

## **FINDING OF NO SIGNIFICANT IMPACT**

### **AIR FORCE RESEARCH LABORATORY SPACE VEHICLES INTEGRATED EXPERMENTS DIVISION OFFICE SPACE AT KIRTLAND AIR FORCE BASE, NM**

Pursuant to the Council on Environmental Quality regulations for implementing the procedural provisions of the National Environmental Policy Act (40 CFR Parts 1500-1508), and the Air Force Environmental Impact Analysis Process, as promulgated at 32 CFR Part 989, the Department of the Air Force (AF) has completed an Environmental Assessment (EA) of the impacts associated with the construction and operation of an office building at Kirtland Air Force Base (KAFB). The office building would house the Air Force Research Laboratory Space Vehicles Integrated Experiments Division (AFRL/VSE).

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

The Air Force Research Laboratory's Space Vehicles Directorate (AFRL/VS) proposes to construct a 3,600-square foot building to increase office space for engineers and program managers in ARFL/VSE. AFRL/VSE is experiencing growth throughout its research programs and has reached capacity within the building that houses their offices and personnel. The proposed building would be constructed in 2005 on Bernice Street north of Aberdeen Avenue on KAFB on a previously developed tract.

Options to the Proposed Action include: (1) Renovating the currently used facility (Building 592); (2) Constructing an addition to Building 592; (3) Moving operations to Building 30117; or (4) Installing a modular building near Building 591 in the AFRL/VSE area. Compared to the proposed action, those four alternatives were either more costly, less efficient, or would limit access to convenient interaction with others performing the research. As a result, those alternatives were not carried forward for further consideration. The no-action alternative to continue operating out of Building 592 was also examined to establish baseline conditions.

#### **Summary of Environmental Consequences**

The EA evaluated the impacts of construction of a new facility and relocation of activities to the proposed facility on the following resource areas: land use, noise, air quality, water quality, biological and cultural resources, soils, hazardous materials and hazardous waste management, and health and safety. The proposed construction would not increase air emissions in the Albuquerque-Bernalillo County Air Basin or change land use/operations in the area. A potential exists for minor short-term impacts such as noise, dust, and soil erosion. There would be only temporary increases in noise levels during construction activities, and the proposed activities would not significantly affect current or projected land use compatibility. Short-term impacts to local air quality from fugitive dust created

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during construction would be controlled by the application of water. Infrastructure and water resources would not be affected, except for the potential for short-term water degradation to water quality from construction-related erosion. Measures would be taken to mitigate potential adverse effects by providing erosion and sedimentation control and landscaping. No significant impacts would occur to vegetation, wildlife, sensitive habitats, or threatened or endangered species. No impacts to cultural resources have been identified.

No hazardous materials/waste management impacts would occur from the proposed action, and the proposed construction would not interfere with Installation Restoration Program remediation. Socioeconomic impacts will be positive but insignificant.

#### Cumulative Impacts

The EA reviewed cumulative impacts which could result from the incremental impact of the proposed action when added to other past, present, or reasonably foreseeable future actions. The other known projects anticipated to occur on KAFB which could contribute to cumulative impacts include various proposed demolition and construction projects on KAFB and the beddown of a training wing of CV-22 Osprey tilt-rotor aircraft. Review of potential environmental impacts of these programs combined with the proposed construction concluded that no significant cumulative impacts to KAFB or the Albuquerque-Bernalillo County region environments would occur collectively from these programs.

#### Decision

Based on my review of the facts and analysis as summarized above and detailed in the attached EA, I find that the proposed action will not have a significant impact on the human environment, either by itself or in consideration with the cumulative impacts of other foreseeable actions. Therefore, an environmental impact statement is not required and will not be prepared.



D. BRENT WILSON, PE  
Base Civil Engineer

18 July 2005

Date

**ENVIRONMENTAL ASSESSMENT  
FOR  
AIR FORCE RESEARCH LABORATORY  
SPACE VEHICLES INTEGRATED EXPERIMENTS DIVISION  
OFFICE SPACE  
AT KIRTLAND AIR FORCE BASE,  
ALBUQUERQUE, NEW MEXICO**

