

***Final***  
**Environmental Assessment**  
**for the**  
**Proposed Antenna Construction at the Existing**  
**ADF Remote Terminal Facility, Buckley, Air**  
**Force Base, Colorado**

***Prepared for:***

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***Prepared By:***

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**September 2004**

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14. ABSTRACT <p><b>The purpose of the Proposed Action is to accomplish the construction and operation of one new 14 to 26 meter diameter antenna and radome structure to support the ADF mission at Buckley AFB, Colorado. The ADF proposes to erect one new antenna and radome structure to enhance its organizational mission. The antenna would be constructed on concrete foundations with grounding and utilities interfacing with the existing support buildings. This antenna would be part of the existing Remote Terminal Facility (RTF) located within the secure area on the northeastern portion of Buckley AFB. Existing ADF personnel would operate the antenna; no additional manpower would be required. The ADF is a Department of Defense (DOD) information processing, analysis, relay, and test facility supporting the U.S. Government and its allies. In addition, it provides an operational environment for training government and civilian personnel in the execution of their organizational mission. This EA has been prepared in accordance with the National Environmental Policy Act to analyze the potential environmental consequences of constructing an antenna within the existing aerospace data facility (ADF). Under the no action alternative, no additional antenna would be constructed. The environmental resources potentially affected by the proposed action and alternative include hydrologic resources; air quality; noise; biological resources, including vegetation, wildlife, and protected species; social and economic resources, including environmental justice; land use and transportation; public services and utilities; and hazardous materials and substances. Based on the nature of the activities that would occur during construction/operation of the antenna, the U.S. Air Force has determined that minimal or no adverse impacts to the above resources are anticipated.</b></p>		
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a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

**FINDING OF NO SIGNIFICANT IMPACT  
FOR THE  
PROPOSED ANTENNA CONSTRUCTION AT THE EXISTING ADF REMOTE  
TERMINAL FACILITY, BUCKLEY AIR FORCE BASE, COLORADO**

**Agency**

Aerospace Data Facility (ADF) and the US Air Force (USAF), 460th Air Base Wing

**Background**

The attached Final Environment Assessment (EA), which is incorporated by reference, dated May 2004, analyzes the potential for impacts to the environment as a result of the construction and operation of a new 14 to 26 meter diameter antenna at the ADF Remote Terminal Facility on Steamboat Avenue on the northeast site of Buckley Air Force Base (AFB). This EA was prepared in accordance with 32 Code of Federal Regulations (CFR) §989, which in turn implements Section 102(2) of the National Environmental Policy Act (NEPA) and the regulations established by the Council on Environmental Quality (CEQ).

**Proposed Action**

The Proposed Action and Alternatives include: (1) the construction and operation of one new 14 to 26 meter diameter antenna and radome structure to support the ADF mission at Buckley AFB, Colorado at the proposed site on the northeast side of Buckley AFB north of building 1201; (2) the construction and operation of one new 14 to 26 meter diameter radome antenna to support the ADF mission at Buckley AFB, Colorado at the alternate proposed site on the northwest side of Buckley AFB within the ADF compound, northwest of building 490; and (3) the No Action Alternative.

**Factors Considered in Determining That No Environmental Impact Statement is Required**

The EA analyzed the environmental impacts of implementing the Proposed Action, the Alternative Action, and the No Action Alternative taking into account all relevant environmental resource areas and conditions. ADF and the USAF has examined the following resource areas and found that implementing the Proposed Action or Alternate Action would not result in any significant impacts to: hydrologic resources; air quality; noise; biological resources, including vegetation, wildlife, and protected species; social and economic resources, including environmental justice; land use and transportation; public services and utilities; and hazardous materials and substances.

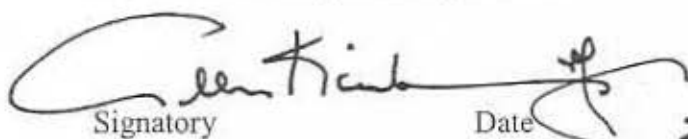
**Public Notice**

NEPA, 40 CFR §1500-1508, and 32 CFR §989 requires public review of the EA before approval of the finding of no significant impact (FONSI) and implementation of the Proposed Action. The public review period ended on 6 April 2004.

**Finding of No Significant Impact**

Based upon the requirements of NEPA, 40CFR §1500-1508, and 32 CFR §989, I conclude that the environmental effects of implementing the Proposed Action are not significant, and therefore, an environmental impact statement will not be prepared. A notice of availability for public review was published in the Denver Post on 7, 14, and 21 March 2004 indicating a 30-day review period. Hard copies of the Draft EA and Draft FONSI were placed in the Denver and

Aurora public libraries for dissemination. The signing of this FONSI completes the USAF Environmental Impact Analysis Process.

A handwritten signature in black ink, appearing to read "Allen Kirkman, Jr.", with a stylized flourish at the end.

Signatory

Date

29 JULY 2004

ALLEN KIRKMAN, JR., Colonel, USAF  
EPC Chairperson/Installation Commander

**COVER SHEET  
ENVIRONMENTAL ASSESSMENT  
FOR THE  
PROPOSED ANTENNA CONSTRUCTION AT THE EXISTING ADF REMOTE TERMINAL  
FACILITY, BUCKLEY AIR FORCE BASE, COLORADO**

- a. **Responsible Agency:** Aerospace Data Facility (ADF) and the U.S. Air Force, 460th Air Base Wing
- b. **Proposed Action:** Construct and operate a new 14 to 26 meter diameter antenna at the ADF Remote Terminal Facility on Steamboat Avenue on the northeast site of Buckley AFB.
- c. **Written comments and inquiries regarding this document should be directed to:** Elise Sherva, 460 CES/CEVP, 660 S. Aspen Street (Mail Stop 86), Bldg. 1005, Room 254, Buckley AFB, Colorado 80011-9551; telephone (303) 677-9077; e-mail [elise.sherva@buckley.af.mil](mailto:elise.sherva@buckley.af.mil).
- d. **Designation:** Draft Environmental Assessment (EA)
- e. **Abstract:** The purpose of the Proposed Action is to accomplish the construction and operation of one new 14 to 26 meter diameter antenna and radome structure to support the ADF mission at Buckley AFB, Colorado. The ADF proposes to erect one new antenna and radome structure to enhance it's organizational mission. The antenna would be constructed on concrete foundations with grounding and utilities interfacing with the existing support buildings. This antenna would be part of the existing Remote Terminal Facility (RTF) located within the secure area on the northeastern portion of Buckley AFB. Existing ADF personnel would operate the antenna; no additional manpower would be required. The ADF is a Department of Defense (DOD) information processing, analysis, relay, and test facility supporting the U.S. Government and its allies. In addition, it provides an operational environment for training government and civilian personnel in the execution of their organizational mission.

This EA has been prepared in accordance with the National Environmental Policy Act to analyze the potential environmental consequences of constructing an antenna within the existing aerospace data facility (ADF). Under the no action alternative, no additional antenna would be constructed.

The environmental resources potentially affected by the proposed action and alternative include hydrologic resources; air quality; noise; biological resources, including vegetation, wildlife, and protected species; social and economic resources, including environmental justice; land use and transportation; public services and utilities; and hazardous materials and substances. Based on the nature of the activities that would occur during construction/operation of the antenna, the U.S. Air Force has determined that minimal or no adverse impacts to the above resources are anticipated.

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## **1.0 Purpose and Need for the Action**

This environmental assessment (EA) was prepared in accordance with 32 Code of Federal Regulations (CFR) §989, which, in turn, implements Section 102 (2) of the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321 to 4370d), as implemented by the regulations promulgated by the Council on Environmental Quality (CEQ) (40 CFR §1500-1508). The principal objectives of NEPA are to ensure the careful consideration of environmental aspects of proposed actions in federal decision-making processes and to make environmental information available to decision-makers and the public, before decisions are made and actions are taken. This EA has been prepared to assess the environmental effects resulting from the proposed construction of Aerospace Data Facility (ADF) antenna at Buckley AFB (BAFB).

### **1.1 Introduction and Background**

BAFB encompasses approximately 3,283 acres adjacent to the City of Aurora, Arapahoe County, Colorado, within the Denver metropolitan area (Figure 1). The current population of BAFB includes approximately 3,600 active duty personnel, 3600 civilian employees, and approximately 1,750 contract employees. In addition the base supports approximately 22,000 retirees, and approximately 55,000 dependents (BAFB, 2003a). The tenant units at BAFB are listed in Table 1-1; however, this list is not inclusive since units tend to change over time. The ADF compound, including the remote terminal facility, comprises approximately 169 acres that lay entirely within BAFB.

The purpose of the Proposed Action is to accomplish the construction and operation of one new 14 to 26 meter diameter antenna to support the ADF mission at BAFB, Colorado. This antenna would be part of the existing Remote Terminal Facility (RTF) located within the secure area on the northeastern portion of BAFB. Existing ADF personnel would operate the antenna; no additional manpower would be required.

**Table 1-1  
Tenant Units at BAFB**

<ul style="list-style-type: none"> <li>• 140<sup>th</sup> Wing, COANG</li> <li>• 2<sup>nd</sup> Space Warning Squadron</li> <li>• 8<sup>th</sup> Space Warning Squadron</li> <li>• 566<sup>th</sup> Information Operations Squadron</li> <li>• Detachment 4, Air Force Operational Testing and Evaluations Center</li> </ul>	<ul style="list-style-type: none"> <li>• Detachment 801, Air Force Office of Special Investigation</li> <li>• Detachment 45, Air Force Technical Applications Center</li> <li>• Aerospace Data Facility</li> <li>• Navy/Marine Corps Reserve Center</li> <li>• Marine Air Control Squadron</li> <li>• Combined Task Force</li> <li>• Air Force Auditing Agency</li> </ul>	<ul style="list-style-type: none"> <li>• COARNG</li> <li>• Civil Air Patrol Defense Commissary Agency</li> <li>• Army/Air Force Exchange Service</li> <li>• Air Force Accounting and Finance Office</li> <li>• Air Force Base Conversion Agency</li> <li>• Air Force Institute of Technology</li> <li>• Air Force Reserve Personnel Center</li> </ul>	<ul style="list-style-type: none"> <li>• Battery A, 1<sup>st</sup> Battalion, 14<sup>th</sup> Marines</li> <li>• Defense Contract Manager</li> <li>• Defense Finance and Accounting Service</li> <li>• Military Entrance Processing Station</li> <li>• Naval Reserve Recruiting Command</li> <li>• U.S. Army Recruiting Battalion</li> </ul>
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COANG = Colorado Air National Guard  
COARNG = Colorado Army National Guard  
Source: BAFB 2003b

## 1.2 Past, Present, and Reasonably Foreseeable Future Actions at BAFB

Within the BAFB General Plan, a list of facilities/areas proposed for construction (capital improvements) between fiscal year 2002 (FY 02) to FY 09 totaling greater than four million square feet (SF), was developed (BAFB 2003c). Sixty-seven (67) activities/facilities have been identified as needed for (1) successful operation of BAFB and (2) to improve the quality of life for active, reserve, and retired members of the armed services living in the Denver metropolitan area. Planned construction of approximately 2,813,482 SF which includes occupiable SF, parking, and runway maintenance /repair is expected within the next four years (FY 03-FY 06); however, timelines are subject to change and projects may be constructed at an earlier or later date (Table 1-2). The ADF antenna construction would account for approximately 40,000 SF of the projected four-year total.

**Table 1-2  
Scheduled Facility Projects at BAFB**

<b>Fiscal Year</b>	<b>Projects</b>	<b>Project Footprint (m<sup>2</sup>)**</b>	<b>Project Footprint (SF)**</b>	<b>Design/Actual Footprint (SF)**</b>
02	BX/Commissary (completed)			200,152
02	Dormitory II (144 person) (Under construction)	5040	54,250	
02	Fitness Center - Completed	5065	54500	67900
02	Military Family housing = 71 acres total land (for houses, landscaping, roads etc)	66175	712298	
02	Telluride Gate - Completed	11	120	
03	460 ABW Headquarters	4744	51066	
03	ADAL space-based infrared surveillance (SBIRS) Mission Control (Under construction)	1672	18000	
03	Car Wash (AAFES)	186	2000	
03	Child Development Center 4 room Addition (Bldg 725)	69	743	
03	Control Tower (COANG)	539	5800	
03	Engine Shop Addition Bldg 960 (COANG)	186	2000	
03	Entomology (O&M) Replace Entomology Shop	209	2255	
03	Fire Station Addition	2000	21531	
03	Golf Driving Range	1	12	
03	H-70 Fuel Storage Facility (O&M)	97	1045	
03	New northern runway extension (COANG)	3484	37500	
03	Temporary Lodging Facility (NAF)	7839	84370	84377
03	Two Pavilions at Williams Lake	6	60	
03	Visitors Quarters	3530	38000	39568
03	Warehouse - Civil Engineering	465	5000	
04	ADD/Alter Access Roads (Airfield) (COANG)	41204	443520	
04	Civil Engineering Complex (COANG)	3470	37350	

**SECTION 1.0**  
**PURPOSE AND NEED FOR THE ACTION**

<b>Fiscal Year</b>	<b>Projects</b>	<b>Project Footprint (m<sup>2</sup>)**</b>	<b>Project Footprint (SF)**</b>	<b>Design/Actual Footprint (SF)**</b>
04	Fire Training Facility - originally 08		3,400 buildings, 41,112 concrete pads	
04	Impound Lot (asphalt paved)	743	8000	
04	New East Gate (estimate based on existing structure at Peterson AFB)	12	128	
04	New Visitor Center (estimate based on existing structure at Peterson AFB)	49	525	
04	Repair Parking Lot East of Bldg 471	29,430	316798	
04	Repair Parking Lots ANG wide (COANG)	13,380	144000	
04	Upgrade Base Infrastructure, Ph III	n/a	n/a	
05	Vail Street Improvements	8475	91200	
05	Army Aviation Support Facility (COARNG)	11148	120000	
05	Athletic Fields (two ball fields, 1 track, and 1 football field)	160 Parking Spaces	Fence 3,600 meters	
05	CDCII Pre school Playground	818	8800	
05	CDCII Pretoddler Playground	486	5225	
05	CDCII Toddler Playground	599	6450	
05	Chapel Center	2423	26081	
05	Child Development Center CDCII	2248	24197	
05	Haz Materials Storage (Env. Level 1) HAZMART Pharmacy	507	5457	
05	Haz Waste Facility (Env. Level 1)	150	1615	
05	Medical Clinic ADAL	424	4563	
05	Permanent Alert Crew Qtrs (COANG)	604	6500	
05	Permanent Alert Shelters (COANG)	3846	41400	
06	- Demolition of existing structures and AST's two 210,000 gallon. Service station tank size	NA	NA	
06	-Petroleum Oil Lubricants (POL) Ops Building	255	2745	

**SECTION 1.0**  
**PURPOSE AND NEED FOR THE ACTION**

<b>Fiscal Year</b>	<b>Projects</b>	<b>Project Footprint (m<sup>2</sup>)**</b>	<b>Project Footprint (SF)**</b>	<b>Design/Actual Footprint (SF)**</b>
06	-Pump house	93	1001	
06	-Storage POL Bulk Ops Building	42	452	
06	Athletic Fields Concession (NAF)	130	1399	
06	Consolidated Fuels Includes	390	4198	
06	Consolidated Services Facility Admin	1407	15145	
06	Leadership Development Center	1638	17631	
06	Logistics Complex	1200	12917	
06	Outdoor Arm Range	605	6512	
06	Pharmacy	557	6000	
06	SF Operations Facility	2500	26910	
06	Youth Center (NAF)	2656	28586	
07	Communications Center (ADAL 730) orig 05	5666	60988	
07	Education Center	2045	22012	
07	Vehicle Maintenance Facility	1812	19504	
08	Consolidated Base Warehouse	9293	100029	
08	Widen 6th Avenue (DAR Project)	1524 Meters	3 Lanes	
09	Fire Station Addition (crash house) - 2	985	10600	
09	Fitness Center Addition (estimate based on existing swimming pool at Peterson AFB)	1175	12652	
09	Taxiway and Arm/Disarm (COANG) Includes Demolition of existing parking apron and portion of Sunlight Road and taxiways F, W, X, and Y		75 feet by 10,500 linear feet and holding pads 225 feet by 400 LF (paved)	
09	Upgrade Based Infrastructure Ph IV	n/a at this time	n/a at this time	
09	Weapons Loading Facility (COANG)	687	7400	

**SECTION 1.0**  
**PURPOSE AND NEED FOR THE ACTION**

<b>Fiscal Year</b>	<b>Projects</b>	<b>Project Footprint (m<sup>2</sup>)**</b>	<b>Project Footprint (SF)**</b>	<b>Design/Actual Footprint (SF)**</b>
09	Weapons Release Complex (COANG)	560	6000	
TBD	FAMCAMP	RV Parking Sites 38	Tent Sites 10 each	
	** Project footprint does not include disturbance due to construction; such as, laydown areas and generally doesn't include parking lots			

AAFES = Army/Air Force Exchange Service  
 ADAL = Addition/Alteration  
 COANG = Colorado Air National Guard  
 COARNG = Colorado Army National Guard  
 NAF = non-appropriated funds  
 NA = not applicable  
 Source: BAFB 2003c

### **1.3 Purpose and Need for the Proposed Action**

The ADF is a Department of Defense (DOD) information processing, analysis, relay, and test facility supporting the U.S. Government and its allies. In addition, it provides an operational environment for training government and civilian personnel in the execution of their organizational mission.

The ADF proposes to erect one new antenna and radome structure to enhance it's organizational mission. The antenna would be constructed on concrete foundations with grounding and utilities interfacing with the existing support buildings.

### **1.4 Scope of the Environmental Assessment**

This EA addresses the construction and operation of the proposed ADF Antenna. The analysis addresses the potential impacts to water resources; air quality; noise; biological resources, including vegetation, wildlife, and protected species; social and economic resources, including environmental justice; land use and transportation; public services and utilities; hazardous materials and substances; asbestos, soils; and historic or archeological resources. The regulatory requirements for each of the mentioned resource areas are also identified, as well as the existing conditions of each resource area.



The NEPA and CEQ regulations require that the environmental effects of proposed actions and alternatives be considered in the decision-making process. Preparation of an environmental document (this EA) must precede final decisions regarding the proposed action, and be available to inform decision-makers and the public of potential environmental consequences/impacts. The development of this EA allows for public consideration and input concerning the implementation of the proposed ADF antenna construction within the remote terminal facility at BAFB. This EA provides the decision-makers and the public with the information required to understand the possible future environmental consequences/impacts of the implementation of the proposed action or alternatives. The decision to be made, after a review of the analysis presented in this EA, would be whether to issue a finding of no significant impact (FONSI) or to proceed with the implementation of an environmental impact statement (EIS) to further quantify and detail the potentially significant impacts resulting from implementation of the proposed action or alternative. Significant as used in NEPA requires considerations of both context and intensity. Context means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Intensity refers to the severity of the impact.

