYSTEMS, and comprises the only CLASS in the INTERMITTENT SUBSYSTEM.

\*\*EMERGENT is limited to TIDAL and LOWER PERENNIAL SUBSYSTEMS.

## SYSTEM

## L - LACUSTRINE

### SUBSYSTEM

#### 1 - LIMNETIC

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	OW-OPEN WATER/ Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	

### SUBSYSTEM

#### 2 - LITTORAL

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE	EM-EMERGENT	OW-OPEN WATER/ Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	2 Nonpersistent	

## SUBSYSTEM

## P - PALUSTRINE

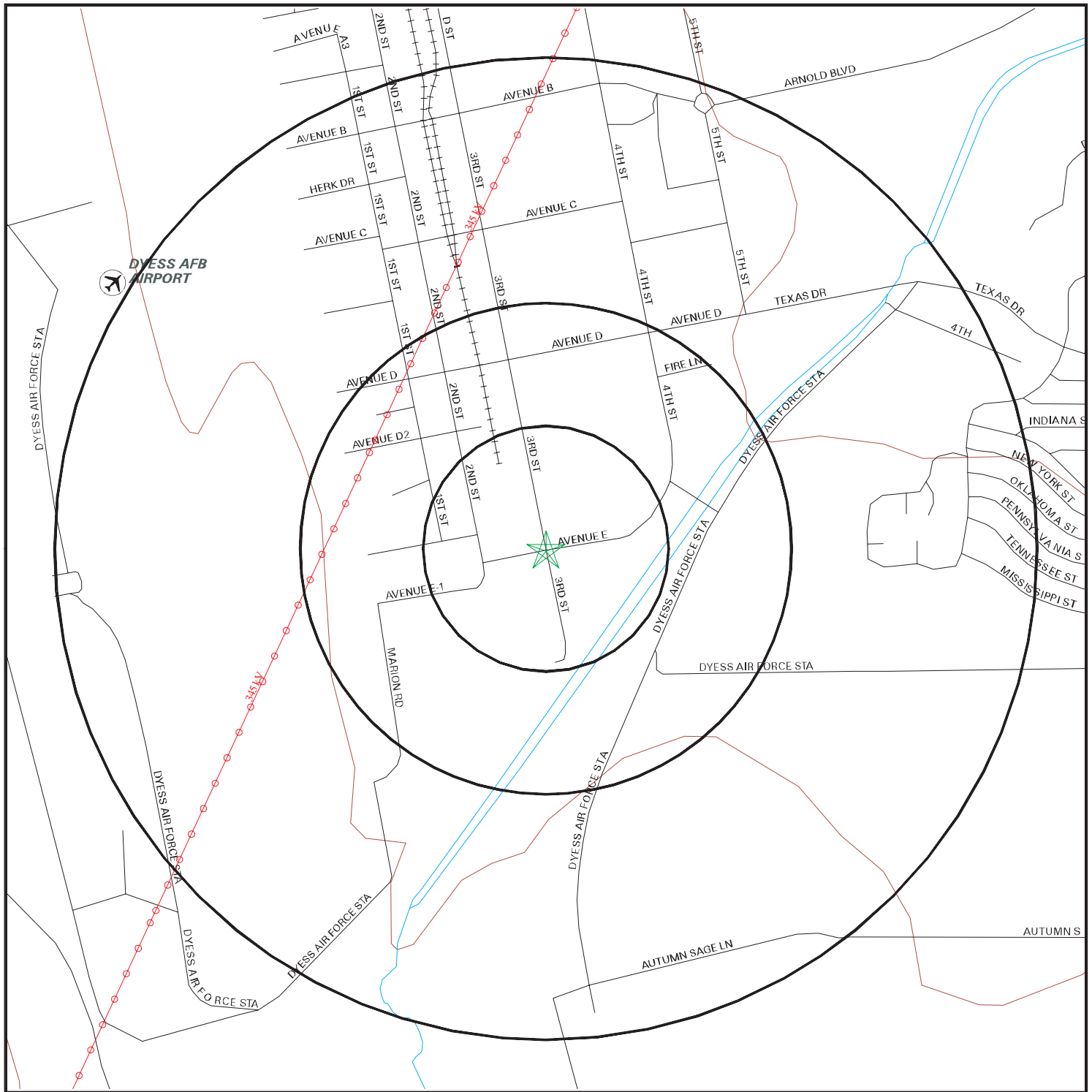
CLASS	RB--ROCK BOTTOM	UB--UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	US--UNCONSOLIDATED SHORE	ML--MOSS- LICHEN	EM--EMERGENT	SS--SCRUB-SHRUB	FO--FORESTED	OW-OPEN WATER/ Unknown
Bottom									
Subclass	1 Bedrock 2 Rubble 3 Mud 4 Organic	1 Cobble-Gravel 2 Sand	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown 6 Unknown Surface	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	1 Moss 2 Lichen	1 Persistent 2 Nonpersistent	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6Deciduous 7 Evergreen	

## MODIFIERS

In order to more adequately describe wetland and deepwater habitats one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.

WATER REGIME				WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS
Non-Tidal	Tidal	Coastal	HalinityInlandSalinitypHModifiersfor	all Fresh Water				
A Temporarily Flooded	H Permanently Flooded	K Artificially Flooded	*S Temporary-Tidal	1 Hyperhaline	7 Hypersaline		g Organic	b Beaver
B Saturated	J Intermittently Flooded	L Subtidal	*R Seasonal-Tidal	2 Euhaline	8 Eusaline	a Acid	n Mineral	d Partially Drained/Ditched
C Seasonally Flooded	K Artificially Flooded	M Irregularly Exposed	*T Semipermanent -Tidal	3 Mixohaline (Brackish)	9 Mixosaline	t Circumneutral		f Farmed
D Seasonally Flooded/ Well Drained	W Intermittently Flooded/Temporary	N Regularly Flooded	V Permanent -Tidal	4 Polyhaline	0 Fresh	i Alkaline		h Diked/Impounded
E Seasonally Flooded/ Saturated	Y Saturated/Semipermanent/ Seasonal	P Irregularly Flooded	U Unknown	5 Mesohaline				r Artificial Substrate
F Semipermanently Flooded	Z Intermittently Exposed/Permanent	*These water regimes are only used in tidally influenced, freshwater systems.		6 Oligohaline				s Spoil
G Intermittently Exposed	U Unknown			0 Fresh				x Excavated

# FCC & FAA Sites Map



- |  |                 |  |                                  |
|--|-----------------|--|----------------------------------|
|  | Streets         |  | Sites                            |
|  | Contour Lines   |  | Omni Directional AM Interference |
|  | County Boundary |  | Directional AM Interference      |
|  | Waterways       |  |                                  |
|  | Power Lines     |  |                                  |
|  | Water           |  |                                  |
|  | Airports        |  |                                  |



**SITE NAME:** EA Site  
**ADDRESS:** 3RD Street/Avenue E  
 Dyess Air Force Base TX 79607  
**LAT/LONG:** 32.4129 / 99.8395

**CLIENT:** CDM Federal Programs  
**CONTACT:** Monica Guggenberger  
**INQUIRY #:** 1797106.8s  
**DATE:** November 16, 2006

TC1797106.8s Page 20 of 30

## FCC & FAA SITES MAP FINDINGS TOWERS

Map ID  
Direction  
Distance  
Distance (ft.)

EDR ID  
Database

No Sites Reported.



## FCC & FAA SITES MAP FINDINGS

### AIRPORTS

EDR ID  
Database

AIR15953  
AIRPORTS

Site Number: 23286.\*A  
Airport Type: AIRPORT  
County: TAYLOR  
Facility Name: DYESS AFB  
Use: PR  
Owner Address: DYESS AFB  
Phone: Not Reported  
Mgmt Address: DYESS AFB  
Mgmt Phone: Not Reported  
Longitude: 099-51-16.559W  
Elev (ft): 1789  
Aero chart: DALLAS-FT WORTH  
Dir from Business: SW  
Certified Date: LU 08/1990  
Is Int'l Airport?: Not Reported  
Inspection Method: Not Reported  
Last inspected: Not Reported  
Lighting: DUSK-DAWN  
Beacon Color: CG  
Single engine: Not Reported  
Jet engines: Not Reported  
Glider: Not Reported  
Ultralights: Not Reported  
Air taxis: Not Reported

Runway id: 16/34  
Width: 300  
Lights Intensity: HIGH  
Markings: PIR  
Longitude: Not Reported  
Approach lights: Not Reported  
Centerline Lights: N  
Recip End ID: 34  
Recip Lat: Not Reported  
Recip Elev: 1787.0  
Recip End Lgts: N

Runway id: 161/341  
Width: 60  
Lights Intensity: Not Reported  
Markings: Not Reported  
Longitude: Not Reported  
Approach lights: Not Reported  
Centerline Lights: Not Reported  
Recip End ID: 341  
Recip Lat: Not Reported

State: TEXAS  
City: ABILENE  
Owner type: MA  
Owner: USAF  
City/State: ABILENE, TX 79607  
Mgmt Name: COMMANDER  
Mgmt City/St: ABILENE, TX 79607  
Latitude: 32-25-14.721N  
Lat Method: E  
Elev method: E  
Dist from Business: 05  
Date Active: Not Reported  
Fed agreements: Not Reported  
Is Customs Airport?: Not Reported  
Inspected by: N  
Attendance: ALL/ALL/ALL  
Has ATC Tower: Y  
Landing fee: Not Reported  
Multi engine: Not Reported  
Helicopters: Not Reported  
Military: 002  
Commercial: Not Reported  
Local ops: Not Reported

Length: 13500  
Surface: ASPH-CONC  
Base End Id: 16  
Latitude: Not Reported  
Elevation: 1789.0  
End Lights: N  
Touchdown Lights: N  
Recip markings: PIR  
Recip Long: Not Reported  
Recip App Lgts: ALSF1  
Recip Ctr Lgts: N

Length: 3500  
Surface: ASPH  
Base End Id: 161  
Latitude: Not Reported  
Elevation: Not Reported  
End Lights: Not Reported  
Touchdown Lights: Not Reported  
Recip markings: Not Reported  
Recip Long: Not Reported

## FCC & FAA SITES MAP FINDINGS AIRPORTS

EDR ID  
Database

---

Recip Elev: Not Reported  
Recip End Lgts: Not Reported

Recip App Lgts: Not Reported  
Recip Ctr Lgts: Not Reported

## FCC & FAA SITES MAP FINDINGS POWERLINES

EDR ID  
Database

POW0001701  
POWERLINES

Msid: MSX1000287- 1  
Range: 0  
Type: AC  
Corridor: N  
Own\_name: Not Reported  
Ownr\_flg: S  
Physaddress: Not Reported  
Physstate: Not Reported  
Mailaddress: Not Reported  
Mailstate: Not Reported  
Phone: Not Reported  
Webpage: Not Reported

Voltage: 345  
Hi\_range: 0  
Status: AC  
Ownr\_id: Not Reported  
Opr\_id: Not Reported  
Coname: Not Reported  
Physcity: Not Reported  
Physlpost: Not Reported  
Mailcity: Not Reported  
Mailpostal: Not Reported  
Fax: Not Reported

## KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

Various Federal laws and executive orders address specific environmental concerns. NEPA requires the responsible offices to integrate to the greatest practical extent the applicable procedures required by these laws and executive orders. EDR provides key contacts at agencies charged with implementing these laws and executive orders to supplement the information contained in this report.

### **NATURAL AREAS**

#### **Officially designated wilderness areas**

##### Government Records Searched in This Report

##### FED\_LAND: Federal Lands

Source: USGS

Telephone: 703-648-5094

Federal data from Bureau of Land Management, National Park Service, Forest Service, and Fish and Wildlife Service.

- National Parks
- Forests
- Monuments
- Wildlife Sanctuaries, Preserves, Refuges
- Federal Wilderness Areas.

Date of Government Version: 12/31/2004

##### Federal Contacts for Additional Information

National Park Service, Intermountain Region

12795 Alameda Parkway

Denver, CO 80225

303-969-2500

USDA Forest Service, Southern

1720 Peachtree Road, N.W.

Atlanta, GA 30367

404-347-2384

BLM- New Mexico State Office

1474 Rodeo Road

Santa Fe, NM 87502-0115

505-438-7400

Fish & Wildlife Service, Region 2

P.O. Box 1306 500 Gold Ave., S.W.

Albuquerque, NM 87103

505-248-6925

#### **Officially designated wildlife preserves, sanctuaries and refuges**

##### Government Records Searched in This Report

##### FED\_LAND: Federal Lands

Source: USGS

Telephone: 703-648-5094

Federal data from Bureau of Land Management, National Park Service, Forest Service, and Fish and Wildlife Service.

- National Parks
- Forests
- Monuments
- Wildlife Sanctuaries, Preserves, Refuges
- Federal Wilderness Areas.

Date of Government Version: 12/31/2004

## KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

### Federal Contacts for Additional Information

Fish & Wildlife Service, Region 2  
P.O. Box 1306 500 Gold Ave., S.W.  
Albuquerque, NM 87103  
505-248-6925

### State Contacts for Additional Information

Dept. of Parks and Wildlife 512-389-4802

### **Wild and scenic rivers**

#### Government Records Searched in This Report

##### FED\_LAND: Federal Lands

Source: USGS

Telephone: 703-648-5094

Federal data from Bureau of Land Management, National Park Service, Forest Service, and Fish and Wildlife Service.

- National Parks

- Forests

- Monuments

- Wildlife Sanctuaries, Preserves, Refuges

- Federal Wilderness Areas.

Date of Government Version: 12/31/2004

### Federal Contacts for Additional Information

Fish & Wildlife Service, Region 2  
P.O. Box 1306 500 Gold Ave., S.W.  
Albuquerque, NM 87103  
505-248-6925

### **Endangered Species**

#### Government Records Searched in This Report

##### Endangered Species Protection Program Database

A listing of endangered species by county.

Source: Environmental Protection Agency

Telephone: 703-305-5239

#### TX Regional Endangered Species: Texas Threatened and Endangered Species

Listing and recovery of endangered species in Texas is coordinated by the Wildlife Diversity Program. The Dept's Permitting Section is responsible for the issuance of permits for the handling of listed species. The locations are referenced by Texas natural regions.

Source: Texas Parks and Wildlife.

Telephone: 512-912-7011

### Federal Contacts for Additional Information

Fish & Wildlife Service, Region 2  
P.O. Box 1306 500 Gold Ave., S.W.  
Albuquerque, NM 87103  
505-248-6925

### State Contacts for Additional Information

Conservation Data Center, The Nature Conservancy of Texas 210-224-8774

## KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

### LANDMARKS, HISTORICAL, AND ARCHEOLOGICAL SITES

#### Historic Places

##### Government Records Searched in This Report

##### National Register of Historic Places:

The National Register of Historic Places is the official federal list of districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, engineering, and culture. These contribute to an understanding of the historical and cultural foundations of the nation.

The National Register includes:

- All prehistoric and historic units of the National Park System;
- National Historic Landmarks, which are properties recognized by the Secretary of the Interior as possessing national significance; and
- Properties significant in American, state, or local prehistory and history that have been nominated by State Historic Preservation Officers, federal agencies, and others, and have been approved for listing by the National Park Service.

Date of Government Version: 03/23/2006

TX Historic Sites: Texas Historic Landmarks

Recorded Texas historic landmarks.

Source: Texas Historical Commission.

Telephone: 512-463-6100

##### Federal Contacts for Additional Information

Park Service; Advisory Council on Historic Preservation

1849 C Street NW

Washington, DC 20240

Phone: (202) 208-6843

##### State Contacts for Additional Information

Texas Historical Commission 512-463-6100

### Indian Religious Sites

##### Government Records Searched in This Report

##### Indian Reservations:

This map layer portrays Indian administrated lands of the United States that have any area equal to or greater than 640 acres.

