FINDING OF NO SIGNIFICANT IMPACT

AIRCRAFT WEATHER SHELTER AT LAUGHLIN AFB, TX

AGENCY: United States Air Force (USAF), Air Education and Training Command (AETC), 47th Flying Training Wing, Laughlin Air Force Base (AFB), TX.

BACKGROUND: Currently, certain facilities are undersized, in poor repair, or inaccessible in inclement weather. Construction and demolition projects that will improve base operations, hereafter known as multiple projects, have been identified for these facilities. An aircraft weather shelter will provide much needed protection for millions of dollars worth of USAF assets from the severe weather of southwest Texas.

The USAF conducted an assessment of the potential environmental consequences of the Proposed Action and the No Action Alternative in accordance with (IAW) the Air Force environmental impact analysis process (EIAP) as set forth in the Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*, that states the USAF will comply with applicable federal, state, and local environmental laws and regulations, to include NEPA. NEPA is covered by the *Environmental Impact Analysis Process,*32 CFR Part 989, as amended, and the Department of Defense (DoD) Instruction 4715.9, *Environmental Planning and Analysis*.

PROPOSED ACTION: The 47th Flying Training Wing (FTW) desires to construct an Aircraft Weather Shelter to improve the ability of Laughlin AFB (LAFB) to protect its aircraft from severe weather. Extreme weather in the form of softball-sized hail caused significant damage to the training fleet at Laughlin AFB. In order to protect T-6 aircraft from damage during future events, a weather shelter designed to provide protection from hail is recommended. The proposed construction is for 90,000 square foot (sf) weather shelter to house the new T-6 aircraft.

SUMMARY OF FINDINGS: The following paragraphs summarize the findings of the attached environmental assessment for the Proposed Action and No Action Alternative.

Noise. The primary source of noise at Laughlin AFB will continue to be from aircraft operations. The primary source of noise from implementation of the Proposed Action will be generated by construction equipment and vehicles involved in site preparation, foundation preparation, and construction and finishing work. Noise related to the construction will be intermittent and short-term in duration. Outdoor noise from construction activity at an occupied building 50 feet from a construction or demolition site could be as high as 75 to 88 dB. The nearest sensitive receptor is approximately 0.4 miles from the site. Noise from flying activities would tend to mask the noise generated

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14. ABSTRACT
This EA examines the proposed construction of an aircraft weather shelter. This action would provide a facility that is considered necessary to protect Laughlin's aircraft from severe weather damage. This EA evaluates the Proposed Action and the No Action Alternative. Resources considered in the impact analysis were: noise, land use, air quality, infrastructure and utilities surface water, earth resources, economics, and hazardous materials and wastes. No significant impacts would result from the Proposed Action or the No Action Alternative.

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by construction projects for the same exposure area. Therefore, noise impacts from the implementation of the Proposed Action are not considered significant.

Land Use. No changes in land use categories will be required.

Air Quality. The largest net short-term increase over baseline emissions for criteria pollutants is 0.16 percent for particulate matter equal to or less than 10 microns in diameter (PM_{10}), with net increases for all other pollutants being less than 4.7 percent. The construction-related emissions would be temporary and would be eliminated after the projects are completed. The construction phase emissions fall below the 10 percent level that would be considered regionally significant by the U.S. Environmental Protection Agency if the region were non-attainment for any of the criteria pollutants; however, the area is attainment. Therefore, the air emission impacts from the implementation of the Proposed Action are not considered significant.

Infrastructure and Utilities. The infrastructure and utilities have adequate capacity to accommodate planned activities. The one-time disposal of construction debris from the project would represent a total of 0.04 percent decrease in the remaining capacity of the landfill, and an approximate 2-day decrease in the expected life of the landfill. Traffic congestion during the construction projects at Laughlin AFB could occur; however, the congestion would be short term, and would cease upon completion of the projects. A Notice of Intent under the USEPA Storm Water, Phase II regulations would be required. Infrastructure and utilities impacts from the implementation of the Proposed Action are not considered significant.

Surface Water. The proposed construction would be within the developed regions of the base. The addition of impervious cover would increase by 0.63 percent at Laughlin AFB These increases would not be expected to noticeably change the total volume or quality of storm water runoff. Existing storm water system capacity could accommodate this increase. Construction site runoff would not be expected to impact surface water resources. Surface water impacts from the implementation of the Proposed Action are not considered significant.

Earth Resources. Construction activity would occur within areas where the physiography and geology have previously been disturbed and modified by prior construction. Therefore, earth resources impacts from the implementation of the Proposed Action are not considered significant.

Hazardous Materials and Wastes, and Pollution Prevention. Construction contractors would be responsible for their hazardous material (HM) used during the project and would be managed in accordance with the HM Management Plan of the base. Any hazardous waste (HW) generated as a result of the proposed demolition activities would be handled by the construction contractor in accordance with applicable Texas Commission on Environmental Quality regulations and the Laughlin AFB HW Management Plan. HM purchases, HW generation, and solid waste generation from the construction would not prevent the base from achieving its pollution prevention goals.

Asbestos and Lead-Based Paint. Asbestos-containing material (ACM) is not expected to be encountered during the construction of the aircraft weather shelter; therefore, ACM is considered not significant. Since there has not been a comprehensive survey to determine the use of lead-based paint (LBP) at Laughlin AFB it is assumed that all facilities constructed prior to 1978 possibly contain LBP. Therefore, there could be the possibility of encountering LBP coatings on pipe fittings and structures associated with the utility systems. Based upon the minimal construction operations that would involve utilities, LBP is not considered significant.

Installation Restoration Program (IRP). A waiver has been granted from HQ AETC/CE for the construction of the Proposed Action on or near ERP Site SS17. Therefore, IRP considerations are not considered significant.

FINDING OF NO SIGNIFICANT IMPACT: Based on the requirements of NEPA, CEQ, and 32 CFR Part 989, I conclude that the environmental effects of the Proposed Action are not significant, and therefore, an environmental impact statement will not be prepared.

29 Jun 04

RICHARD KEITH TRASTER, Colonel, USAF **Date**
Vice Commander

COVER SHEET

Cover Sheet

Proposed action:	Construct Aircraft Weather Shelter.
Type of statement:	Draft EA (Environmental Assessment)
Lead agency:	Department of the Air Force, 47th Flying Training Wing, Laughlin Air Force Base (AFB), Texas
For further information:	47 CES/CEVN Attn: 2d Lt Letha Manning 251 Fourth Street Laughlin AFB, TX 78840-2719 COMM (830) 298-4298 DSN 732-4298
Abstract:	This EA examines the proposed construction of an aircraft weather shelter. This action would provide a facility that is considered necessary to protect Laughlin's aircraft from severe weather damage. This EA evaluates the Proposed Action and the No Action Alternative. Resources considered in the impact analysis were: noise, land use, air quality, infrastructure and utilities, surface water, earth resources, economics, and hazardous materials and wastes. No significant impacts would result from the Proposed Action or the No Action Alternative.

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ACRONYMS AND ABBREVIATIONS

ACRONYMS AND ABBREVIATIONS

These acronyms include those used in the 2000 environmental assessment *for Multiple Construction and Demolition Projects, Laughlin AFB, TX* as well as those specific to this document.

ACM	Asbestos Containing Material
AETC	Air Education and Training Command
AFB	Air Force Base
AFI	Air Force Instruction
AOC	Area of concern
AQCR	Air quality control region
Btu	British thermal unit
BMPs	Best management practices
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
CAA	Clean Air Act
CE	Civil Engineering
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CES/CEV	Civil Engineering Environmental Flight
CFR	Code of Federal Regulations
CO	Carbon monoxide
cy	Cubic yard
CY	Calendar Year
DASR	Digital Airport Surveillance Radar
dB	Decibel
dBA	A-weighted (dB) sound levels
DERP	Defense Environmental Restoration Program
DNL	Day-night average sound level
DoD	Department of Defense
DoDD	Department of Defense Directive
DRMO	Defense Reutilization and Marketing Office
EA	Environmental assessment
EIAP	Environmental impact analysis process
EIS	Environmental impact statement
EO	Executive Order
EPA17	USEPA Industrial Toxics Program
EPCRA	Emergency Planning and Community Right-to-Know Act
F	Fahrenheit
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FOD	Foreign Object Debris
FONSI	Finding of No Significant Impact
Ft^2	Square foot/square feet
FTS	Flying Training Squadron

ACRONYMS AND ABBREVIATIONS
(...continued)

FTW	Flying Training Wing
FY	Fiscal year
gpm	Gallons per minute
HM	Hazardous materials
HMMP	Hazardous Materials Management Plan
HQ	Headquarters
HSWA	Hazardous and Solid Waste Amendments
HVAC	Heating, ventilating, and air conditioning
HW	Hazardous waste
HWMP	Hazardous Wastes Management Plan
IRP	Installation Restoration Program
JPATS	Joint Primary Aircraft Training System
kWh	Kilowatt hours
LBP	Lead-based paint
L_{eq}	Equivalent sound level
Lp	Sound pressure level
mcf	Thousand cubic feet
MILCON	Military Construction
mmBtu	Million British thermal units
MSL	Mean sea level
MSW	Municipal solid waste
MWH	Megawatt hours
N_2O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NLR	Noise Level Reduction
NO	Nitric oxide
NO_2	Nitrogen dioxide
NOI	Notice of Intent
NO_X	Nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	Ozone
ODS	Ozone-depleting substance
OG	Operations Group
OSHA	Occupational Safety and Health Act
PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethylene
P2MAP	Pollution Prevention Management Action Plan
Pb	Lead
PM10	Particulate matter with an aerodynamic diameter less than or equal to 10 micrometers

PPMP	Pollution Prevention Management Plan
PPP	Pollution prevention program
psig	Pounds per square inch (gage)
QD	Quantity Distance
RCRA	Resource Conservation and Recovery Act
RSU	Runway supervisory unit
SARA	Superfund Amendments and Reauthorization Act
SIP	State Implementation Plan
SO_2	Sulfur dioxide
SO_X	Sulfur oxides
SUPT	Specialized Undergraduate Pilot Training
TCE	Trichloroethylene
TCEQ	Texas Commission on Environmental Quality
TPDES	Texas Pollutant Discharge Elimination System
TPWD	Texas Parks and Wildlife Department
TPH	Total Petroleum Hydrocarbons
tpy	Tons per year
TSCA	Toxic Substances Control Act
TSP	Total suspended particulates
USC	United States Code
USEPA	United States Environmental Protection Agency
UST	Underground storage tank
VOC	Volatile organic compound

CHAPTER 1

PURPOSE OF AND NEED FOR PROPOSED ACTION

1.0 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

This chapter includes a statement of the purpose of and need for the Proposed Action, the location of the Proposed Action, a statement of the decision to be made, a summary of the scope of the environmental review, a listing of applicable regulatory requirements, and an overview of the organization of this EA.

1.1 Proposed Project Explanation

The 47th Flying Training Wing (FTW) desires to construct an Aircraft Weather Shelter to improve the ability of Laughlin AFB (LAFB) to protect its aircraft from severe weather. Extreme weather in the form of softball-sized hail caused significant damage to the training fleet at Laughlin AFB. In order to protect T-6 aircraft from damage during future events, a weather shelter designed to provide protection from hail is recommended. The proposed construction is for 90,000 square foot (sf) weather shelter to house the new T-6 aircraft.

Laughlin AFB is located in Val Verde County, approximately 6 miles east of Del Rio, Texas. Figure 1.1 shows the location of Laughlin AFB. The proposed construction site at Laughlin is located near the flight line, west of Arnold Street, north of Building 414, and southeast to the old Fire Training Area. Figure 1.2 shows the location of the weather shelter on LAFB.

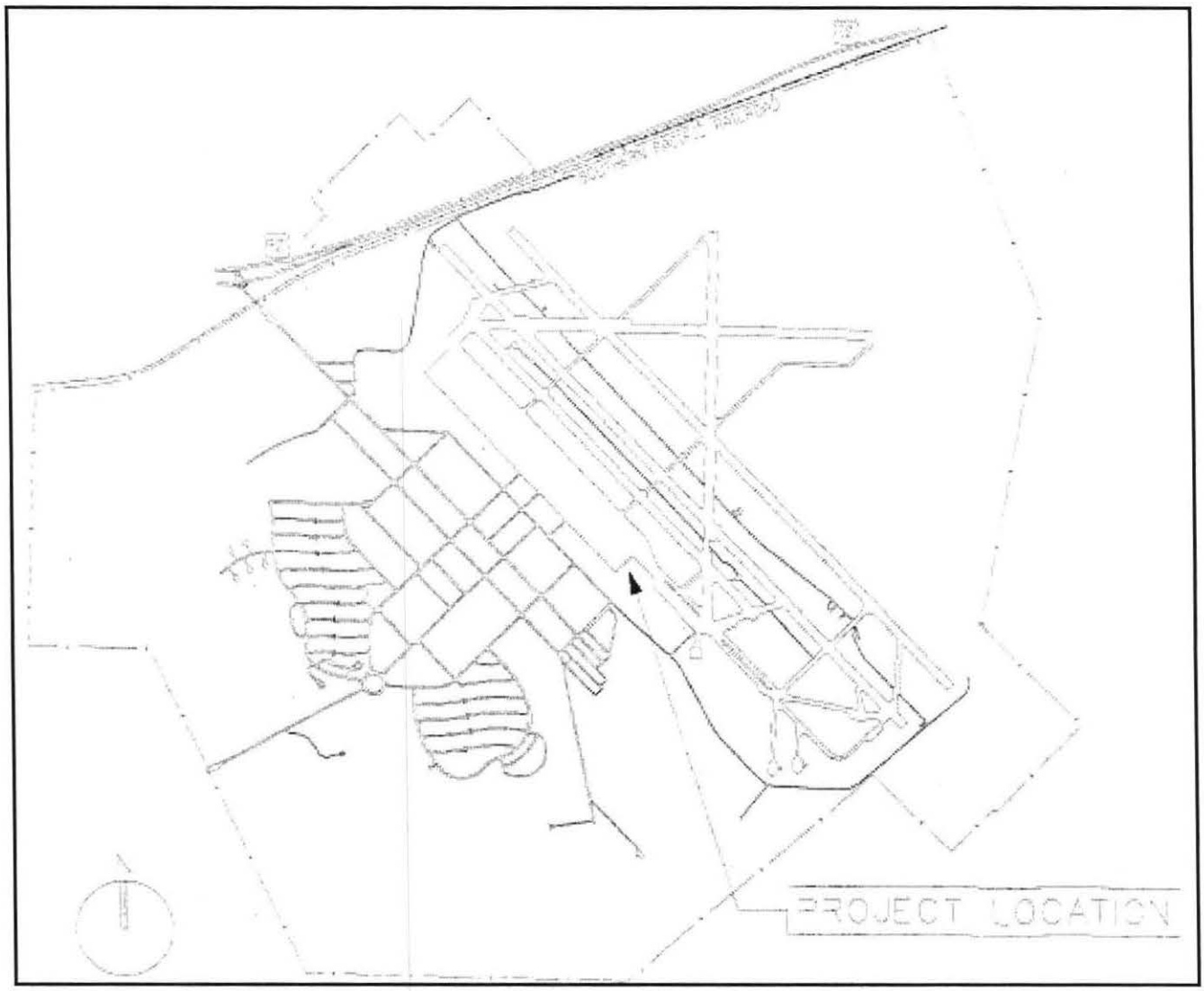
1.2 Summary of the Need for the Proposed Action

Adequate hangar space to store Laughlin's assigned aircraft does not exist at LAFB. Historically, the local area is impacted by hailstorms on the average of two to three per year with a severe storm developing baseball size hailstones every five years. On 7 April 2002, a severe hailstorm caused damage to 80% of the assigned T-37 aircraft at a repair cost of almost $2.0 million. This type of natural event could create repair costs several times greater with the transition to the T-6A Texan II aircraft, which replaces the T-37. The new aircraft is maintained by contractor support and the composite materials used in the manufacturing of the aircraft will severely limit the turnaround time and costs for repairs.