The Environmental Assessment does not constitute approval for the proposed action. The construction projects must be presented to the 460th Air Base Wing Facility Board at BAFB for review, approval for the development, and specific project siting.

## **1.5 Organization of the Environmental Assessment**

This document follows the format established in 32 CFR §989 implementing the CEQ regulations (40 CFR §1502). The document consists of the following sections:

- **Section 1.0 – Purpose of and Need for the Action:** presents a brief description of the background of the installation; the past, present, and reasonably foreseeable future actions on BAFB; the purpose and need for the proposed action; the scope of the environmental review; and a brief description of the EA organization.
- **Section 2.0 – Alternatives Including the Proposed Action:** provides a detailed description of the selection criteria and descriptions of the proposed action and alternatives. Section 2.0 also contains an alternatives comparison matrix.

- **Section 3.0 – Affected Environment:** presents the existing baseline environment or present condition of the area(s) potentially affected by the proposed action and/or alternatives. Each environmental resource potentially impacted by the implementation of the proposed action and/or alternatives is discussed, as well as the regulatory background, if applicable, for each impacted resource area.
- **Section 4.0 – Environmental Consequences:** provides the scientific and/or analytical basis for comparing the alternatives and describes the probable consequences of each alternative on relevant environmental attributes
- **Section 5.0 – List of Preparers:** provides a list of the document preparers and contributors.
- **Section 6.0 – Distribution List and Agencies and Individuals Contacted:** provides a list of persons/agencies contacted in the preparation of this EA.
- **Section 7.0 – References:** provides a list of references used in the preparation of this EA.
- **Section 8.0 – Acronyms and Abbreviations:** provides a list of applicable acronyms and abbreviations used throughout the text.
- **Appendices:** provide background and supporting information to this EA, as necessary. Appendices included in this EA are Appendix A: U.S. Air Force (USAF) Form 813; Appendix B: SHPO Letter and interagency and public transmittal letters; Appendix C: Environmental Constraints; and Appendix D: Comment/Comment Response.

## **2.0 Detailed Description of Proposed Action**

### **2.1 Proposed Action**

The Proposed Action is the construction and operation of a new 14 to 26 meter diameter antenna and radome structure to support and enhance the mission at the existing ADF Remote Terminal Facility, BAFB Colorado. A reinforced concrete foundation and pad would be placed to support the antenna and a utility tunnel would be constructed from the existing building to the proposed radome and antenna. Minor realignment of existing access roads and construction of a 12' wide driveway are anticipated. Existing ADF personnel would operate the antenna and no additional manpower would be required.

#### **2.1.1 Antenna Construction**

Construction of the new antenna, radome and ancillary structures is anticipated to occur over a 6-month period beginning late FY 04. The antenna structure would be housed within a 14 to 26 meter diameter radome structure with related electronic equipment. The antenna and radome would be installed on a concrete foundation and located approximately 100 yards northwest of Building 1201. A reinforced concrete pad for the proposed antenna would measure 50 feet in diameter and be 4 feet thick. A circular wall, 18 feet high by 12 inches thick, would support the radome structure, which houses the antenna.

The area for the proposed antenna site is 200 by 200 feet (Figure 2). There are existing access roads to the proposed site and the alternate site (Figure 2). A 12-foot wide driveway would be constructed from the access road to the radome and antenna at the proposed site.

Electrical power, natural gas, water, and sewer utilities would be required. An external utility interface connection to the antenna would be constructed underground in a utility tunnel connecting the new antenna with the operations building. The existing electric generation and natural gas service has sufficient capacity to provide for the needs of the

new antenna. Both water and sewer utility connections are required, but as the antenna is unmanned, no increase in utility use would result from the proposed action.

It is anticipated 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 as needed to meet project completion requirements.

### **2.1.2 Antenna Operation**

Existing ADF personnel would maintain and operate the proposed antenna and no additional manpower would be required. The construction and operation would meet the Health and Safety requirements of Federal, State, Local, and Air Force regulations. No unacceptable energy hazards, cumulative or other wise, is expected from the operation of this antenna.

## **2.2 Alternative Action**

ADF personnel are considering an alternative location for the proposed site of the new radome and antenna construction. The alternative site is located on Figure 2, within the existing ADF complex. The request for environmental impact analysis form, Air Force Form 813, is presented in Appendix A.

## **2.3 Description of No Action Alternative**

Under the No Action Alternative, the ADF mission would be seriously degraded. Without the proposed expansion, the mission of DOD information processing, analysis, relay, and testing may not be adequately supported.

## **2.4 Comparison of Environmental Effects of All Alternatives**

Table 2-1 summarizes impacts of the Proposed Action, the Alternate Action, and the No Action Alternative.

**Table 2-1  
Comparison of Environmental Effects of Alternatives**

<b>Resource</b>	<b>Proposed Action</b>	<b>Alternate Action</b>	<b>No Action Alternative</b>
Air Quality, including Hazardous Air Pollutants (HAPS)	The construction phase of the Proposed Action is not considered regionally significant and does not violate the Colorado State Implementation Plan (SIP). The operational phase of the Proposed Action is not anticipated to significantly impact air quality at BAFB.	The construction phase of the Alternative Action is not considered regionally significant and does not violate the Colorado SIP. The operational phase of the Alternative Action is not anticipated to significantly impact air quality at BAFB.	No change from the baseline conditions.
Water Resources	The Proposed Action is not anticipated to significantly impact water quality at BAFB.	The Alternative Action is not anticipated to significantly impact water quality at BAFB.	No change from the baseline conditions.
Biological Resources	The Proposed Action would not likely have any effects on biological resources; however, monitoring/surveys would be conducted prior to construction.	The Alternative Action would likely have minimal effects on biological resources with the exception of black-tailed prairie dogs and possible burrowing owls. No impacts to burrowing owl would be expected if development occurs outside the breeding season. A survey must be conducted to assess if species are present within the prairie dog colony prior to the start of excavations.	No change from the baseline conditions.
Vegetative Resources	The Proposed Action is not anticipated to significantly impact vegetative resources at BAFB.	The Alternative Action is not anticipated to significantly impact vegetative resources at BAFB.	No change from the baseline conditions.
Utilities	The Proposed Action is not anticipated to negatively impact the Base existing utility systems.	The Proposed Action is not anticipated to negatively impact the Base existing utility systems	No change from the baseline conditions.
Traffic	No significant impacts to traffic are anticipated.	No significant impacts to traffic are anticipated.	No change from the baseline conditions.
Stormwater	The Proposed Action area to be effected is anticipated to affect greater than 1 acre. Therefore, coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges From Construction Activities is required. A Stormwater Pollution Prevention Plan (SWPPP) and best management practices would need to be developed and implemented.	The Alternate Action area to be effected by construction anticipated to affect greater than 1 acre. Therefore, coverage under the NPDES General Permit for Storm Water Discharges From Construction Activities is required. SWPPP and best management practices would need to be developed and implemented.  The additional area to be paved associated with the Alternate site for the proposed radome and	No change from the baseline conditions.

SECTION 2.0  
DETAILED DESCRIPTION OF PROPOSED ACTION

Resource	Proposed Action	Alternate Action	No Action Alternative
	The additional area to be paved associated with the proposed radome and antenna is approximately 10,000 to 20,000 sq/ft, and would only minimally impact overall base wide storm-water run-off and would not be further analyzed.	antenna is approximately 10,000 to 20,000 sq/ft, and would only minimally impact overall base wide storm-water run-off and would not be further analyzed.	
Hazardous Substances/ Hazardous Waste	Hazardous substances or wastes are not likely to affect the site and would not be further analyzed. In the event that any hazardous materials are encountered, all materials would be managed in accordance with the <i>BAFB Draft Hazardous Materials Management Plan</i> , May 2003 and federal, state, and local regulations.	Hazardous substances or wastes are not likely to affect the site and will not be further analyzed. In the event that any hazardous materials are encountered, all materials will be managed in accordance with the <i>BAFB Draft Hazardous Materials Management Plan</i> , May 2003 and federal, state, and local regulations.	No change from the baseline conditions.
Asbestos	No former buildings were located at this site and a subsurface soils investigation indicates that the soils in the proposed radome and antenna construction area are undisturbed, native soils, with no sign of fill materials and will not be further analyzed.	Barracks were formerly located at this site and were potentially demolished in place sometime during the 1950s. Surface and subsurface soils testing performed in 2003 indicated that no asbestos containing materials were encountered in the soils. Further analysis may be done in accordance with the base wide sampling management plan being discussed with the state. No asbestos impacts are anticipated to affect the site and will not be further analyzed.	No change from the baseline conditions.
Land Use	The Proposed Action would not impact the legal use of BAFB lands; therefore, land use is not an issue and will not be further analyzed. The proposed land use is consistent with the Base General Plan	The Alternative Action would not impact the legal use of BAFB lands; therefore, land use is not an issue and will not be further analyzed. The proposed land use is consistent with the Base General Plan.	No change from the baseline conditions.
Environmental Justice/ Socioeconomic Impacts	Any minor impacts would be primarily confined to the Installation and, therefore, would not have a disproportionately high and adverse impact to any "minority" or "low income" populations near the Installation. Further Environmental Justice analysis will not be made.	Any minor impacts would be primarily confined to the Installation and, therefore, would not have a disproportionately high and adverse impact to any "minority" or "low income" populations near the Installation. Further Environmental Justice analysis will not be made.	No change from the baseline conditions.

Resource	Proposed Action	Alternate Action	No Action Alternative
Noise	Noise levels are anticipated to increase during construction activities; however, the increase would be temporary and would be limited to the construction area. No increases in noise levels are anticipated to be associated with antenna operations. Noise is not anticipated to be an issue and will not be further analyzed.	Noise levels are anticipated to increase during construction activities; however, the increase would be temporary and would be limited to the construction area. No increases in noise levels are anticipated to be associated with antenna operations. Noise is not anticipated to be an issue and will not be further analyzed.	No change from the baseline conditions.

## 2.5 Identification of the Preferred Alternative

The preferred alternative is to implement the Proposed Action as described in section 2.2 of this document.

## 2.6 Mitigation Measures

Mitigation measures would not be necessary for any of the resources analyzed as part of this Description of Proposed Action and Analysis. Best Management Practices (BMPs) are routinely implemented to further minimize the potential for environmental impacts. These management practices are summarized in Table 2-2.

**Table 2-2**  
**Best Management Practices**

Resource	Proposed Action and Alternative Action
Air Quality	Potential criteria pollutant emissions associated with the Proposed Action or the Alternative Action do not exceed significance criteria requirements. Therefore, no mitigative measures for improving the ambient air quality would be required. Although mitigation is not required, possible BMPs include watering for dust suppression to control PM <sub>10</sub> emissions.
Stormwater	Stormwater permits are required for construction sites of one acre and greater and the Proposed Action and Alternative Action site are anticipated to affect greater than 1 acre. Therefore, coverage under the NPDES General Permit for Storm Water Discharges for Construction Activities is required. A SWPPP and best management practices would be developed and implemented. Mitigative measures for stormwater would be required per the permit requirements. Possible BMPs include silt fencing and hay bales to control stormwater surface flow from the site.

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### 3.0 Affected Environment

This section of the EA provides a description of the project area (approximately 1-acre construction and staging area for the ADF antenna construction adjacent to Building 1201) that comprises the Proposed Action and the Alternative Action under consideration (see Section 2.3). In addition, this section also addresses those resource areas that have been excluded from detailed analysis due to either levels and significance of previous impacts, geographic scale of the resources, or the absence of those resources from the project areas and adjacent areas.

#### 3.1 Air Quality

The Clean Air Act (CAA) as amended, provides the framework for federal, state, tribal, and local rules and regulations to protect air quality. The CAA gives the U. S. Environmental Protection Agency (USEPA) the responsibility to establish the primary and secondary National Ambient Air Quality Standards (NAAQS) that set safe concentration levels for six criteria pollutants: particulate matter measuring less than 10 microns in diameter (PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), nitrous oxides (NO<sub>x</sub>), ozone (O<sub>3</sub>), and lead (Pb). Primary NAAQS are established to protect public health, and secondary standards provide protection for the public welfare, which includes

**Table 3-1  
National Ambient Air Quality Standards**

Air Pollutant	Averaging Time	National Ambient Air Quality Standard	
		Primary <sup>1</sup>	Secondary <sup>2</sup>
CO	1-hour	35 ppm	35 ppm
	8-hour	9 ppm	9 ppm
NO <sub>x</sub>	Annual	0.053 ppm	0.053 ppm
SO <sub>2</sub>	3-hour	-	0.50 ppm
	24-hour	0.14 ppm	-
	Annual	0.03 ppm	-
PM <sub>10</sub>	24-hour	150 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>
	Annual	50 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>
O <sub>3</sub>	1-hour <sup>3</sup>	0.12 ppm	0.12 ppm
	8-hour	0.08 ppm	0.08 ppm
Lead (Pb)	Quarterly average	1.5 µg/m <sup>3</sup>	1.5 µg/m <sup>3</sup>

<sup>1</sup> Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly.

<sup>2</sup> Secondary standards set limits to protect public welfare, including protection against decreased visibility, and damage to animals, crops, vegetation, and buildings.

<sup>3</sup> The ozone 1-hour standard applies only to designated non-attainment areas.

ppm = parts per million

µg/m<sup>3</sup> = micrograms per cubic meter

Source: USEPA 2002

wildlife, climate, transportation, and economic values (Table 3-1).

### **3.1.1 Existing Conditions**

BAFB is located in Arapahoe County, Colorado, within the Metropolitan Denver Air Quality Control Region (AQCR 36). The Denver metropolitan area was designated by the USEPA as attainment/maintenance status effective 14 January 2002 for CO, 11 October 2001 for O<sub>3</sub>, and 16 October 2002 for PM<sub>10</sub> (APCD 2002). The region of influence (ROI) for air emissions is generally defined as the Denver Metro AQCR.

BAFB has been identified as a major source of criteria pollutants because it has the potential to emit or has actual emissions of more than 100 tons of any single criteria pollutant. BAFB is currently identified by the APCD as a major Title V source of the PM<sub>10</sub> precursors NO<sub>x</sub> and SO<sub>2</sub> and is subject to Title V Operating Permit No. 950PAR118. This permit was issued on 28 August 1997, most recently reissued as of 11 June 2002, and expires 30 June 2007 (BAFB 2001a). In August 2003, the Colorado Department of Public Health and Environment (CDPHE) performed an inspection and determined BAFB was in compliance with the Title V permit.

## **3.2 Water Resources**

Water resources in this EA include surface water, jurisdictional waters of the United States, floodplains, and physical or biological water quality parameters.

### **3.2.1 Existing Conditions**

#### **Surface Water**

The South Platte River, located approximately 15 miles northwest of BAFB, is the primary surface water drainage in the region. Several smaller intermittent tributaries located within or adjacent to BAFB feed this drainage system. East Toll Gate Creek and an old tributary of Murphy Creek are the only named tributaries that are present on the installation. These waterways are intermittent in the vicinity of, and on, BAFB (BANGB 1999). There are no surface water features within or adjacent to the project areas. The proposed project area is located within developed portions of the installation and is

surrounded by engineered drainage systems. The nearest surface water feature to the proposed ADF antenna site facility location is an unnamed tributary to East Toll Gate Creek approximately 1,100 feet south of the Proposed Action site.

### **3.2.2 Potentially Jurisdictional Waters of the United States**

A base-wide jurisdictional determination by the U.S. Army Corps of Engineers (USACE) has not been made for BAFB; however, there are no potentially jurisdictional waters of the United States within or adjacent to the Proposed Action or Alternate Action areas. The nearest potentially jurisdictional water of the United States is Murphy Gate Creek, which is approximately 1,000 feet south of the proposed ADF antenna facility which is also the nearest potentially jurisdictional special aquatic site (e.g., potentially jurisdictional wetland) to all project area. The nearest potentially jurisdictional water near the Alternative Action site is an unnamed tributary of East Toll Gate Creek.

### **3.2.3 100-Year Floodplain**

As discussed previously, Murphy Creek is the closest surface water feature to the proposed ADF antenna construction. Floodplain maps are currently available for Murphy Creek directly downstream of BAFB. Based on a review of these maps and previous field observations, it is probable that floodplains of this creek on BAFB would be the width of the incised channel or only somewhat wider. Since all of the project areas are greater than 1000 feet away from any surface water feature, they would be outside the 100-year floodplains.

### **3.2.4 Physical or Biological Water Quality Parameters**

BAFB is located at the headwaters of several tributaries to the South Platte River. Any materials used site wide that enter the waterways could affect the quality of the waters leaving the installation. Potential water contaminants that could be carried in stormwater flows could include fertilizers, pesticides, from lawns; fuel, oil, grease, and coolant that drop onto the pavement from vehicles and aircraft; and deicing chemicals applied to roadways, runways, and aircraft. Other potential contaminant sources include

environmental restoration program (ERP) sites, chemical and fuel storage facilities, and golf courses.

BAFB currently protects its watershed through compliance with a number of federal, state, local, and USAF environmental regulations that require the installation to have detailed spill control and response procedures and to implement stormwater pollution prevention BMPs. Specific watershed protection measures used by BAFB include spill cleanup equipment at industrial locations, integrated pest management, and reduction of fertilizer applications. Wastewater generated at the installation is discharged to the sanitary sewer.

### **3.3 Biological Resources**

Biological resources play an integral role in the natural environment. The U.S. Fish and Wildlife Service (USFWS) and the Colorado Division of Wildlife (CDOW) maintain protected species lists (endangered, threatened, proposed candidate, or species of concern) for species that occur or could potentially occur within Arapahoe County (Table 3-4). The ROI for biological resources is Arapahoe County.

#### **3.3.1 Existing Conditions**

##### **3.3.1.1 Vegetation Communities**

The Proposed Action project site and the Alternative Action proposed site are undeveloped land dominated by upland weedy species, including diffuse knapweed (*Centaurea diffusa*), dandelion (*Taraxacum officinale*), Russian thistle (*Salsola iberica*), and pineapple weed (*Matricaria matricarioides*). The area had been recently mowed at the time of the site visit.

Of the eight wildlife species listed by the U.S. Fish and Wildlife Service (USFWS) as potentially occurring in Arapahoe County, and protected under the endangered species act (ESA), two have the potential to occur on the Proposed Action or Alternate Action

areas. However, no evidence of federal endangered or threatened species habitat was observed during the assessment.