**JUNE 2005**

**Prepared For  
Air Force Research Laboratory**

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**TABLE OF CONTENTS**

| <b><u>Section</u></b>   | <b><u>Page</u></b> |
|---|--------------------|
| 1 Introduction  | 1                  |
| 1.1 <i>Purpose and Need for Action</i>                          | 1                  |
| 1.2 <i>Scope of the Environmental Review</i>                    | 2                  |
| 1.3 <i>Decision Needed</i>                                      | 2                  |
| 2. Description of Proposed Action and Alternatives              | 3                  |
| 2.1 <i>Operations Common to All Alternatives</i>                | 3                  |
| 2.2 <i>Description of the Proposed Action</i>                   | 3                  |
| 2.3 <i>No Action Alternative</i>                                | 5                  |
| 2.4 <i>Alternatives Considered but Not Carried Forward</i>      | 5                  |
| 3 Existing Environment  | 6                  |
| 3.1 <i>Land Use/Air Installation Compatible Use Zone</i>        | 6                  |
| 3.2 <i>Air Quality</i>  | 6                  |
| 3.3 <i>Water Resources</i>                                      | 7                  |
| 3.4 <i>Biological Resources</i>                                 | 7                  |
| 3.5 <i>Cultural Resources</i>                                   | 7                  |
| 3.6 <i>Geology and Soils</i>                                    | 7                  |
| 3.7 <i>Hazardous Materials, Hazardous Waste and Solid Waste</i> | 8                  |
| 3.8 <i>Safety and Occupational Health</i>                       | 8                  |
| 3.9 <i>Socioeconomics</i>                                       | 8                  |
| 4 Environmental and Socioeconomic Consequences                  | 9                  |
| 4.1 <i>Land Use/Air Installation Compatible Use Zone</i>        | 9                  |
| 4.2 <i>Air Quality</i>  | 9                  |
| 4.3 <i>Water Resources, Including Wetlands and Floodplains</i>  | 10                 |
| 4.4 <i>Biological Resources</i>                                 | 10                 |
| 4.5 <i>Cultural Resources</i>                                   | 10                 |
| 4.6 <i>Geology and Soils</i>                                    | 10                 |

|   |    |
|---|----|
| <i>4.7 Hazardous Materials, Hazardous Waste and Solid Waste</i> | 11 |
| <i>4.8 Safety and Occupational Health</i>                       | 11 |
| <i>4.9 Socioeconomics</i>                                       | 12 |
| <i>4.10 Environmental Justice</i>                               | 12 |
| <br>5 Cumulative Effects  | 12 |
| 5.1 Past, Present, and Reasonably Foreseeable Actions           | 13 |
| 5.2 Potential Cumulative Effects                                | 14 |
| <br>6 Conclusions   | 15 |
| 6.1 Findings and Mitigation                                     | 15 |
| 6.2 Recommendation  | 15 |
| <br>7 List of Preparers   | 15 |
| <br>8 References  | 16 |
| <br>9 Persons and Agencies Contacted                            | 17 |

## FIGURES

|   |                    |
|---|--------------------|
|   | <b><u>Page</u></b> |
| Figure 1. AFRL/VSE Compound Location  | 2                  |
| Figure 2. Proposed AFRL/VSE Integrated Experiments<br>Building Schematic Floor Plan | 3                  |
| Figure 3. Proposed AFRL/VSE Integrated Experiments<br>Building Location             | 4                  |

# **1 Introduction**

## **1.1 Purpose and Need for Action**

The purpose of this proposed action is to provide additional office space to support the Air Force Research Laboratory (AFRL) Space Vehicles Integrated Experiments Division (VSE). This Division is experiencing growth throughout its research programs and has reached capacity within the buildings that house their offices and personnel. This facility would need to accommodate at least 18 VSE scientists and engineers and facilitate the integration of research programs developed within this organization.