The United States Air Force (USAF) must maintain the highest level of quality education and training for its force structure. The Air Education and Training Command (AETC) is the USAF's major command responsible for training and educating its personnel. LAFB is under AETC command and control and is one of three USAF bases that train student pilots in the Specialized Undergraduate Pilot Training (SUPT) program. Aircraft welfare at Laughlin is essential for the success of Laughlin's mission which is to train the world's best pilots.

Figure 1.1: Location of Laughlin AFB

Figure 1.2: Location of Proposed Action on Laughlin AFB



1.3 Project Purpose

Failure to provide aircraft protection will have a severe impact on the ability of Laughlin to accomplish its primary mission of pilot training. Construction of the Aircraft Weather Shelter will ensure that Laughlin aircraft are protected from severe weather and that the mission will not be negatively impacted. Objectives of this project must meet the following conditions (1) provide a weather shelter to protect the T-6 aircraft from severe weather events; and (2) meet the criteria/scope specified in Air Force Handbook 32-1084 "Facility Requirements." The welfare of these aircraft directly support Laughlin's mission requirements and allow LAFB to meet its primary mission.

1.4 Decision to be Made

This EA supports the Air Force decision whether to:

- Accomplish the construction of the Aircraft Weather Shelter (Proposed Action) or
- Take no action (No Action Alternative).

1.5 Scope of the Environmental Review

1.5.1 National Environmental Policy Act (NEPA)

Under the National Environmental Policy Act (NEPA) of 1969, federal agencies are required to systematically assess the environmental consequences of proposed actions during the decision-making process. The intent of NEPA is to protect, restore, or enhance the environment through well-informed federal decisions. The Council on Environmental Quality (CEQ) was established under NEPA to implement and oversee federal policy in this process. In 1978, the CEQ issued regulations implementing the process (40 Code of Federal Regulations [CFR] 1500-1508). The CEQ regulations specify that an EA be prepared to:

- Briefly provide evidence and analysis to determine whether to prepare an the an environmental impact statement (EIS) or a Finding of No Significant Impact (FONSI)
- Facilitate the preparation of an EIS, when required
- Aid in the agency's compliance with NEPA when an EIS is not necessary

This EA complies with the Air Force environmental impact analysis process (EIAP) as set forth in the Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*, that states the USAF will comply with applicable federal, state, and local environmental laws and regulations, to include NEPA. NEPA is covered by the *Environmental Impact Analysis Process,*32 CFR Part 989, as amended, and the Department of Defense (DoD) Instruction 4715.9, *Environmental Planning and Analysis*. This EA identifies, describes, and evaluates the potential environmental impacts that may result from the implementation of the Proposed Action or No Action

Alternative. It also identifies required environmental permits relevant to the Proposed Action. As appropriate, the affected environment and environmental consequences of the Proposed Action or No Action Alternative may be described in terms of site-specific descriptions or regional overview. Finally, the EA identifies mitigative measures (if required) or best management practices (BMPs) to prevent or minimize environmental impacts.

1.5.2 Identification of Resources Applicable to the EA

As appropriate, the affected environment and environmental consequences of the Proposed Action and the No-Action Alternative may be described in terms of site-specific descriptions or regional overview. Resources analyzed in this assessment include: noise, land use, air quality, infrastructure and utilities, water resources, earth resources, hazardous materials (HM), and hazardous wastes (HW), pollution prevention, asbestos and lead-based paint, and the installation restoration program.

In compliance with NEPA, CEQ guidelines, and 32 CFR Part 989, the description of the affected environment focuses on those conditions and resource areas that are potentially subject to impacts. Some environmental resources and conditions that are often analyzed in an EA have been omitted from this analysis. Resources not included for detailed analysis are discussed below.

Socioeconomic. Military personnel authorizations would remain unchanged from the current baseline condition regardless of which alternative is implemented. For these reasons, the community setting, which is influenced by personnel factors and considers items such as housing, schools, economy, and employment, would not be affected by the Proposed Action. Therefore, community setting is not assessed in this EA. The current level of Laughlin AFB personnel and maximum pilot production were assessed in an EA titled *Specialized Undergraduate Pilot Training Production Increase, February 1997*. The FONSI supported by this EA was signed September 24, 1997.

Threatened and Endangered Species; Floodplains and Wetlands. The Proposed Action activities would occur within the developed area of Laughlin AFB. The construction activities would occur within developed and maintained area that are already improved land with highly modified and disturbed landscape. There would be no disturbance of vegetation outside this area. A 1995 biological field survey of Laughlin AFB was conducted by the Texas Parks and Wildlife Department (TPWD), determined that no threatened or endangered species were present. It did result in one observations of a state threatened lizard, the Texas horned lizard (Phrynosoma cornutum). The survey concluded no federally listed bird species presently nest on base and none were likely except as occasional visitors. No federal or state listed mammal species were observed during the survey (USAF, 1997). Also, this project would not be located within the 100-year floodplain and is not located within or near a wetland.

Cultural Resources. There are currently no structures on Laughlin AFB that are listed in the National Register of Historic places (NRHP). The historical building survey recorded one World War II structure and noted the presence of Korean War-era structures on the base. However, extreme modification of these buildings over the past 40-years has resulted in a lack of architectural integrity and no structures have been recommended as eligible for inclusion on the

National Register (USAF, 1998). The Cultural Resources Management Plan for Laughlin AFB indicates that there are 13 archeological sites located within the boundaries of the base. Of these, four have been determined eligible for inclusion in the NRHP. None of these sites are in close proximity to the proposed project. The proposed project site is located in an area of the base that has been disturbed by previous activities. If any suspected archaeological sites are encountered during a project, the contractor must protect the site in place and report the discovery to the government in accordance with all federal, state, local, and Air Force guidance. No archaeological or historic resource impacts are anticipated.

Environmental Justice. Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, encourages federal facilities to achieve "environmental justice" by identifying and addressing, as appropriate, any disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations. Accompanying EO 12898 was a Presidential transmittal memorandum which referenced existing federal statutes and regulations to be used in conjunction with EO 12898. One of the items in this memorandum was the use of the policies and procedures of NEPA, specifically that, "Each federal agency shall analyze the environmental effects, including human health, economic, and social effects, of federal actions, including effects on minority communities and low-income communities, when such analysis is required by the NEPA 42 United States Code (USC) Section 4321, et. seq." Based on analysis conducted for the EA, it was determined that activities associated with the Proposed Action and the No Action Alternative would not cause adverse effects for the following resources: noise, land use, air quality, infrastructure and utilities, water resources, earth resources, and HM or HW. Therefore, no disproportionately high or adverse impacts on minority and low-income populations would occur.

1.5.3 Statement of the Baseline Condition and Analysis Period

When applicable, the baseline conditions in this EA are the projected levels of activity stated as the proposed action in the following documents:

- "Environmental Assessment, Multiple Construction and Demolition Projects, Laughlin Air Force Base, Texas," dated October 2000.
- "Environmental Assessment for Multiple Actions," Laughlin AFB, dated May 2001.
- "Environmental Assessment for Establishment of a Temporary T-6A Airfield Laughlin AFB, Texas," dated October 2002.

Information in the first EA above was based on the construction of multiple facilities and roads and the demolition of multiple facilities at Laughlin AFB, TX and Spofford Airfield, Texas.

1.5.4 Applicable Regulatory Requirements

It is anticipated that no additional regulatory permits or amendments to existing permits would be required under the Proposed Action or alternatives. If additional permits are required during implementation of the Proposed Action or alternatives, Laughlin AFB personnel would coordinate the action for the permit.

1.6 Introduction to the Organization Of The Document

This EA is organized into seven chapters. Chapter 1 contains an explanation for the proposed project, a summary of the need for the Proposed Action, the project purpose, the decision to be made, and the scope of the environmental review. Chapter 2 provides a history of the formulation of alternatives, a description of the Proposed Action and No Action alternatives, a description of alternatives considered but eliminated from detailed study, a comparison of environmental effects including possible cumulative conditions, and mitigation requirements if required. Chapter 3 contains a general description of the biophysical resources and baseline conditions that potentially could be affected by the Proposed Action, the No Action Alternative, or the cumulative condition if it exists. Chapter 4 is an analysis of the environmental consequences. Chapter 5 lists those who prepared this document. Chapter 6 lists the persons and agencies consulted in the preparation of this EA, and Chapter 7 contains the references. Appendix A contains Air Force Form 813, and DD Form 1391 for the project assessed in this EA.

CHAPTER 2

DESCRIPTION OF THE PROPOSED ACTION AND NO ACTION ALTERNATIVES

2.0 DESCRIPTION OF THE PROPOSED ACTION AND NO ACTION ALTERNATIVES

This chapter has eight sections: a history of the formulation of alternatives, identifications of alternatives eliminated from further consideration, a detailed description of the Proposed Action, a description of the No Action Alternative, identification of other actions announced for the base, a comparison of the environmental impacts of all alternatives, identification of the preferred alternative, and a discussion of mitigation requirements and BMPs.

2.1 History of the Formulation of Alternatives

Laughlin AFB must ensure it has the facilities and infrastructure to support the assigned mission. To meet this need, the base manages an ongoing planning process that evaluates how well existing facilities and infrastructure meet mission requirements. This evaluation process also considers the long-term and assesses the capabilities of facilities and mission or the function housed in the building, or it becomes apparent there will be a future insufficiency, multiple options are explored as to how best resolve the deficiency. Potential solutions include building alteration, adding on to an existing structure, relocating the function to another facility, or constructing a new facility.

Factors considered included issues such as:

- The anticipated number of assigned personnel;
- The economic efficiency of continued operation of a building or infrastructure element;
- The ability of the base to accommodate potential mission changes;
- How well a certain building supports the function of the mission housed in the facility;
- The combined effectiveness of using a single building for multi-functional purposes; and
- The realization that facilities require repair.

With this process as the background, Laughlin AFB personnel identified the need to modernize facilities for selected functions to ensure the base continues to support its assigned mission. Once a facility is identified as not satisfying the mission of the function housed in a building, the base planning process is used to determine how best to resolve the deficiency. This process includes the development of a Proposed Action and an Alternative Action that consider issues such as the need for the facility, where the facility should be located to best accomplish the

mission of the function, what is the need date to ensure there is no degradation of the mission, and what is the most cost effective and efficient manner to complete and operate the facility.

2.2 Description of Alternatives Including the Proposed and No Action Alternatives

2.2.1 Description Of The No Action Alternative

Under the No Action Alternative, the project would not be accomplished and the base would continue to operate using existing facilities existing conditions. Without the weather shelter the potential for negative mission impact is significantly increased. The No Action Alternative does not achieve the objectives.

2.2.2 Description of the Proposed Alternative

The proposed building would be a 3-sided structure with the open end facing the aircraft parking apron. Three different sized structures are currently being evaluated. All three would have the same width, but would vary in the length and aircraft storage capacity. A minimum width of 225' was requested from Aircraft Maintenance personnel to faciliatate3 the towing and maneuvering of two aircraft simultaneously into the building.

The largest building would be sited a minimum of 20'from the apron edge. This would put the south end approximately 6' from crossing an existing storm drain line. Locating the larger building this close to the apron would require the building slab to match the apron slope, because there would not be enough room to properly transition the slope for aircraft movements. The smaller buildings may be located 50' from the apron edge. This would provide adequate room to transition from the apron slope to the building's finished floor elevation.

All three building sizes would require blast deflectors to be placed around the perimeter of the T-6A engine run-up area to protect the building from objects kicked-up by the propeller wash. No POV parking area or access drives would be required.

The siting of the proposed building would require two waivers. An airfield waiver would be required because the new facility would be inside the established Building Restriction Line (BRL) and would violate the 1000' runway clearance zone. A waiver would be required before construction can proceed because the site is identified as an Environmental Restoration Program (ERP) site. The groundwater in the area is contaminated with low levels of TCE and PCE. A ground water monitoring well would have to be relocated and the soil would require testing for contaminants. A waiver is currently being routed through Civil Engineering headquarters at AETC for approval. It was signed by the environmental section (CEV) and is currently at the engineering section (CEC).

It is estimated that construction activity would be limited to weekdays only and would occur between 7:30 a.m. and 4:00 p.m. Occasionally, construction would occur on weekends if required to meet project completion requirements. There would be no net change in the number of personnel authorizations at Laughlin AFB.

2.3 Description of Alternatives Considered but Eliminated from Detailed Study

Laughlin AFB considered various alternatives to meet the objectives; however, no other location could accommodate an aircraft hangar. The proposed construction site is the last open space area along the flightline. No other areas proved access to the flightline, close proximity to the apron parking are, and access to the industrial use are along Second Street. The Military Construction (DD Form 1391) Data Project and the HQ AETC/CE Waiver for the Proposed Action are presented in Appendices A and B respectively.

2.4 A Comparison of Environmental Effects of All Alternatives

Table 2.2 shows the change to impervious cover from the Proposed Action. Table 2.3 summarizes the impacts of the Proposed Action and the No Action Alternatives.

Table 2.1: Change in Impervious Cover for Proposed Action

Project Title	Facility Area (ft^2)	Parking Area (ft^2)	Change in Impervious Cover (ft^2)
Aircraft Weather Shelter (Largest option)	**90,000**	**0**	**90,000**

Table 2.2: Summary of Environmental Impacts

Resource (Applicable Section)	Proposed Action	No Action Alternative
Noise (Para 4.2 of Chap 4)	Outdoor noise within 50 feet from construction activity could be as high as 75 to 88 dB. However, noise from construction equipment at Laughlin AFB would be intermittent and short-term in duration. The nearest sensitive receptor is approximately 0.4 miles from the site. Interior noise levels would be reduced by approximately 18 to 27 dB due to noise level reduction (NLR) properties of the construction materials of buildings. The primary source of noise during and after the MILCON project is complete would continue to be aircraft operations. To achieve an indoor noise level of DNL 45 dB or less, the new facility would be designed and constructed to achieve the Air Force's NLR policy of interior noise reduction of 30 dB for a facility in the DNL 70 to 75 dB zone.	No change from the baseline condition as described in Paragraph 3.2.
Land Use (Para 4.3 of Chap 4)	The planned location of the construction project at Laughlin AFB would be in a land use area with facilities of the same function as the proposed project. NO land use changes would be necessary due to construction.	No change from the baseline condition as described in Para 3.3.