Source: USGS

Phone: 888-275-8747

Date of Government Version: 10/01/2003

##### Federal Contacts for Additional Information

Department of the Interior- Bureau of Indian Affairs

Office of Public Affairs

1849 C Street, NW

Washington, DC 20240-0001

Office: 202-208-3711

Fax: 202-501-1516

National Association of Tribal Historic Preservation Officers

1411 K Street NW, Suite 700

Washington, DC 20005

Phone: 202-628-8476

Fax: 202-628-2241

## KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

### State Contacts for Additional Information

A listing of local Tribal Leaders and Bureau of Indian Affairs Representatives can be found at:  
<http://www.doi.gov/bia/areas/agency.html>

### **FLOOD PLAIN, WETLANDS AND COASTAL ZONE**

#### **Flood Plain Management**

##### Government Records Searched in This Report

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

### Federal Contacts for Additional Information

Federal Emergency Management Agency 877-3362-627

### State Contacts for Additional Information

Dept. of Public Safety, Div. Of Emergency Management 512-424-2138

#### **Wetlands Protection**

##### Government Records Searched in This Report

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

### Federal Contacts for Additional Information

Fish & Wildlife Service 813-570-5412

### State Contacts for Additional Information

Dept. of Parks & Wildlife 512-389-4802

#### **Coastal Zone Management**

##### Government Records Searched in This Report

##### CAMA Management Areas

Dept. of Env., Health & Natural Resources  
919-733-2293

### Federal Contacts for Additional Information

Office of Ocean and Coastal Resource Management  
N/ORM, SSMC4  
1305 East-West Highway  
Silver Spring, Maryland 20910  
301-713-3102

### State Contacts for Additional Information

General Land Office, Coastal Division 512-463-5054

##### Government Records Searched in This Report

Coastal Zone Boundary  
General Land Office  
512-463-5144

## KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

### **FCC & FAA SITES MAP**

For NEPA actions that come under the authority of the FCC, the FCC requires evaluation of Antenna towers and/or supporting structures that are to be equipped with high intensity white lights which are to be located in residential neighborhoods, as defined by the applicable zoning law.

#### Government Records Searched in This Report

##### **Cellular**

Federal Communications Commission

Mass Media Bureau

2nd Floor - 445 12th Street SW

Washington DC 20554 USA

Telephone (202) 418-2700

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##### **Tower**

Federal Communications Commission

Mass Media Bureau

2nd Floor - 445 12th Street SW

Washington DC 20554 USA

Telephone (202) 418-2700

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##### **Antenna Registration**

Federal Communications Commission

Mass Media Bureau

2nd Floor - 445 12th Street SW

Washington DC 20554 USA

Telephone (202) 418-2700

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##### **AM Tower**

Federal Communications Commission

Mass Media Bureau

2nd Floor - 445 12th Street SW

Washington DC 20554 USA

Telephone (202) 418-2700

##### **FAA Digital Obstacle File**

National Oceanic and Atmospheric Administration

Telephone: 301-436-8301

Describes known obstacles of interest to aviation users in the US. Used by the Federal Aviation Administration (FAA) and the National Oceanic and Atmospheric Administration to manage the National Airspace System.

##### **Airport Landing Facilities**

Federal Aviation Administration

Telephone (800) 457-6656

Private and public use landing facilities.

##### **Electric Power Transmission Line Data**

PennWell Corporation

Telephone: (800) 823-6277

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## KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

### **Excessive Radio Frequency Emission**

For NEPA actions that come under the authority of the FCC, Commission actions granting construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities, require the determination of whether the particular facility, operation or transmitter would cause human exposure to levels of radio frequency in excess of certain limits.

#### Federal Contacts for Additional Information

Office of Engineering and Technology  
Federal Communications Commission  
445 12th Street SW  
Washington, DC 20554  
Phone: 202-418-2470

### **OTHER CONTACT SOURCES**

#### **NEPA Single Point of Contact**

State Contacts for Additional Information  
State Grants Team  
Governor's Office of Budget & Planning  
P.O. Box 12428  
Austin, TX 78711  
512-305-9415

### **STREET AND ADDRESS INFORMATION**

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## **The EDR Aerial Photo Decade Package**

**EA Site  
3RD Street/Avenue E  
Dyess Air Force Base, TX 79607**

**Inquiry Number: 1797106.5**

**November 17, 2006**

## **The Standard in Environmental Risk Management Information**

**440 Wheelers Farms Road  
Milford, Connecticut 06461**

### **Nationwide Customer Service**

**Telephone: 1-800-352-0050  
Fax: 1-800-231-6802  
Internet: [www.edrnet.com](http://www.edrnet.com)**

# EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDRs professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

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***Thank you for your business.***

Please contact EDR at 1-800-352-0050  
with any questions or comments.

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**Date EDR Searched Historical Sources:**

Aerial Photography November 17, 2006

**Target Property:**

3RD Street/Avenue E

Dyess Air Force Base, TX 79607

<u><i>Year</i></u>	<u><i>Scale</i></u>	<u><i>Details</i></u>	<u><i>Source</i></u>
1940	Aerial Photograph. Scale: 1"=500'	Flight Year: 1940	ASCS
1953	Aerial Photograph. Scale: 1"=1500'	Flight Year: 1953 Best Copy Available from original source	AMS
1964	Aerial Photograph. Scale: 1"=500'	Flight Year: 1964	ASCS
1976	Aerial Photograph. Scale: 1"=500'	Flight Year: 1976	USGS
1980	Aerial Photograph. Scale: 1"=500'	Flight Year: 1980	TXDOT
1994	Aerial Photograph. Scale: 1"=500'	Flight Year: 1994	TXDOT
2004	Aerial Photograph. Scale: 1"=500'	Flight Year: 2004 Best Copy Available from original source	USDA-CIR



INQUIRY #: 1797106.5

YEAR: 1940

| = 500'







INQUIRY #: 1797106.5

YEAR: 1953

| = 1500'





INQUIRY #: 1797106.5

YEAR: 1964

| = 500'







INQUIRY #: 1797106.5

YEAR: 1976

| = 500'







INQUIRY #: 1797106.5

YEAR: 1980

| = 500'





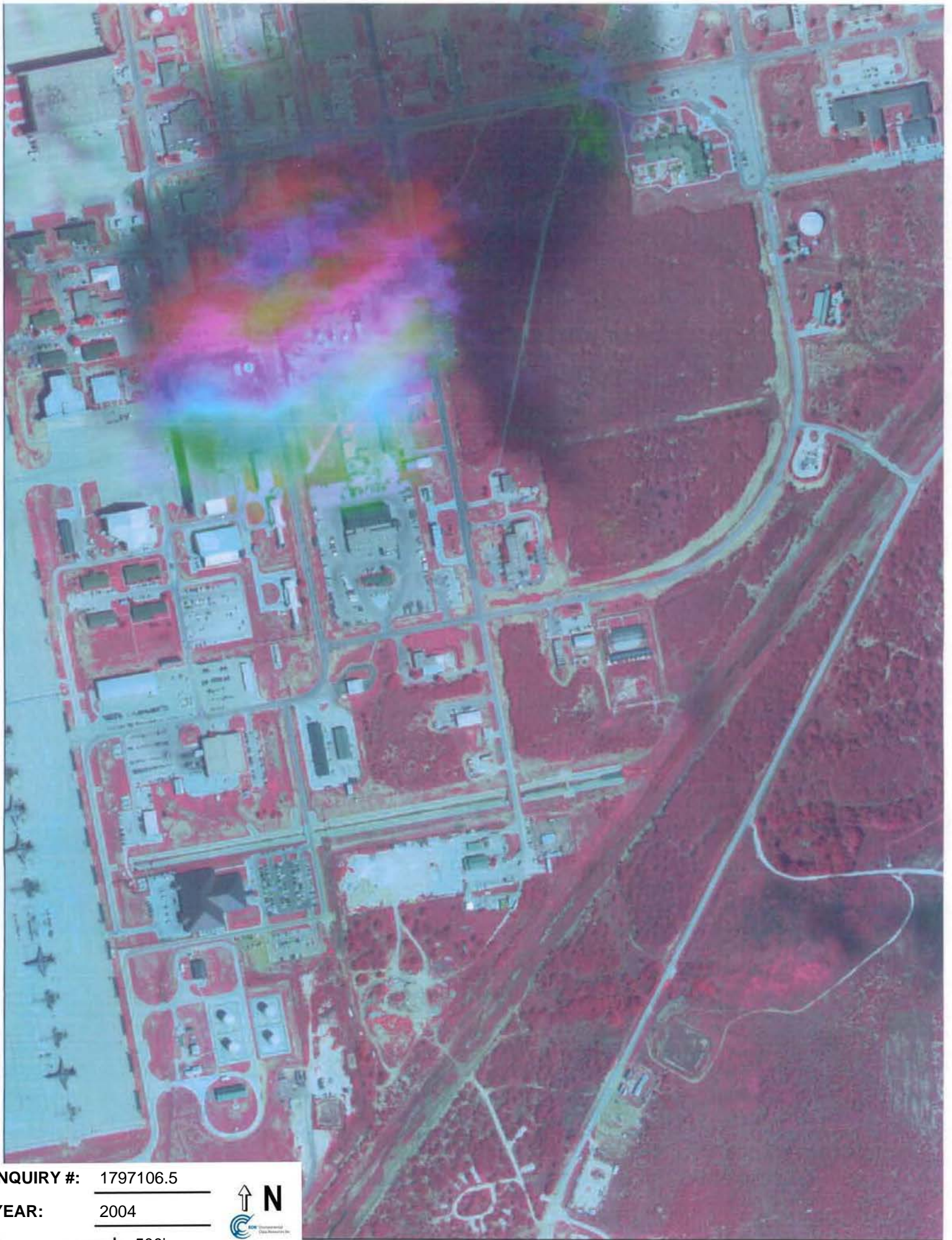
INQUIRY #: 1797106.5

YEAR: 1994

| = 500'







INQUIRY #: 1797106.5

YEAR: 2004

| = 500'



## **Appendix C**

### **Interview Records**

# CDM Personal Interview Report



9200 Ward Parkway, Suite 500  
Kansas City, MO 64114  
(816) 444-8270 - phone  
(816) 523-2600 - fax

<b>Project:</b>	Dyess Air Force Base	<b>Client:</b>	ACC
<b>Job No.</b>	48043-6135.015	<b>Date:</b>	November 14, 2006
<input type="checkbox"/> Phone in <input type="checkbox"/> Phone out <input checked="" type="checkbox"/> Current Project <input type="checkbox"/> Prospective Project/Marketing <input type="checkbox"/> Administrative <input type="checkbox"/> Other			
<b>Made by/Received by:</b>	Laura Splichal		
<b>Talked with:</b>	Judy Overbey, Environmental Restoration Program (ERP) Manager (325)696-6454		
<b>Subject:</b>	SWMU Sites Located on Dyess AFB		
<b>Distribution:</b>	Project File		

## Discussion:

Sites/Wells near subject property:  
Bldg 8015 – old OWS SD-30  
Bldg 8018 – ST-10 Leaking USTs. Tanks were removed in 1988.

These sites have monitoring wells located off the SW edge of the property. Two wells located on NW and SE corners of intersection of Ave E and 3<sup>rd</sup> Street are clean. These wells are located between the sites and the subject property.

Two other wells 336 and 337 are located SE and south of the site, respectively. Well 337 is dry and 336 has been clean.

Potentiometric map shows groundwater flow is to the SE. Report also has geology/hydrogeology info. Copied data and maps from report for these sites.

Bldg 8008 – OT-37 closed site. No wells  
Bldg 8009 – OT-30. closed site. No wells  
Copied pages of SWMU report that describe these sites – located west of the subject property.

# CDM Personal Interview Report



9200 Ward Parkway, Suite 500  
Kansas City, MO 64114  
(816) 444-8270 - phone  
(816) 523-2600 - fax

<b>Project:</b>	Dyess Air Force Base	<b>Client:</b>	ACC
<b>Job No.</b>	48043-6135.015	<b>Date:</b>	November 14, 2006
<input type="checkbox"/> Phone in <input type="checkbox"/> Phone out <input checked="" type="checkbox"/> Current Project <input type="checkbox"/> Prospective Project/Marketing <input type="checkbox"/> Administrative <input type="checkbox"/> Other			
<b>Made by/Received by:</b>	Laura Splichal		
<b>Talked with:</b>	Kim Walton, Natural and Cultural Program Manager, Tele: (325) 696-4379		
<b>Subject:</b>	Natural and Cultural Issues at the Subject Site, Dyess AFB		
<b>Distribution:</b>	Project File		

## Discussion:

There are no wetlands or 100-year floodplain on the site. 100-year floodplain goes up to SE side of site where surface water runoff discharges to the diversion structure.

Earthen diversion structure is riparian habitat. Planted 8 - 9 species of riparian trees and shrubs. There is a drip system to support the trees. Planted 10,000 trees. No soil amendments done, since it was not cost effective. Installed drip system instead. Temporary system until trees are established.

### Archeological Issues:

No survey done of site to his knowledge. Recommends survey (surface analysis) prior to construction to make sure no artifacts are present at the subject site. The site is not identified as an area that required closer investigation. Seven areas identified on Dyess AFB of cultural interest. Site is not one of these.

### Archaeological Sites:

Not of significance to be listed. The Subject site for development is not one of these. Site never used for anything to his knowledge. Kim has had position since Oct 2002.

Site covered with young Mesquite trees and mature trees. Early 1990s, the site was downgraded in the land management classification. Changed from mowed (semi-improved area) to unimproved (natural state) state. Younger mesquite trees started growing then.

### Shrike Area:

Migratory bird habitat. Shrikes like younger mesquite areas. Shrike and Bell's Vireo are the priority species. Not threatened or endangered.

### Texas Horned Lizard:

State Threatened. Primary food source is harvester ant. Observed Harvester Ants that might indicated Texas Horned Lizard habitat. Entire base is potential habitat. A state-certified permitted biologist is required to relocate the lizard if

observed. Considerable undeveloped habitat primarily east, NE, SE of site where relocation could occur. Mr. Walton accompanied CDM personnel on walk through of subject site. Harvester Ants were only observed in soil adjacent to the sidewalk. Mr. Walton did not see evidence of Texas Horned Lizard habitat during the site walk through.

#### Migratory Nesting Season:

Nests cannot be destroyed during the migratory nesting season. Migratory Bird Treaty Act (Federal law). Nesting season is March – October. Do construction outside this window. (Design issue).

#### Avian Protection on Utility Lines:

Lacking avian protection on utility lines. Need 60-inch spacing between overhead lines. Not an issue if electric is buried. (Design issue). Dyess AFB has Avian Protection Plan that discusses this. Overhead line installation would have to comply with this.

Will need to grub with root plow to remove Mesquite trees at the root. Otherwise will re-grow. Need dig permit to do this.

National Register of Historic Places – N/A to anything on Dyess AFB.

Kim provided dates for construction of the buildings surrounding the site:

- 8130 – Metals fabrication shop: 1960
- 8131 – Welding shop: 1960
- 8214/8215 – Water plant: 1991
- 8211 – PME Lab: 1986
- 8150 – Child Development Center: 2002



# CDM Personal Interview Report



9200 Ward Parkway, Suite 500  
Kansas City, MO 64114  
(816) 444-8270 - phone  
(816) 523-2600 - fax

<b>Project:</b>	Dyess Air Force Base	<b>Client:</b>	ACC
<b>Job No.</b>	48043-6135.015	<b>Date:</b>	11/14/06 and 2/15/07
<input type="checkbox"/> Phone in <input checked="" type="checkbox"/> Phone out <input checked="" type="checkbox"/> Current Project <input type="checkbox"/> Prospective Project/Marketing <input type="checkbox"/> Administrative <input type="checkbox"/> Other			
<b>Made by/Received by:</b>	Bob Kaspzyk		
<b>Talked with:</b>	Kim Walton, Natural and Cultural Program Manager, Tele: (325) 696-4379		
<b>Subject:</b>	Visual Site Inspection of subject property; Harvester Ants; Native American Consultation		
<b>Distribution:</b>	Project File		

## Discussion:

A site reconnaissance was conducted by CDM personnel on November 14, 2006. The walk-thru began in the parking lot on the south of the study area at 13:00 hours. Mr. Kim Walton, Cultural & Natural Resources Program Manager for the base, accompanied CDM personnel on the site walk through.

Currently, the entire study area is unimproved and void of structural features. Most of the study area was overgrown with mesquite trees and cactus. Three bird nests were found in older mesquite trees. Grass cover was sparse due to heavy coverage of the mesquite trees. Some grassy areas exist where trees aren't as thick. Harvester ants were identified along the maintained areas (mowed areas near the sidewalk). The Texas Horned Lizard feeds on harvester ants, but none were observed during the site walk through.