### **3.3.2 Threatened and/or Endangered Species**

#### **3.3.2.1 Bald Eagle**

Bald eagles (*Haliaeetus leucocephalus*) typically inhabit areas near large open water bodies throughout the breeding season to fish or scavenge. The project area is not adjacent to any large open bodies of water. As such, the regular occurrence of bald eagle on or immediately adjacent to the project area during the breeding season is considered highly unlikely. During migration and winter, eagles would utilize areas away from water, especially to scavenge upon prairie dogs and dead animals. The relatively undeveloped nature of the area suggests that occasional use of the property by wintering bald eagles may be possible, but is not likely. However, regular use by eagles is considered highly unlikely due to the lack of open water bodies or a significant prey base on or adjacent to the Proposed Action or Alternative Action sites. No known eagle nesting sites are located within one mile of either site.

#### **3.3.3 Federal Candidate or Proposed Species**

In addition to actual listed species in Arapahoe County, the black-tailed prairie dog (*Cynomys ludovicianus*) is listed as a candidate species. Candidate species are species that the FWS maintains warrant listing, but currently are not listed because of higher priorities.

During the site assessment, one abandoned black-tailed prairie dog burrow was observed on the Proposed Action site and no active or abandoned burrows were observed at the proposed Alternative Action site. Since the burrow that was identified at the Proposed Action site was abandoned and the species is not listed at this time, consideration of impacts to the species is not required under the ESA. However, Air Force and DoD policy is to when practical, give the same protection to candidate species that is given to species that are already listed per AFI 32-7064 Integrated Natural Resources Management (AFCEE, 2003). Therefore any black-tailed prairie dogs located on the

construction site would be managed in accordance with the Environmental Assessment of Proposed Prairie Dog Management Practices at BAFB (BAFB, 2001b)

#### **3.3.4 State-Listed Species**

Animals listed by the State of Colorado as threatened or endangered species are protected from take of the animal itself. This includes nests or eggs, but generally does not include impacting the species' habitat, unlike the prohibitions of species listed under the ESA. Results of the SWCA, Inc., site visit indicate that no state-listed species have the potential to occur on the Proposed Action site, but the Alternative Action site has the potential for burrowing owls to be present based upon the presence of the prairie dog colony; however no burrowing owls were observed. Based upon the results of the "*Black-tailed Prairie Dog and Burrowing Owl Survey*" for BAFB (BAFB, 2003d) both the Proposed Action and Alternative Action sites may have prairie dogs and/or burrowing owls located adjacent to the proposed sites.

Burrowing owls are migratory and generally only reside in Colorado between the months of April through October. If development of this site proceeds during that portion of the year, it is recommended that a survey be conducted to assess if the species is present at both the Proposed Action and Alternative Action sites. No impacts to burrowing owl would be expected if development occurs outside the breeding season.

**Table 3-4  
Federal and State-Listed Species Potentially  
Occurring in Arapahoe County, Colorado**

Common Name (Scientific Name)	Habitat Reason for Decline	Preferences/ Federal Status	State Status	Potentially Suitable Habitat Present?
<b>BIRDS</b>				
Bald eagle* ( <i>Haliaeetus leucocephalus</i> )	Sea coasts, rivers, and large lakes; nests in tall trees or cliffs near water/habitat destruction, illegal shooting, pesticides	T	T	Yes
Interior least tern** ( <i>Sterna antillarum</i> )	Sandy/pebbly beaches, inland river sandbars for nesting and shallow water for foraging/riverine alterations, habitat loss, nest disturbance	NL	E	No
Mountain plover** ( <i>Charadrius montanus</i> )	Prairie grasslands, arid plains, and fields; nesting plovers choose shortgrass prairies grazed by prairie dogs, bison, and cattle, and overgrazed tall grass and fallow fields/habitat loss, overgrazing, predation	PT	SC	Yes
Mexican spotted owl** ( <i>Strix occidentalis lucida</i> )	Lower elevation forests mostly in deeply incised, rocky canyons; complex forest structures that contain uneven-aged, multi-level, and old-aged thick forests/logging, catastrophic wildfire	T	T	No
Piping plover** ( <i>Charadrius melodus</i> )	Sandy lakeshore beaches, sandbars within riverbeds, and sandy wetland pastures, all of which must be sparsely vegetated/habitat alteration and destruction, recreational activities near nesting sites	NL	T	No
Western burrowing owl* ( <i>Athene cunicularia</i> )	Primarily found in grasslands and mountain parks, usually in or near prairie dog towns; also uses well-drained steppes, deserts, prairies, and agricultural lands/urbanization, decimation of prairie dog populations	NL	T	Yes
<b>MAMMALS</b>				
Black-footed ferret** ( <i>Mustela nigripes</i> )	Closely associated with prairie dog habitat; utilizes prairie dog burrows for nesting/habitat loss, poisoning, canine distemper, plague	E	T	Yes
Black-tailed prairie dog* ( <i>Cynomys ludovicianus</i> )	Short-grass prairie, they avoid heavy brush and tall grass areas/habitat loss, sport hunting, extermination by ranchers/farmers	C	SC	Yes
Preble's meadow jumping mouse** ( <i>Zapus hudsonius preblei</i> )	In and near densely vegetated, shrub-dominated riparian areas/habitat loss	T	SC	Yes
<b>PLANTS</b>				
Colorado butterfly plant** ( <i>Gaura neomexicana coloradensis</i> )	Sub-irrigated, alluvial soils of drainage bottoms surrounded by mixed grass prairie; elevation 5,800-6,200 feet/vegetative succession, haying, grazing, herbicide spraying, urban expansion	T	R/S1	No
Ute ladies'-tresses** ( <i>Spiranthes diluvialis</i> )	Open wetland and riparian areas with permanent sub-irrigation; early successional riparian habitats such as point bars, sand bars, and low-lying gravelly, sandy, or cobbly edges/alteration of hydrology, invasive plants, habitat loss, low reproductive rate, loss of pollinators	T	R/S2	No

\* = Known to occur at BAFB      \*\* = Not likely to occur at BAFB  
C = Federally or state-listed candidate species      E = Federally or state-listed endangered species  
PT = Proposed threatened      R = State-listed as rare  
S1 = Critically endangered in state      S2 = Endangered or threatened in state  
SC = State-listed special concern species (not a statutory category)  
T = Federally or state-listed threatened species  
NL = Not listed (species may be federally protected, but is not listed by the USFWS as potentially occurring in Arapahoe County)  
Sources: CDOW 2002a, 2002b, 2002c; USFWS 2003

### **3.4 Utilities**

The utilities supplied to BAFB, including the area of the Proposed Action and the Alternative Action, are discussed in this section. The utilities include electricity, natural gas, water supply, wastewater treatment, and solid waste. The ROI for these utility systems includes the service area for each utility that serves the Proposed Action and the Alternative Action sites. The major attributes of these utility systems in the ROI are average daily or monthly demand. These demands are used in determining whether the existing utility systems are capable and adequate to provide services.

#### **3.4.1 Utilities – Existing Conditions**

Xcel Energy provides the main source of electrical and gas energy to BAFB (USAF 1998). BAFB used 98,953,436 KWH of electricity and 1,344,167 CCF of natural gas in FY02.

BAFB obtains potable water from the City of Aurora. Nine reservoirs and lakes provide Aurora with 44.6 billion gallons of storage capacity. Water is transported from these reservoirs, natural river systems, pipes, tunnels, and pumps to meet the city's daily needs. Before distribution to the public water supply system, the water is treated and analyzed for various constituents to ensure compliance with federal, state, and local health department standards (City of Aurora 2002).

BAFB wastewater is discharged into the East Toll Gate Creek trunk sewer, which is a part of the City of Aurora wastewater collection system (USAF 1998). The wastewater is treated at the Metro Wastewater Reclamation District treatment plant, which discharges treated effluent to the South Platte River (USAF 1998). Monitored wastewater discharge points revealed that wastewater discharge levels for BAFB range from 3.56 million gallons for months during the winter, spring, and fall to 9.8 million gallons for the summer months.



BAFB disposed of approximately 1,477 tons of non-hazardous municipal solid waste (MSW) in regulated landfills during FY 02. BAFB diverted approximately 514 tons of MSW and construction debris from regulated landfills through recycling and reuse programs during FY 02.

### **3.5 Transportation Resources**

Transportation resources refer to the infrastructure and equipment required for the movement of people, raw materials, and manufactured goods over water, across the surface of the earth, or through air. Particular emphasis for this analysis is given to the road networks in the region of and on BAFB. The region of influence (ROI) for transportation includes all of the roadways on BAFB and in the immediate vicinity of the base. It also includes the major routes in the area that could be affected by the proposed action.

#### **3.5.1 Transportation – Existing Conditions**

Interstate 225 (I-225), a major north-south artery, provides access to and from the Aurora area. Other important road networks providing access to the area are I-25 to the south, I-70 to the north, and E-470 to the east. I-25 is a north-south highway that runs from Texas to Wyoming. I-70 is an east-west highway that runs from Maryland to Utah. C-470 is a regional toll-way that connects I-25 on the southern extent of the city to I-70 and the Denver International Airport. Denver International Airport, which is located approximately 17 miles to the north of BAFB, provides worldwide commercial air transportation. Denver Union Station is located approximately 17 miles west of BAFB and offers interstate passenger rail service. The Regional Transport District (RTD) provides mass transit in the Aurora area. The RTD is a public agency created to operate as a public transportation system. The RTD operates in a seven-county service area. RTD Local Route 10 provides daily service for BAFB. The RTD has one stop at the Telluride gate.

Interstate 225 and the local community are connected to BAFB by two main streets, 6th Avenue to the north and Mississippi Avenue to the south. Access to BAFB is available

via gates at the intersections of Aspen Avenue and 6<sup>th</sup> Avenue (North Gate) and Aspen Avenue and Mississippi Avenue (South Gate) and via the Telluride gate (BX/Commissary traffic). Of the traffic entering and departing the installation, 67 percent uses the North Gate (BAFB 2002b). Aspen Avenue is a 4-lane, divided street running north to south from the North Gate to the central base and continuing to the South Gate. All vehicles entering and departing the installation must use Aspen Avenue. Breckenridge and Steamboat avenues distribute traffic from Aspen Avenue to the major industrial and flightline areas (BAFB 2002a).

### **3.6 Issues Eliminated From Detailed Analysis in this Environmental Assessment**

CEQ regulations (§1501.7) state that the lead agency shall identify and eliminate from detailed study the issues which are not important or which have been covered by prior environmental review, narrowing the discussion of these issues in the document to a brief presentation of why they would not have a dramatic effect on the human environment. In accordance with §1501.7, issues eliminated from detailed study include the following resource areas.

#### **3.6.1 Noise**

The Noise Control Act directs federal agencies to comply with applicable federal, state, interstate, and local noise control 197. The USEPA provided information on negative effects of noise and identified indoor and outdoor noise limits that protect public health and welfare.

The region of influence (ROI) for the existing noise conditions analysis is the Proposed Action site, the Alternative Action site, and adjacent land uses on the BAFB installation. Existing noise conditions on BAFB are highly influenced by the operational activities of aircraft and by the test run-ups of aircraft engines. In the absence of aircraft activity, noise due to base activities is generated from surface traffic; maintenance and repair facilities; training ranges; heating, ventilation, and air conditioning (HVAC) equipment; and other man-made sources. Additionally, noise is almost entirely restricted to the base.

The Proposed Action area for the antenna construction is located between the day-night average sound level (DNL) 65 decibels (dBA) and DNL 70 dBA contour lines on the east side of the airfield, which is generally south of 6th Avenue and east of Aspen Avenue (Figure 3). The proposed Alternate Action site is located between the DNL 60 dBA and DNL 65 dBA contour lines on the west side of the airfield, which is generally south of 6th Avenue and west of Aspen Avenue.

During construction of the proposed antenna, noise levels are anticipated to increase slightly during construction work hours and only during site grading and excavation activities. The site work is anticipated to last approximately 6 months; however many factors affect construction and that time frame may not reflect actual construction durations.

Antenna operation does not generate any noise and no increases in noise levels are anticipated to be associated with the ADF antenna operation. Noise was eliminated from further analysis.

### **3.6.2 Social or Economic Resources (including environmental justice)**

Socioeconomic analyses generally include detailed investigations of the prevailing population, income, employment, and housing conditions of a community or area of interest. The socioeconomic conditions of a ROI could be affected by changes in the rate of population growth, changes in the demographic characteristics of a ROI, or changes in employment within the ROI caused by the implementation of the Proposed Action. In addition to these characteristics, populations of special concern, as addressed by Executive Order (EO) 12898 (EO 12898, 1994) are identified and analyzed for environmental justice impacts.

According to the U.S. Census Bureau (USCB) 2000 Census information, BAFB is located in USCB Census Tract 71.02, Block Group 9, Arapahoe County, Colorado (USCB 2002). In the 1990 Census, BAFB was located in USCB Census Tract 71, Block Group 1 (USCB 1993).

The general population of Arapahoe County increased by 96,456 persons or 24.6 percent between 1990 and 2000, totaling 487,967 persons (USCB 1993, 2002). Both the urban and rural components of the population increased. The urban component increased 25 percent to 478,124, and the rural component increased 8.5 percent to 9,843; however, this increase was offset by a decrease in the farm population of 27.1 percent to 425 persons (USCB 1993, 2002). Demographically in 2000, the general population of Arapahoe County was 79.7 percent White, 7.4 percent Black, 3.8 percent Asian, and 9.0 percent all other races or combination of races (USCB 2002). The Hispanic population accounted for 11.8 percent of the total population (USCB 2002). The total minority population in Arapahoe County for 2000 was 127,780, or 26.2 percent of the general population.

The general population of USCB Census Tract 71.02 was 3,619 in 2000 (USCB 2002). Demographically in 2000, this population was 86.2 percent White, 2.8 percent Black, 2.3 percent American Indian or Alaska Native, 3.2 percent Asian, and 5.6 percent all other races or combination of races (USCB 2002). The Hispanic population in this census tract accounted for 8.0 percent of the total population (USCB 2002). The total minority population of this census tract in 2000 was 645, or 17.8 percent of the general population (USCB 2002). More specifically, the total population of USCB Block Group 9 was 250 persons (USCB 2002). This population was, demographically, 55.6 percent White, 30 percent Black, 8.8 percent American Indian or Alaska Native, 2.4 Asian, and 3.2 percent all other races or combination of races (USCB 2002). The Hispanic population of this block group was 12, or 4.8 percent of the total population (USCB 2002). The total minority population of this block group was 116, or 46.4 percent of the total population (USCB 2002).

Between 1990 and 2000, total full-time and part-time employment increased 62 percent to 389,723 jobs in Arapahoe County (BEA 2002). The largest percentage employment gains between 1990 and 2000 were in Construction (163 percent); Transportation and Public Utilities (130 percent); State Government (123 percent); and Agricultural Services (108 percent) (BEA 2002b). Two industries reported a percentage loss of jobs, Mining (41 percent) and Farms (15 percent) (BEA 2002).

Poverty status between 1990 and 2000 in Arapahoe County remained approximately constant at 5.8 percent below the poverty threshold (USCB 1993, 2002). The poverty rate in USCB Census Tract 71.02 was 7.4 percent in 2000, while Block Group 9 had a poverty rate of 8.6 percent (USCB 2002).

Impacts from the Proposed Action would include all local expenditures for labor and materials for construction of the antenna and the ancillary facilities, utility line extensions, electrical distribution systems, HVAC systems/boiler. The impacts of the expenditures would be short term and would occur primarily during the construction duration. Labor for these construction activities could be adequately supplied by the regional labor pool so that no population effects would be expected due to in-migrating labor force.

The proposed ADF antenna construction would be an unmanned facility confined to BAFB, and operation and maintenance are not anticipated to require additional manpower. The proposed construction and operation is not anticipated to affect any “minority” or “low income” populations near the Installation. Social or Economic Resources, including environmental justice, were eliminated from further analysis.

### **3.6.3 Land Use**

BAFB lies adjacent to the City of Aurora, approximately 8 miles east of the Denver/Aurora corporate boundaries in Arapahoe County. As such, BAFB is part of an inner suburb of a large city. Accordingly, the area has a suburban character with motor vehicles providing the principal means of transportation and influencing the design of the roadways, land uses, site layouts, and building designs. The ROI for land use includes the current and planned land uses described in the BAFB General Plan for the existing and proposed sites. BAFB is bounded to the northeast by Colorado State Route 30 (6<sup>th</sup> Avenue), directly east and south by privately held real estate and the Plains Conservation Center, and on the west by undeveloped land owned by the City of Aurora and the State

of Colorado (Tower Road, Buckley Road). An airfield has been active at BAFB since the early 1940s.

With a contiguous landmass of approximately 3,250 acres, and its attributes as host to a significant commuter employee population and service center for a military retirees population, BAFB is a significant land use in its own right. BAFB functions as a compact community of interest and has many characteristics of a small city. As the 460th ABW continues its new role as host unit for the installation with the resulting base population growth and facilities construction, this aspect would become more pronounced.

Prior to the beginning of specific construction projects on an USAF installation, a detailed analysis of the project area occurs. Among the factors examined are the ongoing constraints to any development that are imposed by the airfield safety areas, ordnance storage safety areas, environmentally sensitive sites, and sites contaminated from previous activities that require remediation of environmental deficiencies. The Proposed Action and Alternate Action locations for the ADF antenna construction are in areas that are already utilized as part of the ADF mission in secure areas. The Proposed Action or Alternative Action would not impact the legal use of BAFB lands and are in compliance with the Base General Plan. Land Use was eliminated from further analysis.

#### **3.6.4 Hazardous Substances/ Hazardous Wastes**

The installation currently has an Environmental Restoration Program (ERP) to handle contaminated soil and groundwater sites, as well as a *Draft Hazardous Materials Management Plan* (BAFB, 2003e) to address spills and uncontrolled releases. BAFB is currently conducting a basewide preliminary assessment under the ERP program.

Heavy construction equipment utilizes both gasoline and diesel fuels, these fuels are classified as controlled substances, but are excluded as hazardous substances under the Resource Conservation and Recovery Act (RCRA) and the Comprehensive

Environmental Response, Compensation, and Liability Act (CERCLA). Additional construction equipment activities may also use other hazardous substances including minor amounts of degreasers and solvents. These substances would be used during construction activities; however, none are likely to be used in quantities that would require any reporting requirements under CERCLA. In the event that any hazardous materials are encountered, all materials would be managed in accordance with the *Buckley AFB Draft Hazardous Materials Management Plan*, (BAFB, 2003e) and federal, state, and local regulations. The ADF currently uses an above ground storage tank to power the back-up generator to support the continued operation of the antennae in the event of a power failure, however, the fuel is not regulated under either CERCLA or RCRA but any releases would be managed under the BAFB site wide Spill Prevention and Countermeasures Control Plan (SPCC). Hazardous substances/Hazardous wastes were eliminated from further analysis.