Air Quality (Para 4.4. of Chap 4)	The greatest increase in any of the criteria pollutants would temporarily increase the emissions in Air Quality Control Program (AQCR) 217, which includes Val Verde County, by a maximum of 0.16 percent (PM_{10}), with net increases for all other pollutants being less than 0.08 percent. The construction-related emissions would be temporary and would cease after the projects are completed. The construction phase emissions fall below the 10 percent level that would be considered regionally significant by the U.S. Environmental Protection Agency.	No change from the baseline condition as described in Para 3.4.
Infrastructure and Utilities (Para 4.5 of Chap 4)	No connection would be made to the existing airfield storm drain system. A new line with surface inlets would be placed along the east side of the building to collect runoff from Taxiway G and the engine run-up areas and roof drain fro the proposed building. Another line would be placed along the west side of the building to collect roof drain flow. Both lines would connect to a new line along the south end of the building, which would turn to the south and into the existing ditch. A Notice of Intent under the Storm Water Phase II regulations would be required for construction. The net increase in the energy usage associated with the Proposed Action would be 6,212 mmBtu, and increase of 4.7 percent over the baseline. The existing water distribution system and sanitary sewer system in the area would be adequate to support the proposed facility. There would be no gas service to the building. Traffic congestion during the various construction and demolition projects at Laughlin AFB could occur; however, the congestion would be short-term, and would cease upon completion of the projects.	No change from the baseline condition as described in Para 3.6.
Earth Resources (Para 4.7 of Chap 4)	Construction activity would occur within areas where the physiography, geology, and soils have been previously disturbed and modified by prior building construction. Construction contractors would use erosion control techniques such as organic filters, rock berms, and temporary diversions to minimize erosion during construction. Runoff control measures should be maintained until native plants have been reestablished on disturbed areas. A ground cover should be established quickly to prevent soil erosion.	No change from the baseline condition as described in Para 3.7.
Hazardous Materials and Wastes, and Pollution Prevention (Para 4.8 and 4.9 of Chap 4)	Construction contractors would be responsible for their hazardous material (HM) used during the project and would be managed in accordance with the HM Management Plan of the base. Any hazardous waste (HW) generated as a result of the proposed demolition activities would be handled by the construction contractor in accordance with applicable Texas Commission on Environmental Quality regulations and the Laughlin AFB HW Management Plan. HM purchases, HW generation, and solid waste generation from the construction would not prevent the base from achieving its pollution prevention goals.	No change from the baseline condition as described in Para 3.8 and 3.9.
Asbestos and Lead-Based Paint (Para 4.10 of Chap 4)	Asbestos-containing material (ACM) is not expected to be encountered during the construction of the aircraft weather shelter; therefore, ACM is considered not significant. Since there has not been a comprehensive survey to determine the use of lead-based paint (LBP) at Laughlin AFB it is assumed that all facilities constructed prior to 1978 possibly contain LBP. Therefore, there could be the possibility of encountering LBP coatings on pipe fittings and structures associated with the utility systems. Minimal construction operations are anticipated that would involve utilities.	No change from the baseline condition as described in Para 3.10.

Installation Restoration Program (Para 4.11 of Chap 4)	A waiver has been granted from HQ AETC/CE for the construction of the Proposed Action on or near ERP Site SS17.	No change from the baseline condition as described in Para 3.11.

2.4.1 Other Actions Considered for Cumulative Impact Purposes

A cumulative impact, as defined by the CEQ (40 CFR 1508.7), is the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of which agency (federal or non-federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." Cumulative impacts result when the effects of an action are added to or interact with other effects in particular place and within a particular time (USEPA, 1999).

Laughlin AFB proposes to construct other facilities on base over the next several years. These construction projects were previously assessed in the following EAs entitled *Multiple Construction and Demolition Projects, Laughlin Air Force Base, Texas* (2000c), with the FONSI signed October 2, 2000; *Multiple Actions,* Laughlin AFB (2001), with the FONSI signed May 2001; and *Establishment of a Temporary T-6A Airfield* (2002), with the FONSI signed October 2002. Impacts from these projects would be temporary and only occur during the construction period for the EAs *Multiple Construction and Demolition Projects and Multiple Actions,* since there would otherwise be no change in personnel, programs, or operations. Potential impacts from construction activities (i.e. noise, air emissions, solid waste, hazardous materials and waste, and transportation) are temporary and would cease upon completion of the construction projects. Other biophysical resources that were assessed included land use, storm water management, biological resources, surface water, and earth resources. Potential impacts to these resources from construction activities are site specific and would not combine with similar biophysical resources affected from other activities. These projects resulted in no land use designation changes and are located in previously disturbed or developed areas. Since none of the projects that were assess in the EAs *Multiple Construction and Demolition Projects and Multiple Actions* are scheduled to be constructed during the same period as the proposed action, there are no foreseen no additive or interactive effects to those of the proposed action. Therefore, no cumulative impacts are considered for this EA.

2.5 Mitigation Requirements

Mitigation measures would not be necessary for any of the resources analyzed in this EA. BMPs are routinely implemented to further minimize the potential for environmental impacts. These BMPs are detailed in Chapter 4, Environmental Consequences, within each subsection as necessary.

CHAPTER 3

AFFECTED ENVIRONMENT

3.0 AFFECTED ENVIRONMENT

This chapter describes the existing environmental media that could be affected by, or could affect the Proposed Action and No Action Alternative. Within this context, only those base-specific components relevant to the potential impacts are described in detail. Anticipated effects of the Proposed Action are discussed in Chapter 4, Environmental Consequences.

The baseline condition for noise, land use, surface water, and earth resources were obtained from the SUPT and JPATS EAs (USAF, 1997; USAF, 1999c). The base currently is operating at or very close to those conditions presented in the SUPT EA. Baseline conditions for air quality associated with stationary emissions sources are CY99 emissions inventory data. The infrastructure and utilities, hazardous materials and wastes, resources use CY99 data to describe the baseline condition.

3.1 Installation Location, History, and Current Mission

Laughlin AFB was established on July 2, 1942 as the Army Air Corps Laughlin Field. Named in honor of Del Rio native 1st Lt. Jack T. Laughlin, the field initially provided transition training for pilots in the Martin B-26 Marauder medium bomber from 1942 until deactivation in 1945. From 1945 to 1952, the base area was used for local cattle grazing and an army airfield. Laughlin Field reopened as Laughlin AFB 1952 to provide combat crew training in the Republic F-84 Thunderjet during the Korean Conflict. The base was transferred to the Strategic Air Command in 1957. The mission of the 4080th Strategic Reconnaissance Wing was to provide high altitude weather reconnaissance in the Martin RB-57. Beginning in 1960, Laughlin AFB provided all air and ground crew training for the Lockheed U-2A. In 1963, Laughlin AFB was transferred to Air Training Command (now the Air Education and Training Command), and Undergraduate Pilot Training (now SUPT) became the primary mission of the base.

Today, Laughlin AFB is home to the 47 Flying Training Wing (FTW). Its mission is to provide pilot training for USAF personnel, as well as international students, in the T-37, T-6, T-38, and T-1 aircraft. Assigned units including administration, communications, personnel, logistics readiness, security, finance, maintenance, and medical services provide mission support functions.

3.2 Noise

3.2.1 Noise Descriptors

Noise is usually defined as unwanted sound, a definition that includes both the psychological and physical nature of the sound (AIHA, 1986). Under certain conditions, noise may cause hearing loss, interfere with human activities at home and work, and my affect human health and well being in various ways. Sound pressure level (L_p) can vary over an extremely large range of amplitudes. The decibel (dB) is the accepted standard unit for measuring the amplitude of sound

because it accounts for the large variations in amplitude and reflects the way people perceive changes in sound amplitude.

Different sounds have different frequency content. When describing sound and its effect on a human population, A-weighted (dB) sound levels are typically used to account for the response of the human ear. The term "A-weighted" refers to a filtering of the sound signal to emphasize frequencies in the middle of the audible spectrum and to de-emphasize low and high frequencies in a manner corresponding to the way the human ear perceives sound. This filtering network has been established by the American National Standards Institute (ANSI, 1983). The A-weighted nose level has been found to correlate well with peoples' judgments of the noisiness of different sounds and has been used for many years as a measure of community noise. Figure 3.1 depicts the typical A-weighted sound pressure levels for various sources. For example, 65 dB is equivalent to normal speech at a distance of 3 feet.

Community noise levels usually change continuously during the day. However, community noise exhibits a daily, weekly, and a yearly pattern. Several descriptors have been developed to compare noise levels over different time periods. One descriptor is the equivalent sound level (L_{eq}). The L_{eq} is the equivalent steady-state A-weighted sound level that would contain the same acoustical energy as the time vary A-weighted sound level during the same time interval.

Another descriptor, day-night average sound level (DNL), was developed to evaluate the total daily community noise environment. DNL is the energy averaged A-weighted acoustical levels for a 24-hour period with a 10 dB upward adjustment added to the nighttime levels (10:00p.m. to 7:00 a.m.). This adjustment is an effort to account for the increased sensitivity of most people to noise in the quiet nighttime hours. DNL has been adopted by federal agencies including DoD, the USEPA, the Federal Avaiation Administration (FAA), and the United States Department of Housing and Urban Development (HUD) as the accepted unit for quantifying human annoyance to general environmental noise.

3.2.2 Noise Criteria and Regulations

Federal and local governments established noise guidelines and regulations for the purpose of protecting citizens from potential hearing damage and from various other adverse physiological, psychological, and social effects associated with noise. The following paragraphs describe the guidelines and regulations relevant to the project.

According to USAF, FAA, and HUD criteria, residential units and other noise-sensitive land uses are "clearly unacceptable" in areas exposed to noise where the DNL is 65 dB or less.

USAF policy for many years has been to implement, where feasible, Noise Level Reduction (NLR) measures in residential and public use buildings on base. NLR measures are intended to reduce indoor noise levels to approximately DNL 45dB or less. The recommended NLR standards for residential structures are NLR 25 dB for residences in the DNL 65 to 70 dB noise zone and NLR 30 dB for those in the DNL 70 to 75 dB zone. Above DNL75 dB, residential land use is not recommended. Buildings constructed prior to implementation of the NLR measures were not necessarily built to NLR standards. Since implementation of the NLR measures, all

new buildings are designed and constructed to comply with the appropriate NLR standards (USAF, 1978).

3.2.3 Effects of Noise Exposure

As discussed below, several surveys were conducted to determine peoples' reactions to their noise environment as a function of DNL occurring outside their homes. Guidelines were developed for individual land uses base upon the information collected in these surveys and from information concerning activity interference. For various land uses, the level of acceptability of the noise environment is dependent upon the activity conducted and the type of building construction (for indoor activities).

Annoyance. When high noise is experienced inside or outside residences, as may occur from aircraft overflight or the operation of equipment, a feeling of annoyance may result. The noise may also interfere with the performance of various activities such as conversation and watching television. The degree to which there is annoyance and/or activity interference depends on the magnitude of the intruding noise, the frequency with which it occurs, and the time of day it occurs. In response to the Noise Control Act of 1972, which directed the USEPA to establish a recommended measure to describe community noise, DNL was selected as the unit of measure to be used to predict annoyance from noise exposure.

Annoyance is the primary human response to environmental noise, which usually is intermittent, with relatively long intervals of quiet (AIHA, 1986). The degree of annoyance has been found to correlate well with the DNL. A comparison of the DNL with the percentage of the exposed population exposed to DNL levels greater than 65 dB provides an estimate of the number of persons "highly annoyed" by aircraft noise. These levels of annoyance are based on long-term exposure. Annoyance for short-term activities, such as construction noise and new flight patterns, could be influenced by such factors as habituation and attitude toward the activity creating the noise. Nonetheless, a comparison of this type provides the best available information to predict reactions to a new noise exposure.

Table 3.1 presents the results of over a dozen studies of transportation modes, including airport operations, investigating the relationship between noise and annoyance levels. This relationship has been recommended by the USEPA (USEPA, 1982), re-evaluated (Fidel et al., 1988), and updated (Finegold et al., 1992) for use in describing peoples' reactions to semi-continuous (transportation) noise. This data provides a perspective on the level of annoyance that might be anticipated. For example, 12 to 22 percent of persons exposed to DNL 65 to 70 dB would be highly annoyed by the noise.

Table 3.1: Theoretical Percentage of Population Highly Annoyed by Noise Exposure

DNL Intervals in dB	Percentage of Persons Highly Annoyed
65-70	12-22
70-75	22-36
75-80	36-54

Source: FICON, 1992

Hearing Loss. Hearing loss is measured in decibels and refers to a permanent auditory threshold shift of an individual's hearing. The USEPA has recommended a limiting daily equivalent energy value of L_{eq} 70 dB to protect against hearing impairment over a period of 40 years (USEPA, 1974). This daily energy average would translate into a DNL of approximately 75 dB or greater. Based on a USEPA study, hearing loss is not expected in people exposed to a DNL 75 dB or less (USEPA, 1974).

3.2.4 Baseline Noise

The primary source of noise in the vicinity of Laughlin AFB is airfield operations and aircraft maintenance. The noise contours used to establish the baseline conditions at Laughlin AFB were obtained from the SUPT EA. Aircraft activities include pilot training, aircraft maintenance, and transient military operations.

The noise associated with activities at Laughlin AFB is characteristic of the noise associated with flying operations at most Air Force installations and civilian airports. During periods of no aircraft activity at Laughlin AFB, noise associated with base activities results primarily from maintenance and shop operations, ground traffic movement, occasional construction, and similar sources. The noise is almost entirely restricted to base itself and is comparable to sounds that occur in adjacent communities. It is during periods of aircraft ground or flight activity that the noise environment changes.

Analysis of noise contours for Laughlin AFB indicates that T-6, T-1, and T-38 will be the dominate noise sources at Laughlin AFB beginning in FY05 when construction of the proposed projects would take place. To reduce noise impacts, the 47th FTW limits most of its intensive operations to weekdays between 6:00 a.m. and 10:00 p.m. Aircraft are not allowed to takeoff, accomplish touch and go operations, land, or conduct low approaches between 10:00 p.m. and 6:00 a.m. unless night flying is scheduled, and then only during the hours of the scheduled night flying period. No unsuppressed engine runs are conducted during that period.

Figure 3.2 depicts the noise contours from aircraft operations at Laughlin AFB. These contours are representative of the noise environment in the vicinity of the airfield based on the represented in the figure reflect only contribution of aircraft noise to ambient environmental noise levels. The noise generated by surface vehicles (e.g. cars and trucks) is not included in the contours. The contribution from such sources to the total noise level should be small except in the immediate vicinity of roads. An estimated 925 on- and off base residents were forecast to be exposed to DNL 65 dB and higher. Most of these residents live on base (897 people) and in the area immediately west of the base along US Highway 90. The Proposed Action construction project is in the DNL 70 to 75 dB noise zone. Because only areas with a DNL above 65 dB are considered in land use compatibility planning and impact assessment, only contours of a DNL of 65 dB and greater are shown.

Facilities on Laughlin AFB that would be considered sensitive receptors are the base hospital (Building 375), the child development center (Building 476), and on-base residences. These receptors are located near the DNL 65 dB noise zone.