Surface features in the study area include two sidewalks and a parking lot. A short sidewalks run from Avenue D at the north end southwest to Third Street. A longer sidewalk runs from Avenue D to the welding shop located at the southwest end of the site. The cement parking lot was located along the west edge of the site across the street from the CE buildings. Overhead power lines cross the site in an east-west direction from Fourth Street to Third Street near the south end of the site. The ground below the power lines have been clear cut. An underground structure was discovered at the south end of the site. The ground near the structure appeared to be weathered and disturbed. The structure was circular and constructed of orange brick with a diameter of approximately 3 feet at ground surface. The diameter of the structure decreased with depth to approximately two feet below ground surface, the structure was filled with soil below that depth. The structure was built by placing the bricks next to one another without the use of mortar indicating that it was not likely a cistern but probably an old well. According to Mr. Walton, the structure was made of Abilene brick. Mr. Walton had no knowledge of the structure and was not aware of its existence. No other man-made structures were identified on the site. At the north end of the site behind the Child Development Center a brush pile exists as a result of brush clearing conducted by base personnel to provide an access path for emergency vehicles. Bits of rubber tire were also found in this area. Abundant bore holes were identified throughout the site as a result of animal activities. No evidence of hazardous waste disposal such as drums, distressed vegetation or discharge pipes were identified on site. Photographic documentation of the site was conducted during the site walk through.



**Follow up call on 2/15/07:**

Q. when would the Harvester Ant be expected to be seen on base (In reference to ant seen on site visit)?

A. Ant colony is evident when ants are in hibernation. Expect to see on side walks and finished of mowed areas. Harvester ants were identified during the site visit on the sidewalk. While we were reading the text of the document we realized that the wording of the text is confusing and implies that the ants were not seen during the visit. Text should be re-worded to clarify.

Q. Is there any documentation that Native American interests do not exist on Dyess AFB?

A. Kim has sent letter to several tribes in the area and, with one exception, did not receive responses. Dyess AFB considers a lack of response a confirmation that there are not tribal interests in the site. Follow up calls were made. Kim will send documentation.

Q. Kim wanted to know when someone would be contacting him from EDR. EDR was contracted to conducted a records search and was scheduled to contact Kim for information. I told him I would follow up on it.

# CDM Personal Interview Report



9200 Ward Parkway, Suite 500  
Kansas City, MO 64114  
(816) 444-8270 - phone  
(816) 523-2600 - fax

<b>Project:</b>	Dyess Air Force Base	<b>Client:</b>	ACC
<b>Job No.</b>	48043-6135.015	<b>Date:</b>	November 14, 2006
<input type="checkbox"/> Phone in <input type="checkbox"/> Phone out <input checked="" type="checkbox"/> Current Project <input type="checkbox"/> Prospective Project/Marketing <input type="checkbox"/> Administrative <input type="checkbox"/> Other			
<b>Made by/Received by:</b>	Laura Splichal		
<b>Talked with:</b>	Bruce Wheat, Chief Warrant Officer (CWO), Army National Guard, Tele: (325) 672-3993		
<b>Subject:</b>	Site Inspection and Interview at the Army National Guard Facility in Abilene, TX.		
<b>Distribution:</b>	Project File		

## Discussion:

Chief Wheat was told the Marine Reserves, Army Reserves and Army National Guard will be sharing the new Armed Forces Reserve Center at Dyess AFB.

At the Abilene Armory, 3 National Guard units are represented including the 142<sup>nd</sup> Rear Area Ops Center (ROC) directed by LTC Huffins; Company A 111<sup>th</sup> Engineering Battalion directed by Staff SGT Delgado formerly from Snyder, TX; and the Headquarters and Headquarters Company (HHC) 111<sup>th</sup> Engineering Battalion directed by Major Stragindar formerly from Coleman, TX. The HHC 3<sup>rd</sup> Battalion, 12<sup>th</sup> Armor from Coleman has been absorbed into the HHC 111<sup>th</sup> engineering battalion.

The Snyder and Coleman armories have been closed and the permanent ops transferred to the Abilene facility. There are reserve personnel from these units who will be reporting to the new Dyess AFB facility.

The U.S. Army Reserve Center is located on S Treadway. Chief Wheat does not coordinate with them and did not have a contact.

The National Guard is a conditionally exempt small quantity waste generator. Any hazardous waste generated goes to Dyess Defense Reutilization and Marketing Office (DRMO) for disposal. They manage universal wastes on their own.

National Guard ops consist of vehicle maintenance for all National Guard vehicles at the armory including scheduled service and repairs, as needed.

Shop has a hot parts washer that is a water based system. Water and soap is heated to 185 degrees F.

- Powdered soap used: Graymills Aquatene 571.
- Rust inhibitor used: Spray-Det C&H 571 Rust inhibitor.
- Defoaming Agent used: Dow Corning Anti-Foam Silica Compound.

Keep adding water and other additives until water gets so dirty it will not clean. Then water is sampled and disposed. Has been non-hazardous in the past. Parts washer also has an oil skimmer that periodically skims oil off the water into a SAA 5-gal used oil bucket.

Vehicle wash rack has a 3 stage grit trap that causes solids to settle out before water is disposed in the sanitary sewer. Grit trap gets pumped out above every 5 years. Sludge is sampled beforehand and has been non-hazardous.

Universal wastes include used batteries, fluorescent light bulbs, used oil, used diesel fuel, and used oil filters.

- Waste batteries are recycled by Exide Battery Company.
- Used light bulbs and used absorbents are taken to the Army National Guard (ARNG) Ft. Worth Support Shop and combined with their waste for disposal.
- Waste Fuel and Waste Oil is picked up by January Environmental Services and burned by them for energy recovery. They pay the National Guard for this fuel. Also take the used oil filters, but charge for this.
- Scrap metal and used tires are taken to the Dyess DRMO.

Shop has no air emissions. Only spray painting is spot spraying as needed for touch up using aerosol cans. No paint booth. Empty cans are punctured inside a drum. The paint vapors are captured on a filter and any waste paint is contained inside the drum. The empty containers are thrown away. Aerosol paints are stored inside a flammable materials cabinet.

Some welding is performed as needed using acetylene or stick welding.

Only solvent usage is in "Brake Buggy." It uses 5 gallons of ZEP solvent Dyna (copied MSDS). Solvent is sprayed on brakes then runoff is collected in funnel and re-used. Have used same solution for 3 years, haven't disposed of it yet.

Chief Wheat provided a copy of a federal permit for the wash rack and a letter from the city pursuant to wastewater disposal. Indicated they had an exclusion letter from the State of Texas for air emissions (related to aerosol can crusher), but couldn't find it.

Personnel wear hearing protection and eye protection in the shop as needed.

For new wash rack at Dyess AFB, Chief Wheat requested NOT to have a diverter valve that diverts rain water to the storm water system because it doesn't work well, instead wants a recycle pit or discharge to the sanitary sewer.

Oil filter press located in the shop that drains/crushes used oil filters. The used oil and crushed filters are collected in separate drums beneath the press.

Shop had two 55-gallon drums of product oil. One was motor oil and one was gear oil.

SAA buckets are added to two totes of used oil and used diesel fuel stored outside in a storage locker. January Environmental Services collects/pumps the used oil and used diesel fuel from these totes. Used antifreeze also stored in this locker that is recycled at the Ft. Worth ARNG facility.

New batteries and sulfuric acid are stored in a separate Corrosives cabinet outside (across from the oil/fuel/antifreeze locker).

# CDM Personal Interview Report



9200 Ward Parkway, Suite 500  
Kansas City, MO 64114  
(816) 444-8270 - phone  
(816) 523-2600 - fax

<b>Project:</b>	Dyess Air Force Base	<b>Client:</b>	ACC
<b>Job No.</b>	48043-6135.015	<b>Date:</b>	December 15, 2006
<input type="checkbox"/> Phone in <input checked="" type="checkbox"/> Phone out <input type="checkbox"/> Current Project <input type="checkbox"/> Prospective Project/Marketing <input type="checkbox"/> Administrative <input type="checkbox"/> Other			
<b>Made by/Received by:</b>	Bob Kaspzyk		
<b>Talked with:</b>	Kim Walton, Natural and Cultural Program Manager, Tele: (325) 696-4379		
<b>Subject:</b>	Natural and Cultural Issues at the Subject Site, Dyess AFB		
<b>Distribution:</b>	Project File		

## Discussion:

Restriction on the development of the subject property that could be enforced because of the mesquite trees on the property. Kim said that the base has an urban development plan and a land management plan to provide guidelines and restrictions on property development. However, the mesquite tree is considered an invader species and is not associated with development restrictions. He sent me applicable sections from both plans.

# CDM Personal Interview Report



9200 Ward Parkway, Suite 500  
Kansas City, MO 64114  
(816) 444-8270 - phone  
(816) 523-2600 - fax

<b>Project:</b>	Dyess Air Force Base	<b>Client:</b>	ACC
<b>Job No.</b>	48043-6135.015	<b>Date:</b>	December 28, 2006
<input type="checkbox"/> Phone in <input checked="" type="checkbox"/> Phone out <input checked="" type="checkbox"/> Current Project <input type="checkbox"/> Prospective Project/Marketing <input type="checkbox"/> Administrative <input type="checkbox"/> Other			
<b>Made by/Received by:</b>	Monica Guggenberger		
<b>Talked with:</b>	Brian Danko, Water Quality Manager, Tele: (325) 696-5667		
<b>Subject:</b>	Water Quality Management at Dyess AFB		
<b>Distribution:</b>	Project File		

## Discussion:

Called Brian for clarification on a few issues. The sanitary sewer discharges to the City of Abilene near the main entrance of the base. All the sewer mains have been updated from vitrified clay pipes to PVC pipes. Ninety percent of these lines were updated using a pipe bursting method and were replaced. The remaining 10% were updated using a curing in place method. They are currently working on updating the lateral lines but are awaiting funding. These will be replaced with PVC pipes.

# CDM Personal Interview Report



9200 Ward Parkway, Suite 500  
Kansas City, MO 64114  
(816) 444-8270 - phone  
(816) 523-2600 - fax

<b>Project:</b>	Dyess Air Force Base	<b>Client:</b>	ACC
<b>Job No.</b>	48043-6135.015	<b>Date:</b>	February 14, 2007
<input type="checkbox"/> Phone in <input checked="" type="checkbox"/> Phone out <input checked="" type="checkbox"/> Current Project <input type="checkbox"/> Prospective Project/Marketing <input type="checkbox"/> Administrative <input type="checkbox"/> Other			
<b>Made by/Received by:</b>	Bob Kaspzyk		
<b>Talked with:</b>	Jim Robertson, Chief of Analysis, Tele: (325) 696-5649		
<b>Subject:</b>	Follow up questions to EA review		
<b>Distribution:</b>	Project File		

Discussion: We require more information on comment from JR "suggest a brief discussion of the major rework in housing and the ongoing proposed military construction project." Jim said that census data used is out of date. This is important to change because housing projects have been demolished and several phases of new housing construction are ongoing. Talk to Gerald Walsh (x2051) for synopsis of construction program.

What is the definition of Q.D. Arc. – Q.D. Arc. Means "Quantity Distance Arc; it refers to the minimum required distance around a munitions storage area.

Where do I direct air quality question. Jim Armstrong (x5663)

Where do I direct traffic question. Dan Freeburg (x5617) or Tommy Downing

Where do I direct utility question. Tom Denslow (x5628)

Question by Walt Smith requires clarification on 5 generators to be installed by Siemens. Jim said that generators are to be installed as part of an aggregate of construction projects (i.e. housing etc.). The generators are to supplement the waste-to-energy plant during peak operation. They may operate 300 hrs/yr or more. They are close to exceeding the emissions on their permit. Discuss with Jim Armstrong.

# CDM Personal Interview Report



9200 Ward Parkway, Suite 500  
Kansas City, MO 64114  
(816) 444-8270 - phone  
(816) 523-2600 - fax

<b>Project:</b>	Dyess Air Force Base	<b>Client:</b>	ACC
<b>Job No.</b>	48043-6135.015	<b>Date:</b>	February 15, 2007
<input type="checkbox"/> Phone in <input checked="" type="checkbox"/> Phone out <input checked="" type="checkbox"/> Current Project <input type="checkbox"/> Prospective Project/Marketing <input type="checkbox"/> Administrative <input type="checkbox"/> Other			
<b>Made by/Received by:</b>	Bob Kaspzyk		
<b>Talked with:</b>	Jim Armstrong, Tele: (325) 696-5663		
<b>Subject:</b>	Follow up questions to EA review – Air Emissions		
<b>Distribution:</b>	Project File		

## Discussion:

Q.) Is there a point source air emissions report for the base?

A.) They can provide the spread sheet for the past year up to Nov. '06. He doesn't have Dec. '06 but will email everything from Nov 06 back a year.

Q.) We need more info regarding air emissions of the generators and limits of air permit. The Waste to Energy plant supplements the power the base gets off the grid. The plant is on a separate account and does not count as base emission on the APD-Cert. The plant is under Title V permit. Reserve center emissions can be separated from base if needed so that base doesn't need Title V permit. The TCEQ will allow this separation of the plant and reserve center from the base but he's not sure if the base can do it internally. Together if the generators and the plant were combined with the reserve center the emission would probably require a title V permit. Jim thinks that the reserve center could be combined with the base emissions with out affecting the current emissions status. Jim will provide last year's emissions report, the Title V Thresholds, and the generator data.

# CDM Personal Interview Report



9200 Ward Parkway, Suite 500  
Kansas City, MO 64114  
(816) 444-8270 - phone  
(816) 523-2600 - fax

<b>Project:</b>	Dyess Air Force Base	<b>Client:</b>	ACC
<b>Job No.</b>	48043-6135.015	<b>Date:</b>	February 16 & 22, 2007
<input type="checkbox"/> Phone in <input checked="" type="checkbox"/> Phone out <input checked="" type="checkbox"/> Current Project <input type="checkbox"/> Prospective Project/Marketing <input type="checkbox"/> Administrative <input type="checkbox"/> Other			
<b>Made by/Received by:</b>	Bob Kaspzyk		
<b>Talked with:</b>	Tom Denslow, Maintenance Engineer, Tele: (325) 696-5628		
<b>Subject:</b>	Follow up to the EA review – Utility usage		
<b>Distribution:</b>	Project File		

## Discussion:

The reviewer requested that a discussion of the current rate of utility use be provided so that a comparison can be made with the anticipated use. Is there a current estimate of utility usage by either the number of users or by building size?

Tom said he has current consumption by building size for FY 06.

Electricity	Kwh/ft <sup>2</sup>	19.21431	
Gas	Kft <sup>3</sup> /ft <sup>2</sup>	0.05869	
Water	X1000g/ft <sup>2</sup>	0.04409	
Sewer		60% of water consumption	

Current use at the Marine Corps. Facility is 252,600 Kwh/ft<sup>2</sup> and 420,000 Kft<sup>3</sup>/ft<sup>2</sup> for gas. The water is estimated (not metered). The Marine facility is 20,452 c.

Follow up call on 2/27/07:

Call was to verify the consumption values received on previous call. After calculating the anticipated usage with the proposed building dimensions the annual consumption seemed high. In comparing the current usage of the Marine facility (20,000 ft<sup>2</sup>) with the estimated values there was difference; 2.2mil Kwh/ft<sup>2</sup> for the proposed AFRC and 1.4 Kwh/ft<sup>2</sup> for the Marine facility. The 1.4 was extrapolated from their current consumption. The numbers we used to calculate the AFRC consumption are base average numbers. The actual consumption may be substantially different depending on the usage (i.e. weekends only would be less than full time use). The amount of building space that is heated or cooled will also affect consumption rates. Currently, the base is at approximately 50% of capacity for the electricity and less than 50% for gas capacity. The max for the base is 30 mega watts and the peak usage is usually 13 m. watts.