Existing ERP Site 5, the Former Fire Training Area No.1, is located about 800 feet southwest of the Proposed Action location; however, remedial action is not intended, and the Air Force is preparing a No Further Response Action Planned Decision Document.

### **3.6.5 Asbestos**

World War II era buildings and barracks were formerly located in the northwest area of BAFB; however, all of BAFB is considered the ROI for asbestos. The project area for the Proposed Action for the ADF antenna construction and operation is located in an undeveloped area of the remote terminal facility (RTF). Historical aerial photographs from this area indicate that no former buildings/barracks were located in the Proposed Action ADF antenna construction area and a soils investigation of the area indicates that the soils in the area are native and are undisturbed. While not expected at the Proposed Action site, work would stop if asbestos containing materials/soils were encountered during construction activities.

The Alternate Action location for the proposed ADF antenna construction is in an area where former World War II era buildings/barracks were located. There is the potential for asbestos containing materials (ACM) to be present in: insulation on abandoned buried steam lines, abandoned buried transite water lines, and debris in surface and/or near surface soils remnant from building demolition. The area was investigated to assess soils and potentially asbestos containing materials in subsurface soils. Soil samples were submitted for laboratory analysis and results indicated that no asbestos containing material was detected in the surface or subsurface soils in the areas investigated (MES, 2003). Further analysis may be performed on surface and subsurface soils to comply with the base wide sampling management plan under discussion/development with the State currently. Asbestos was eliminated from further analysis.

#### **3.6.6 Historic or Archeological Resources**

There are no known cultural resource sites at or in the immediate vicinity of either site. A full account of installation cultural resources and cultural resources management is provided in the Draft Integrated Cultural Resources Management Plan (BANGB, 2002). In the unlikely event that a potential historical/archeological object is uncovered during excavations that the excavation must stop and the Base Historical Resources Manager notified prior to any further work in the area. Historic and/or Archeological resources were eliminated from further analysis.



## 4.0 Environmental Consequences

This section of the EA forms the basis for the comparison of the alternatives identified in Section 2.0. The project area for the proposed ADF antenna construction consists of approximately 1.0-acre construction and staging area. The discussion presented in section 2.0 includes the potential environmental impacts from implementing the proposed action and alternatives. Table 4-1 provides a summary of the environmental consequences associated with implementing those alternatives carried forward for detailed analysis, as well as the alternatives that were eliminated. As demonstrated in Table 4-1, neither the Proposed Action nor the Alternative Action carried forward for detailed analysis would result in significant impacts to the environment.

**Table 4-1**  
**Alternatives Comparison Matrix Summary**

<b>Environmental Attributes (Threshold Criteria)</b>	<b>No Action</b>	<b>Proposed Action</b>	<b>Alternative Action</b>
<b><i>Resources Carried Forward for Detailed Analysis</i></b>			
Air Quality (increase above de minimis standards)	No	No	No
Water Resources (number of surface water features affected) (acres and/or linear feet of potentially jurisdictional waters affected) (change in physical or biological water quality parameters) (within 100-year floodplain) (significant increase in stormwater flow) (significant alteration of localized drainage patterns)	0 0 No No No No	0 0 No No No No	0 0 No No No No
Biological Resources (number of threatened and/or endangered species affected)	0	0	0
Vegetative Resources (acres of vegetation communities affected)	0	1.0	1.0
Utilities (unacceptable change in level of service)	No	No	No
Traffic (consistent with adjacent land uses [current and planned]) (unacceptable change in level of service)	No No	Yes No	Yes No
<b><i>Resources Eliminated from Further Analysis</i></b>			
<b>Environmental Attributes (Threshold Criteria)</b>	<b>No Action</b>	<b>Proposed Action</b>	<b>Alternative Action</b>
Noise (permanent increase to unacceptable levels) (within compatible noise contour)	No Yes	No Yes	No Yes

**Table 4-1  
Alternatives Comparison Matrix Summary**

Social or Economic Resources (including environmental justice) (unacceptable change in personal income or employment) (number of minority and/or low-income populations affected)	No 0	No 0	No 0
Land Use (consistent with adjacent land uses [current and planned])	Yes	Yes	Yes
Hazardous Substances/Hazardous Wastes (existing solid/hazardous waste and debris removed, If present)	No	Yes	Yes
Asbestos (ACM to be removed and remediated, if present)	No	Yes	Yes
Historic or Archeological Resources (Historic resources identified, if present)	No	Yes	Yes

#### 4.1 Air Quality

Impacts to air quality would be considered significant if any criteria pollutant emissions associated with the implementation of the proposed action or alternatives would exceed the rates specified for attainment/maintenance areas for CO, O<sub>3</sub>, and PM<sub>10</sub> (Table 4-2), would be regionally significant, or would contribute to a violation of the Title V permit limitations.

**Table 4-2  
Applicability Thresholds for Criteria Pollutants  
for Denver Air Quality Control Region (AQCR 36)**

Criteria Pollutants	Tons/Year
<b>O<sub>3</sub> (NO<sub>x</sub>, SO<sub>2</sub> or NO<sub>2</sub>)</b>	
All maintenance areas	100
<b>O<sub>3</sub> (VOCs)</b>	
Maintenance areas inside an O <sub>3</sub> transport region	50
Maintenance areas outside an O <sub>3</sub> transport region	100
<b>CO</b>	
All maintenance areas	100
<b>PM<sub>10</sub></b>	
All maintenance areas	100

VOC = volatile organic compounds  
Source: 40 CFR §93.153

The air quality analysis examined impacts from air emissions associated with the construction of the proposed ADF antenna within the secure compound at the remote terminal facility. As part of the analysis, emissions generated from construction, motor vehicles, and other (non-mobile) sources were examined for CO, volatile organic compounds (VOCs), SO<sub>2</sub>, NO<sub>x</sub>, and PM<sub>10</sub>. No air quality impacts are anticipated for the construction and operation of the ADF antenna.

#### **4.1.1 No Action**

Selecting the no action alternative would result in no significant impacts to ambient air quality conditions of the project areas or surrounding areas since no construction activities would be undertaken. Ambient air conditions would remain as described in Section 3.1.

#### **4.1.2 Proposed Action**

Implementing the proposed action would have a minor, temporary impact on local air quality; however, emissions are not expected to exceed the rates specified for attainment/maintenance areas for CO, O<sub>3</sub>, and PM<sub>10</sub>, be regionally significant, or contribute to a violation of Title V permit limitations. The primary impact would be directly related to the generation of PM<sub>10</sub> at and around the project areas during the preliminary stages of construction. These emissions would primarily be a function of (1) construction activities, such as grading and excavation; (2) movement of dust (wind erosion) from ‘piled’ materials; and (3) mechanical entrainment of road dust.

The potential air quality impact resulting from construction activities would be minor, temporary, and would disperse with distance from the project area. Implementing abatement measures such as proper maintenance of construction vehicles, limiting the size of the disturbance area, and watering unpaved roadways, as necessary, would minimize potential impacts.

Table 4-3 provides a summary of the BAFB baseline emissions, proposed construction calculations for PM<sub>10</sub>, and the Title V permit limits for BAFB permit requirements for PM<sub>10</sub>.

**Table 4-3**  
**Construction PM<sub>10</sub> Emissions for Stationary Sources**

<b>PM<sub>10</sub> Emissions</b>	<b>TPY</b>
Baseline <sup>1</sup>	12.0
Proposed Construction	0.54
Projected Total	12.54
Title V Permit Limits	99.9

<sup>1</sup> Total Stationary Source Emissions at BAFB (2001a)  
TPY = tons per year

The maximum PM<sub>10</sub> concentration of 101 micrograms per cubic meter (µg/m<sup>3</sup>) at a distance of 65 meters from the fence line was compared to the primary and secondary NAAQS PM<sub>10</sub> for 24 hours of 150 µg/m<sup>3</sup>. Since the maximum-modeled concentration is below the NAAQS for particulates, a potential for an elevated local concentration for PM<sub>10</sub> would not be anticipated for this temporary activity. No decrease in visibility and subsequently no impact to airfield operations or aircraft safety would be anticipated for the proposed action. Because the grading and construction activities are low to the ground, these estimated concentrations would drop off rapidly in a short distance; as a result, temporary impacts would be local and not regional. These estimates are averages, and at any instant, actual instantaneous concentration is likely to be higher or lower based on local wind conditions.

Combustive emissions from construction equipment exhausts were estimated using emissions factors for diesel-powered off-road equipment (USEPA 1991; Waier 2001). The USEPA assumes that 230 working days (8 hours per day) are available per year for construction (accounting for weekends, weather, and holidays) (USEPA 1995). Criteria pollutant emissions associated with the implementation of the Proposed Action or the Alternative Action do not exceed the rates specified for attainment/maintenance areas for CO, O<sub>3</sub>, and PM<sub>10</sub> (Table 4-4). The proposed action is not regionally significant because the emissions do not exceed 10 percent or more of the attainment/maintenance area's total emissions for that particular pollutant (AQCR 36) (Table 4-5).

**Table 4-4**  
**Total Construction Emissions Compared to Applicability Thresholds**

Criteria Pollutants	Applicability Threshold (tpy)	Total Construction Emissions (tpy)	Violates Applicability Threshold
NO <sub>x</sub>	100	1.3	No
SO <sub>2</sub>	100	0.5	No
VOCs	50(100)	0.3	No
CO	100	2.0	No
PM <sub>10</sub>	100	0.54	No

tpy = tons per year

**Table 4-5**  
**Total Construction Emissions Compared to AQCR 36 Total Emissions**

Criteria Pollutants	AQCR 36 Total Emissions* (tpd)	Construction Emissions (tpd)	Percent Total	Regionally Significant
NO <sub>x</sub>	313	0.0035	0.0011%	No
SO <sub>2</sub>	180	0.0013	0.0008%	No
VOCs	507	0.0008	0.0002%	No
CO	1203	0.0054	0.0005%	No
PM <sub>10</sub>	70	0.0060	0.0086%	No

\*Colorado Air Quality Control Commission (CAQCC) 2003

tpd = tons per day

No air emissions are generated as part of the antenna maintenance and operation and the current size and capacity of the backup generator is sufficient to support the new antenna. There would be no significant impacts to air quality for the operation and maintenance of the new antenna for the Proposed Action.

#### 4.1.3 Alternative Action

Implementing this alternative would have the similar types of impacts as the Proposed Action and all calculations and assumptions made for the Proposed Action would apply to the Alternative Action. The Alternative Action would have a minor, temporary impact on local air quality; however, this impact would not be significant. Air emissions during construction would remain the same, just different locations on base. There would be no significant impacts to air quality for the operation and maintenance of the new antenna for the Alternative Action.

## **4.2 Water Resources**

Implementation of the Proposed Action or Alternative could result in the disturbance of localized surface water features, wetlands/waters of the United States, and/or floodplains through ground-disturbing activities and in an increase of impervious cover within the project areas. Water features could receive silt from or have drainage patterns affected by ground-disturbing activities. Localized water features could also contain federally protected species or support important riparian habitat. Significant effects to water resources in the project areas would be quantified in this EA by acreage and/or linear distance of surface waters affected and/or by an unacceptable rise in the level of physical and biological parameters as defined by the CDPHE. Other significant potential environmental impact thresholds include the creation of excess stormwater runoff that would exceed the capacity of existing or planned stormwater drainage systems, excess stormwater that would result in flooding either on site or off site, and significant alteration of localized drainage patterns.

### **4.2.1 No Action**

Selecting the no action alternative would result in no significant long-term impacts to hydrologic resources. Since there would be no construction activities, hydrologic resources would remain as described in Section 3.2.

### **4.2.2 Proposed Action**

Implementing the proposed action would result in no significant long-term impacts to surface water resources, jurisdictional waters of the United States, floodplains, or water quality. Coverage under the EPA's Construction General Permit would be obtained and a SWPPP would be implemented to reduce the potential for soil erosion and contaminated stormwater flows due to construction activities.

### **4.2.3 Alternative Action**

Implementing this alternative would result in no significant impacts to hydrologic resources. Potential environmental consequences would be similar to those of the proposed action.

### **4.3 Biological Resources**

The USFWS and the CDOW maintain protected species lists (endangered, threatened, proposed candidate, or species of concern) for species that occur or could potentially occur within Arapahoe County. If species do occur, implementing the proposed action or alternatives could affect these species and their habitat through ground-disturbing activities and increases in impervious cover. Potential effects to biological resources for both listed and non-listed species would be estimated in this EA based on the number of acres of habitat and/or the number of individual species affected. Impacts to biological resources would be significant if there were significant adverse effects on protected species or their habitats or if there were any significant adverse impacts to other sensitive habitats.

#### **4.3.1 No Action**

Selecting the no action alternative would result in no ground-disturbing activities and therefore no alteration/disturbance of existing vegetative cover. Due to the absence of ground-disturbing activities at the project areas, vegetation and wildlife, including protected species, would not be significantly impacted.

#### **4.3.2 Proposed Action**

Implementing the proposed action would not result in significant impacts to biological resources. The proposed action would remove approximately 1.0 acre of previously disturbed prairie, which is highly prevalent in disturbed areas and is not considered a sensitive community type. Additionally, no listed species (including black-tailed prairie dogs and burrowing owls), or their habitat, have been observed on or adjacent to the project areas. In accordance with BAFB policy, surveys would be conducted prior to commencement of construction activities to verify the presence/absence of either black-tailed prairie dogs or burrowing owls. Any black-tailed prairie dogs present would be removed prior to commencing construction activities using approved removal methods. If nesting burrowing owls were present, construction activities would be scheduled between the months of November through February, when nesting owls would not be present. If black-tailed prairie dogs and/or burrowing owls were identified after

commencement of construction, construction activities would be halted and the 460 Civil Engineering Squadron (CES)/Civil Engineering Environmental Flight (CEVP) would be contacted for further instructions.

#### **4.3.3 Alternative Action**

Implementing this alternative would result in no significant impact on biological resources. The Alternative Action would not likely have any effects on biological resources, with the exception of black-tailed prairie dogs present at the proposed alternative site. Biological resources at the site are markedly absent, with little or no vegetative cover on the predominantly barren site. The Alternative Action would not have an effect on federally listed or state species. The prairie dogs and owls would be managed per the “*Supplement to the Environmental Assessment of Proposed Prairie Dog Management Practices at Buckley Air Force Base, June 2001*” (BAFB, 2001c). Site monitoring would be required to ensure that prairie dogs and/or burrowing owls have not migrated into the area for the proposed action.

There is potential for burrowing owls to be present on the site based upon the presence of the prairie dog colony; however no burrowing owls were observed. Burrowing owls are migratory and generally only reside in Colorado between the months of April through October. If development of this site proceeds during that portion of the year, it is recommended that a survey be conducted to assess if the species is present within the prairie dog colony. No impacts to burrowing owl would be expected if development occurs outside the breeding season. Potential environmental consequences would be similar to those of the proposed action.

#### **4.4 Utilities**

Impacts to electrical and natural gas utility systems would be considered significant if the degree to which an increase in the demands on the utility distribution systems would result in the need for additional capacity or new support and/or supply facilities.



#### **4.4.1 No Action**

Selecting the no action alternative would not create any changes to the public services or utilities in and around BAFB. There would be no construction of new facilities and no increase in demand for utilities, such as energy or water services. Under this alternative, no additional radome and antenna would be constructed and no construction activities would occur. As a result, no significant adverse impacts would occur, and baseline conditions would remain as described in Section 3.4.

#### **4.4.2 Proposed Action**

Implementing the proposed action would not result in significant impacts to public services or utilities. The energy consumption rate is equivalent to 1% of the current electricity demand of the ADF compound and less than 0.5% of the current base usage rates. Therefore, the action is not anticipated to negatively impact the base electrical distribution system. The energy consumption rate for natural gas would represent approximately 1% of the current ADF natural gas usage rate, and less the 0.5% of the average annual base usage rate. Therefore, the Proposed Action is not anticipated to negatively impact the Base natural gas distribution system. Additionally, operation of the new facilities would not increase the need for local services, such as police, fire, public schools, or public recreational areas.

#### **4.4.3 Alternative Action**

Implementing this alternative would have no significant public service or utilities impacts. Potential environmental consequences would be similar to those of the proposed action.

#### **4.5.1 Transportation**

Transportation resources refer to the infrastructure and equipment required for the movement of people, raw materials, and manufactured goods over water, across the surface of the earth, or through air. Particular emphasis for this analysis is given to the road networks in the region of and on BAFB and includes all of the roadways on BAFB and in the immediate vicinity of the base. It also includes the major routes in the area

that could be affected by the Proposed Action. Significant impacts would include a greater than 10% increase in off-base traffic, creating potential safety issues, congestion, time delays, and/or a greater than 20% increase in on-base traffic impacts creating potential overloading existing security processing lanes, safety congestions, and time delays.

#### **4.5.1 No Action**

Selecting the no action alternative would not create any changes to the transportation networks in and around BAFB. Under this alternative, no construction activities would occur and baseline conditions would remain as described in Section 3.5.

#### **4.5.2 Proposed Action**

Implementation of the proposed action would not result in significant impacts to transportation resources. The transport of workers and construction equipment to and from the project areas would result in a temporary increase in traffic volume on Aspen Avenue. Aspen Avenue is a 4-lane primary route, and the temporary increase in traffic is not expected to adversely impact area traffic patterns or roadway operations. There would be no permanent changes to on- or off-base transportation patterns, capacity, or volume. However, there may be temporary negative impacts to transportation from construction activities. During construction activities, there would be a slight increase of traffic on and around the base from trucks entering and leaving the project areas.

#### **4.5.3 Alternative Action**

Implementing this alternative would have no significant land use or transportation impacts. Potential environmental consequences would be similar to those of the proposed action.

### **4.6 Issues Eliminated from Further Analysis**

The following subsections indicate the issues that were eliminated from further analysis.

**4.6.1 Noise**

Eliminated from further analysis.

**4.6.2 Social or Economic Resources (Including Environmental Justice)**

Eliminated from further analysis.

**4.6.3 Land Use**

Eliminated from further analysis.

**4.6.4 Hazardous Substances/Hazardous Wastes**

Eliminated from further analysis.

**4.6.5 Asbestos**

Eliminated from further analysis.

**4.6.6 Historic or Archeological Resources**

Eliminated from further analysis.