3.3 Land Use

Laughlin AFB is located adjacent to US Highway 90 in an unincorporated portion of Val Verde County, approximately six miles east of the City of Del Rio. Development, consisting mainly of commercial activities and some residential land uses, occurs along US Highway 90 between Del Rio and Laughlin AFB. The majority of these land uses are located outside Laughlin AFB's published DNL 65 dB contour line. A mobile home park is located south of US Highway 90 west of the 65 dB contour.

Development along the southeast boundary of Laughlin AFB is constrained due to the existence of a floodplain in which development is not allowed. The floodplain provides a natural buffer between the base and future adjacent land uses (USAF, 1997).

Approximately 96.8 percent of the land in Val Verde County is in agricultural use as grazing land for sheep, goats, cattle, and horses. The City of Del Rio is the county seat for Val Verde County. Laughlin AFB coordinates with Val Verde County and the City of Del Rio through the Middle Rio Grande Development Council in accordance with EO 12372. The Middle Rio Grande Development council is an agency created with state approval to manage regional development, and to foster coordination between Val Verde County, the City of Del Rio, and private, civic, institutional, and community organizations (USAF, 1997).

The existing land use patter for Laughlin AFB lays the groundwork for future land use decisions, focusing on the installation's primary mission of student pilot training and mission command support functions. There are 12 land use categories at Laughlin AFB: airfields, aircraft operations and maintenance, industrial, administrative, community (commercial), community (service), medical, housing (unaccompanied), housing (accompanied), outdoor recreation, water, and open space. Training areas have been designed as subsections of the industrial, administrative, and outdoor recreation categories to identify uses directly related to the base's training mission (USAF, 1999h).

3.4 Air Quality

3.4.1 Definition of the Resource

In accordance with Clean Air Act (CAA) requirements, the air quality in a given region or area is measured by the concentration of various pollutants in the atmosphere. The concentrations of these "criteria pollutants" are expressed in units of parts per million (ppm) or in units of micrograms per cubic meter ($\mu g/m^3$). Air quality in a region is a result not only of the types and quantities of atmospheric pollutants and pollutant sources in an area, but also of surface topography, the size of the air basin, and the prevailing meteorological conditions.

The CAA directed USEPA to develop, implement, and enforce strong environmental regulations that would ensure cleaner and healthier ambient air quality. In order to protect public health and welfare, the USEPA developed numerical concentration-based standards, or National Ambient Air Quality Standards (NAAQS) for pollutants that have been determined to impact human health and the environment. The USEPA established both primary and secondary NAAQS under

the provisions of the CAA. NAAQS are currently established for six criteria air pollutants including: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter equal to or less than 10 microns in diameter (PM_{10}), and lead (Pb). NAAQS represent maximum levels of background pollution that are considered safe, with an adequate margin of safety to protect public health and welfare. O_3 is not emitted directly from stationary, mobile, or area pollution sources; rather, it is a product of photochemically reactive compounds such as oxides of nitrogen (NO_x) and volatile organic compounds (VOC). These compounds are inventoried and quantified as precursors of O_3.

The Texas Commission on Environmental Quality (TCEQ) is responsible for implementation of the CAA. Table 3-4 presents the federal primary and secondary NAAQS, which have been adopted by the state of Texas, as promulgated in Texas Administrative Code, Title 30, Chapter 101.21 as amended.

The CAA §176(c)(1) prohibits federal agencies from undertaking projects that do not conform to a USEPA-approved State Implementation Plan (SIP) in non-attainment areas. In 1993, the USEPA developed the General Conformity Rule, which specifies how federal agencies must determine CAA conformity for sources of non-attainment pollutants in designated non-attainment and maintenance areas. This rule and all subsequent amendments may be found in 40 CFR 51 Subpart W and 40 CFR 93 Subpart B. Through the Conformity Determination process specified in the final rule, any federal agency must analyze increases in pollutant emissions directly or indirectly attributable to the Proposed Action, and may need to complete a formal evaluation that may include modeling for NAAQS impacts, obtaining a commitment from the state regulatory agency to modify the SIP to account for emissions from the Proposed Action, and/or provision for mitigation for any significant increases in non-attainment pollutants. Since the Proposed Action at MCMIA occurs in an attainment area, the General Conformity Rule does not apply, and no further conformity analysis is required.

Table 3-2: National and State Ambient Air Quality Standards

Pollutant	Standard Value		Standard Type
Carbon Monoxide (CO)			
8-hour Average	9 ppm	(10 mg/m^3) [b]	Primary & Secondary
1-hour Average	35 ppm	(40 mg/m^3) [b]	Primary
Nitrogen Dioxide (NO_2)			
Annual Arithmetic Mean	0.053 ppm	(100 $\mu g/m^3$) [b]	Primary & Secondary
Ozone (O_3)			
1-hour Average[a]	0.12 ppm	(235 $\mu g/m^3$) [b]	Primary & Secondary
8-hour Average[a]	0.08 ppm	(157 $\mu g/m^3$) [b]	Primary & Secondary
Lead (Pb)[c]			
Quarterly Average		1.5 $\mu g/m^3$	Primary & Secondary
Particulate < 10 micrometers (PM_{10})			

Annual Arithmetic Mean		50 $\mu g/m^3$	Primary & Secondary
24-hour Average		150 $\mu g/m^3$	Primary & Secondary
Sulfur Dioxide (SO_2)			
Annual Arithmetic Mean	0.03 ppm	(80 $\mu g/m^3$) [b]	Primary
24-hour Average	0.14 ppm	(365 $\mu g/m^3$) [b]	Primary
3-hour Average	0.50 ppm	(1300 $\mu g/m^3$) [b]	Secondary

Notes:
[a] In July of 1997, the 8-hour ozone standard was promulgated and the 1-hour ozone standard was remanded for all areas, excepting areas that were designated non-attainment with the 1-hour standard when the ozone 8-hour standard was adopted. In July of 2000, the ozone 1-hour standard was re-instated as a result of the federal lawsuits that were preventing the implementation of the new 8-hour ozone standard. As of December 2001, USEPA estimated that the revised 8-hour ozone standard rules will be promulgated in 2003-2004. In the interim, no areas can be deemed to be definitively non-attainment with the new 8-hour standard.
[b] Parenthetical value is an approximately equivalent concentration.
[c] Lead was originally established as a criteria pollutant due to the use of leaded gasoline. The increased and predominate use of unleaded gasoline has led to a significant decrease in the measurable levels of lead in the air. As a result, in a majority of the country, emissions of lead are no longer significant.
mg/m^3 – milligrams per cubic meter
$\mu g/m^3$ – micrograms per cubic meter
ppm – parts per million

3.4.2 Regional Air Quality

The fundamental method the USEPA tracks compliance with the NAAQS is the designation of a particular region as "attainment" or "non-attainment". Based on the NAAQS, each state is divided into three area types for each of the criteria pollutants. The areas are:

- Attainment – Areas in compliance with the NAAQS
- Non-attainment – Areas not meeting the ambient air quality standards and
- Unclassifiable – Areas where a determination of attainment/non-attainment cannot be completed due to a lack of monitoring data and treated as attainment until proven otherwise areas

Attainment designation indicates that air quality within an area is equal to or better than the NAAQS. Non-attainment indicates that air quality within a specific geographical area exceeds applicable NAAQS. Unclassifiable indicates that air quality cannot be or has not been classified on the basis of information availability, and is treated as attainment.

Generally, areas in violation of one or more of the NAAQS are designated non-attainment and must comply with stringent restrictions until all of the standards are met. In the case of O_3, CO, and PM_{10}, USEPA divides non-attainment areas into different categories, depending on the severity. Each non-attainment category has separate deadlines for attainment and a different set of control requirements under the SIP.

3.4.3 Baseline Air Emissions

An air emissions inventory is an estimate of the total mass of pollutants' emissions generated from a source or sources over a period of time, typically a year. The quantity of air pollutants is generally measured in pounds per year or tons per year (tpy).

Accurate air emissions inventories are needed for estimating the relationship between emissions sources and air quality. Emission sources may be categorized as either mobile or stationary emission sources. Typical mobile emission sources at USAF installations include aircraft, on- and off-road vehicles, and aerospace ground equipment. Stationary emission sources may include boilers, generators, fueling operations, industrial processes, and burning activities among others.

Laughlin AFB is located within the Metropolitan San Antonio Intrastate AQCR 217, specifically in Val Verde County. This AQCR includes the counties of Atascosa, Bandera, Bexar, Comal, Dimmitt, Edwards, Frio, Gillespie, Guadalupe, Karnes, Kendall, Kerr, Kinney, La Salle, Maverick, Medina, Real, Uvalde, Val Verde, Wilson, and Zavala. The USEPA has designated the air quality within Val Verde and Kinney Counties as better than NAAQS for NO2 and SO2; and unclassifiable for CO, Pb, NO2, O3, and PM10. Laughlin AFB is approximately 150 miles west of the San Antonio Metropolitan area. Portions of the San Antonio Metropolitan area are currently being considered for ozone non-attainment.

A complete mobile source emission inventory for Laughlin AFB has not been previously determined. Therefore, the baseline emissions inventory quantities presented in Table 3.3 include the stationary emissions reported in the Laughlin AFB 1997 Air Emissions Inventory Report (USAF, 1999a) and mobile emissions estimated for the forecast baseline airfield operations at Laughlin AFB. Current emission quantities for AQCR 217 presented in Table 4.3 only include stationary, significant, and grandfathered point sources. Emissions from mobile sources and insignificant or trivial area and volume sources have not been determined for AQCR 217.

3.4.4 Meteorology

The climate around Laughlin AFB is characterized as semi-arid continental, with 80 percent of the annual rainfall occurring from April through October. During this period, rainfall is chiefly in the form of showers and thunderstorms that comprises of heavy downpours that result in flash flooding. The small amount of precipitation for November through March usually falls as steady light rain. An average of 18.35 inches of precipitation is recorded annually. Snow, hail, and sleet occur annually, but frequently melt before providing ground cover.

Temperature averages indicate mild winters and hot summers. Strong dry, dusty north and northwest winds bring in cold weather. The average temperature is 69.9° Fahrenheit (F), ranging from a mean of 51.4°F in January to 85.2°F in July and August. Clear to partly cloudy skies predominate with the mean number of cloudy days being less than the number of clear days (NOAA, 1999).

3.5 Infrastructure and Utilities

3.5.1 Storm Water Management

The Laughlin AFB storm water management system predominately consists of open ditches and swales. The system adequately supports the limited rainfall received at the base. Laughlin AFB applied to the Texas Commission on Environmental Quality (TCEQ) for a renewal of its Texas Pollutant Discharge Elimination System (TPDES) Permit in Nov 2001. The TCEQ issued a certificate acknowledging Laughlin's intent to discharge storm water associated with industrial activity. Laughlin's TPDES multi-sector storm water permit number is TXR05M844. The permit, issued 20 Aug 2001, will expire 5 years after issuance.

3.5.2 Solid Waste Management

Municipal solid waste (MSW) at Laughlin AFB is managed in accordance with the guidelines specified in AFI 32-7042, Solid and Hazardous Waste Compliance. AFI 32-7042 incorporates by reference the requirements of Subtitle D, 40 CFR Parts 240 through 244, 257, and 258, and other applicable federal regulations, AFIs and Department of Defense Directives (DoDDs). In general, AFI 32-7042 establishes the requirement for installations to have a solid waste management program that incorporates the following: a solid waste management plan; procedures for handling storage, collection, and disposal of solid waste; record-keeping and reporting; and pollution prevention (USAF, 1999c).

In CY02, Laughlin AFB disposed of 1554 tons or about 2072 cubic yards (cy) of MSW. Of this total, approximately 35 percent was generated from base housing, with the remaining from base operations (USAF, 2003b). A contractor disposes of MSW in a landfill facility owned by the City of Del Rio. According to landfill personnel, approximately 47, 450 tons of waste is disposed of in the landfill each year and the remaining life expectancy of the landfill is 10 years (USAF, 1999c).

3.5.3 Electricity/ Natural Gas

Laughlin AFB is supplied with electricity by two 12-megawatt feeder lines from Central Power and Light Company, a subsidiary of Central and Southwest Corporation. Power enters the base from the Hamilton Road substation located about 2 miles west of the base. The substation has capacity of 15.9 megawatt hours (MWH) and consists of two transformers, with one being dedicated to Laughlin AFB (USAF, 1997). If required, the power company cal also dedicated 80 percent of the second transformer for the base to meet future requirements (USAF, 1999d). During the FY02, base usage was 42,967,623 kilowatt-hours (kWh) of electricity (USAF, 2003)

Laughlin AFB receives natural gas service from PG&E-Reata via one 6 inch, steel delivery pipeline operating at 60 pounds per square inch gauge pressure (psig) to the base's only regulator station, near the golf course. Approximately half of the existing steel gas pipe system was replaced in 1994 with polyethylene piping. The system operates at 16 psig in the summer and 19psig in the winter and is adequately sized with significant amounts of excess capacity (USAF, 1999d). During FY02, Laughlin AFB consumed 75,575 thousand cubic feet of natural gas (USAF, 2003b). This equates to an annual usage of 78,598 mmBtu or 216 mmBtu/day. The Proposed Action does not require the use of Natural Gas.

3.5.4 Transportation

Laughlin AFB has excellent access to the regional transportation network of highways. US Highway 90, connecting Laughlin AFB with Del Rio to the west and Uvalde 60 miles to the east, borders the north side of the base. US Highway 277, connecting Del Rio to Eagle Pass to the south, is southwest of the base.

With few exceptions, the transportation system at Laughlin AFB generally operates well. Two gates serve as access points to and from the local highway system: the Main Gate at Liberty Drive and Highway 90, and the gate at Laughlin Drive which connects to US 277. The Laughlin Drive gate is not heavily used to the limited hours of use. An August 1988 Texas Department of Transportation study estimated that approximately 6400 vehicles per work day entered and exited Laughlin AFB from US Highway 90. Base officials estimate that 60 percent of the traffic occurs during the peak traffic hours of 7:00-9:00 AM and 3:30-5:30 PM, 20 percent between 11:00 AM- 1:00 PM, and 20 percent at other times (USAF, 1997).

Traffic at the main gate intersection with Highway 90 slows during morning commute hours and during identification checks. On-base traffic flows well with only minor congestion occurring during rush hours. Vehicle parking is adequate for most areas. Parking space shortages are most likely to occur in the areas near the aircraft maintenance functions and flying training squadrons (USAF, 1997).

3.6 Surface Water

Laughlin AFB is located in the southeaster section of the Rio Grande drainage basin. Average annual rainfall for Laughlin AFB is 18 inches. The majority of precipitation occurs from April through October. The general direction of surface water flow is southeast into the Ro Grande and down toward the Gulf of Mexico. Lake Amistad reservoir, located approximately 12 miles northwest of Laughlin AFB, impounds approximately 3,383,000 acre-feet of water and has an average monthly release of 2400 cubic feet per second. Because the reservoir was a cooperative undertaking between the United States and Mexico, Texas was allocated 56.2 percent of the available surface water. The TCEQ characterized Lake Amistad reservoir as having excellent water quality (USAF, 1997).

Laughlin AFB contains a total of 19 acres of surface water, which includes sewage treatment ponds and golf course water hazards. There are no permanent streams occurring base. However,

Sacatosa and Zorro Creeks, respectively, flow intermittently along the southeastern boundary and northwest corner of the base. All surface water on base is nonpotable (USAF, 1997).