# CDM Personal Interview Report



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Kansas City, MO 64114  
(816) 444-8270 - phone  
(816) 523-2600 - fax

<b>Project:</b>	Dyess Air Force Base	<b>Client:</b>	ACC
<b>Job No.</b>	48043-6135.015	<b>Date:</b>	February 15 & 27, 2007
<input type="checkbox"/> Phone in <input checked="" type="checkbox"/> Phone out <input checked="" type="checkbox"/> Current Project <input type="checkbox"/> Prospective Project/Marketing <input type="checkbox"/> Administrative <input type="checkbox"/> Other			
<b>Made by/Received by:</b>	Bob Kaspzyk		
<b>Talked with:</b>	Gerald Walsh, Tele: (325) 696-2051		
<b>Subject:</b>	Follow up to the EA review – Current construction projects		
<b>Distribution:</b>	Project File		

## Discussion:

Additional information is required with regard to current and future housing to revise the current housing discussion in the EA. Jim Robertson said that you may have more updated information.

Currently there are 85 + 173 houses (158 total). There are an additional 326 housing projects under construction and 90 proposed for next year.

# CDM Personal Interview Report



9200 Ward Parkway, Suite 500  
Kansas City, MO 64114  
(816) 444-8270 - phone  
(816) 523-2600 - fax

<b>Project:</b>	Dyess Air Force Base	<b>Client:</b>	ACC
<b>Job No.</b>	48043-6135.015	<b>Date:</b>	February 15 & 27, 2007
<input checked="" type="checkbox"/> Phone in <input type="checkbox"/> Phone out <input checked="" type="checkbox"/> Current Project <input type="checkbox"/> Prospective Project/Marketing <input type="checkbox"/> Administrative <input type="checkbox"/> Other			
<b>Made by/Received by:</b>	Bob Kaspzyk		
<b>Talked with:</b>	Dan Freeburg, Tele: (325) 696-5617		
<b>Subject:</b>	Follow up to the EA review – Current construction projects		
<b>Distribution:</b>	Project File		

Discussion:      Reviewer is looking for the current rate of traffic flow on base so that a comparison can be made of the traffic flow after the reserve center is in operation. Dan said that there is a 3-4 year old study on traffic available. There have been no significant changes to housing and facilities so the study should not be obsolete. He will try to locate and forward the report.

Follow up call on 2/27/07: Several attempts were made to email the report and failed. He thinks the file (35mg) may be too large and has sent it regular mail. In addition, there is a proposal for future development that would involve changes to the existing traffic patterns on the base. This is a long term plan that would likely affect most of the base. Dan said he would send the report along with a list of current plans.

## **Appendix D**

### **Air Emissions Data**



**Texas Commission on Environmental Quality**  
**Form APD-CERT**  
**Certification of Emission Limits (Page 3)**

<b>EMISSIONS RATE DATA*</b>								
<b>Maximum Emission Rates (tons/year)</b>								
<b>EPN/FIN</b>	<b>Source Category</b>	<b>NOx</b>	<b>CO</b>	<b>VOC</b>	<b>SO2</b>	<b>PM10</b>	<b>HAP</b>	<b>Fugitive VOC</b>
10000 to 10100	Abrasive Blasting					2.00	0.50	
20000 to 20100	Aircraft Engine Testing	25.00	25.00	25.00	5.00	5.00	1.00	
14000 to 14100	External Combustion	25.00	25.00	4.00	5.00	2.00	1.00	
17006 to 17099	Fuel Cell Maintenance			10.00			1.00	
22000 to 26100	Fuel and Liquid Storage			6.00			1.00	
16000 to 16100	Fuel Transfer (Loading)			1.00			0.50	
15000 to 15100	Fuel Dispensing			4.00			1.00	
36000 to 36100	Non-Destructive Inspection			2.00			0.50	
11000 to 11100, 38001	Solvent Cleaning Machines and Dipping Tanks			3.00			1.00	
19000 to 19900	Stationary Internal Combustion	20.00	5.00	2.00	5.00	2.00	1.00	
21000 to 21300	Surface Coating			15.00		10.00	5.00	
27001 to 27100	Welding and Soldering					1.00	0.50	
29001 to 29100	Woodworking, Fiberglass, and General Sanding					6.00		
12003 to 12004	Paper Disintegration					3.00		
34000	Miscellaneous Chemical Usage						8.00	25.00
17500	Equipment Leaks						0.50	2.00

<b>Emissions Totals:</b>	<b>70.00</b>	<b>55.00</b>	<b>72.00</b>	<b>15.00</b>	<b>31.00</b>	<b>22.50</b>	<b>27.00</b>
<b>Title V Major Source Threshold:</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>25</b>	<b>n/a</b>

\* Facility Names, Point Names, Authorization Types, Authorization Dates, and Applicable Permit Numbers are listed in Appendix B of this document. Because only annual emissions are being certified with this submittal, emission rates in pounds per hour are not included on this table.

TCEQ - 10489 [Revised 04/05]

Certification of Emission Limits Form (This form for use by facilities subject to air quality permit requirements and may be revised periodically) (APDG: 5375v1)

**Expeditionary Readiness Training  
(ExpeRT) Course Expansion  
Final Environmental Assessment**

**Creech Air Force Base**

**June 2006**

## **APPENDIX B**

### **AIR QUALITY ANALYSIS**

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## APPENDIX B

### AIR QUALITY ANALYSIS

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#### Air Quality Standards

As described in Section 3.2, Air Quality in a given location is described by the concentration of various pollutants in the atmosphere. The significance of the pollutant concentration is determined by comparing it to the federal and state ambient air quality standards. These standards (Table B-1) represent the maximum allowable atmospheric concentrations that may occur while ensuring protection of public health and welfare, with a reasonable margin of safety. The Nevada Division of Environmental Protection, Bureau of Air Quality has adopted the NAAQS, with the following exceptions and additions: 1) state annual SO<sub>2</sub> standard is more stringent than the national standard; 2) a new 8-hour CO standard specific to elevations greater than 5,000 feet above mean seal level; and 3) new standards for visibility. The state ambient air quality standards are also summarized in Table B-1.

The air quality analysis in this EA examined impacts from air emissions associated with the proposed action. As part of the analysis, emissions generated from construction and infrastructure upgrade activities (including truck and equipment emissions) were examined for carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>x</sub>), Ozone (O<sub>3</sub>) (which volatile organic compounds [VOCs] are precursors), and particulate matter (PM<sub>10</sub>). Currently, Clark County is in serious nonattainment for CO and PM<sub>10</sub>; however, the county has not experienced an exceedance of the CO standard in nearly 6 years and is currently seeking a re-designation by EPA to a maintenance status for CO. In addition, a portion of Clark County, the Las Vegas Valley in which Nellis AFB is found, is in basic (subpart 1) nonattainment for 8-hour ozone (precursors of this pollutant include NO<sub>x</sub> and VOCs) (DAQEM 2004). This means that at Silver Flag Alpha certain *de minimus* thresholds may not be exceeded in any given year. These thresholds are: CO (100 tons/year), PM<sub>10</sub> (70 tons/year), and VOCs (100 tons/year). In summary, combined construction and upgrade activities, for any new projects at Silver Flag Alpha, in any one year, would not exceed threshold levels.

**Table B-1 State and National Ambient Air Quality Standards**

	<i>Nevada Standards<sup>A</sup></i>		<i>National Standards<sup>B</sup></i>	
	AVERAGING TIME	CONCENTRATION CENTER	PRIMARY CENTER <sup>C,D</sup>	SECONDARY CENTER <sup>C,E</sup>
Ozone	1 Hour	235 µg/m <sup>3</sup> (0.12 ppm)	235 µg/m <sup>3</sup> (0.12 ppm)	Same as Primary
Ozone	8 Hours		157 µg/m <sup>3</sup> 0.08 ppm	Same as Primary
Carbon Monoxide less than 5,000 ft above MSL	8 Hours	10 mg/m <sup>3</sup> (9.0 ppm)	10 mg/m <sup>3</sup> (9.0 ppm)	None
Carbon Monoxide at any elevation	1 Hour	40 mg/m <sup>3</sup> (35 ppm)	40 mg/m <sup>3</sup> (35 ppm)	
Nitrogen Dioxide	Annual Arithmetic Mean	100 µg/m <sup>3</sup> (0.05 ppm)	100 µg/m <sup>3</sup> (0.05 ppm)	Same as Primary
Sulfur Dioxide	Annual Arithmetic Mean	80 µg/m <sup>3</sup> (0.03 ppm)	80 µg/m <sup>3</sup> (0.03 ppm)	None
	24 Hours	365 µg/m <sup>3</sup> (0.14 ppm)	365 µg/m <sup>3</sup> (0.14 ppm)	
	3 Hours	1,300 µg/m <sup>3</sup> (0.5 ppm)	None	1,300 g/m <sup>3</sup> (0.5 ppm)
Particulate Matter as PM <sub>10</sub>	Annual Arithmetic Mean	50 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	Same as Primary
	24 Hours	150 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	
Particulate Matter <sup>F</sup> as PM <sub>2.5</sub>	Annual		15 µg/m <sup>3</sup>	Same as Primary
	24 Hours		65 µg/m <sup>3</sup>	---
Lead (Pb)	Quarterly Arithmetic Mean	1.5 µg/m <sup>3</sup>	1.5 µg/m <sup>3</sup>	Same as Primary
Visibility	Observation	In sufficient amount to reduce the prevailing visibility to less than 30 miles when humidity is less than 70%	--	--

Notes:(a) 235 µg/m<sup>3</sup>" means micrograms per cubic meter. 3, (b) "ppm" means part per million by volume.

Note A: These standards must not be exceeded in areas where the general public has access.

Note B: These standards, other than for ozone and those based on annual averages, must not be exceeded more than once per year. The ozone standard is attained when the expected number of days per calendar year with a maximum hourly average concentration above the standard is equal to or less than one.

Note C: Concentration is expressed first in units in which it was adopted and is based upon a reference temperature of 25° C and a reference pressure of 760 mm of mercury. All measurements of air quality must be corrected to a reference temperature of 25° C and a reference pressure of 760 mm of Hg (1,013.2 millibars); ppm in this table refers to ppm by volume, or micromoles of regulated air pollutant per mole of gas.

Note D: National primary standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health.

Note E: National secondary standards are the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a regulated air pollutant.

Note F: Final regulatory procedures were announced in 2004, the entire state of Nevada is in attainment for this criteria pollutant. However, all air emissions inventory for 2003 do not include calculation of this criteria pollutant since no ruling had been reached.



**FY06**

**Concrete Slab Construction for 70,000-gallon Water Storage Tank**

1,000 sf X 2 ft = 4,000 cu ft

Equipment	Number	Hr/day	# days	Hp	LF	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO2 g/hp-hr	PM g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb
Skid steer loader	1	8	4	67	0.23	0.5213	2.3655	5.5988	0.93	0.473	0.6	2.6	6.1	1.0	0.5
Concrete truck	8	2	2	250	0.21	0.68	2.7	8.38	0.89	0.402	2.5	10.0	31.0	3.3	1.5
Dump truck	8	2	2	275	0.21	0.68	2.7	8.38	0.89	0.402	2.8	11.0	34.1	3.6	1.6
Delivery truck	2	1	3	180	0.21	0.68	2.7	8.38	0.89	0.402	0.3	1.4	4.2	0.4	0.2
Backhoe/loader	1	8	3	98	0.21	0.99	3.49	6.9	0.85	0.722	1.1	3.8	7.5	0.9	0.8
Small generator	1	2	3	10	0.43	0.7628	4.1127	5.2298	0.93	0.4474	0.0	0.2	0.3	0.1	0.0
										<b>Subtotal</b>	7.3	29.0	83.3	9.4	4.7

**Trenching for Underground Communication and Water Lines to Tent City**

2,600 ft X 2 ft

900 ft/day

Equipment	Number	Hr/day	# days	Hp	LF	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO2 g/hp-hr	PM g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb
Trencher	1	8	3	115	0.21	0.5213	2.3655	5.5988	0.93	0.473	0.7	3.0	7.2	1.2	0.6
Backhoe/loader	1	8	3	98	0.21	0.99	3.49	6.9	0.85	0.722	1.1	3.8	7.5	0.9	0.8
										<b>Subtotal</b>	1.7	6.8	14.7	2.1	1.4

**Dig Post Holes for Overhead Power Lines to Tent City**

3,600 ft linear, 330 ft between poles - 11 poles total

Equipment	Number	Hr/day	# days	Hp	LF	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO2 g/hp-hr	PM g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb
Skid steer loader w/ auger	1	8	2	115	0.21	0.5213	2.3655	5.5988	0.93	0.473	0.4	1.1	0.7	0.3	0.0

**Construct 1-acre Leach Field and Dig Trench for 10,000-gallon Capacity Septic/Holding Tank**

1000 ft X 2 ft

Equipment	Number	Hr/day	# days	Hp	LF	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO2 g/hp-hr	PM g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb
Trencher	1	10	1	115	0.21	0.5213	2.3655	5.5988	0.93	0.473	0.3	1.3	3.0	0.5	0.3
Backhoe/loader	1	8	3	98	0.21	0.99	3.49	6.9	0.85	0.722	1.1	3.8	7.5	0.9	0.8
										<b>Subtotal</b>	1.4	5.1	10.5	1.4	1.0

VOC	CO	NOx	SO2	PM
ton	ton	ton	ton	ton
0.01	0.02	0.05	0.01	0.00
<b>FY06 Annual Totals</b>				

**FY07**

**Construct and Pour Slab for Combat Arms Training and Maintenance Academic Facility**

8000 sf

Equipment	Number	Hr/day	# days	Hp	LF	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO2 g/hp-hr	PM g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb
Skid steer loader	2	4	4	67	0.23	0.5213	2.3655	5.5988	0.93	0.473	0.6	2.6	6.1	1.0	0.5
Concrete truck	8	2	2	250	0.21	0.68	2.7	8.38	0.89	0.402	2.5	10.0	31.0	3.3	1.5
Dump truck	8	2	4	275	0.21	0.68	2.7	8.38	0.89	0.402	5.5	22.0	68.3	7.3	3.3
Delivery truck	2	1	4	180	0.21	0.68	2.7	8.38	0.89	0.402	0.5	1.8	5.6	0.6	0.3
Backhoe/loader	1	8	8	98	0.21	0.99	3.49	6.9	0.85	0.722	2.9	10.1	20.0	2.5	2.1
Small generator	2	2	4	10	0.43	0.7628	4.1127	5.2298	0.93	0.4474	0.1	0.6	0.8	0.1	0.1
										<b>Subtotal</b>	12.1	47.1	131.8	14.8	7.7

**Construct and Pour Slab for Virtual Combat Convoy Training Facility**

6400 sf

Equipment	Number	Hr/day	# days	Hp	LF	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO2 g/hp-hr	PM g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb
Skid steer loader	2	4	3	67	0.23	0.5213	2.3655	5.5988	0.93	0.473	0.4	1.9	4.6	0.8	0.4
Concrete truck	8	2	2	250	0.21	0.68	2.7	8.38	0.89	0.402	2.5	10.0	31.0	3.3	1.5
Dump truck	8	2	3	275	0.21	0.68	2.7	8.38	0.89	0.402	4.2	16.5	51.2	5.4	2.5
Delivery truck	2	1	3	180	0.21	0.68	2.7	8.38	0.89	0.402	0.3	1.4	4.2	0.4	0.2
Backhoe/loader	1	8	6	98	0.21	0.99	3.49	6.9	0.85	0.722	2.2	7.6	15.0	1.9	1.6
Small generator	2	2	3	10	0.43	0.7628	4.1127	5.2298	0.93	0.4474	0.1	0.5	0.6	0.1	0.1
										<b>Subtotal</b>	9.7	37.8	106.6	11.9	6.2

**Convoy Trail and Range Improvements**

Grader working 2 miles of dirt road, 20 ft wide, 2 working days total. Grader #1 working 6.47 acres range improvements, 10 workings days total.  
Trencher working 10 days for upgrades at ranges

Equipment	Number	Hr/day	# days	Hp	LF	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO2 g/hp-hr	PM g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb
Trencher	1	8	10	115	0.21	0.5213	2.3655	5.5988	0.93	0.473	2.2	10.1	23.8	4.0	2.0
Grader	2	8	12	150	0.59	0.68	2.7	8.38	0.93	0.402	25.5	101.1	313.9	34.8	15.1
										<b>Subtotal</b>	27.7	111.2	337.8	38.8	17.1

Equipment	Number	Hr/day	# days	Hp	LF	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO2 g/hp-hr	PM g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb
Water Truck	2	8	20	180	0.21	0.68	2.7	8.38	0.89	0.402	18.1	72.0	223.5	23.7	10.7

**Fugitive dust emissions:**

PM	Days of	Controls	Uncontrolled	Controlled
tons/acre/mo	Acres	Disturbance	Reduction	Total
1.2	8.28	2	0.8	0.66
				0.13

**Convoy Trail Vehicle Ops**

Traversing dirt road (1 mile in length, so 2 miles RT), 5 MPH, 468 trips per year

High Mobility Multi-Purpose Wheeled Vehicle (HMMWV)

Equipment	Number	Hr/day	# days	Hp	LF	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO2 g/hp-hr	PM g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb
HMMWV	2	2	12	190	0.21	0.68	2.7	8.38	0.89	0.402	2.9	11.4	35.4	3.8	1.7

M-35 Cargo Truck - 2.5 T capacity

Equipment	Number	Hr/trip	# trips	Hp	LF	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO2 g/hp-hr	PM g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb
M-35	2	0.4	468	210	0.21	0.68	2.7	8.38	0.89	0.402	24.8	98.3	305.0	32.4	14.6

**Unpaved Road PM<sub>10</sub> Emissions:**

$$E = [(K(s/12)^3 (S/30)^{3/4}) / (M/0.5)^{5/8}] \cdot C$$

Vehicle	W in tons	k	a	c	d	C	S	s	M	E in lb per mi	miles per trip	Annual Emissions
HMMWV	2.25	1.5	0.9	0.2	0.5	0.00047	5	16	0.2	0.95	5	57.15
M-35	2.5	1.5	0.9	0.2	0.5	0.00047	5	16	0.2	0.95	5	57.15
											Total PM <sub>10</sub> in tons	0.06

	VOC ton	CO ton	NOx ton	SO2 ton	PM ton
<b>FY07 Annual Totals</b>	0.05	0.19	0.57	0.06	0.22

PM conservatively assumed as PM10 for exhaust and fugitive dust calculations.  
PM<sub>10</sub> for unpaved roads does not account for natural mitigation, e.g. rainfall, etc.