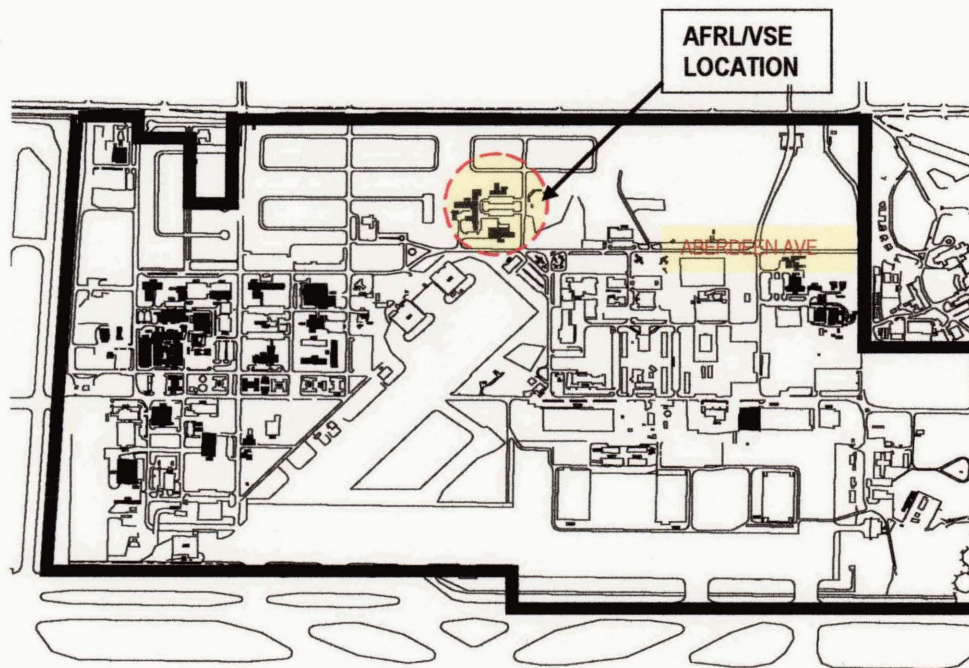
A facility is needed to support four major research and development (R&D) efforts which are ramping up and require full development and support teams:

- Hypersonic Test Vehicle (HTV) program – This program is developing and testing small, responsive launch platforms;
- RoadRunner – RoadRunner will enhance space operations and provide rapid capability for field units to set up and obtain real-time tactical battlefield information;
- Innovative Space-based radar Antenna Technology (ISAT) program – This program will increase target acquisition resolution and shorten gaps between satellite transmissions;
- Ballistic Missile Technology (BMT) – This program will enhance intercontinental ballistic missile (ICBM) technology, by making them more lethal, more precise and more difficult to track.

By October 2005, the four programs are scheduled to be fully staffed. All four research programs are on tight time-lines to fulfill their research and development components and must complete these tasks prior to their next scheduled mission launches.

Integration of the program staff into the existing VSE facilities (Buildings 591, 592, 593, and 595) is impossible due to the lack of available vacant offices within each facility. This research needs to be accomplished in a modern climate-controlled environment suitable for computer research and program simulation. The location desired is in the immediate area of the VSE facility compound (Figure 1) – in proximity to building 595, the satellite integration and test facility, on Kirtland Air Force Base, NM.

The surrounding AFRL facilities are filled to capacity and cannot support the personnel required to support these programs to manage programs and develop system hardware. There is no existing facility on KAFB with the specific space availability and adjacency requirements for supporting space vehicle, satellite, and tracking program integration and research development. A new office building would provide the necessary working area to ensure hardware development success. Without a new facility, these programs and associated research funds would be at risk.



**Figure 1. AFRL/VSE Compound Location**

## **1.2 Scope of the Environmental Review**

This Environmental Assessment is prepared in accordance with guidance for the preparation of an environmental assessment as contained in Air Force *Environmental Impact Analysis Process* (32 CFR Part 989), and the Council on Environmental Quality (CEQ) *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 CFR Parts 1500-1508). It is intended as a means of documenting the evaluation of the environmental consequences of those proposed actions which do not meet the criteria for a categorical exclusion as defined in 32 CFR Part 989, but do not appear to have any environmental impacts which require a detailed analysis.

The major areas of environmental concern identified are the potential for noise and air pollution during construction.

## **1.3 Decision Needed**

The environmental impacts of the Proposed Action, as well as those of other reasonable and prudent alternatives, are discussed in this document. The 377th Air Base Wing Commander will make the following decisions:

- Whether or not to build the proposed AFRL Space Vehicles Integrated Experiments Division office building
- If the Proposed Action meets the requirements for a "Finding of No Significant Impact (FONSI)"