3.7 Earth Resources

3.7.1 Physiography and Geology

Laughlin AFB lies near the junction of the Edwards Plateau and South Texas Plains ecological regions. The Edwards Plateau region, north of Highway 90, is characterized as having shallow soils underlain by limestone or caliche, scrub oak and mesquite brush vegetation, and terrain elevations ranging from 1,000 to 3,000 feet above mean sea level (MSL). South of Highway 90, the South Texas Plains physiographic region consists of rolling terrain with open prairies, deep soils, and elevations ranging from sea level to 1,000 feet above MSL (USAF, 1997).

The geology of Val Verde County consists of sedimentary rock from three geologic periods. The dominant bedrock material is limestone from the Cretaceous Perio (74 to 135 million years old) and was deposited under marine conditions. Tertiary and Quaternary (less than 3 million years) materials were deposited under fresh water conditions (USAF, 1997).

3.7.2 Soils

The dominant soil type for Laughlin AFB is Zapata-Vinegarron complex. The soil complex is characterized as having 60 percent Zapata, 30 percent Vinegarron, and 10 percent other. Zapata soil, located on uplands, has a surface layer about 8 inches thick with slopes ranging from1 percent to 5 percent. Vinegarron soils are loamy, well drained, and moderately permeable. Both soils are moderately alkaline with pH ranges from 7.9 to 8.4 (USAF, 1997).

3.8 Hazardous Materials and Wastes

3.8.1 Hazardous Materials

Hazardous materials (HMs) are those substances defined by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), and the Toxic Substances Control Act (TSCA). Hazardous wastes are defined by the Solid Waste Disposal Act as amended by the Hazardous and Solid waste Amendments (HSWA). In general, both hazardous materials and wastes include substances that, because of their quantity, concentration, physical, chemical, or infectious characteristics, may present substantial danger to public health or welfare or to the environment when released or otherwise improperly managed.

HM management at USAF installations is established primarily by AFI 32-7086, *Hazardous Materials Management*. AFI 32-7080 incorporates the requirements of all Federal regulations, other AFIs, and DoD Directives, for the reduction of HM uses and purchases. The HMs addressed by the instruction include procurement of ozone depleting substances (ODS) and of products containing the 17 chemicals listed under the voluntary 33/50 USEPA Industrial Toxics

Program (EPA 17). Laughlin AFB purchased and used numerous products containing 9852 pounds of EPA 17 chemicals during CY99 (USAF, 1999b).

3.8.2 Hazardous Wastes

Unless otherwise exempted by CERCLA regulations, RCRA Subtitle C (40 CFR Parts 260 through 270) regulations are administered by the USEPA and are applicable to the management of hazardous waste (HW). In the State of Texas, regulatory authority is delegated and enforced by the TCEQ. Hazardous waste from Laughlin AFB must be handled, stored, transported, disposed, or recycled in accordance with both federal and state regulations. Laughlin AFB has a Part B RCRA permit for storage of wastes.

Laughlin AFB is registered as a municipal large quantity generator of HW. Hazardous wastes generated at Laughlin AFB include spent solvents, thinners, strippers, paint waste, laboratory chemicals, and unused materials considered as waste or products containing HMs having exceeded their shelf-life. Used motor oil, turbine oil, and hydraulic fluid are also generated on base and transported to an off-base facility. There are a total of 35 waste accumulation areas and satellite accumulation points on base. Hazardous wastes are transported to the Defense Reutilization and Marketing Office (DRMO) interim storage facility at Building 2026, white used oil and hydraulic fluid is transported separately for recycling. Waste antifreeze and refrigerants are recovered, recycled, and reused in on-base maintenance facilities (USAF, 1996b).

In CY95, approximately 64,814 pounds of hazardous waste from Laughlin AFB were transported off base for disposal. This quantity was used to establish the new hazardous waste baseline from which waste reduction progress is measured. As illustrated in Table 3.5, implementation of a waste minimization program at Laughlin AFB reduced on-base hazardous waste generation 47 percent by the end of CY01 when compared to the CY95 hazardous waste baseline (USAF, 2000a).

Table 3.3: Hazardous Waste Reduction

Year	Hazardous Waste Generated (lbs)	Percent Reduction
95	64,814	--
96	108,074	-66.7
97	50,170	22.6
98	48,554	25.1
99	45,563	30.0
00	38,600	40.4
01	34,167	47.3
02	15,780	75.7

3.9 Pollution Prevention Program

The USAF has taken a proactive and dynamic role in developing a Pollution Prevention Program (PPP) to implement the regulatory mandates in the Pollution Prevention Act of 1990; Executive Order (EO) 12856 Federal Compliance with Right-to-Know laws and Pollution Prevention Requirements; EO 13101 Federal Acquisition, Recycling, and Waste Prevention; and EO 12902 Energy Efficiency and Water Conservation at Federal Facilities. The USAF PPP incorporates the following principles in priority order:

- Generation of hazardous substances, pollutants, or contaminants will be reduced or eliminated at the source whenever feasible (source reduction);
- Pollution that cannot be prevented will be recycled in and environmental
- Disposal or other releases to the environment, will be employed only as a last resort and will be conducted in an environmentally safe manner, according to regulatory guidance.

AFI 32-7080, dated May 12, 1994, provides the directive requirement for the USAF PPP. The AFI incorporates by reference applicable federal, DoD, and USAF level regulations and directives for pollution prevention. Each installation has incorporated the requirements of AFI 32-7080 into a Pollution Prevention Management Plan (PPMP) and a Pollution Prevention Management Action Plan (P2 MAP). The P2 MAP is a single reference used to manage the actions needed to develop and execute an installation's PPP. Installation P2 MAPs address the process required to operate the base's PPMP, the program required to fund PPPs, the road map to achieve USAF PPP goals, and the actions required to execute the PPMP. P2 MAPs are based on recurring opportunity assessments designed to continually evaluate an installation's success in achieving pollution prevention at the highest level in the hierarchy of action. The P2 MAP incorporates management strategies for meeting the goals of the following program elements of the Air Force PPP:

- Reduction of ODS, including complete elimination of Class I ODSs and reduction of Class II ODSs by specified target dates using CY92 as the baseline.
- Reduction of EPA 17 industrial toxics by 50 percent by the end of CY96 from a CY92 baseline to comply with USEPA's 33/50 Industrial Toxics Program objectives (this goal has been surpassed with a 94.5 percent reduction rate in CY99).
- Reduction of HW disposed by 40 percent by the end of CY00 from a CY95 baseline using source reduction whenever possible followed by reclamation and recycling. Laughlin AFB achieved a 41 percent reduction in HW in CY00.
- The DoD objective to reduce MSW generation at the end of CY97 by 50 percent from the CY 92 baseline was achieved earlier than anticipated. Effective FY99, the new guidance is to ensure that, by the end of FY05, installations recycle 40 percent of the non-hazardous solid waste generated, white ensuring integrated non-hazardous solid

waste management programs provide and economic benefit when compared with disposal using landfills and incineration alone (DoD, 1998). Laughlin AFB achieved a 25 percent diversion rate for FY02 and has initiated an independent goal to meet DoD's 40 percent MSW diversion goal by CY04.

- EO13101 is designed to further promote the Federal government's use of recycled products and environmentally preferable products and services. The head of each executive agency will incorporate waste prevention and recycling into the agency's daily operations and work to increase and expand markets for recovered material through greater Federal government preference and demand for such products.

- Implementation of energy conservation in accordance with EO 12902 (Energy Efficiency and Water Conservation at Federal Facilities, Mar 8, 1994), including reduction of facility energy use (natural gas, coal, electricity, fuel, oil, etc.) 10 percent by the end of CY94, 20 percent by the end of CY99, and 30 percent by the end of year 2004 using the CY85 consumption as the baseline. The metric used to measure progress in reducing energy consumption is measured in. Laughlin AFB achieved a 29.1 percent reduction in energy consumption in CY99.

Laughlin AFB has a P2 MAP that incorporates appropriate management, measurement, and reporting goals to comply with program elements of the Air Force PPP.

3.10 Asbestos and Lead-Based Paint

Asbestos management at USAF installations is established in AFI 32-1052, *Facility Asbestos Management*. The AFI incorporates by reference applicable requirements of 29 CFR 669 et seq. 29 CFR 1910.1025, 20 CFR 1926.58, 40 CFR 61.140, Section 112 of the CAA, and other applicable AFIs and DoDDs. AFI 32-1052 requires installations to develop an asbestos management plan for the purposes of maintaining a permanent record of the current status and condition of all asbestos-containing material (ACM) in the installation facility inventory and documenting all asbestos management efforts. In addition, the instruction requires installations to develop an asbestos operating plan that details how the installations will conduct asbestos-related projects. Asbestos is regulated by the USEPA with the authority promulgated under the Occupational Safety and Health Act (OSHA), 29 USC §§ 669 et. seq. Emissions of asbestos fibers to ambient air are regulated under Section 112 of the CAA. The USEPA policy is to leave asbestos in place if its disturbance or removal could pose a health threat.

Base-wide surveys were completed in CY93 and CY01. Asbestos at Laughlin AFB is managed in accordance with the installation's *Asbestos Operating and Management Plan*. This plan specifies procedures for the removal, encapsulation, enclosure, and repair activities associated with ACM abatement projects, and is designed to protect personnel who live and work on Laughlin AFB from exposure to airborne asbestos fibers as well as to ensure that Laughlin AFB remains in compliance with all federal, state, and local regulations pertaining to asbestos (USAF, 1997).

Lead-based paint at Laughlin AFB is managed in accordance with USAF policy (USAF, 1997). The use of LBP as architectural coatings declined significantly after restrictions were initiated in 1978. There has not been a comprehensive survey to determine the use of LBP at Laughlin AFB; therefore, it is assumed that all facilities constructed prior to 1978 possibly contain LBP. Hazardous waste disposal records show that 5,480 pounds of LBP waste was disposed of in 1998 (USAF, 199f). It is likely that pipe fittings and structures associated with the utility systems have LBP coatings.

3.11 Installation Restoration Program

The Installation Restoration Program (IRP) is a subcomponent of the Defense Environment Restoration Program (DERP), which became law under SARA of 1986. The IRP requires each DoD installation to identify, investigate, and clean up contaminated sites. The aircraft weather shelter project would be located at ERP Site SS17, formerly Area of Concern (AOC) 07. Based on preliminary data, it is believed that the only contaminants of concern (COCs) are PCE and TCE. While the extent of ERP Site SS17 has not been delineated, the proposed construction should not impact cleanup options or contaminant migration. A waiver was granted from HQ AETC/CE for the construction of the Proposed Action on or near ERP Site SS17. The waiver requires the relocation of one existing monitoring well. See Appendix B for the waiver.

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

4.0 ENVIRONMENTAL CONSEQUENCES

This chapter provides the scientific and analytic basis for comparing the environmental consequences of the Proposed Action and No-Action Alternative. The probable effects of each alternative on environmental resources are described.

For analysis purposes, fiscal year (FY) 99 (beginning October 1998) is assessed to represent the potential annual impacts at Laughlin AFB for the duration of the Proposed Action. Other projects that would take place in this same period of time were already assessed in the *Multiple Construction and Demolition Projects* EA and the *Multiple Actions* EA. Based on a comparison of the impacts between those projects and the ones being analyzed in this EA, there are no cumulative impacts that would combine with the Proposed Action to have a significant impact due to construction times not overlapping.

4.1 Mission

The mission at Laughlin AFB would not change. The activities associated with implementation of the Proposed Action are identical to those accomplished at Laughlin AFB under baseline conditions. The construction of the proposed facility would allow Laughlin AFB to more effectively meet mission requirements.

4.2 Noise

In considering the basis for evaluating significance of noise impacts, several items were examined, including: 1) the degree to which noise levels generated by construction activities would be higher than the ambient noise levels; 2) the degree to which there would be annoyance and/or activity interference; and 3) the proximity of noise-sensitive receptors to the noise source.

The primary means of assessing environmental noise is through computer simulations since direct measurement of noise levels is often impractical, expensive, and inconclusive. Unlike a topographic contour, noise contours are not intended to be precise representations of the noise zones. Geographic features, meteorology, and the receiver's perception of the source can influence the impact of the noise. Noise contours do not distinctly divide noise zones with one side of the line compatible and the other side incompatible. However, the use of noise contour maps has proven to be a reliable planning tool in affected areas.

4.2.1 Proposed Action

Assuming that noise from the construction equipment radiates equally in all directions, the sound intensity would diminish inversely as the square of the distance from the source. Therefore, in a free field (no reflections of sound), the sound pressure level (L_p) decreases six dB with each doubling of the distance from the source. Under most conditions, reflected sound will reduce the attenuation due to distance. Therefore, doubling the distance may only result in a decrease of

four to five dB (AIHA, 1986). Table 4.1 shows the anticipated sound pressure levels at a distance of 50 ft for miscellaneous heavy equipment.

Table 4.1: Heavy Equipment Noise Levels at 50 feet

Equipment Type	Number Used*	Generated Noise Levels, L_p (dB)**
Bulldozer	1	88
Backhoe (rubber tire)	1	80
Front Loader (rubber tire)	1	80
Concrete Truck	1	75
Concrete Finisher	1	80

* Estimated number in use at any time

** Source: CERL, 1978.

The primary source of noise from construction would be generated by equipment and vehicles involved in site preparation, foundation preparation, and construction. Construction noise would be intermittent and short-term in duration. Typical noise levels generated by these activities range from 75 to 88 dB at 50 ft from the source.

For the purposes of this assessment, it is estimated the shortest distance between a noise source and another base building would be about 50 ft. The shortest distance between a construction project and sensitive receptors such as the base clinic (Bldg. 375), the child development center (Bldg. 476), or nearby residences would be over 2000 ft or approximately 0.4 miles. From Table 4.1, outdoor noise from construction activity at an occupied building 50 ft from the site could be as high as 75 to 88 dB. This level of noise could annoy as many as 54 percent of building occupants (refer to Paragraph 3.2.3 of Chapter 3 and Table 3.1 of the *Multiple Construction and Demolition Projects* EA) and cause disruption of normal conversation during the noise event. For comparison purposes, Figure 3.1 (Chapter 3 of the *Multiple Construction and Demolition Projects* EA) contains typical sound levels from outdoor noise sources. Noise related to the construction projects accomplished at the base would have a short-term impact on the base functions and when individuals are outdoors.

Interior noise levels during construction activity would be reduced by approximately 18 to 27 dB due to the NLR properties of the building's construction materials (USDOT, 1992). The potential for hearing loss involves direct exposure on a regular, continuing, long-term basis to DNL levels above 75 dB. As stated in Chapter 3, paragraph 3.2.3 of the *Multiple Construction and Demolition Projects* EA, hearing loss projection is based on an average daily outdoor exposure of 16 hours over a 40-year period. It is anticipated construction activities would occur between 7:30 a.m. and 4:30 p.m., five days per week. Individuals are not expected to be outdoors for the entire noise producing period. Under this condition, persons would not be exposed to long-term and regular noise above 75 dB and therefore should not experience loss of hearing.