**References:**

Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling—Compression-Ignition , EPA Report No. NR-009c, April 2004.  
Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling , EPA Report No. NR-005c, April 2004.  
Conversion Factors for Hydrocarbon Emission Components, EPA 420-P-04-001, NR-002b, April 2004.  
Nonroad Engine and Vehicle Emission Study--Report, EPA 460/3-91-02, November 1991.  
Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, Chapter 13,  
Miscellaneous Sources, Section 13.2.2, Unpaved Roads, December 2003.  
Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, Chapter 13,  
Miscellaneous Sources, Section 13.2.3, Heavy Construction Operations, January 1995.

**TEXAS ARMY NATIONAL GUARD  
CALIFORNIA CROSSING SITE**  
1755 California Crossing Road,  
Dallas, Texas 75220

**AIR EMISSIONS INVENTORY ANALYSIS  
UNDER THE CLEAN AIR ACT AMENDMENTS**

Submitted to:

**ADJUTANT GENERAL'S DEPARTMENT  
TEXAS ARMY NATIONAL GUARD  
STATE OF TEXAS**

Submitted by:

**GEOMET TECHNOLOGIES, INC.  
20251 Century Blvd.  
Germantown, MD 20874**

July 31, 2003

# TABLE OF CONTENTS

Section	Page No.
Executive Summary .....	iii
1.0 Overview of TXARNG Armory and OMS at California Crossing .....	1
1.1 Introduction.....	1
1.2 Air Emission Sources .....	1
1.3 Title V Applicability.....	2
2.0 Summary of Air Emissions.....	4
3.0 Compliance Status and Strategy.....	7
3.1 Facility Wide Requirements .....	7
3.2 Source Categories - Specific Requirements .....	7
3.3 Compliance Strategy.....	9
4.0 Sample Calculations.....	10

## LIST OF TABLES

Table 1-1	California Crossing Site Air Emission Sources .....	1
Table 1-2	Attainment Status and Major Source Thresholds in Dallas County .....	3
Table 2-1	Estimated Actual Criteria Pollutant Emissions .....	4
Table 2-2	Estimated Potential Criteria Pollutant Emissions.....	5
Table 2-3	Total Estimated Actual and Potential HAP Emissions .....	6

# ACRONYMS

CO	Carbon Monoxide
ft <sup>3</sup>	Cubic Feet
ft <sup>3</sup> yr	Cubic Feet per Year
HAP	Hazardous Air Pollutant
hp	Horsepower
hr	Hour
hr/yr	Hours per Year
IC	Internal Combustion
lb	Pound
MMBtu	Million British thermal unit
MMBtu/hr	Million British thermal unit per hour
MSDS	Material Safety Data Sheet
NG	Natural Gas
NO <sub>x</sub>	Nitrogen Oxides
PBR	Permit by Rule
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter less than or equal to 10 microns in diameter
ppmv	Parts per million by volume
SO <sub>2</sub>	Sulfur Dioxide
TAC	Texas Administrative Code
tpy	Tons per Year
TSP	Total Suspended Particulates
TXAG	Texas Adjutant General
VOC	Volatile Organic Compound
yr	Year

## EXECUTIVE SUMMARY

An air emissions inventory was conducted at the California Crossing site to quantify the actual and potential emissions of criteria and hazardous air pollutants emitted at the site during a 12-month period between 2001 and 2002. The purpose of this report is to determine overall compliance with the Clean Air Act. As part of that determination, Title V applicability was examined.

The California Crossing Site consists of an Armory and an Organization Maintenance Shop (OMS). The site located at 1755 California Crossing Road, Dallas, Texas 75220 is not a major source of any criteria pollutant, volatile organic compound (VOC) or hazardous air pollutant (HAP). Total potential and actual emissions for all pollutants are well below two tons per year. In addition, none of the emissions sources are out of compliance with applicable regulations.

The site is located in a serious non-attainment area, but because of its size (very low potential emissions) it is very unlikely to become a major source in the foreseeable future, even with moderate growth. Periodically the air compliance personnel are advised to check the site for equipment/operation changes that could result in permitting or other compliance requirements.

## SECTION 1.0 OVERVIEW OF TXARNG ARMORY AND OMS AT CALIFORNIA CROSSING

An air emissions inventory was conducted at the California Crossing site to quantify the actual and potential emissions of criteria and hazardous air pollutants emitted at the site during a 12-month period between 2001 and 2002. The purpose of this report is to determine overall compliance with the Clean Air Act. As part of that determination, Title V applicability was examined.

### 1.1 INTRODUCTION

The California Crossing Site consists of an Armory and an Organization Maintenance Shop (OMS). The site is located at 1755 California Crossing Road, Dallas, Texas 75220. The POC for the Armory site is Sgt. Ripley, phone (972) 556-1513 and for the POC for the OMS site is SFC Jimmy Terry, phone (972) 556-1002 ext.1344. The OMS is co-located with the Armory.

A representative of GEOMET Technologies LLC, Ms. Radhika Narayanan, made a visit to this site on November 6, 2002. Information regarding equipment and activities was obtained by interview of personnel and inspection of the equipment.

### 1.2 AIR EMISSION SOURCES

Table 1-1 lists the equipment and activities that generate air pollutant emissions at the California Crossing Site. As shown in the table the air emission sources at the Armory consist of heaters used for hot water or space heating and several pieces of equipment stored in the motor pool that are either not used or are only used offsite during annual training. The Armory also has a firing range that has never been used and has been condemned (not shown in table below).

The OMS air emission sources consist of space heaters, aerosol spray can operations and welding. The facility does not currently have any can puncturing operations. The spent aerosol cans are collected and sent to another TXANG facility for processing and disposal.

The portable engines located at the Motor Pool are not used on-site. They are considered non-road engines and thus they are not treated as stationary sources. Accordingly, emissions from these engines do not contribute to site's permit status under Title V. As a result, their emissions have not been estimated in this report. Nevertheless, the engines/generators have been listed here in order to have a complete inventory.

**TABLE 1-1.  
CALIFORNIA CROSSING SITE AIR EMISSION SOURCES**

Location	Source Type	Heat Input <sup>1</sup> (MMBtu/hr) or Capacity	Fuel or Solvent/Material Type	Manufacturer or Model	2002 operating Schedule or Fuel/Material Use (ft <sup>3</sup> /yr) <sup>2</sup>
<b>ARMORY</b>					
Men's Room	Water Heater	0.075	NG	Bradford White	16,932
Kitchen	Water Heater	0.075	NG	State Courier 510	16,932
Men's Room	Space Heater	0.050	NG	Reznor US-50F	11,273
Supply Rooms	10 Space Heaters	0.125	NG	Reznor US-125F	281,831

Location	Source Type	Heat Input <sup>1</sup> (MMBtu/hr) or Capacity	Fuel or Solvent/Material Type	Manufacturer or Model	2002 operating Schedule or Fuel/Material Use (ft <sup>3</sup> /yr) <sup>2</sup>
Downstairs Utility Room	3 Space Heaters	0.150	NG	Rheem Criterion II	101,459
Upstairs Utility Room	3 Space Heaters	0.100	NG	Rheem Criterion II	67,639
Upstairs Utility Closet	2 Space Heaters	0.100	NG	Rheem Criterion II	45,093
Downstairs Utility Closet	2 Space Heaters	0.150	NG	Rheem Criterion II	67,639
Upstairs Classroom (Utility Closet)	2 Space Heaters	0.100	NG	Rheem	45,093
Upstairs Classroom	2 Space Heaters	0.100	NG	Rheem	45,093
Drill Hall	4 Space Heaters	0.175	NG	Reznor US-175F	157,825
Kitchen Closet	Space Heater	0.180	NG	Borg Warner	40,584
Kitchen	2 Dishwashers	0.021	NG	Hobart Vulcan	9,520
Motor Pool	3 Portable Heaters	0.250	Diesel	VBM Corp.250 A	Not used
	Generator	3 kW	Diesel	Tobyhanna MEP 701A	Used in field
	28 Generators	5 kW	Diesel	Libby MEP 002 A	Used in field
	17 Generator	10 kW	Diesel	Libby MEP 003 A	Used in field
	Generator	10 kW	Gasoline	Hercules MEP-018A 4 A084-3	Not used
	Generator	10 kW	Gasoline	Jeta Power MEP-018 A 4A084-3	Not used
	4 Compressors	1.5 kW	Gasoline	Chrysler Outboard Mfg.	Not used
	8 Fuel Pods	600 gallon	Diesel	Beta Systems	Mostly used in field
	4 Fuel Pods	600 gallon	N/A	CEL-NIL-T-40136	Stored empty onsite
<b>OMS</b>					
Service Bay	4 Space Heaters	0.100	NG	Janitrol 68-100-A	To be replaced soon
	Surface Coating	16 oz. can 16 oz. can	Black Tan Brake Cleaner	Krylon Krylon ZEP	50 cans 50 cans 15 gal.
	Welding	E 7018	-	-	Negligible use

<sup>1</sup>: Heat Input is given is for each individual unit

<sup>2</sup>: The natural gas usage for the facility as a whole was available, however it was not available for individual heating units. To obtain individual heating unit natural gas consumption, the overall usage was proportioned based on the individual unit capacities.

#### Notes and Assumptions:

- 1) The capacities for some of the central heat space heaters at the Armory were estimated based on the size of the coil or condenser. The plates for some of the heaters were not identifiable.
- 2) At the OMS, all existing space heaters were to be replaced by new space heaters on November 12, 2002. No information on the new space heaters was available at this time.
- 3) An old parts washer at the OMS was replaced by a steam degreaser that uses steam, water, and detergents. Since this is not an air emission source, it has been excluded from table of sources.



### 1.3 TITLE V APPLICABILITY

The California Crossing site is located in Dallas County. The attainment status for the criteria pollutants in this region and the pollutant thresholds that determine major source status are indicated in Table 1-2 below.

**TABLE 1-2.  
ATTAINMENT STATUS AND MAJOR SOURCE THRESHOLD IN DALLAS  
COUNTY**

POLLUTANT	ATTAINMENT STATUS	MAJOR SOURCE THRESHOLD
OZONE	Nonattainment (serious)	50 tpy (VOC and/or NOx emissions)
CO	Attainment	100 tpy
SO <sub>2</sub>	Attainment	100 tpy
NO <sub>x</sub>	Attainment	100 tpy
PM10	Attainment	100 tpy
Lead	Attainment	100 tpy

For hazardous air pollutants (HAPs), a facility is a major source if it has the potential to emit more than 10 tons per year of a single HAP or 25 tons per year of two or more HAPs.

The major source thresholds listed above indicate the quantity of potential emissions that would classify a facility as a major source if the potential emissions exceed that level. Major sources require a Title V Permit. None of the potential emissions of any pollutant from the Armory or the OMS exceeds the thresholds listed above. Section 2.0 provides a summary of actual and potential emissions from the California Crossing site.

## SECTION 2.0 SUMMARY OF AIR EMISSIONS

Tables 2-1 and 2-2 present the estimated annual actual and potential VOC, TSP and criteria pollutant emissions from the Armory and OMS at the California Crossing site. The estimated actual and potential hazardous air pollutant emissions from the site are presented in Table 2-3. As shown in the tables all total emissions (actual and potential) are well below 1 ton per year for all regulated pollutants, except for nitrogen oxides (NO<sub>x</sub>), whose total potential emissions are approximately 1.5 tons per year. Table 2-3 shows the total HAP emissions from both the Armory and OMS. About 90% of the actual HAP emissions are contributed by the OMS sources whereas about 40% of the potential HAP emissions are from the OMS sources.

**TABLE 2-1.  
ESTIMATED ACTUAL CRITERIA POLLUTANT EMISSIONS**

Location & Type of Source*	Heat Input (MMBtu/hr) or Capacity	No. of Units	2002 Fuel Use (ft³) or Material Use	Estimated CY2002 Emissions (tons)						
				TSP	PM <sub>10</sub>	SO <sub>2</sub>	CO	VOC	NO <sub>x</sub>	Lead
ARMORY										
Men's Room	0.075	1	16,932	6.4E-05	6.4E-05	5.1E-06	3.4E-04	4.7E-05	8.0E-04	4.2E-09
Kitchen	0.075	1	16,932	6.4E-05	6.4E-05	5.1E-06	3.4E-04	4.7E-05	8.0E-04	4.2E-09
Men's Room	0.050	1	11,273	4.3E-05	4.3E-05	3.4E-06	2.3E-04	3.1E-05	5.3E-04	2.8E-09
Supply Rooms	0.125	10	281,831	1.1E-03	1.1E-03	8.5E-05	5.6E-03	7.8E-04	1.3E-02	7.0E-08
Downstairs Utility Room	0.150	3	101,459	3.9E-04	3.9E-04	3.0E-05	2.0E-03	2.8E-04	4.8E-03	2.5E-08
Upstairs Utility Room	0.100	3	67,639	2.6E-04	2.6E-04	2.0E-05	1.4E-03	1.9E-04	3.2E-03	1.7E-08
Upstairs Utility Closet	0.100	2	45,093	1.7E-04	1.7E-04	1.4E-05	9.0E-04	1.2E-04	2.1E-03	1.1E-08
Downstairs Utility Closet	0.150	2	67,639	2.6E-04	2.6E-04	2.0E-05	1.4E-03	1.9E-04	3.2E-03	1.7E-08
Upstairs Classroom (Utility Closet)	0.100	2	45,093	1.7E-04	1.7E-04	1.4E-05	9.0E-04	1.2E-04	2.1E-03	1.1E-08
Upstairs Classroom	0.100	2	45,093	1.7E-04	1.7E-04	1.4E-05	9.0E-04	1.2E-04	2.1E-03	1.1E-08
Drill Hall	0.175	4	157,825	6.0E-04	6.0E-04	4.7E-05	3.2E-03	4.3E-04	7.4E-03	3.9E-08
Kitchen Closet	0.180	1	40,584	1.5E-04	1.5E-04	1.2E-05	8.1E-04	1.1E-04	1.9E-03	1.0E-08
Kitchen	0.021	2	9,520	3.6E-05	3.6E-05	2.9E-06	1.9E-04	2.6E-05	4.5E-04	2.4E-09
ARMORY TOTAL EMISSIONS				3.4E-03	3.4E-03	2.7E-04	1.8E-02	2.5E-03	4.3E-02	2.3E-07
OMS										
Service Bay - Heaters	0.100	4	90,186	3.4E-04	3.4E-04	2.7E-05	1.8E-03	2.5E-04	4.2E-03	2.3E-08
Service Bay – Surface Coating			26.72 gal.	7.9E-02	-	-	-	2.3E-02	-	-
OMS TOTAL EMISSIONS				8.0E-02	3.4E-04	2.7E-05	1.8E-03	2.3E-02	4.2E-03	2.3E-08
TOTAL EMISSIONS FOR SITE			997,100	8.3E-02	3.7E-03	3.0E-04	2.0E-02	2.6E-02	4.7E-02	2.5E-07

\*: Unless otherwise noted, source type is space heater, hot water heater, furnace and other external combustion sources.