**4.7 Cumulative Impacts**

Cumulative effects should be considered in the scoping process of proposed actions to avoid long-term damage to the natural and man-made environments. Implementing the proposed action or the alternative action considered in this EA could potentially result in cumulative impacts. Cumulative impacts can become an important issue when the chosen activity (i.e., construction of the ADF antenna) interacts either directly or indirectly with other unrelated actions (past, present, or reasonably foreseeable). BAFB currently maintains 2.5 million SF of occupiable floor space (BAFB 2002b), which, with the addition of surface parking areas, accounts for approximately 4.2 million SF of developed surface at BAFB. Planned construction/development activities would increase developed surfaces, including parking, at BAFB by approximately, 638,258 SF in FY 03, 59,040 SF in FY 04, and 131,445 SF in FY 05, for an approximate total of 800,000 SF in new construction, depending on construction scheduling, bringing the total developed areas of BAFB to approximately 5.1 million SF (BAFB 2003c). If all projects were constructed according to current schedules, there would be an increase of approximately 21 percent in developed surfaces on BAFB within the next four years. A Capital Improvements Plan EA that fully addresses the cumulative impacts of all construction

activities is currently being undertaken by BAFB and is scheduled for FY2004. Therefore the cumulative impacts would be more fully addressed in that plan. The construction of the ADF antenna would account for 40,000 SF or approximately less than 1.0 percent of the total planned construction activities between FY 03 and FY 06. These construction activities would increase the amount of impervious and built surfaces within the installation; however, construction and operational BMPs would reduce or avoid any immediate adverse impacts to the natural and man-made environments at BAFB.

#### 4.7.1 Hydrologic Resources

There would be no significant cumulative impacts to hydrologic resources due to implementing the proposed action or alternative. However, there would be more stormwater discharged, collected, and managed due to the increase in impermeable surfaces. Estimated average annual stormwater volumes are listed in Table 4-6. Active BMPs, collection, and management of these additional surface waters should minimize any chance for increased discharge concentrations.

**Table 4-6**  
**Estimated Average Annual Stormwater Flows for BAFB**

<b>Year</b>	<b>Estimated Impervious Surface Area (acres)</b>	<b>Estimated Stormwater Volume* (10<sup>6</sup> gallons)</b>	<b>Increase in Estimated Stormwater Volume (10<sup>6</sup> gallons)</b>
All Previous Construction	142.6	1.09	0.00
FY 02	143.8	1.10	0.01
FY 03	158.5	1.22	0.13
FY 04	229.9	1.23	0.14
FY 05	232.9	1.25	0.16
Total	232.9	1.25	0.16
PA/AA	1.5	0.01	0.01
<b>Percent Accounted for by the PA/A (%)</b>	0.6	0.9	0.9

\*Assumes average annual precipitation of approximately 16 inches

10<sup>6</sup> = 1,000,000

PA/A = Proposed Action or Alternative Action

During construction phases, extra care should be taken to perform scheduled servicing of the catch basins, and any other stormwater collection points. This would ensure containment of construction debris, displaced silt and fuel, oil, grease, and coolants from construction equipment. After construction completion, the subsequent collection and

management of stormwater would lead to a lowered transport and discharge of many potential water contaminants, including fertilizers, pesticides, fuel, oil, grease, and coolant.

When implementation of a proposed action or alternative is combined with previous and other foreseeable future activities, flooding potential could be increased. Estimated peak stormwater flow rates for a 10-, 25-, 50-, and 100-year storm event with duration of 2 and 24 hours are listed in Table 4-7. If necessary, appropriate upgrades to existing stormwater management systems would be made to handle the increased flows. Although there would be no anticipated change to the documented 100- year floodplain, the potential for localized on base flooding during a significant precipitation event would be examined with respect to these ongoing changes. During such an event, spikes in transport of traditional surface pollutants such as particulates, oil, grease, and coolants could also be observed.

**Table 4-7**  
**Peak Stormwater Flows for BAFB during 10-, 25-, 50-, and 100-Year Storm Events**

Storm Frequency (years)	Duration (hrs)	Peak Intensity (in/hr)	Peak Stormwater Flow Rates (ft <sup>3</sup> /s)						Percent 2005 Peak Flow Due to PA/AA
			Previous	FY 02	FY 03	FY 04	FY 05	PA/A	
10	2	0.90	79.1	79.7	87.9	88.7	90.3	0.8	0.9
10	24	0.08	7.7	7.8	8.6	8.7	8.8	0.1	0.9
25	2	1.06	98.4	99.2	109.4	110.3	112.4	1.0	0.9
25	24	0.11	9.8	9.9	10.9	11.0	11.2	0.1	0.9
50	2	1.13	105.2	106.1	116.9	117.9	120.2	1.1	0.9
50	24	0.11	10.2	10.2	11.3	11.4	11.6	0.1	0.9
100	2	1.44	133.3	134.4	148.2	149.5	152.3	1.4	0.9
100	24	0.14	13.3	13.4	14.8	14.9	15.2	0.1	0.9

ft<sup>3</sup>/s = cubic feet per second

hrs = hours

in/hr = inches per hour

PA/AA = Proposed Action or Alternative Action

#### 4.7.2 Air Quality

There would be no significant cumulative impacts to air quality due to the proposed action or alternative. Cumulative impacts to air quality were considered significant if construction or operational emissions for previous, proposed, and reasonably foreseeable future construction activities would exceed the *de minimus* rate specified for

attainment/maintenance areas (see Table 4-2), would be regionally significant, or would contribute to a violation of the Title V permit limitations.

#### 4.7.3 Construction Activities

The PM<sub>10</sub> emissions were identified as the primary pollutant from proposed construction activities. The PM<sub>10</sub> emissions anticipated during construction activities are listed in Table 4-8. These emissions levels do not constitute a significant cumulative impact. The analysis was based on approximate building square footage and surface parking.

**Table 4-8**  
**PM<sub>10</sub> Emissions for Previous, Proposed, and**  
**Reasonably Foreseeable Construction Activities**

	<b>All Previous Construction</b>	<b>FY 02</b>	<b>FY 03</b>	<b>FY 04</b>	<b>FY 05</b>	<b>Total</b>
Baseline PM <sub>10</sub> Emissions (tons)	NA	12.0	12.0	12.0	12.0	
PM <sub>10</sub> Emissions from PA/A (tons)	NA	0.0	0.0	0.56	0.0	1.66
Other Reasonably Foreseeable Construction PM <sub>10</sub> Emissions (tons)	NA	4.5	52.5	4.9	10.3	
Total (tons)	513.4	16.4	64.5	17.46	22.3	634.36
Title V Permit Limits for Potential PM <sub>10</sub> Emissions (tons)	NA	99.9	99.9	99.9	99.9	
<b>Percent Emissions Accounted for by the PA/AA</b>	0.0	0.0	0.0	0.17	0.0	0.17

NA = not applicable

PA/AA = Proposed Action or Alternative Action

#### 4.7.4 Facilities Operations

There would be minor ongoing emissions from support services after completion of construction activities. These cumulative emissions are not considered significant. Emissions are not anticipated to exceed the rates specified for attainment/maintenance areas for CO, O<sub>3</sub>, and PM<sub>10</sub>, be regionally significant, or significantly contribute to a

violation of Title V permit limitations (Table 4-9). The analysis was based on approximate building square footage and surface parking.

**Table 4-9  
Emissions for Previous, Proposed, and  
Reasonably Foreseeable Heating and Cooling Activities**

Year	Acres	Estimated Basewide Natural Gas Usage for Heating and Cooling (10 <sup>6</sup> ft <sup>3</sup> )	CO (tpy)	NO <sub>x</sub> (tpy)	PM <sub>10</sub> (tpy)	SO <sub>x</sub> (tpy)
All previous construction	142.600	199.800				
FY 02	143.800	201.600	8.3000	10.1000	0.8000	0.10000
FY 03	158.500	222.200	9.2000	11.1000	0.8000	0.10000
FY 04	229.9	224.100	9.2000	11.2000	0.9000	0.10000
FY 05	232.9	228.300	9.4000	11.4000	0.9000	0.10000
PA/AA	1.5	0.165	0.0033	0.06	0.0006	0.00005
<b>PA/AA as a Percentage of FY05 Emissions (%)</b>	0.6	0.07	0.03	0.0180	0.06	0.05

10<sup>6</sup> = 1,000,000

ft<sup>3</sup> = cubic feet

tpy = tons per year

PA/AA = Proposed Action or Alternative

Construction activities would increase the amount of short-term mobile emissions on BAFB; however, active monitoring and maintenance of construction equipment would reduce overall impacts during construction. Operational emissions should be minor and not add significantly to BAFB total yearly emissions.

#### 4.7.5 Noise

Construction activities associated with a proposed action or alternative would increase the short-term noise levels of the adjacent areas; however, once construction equipment is removed, noise should return to pre-construction levels. Operational activities would not contribute to additional long-term noise levels since there would not be any new mobile sources of noise, nor would the activities create additional noise.

#### **4.7.6 Biological Resources**

Construction and operational activities associated with the proposed action or alternative would remove approximately 1.0 acres of currently disturbed, undeveloped vegetation, which is less than 1.0 percent of the total undeveloped surface on BAFB. There are currently no protected species or species of local concern (i.e., black-tailed prairie dogs or burrowing owls) located within the Proposed area, and one identified colony on the Alternative site. Therefore the proposed action or alternative would not, in the short-term, cumulatively impact these populations on BAFB. Protected species and species of local concern would be managed under the guidance of the Prairie Dog Management Plan for BAFB and the Wildlife Management Plan for BAFB to ensure that future development would not cumulatively impact these populations on BAFB.

#### **4.7.7 Social or Economic Resources (Including Environmental Justice)**

Impacts from the Proposed Action would include all local expenditures for labor and materials for construction of the antenna and the ancillary facilities, utility line extensions, electrical distribution systems, HVAC systems/boiler. The impacts of the expenditures would be short term and would occur primarily during the construction duration. Labor for these construction activities could be adequately supplied by the regional labor pool so that no population effects would be expected due to in-migrating labor force. There would no measurable effect on number of jobs, average wages and household earnings, and tax revenues in Arapahoe County from the addition of the Proposed Action. There would be no cumulative social or economic impacts due to the proposed action or alternatives since there would not be an increase or decrease in total employment at BAFB.

#### **4.7.8 Land Use and Transportation**

Under the proposed action or alternatives, all activities would occur within the appropriate land use area, thereby not creating cumulative impacts to land use on BAFB. Since these activities would be located within the interior of the installation, there should be no adverse short-term impacts to current or planned land use activities on non-military lands surrounding BAFB. The General Plan was developed in coordination with surrounding communities to lessen future impacts that developments at BAFB could



potentially create. Future developments on BAFB would occur within the appropriate land use category as described in the General Plan, which would coincide with planned land uses of adjacent non-military lands and thereby avoid cumulative impacts to land use and transportation.

#### 4.7.9 Utilities

Since implementing either the proposed action or alternative would use existing public services and utilities, there would be a slight increase in demand for these services. However, due to the small demand these activities would require, there would be no short-term adverse changes in the level of service (Table 4-13). Future development at BAFB could cumulatively increase utility demand by approximately 40 percent over the current usage based on the estimated square footage built per year.

**Table 4-10**  
**Estimated Increase in Utility Demand**

Parameter	Current	FY 02	FY 03	FY 04	FY 05	PA/AA
SF	2,200,000	54,250	638,258	59,040	131,445	5,074
Electricity (kwh/m <sup>1</sup> )	8,862,732	218,547	2,571,232	237,843	529,528	20,441
Gas (ft <sup>3</sup> /m <sup>2</sup> )	156,412	3,857	45,378	4,198	9,345	361
Water (mgm <sup>3</sup> )	5.95	0.15	1.72	0.16	0.36	0.01
Cumulative Percent Increase in Utility Demand		2.00	31.00	34.00	40.00	0.20

PA/AA = Proposed Action or Alternative Action

kwh/m = kilowatt hour per month

ft<sup>3</sup>/m = cubic feet per month

mgm = million gallons per month

<sup>1</sup> Average electricity usage per square foot = 4.03 kilowatt hour based on FY 02 utility usage at BAFB

<sup>2</sup> Average gas usage per square foot = 0.07 cubic feet based on FY 02 utility usage at BAFB

<sup>3</sup> Average water usage per square foot = 9.01E-08 million gallons per day based on FY 02 utility usage at BAFB

#### 4.7.10 Hazardous Materials and Substances

Following all federal, state, and local laws and regulations, all new materials used for construction would not contain ACM. Materials utilized during construction activities would likely include fuels, paints, glues, asphalt materials, etc. Most of these materials would typically be consumed in their entirety and very little waste generated for disposal. As a result, no significant amounts of construction-related hazardous materials would be expected, and any hazardous materials generated during the activities would be disposed

of in accordance with all applicable federal, state, and local regulations. All hazardous materials and hazardous wastes used or generated during the proposed action or alternatives would be used and disposed of according to all applicable regulations, thereby ensuring no cumulative impacts.

## 5.0 List of Preparers

Name/Title	Expertise/Experience	Involvement
Eric Smith, Matrix Design Group, Inc.  NEPA Specialist	<i>Traffic/Transportation Engineering 11 years</i>	NEPA Review
Linda Balcom, Matrix Environmental Services, LLC  <i>Project Management</i>	<i>Regulatory Compliance 15 years</i>	Project Management Hazardous Materials
Trent Miller, SWCA Environmental Consultants  <i>NEPA specialist</i>	<i>NEPA Analysis 18 years</i>	NEPA Analysis
Heather Neill, SWCA Environmental Consultants  <i>Biologist</i>	<i>Biology 8 years</i>	Biological Resources
Todd Kohler, SWCA Environmental Consultants  <i>Archeologist</i>	<i>Archeology 13 years</i>	Cultural Resources

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## 6.0 Distribution List

Name	Company	Address	City	State	Postal Code
Bruce Rosenlund	U.S. Fish and Wildlife Service	755 Parfet Street, Suite 361	Lakewood	CO	80215
Eliza Moore	Colorado Division of Wildlife	6060 South Broadway	Denver	CO	80216
Cynthia Cody	U.S. Environmental Protection Agency, Region 8	999 18th Street, Suite 500	Denver	CO	80202
David Rathke	U.S. Environmental Protection Agency, Region 8	999 18th Street, 8EPR-F Suite 500	Denver	CO	80202
Jennifer Lane	U.S. Environmental Protection Agency, Region 8	999 18th Street, Suite 500	Denver	CO	80202
Denise Balkas	City of Aurora	15151 E. Alameda	Aurora	CO	80012
Ed LaRock	Colorado Department of Public Health and Environment	4300 Cherry Creek Drive, South	Denver	CO	80246-1530
Brad Beckman	Colorado Department of Transportation	4201 East Arkansas Ave.	Denver	CO	80222
Eugene Jansak	Metro Wastewater Reclamation District	6450 York Street	Denver	CO	80229-7499
James Ives, C.E.P.	City of Aurora	15151 E. Alameda	Aurora	CO	80012
Georgianna Contiguglia	Colorado History Museum	1300 Broadway	Denver	CO	80203-2137

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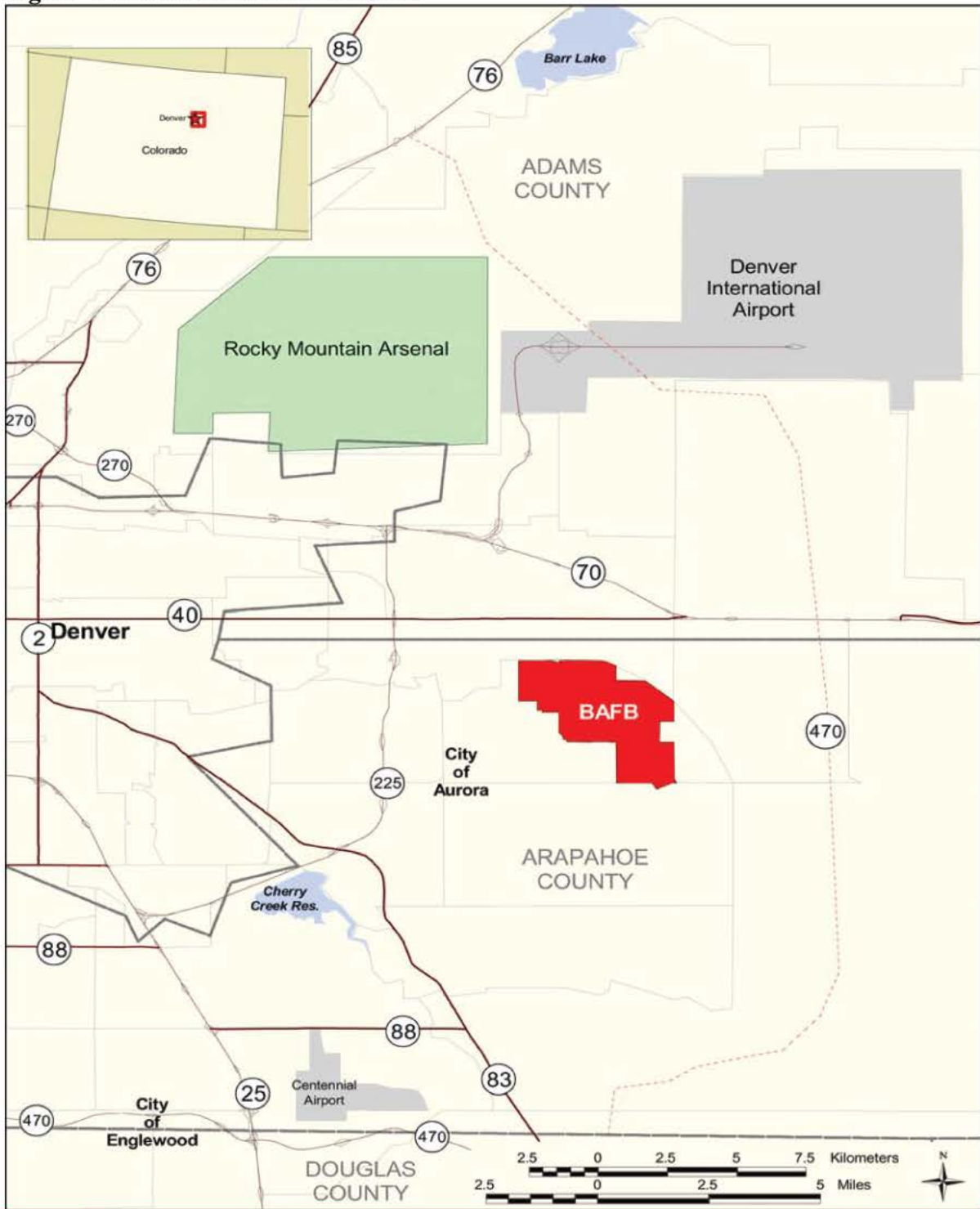
## 8.0 Acronyms and Abbreviations