The primary source of noise at Laughlin AFB would continue to be from aircraft operations and the noise contours would be as depicted in Figure 3.2 of the *Multiple Construction and Demolition Projects* EA). It depicts the noise contours of the proposed action assessed in the EA accomplished for the beddown of the Joint Primary Aircraft Training System (JPATS). The anticipated noise levels predicted to occur as a result of the T-6 aircraft would occur during the implementation of the construction projects analyzed in the JPATS EA. Note that noise from flying activities would tend to mask the noise generated by construction projects for the same exposure area. The perception would be that construction noise likely would not be discernable during periods of aircraft operations. However, there could be periods of time during which construction noise could be discerned and provide minor annoyance. This condition would occur when construction activity is underway and flying activity is low.

4.2.2 No Action Alternative

Under the No-Action Alternative, there would be no change from the baseline conditions.

4.2.3 Mitigative Actions

Noise levels would be temporarily increased from the Proposed Action activities. However, mitigation measures would not be required.

Although mitigation is not required, possible BMPs that could further reduce impacts for the project include: hearing protective devices such as ear plugs or ear muffs should be worn at all locations where workers may be exposed to high noise levels.

4.3 Land Use

In considering the basis for evaluating significance of impacts on land use, several items were examined, including: 1) the degree to which the location of facilities would impact existing sensitive land use; 2) the degree to which construction and/or operation of facilities would interfere with the activities or functions of adjacent existing or proposed land uses; and 3) the degree of any physical changes in land use that would impact surrounding uses and compatibility with land uses.

4.3.1 Proposed Action

The activities and land uses associated with the Proposed Action would be consistent with the installation's Base Comprehensive Plan and General Plan. The Proposed Action would require no changes to the land use patterns and categories at Laughlin AFB. Therefore, no land use impacts would be expected.

4.3.2 No Action Alternative

Under the No Action Alternative, there would be no change in land use as described in Chapter 3.3.3 of the *Multiple Construction and Demolition Projects* EA.

4.3.3 Mitigative Actions

Mitigative actions would not be necessary.

4.4 Air Quality

Impacts to the air quality would be considered significant if pollutant emissions associated with the implementation of the federal action caused or contributed to a violation of any national, state, or local ambient air quality standard, exposed sensitive receptors to substantially increased pollutant concentrations, represented an increase of 10 percent or more in affected AQCR's emission inventory, or exceeded the significance criteria established by the Texas State Implementation Plan (SIP).

4.4.1 Proposed Action

Implementation of the Proposed Action would generate air emissions from a variety of activities. Fugitive dust from ground disturbing activities and combustive emissions from construction equipment would be generated during the construction of the proposed project. Fugitive dust would be generated from activities associated with site clearing, grading, cut and fill operations, and from vehicle traffic moving over the disturbed site. These emissions would be greatest during the initial site preparation activities and would vary from day to day depending on the construction phase, level of activity, and prevailing weather conditions.

The quantity of uncontrolled fugitive dust emissions from a construction site is proportional to the area of land being worked and the level of construction activity. The USEPA has estimated that uncontrolled fugitive dust emissions from ground-disturbing activities would be emitted at a rate of 80 pounds of Total Suspended Particulates (TSP) per acre per day of disturbance (USEPA, 1995). In a USEPA study of air sampling data at a distance of 50 meters downwind from construction activities, PM_{10} emissions from various open-dust sources were determined based on a ratio of PM_{10} to TSP sampling data. The average PM_{10} (particulate matter with an aerodynamic diameter less than 10 micrometers) to TSP ratios for top soil removal, aggregate hauling, and cut and fill operations are reported as 0.27, 0.23, and 0.22 respectively (USEPA, 1988). Using 0.24 as the average ratio for purposes of analysis, the emission factor for PM_{10} dust emissions becomes 19.2 pounds per acre per day of disturbance.

The USEPA also assumes that 230 working days are available per year for construction (accounting for weekends, weather, and holidays), and that only half of these working days would result in uncontrolled fugitive dust emissions at the emitted rate described above (USEPA, 1995). These emissions would produce slightly elevated short-term PM_{10} ambient air concentrations. However, the effects would be temporary and would fall off rapidly with distance from the proposed construction site. The USEPA estimates that the effects of fugitive dust from construction activities would be reduced significantly with an effective watering program. Watering the disturbed area of the construction site twice per day with approximately 3,500 gallons per acre per day would reduce TSP emissions as much as 50 percent (USEPA, 1995).

Specific information describing what types of construction equipment are required for a specific task, the hours the equipment is operated, and the operating conditions vary widely from project to project. For purposes of analysis, these parameters were estimated using established cost estimating methodologies for construction. Typical equipment requirements were drawn from pavement construction estimating information (Means, 1998). Combustive emissions from construction equipment exhausts were estimated from USEPA approved emissions factors for heavy-duty diesel powered construction equipment (USEPA, 1985). For a conservative estimate, it was assumed that each piece of equipment would travel at least 10 miles per construction day for the duration of the estimated project length.

Table 4.2 lists the estimated combustive emissions from construction equipment and fugitive dust emissions. To assess the effect of the Proposed Action on the local air quality, emissions associated with the Proposed Action are compared to the AQCR 217 stationary air emission inventory of calendar year (CY) 99. The emissions would produce slightly elevated air concentrations. However, the effects would be temporary, fall off rapidly with distance from the proposed construction site, and would not result in any long-term impacts.

Analysis of Table 4.2 data indicates that the greatest single increase in emissions from construction would be in PM_{10} (3.0 tpy), while the other pollutants would have negligible increases of less that 6.3 tons combined. The PM_{10} increase would be a conservative estimate of a 0.11 percent increase, while the other pollutants combined would not increase by more than 0.046 percent. The construction-related emissions would be temporary and would cease after the projects are completed.

The construction phase emissions fall below the 10 percent level that would be considered regionally significant by the USEPA if the region were non-attainment for any of the criteria pollutants; however, the area is attainment. Therefore, the air emission impacts from the implementation of the Proposed Action are not considered significant. If the regional air quality should change to non-attainment status prior to implementation of the Proposed Action, air quality impacts would have to be reevaluated and an air conformity analysis may be required.

Table 4.2: Proposed Action Emissions

Criteria Air Pollutant	CO (tpy)	VOC (tpy)	SO_x (tpy)	NO_x (tpy)	PM_{10} (tpy)	Pb (tpy)
AQCR 217 Emission Totals*	6,829.7	2,780.3	52,650.5	39,919.3	2,806.6	6.1
Proposed Action** Construction Emissions	1.8	0.28	0.41	3.81	3.0	0
Percent Change in AQCR 217 (%)	0.026%	0.01%	0.0008%	0.0095%	0.11%	0.0%

* Summarized from TNRCC (now TCEQ) Stationary Emissions Inventory Report (TNRCC, 1999).

** Estimated net change in emissions comparing the baseline to the Proposed Action relative to similar construction projects from *Multiple Construction and Demolition Projects* EA.

tpy tons per year.

4.4.2 No Action Alternative

Under the No Action Alternative, there would be no change from the baseline conditions.

4.4.3 Mitigative Actions

Potential criteria pollutant emissions associated with the Proposed Action do not exceed significance criteria requirements. Therefore, no mitigative actions for improving the ambient air quality would be required. Although mitigation is not required, possible BMPs include watering for dust suppression to control PM10 emissions.

4.5 Infrastructure and Utilities

To evaluate the significance of impacts on infrastructure and utilities, several items were examined:

- The degree to which an increase in the demands on the utility system would result in the need for additional capacity or new support and/or supply facilities;
- The degree to which the increased demands from the Proposed Action would reduce the reliability of transportation systems, or aggravate existing adverse conditions on the base; and
- The degree to which the Proposed Action changes surface water runoff and erosion characteristics.

4.5.1 Storm Water Management

4.5.1.1 Proposed Action

All proposed construction would occur within the developed portion of the base. It is estimated that construction activities associated with the Proposed Action would create an additional 90,000 ft^2 of impervious cover and storm water runoff would increase. The base has approximately 53 acres of permanent or semi-permanent buildings (2,308,680 ft^2), 602 units (about 800,000 ft^2) of family housing, 25.6 miles of paved roads (about 1,622,000 ft^2), and approximately 225 acres of airfield pavements (9,801,000 ft^2) (USAF, 1999f). This addition of impervious surface (0.63 percent increase) would not be expected to noticeably change the total volume or quality of storm water runoff. Existing storm water system capacity could accommodate this increase; therefore, project site runoff would not be expected to impact storm water management.

According to USEPA's Storm Water Phase II regulations, CFR 122.26(b)(15), construction activities including clearing, grading, and excavating activities that result in the disturbance of greater than or equal to one acre would require a Notice of Intent (NOI) under the general Texas storm water discharge permit. It is estimated that the project would disturb greater than one acre thus requiring a storm water NOI under the Phase II regulations.

4.5.1.2 No Action Alternative

Under the No Action Alternative, there would be no change from the baseline conditions.

4.5.1.3 Mitigative Actions

Mitigation actions would not be required. Possible BMPs to control erosion would be used by the contractors to minimize erosion during construction. If site characteristics present the potential for storm water sediment to enter the storm water system, drains in the area must be protected with silt fences, hay bales, or an approved equivalent. The rate of runoff from the construction site would be retarded and controlled mechanically. Diversion ditches would be constructed to retard and divert runoff to protected drainage courses. Curbs and gutters installed during any street construction would be connected to the existing storm water system to channel runoff. If required, a new storm water system or connections would be constructed to comply with current regulations.

4.5.2 Solid Waste Management

4.5.2.1 Proposed Action

In considering a basis for evaluating the significance of impacts on solid waste, several items are considered. These items include evaluating the degree to which the proposed construction project could affect the existing solid waste management program and capacity of the area landfill.

Solid waste generated from the proposed construction activity would consist of building materials such as solid pieces of concrete, metals, and lumber. Analysis of the impacts associated with implementation of the Proposed Action is based on the following assumptions:

- The approximate loose density of mixed burnable construction debris is 600 pounds per cubic yard or 22.2 pounds per cubic foot (Wilson, 1977); and
- Approximately 4 pounds of construction debris is generated for each ft^2 of floor area (Davis, 1995).

Table 4.3 represents the amount of Municipal Solid Waste (MSW) in tons generated from the proposed construction using the assumptions detailed above. Waste resulting from the construction would primarily consist of waste cement concrete and lumber.

Table 4.3: Projected Construction Solid Waste Generation

Project Name	Construction	
	ft^2	MSW (tons)
Aircraft Weather Shelter	90,000	180
TOTAL	**90,000**	**180**

Analysis of the data presented in Table 4.3 indicates that approximately 180 tons of construction debris would result from the implementation of the Proposed Action. Assuming an average density of the non-asphalt/cement concrete waste (burnable and non-burnable) of 55.6 pounds per cubic foot, it is estimated the 240 cubic yards of landfill space would be required. This one-time increase in the city of Del Rio landfill represents a 0.04 percent decrease in the remaining capacity of the landfill and a decrease in the expected life of the landfill of approximately 2 days.

4.5.2.2 No Action Alternative

Under the No Action Alternative, there would be no change from the baseline conditions.

4.5.2.3 Mitigative Actions

No mitigative actions would be required.

4.5.3 Electricity and Natural Gas

4.5.3.1 Proposed Action

No habitable space would be added due to the Proposed Action. Based on an estimated annual energy usage of 69,020 British thermal units (Btus) per ft^2 (see Chapter 3, paragraph 3.5.3 of the *Multiple Construction and Demolition Projects* EA), the proposed 90,000 square feet of additional space would have a total energy requirement of 6,212 mmBtu annually or 17 mmBtu per day. The energy consumed to operate the facility represents a 4.7 percent increase over the Laughlin's annual energy baseline usage of 133,148 mmBtu (electricity usage). Due to the available capacity in the electrical distribution systems at Laughlin AFB, the increase in requirements generated by the Proposed Action could be accommodated.

The Proposed Action does not require the use of Natural Gas.

4.5.3.2 No Action

The demand for energy usage would remain at the same levels experienced under baseline conditions for Laughlin AFB.

4.5.3.3 Mitigative Actions

No mitigative actions to improve energy management practices at Laughlin AFB would be required.

4.5.4 Transportation

4.5.4.1 Proposed Action

Minor traffic congestion from the construction and demolition projects could occur due to an increase in heavy equipment and contractor vehicles. Congestion resulting from the Proposed Action attributable to the construction activities would be short-term, and would cease upon completion of the project.

Heavy equipment would be isolated to the respective construction location for the duration of the construction. The personal vehicles utilized by construction workers would be expected to increase gate counts for the duration of the construction. This slight impact would be temporary and would be halted upon completion of the construction.

4.5.4.2 No Action Alternative

Under the No Action Alternative, there would be no change from the baseline conditions.

4.5.4.3 Mitigative Actions

No mitigative actions to improve transportation at Laughlin AFB and Spofford AA would be required.

4.6 SURFACE WATER

In considering the basis for evaluating the significance of impacts on water resources, several items were examined, including: 1) the degree to which the Proposed Action could impact surface water features; and 2) the degree to which the Proposed Action could change impermeable surface areas.

4.6.1 Proposed Action

The proposed construction would be within the developed regions of the base. It is estimated that construction activities associated with the Proposed Action would create an additional of about 90,000 square feet impervious surface. As discussed in section 4.5.1.1, this addition of impervious surface represents a minimal increase and would not be expected to noticeably change the total volume or quality of storm water runoff.

4.6.2 No Action Alternative

Under the No Action Alternative, there would be no change from the baseline conditions.

4.6.3 Mitigative Actions

No surface water impacts would be anticipated at Laughlin AFB under the Proposed Action; therefore, no mitigative actions beyond BMPs for control of surface water runoff and conservation of water would be required. Erosion control techniques, including organic filter berms, rock berms, and temporary diversions to minimize erosion, runoff, and discharge would be incorporated to minimize erosion during construction.

4.7 Earth Resources

In considering the basis for evaluating significance of impacts on earth resources, several items were examined, including: 1) the degree to which the Proposed Action could potentially disrupt the ground surface; and 2) the degree to which the Proposed Action could potentially increase erosion caused by disturbance of the ground surface during construction.

4.7.1 Proposed Action

Physiography, Geology, and Soils. The construction activity at Laughlin AFB under the Proposed Action would occur where the physiography, geology, and soils have been previously disturbed and modified by prior construction. Thus, no significant impacts are expected from this action Erosion prevention BMPs, such as organic filter berms or tubes during construction and planting native vegetation after construction, would be used minimize erosion. There would not be any appreciable change in the elevation profile or drainage characteristics.

4.7.2 No Action Alternative

Under the No Action Alternative, there would be no change from the baseline conditions.

4.7.3 Mitigative Actions

No impact to earth resources would be anticipated under the Proposed Action; therefore, no mitigative actions would be required. Implementation of BMPs would minimize erosion. To enhance the stabilization of exposed soils, newly graded areas should be seeded or sodded with native grasses, while graded embankments should not exceed a 4:1 slope. Runoff control measures should be maintained until native plants have been reestablished on disturbed areas.