**TABLE 2-2.  
ESTIMATED POTENTIAL CRITERIA POLLUTANT EMISSIONS**

Location & Type of Source*	Heat Input (MMBtu/hr) or Capacity	No. of Units	Potential Fuel Use (ft <sup>3</sup> )	Maximum Uncontrolled Potential to Emit (tons)						
				TSP	PM <sub>10</sub>	SO <sub>2</sub>	CO	VOC	NO <sub>x</sub>	Lead
ARMORY										
Men's Room	0.075	1	644,976	2.5E-03	2.5E-03	1.9E-04	1.3E-02	1.8E-03	3.0E-02	1.6E-07
Kitchen	0.075	1	644,976	2.5E-03	2.5E-03	1.9E-04	1.3E-02	1.8E-03	3.0E-02	1.6E-07
Men's Room	0.050	1	429,412	1.6E-03	1.6E-03	1.3E-04	8.6E-03	1.2E-03	2.0E-02	1.1E-07
Supply Rooms	0.125	10	10,735,294	4.1E-02	4.1E-02	3.2E-03	2.1E-01	3.0E-02	5.0E-01	2.7E-06
Downstairs Utility Room	0.150	3	3,864,706	1.5E-02	1.5E-02	1.2E-03	7.7E-02	1.1E-02	1.8E-01	9.7E-07
Upstairs Utility Room	0.100	3	2,576,471	9.8E-03	9.8E-03	7.7E-04	5.2E-02	7.1E-03	1.2E-01	6.4E-07
Upstairs Utility Closet	0.100	2	1,717,647	6.5E-03	6.5E-03	5.2E-04	3.4E-02	4.7E-03	8.1E-02	4.3E-07
Downstairs Utility Closet	0.150	2	2,576,471	9.8E-03	9.8E-03	7.7E-04	5.2E-02	7.1E-03	1.2E-01	6.4E-07
Upstairs Classroom (Utility Closet)	0.100	2	1,717,647	6.5E-03	6.5E-03	5.2E-04	3.4E-02	4.7E-03	8.1E-02	4.3E-07
Upstairs Classroom	0.100	2	1,717,647	6.5E-03	6.5E-03	5.2E-04	3.4E-02	4.7E-03	8.1E-02	4.3E-07
Drill Hall	0.175	4	6,011,765	2.3E-02	2.3E-02	1.8E-03	1.2E-01	1.7E-02	2.8E-01	1.5E-06
Kitchen Closet	0.180	1	1,545,882	5.9E-03	5.9E-03	4.6E-04	3.1E-02	4.3E-03	7.3E-02	3.9E-07
Kitchen	0.021	2	362,612	1.4E-03	1.4E-03	1.1E-04	7.3E-03	1.0E-03	1.7E-02	9.1E-08
TOTAL ARMORY EMISSIONS				1.3E-01	1.3E-01	1.0E-02	6.9E-01	9.5E-02	1.6E+00	8.6E-06
OMS										
Service Bay - Heaters	0.100	4	3,435,294	1.3E-02	1.3E-02	1.0E-03	6.9E-02	9.4E-03	1.6E-01	8.6E-07
Service Bay – Surface Coating			112.5 gal.	3.3E-01	-	-	-	9.7E-02	-	-
TOTAL OMS EMISSIONS				3.5E-01	1.3E-02	1.0E-03	6.9E-02	1.1E-01	1.6E-01	8.6E-07
TOTAL EMISSIONS FOR SITE			-	4.8E-01	1.4E-01	1.1E-02	7.6E-01	2.0E-01	1.8E+00	9.5E-06

\*: Unless otherwise noted, source type is space heater, hot water heater, furnace and other external combustion sources.

**TABLE 2-3.**  
**TOTAL ESTIMATED ACTUAL AND POTENTIAL HAP EMISSIONS**

Pollutant	HAP Emissions (ton/yr)	
	Actuals	Potentials
Arsenic Compounds	9.1E-08	3.5E-06
Beryllium Compounds	5.4E-09	2.1E-07
Cadmium Compounds	5.0E-07	1.9E-05
Chromium Compounds	6.3E-07	2.4E-05
Cobalt Compounds	3.8E-08	1.5E-06
Lead Compounds	2.3E-07	8.6E-06
Manganese Compounds	1.7E-07	6.6E-06
Mercury Compounds	1.2E-08	4.5E-07
Nickel Compounds	9.5E-07	3.6E-05
Selenium Compounds	1.1E-08	4.1E-07
Benzene	9.5E-07	3.6E-05
Dichlorobenzene	5.4E-07	2.1E-05
Formaldehyde	3.4E-05	1.3E-03
Hexane	8.2E-04	3.1E-02
Naphthalene	2.8E-07	1.1E-05
Polycyclic Organic Matter (POM)	4.0E-08	1.5E-06
Toluene	5.8E-04	2.5E-03
Ethylbenzene	1.3E-03	3.8E-02
Xylene	7.4E-03	3.1E-02
Glycol Ethers	9.1E-04	3.8E-03
<b>TOTAL</b>	<b>1.1E-02</b>	<b>1.1E-01</b>

Notes and Assumptions:

- 1) Potential emissions from the space and water heaters were calculated by assuming that each of these sources has the potential to operate on a continuous basis throughout the entire year (i.e., 24 hr/day, 7 day/week, and 365 day/yr for a total of 8,760 hr/yr).
- 2) When estimating actual emissions from surface coating and miscellaneous chemical/solvent use, and fueling operations, it is assumed that they occur during a normal year-round, single shift schedule of 8 hr/day, 5 day/week for a total of 2080 hr/yr. When estimating potential emissions from these sources, we assume a year-round, three shift schedule of 8 hr/day, 7 day/wk for a total of 8760 hr/yr. Therefore, potential emissions from these sources are calculated by multiplying the actual emissions by a factor of 4.21 (8760/2080). For example, if 30 gallons of paint are used per year, then potential paint use is (8760/2080)\*30 gal/yr.
- 3) Equipment that is never used will not contribute to the estimate of actual emissions; however, for Title V permitting purposes the potential to emit from such equipment must be included. If the equipment is capable of operation the potential emissions will be calculated whenever possible. Equipment that does not work has not been treated as a source, and has been excluded from the emissions inventory.
- 4) Emissions for equipment classified, as non-road engines are not included in the summary

tables above. Generators used exclusively for annual training offsite have been treated as non-road engines.

- 5) Emissions from welding were considered negligible  $<0.1$  lb/yr due to the very small quantity of welding rod used.
- 6) Emissions from the tactical haulers and fuel pods used in the field were not calculated due to the lack of accurate fuel data. However, emissions for annual training that occurs a limited number of times per year will be insignificant.

## SECTION 3.0 COMPLIANCE STATUS AND STRATEGY

A review of air quality rules as they pertain to the California Crossing Armory and OMS is summarized in this section along with strategies to maintain or achieve future compliance.

### 3.1 FACILITY WIDE REQUIREMENTS

The various standards applicable to the entire facility and cited by the rule number are given below. In addition, the relevance of the rules to the California Crossing Armory and OMS are discussed.

**Section 101.10:** In ozone non-attainment areas emission inventory rules apply to all major sources and to sources whose actual emissions are equal or more than 10 tpy of VOC, 25 tpy of NO<sub>x</sub> or 100 tpy of CO. The rule also applies to any source in an attainment area that emits 100 tpy or more of any criteria pollutant or VOC, and to any major source of hazardous air pollutants (HAPs). The rules require the submission of an initial emissions inventory and annual updates.

Emissions at the Armory and OMS are below those quoted in the above standard. Thus, Section 101.10 is not applicable.

**Section 112.3:** Net ground level concentrations of SO<sub>2</sub> are not to exceed 0.4 parts per million by volume (ppmv), averaged over a 30-minute period. In Galveston or Harris counties the limit is 0.28 ppmv, and in Jefferson or Orange Counties the limit is 0.32 ppmv.

GEOMET is unable to determine if the California Crossing Armory and OMS complies with the relevant standard unless ambient monitoring or detailed dispersion modeling are carried out. These tasks are beyond the scope of work under the current contract. However, because of the small quantities of SO<sub>2</sub> emitted from the site, it is likely that the standard is not being exceeded.

**Section 111.111:** No person may cause, suffer, allow, or permit visible emissions from any source, except as follows. For stationary vents visible emissions should not exceed 30% opacity shall not exceed 30% averaged over a six-minute period. If the source was constructed after January 31, 1972 opacity shall not exceed 20% averaged over a six-minute period.

GEOMET is unable to determine if the California Crossing site complies with relevant standard unless visual opacity tests (Test Method 9 40 CFR 60, Appendix A) are performed. Typically if fuel -burning equipment similar to what is found at the Armory is well maintained and operated properly opacity standards such as those above should be met.

### 3.2 SOURCE CATEGORY - SPECIFIC REQUIREMENTS

The specific standards that apply to space heaters at California Crossing (cited by rule number) and their relevance are discussed below.

Section 116.110 states that "Before any actual work is begun on the facility, any person who plans to construct any new facility or to engage in the modification of any existing facility which may emit air contaminants into the air of this state shall either:

- ☐ obtain a permit under §116.111 of this title (relating to General Application);
- ☐ satisfy the conditions for a standard permit;

- ❑ satisfy the conditions for a flexible permit;
- ❑ satisfy the conditions for facilities permitted by rule under Chapter 106; or
- ❑ satisfy the criteria for a *de minimis* facility or source under §116.119”

The California Crossing site does not qualify for *de minimis* exemption from New Source Review permit requirements under TAC 30 §116.119. This is because the facility has sources, such as combustion units, that are not automatically exempted as *de minimis* sources. TCEQ’s *de minimis* facilities list includes domestic heating equipment and water heaters. The heating equipment at the California Crossing site does not meet the definition of ‘domestic’ equipment, and hence does not qualify as *de minimis*.

The *de minimis* rule is based upon **contaminant specific** site-wide uncontrolled emissions. In general, if a facility does not qualify for *de minimis* status, none of the air emission sources at that facility can qualify as *de minimis*. However, VOC components from aerosol coating operations are different from VOC components emitted from combustion sources. As a result, a facility can use a combination of the one line PBR (i.e. for space heaters) and use *de minimis* as per 30 TAC §116.119 for other sources such as aerosol spray painting.

Source category-specific permits by rule are described in Chapter 106. When the sources meet the conditions of a given permit by rule, the source is not required to have a construction permit. Permits by rule and other regulatory requirements that apply to all sources at the California Crossing site are discussed below.

#### Surface Coating – Aerosol Spray Can Use

**TAC 30 §116.119(a)(2)(B):** Coating operations (excluding plating materials) that do not use quantities that exceed 100 gallons per year are exempt as *de minimis* sources. The annual use of aerosol coatings at the California Crossing site is well below this limit, and the operations can therefore be classified as *de minimis*.

#### Space Heaters

**TAC 30 §106.102 (PBR 106.102):** Combustion units designed and used exclusively for comfort heating purposes employing liquid petroleum gas, natural gas, or solid wood as fuel. Combustion of bark chips, sawdust, wood chips, treated wood, or wood contaminated with chemicals is not included.

The space heaters at the California Crossing site meet the permit by rule conditions.

#### Internal Combustion Engines

**TAC 30 §106.511 (PBR 106.511):** Internal combustion (IC) engine and gas turbine driven compressors, electric generator sets, and water pumps, used only for portable, emergency, and/or standby services, provided that the maximum annual operating hours shall not exceed 10% of the normal annual operating schedule of the primary equipment; and all electric motors. (For purposes of this exemption "standby" means to be used as a "substitute for," and not "in addition to" other equipment.)

The generators at the California Crossing site are portable, and therefore meet these conditions.

### Welding

**TAC 30 §106.227:** Brazing, soldering, or welding equipment, except those which emit 0.6 ton per year or more of lead, are permitted by rule. The welding activities at the California Crossing site qualify for this exemption.

### Storage Tanks

**TAC 30 §115.112 to §115.169:** These rules apply to VOC sources such as storage of volatile organic compounds, vent gas control, and municipal solid waste landfills. Of these, only the storage of VOC is relevant to the California Crossing Armory and OMS.

**Section 115.112:** These rules apply to the control of VOCs from the storage of volatile organic compounds. However, sources meeting specific conditions (as per rule 115.117) are exempt from such requirements.

**Section 115.117:** Various exemptions are listed. However, the exemption that applies at the California Crossing site is as follows: storage containers with a capacity of less than 25,000 gal. are exempt.

## **3.3 COMPLIANCE STRATEGY**

The California Crossing Armory and OMS is not a major source of any criteria pollutant or VOC. It is not a major source of any hazardous air pollutant either. No emissions source is out of compliance with applicable regulations. Even though the site is located in a serious non-attainment area, because of its size (very low potential emissions) it is not likely to become a major source in the foreseeable future, even with moderate growth. However, periodically the air compliance personnel are advised to check the site for equipment/operation changes that could result in permitting requirements or changes.



## SECTION 4.0 SAMPLE CALCULATIONS

### External Combustion (Natural Gas) Example Calculation

Note: This example calculation is applicable to all external combustion sources (space/hot water heaters) found at the California Crossing Armory.

Data: Natural gas fired space heater, located in the Kitchen Closet  
Rated capacity: 0.180 MMBtu/hr, Annual fuel usage: 40,584 ft<sup>3</sup>/yr

#### Emission Factors:

The following reference was used to obtain emission factors for the heaters:

U.S. Environmental Protection Agency. Office of Air Quality Planning and Standards. *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and the Area Sources*. (AP-42). Fifth Edition. Research Triangle Park, NC, 1985-2000.

For the purpose of selecting appropriate emission factors, external combustion sources (i.e., heaters, furnaces, boilers) are categorized by the heat input capacity of the unit with the following categories:

<u>Combustor Type</u>	<u>Heat Input Capacity (MMBtu/hr)</u>
Large Boiler	> 100
Small Boiler	0.3 - 100
Residential Furnace	< 0.3

The rated capacity of 180,000 Btu/hr places this boiler in the residential furnace category. The appropriate VOC and criteria pollutant emission factors for this fuel type and furnace size were taken from Tables 1.4-1 and 1.4-2 of AP-42.

Total Particulate	7.6 lb/10 <sup>6</sup> cubic feet
Particulate <10 microns	7.6 lb/10 <sup>6</sup> cubic feet
Sulfur Dioxide	0.6 lb/10 <sup>6</sup> cubic feet
Carbon Monoxide	40 lb/10 <sup>6</sup> cubic feet
Nitrogen Oxides	94 lb/10 <sup>6</sup> cubic feet
VOCs (non-methane)	5.5 lb/10 <sup>6</sup> cubic feet
Lead	0.0005 lb/10 <sup>6</sup> cubic feet

HAP emission factors (not shown) were taken from Tables 1.4-3 and 1.4-4 of AP-42.

#### Sample Calculation:

The following sample calculation illustrates the use of the emission factors:

Emissions (lb/yr) = emission factor (lb/10<sup>6</sup> ft<sup>3</sup>) \* fuel usage (10<sup>6</sup> ft<sup>3</sup>/yr) \* number of identical units

#### Non-methane VOC Emissions:

VOC (lb/yr) = (5.5 lb/10<sup>6</sup> ft<sup>3</sup>) \* (40,584 ft<sup>3</sup>/yr) \* 1

VOC (lb/yr) = 0.2232 lb/yr

VOC (ton/yr) = 0.2232 (VOC lb/yr) / 2000 (lb/ton) = 1.1E-04 ton/yr

The other pollutants (including HAPs) are calculated in the same manner as shown above.