µg/m <sup>3</sup>	micrograms per cubic meter
a.m.	ante meridian
AAFES	Army Air Force Exchange Service
ACM	asbestos-containing material
ADF	Aerospace Data Facility
AICUZ	Air Installation Compatible Use Zone
APCD	Air Pollution Control Division
AQCR	Air Quality Control Region
BAFB	Buckley Air Force Base
BANGB	Buckley Air National Guard Base
BEA	Bureau of Economic Analysis
BMP	best management practice
BX	Base Exchange
CAA	Clean Air Act
CAQCC	Colorado Air Quality Control Commission
CDOW	Colorado Division of Wildlife
CDPHE	Colorado Department of Public Health and the Environment
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CES	Civil Engineering Squadron
CEVP	Environmental Flight
CFR	Code of Federal Regulations
CO	carbon monoxide
COANG	Colorado Air National Guard
COARNG	Colorado Army National Guard
dBa	decibel
DNL	day night average sound level
DoD	Department of Defense
EA	environmental assessment
EIS	environmental impact statement
EO	Executive Order
ERP	environmental restoration program
ESA	Endangered Species Act
FICON	Federal Interagency Committee on Noise
FONSI	finding of no significant impact
FY	fiscal year
HAP	hazardous air pollutant
HVAC	heating, ventilation, and air conditioning
I-225	Interstate 225
I-25	Interstate 25
I-70	Interstate 70
M <sup>2</sup>	square meters
MSW	municipal solid waste
NAAQS	National Ambient Air Quality Standards

NEPA	National Environmental Policy Act
NO <sub>x</sub>	nitrous oxides
NPDES	National Pollutant Discharge Elimination System
O <sub>3</sub>	ozone
O&M	operations and maintenance
Pb	lead
p.m.	post meridian
PM <sub>10</sub>	particulate matter measuring less than 10 microns in diameter
ppm	parts per million
POL	petroleum, oil, and lubricant
RCRA	Resource Conservation and Recovery Act
ROI	region of influence
RTD	Regional Transport District
RTF	Remote Terminal Facility
SBIRS	space-based infrared surveillance
SF	square feet
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
SPCC	Spill Prevention and Countermeasures Control Plan
SWPPP	Stormwater Pollution Prevention Plan
tpd	tons per day
tpy	tons per year
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USC	U.S. Code
USCB	U.S. Census Bureau
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound

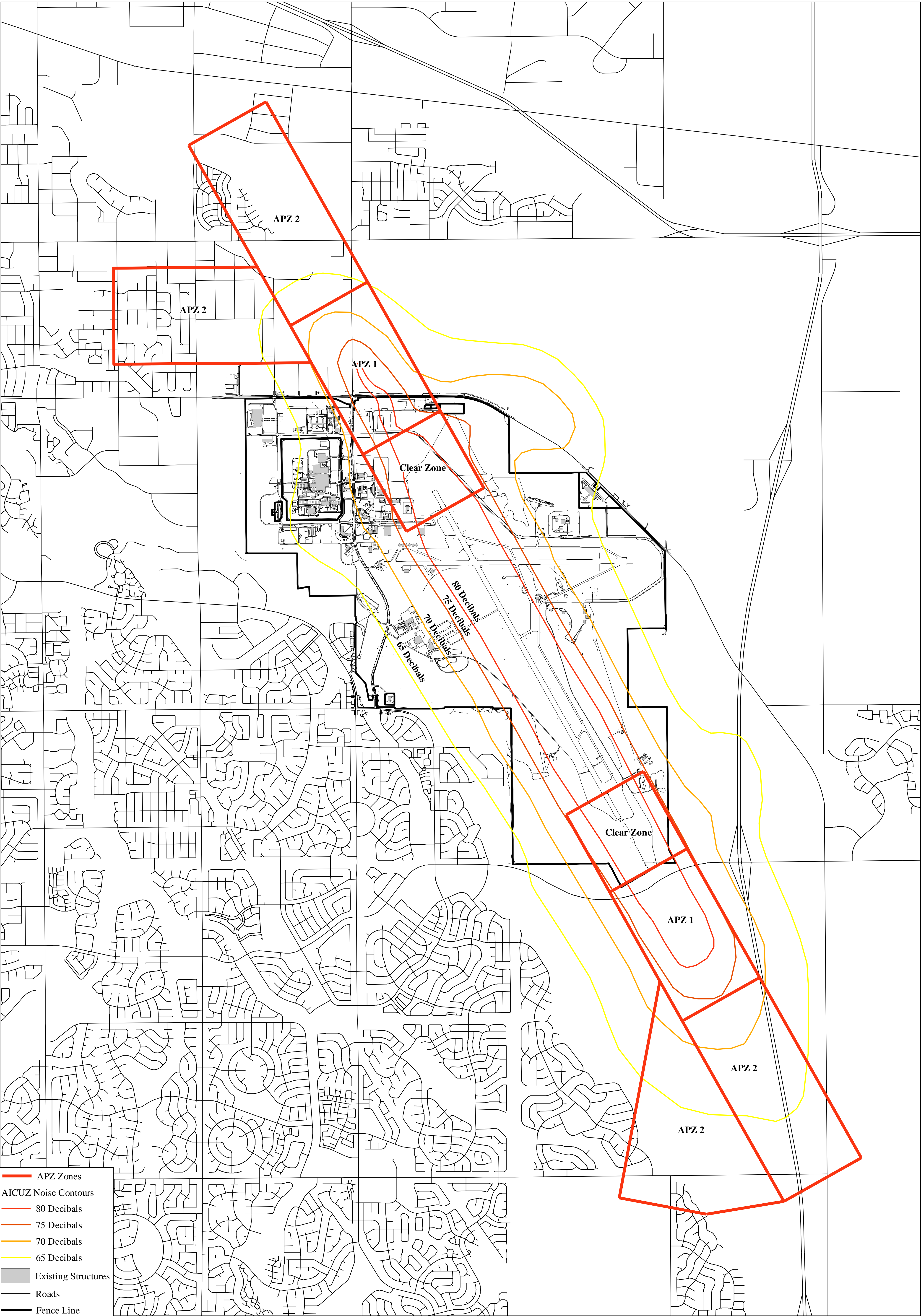


**Figure 1. General Location of BAFB**



**Figure 1**  
**General Location of Buckley AFB, Colorado**  
**Environmental Assessment For The Proposed Antenna Construction**



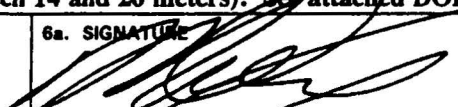
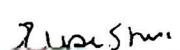


Prepared by Matthew Held  
26 March 2003

**APZ Zone and AICUZ Noise Contours  
Buckley AFB, Colorad**

**APPENDIX A:**  
**USAF FORM 813**



REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS		Report Control Symbol RCS: 21123
INSTRUCTIONS: Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).		
<b>SECTION I - PROPONENT INFORMATION</b>		
1. TO (Environmental Planning Function) 460 CES/CEV-ELISE SHERVA	2. FROM (Proponent organization and functional address symbol) ADF/SG/FED	2a. TELEPHONE NO. 303-677-9077
3. TITLE OF PROPOSED ACTION ADF Antenna Construction		
4. PURPOSE AND NEED FOR ACTION (Identify decision to be made and need date) Assess environmental impact of constructing new antenna at ADF Remote Terminal Facility. Pursue CATEX 3.11 of AFI 32-7061, Att. 2 by comparing project with SBIRS project EA and resulting FONSI dated March 2001. Need: 04 Aug 03		
5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Provide sufficient details for evaluation of the total action.) Construction of antenna, reinforced concrete antenna foundation, radome, minor site improvements, and supporting utilities. Antenna size not yet finalized (Between 14 and 26 meters). See attached DOPAA (section 2.3.2) and maps.		
6. PROPONENT APPROVAL (Name and Grade) MIKE DAY, CHIEF OF ESH	6a. SIGNATURE 	6b. DATE 2/6/03
<b>SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY.</b> (Check appropriate box and describe potential environmental effects including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown effect)		+   0   -   U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (Noise, accident potential, encroachment, etc.)		sh
8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.) minor negative impact during construction		✓
9. WATER RESOURCES (Quality, quantity, source, etc.) minor negative impact during construction & increase in surface water		✓
10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)		✓
11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)		✓
12. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.) minor potential positive & negative impacts		✓
13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.) No reported or known sites present but possibly disturbed		✓
14. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)		✓
15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)		✓
16. OTHER (Potential impacts not addressed above.) cumulative impacts - short term air during construction & sound during construction		✓
<b>SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION</b>		
17. <input checked="" type="checkbox"/> PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) # <u>A2 3.11</u> ; OR <input type="checkbox"/> PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX: FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.		
18. REMARKS The proposed action requires an environmental assessment while the alternative location would qualify for a CATEX A2 3.11 - Actions similar to other actions which have been determined to have a insignificant impact in a similar setting as established in a FONSI. The alternative is near the new SBIRS antenna site, the location of the Supplemental SA - SBIRS Mission Control Station for Repair Support Program Association - March 2001 FONSI 13 March 2001		
19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade) Elise Sherva GS-12	19a. SIGNATURE 	19b. DATE 9/4/03

Continuation Sheet for AF Form 21123 – ADF Antenna Construction

Requirements and Restrictions for the Alternative Site (The Proposed Action site requires and Environmental Assessment, which would address any requirements or restrictions):

1. Best Management Practices (BMPS) would be implemented to minimize fugitive dust during construction.
2. BMPs would be implemented to minimize storm water runoff during construction and the project would design for the increase in storm water so erosion, resulting in increased total suspended solids, would not occur near the site.
3. While asbestos contaminated soil is not anticipated, work would stop immediately and the Environmental Flight contacted at 303-677-9218 if any construction debris were found and/or any asbestos containing material were found.
4. While not anticipated, work would stop immediately if any bones, arrowheads, pottery fragments or other archaeological artifacts are found during construction. The Environmental Flight would be contacted immediately at 303-677-6937.
5. While wildlife is not anticipated, coordination with 460 CES/CEV, 303-677-6937 is required PRIOR to construction to ensure construction does not impact any burrowing owls (State threatened species) or black-tailed prairie dogs (Federal Candidate Species).



## DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

This section provides a history of the formulation of alternatives, identification of alternatives eliminated from further consideration, a detailed description of the Proposed Action, and a description of the No Action Alternative.

### 2.1 HISTORY OF THE FORMULATION OF ALTERNATIVES

The Aerospace Data Facility (ADF) is a DoD information processing, analysis, relay and test facility supporting the U.S. Government and its allies, located at Buckley Air Force Base (BAFB), Aurora Colorado. In addition, it provides an operational environment for training government and civilian personnel in the execution of their organizational mission.

The Air Force proposes to construct and operate one, 14 to 26 meter diameter antenna at the ADF in order to continue DoD training and support requirements.

### 2.2 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

ADF personnel initially considered several alternative antenna locations on BAFB and elsewhere. However, after operation, support, security and training requirements were considered only two alternative locations on BAFB were consideration reasonable. The location of these two alternatives sites within BAFB is depicted in Figure 1, attached.

### 2.3 DETAILED DESCRIPTION OF THE PROPOSED ACTION

The Proposed Action is to construct and operation a 14 to 26 meter diameter antenna, which will be enclosed within a radome in the existing ADF Remote Terminal Facility (RTF) compound (Preferred Alternative) or ADF compound (Alternative). The exact size of the antenna to be determined in the coming months. Detailed alternative locations maps are provided in attached figures 2 and 3, respectively.

#### 2.3.1 PROPOSED ACTION

Construction of the 14 to 26 meter diameter antenna will occur at either the preferred or alternate site. The primary location is (Colorado coordinate system - 2211701.0 ft E, 685994.0 ft N) north of building 1202 within the existing RTF compound. The alternate antenna site is in the northeast corner of the existing ADF compound (Colorado coordinate system - 2202891.0 ft E, 688287.0 ft N).

#### 2.3.2 ANTENNA CONSTRUCTION

Construction of the antenna will be equivalent at either preferred or alternative location. Construction is expected to begin in 2004 and be completed in late 2005. A reinforced concrete foundation and pad will be poured to support the antenna, which will reside within a radome structure.

The existing area impacted by the new antenna structure, site improvements, and utilities would be range from a maximum of 20,000sf for the preferred location to 40,000 sf for the alternate location.

Existing area impacts include:

1. Minor realignment of existing internal compound access roads 9
2. 12 feet wide blacktop service road (driveway) to the antenna. 9
3. Radome foundations excavation and subsurface drainage. 9/10
4. Exterior concrete pad mounted HVAC unit adjacent to the Radome. 9
5. Surface drainage and landscaping alternations immediately surrounding the Radome to match existing conditions.
6. Concrete utility tunnel and vaults from existing buildings to the Radome.

Electrical power, natural gas, water, and sewer utilities would be required. All external utility interface connections would be via the underground concrete tunnels and vaults to the existing facilities. The existing electric generation and natural gas service has sufficient capacity to provide for the needs of the new antenna. Both water and sewer utility connections are required, but as the antenna is unmanned, no net total facility increase in these utilities results from the Proposed Action.

It is anticipated that construction activity would be limited to normal weekday business hours of 7:30 am to 4:30 pm with occasional construction activity occurring on weekends as needed to meet project completion requirements. There would be no net change in the number of personnel authorizations at Buckley AFB as a result of the Proposed Action.

### 2.3.3 ANTENNA OPERATION

Health and Safety: The construction and operation of the Proposed Action will meet the Health and Safety requirements of all Federal, State, and Local regulations.

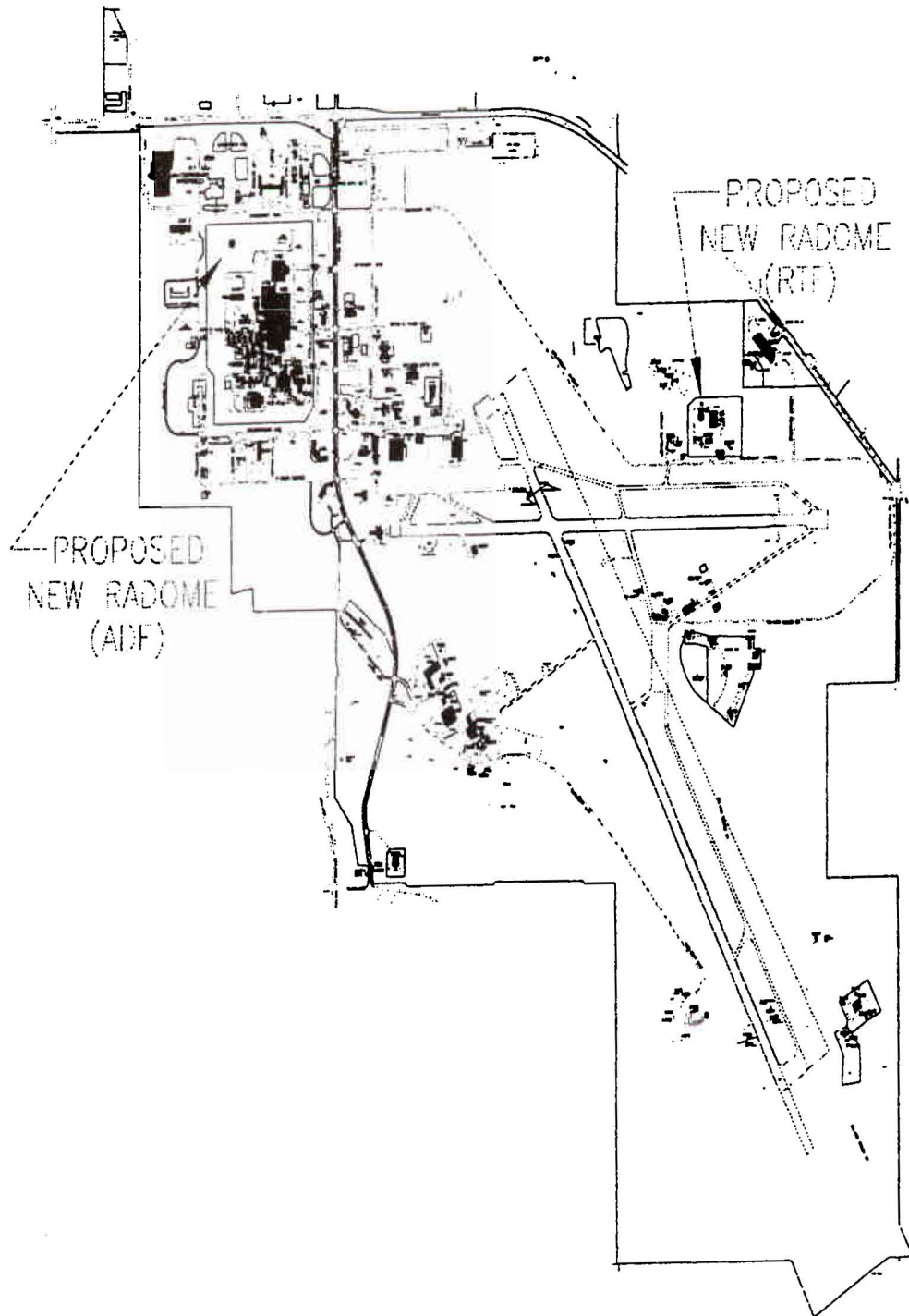
Existing ADF personnel will maintain and operate the antenna; no additional manpower would be required. No unacceptable energy hazard, cumulative or other wise, is expected from the operation of this antenna.

## 2.4 DESCRIPTION OF THE NO ACTION ALTERNATIVE

The No Action Alternative would entail not building antennas at either the preferred or alternative locations. The No Action Alternative would seriously degrade the ADF's ability to meet the continuing DoD training and support requirements and as such was considered unreasonable.