4.8 Hazardous Materials and Wastes

4.8.1 Hazardous Materials

4.8.1.1 Proposed Action

Products containing HMs would be procured and used during the proposed construction of base facilities. It is anticipated that the quantity of products containing HMs (such as oil, grease, hydraulic fluid, solvents, and paint) used during the proposed construction would be minimal, and their use would be temporary. Construction contractors would be responsible for the HMs used during the project and would be managed in accordance to the base's Hazardous Materials Management Plan (HMMP). Therefore, HM management at Laughlin AFB and Spofford AA would not be impacted by the proposed construction activities.

Contractors would be required to use and store HM in accordance with all federal, state, and local regulations. Specifically, contractors are prohibited from using Class I ODSs, mercury, polychlorinated biphenyls, or materials that contain potentially hazardous concentrations of lead. HM will not be stored in containers in direct contact with the ground. Containers will be kept closed when not in use.

4.8.1.2 No Action Alternative

Under the No Action Alternative, there would be no change from the baseline conditions.

4.8.1.3 Mitigative Actions

No mitigative actions for improving hazardous material management would be required.

4.8.2 Hazardous Wastes

4.8.2.1 Proposed Action

It is anticipated that the quantity of HW generated from the proposed construction and operation of this proposed facility would be negligible, and would not have any affect on the base Hazardous Waste Management Plan (HWMP). Any HW generated as a result of the Proposed Action would be handled by the construction contractor in accordance with applicable TCEQ regulations and the Laughlin AFB HWMP.

4.8.2.2 No Action Alternative

Under the No Action Alternative, there would be no change from the baseline conditions.

4.8.2.3 Mitigative Actions

No mitigative actions for improving hazardous waste management would be required.

4.9 Pollution Prevention

4.9.1 Proposed Action

Annual purchases of ODSs and EPA 17 chemicals, off-base transfers of HW, disposal of MSW, and energy consumption would increase slightly during the proposed construction and demolition activities. Specifically, products containing EPA 17 and Emergency Planning and Community Right-to-Know Act (EPCRA) chemicals would be procured for use in constructing the new facilities. However, when considering the goals and the base status presented in Table 3.6 of the *Multiple Construction and Demolition Projects* EA, it is not anticipated that the volume of chemicals procured would impact the base's ability to meet its reduction goals.

Generation of HW would increase slightly as described in section 4.8.2.1 during construction activities. However, increases from these activities would be temporary and would not impact the base's attainment of HW reduction goals. Laughlin AFB achieved a 30 percent reduction in HW generation for CY99.

As indicated in Table 4.3, solid waste generated from the proposed construction and demolition activities would result in approximately 180 tons of Type IV construction debris (asphalt, wood, etc.) being disposed in the local landfill. This quantity would not impact Laughlin AFB's ability to achieve the MSW reduction goals since the MSW baseline does not include Type IV solid waste. As indicated in Paragraph 3.8.3 of the *Multiple Construction and Demolition Projects* EA, Laughlin AFB has already achieved a 24 percent reduction in MSW.

4.9.2 No Action Alternative

Under the No Action Alternative, there would be no change from the baseline conditions.

4.9.3 Mitigative Actions

No mitigative actions for improving the pollution prevention program would be required.

4.10 Asbestos and Lead Based Paint

4.10.1 Proposed Action

It is anticipated that ACM would not be encountered during the construction of the aircraft weather shelter. Because there has not been a comprehensive survey to determine the use of LBP at Laughlin AFB it is assumed that all facilities constructed prior to 1978 possibly contain LBP. Therefore, there could be the possibility of encountering LBP coatings on pipe fittings and structures associated with the utility systems. Based upon the minimal construction operations that would involve utilities, LBP is not considered significant.

4.10.2 No Action Alternative

Under the No Action Alternative, there would be no change from the baseline conditions.

4.10.3 Mitigative Actions

No impact to the HM and waste management of ACM and LBP would be anticipated under the Proposed Action. Therefore, no mitigative actions would be required.

4.11 Installation Restoration Program

4.11.1 Proposed Action

The aircraft weather shelter project would be located at ERP Site SS17, formerly Area of Concern (AOC) 07. Based on preliminary data, it is believed that the only contaminants of concern (COCs) are PCE and TCE. While the extent of ERP Site SS17 has not been delineated, the proposed construction should not impact cleanup options or contaminant migration. A waiver was granted from HQ AETC/CE for the construction of the Proposed Action on or near ERP Site SS17. The waiver requires the relocation of one existing monitoring well. See Appendix C for the waiver.

4.11.2 No Action Alternative

Under the No Action Alternative, there would be no change from the baseline conditions.

4.11.3 Mitigative Actions

A waiver was granted from HQ AETC/CE for the construction of the Proposed Action on or near ERP Site SS17. The waiver requires the relocation of one existing monitoring well.

4.12 Unavoidable Adverse Environmental Impacts

Unavoidable impacts would result from the implementation of the Proposed Action. However none of the impacts would be significant. Noise from the facility construction activities would occur; however, the activities would take place during daytime hours and would be at levels that would not cause hearing impairment. The emission of air pollutants associated with construction activities would be an unavoidable condition, but is not considered significant. The loss of aggregate used for concrete, which would become inaccessible, would occur as a result of the construction activities. However, the impact would be insignificant due to the small amount needed. Site grading during construction would remove minimal vegetation. The use of nonrenewable energy resources is unavoidable, but the amount used would be insignificant.

4.13 Irreversible and Irretrievable Commitment of Resources

NEPA also 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 and irretrievable resource commitments are related to the use of nonrenewable resources and the effects the use of these resources would have on consumption or destruction of a resource that could not be replaced in a reasonable period of time.

The irreversible environmental changes that could result from implementation of the Proposed Action include the consumption of material resources, energy resources, and human resources.

Material resources used for the Proposed Action include building materials for construction and cement concrete. The materials that would be consumed are not in short supply and are readily available from suppliers in the region. Use of these materials would not limit other unrelated construction activities and, therefore, would not be considered significant.

Energy resources would be irretrievably lost. These include petroleum-based products such as gasoline and diesel fuel and electricity. During facility construction, gasoline and diesel fuel would be used for operation of equipment and other vehicles. Electricity and water would be used upon completion of the aircraft weather shelter; however, the amount would be minimal. Consumption of these energy resources would not place a significant demand on their availability in the region. Therefore, no adverse impacts would be expected.

The use of human resources for facility construction is considered an irretrievable loss, only in that it would preclude such personnel from engaging in other work activities. However, the use of human resources for the Proposed Action represents employment opportunities and is considered beneficial.

CHAPTER 5

LIST OF PREPARERS

5.0 LIST OF PREPARERS

Name	Degree	Professional Discipline	Years of Experience
Letha Manning, 2d Lt, USAF	B.S., Civil Engineering, Environmental Track; Chemistry Major	Environmental Engineer	1

CHAPTER 6

LIST OF PERSONS AND AGENCIES CONSULTED

6.0 LIST OF PERSONS AND AGENCIES CONSULTED

Note: This chapter lists the individuals that represent the cross-functional team consulted during the preparation of this EA.

6.1 Federal Agencies

Laughlin Air Force Base, Texas

Flores, Ramon (47 CES/CEV)
Woods, Pat (47 CES/CEV)
Ney, Jodi (47 CES/CEV)
Day, Stephen (47 CES/CEC)
Shadwick, Dena (47 CES/CEV)
Van Winkle, Dave (47 CES/CEDP)
Graf, Ben (47 CES/CEO)

CHAPTER 7

REFERENCES

7.0 REFERENCES

These references are specific to this EA and also include references used in two environmental assessments: *Multiple Construction and Demolition Projects*, October 2000; *Multiple Actions,* Laughlin AFB, May 2001; and *Establishment of a Temporary T-6A Airfield*, October 2002.

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APPENDIX A
DD Form 1391

1. COMPONENT	FY 2006 MILITARY CONSTRUCTION PROJECT DATA	2. DATE
AIR FORCE	(computer generated)	AUG 28 '03

3. INSTALLATION AND LOCATION	4. PROJECT TITLE
LAUGHLIN AIR FORCE BASE, TEXAS	AIRCRAFT WEATHER SHELTER

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
85796	141-181	MXDP033000	5,200

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT	COST
ACFT SHLTR	SM	8,730	365	3,188
SUPPORTING FACILITIES				1,542
UTILITIES	LS			(200)
PAVEMENTS	SM	23,750	45	(1,069)
SITE IMPROVEMENTS	LS			(200)
FORCE PROTECTION MEASURES	LS			(73)
SUBTOTAL				4,730
CONTINGENCY (5.0 %)				236
TOTAL CONTRACT COST				4,966
SUPERVISION, INSPECTION AND OVERHEAD (5.7 %)				283
TOTAL REQUEST				5,250
TOTAL REQUEST (ROUNDED)				5,200

10. Description of Proposed Construction: Provide all labor, equipment and materials to construct a clear span aircraft storage facility with concrete pavement. Work will include site clearing, excavation, backfilling, concrete foundation, utilities infrastructure, erection of a pre-engineered metal building and concrete pavements for access to facility. Includes minimum DoD Force Protection standards.

11. REQUIREMENT: 8,730 SM ADEQUATE: 0 SM SUBSTANDARD: 0 SM

PROJECT: Construct an aircraft storage facility to protect aircraft during severe weather events. (Current Mission)

REQUIREMENT: Protection of aircraft to support primary mission.

CURRENT SITUATION: Laughlin does not have enough hangar space to store all of the aircraft assigned. This area historically is impacted by hail storms on the average of two to three per year with a severe storm developing baseball size hail stones every five years. On 7 Apr 02, a severe hail storm caused damage to 80% of the assigned T-37 aircraft at a repair cost of almost $2.0 million dollars. With the transition to the T-6A Texan II aircraft, which is replacing the T-37, this type of natural event could create repair costs several times as much as for the T-37. The new aircraft is maintained by contractor support and the composite materials used in the manufacturing of the aircraft will severly limit the turnaround time and costs for repairs.

IMPACT IF NOT PROVIDED: Failure to provide this project will have a severe impact of the ability of Laughlin to accomplish its primary mission of pilot training. A mission capability loss of 75% would have resulted if T-6 aircraft would have subjected to the same weather conditions of 7 Apr 02. It is not a matter of if, a severe hail storm will occur, but when.

ADDITIONAL: This project meets the criteria/scope specified in Air Force Handbook 32-1084 "Facility Requirements". All known alternative options were considered during the development of this project. No other option could meet the mission requirements. Therefore, no economic analysis was needed or performed. A certificate of exemption will

1. COMPONENT	FY 2006 MILITARY CONSTRUCTION PROJECT DATA	2. DATE
AIR FORCE	(computer generated)	AUG 28 '03

3. INSTALLATION AND LOCATION	4. PROJECT TITLE
LAUGHLIN AIR FORCE BASE, TEXAS	AIRCRAFT WEATHER SHELTER

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
85796	141-181	MXDP033000	5,200

be prepared.
Base Civil Engineer: Lt Col Marc L Pincince, (830)298-5252
Aircraft Weather Shelter, 8,730SM = 90,000SF

JOINT USE CERTIFICATION: Mission requirements, operational considerations, and location are imcompatable with use by other components.

1. COMPONENT	FY20 06 MILITARY CONSTRUCTION PROJECT DATA	2. DATE
AF (AETC)		30-Jan-03
3. INSTALLATION AND LOCATION		
LAUGHLIN AIR FORCE BACE, TEXAS		
4. PROJECT TITLE		5. PROJECT NUMBER
ACFT WEATHER SHELTER		MXDP 033000

Existing Facilities/Deficiency Detailed Data Sheet

A. Requirements and Assets:

(1) **Scope of Request (SM):** 8,730

(2) **Mission:** 47TH Flying Training Wing

(3) **Requirements (SM)** 8,730

(4) **Functional Breakout of Proposed Scope:**

Type of Space	Gross EA
ACFT WEATHER SHELTER	1

(5) **Requirements/Assets Summary**

	SM
a. Total Requirment	8,730
b. Existing Substandard	0
c. Existing Adequate	0
d. Funded, Not in Inventory	0
e. Adequate Assets (c+d)	0
f. Included in prior Program	0
g. Deficiency (a-e-f)	8730

B. Facility Summaries:

Cat Code	Nomenclature/Bldg #	Scope Used (SM)	Total Scope Bldg (SM)	Year	Cond Code	type const	Remarks
b. Existing Substandard							
e. Adequate Assets							
g. Deficiency							
141-181	ACFT WEATHER SHELTER		8,730				THIS PROJECT

COMPONENT AF (AETC)	FY20 06 MILITARY CONSTRUCTION PROJECT DATA	2. DATE 30-Jan-03

INSTALLATION AND LOCATION
LAUGHLIN AIR FORCE BASE, TEXAS

PROJECT TITLE CFT WEATHER SHELTER	5. PROJECT NUMBER MXDP 033000

COST ESTIMATE

SUBSTRUCTURE	$	1,275.20
SUPERSTURCTURE	$	1,299.40
PLUMBING	$	18.70
FIRE PROTECTION SYSTEM	$	274.70
ELECTRICAL	$	320.00
SUBTOTAL	$	3,188.00
UTILITIES	$	200.00
PAVEMENTS	$	1,069.00
SITE IMPROVEMENTS	$	200,000.00
FORCE PROTECTION MEASURES	$	73,000.00
SUBTOTAL	$	4,730.00
CONTINGENTY @ 5%	$	236.00
TOTAL CONTRACT COSTS	$	4,966.00
SIOH @ 5.7%	$	283.00
TOTAL REQUEST	$	5,249.00
TOTAL REQUEST ROUNDED	$	5,250.00