## Painting Operations Example Calculation

Data: 5.9 gal/yr paint (15 oz can x 50 cans/year x 1 gal/128 oz), paint density = 6.21 lb/gal.  
Volatiles= 54.3 percent (wt.). Pigment= 45.7 percent (wt.)  
HAPs: Ethylbenzene 4 percent. Xylene 23 percent, Glycol ether 5 percent.  
(physical property and HAP data taken from a sample MSDS)

### Emission Factors:

Emission factors are not used. Instead, engineering calculations, based on information obtained from the MSDS and from the inventory, are used to estimate emissions. This sample calculation demonstrates the method of emission calculations from aerosol spray paint cans.

### Sample Calculations:

- 1) Paint usage (lb/yr) = paint (gal/yr) \* density of paint (lb/gal)  
Paint usage (lb/yr) = 5.86 gal/yr \* 6.21 lb/gal  
Paint usage (lb/yr) = 36.390 lb/yr
- 2) VOC emissions (lb/yr) = paint usage (lb/yr) \* volatiles composition  
VOC emissions (lb/yr) = 36.390 lb/yr \* 0.543  
VOC emissions (lb/yr) = 19.76 lb/yr
- 3) Ethylbenzene emissions = paint usage (lb/yr) \* Ethylbenzene composition (%)  
Ethylbenzene emissions = 36.390 lb/yr \* 0.04  
Ethylbenzene emissions = 1.455 lb/yr  
(All other HAP emissions are calculated in a similar fashion)
- 4) Total suspended particulate (TSP) emissions (lb/yr)= usage (lb/yr) \* pigment composition(%)  
TSP emissions (lb/yr) = 36.390 lb/yr \* 0.457  
TSP emissions (lb/yr) = 16.631 lb/yr  
TSP emissions (ton/yr) = TSP emissions (lb/yr) \* 1 ton/2000 lb  
TSP emissions (ton/yr) = 16.631 lb/yr \* 1 ton/2000 lb = 0.0083

## **Appendix E**

### **ERP Site Information**



## DEPARTMENT OF THE AIR FORCE

7TH CIVIL ENGINEER SQUADRON (ACC)

710 3RD STREET

DYESS AIR FORCE BASE TEXAS 79607-1670

11 May 2007

Ms. Kelly Cook  
Texas Commission on Environmental Quality  
MC172  
P.O. Box 13087  
Austin, Texas 78711-3087

Dear Ms. Cook:

This letter is being submitted in response to a letter received from Mr. Jack Colley, Chief of the Texas Division of Emergency Management dated November 22, 2006, addressed to Mr. Mike Jones, Air Combat Command (ACC) (Attachment 1). The letter requests a review of Installation Restoration Program (IRP) sites subject to institutional controls including post-closure maintenance and their potential effect on the property proposed for construction of a new Armed Forces Reserve Center at Dyess Air Force Base (AFB) as recommended by the Base Realignment and Closure (BRAC) Commission.

A thorough review of the Environmental Restoration Program (ERP) sites on Dyess AFB was conducted as part of the Environmental Assessment (EA) process. The review found that based on existing records, none of the ERP sites are shown to impact the quality of the soil or groundwater on or beneath the subject property.

A map of the forty-four ERP sites identified on Dyess AFB is included for reference (Attachment 2). The subject property where the Armed Forces Reserve Center will be constructed is an empty lot located east of sites SD-29, OT-37, OT-30, SD-30, and ST-10. These sites are described as follows:

- SD-29: Oil/water separator (OWS) associated with Building 8007
- OT-37: Drum storage area at Building 8008
- OT-30: Drum storage area at Building 8009
- SD-30: Two OWSs associated with Building 8015
- ST-10: UST south of Building 8016

Sites SD-29, OT-37, and OT-30 were investigated and closed with no further action planned.

Site SD-30 (SWMU 28) is an oil water separator site. Two identical oil/water separators (OWSs) served this building and were located adjacent to the north and south sides of the building. The southern OWS was removed and the northern OWS was abandoned in place. Semi-annual groundwater monitoring for total VOCs, SVOCs, and metals is conducted for this site.

Site ST-10 (SWMU 5) is a leaking underground storage tank site located on the south side of Building 8016. The UST was removed in 1988. The excavation was backfilled with clean fill and covered with an asphalt cap. The asphalt cap is maintained at this site and semi-annual groundwater monitoring is conducted for VOCs, SVOCs, and metals.

Potentiometric surface maps (Attachments 3 and 4) prepared for sites SD-30/ST-10 indicate the groundwater flow direction is to the southeast. The direction of groundwater flow has remained relatively consistent during all 15 rounds of sampling that have been conducted at these sites.

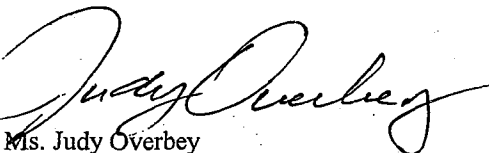
Total VOC and Total SVOC/Metals plume maps are also attached for these two sites (Attachments 5 and 6). These maps indicate groundwater contamination is limited in extent. Monitoring wells MW-206 and MW-207, located

*Global Power For America*

southeast of these sites, have historically been non-detect for these contaminants. In addition, comparison of the January 2000 and July 2006 total VOC plume isopleths indicate an overall decrease in the total concentration and extent of the plume and a significant decrease in total VOC concentrations. Neither site appears to have impacted the subject property.

Please contact me at (325) 696-6454 should you require any further information regarding this matter.

Sincerely,



Ms. Judy Overbey  
Environmental Restoration Program (ERP) Manager  
Dyess Air Force Base Texas

Attachments:

1. Letter from Chief of Governor's Division of Emergency Management dated November 22, 2006
2. Dyess ERP Site Map -- December 2005
3. Potentiometric Surface Map -- January 2000
4. Potentiometric Surface Map -- January 2007
5. Total VOC Map -- January 2007
6. Total SVOC Map -- January 2007



**DIVISION OF EMERGENCY MANAGEMENT**  
**Office of the Governor**

**RICK PERRY**  
Governor

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**STEVEN McCRAW**  
Director  
Office of Homeland Security

**JACK COLLEY**  
Chief

November 22, 2006

Mr. Mike Jones  
Project Manager  
ACC/A7ZP  
Department of the Air Force  
Headquarters Air Combat Command  
129 Andrews Street, Suite 102  
Langley AFB, VA 23665-2969

Dear Mr. Jones:

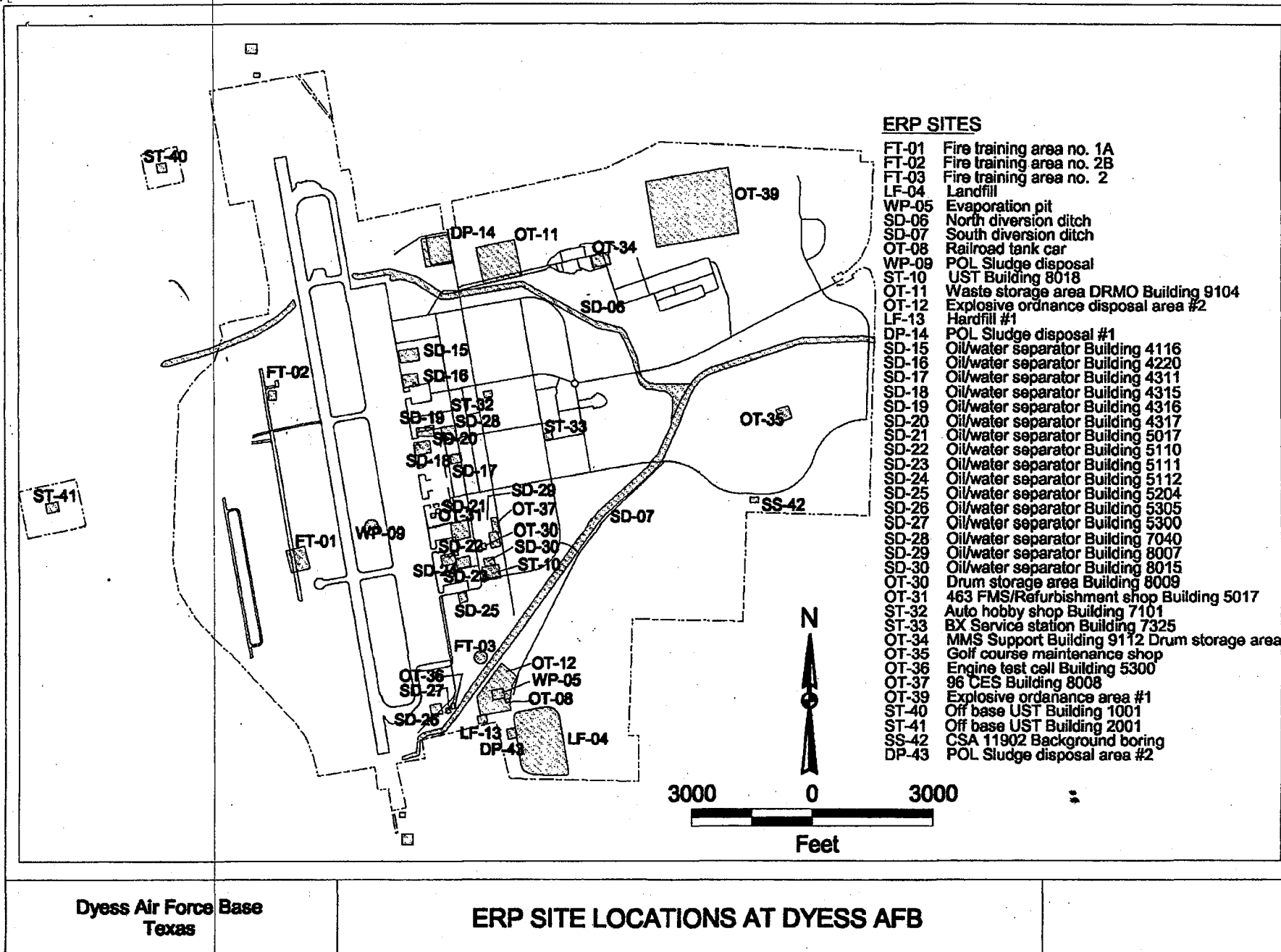
With regard to the Environmental Assessment (EA) of potential impacts for the relocation of B Company of the 413<sup>th</sup> Civil Affairs Battalion and the Area Maintenance Support Activity 11 Sub-Shop to a new Armed Forces Reserve Center on Dyess AFB, TX, I have the following comments:

- 1) Request that a review of the Dyess AFB Installation Management Plan be conducted to check the location of Installation Restoration Program (IRP) sites subject to institutional controls, including post-closure maintenance when choosing the site of the Armed Forces Reserve Center and provide the results to the Texas Commission on Environmental Quality (TCEQ), Attn: Kelly Cook, MC172, P.O. Box 13087, Austin, Texas 78711-3087.
- 2) With these controls and processes in place, a significant environmental impact is not anticipated by the State of Texas, at this time, and
- 3) The TCEQ should be notified of the closure and evacuation of the present maintenance facilities to allow the State of Texas the opportunity to monitor the existing facilities for any environmental impact that may be left at the sites from the maintenance unit is moving from.

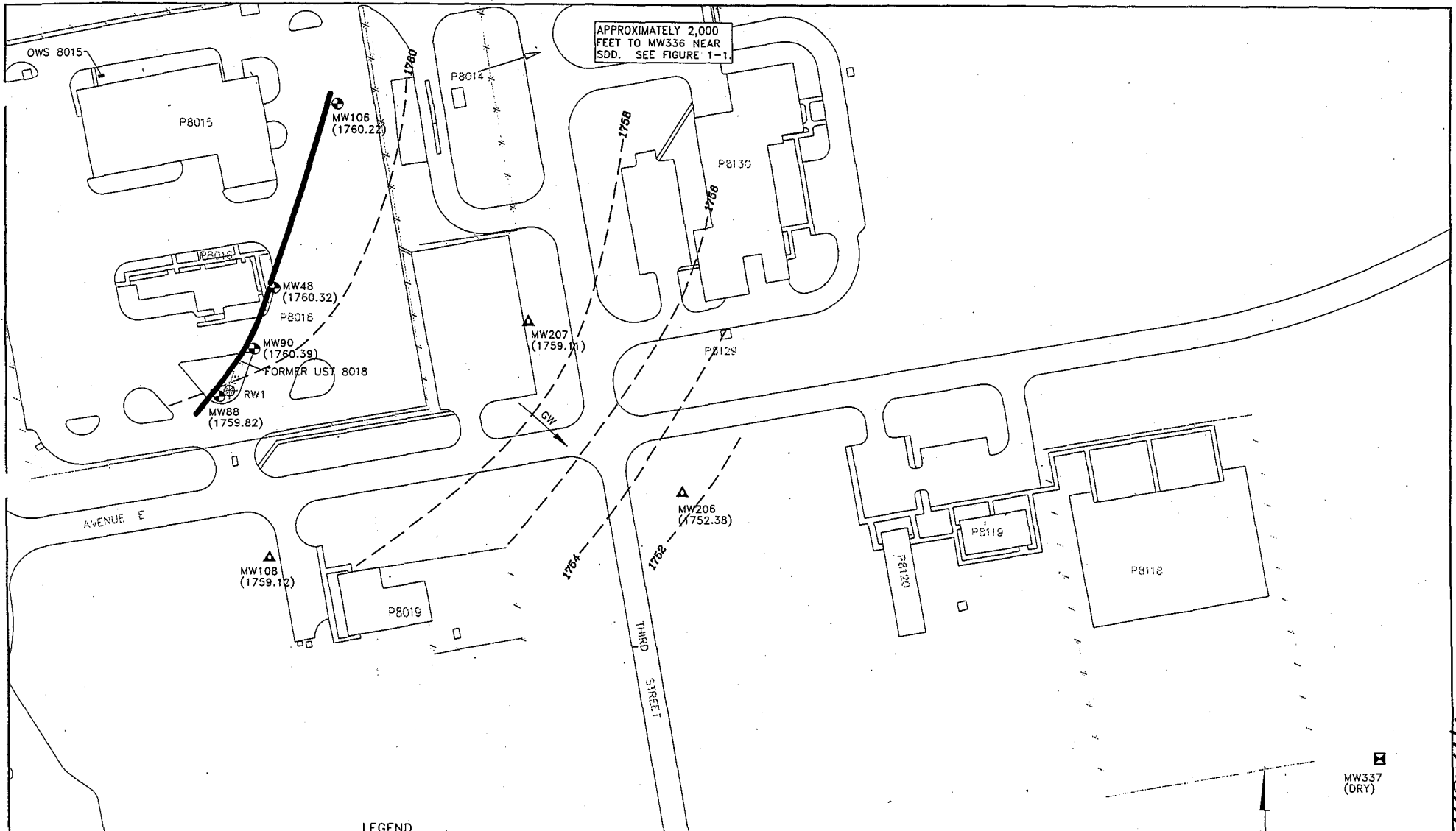
Should you have any questions, please call James H. Ogden, Jr., Supervising Planner – Technological Hazards Group, Governor's Division of Emergency Management, at 512/424-5677, or Kelly Cook, Office of Compliance and Enforcement, Texas Commission on Environmental Quality, at 512/239-0044.

Sincerely,

  
Jack Colley  
Chief



Attachment 2



APPROXIMATELY 2,000  
FEET TO MW336 NEAR  
SDD. SEE FIGURE 1-1.