Unclassified

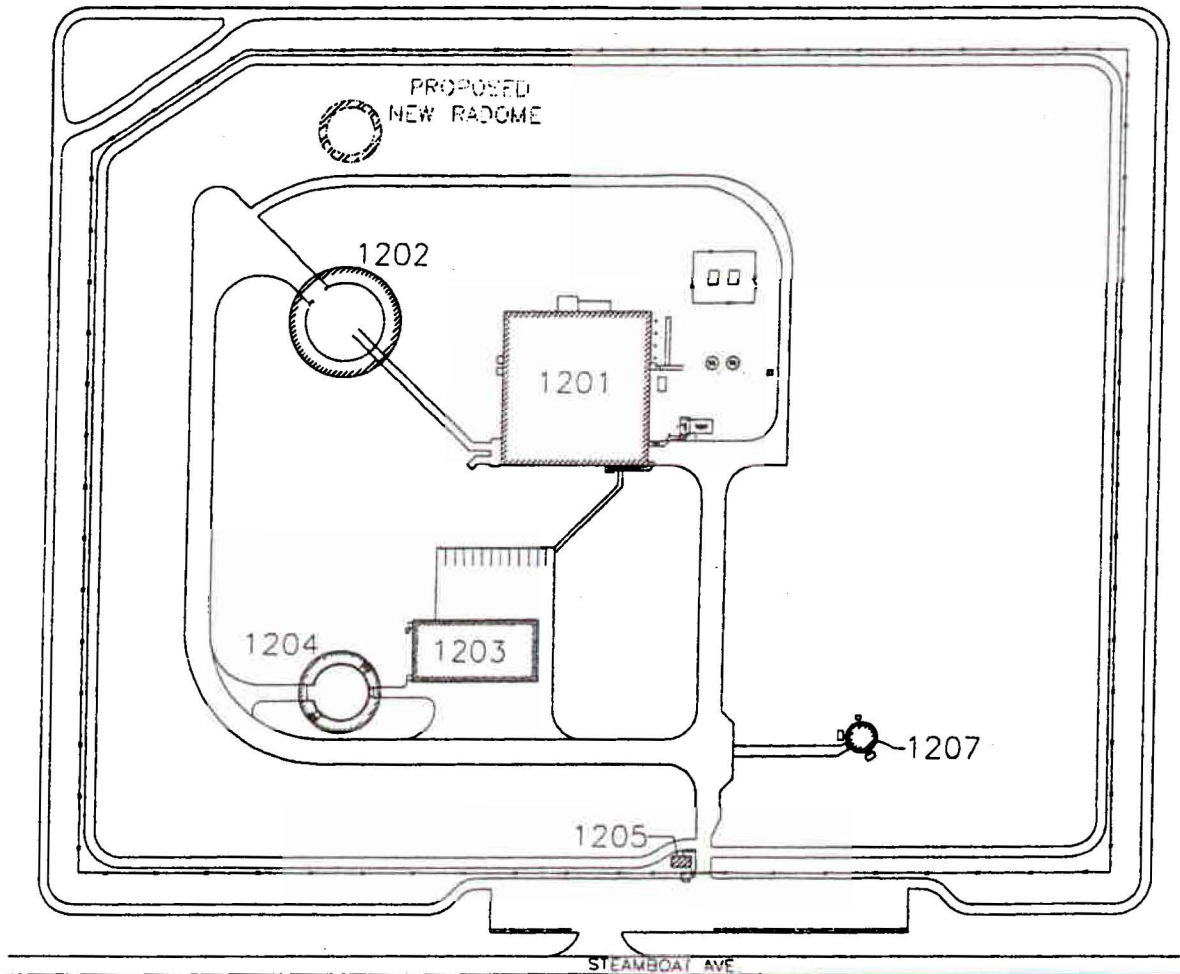
Figure-1: Reasonable Alternative Antenna Locations on BAFB



Unclassified

Unclassified

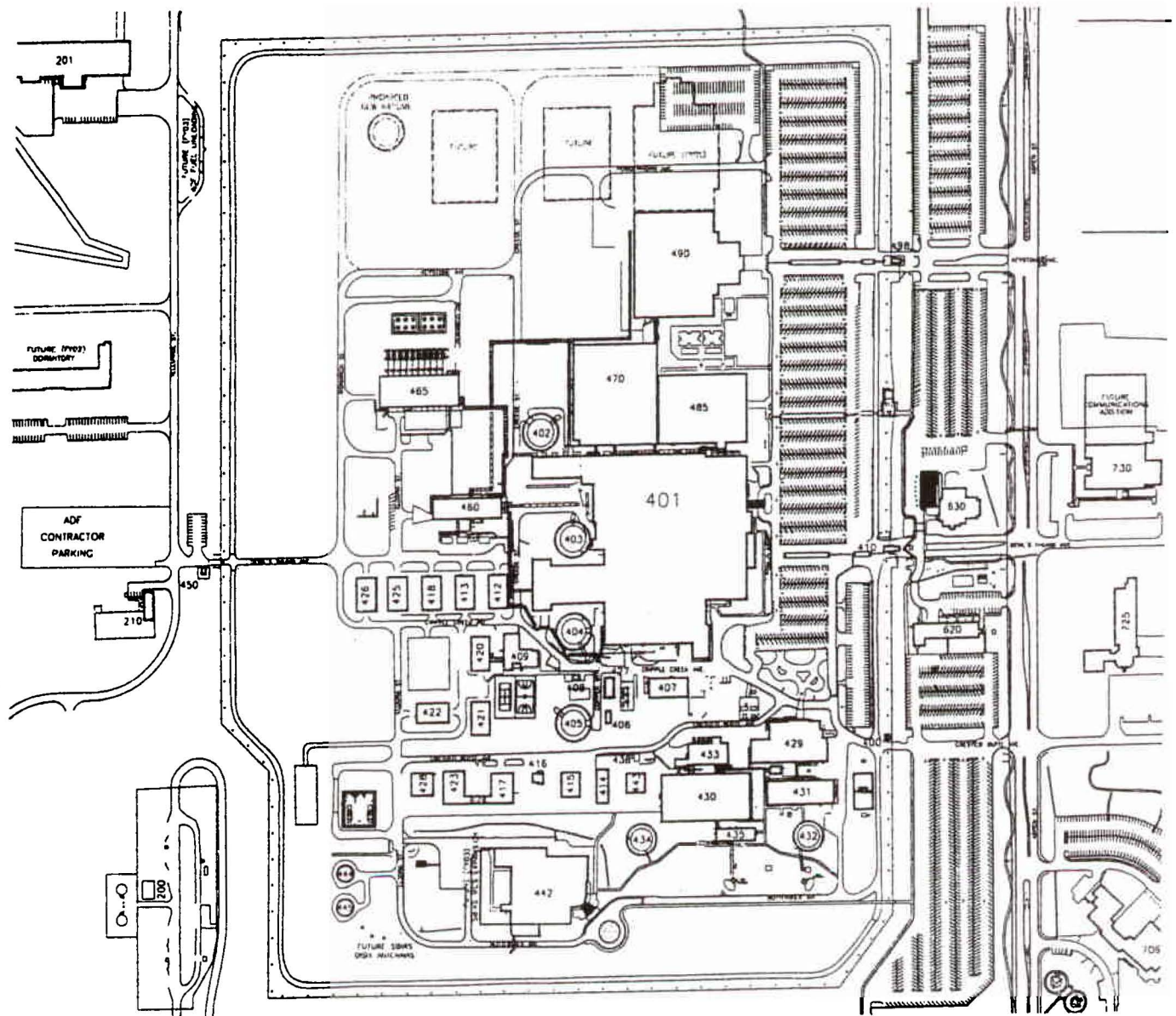
Figure-2 Preferred Antenna Location, RTF Site



Unclassified

Unclassified

Figure – 3 Alternative Antenna Location, ADF Site



Unclassified



**BASE CIVIL ENGINEER WORK REQUEST**  
(See Reverse for instructions)

Form Approved  
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average .3 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to the Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project 0704-0188, Washington DC 20503. Please DO NOT RETURN your form to either of these addresses. Send your completed form to HQ AFESC/DEMG.

**SECTION I - TO BE COMPLETED BY REQUESTER**

1. FROM (Organization) Aerospace Data Facility (ADF) Facility Engineering Division	2. OFFICE SYMBOL SSG/FED	3. DATE OF REQUEST 18 Jul 00	4. WORK REQUEST NO. (For BCE Use) 21123
5. NAME AND PHONE NO. OF REQUESTER Timothy P. Sullivan, 303-677-4897		6. REQUIRED COMPLETION DATE 1 Oct 03	7. BUILDING, FACILITY OR STREET ADDRESS WHERE WORK IS TO BE ACCOMPLISHED Aerospace Data Facility

8. DESCRIPTION OF WORK TO BE ACCOMPLISHED (Include Sketch or Plan, when appropriate)

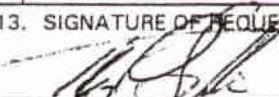
Construction of an antenna, reinforced concrete antenna foundation, radome, minor site improvements, and supporting utilities. Antenna diameter will be finalized in the coming months but is expected to be between 14 and 26 meters. Attachment 1, Description of Proposed Action and Alternatives, provides additional details. Acceptable alternative sites are identified in Figure 1 of attachment 1. Figure 2, identifies the preferred location at the ADF Remote Terminal Facility (RTF) and Figure 3 identifies the alternative location in the northwestern corner of the ADF Compound.

9. BRIEF JUSTIFICATION FOR WORK TO BE ACCOMPLISHED (Not required for maintenance and repair)

New antenna is required to support ADF missions. No alternatives other than those identified were considered reasonable due to ADF training, security, and maintenance requirements.

AF Form 813 attached.

10. DONATED RESOURCES ADF will fund and contract for completion of all work.

<input type="checkbox"/> FUNDS	<input type="checkbox"/> LABOR	<input type="checkbox"/> MATERIAL	<input checked="" type="checkbox"/> CONTRACT BY REQUESTER	<input type="checkbox"/> NONE
11. NAME OF REQUESTER Timothy P. Sullivan		12. GRADE OF REQUESTER GS-12	13. SIGNATURE OF REQUESTER (See Reverse of Form) 	

14. COORDINATION

**SECTION II - FOR BASE CIVIL ENGINEER USE**

15. WORK ORDER (Place an "X" in the appropriate box.)

<input type="checkbox"/> IN-SERVICE	<input type="checkbox"/> SELF-HELP	<input type="checkbox"/> CONTRACT	<input type="checkbox"/> SABER
-------------------------------------	------------------------------------	-----------------------------------	--------------------------------

16. DIRECT SCHEDULED WORK (Place an "X" in the appropriate box.)

<input type="checkbox"/> EMERGENCY	<input type="checkbox"/> URGENT	<input type="checkbox"/> ROUTINE	<input type="checkbox"/> SELF-HELP	<input type="checkbox"/> M/C
------------------------------------	---------------------------------	----------------------------------	------------------------------------	------------------------------

17. SELF-HELP (Place an "X" in the appropriate box.)

<input type="checkbox"/> BRIEFING REQUIRED	<input type="checkbox"/> ADEQUATE COORDINATION	<input type="checkbox"/> INSPECTION REQUIRED
--	--	--

**SECTION III - COMPLETE ONLY IF WORK IS TO BE ACCOMPLISHED BY WORK ORDER**

18. WORK CLASS	19. PRIORITY	20. ESTIMATED HOURS	21. ESTIMATED FUNDED COST	22. ESTIMATED TOTAL COST
23. THERE IS NO NEED FOR AN ENVIRONMENTAL ASSESSMENT (AFR 19-2)		24. A WRITTEN ASSESSMENT IS BEING/HAS BEEN PROCESSED	25. APPROVED	26. DISAPPROVED

27. REMARKS

**SECTION IV - APPROVING AUTHORITY**

28. NAME AND GRADE (Please Type or Print)	29. SIGNATURE	30. DATE
---	---------------	----------



DEPARTMENT OF THE AIR FORCE  
460TH AIR BASE WING (AFSPC)

25 Aug 2003

MEMORANDUM FOR 460 CES/CEV

FROM: 460 ABW/JA

SUBJECT: Legal Review – AF Form 813 Aerospace Data Facility (ADF) Antenna Construction

1. SYNOPSIS. We have reviewed the AF Form 813 request to install an antenna and radome at the ADF Remote Terminal Facility, and find that if construction will occur at the proposed site an Environmental Assessment will need to be accomplished but if it is constructed at the alternate site in the ADF compound, it is legally sufficient for a Categorical Exclusion from further environmental analysis.

2. FACTS. The ADF proposes to construct and operate an antenna (with no larger than a 26 meter diameter) at their Remote Terminal Facility on the east side of the base. The alternate location for this antenna is at the ADF main compound. ADF is an information processing, analysis, relay and testing facility supporting the U.S. Government and its allies in the area of national defense. The proposed construction will consist of minor realignment of existing compound access roads, installing a 12 foot wide blacktop service road, installing an exterior concrete pad mounted HVAC unit adjacent to the Radome and extending existing electrical power, natural gas, water, and sewer utilities via underground concrete tunnels from the existing facilities. Previous EAs exist for antenna construction in the main complex<sup>1</sup> where there was a Finding of No Significant Impact but no EAs exist for similar projects at the Remote Terminal Facility.

3. LAW. Environmental impact analysis of proposed actions is required to comply with the law.<sup>2</sup> A Categorical Exclusion exists for actions similar to other actions, which have been determined to have an insignificant impact in a similar setting as established an EA resulting in a FONSI.<sup>3</sup>

4. DISCUSSION. Installation of these type antennas and radomes have been done on Buckley before. Their installation in the main ADF compound has been reviewed at least twice in previous EAs with Findings of No Significant Impact. While this would allow use of a categorical exclusion for the alternate site location (in the main ADF compound),<sup>4</sup> the proposed

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<sup>1</sup> See *Data Processing, Research, and Training Facility and Dormitory, Aerospace Data Facility EA*, December 1993, figure 5, page 8 and *Supplemental Environmental Assessment and Finding of No Significant Impact: Space Based Infrared System (SBIRS) Mission Control Station for Defense Support Program Consolidation*, March 2001, figure 2-1, page 2-3. Both of these EAs deal with antenna construction in the ADF main compound.

<sup>2</sup> See 32 CFR 989; National Environmental Policy Act of 1969 (NEPA); Executive Order 12114.

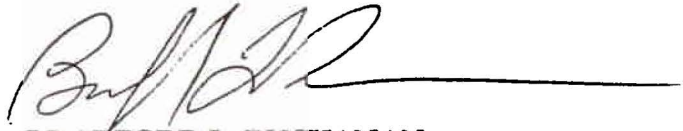
<sup>3</sup> See 32 CFR 989, Appendix B, para A2.3.11.

<sup>4</sup> Categorical Exclusion A2.3.11.



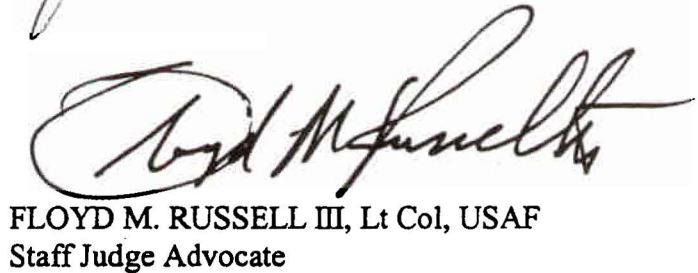
site has had no previous review of similar actions. The eastern side of Buckley is less developed and holds more potential for significant impact. Thus, we recommend an Environmental Assessment be done to cover the Proposed site, while the alternate site may be excluded from further environmental assessment under a Categorical Exclusion [32 CFR 989, Appendix B, para A2.3.11].

5. RECOMMENDATION. That an Environmental Assessment for the proposed site be done with the alternate site Categorical Excluded from further environmental analysis.



BRADFORD L. BUCHANAN  
Attorney-Advisor

I concur.



FLOYD M. RUSSELL III, Lt Col, USAF  
Staff Judge Advocate



**APPENDIX B:**  
**Public Transmittal Letters**

**APPENDIX C:**  
**Environmental Constraints**

properties were discovered on the parcel. A Limited-Results Archaeological Survey Form is included in Appendix A.

## **2.3 ALTERNATIVE SITE RESULTS**

### **2.3.1 Vegetative Community Assessment**

The entire alternative site is undeveloped land dominated by weedy herbaceous species and sandy areas of bare ground. Dominant vegetation is primarily forbs, including dandelion, pineapple weed, western sticktight (*Lappula occidentalis*), and field bindweed (*Convolvulus arvensis*). The entire area had been recently mowed at the time of the site visit.

### **2.3.2 Federal Threatened and Endangered Species**

As with the proposed project site, no evidence of federal threatened or endangered species habitat was observed on the alternative site.

### **2.3.3 Federal Candidate or Proposed Species**

The black-tailed prairie dog is currently listed as a candidate species. A black-tailed prairie dog colony was observed on the alternative site during the site visit. Though placement of the prairie dog as a candidate species does not afford official federal protection to the animal, consideration of impacts to the species are recommended and may be important in land-use planning since the future federal status of the prairie dog is uncertain.

### **2.3.4 State-Listed Species**

Results of the site visit to the alternative site indicate that one state-listed species, the burrowing owl (*Athene cunicularia*), has the potential to occur on the subject parcel. Burrowing owls, as their name implies, reside in burrows, namely that of the prairie dog in Colorado. Though there is a prairie dog colony on the property, no burrowing owls were found during the site visit. However, the burrowing nature of the species makes detections difficult at times. The owls are only present in the state during their breeding season from late March or early April through October, migrating south for the remainder of the year. The small size of the prairie dog colony and the fact that the site is in close proximity to buildings and floodlights suggest that the regular presence of burrowing owls on the property is unlikely.

### **2.3.5 Jurisdictional Waters of the U.S.**

No jurisdictional waters of the U.S., including wetlands, were identified on the alternative site.

### **3.4 JURISDICTIONAL WATERS OF THE U.S.**

Based on site observations, it is the opinion of SWCA that jurisdictional waters of the U.S., including wetlands, are not present on the proposed project site or the alternative site. Therefore, no issues related to the CWA are anticipated by construction or development of the project on either site.

### **3.5 CULTURAL RESOURCE INVESTIGATIONS**

SWCA conducted a Class III cultural resources inventory of two parcels totaling approximately 1.0 acre associated with the Buckley Air Force Base Environmental Constraints Analysis. No sites or IFs were found; therefore, cultural resource clearance is recommended for any future action or undertakings in the project area.

**APPENDIX A**  
**Limited-Results Archaeological Survey Form**

OAHP Use Only: OAHP Doc. No. \_\_\_\_\_ OAHP Project No. \_\_\_\_\_

Colorado Office of Archaeology and Historic Preservation

**LIMITED-RESULTS CULTURAL RESOURCE SURVEY FORM**

Small scale limited results projects include block surveys under 160 acres with linear surveys under four miles. Additionally, there should be no sites and a maximum of four Isolated Finds. This form must be typed.

---

**I. IDENTIFICATION**

1. Report Title (include County): Buckley Air Force Base Environmental Constraints Analysis,  
Arapahoe County, Colorado.
2. Date of Field Work: 6 & 8 October 2003
3. Form completed by: Todd Kohler Date: 8 October 2003
4. Survey Organization/Agency: SWCA Environmental Consultants  
Principal Investigator: Kevin Thompson  
Principal Investigator's Signature: \_\_\_\_\_  
Other Crew: Todd Kohler  
Address: 8461 Turnpike Dr., Suite 100, Westminster, CO 80031
5. Lead Agency / Land Owner: Buckley Air Force Base  
Contact: Linda Balcom  
Address: 1601 Blake Street #508 Denver, Colorado 80202
6. Client: Matrix Design Group
7. Permit Type and Number: Colorado State Archaeological Permit 2003-16
8. Report / Contract Number: NA

Comments:

---

**II. DESCRIPTION OF UNDERTAKING / PROJECT**

10. Type of Undertaking: Building Construction
11. Size of Undertaking (acres): 1 acre Size of Project (if different): Same
12. Nature of the Anticipated Disturbance: Backhoe excavation, blading and construction
13. Comments:



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#### IV. LITERATURE REVIEW

23. Location of File Search: Colorado Historical Society, Office of Archaeology and Historic Preservation Date: October 3, 2003

24. Previous Survey Activity

In the project area: None

In the general region: There have been three cultural resource surveys, and two cultural resource reviews within Buckley Air Force Base/Air National Guard Base occurring between 1983 and 1990 (Anderson 1983, Burney 1989, Foothills Engineering Consultants 2002, Higgins 1988, Tate et al. 1990). These projects focused on non-fenced, low-security areas outside areas slated for development for this project.