1. COMPONENT (AETC)	FY20 06 MILITARY CONSTRUCTION PROJECT DATA	2. DATE 30-Jan-03

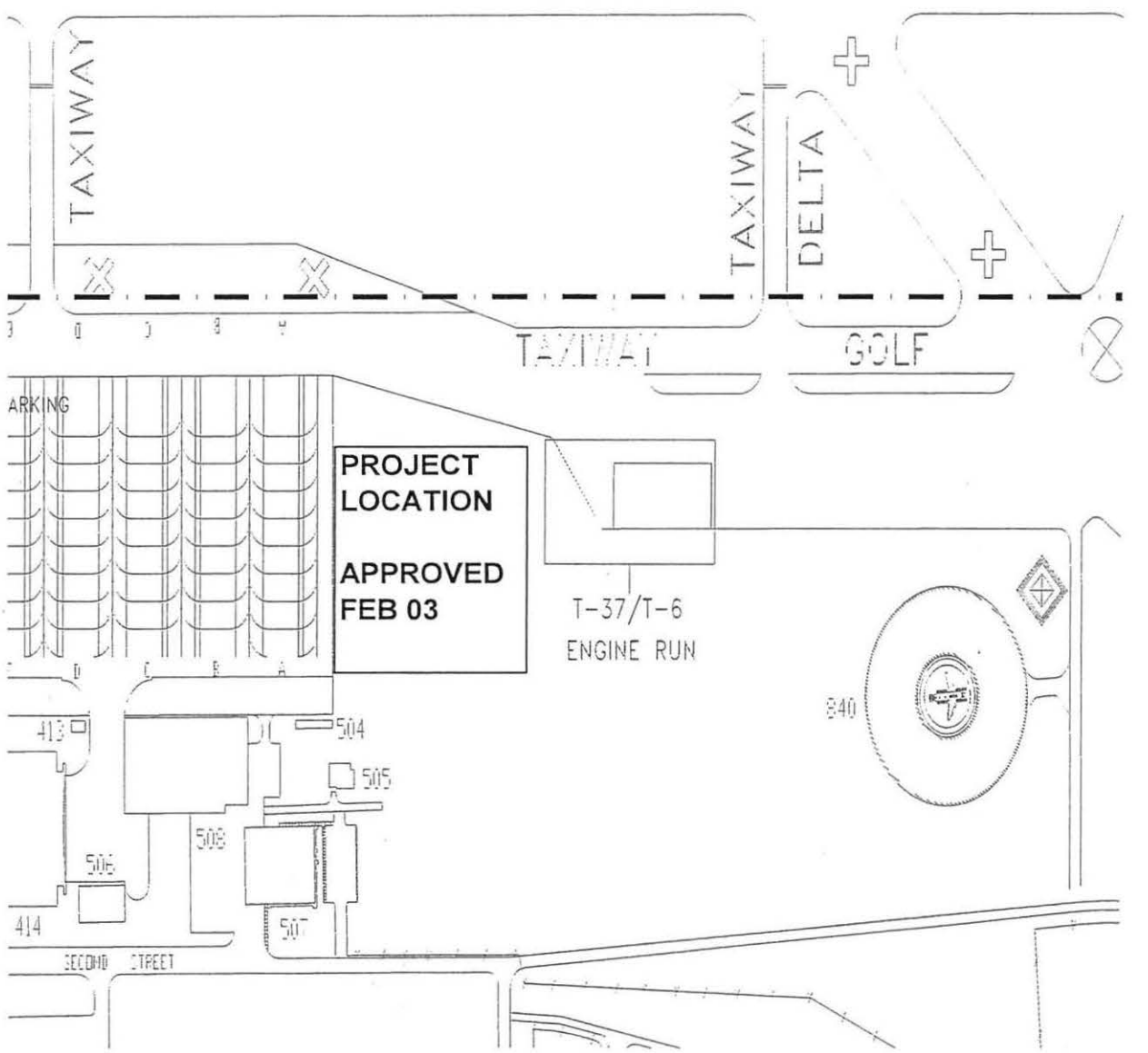
3. INSTILLATION AND LOCATION
LAUGHLIN AIR FORCE BACE, TEXAS

4. PROJECT TITLE	5. PROJECT NUMBER
ACFT WEATHER SHELTER	MXDP 033000

Functional Relocation Schematic

1. COMPONENT AF (AETC)	FY20 06 MILITARY CONSTRUCTION PROJECT DATA	2. DATE 30-Jan-03
3. INSTALLATION AND LOCATION LAUGHLIN AIR FORCE BACE, TEXAS		
4. PROJECT TITLE ACFT WEATHER SHELTER		5. PROJECT NUMBER MXDP 033000

Site Plan



1. COMPONENT AF (AETC)	FY20 06 MILITARY CONSTRUCTION PROJECT DATA	2. DATE 30-Jan-03

3. INSTALLATION AND LOCATION
LAUGHLIN AIR FORCE BASE, TEXAS

4. PROJECT TITLE	5. PROJECT NUMBER
ACFT WEATHER SHELTER	MXDP 033000

CERTIFICATE OF COMPLIANCE

1. Environmental Impact Analysis
   - ____ Categorical exclusion letter _____ applies
   - X Environmental Assessment under preparation. Expected completion date is 31 May 2003
   - ____ Finding of No Significant Environmental Impact signed on: _____.
   - ____ Draft Environmental Impact Statement (EIS) under preparation. Expected Completion date: _____.
   - ____ Draft EIS filed on _____ (date).
   - ____ Final EIS filed on _____ (date).
   - ____ Record of Decision signed on _____ (date).
   - ____ Foreign nation or protected global resource exemption number _____ applies.
   - ____ Environmental study (or review underway) under preparation. Expected completion date: _____.
   - ____ Environmental study (or review) completed on _____ (date).

2. Wetlands (AFI 32-7064)
   - X Project is not sited on a wetland.
   - ____ Requirements of EO 11990 in progress. Estimated completion date:_____.
   - ____ Requirements of EO 11990 completed on_____ (date). Finding of "No Practicable Alternative" signed _____ (date).

3. Flood Plaines (AFI 32-7064)
   - X Project is not situated on a 100-year flood plain.
   - ____ Requirements of EO 11988 in progress. Estimated completion date:_____.
   - ____ Project is situated on a 100-year flood plain. Requirements of EO 11988 completed on _____ (date). Finding of "No Practicable Alternative" signed _____ (date).

4. Coastal Zone Management (AFI 32-7064)
   - N/A Project does not directly effect a state coastal zone.
   - N/A Consistency determination being developed. Estimated completion date is _____.
   - N/A Consistency determination completed on _____ (date).

5. Coastal Barrier Resources (AFI 32-7064)
   - N/A Project is not sited within the Coastal Barrier Resources System.
   - N/A Project excepted from the Coastal Barrier Resources Act (CBRA).
   - N/A Consultation with the Regional Director, United States Fish and Wildlife Service (USFWS), in progress. Estimated completion date is _____.
   - N/A Consultation with the Regional Director, (USFWS), completed _____ (date).

1. COMPONENT AF (AETC)	FY20 06 MILITARY CONSTRUCTION PROJECT DATA	2. DATE 30-Jan-03

3. INSTALLATION AND LOCATION
LAUGHLIN AIR FORCE BASE, TEXAS

4. PROJECT TITLE	5. PROJECT NUMBER
ACFT WEATHER SHELTER	MXDP 033000

6. Threatened and Endangered Species (AFI 32-7064)

X Project has no potential for effecting threatened or endangered species or critical habitats.
___ Based on evidence from USFWS or host nation liaison on _____ (date), threatened or endangered species in the vicinity of the project will not be effected.
___ Consultation with USFWS underway in accordance with the Endangered Species Act.
___ Formal consultation with the Regional Director, USFWS, completed on _____ (date).
___ Biological Assessment is required. Estimated completion date is _____.
___ Biological option issued by USFWS on _____ (date).

7. Cultural Resource Management (AFI 7065)

X No historical properties will be effected by this project.
___ Properties effected by project are addressed in a Programmatic Agreement that was fully executed with the State Historic Preservation Officer and the ACHP on _____ (date).
___ Project area has not been surveyed for historic properties. Survey requirements are identified in the A-106 system and the estimated completion date is _____.
___ Project area has been surveyed and no historic properties were identified; the State Historic Preservation Officer was notified by letter dated _____.
___ Survey identified historic properties but the project will have no effect on them; written concurrence by the State Historic Preservation Officer is dated _____.
___ After consultation, State Historic Preservation Officer concurred that the project will have no adverse effect on historic properties. The Advisory Council on Historic Preservation concurred in writing with this determination on _____ (date).
___ Project will have an adverse effect on historic properties. A memorandum of agreement (MOA) mitigating the adverse effect was executed on _____ (date).
___ Estimated date to execute the MOA is _____ or no MOA was developed and the formal comments of the council are being sought.
___ Project will effect a site or property of interest to Native Americans.
___ Appropriate Native American Tribe of Group contacted on _____ (date).

8. Interagency and Intergovernmental Coordination for Environmental Planning (AFI 32-7060)

X Coordination of proposed project with the state Single Point of Contact or other agencies is not required.
___ Coordination with the state Single Point of Contact is in progress. Expected date of completion is _____.
___ Proposed project was coordinated with the state Single Point of Contact or other agencies on _____ (date). (Specify any other agencies).

1. COMPONENT AF (AETC)	FY20 06 MILITARY CONSTRUCTION PROJECT DATA	2. DATE 30-Jan-03

INSTALLATION AND LOCATION
LAUGHLIN AIR FORCE BASE, TEXAS

4. PROJECT TITLE	5. PROJECT NUMBER
ACFT WEATHER SHELTER	MXDP 033000

9. Environmental Permits (AFIs 32-7040, 7041, 7044)

X No permits are required.

____ No permits required, but regulatory agency notification required prior to construction (.e.g.. underground storage tank removals).

____ The following permits are required prior to construction: (List the construction and operating permits).

1.
2.
Etc.

10. Potentially Regulated Substances (AFIs 32-1052, 7042)

a. Asbestos:

X not present; _____ survey underway;

____ present (Describe mitigation, or state why mitigation is not necessary)

b. Lead-Based Paint:

X not present; _____ survey underway;

____ present (Describe mitigation, or state why mitigation is not necessary)

c. Ozone depleting substance:

X not present; _____ survey underway;

____ present (Describe mitigation, or state why mitigation is not necessary)

d. Polychlorinated biphenyls (PCBs):

X not present; _____ survey underway;

____ present (Describe mitigation, or state why mitigation is not necessary)

e. Radon:

X not present; _____ survey underway;

____ present (Describe mitigation, or state why mitigation is not necessary)

f. Other known hazardous or toxic substances and pollutants: (e.g. contaminated soils)

X not present; _____ survey underway;

____ present (Describe mitigation, or state why mitigation is not necessary)

11. Radon at new construction sites

X Not Present

____ Present

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3. INSTALLATION AND LOCATION LAUGHLIN AIR FORCE BASE, TEXAS		
4. PROJECT TITLE ACFT WEATHER SHELTER		5. PROJECT NUMBER MXDP 033000

12. Installation Restoration Program (IRP)

X Facility is not sited on or near an IRP site.

____ Facility is sited near an IRP site. Approximately ____ feet away.

____ Facility is on an IRP site.

_____ A Request for Waiver was submitted to MAJCOM on _____ (date)

_____ The site was projected to be remedied and/or closed out on _____ (date), prior to the commencement of construction activities.

_____ The nature of the site contamination does not preclude the type of construction activity proposed.

_____ There is a Compliance Agreement associated with this site.

_____ A Remedial Investigation Feasibility Study was competed on _____ (date) to accurately delineate the aerial extent of the contamination.

13. Air Pollutants (AFI 32-7040)

X Will not be generated by the operation or construction of this facility.

____ Will be generated by the operation or construction of this facility. Describe the types and amount of substance expected to be generated, existing control systems, and the need for additional controls.

_____ Conformity determination not required.

_____ Conformity determination required.

14. Solid and Hazardous wastes (AFIs 32-7042, 32-7080)

X Facility will not be used for managing solid or hazardous wastes.

____ Facility will be used for managing solid or hazardous wastes.

15. Underground Storage Tanks (AFI (32-7044) (Check all that apply)

X No underground storage tanks are involved.

New underground storage tanks will be installed.

Existing tanks on the project will be removed. Ensure regulatory agency has been notified.

_____ Contamination exists

_____ Contamination unknown

_____ Existing tanks on this project site will be retained.

____ Contamination exists

____ Contamination unknown

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16. Air Installation Compatible Use Zone (AFI 32-7063)

X Facility is sited in compliance with Air Installation Compatible Use Zone Study. No noise level reduction is required.

___ Facility is sited in compliance with Air Installation Compatible Use Zone Study. Noise level reduction of _____ will be provided in design and construction.

___ Noise waiver request is being processed.

___ Noise waiver has been granted.

17. Base Comprehensive Plan (AFI 32-7062)

X Facility is sited in a compatible land use category.

___ Facility is not sited in a compatible land use category for the following reason:

18. Airfield Clearance Criteria (AFI 32-1026)

___ Facility is in compliance with the airfield clearance criteria, including clear zone, accident potential zones and airfield airspace (height obstruction) criteria.

X A request for waiver to airfield/airspace clearance criteria is being prepared. Expected completion date is JAN 04.

___ A temporary waiver for construction activity in the airfield vicinity was approved on _____ (date)

___ A permanent waiver of the airfield/airspace clearance was obtained on _____ (date)

19. Air Space Use

X Project does not effect air space use and does not require submittal to the Regional Administrator, FAA

___ Project does not effect air space FAA coordination not required.

___ Project sent to Regional FAA on _____ (date)

20. Explosives Quantity/Distance Siting and Safety Clearance Criteria

a. Project involving munitions storage and explosives related facilities.

X Project is not effected by Q/D criteria.

_____ A request for a waiver is under preparation. Expected completion date is _____(date)

_____ Request for waiver to safety criteria sent to MAJCOM on _____ (date)

_____ Explosive siting and safety approval obtained on _____ (date)

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b. Project not involving explosives.

X Project is not within the Q/D Clear Zone of any existing or proposed explosive-related facility.

_____ A request for a waiver is under preparation. Expected completion date is _____(date)

_____ Exemption required and granted on _____ (date)

21. Air Base Survivability, Conventional Hardening, Chemical Protection Levels, and Priorities Camouflage, Concealment and Deception

X Project does not effect airbase operability.

____ Facility is sited or constructed in compliance with criteria contained in WMP-1.

____ Waiver or exemption required; request submitted to MAJCOM Civil Engineering Readiness Office, in accordance with WMP-1

____ Waiver or exemption granted on _____ (date).

22. Allowance for Physically Handicapped

X Project provides for all design features for handicapped.

____ Project provides access and limited features.

____ Project provides access but no other features.

____ Design features for handicapped are not required.

____ Design features for handicapped will not be provided for the following reason:

23. Real Estate Requirement (AFR 32-9001)

X Project does not require acquisition of real estate interest.

____ Project requires acquisition of a real estate interest over $200,000.

____ Land interest is to be acquired through minor land authority.

____ Other (explain): _____

24. Facility Security

X Not required beyond normal locks and lighting.

____ Threat assessment performed by OSI.

____ Crime Prevention through Environmental Design methods to be incorporated into design if warranted. (See local Security Forces).

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25. Excess Space

X Excess space is not available to satisfy the requirement.

___ Excess space is available to satisfy the requirement.

26. Temporary Facilities

N/A Temporary facilities are required for this project and will be demolished upon completion.

I concur with the above statements.

Judee Bell — 18 Feb 2003
Environmental Impact Analysis Coordinator — Date

for Base Civil Engineer — 18 Feb 2003
Date

Mission Support Group Commander — 18 Feb 2003
Date

APPENDIX B
HQ AETC/CE Waiver for ERP Site

DEPARTMENT OF THE AIR FORCE
AIR EDUCATION AND TRAINING COMMAND

MAR 1 6 2004

MEMORANDUM FOR 47 CES/CC

FROM: HQ AETC/CE
266 F Street West
Randolph AFB TX 78150-4319

SUBJECT: Waiver Request for Construction on or Near Environmental Restoration Site SS17, Laughlin AFB TX

1. Your construction waiver request for the aircraft weather shelter is approved with a condition. The monitoring well adversely affected by construction is properly abandoned per Texas well closure requirements with MILCON project funds. A copy of the Texas well closure report(s) shall be provided to 47 CES/CEV. AFI 32-7020 restricts the use of Environmental Restoration Account funds in support of MILCON projects.

2. Should you have a question or require further information, please have your staff contact our POC, Ms. Sylvia Crowell, HQ AETC/CEVR, DSN 487-3302.

MICHAEL D. BRATLIEN
Deputy Civil Engineer

cc:
HQ AETC/CEC/CEP/CEO
47 CES/CEC
47 CES/CEV