**LEGEND**

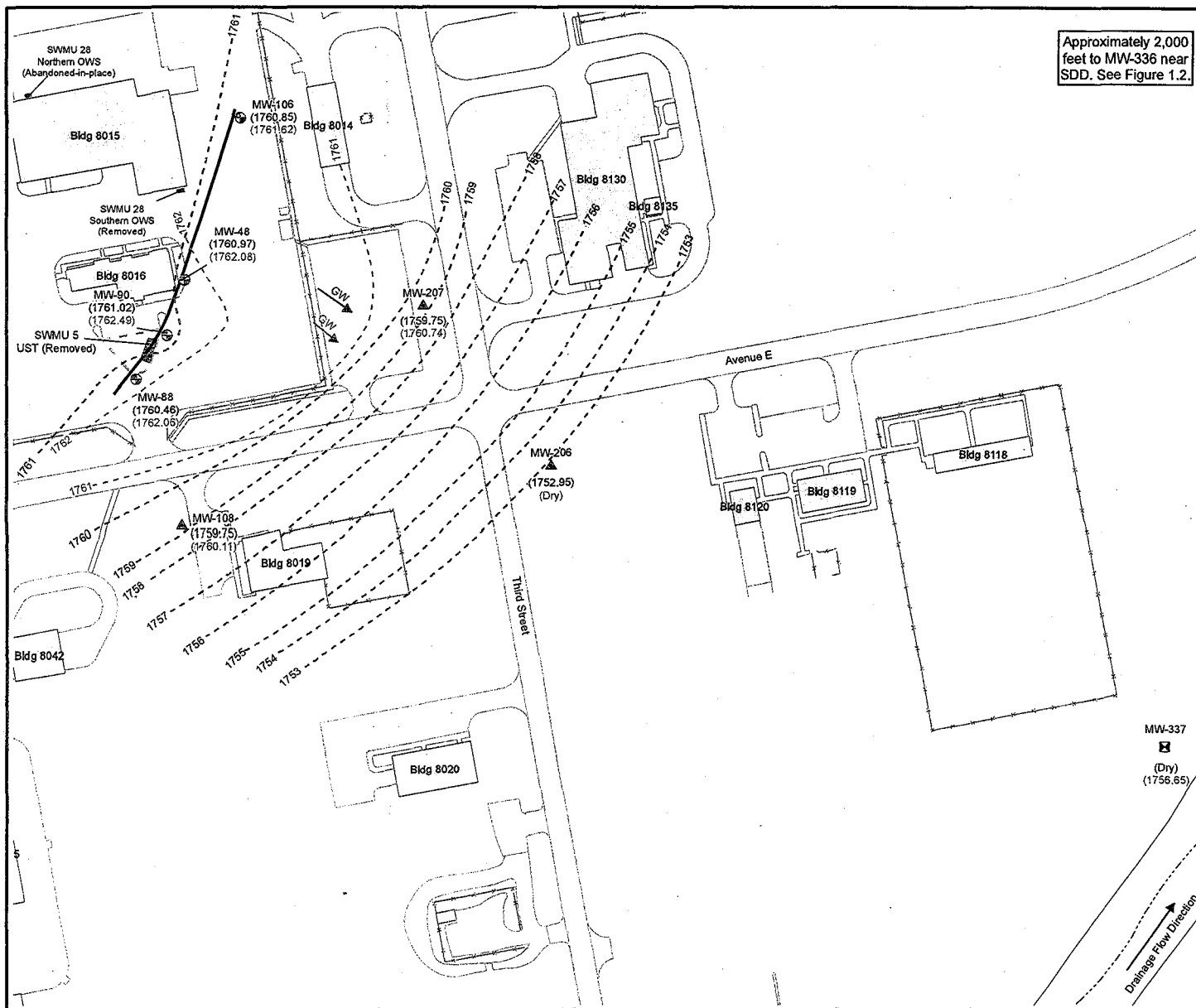
- POINT OF COMPLIANCE WELL
- POINT OF EXPOSURE WELL
- OBSERVATION WELL
- RECOVERY WELL
- OIL/WATER SEPARATOR
- APPROXIMATE SWMU
- POINT OF COMPLIANCE
- FENCE
- GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (01/00)
- DIRECTION OF GROUND-WATER FLOW

DRN BY	DAP	DATE 12/15/99	UST 8018 AND OWS 8015 - SWMU 5/28	PROJECT NO.	FIG. NO.
CHK'D BY	REVISION		POTENTIOMETRIC SURFACE MAP - JANUARY 2000	45-FOM9602W.00	4-2
			DYESS AIR FORCE BASE TEXAS		

May 02, 2000 2:40:21 p.m.  
Drawing: T:\DYESS\2103-SCR\SCR\2\_2-1.DWG (DAP)  
Xrefs: WELLS.DWG SW-BASE.DWG

Attachment 3





HGL—2007 Semi-Annual Groundwater Sampling Report  
Dyess AFB, Texas

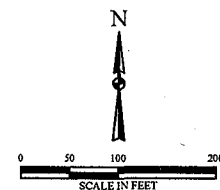
### Figure 3.2 Potentiometric Surface Map UST 8018 and OWS 8015 (SWMU 5/28) January 2007

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#### Legend

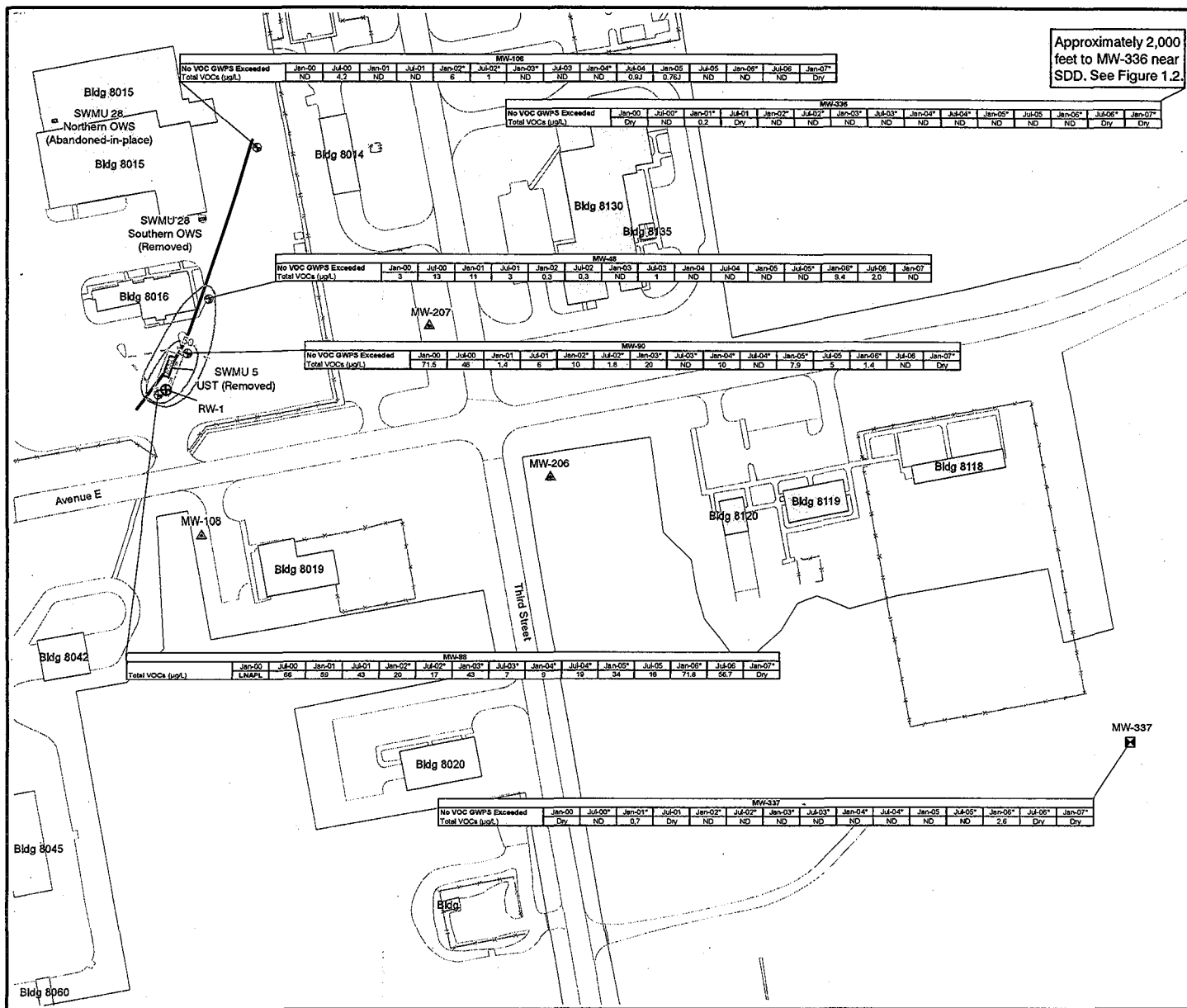
- ⊗ Point-of-Compliance Monitoring Well
- ▲ Observation Well
- ⊠ Point-of-Exposure Monitoring Well
- - - - Potentiometric Surface - Jan 2000
- - - - Potentiometric Surface - Jan 2007
- Groundwater Flow Direction - Jan 2000
- Groundwater Flow Direction - Jan 2007
- - - - Drainage
- - - - Limit of Cap (Asphalt)
- Point-of-Compliance Boundary
- Former OWS (SWMU 28)
- Former UST/Tank Excavation (SWMU 5)



Filename: X:\AFC003\Dyess\_AFB\Maps\2007\_Semi-Annual\_GW\_Sampling\  
SWMU\_5\_Potentiometric\_Surface\_map.mxd  
Project: AFC003-037-03-04-04  
Revised: 01/07/07 PD  
Source: AFCEE



Attachment 4



HGL—2007 Semi-Annual Groundwater Sampling Report  
Dyess AFB, Texas

**Figure 3.3**  
**Total VOC Plume Map**  
**UST 8018 and OWS 8015**  
**(SWMU 5/28)**  
**January 2007**

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**Legend**

- Point-of-Compliance Monitoring Well
- ▲ Observation Well
- ⊕ Recovery Well
- ⊠ Point-of-Exposure Monitoring Well
- Limit of Cap (Asphalt)
- Point-of-Compliance Boundary
- Total VOC Isopleth Contour - Jan 2000 (µg/L)
- Fence
- Former OWS (SWMU 28)
- ▨ Former UST/Tank Excavation (SWMU 5)
- ND Not Detected

**Notes:**

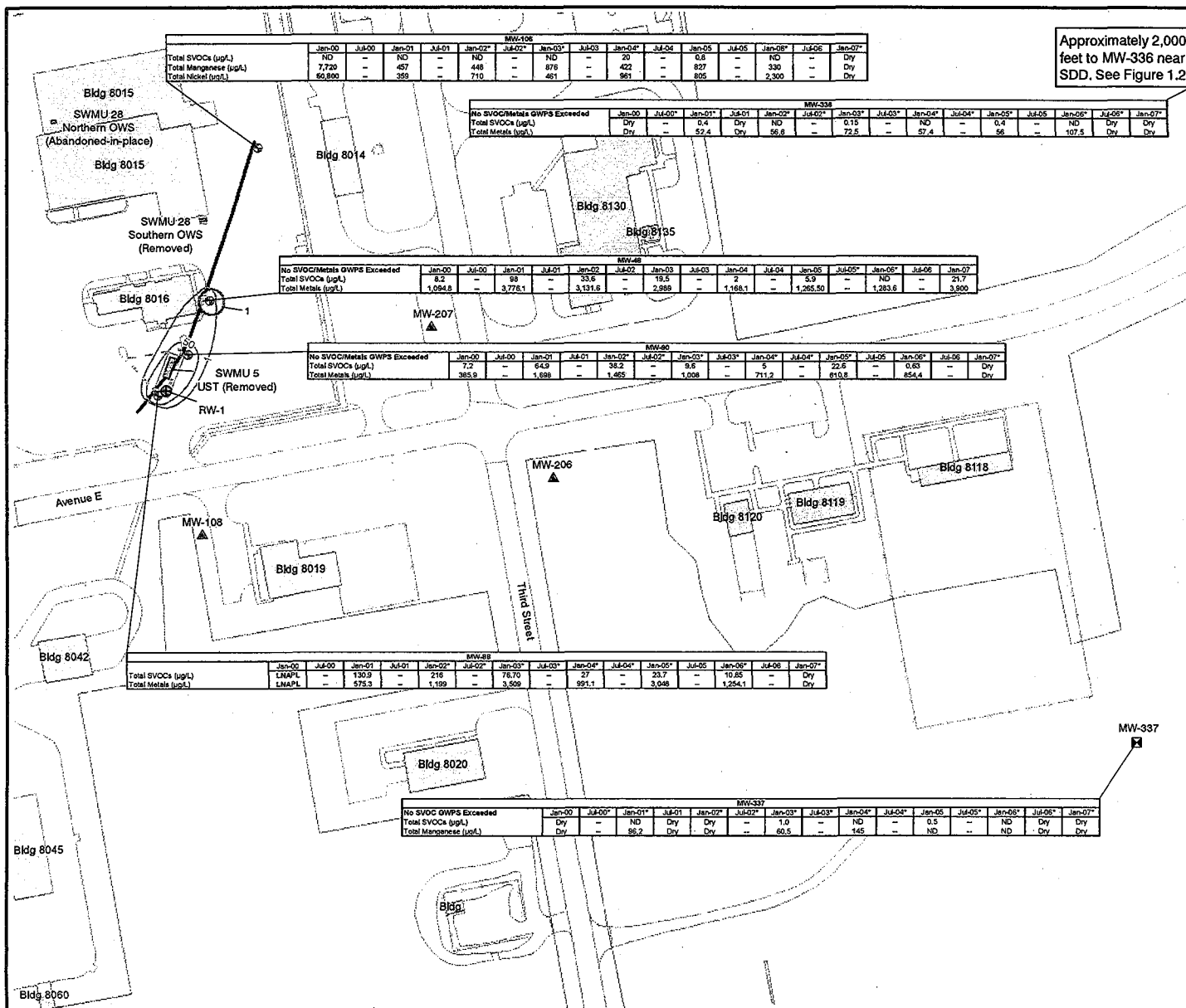
1. Figure includes VOC contours for the first round of sampling (January 2000). No VOCs were detected during the January 2007 sampling event.
2. Results for individual VOC compounds are presented if the GWPS was exceeded at least once.
3. \* - Well production rate estimated to be less than 6 gallons per hour (defined as dry and in compliance per the TCEQ). Prior to July 2006, a sample was collected for qualitative evaluation. After July 2006, a sampling was not conducted and the well was called "Dry."
4. Wells without sample results presented were only used for water level measurements.

0 65 130 260  
SCALE IN FEET

Filename: X:\APC003\Dyess\_AFB\Maps\2007\_Semi-Annual\_GW\_Sampling\  
SWMU\_5\_Total\_VOC\_Plume.mxd  
Project: APC003-037-03-03-04  
Revised: 04/16/07 BE  
Source: AFCEE



Hachment 5



HGL—2007 Semi-Annual Groundwater Sampling Report  
Dyess AFB, Texas

### Figure 3.7 Total SVOC/Metals Plume Map UST 8018 and OWS 8015 (SWMU 5/28) January 2007

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#### Legend

- Point-of-Compliance Monitoring Well
- ▲ Observation Well
- ⊕ Recovery Well
- ⊠ Point-of-Exposure Monitoring Well
- Limit of Cap (Asphalt)
- Point-of-Compliance Boundary
- Total SVOC Isopleth Contour - Jan 2000 (µg/L)
- Total SVOC Isopleth Contour - Jan 2007 (µg/L)
- Fence
- Drainage
- Total SVOC Concentrations > 1 µg/L (Jan 2007)
- Former OWS (SWMU 28)
- Former UST/Tank Excavation (SWMU 5)
- ND Not Detected

#### Notes:

1. Figure includes SVOC contours for the first round of sampling (January 2000) and the most recent SVOC sampling round (January 2007).
2. Results for individual SVOC compounds are presented if the GWPS was exceeded at least once.
3. \* - Well production rate estimated to be less than 6 gallons per hour (defined as dry and in compliance per the TCEQ); prior to July 2006, a sample was collected, after July 2006, a sample was not collected and the well is called "Dry."
4. Analyte concentrations exceeding respective GWPS but not detected in wells unable to sustain a production rate of 6 gallons per hour have been left unbolded, the well is considered to be in compliance.

0 65 130 260  
SCALE IN FEET

Filename: X:\AFC002\Dyess\_AFB\Maps\2007\_Semi-Annual\_GIW\_Sampling\  
SWMU\_5\_Total\_SVOC\_Plume.mxd  
Project: AFC002-037-03-04  
Revised: 04/15/07 BF  
Source: AFCEE



Attachment 6