25. Known Cultural Resources

In the project area: None

In the general region (summarize): There are numerous prehistoric and historic sites limited to sparse lithic scatters and remnant building or dwelling foundations throughout the Buckley property.

26. Expected Results: Due to the size of the survey areas, and previous disturbances within them, it was considered unlikely that any cultural resources would be identified in the project areas.

#### VI. STATEMENT OF OBJECTIVES

27. To identify any cultural resources within the project areas.

#### VII. FIELD METHODS

28. Definitions: Site: Archaeological sites were defined as 10 or more artifacts at least 50 years in age.

IF: Isolated Finds (IFs) were defined as nine or fewer artifacts.

29. Describe Survey Method: Three 10-meter transects were walked along the areas proposed for development

#### VIII. RESULTS

30. List IFs if applicable. Indicate IF locations on the map completed for Part III.

A. Smithsonian Number: None Description: None

B. Smithsonian Number: \_\_\_\_\_ Description: \_\_\_\_\_

C. Smithsonian Number: \_\_\_\_\_ Description: \_\_\_\_\_



31. Using your professional knowledge of the region, why are there none or very limited cultural remains in the project area? Is there subsurface potential? The survey areas were less than one acre and disturbed by previous construction activity. Subsurface potential within the project area is considered poor because of the reworked, disturbed nature of the soils.

### References Cited

Anderson, J.L.

- 1983 *Final Report on a Cultural Resource Inventory for the Proposed Military Construction Project, P-060, Navy and Marine Corps Reserve Training Center at Air National Guard Base, Aurora, Arapahoe County, Colorado.* Pioneer Archaeological Consultants, Longmont, Colorado. Submitted to U.S. Department of the Navy, Northern Division, Navy Facilities Engineering Command, Philadelphia, Pennsylvania.

Burney, M.S.

- 1989 *Literature and File Search and Archaeological Reconnaissance of the Buckley Air National Guard Base Located in Arapahoe County, Colorado.* Burney and Associates, Inc. Submitted to Hunter Environmental Science and Engineering, Inc. Englewood, Colorado.

Foothills Engineering Consultants, Inc.

- 2002 *Archaeology Survey Review for Buckley Air Force Base, Aurora, Colorado.* Submitted by Foothills Engineering Consultants, Inc. Lakewood, Colorado.

Higgins, H.C.

- 1988 *The Buckley Land Exchange Class III Cultural Resources Survey SW1/4, Section 9, T4S, R66W, Zone 13, Fitzsimons 7.5' USGS Quadrangle Map 1965 for SCS-CRS-1988, for Arapahoe County, Colorado.* Submitted to Fourth Satellite Communications Squadron AFSPACECOM, Holoman Air Force Base, New Mexico.

Tate, M.J., B.P. O'Neil, R.J. Mutaw and G.C. Tucker, Jr.

- 1989 *A Cultural Resources Inventory of the Buckley Air National Guard Base, Arapahoe County, Colorado.* Powers Elevation Co., Inc. submitted to Pahl, Pahl, Pahl Architects/Planners, Denver, Colorado.

**APPENDIX D:**  
**Comment and Response to Comments**



DEPARTMENT OF THE AIR FORCE  
460TH AIR BASE WING (AFSPC)

AUG 02 2004

Lt Col Christopher C. McLane  
Commander, 460th Civil Engineer Squadron  
660 South Aspen Street, Stop 86  
Buckley AFB CO 80011-9551

Ed LaRock, Environmental Protection Specialist  
Colorado Department of Public Health and Environment  
Hazardous Materials and Waste Management Division  
4300 Cherry Creek Drive South  
Denver CO 80246

Dear Mr. LaRock

Thank you for your correspondence dated 26 Jun 04 on the Environmental Assessment (EA) for the Proposed Antenna Construction at the Existing Aerospace Data Facility (ADF) Remote Terminal Facility. Our responses to your comments are outlined below.

**Response to Comment 3:** We concur with your response to comment 3, and Section 3.6.4 has been changed to: "Existing ERP Site 5, the Former Fire training Area No. 1, is located about 800 feet southwest of the Proposed Action location; however, remedial action is not indicated, and the Air Force is preparing a No Further Response Action Planned Decision Document."

**Response to Comment 4:** A copy of the figure was sent 23 Jul 04 via electronic mail.

If you have any further questions please feel free to contact Ms. Elise Sherva, NEPA Program Manager, at 720-847-9077, E-mail [elise.sherva@buckley.af.mil](mailto:elise.sherva@buckley.af.mil), or Capt Tony Fontanetta, Acting Environmental Planning Chief, at 720-847-9977, E-mail: [anthony.fontanetta@buckley.af.mil](mailto:anthony.fontanetta@buckley.af.mil).

Sincerely,

A handwritten signature in black ink, appearing to read "Chp C McLane", is positioned above the printed name.

CHRISTOPHER C. MCLANE, Lt Col, USAF  
Base Civil Engineer

**From:** ED J LAROCK [ed.larock@state.co.us]  
**Sent:** Friday, June 25, 2004 3:42 PM  
**To:** anthony.fontanetta@BUCKLEY.AF.MIL; Elise.Sherva@BUCKLEY.AF.MIL  
**Cc:** Janet.Wade@BUCKLEY.AF.MIL; Mark.Spangler@BUCKLEY.AF.MIL;  
rathke.david@epamail.epa.gov; JEFF Edson; Monica Sheets  
**Subject:** EA for ADF at BAFB RTC



Site 5 comment hold  
letter.pdf...

Dear Ms. Sherva and Lt. Fontanetta,

I am writing in regard to the Air Force Response to CDPHE Comments letter dated June 4, 2004 and received June 7, 2004, on the Draft Environmental Assessment for the Proposed Antenna Construction at the Existing ADF Remote Terminal Facility, Buckley AFB, Colorado.

Response to comment 3 - The Air Force statement that ERP Site 5 "only requires the State's acceptance of the NFRAP decision" is incorrect. Please see the attached letter from the Air Force ERP manager and revise your sentence for the EA accordingly. The state is still awaiting action from the Air Force on Site 5.

Response to comment 4 - A copy of the referenced figure in your letter was not attached. Please send it with your response top this email.

Please response at your earliest convenience to correct these issues, sincerely,

Ed LaRock  
Hazardous Materials and Waste Management Division  
Colorado Dept. of Public Health and Environment  
4300 Cherry Creek Drive South  
Denver, CO 80246-1530  
303-692-3324  
Fax 303-759-5355  
ed.larock@state.co.us



DEPARTMENT OF THE AIR FORCE  
460TH AIR BASE WING (AFSPC)

Lt Col Christopher C. McLane  
Commander, 460th Civil Engineer Squadron  
660 South Aspen Street, Stop 86  
Buckley AFB CO 80011-9551

JUN 04 2004

Denise M. Balkas  
City of Aurora  
Director of Plans  
15151 East Alameda Parkway  
Aurora CO 80012

Dear Ms. Balkas

Thank you for your letter dated 2 April 2004, on the Draft Environmental Assessment (EA) for Proposed Antenna construction at existing Aerospace Data Facility (ADF) Remote Terminal Facility, Buckley Air Force Base (BAFB). Our responses follow:

1. Buckley AFB is preparing an EA that will cover all cumulative impacts. The timeline for this EA has slipped; however, we anticipate a Draft EA by September 2004. While this EA addresses cumulative impacts for past, present, and future construction projects it will only serve as a Programmatic EA from which to tier future EA's. As stated in previous correspondence dated 24 June 2002, all attempts are made to include all projects into an annual EA; however, this is not feasible due to the following:

a. Additional projects are identified that cannot be included in the present or future years EA's due to construction and/or funding timelines.

b. Tenant organizations that program for and pay for environmental assessments for their projects.

c. Receiving funds at different times of the year, as with non-appropriated versus appropriated funds.

2. Page 28, Section 3.6.4 – Resource Control and Recovery Act has been changed to Resource Conservation and Recovery Act.

3. Table 4-3 has been changed to reflect that Projected Total is the sum of the Baseline emissions plus the proposed construction.

4. The column heading in Table 4-6 has been changed to "Increase in Estimated Stormwater Volume" to provide the reader a better understanding of the table.
5. Table 4-9 has been corrected to reflect emissions for the PA/AA as compared to emissions from fiscal year 05.
6. Page 48, first line – A period has been inserted after the word regulations.

Please contact Ms. Elise Sherva at 720-847-9077, email [elise.sherva@buckley.af.mil](mailto:elise.sherva@buckley.af.mil) or 1Lt Anthony Fontanetta at 720-847-9187, email [anthony.fontanetta@buckley.af.mil](mailto:anthony.fontanetta@buckley.af.mil), if you have any questions or require further information.

Sincerely,

A handwritten signature in black ink, appearing to read "C. C. McLane", is positioned above the printed name.

CHRISTOPHER C. McLANE, Lt Col, USAF  
Base Civil Engineer

**From:** Fontanetta Anthony P 1stLt 460 CES/CEOE <Anthony.Fontanetta@BUCKLEY.AF.MIL>  
**To:** "Frank Turina (E-mail)" <Frank\_Turina@URSCORP.COM>  
**Date:** Monday, April 05, 2004 02:02PM  
**Subject:** FW: Environmental Assessments at BAFB

---

Please add to subjects EAs.

-----Original Message-----

From: ED J LAROCK [mailto:ed.larock@state.co.us]  
Sent: Friday, April 02, 2004 4:05 PM  
To: anthony.fontanetta@BUCKLEY.AF.MIL; Elise.Sherva@BUCKLEY.AF.MIL  
Cc: Janet.Wade@BUCKLEY.AF.MIL; Mark.Spangler@BUCKLEY.AF.MIL;  
Rathke.David@epamail.epa.gov; CURTIS L Burns; EDWARD H SMITH; Monica  
Sheets; Tom Bain  
Subject: Environmental Assessments at BAFB

Lt. Fontanetta,

I am sending comments on three recently received environmental assessments at Buckley AFB. Elise requested comments go to you in her absence.

Preliminary Draft Environmental Assessment for Proposed Construction II, Buckley AFB, Colorado dated March 2004 and received March 8, 2004.

1) General - The AF ERP program is conducting a basewide preliminary assessment which may identify other environmental concerns not previously identified at the base, potentially in areas proposed for construction.

2) Section 2.1.1, Athletic Fields - The location of these proposed fields may be in areas where asbestos in soil occurs and/or stockpiles of asbestos contaminated soils exist. All removal activities in these areas should be coordinated with CDPHE as required by existing compliance orders.

3) Section 2.1.8, Demolitions, page 2-14 - Regulations pertaining to building demolition with asbestos materials are covered by the CDPHE Air Pollution Control Division (APCD). Please contact Mr. Tom Bain of the APCD at 303 692 3182 for further information on these requirements to avoid any regulatory issues.

Draft Environmental Assessment for the Proposed Antenna Construction at the Existing ADF Remote Terminal Facility, Buckley AFB, Colorado dated March 2004 and received March 9, 2004

1) General - The AF ERP program is conducting a basewide preliminary assessment which may identify other environmental concerns not previously identified at the base, potentially in areas proposed for construction.

2) Section 3.6.5, Asbestos - Concur with stated intent to coordinate this activity with the State.

3) There is no mention of the Environmental Restoration Program. The Proposed Action Location is adjacent to ERP Site 5.



4) Figure 1 displays the location of the Rocky Mountain Arsenal National

Wildlife Refuge. It is still an NPL superfund site and will not formerly become a wildlife refuge until the superfund remedy is complete. I suggest just calling it the Rocky Mountain Arsenal. Also the figure incorrectly displays the outline of Jefferson County. That is Denver County and it includes DIA. CDPHE made this exact same comment on the Environmental Assessment for the Proposed Construction of an Entomology Facility and Demolition of the Existing Entomology Facility at Buckley AFB, Colorado, in June 2003. Was that Figure ever changed?

Environmental Assessment for the Proposed Construction and Operation of a Hazardous Materials Issue Facility and a Hazardous Wastes Storage Facility dated 28 March 2004 and received March 31, 2004

1) General - The AF ERP program is conducting a basewide preliminary assessment which may identify other environmental concerns not previously identified at the base, potentially in areas proposed for construction.

2) Any asbestos encountered will need to be reported to the CDPHE for proper abatement planning.

3) The operation of the facility will be subject to RCRA regulations and inspections.

Please provide a response to these comments and let us know when and where the final documents are available. If you require this in a letter form, please contact me. Thank you for the opportunity to comment.

Ed LaRock  
Hazardous Materials and Waste Management Division  
Colorado Dept. of Public Health and Environment  
4300 Cherry Creek Drive South  
Denver, CO 80246-1530  
303-692-3324  
Fax 303-759-5355  
[ed.larock@state.co.us](mailto:ed.larock@state.co.us)

Planning Department  
15151 E. Alameda Parkway  
Aurora, Colorado 80012  
Phone: 303-739-7250  
Fax: 303-739-7268  
www.auroragov.org



April 2, 2004

Ms. Elise Sherva  
Conservation Chief  
460 CES/CEVP  
660 S. Aspen Street, (Stop 86)  
Building 1005, Room 254  
Buckley AFB, CO 80011-9551

Dear Ms. Sherva:

**RE: Comments on Draft EA for Proposed Antenna Construction at existing ADF Remote Terminal Facility, BAFB**

The staff for the City of Aurora, Colorado has reviewed the above-referenced document and has the following comments on the Draft Environmental Assessment (EA) for the Proposed Antenna Construction at the existing ADF Remote Terminal at Buckley Air Force Base (BAFB):

**General Comments:**

The proposed project involves the construction of one new 14 to 26 meter diameter antenna to support the ADF mission at BAFB. The City remains concerned over the piece-meal approach being used to conduct environmental assessments for the extensive amount of proposed new construction on base. While staff concurs with the assessment that there will be minimal environmental impacts resulting from the construction of the proposed antenna, it is difficult to assess the cumulative impact of the numerous other concurrent projects. Within the first quarter of this year, we have or will receive at least six (6) individual EAs to review and on which to prepare comments. It is believed that a better assessment of cumulative effects might be achieved by combining the assessment of several projects into one document.

**Specific Comments:**

**Page 28, Section 3.6.4** – RCRA stands for Resource Conservation and Recovery Act, not "Control" Act as stated in the text.

**Page 34, Table 4-3** –Please explain what "Projected Total" on the third line of the table refers to. If "Projected Total" is the sum of Baseline Emissions plus Proposed Construction, the total needs to be corrected.

April 2, 2004

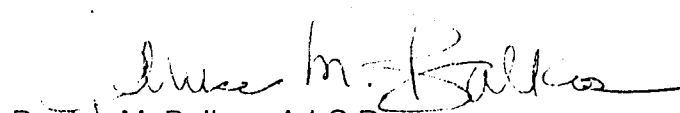
**Page 42, Table 4-6** – The term “Groundwater Converted to Collected Stormwater” should be defined and explained to assist the reader to better understand the table.

**Page 45, Table 4-9** – Emissions are not typically summed from one year to the next as indicated in the “Total” line in the table. It is suggested that the emissions from the PA/AA be compared to emissions occurring in a single fiscal year.

**Page 48, first line** – There appears to be a typographical error. A period is missing after the word “regulations”.

Thank you for giving the City the opportunity to respond to the draft EA and FONSI. We look forward to receiving the Final Environmental Assessment.

Sincerely,

A handwritten signature in black ink, appearing to read "Denise M. Balkas".

Denise M. Balkas, A.I.C.P.  
Director of Planning

DMB/jai

cc: Nancy Freed, Deputy City Manager of Operations  
Jim Ives, Environmental Program Supervisor



COLORADO  
HISTORICAL  
SOCIETY

**The Colorado History Museum 1300 Broadway Denver, Colorado 80203-2137**

March 23, 2004

Lt. Col. Christopher C. McLane  
460<sup>th</sup> Civil Engineer Squadron  
18401 East A-Basin Avenue (Stop 86)  
Buckley AFB, CO 80011-9524

Re: Section 106 Review for installation of a new antenna at the Aerospace Data Facility  
Remote Antenna Terminal. (CHS #42835)

Dear Lt. Col. McLane,

Thank you for your correspondence received by our office on March 22, 2004 regarding  
the above-mentioned project.

After reviewing the submitted information, our office concurs with your *no adverse effect*  
finding under the Section 106 review of the National Historic Preservation Act.

If we may be of further assistance, please contact Amy Pallante, our Section 106  
Compliance Coordinator, at (303) 866-4678.

Sincerely,

For  
Georgianna Contiguglia  
State Historic Preservation Officer

cc: Mr. Floyd Hatch, Buckley AFB



DEPARTMENT OF THE AIR FORCE  
460TH AIR BASE WING (AFSPC)

February 4, 2004

Mr Mark Spangler  
460 CES/CEVR  
660 South Aspen Street, Stop 86  
Buckley AFB CO 80011-9551

Mr Ed LaRock  
Hazardous Materials and Waste Management Division  
Colorado Department of Public Health and Environment  
4300 Cherry Creek Drive South  
Denver, CO 80246-1530

Dear Mr. LaRock

A URS letter dated October 27, 2003, transmitted to members of the Technical Working Group (TWG), the October 2003 Draft Final No Further Response Action Decision Document for Site 5, Former Fire Training Area No. 1. That letter requested that comments on the document be submitted by November 14, 2003. As we have discussed in past TWG meetings, the Air Force needs to reconsider several issues with the document, one in consultation with the CDPHE legal advisor. I understand that you were prepared to submit your comments by the requested date; however, please do not submit your comments until these few issues are resolved.

Thank you for your continued support of the Buckley Environmental Restoration Program. Please contact me at 303-677-9402 or [mark.spangler@buckley.af.mil](mailto:mark.spangler@buckley.af.mil) with any questions.

Sincerely

A handwritten signature in black ink, reading "Mark E. Spangler", is positioned above the typed name.

MARK E. SPANGLER  
Environmental Restoration Program Manager

cc:  
Mr. David Rathke, EPA  
Mr. Rich Muza, EPA  
Ms. Carol MacLennan, TCHD  
Mr. Jim Ives, City of Aurora  
Mr. Brad Buchanan, 460 ABW/JA