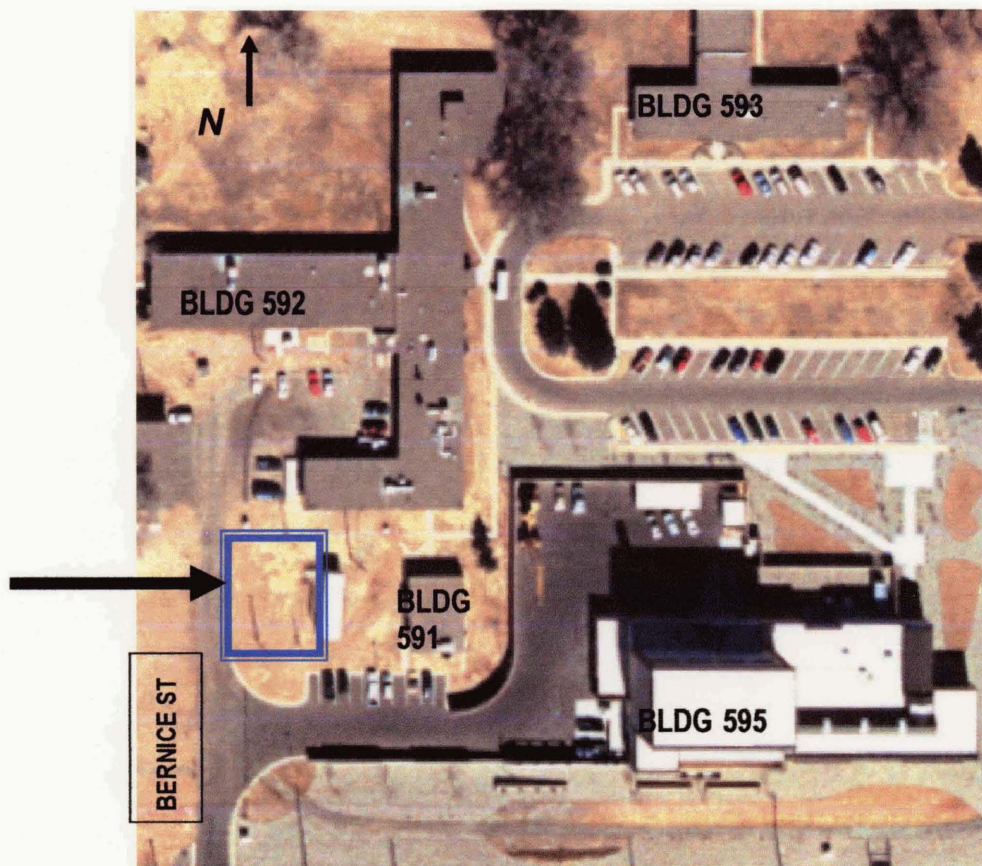




There would be approximately 18 offices for staff, a medium sized conference room, a small break room, two bathrooms, mechanical/electrical room, and a utility closet.

A central forced-air gas fired HVAC unit would provide heating and cooling. Electrical requirements would meet standard office requirements along with one 240 VAC, three-phase circuit breaker panel for equipment and the building air conditioning.

The proposed site is the previous location of the KAFB Clinic Bioenvironmental Engineering Office on Bernice Street north of Aberdeen Avenue. This site was approved for AFRL construction in May 2003 and would use the existing utility services. Figure 3 identifies the proposed location of the new building south of building 592 (constructed in 1954), west of building 591 (constructed in 1955), and west of building 595 (constructed in 1995). The Proposed Action would also include construction of a parking area, approximately ¼ acre in size, to accommodate approximately 50 spaces for occupants of this proposed building and Building 591. The user would fund the proposed building construction. The target completion date for the building would be fall 2005.



**Figure 3. Proposed AFRL/VSE Integrated Experiments Building Location**



### **2.3 No Action Alternative.**

The no action alternative would result in the proposed facility not being constructed. Personnel associated with these four major AFRL/VSE research and development efforts would continue operating out of Building 592.

### **2.4 Alternatives Considered but Not Carried Forward**

#### **2.4.1 Renovate Building 592**

Renovation of Building 592, built in 1954 as a military dispensary and used for administration since 1982, would involve redesigning the interior to accommodate the existing operations plus the four major R&D efforts. Current space is restrictive, with offices housed in former conference rooms and storage closets. The interior redesign and renovation would be cost-prohibitive because renovation would require all construction to meet current regulations and code. HVAC and electrical upgrades alone have been estimated to cost between \$500,000 and \$1,000,000.

#### **2.4.2 Construct an Addition to Building 592**

An addition to Building 592 was considered as a potential solution. Design studies were conducted for this option. A new building wing was drawn and evaluated. The addition would involve new construction to accommodate the existing operations plus the ramping up for the four major R&D efforts. The addition would be cost-prohibitive. The building was constructed in 1954 and renovation would require all construction to meet current regulations and code. Also, this facility is scheduled to be demolished for the programmed MILCON replacement and a new addition to this building would not be a prudent use of government funds.

#### **2.4.3 Use Building 30117**

Building 30177, an existing facility used by AFRL/VS, was considered but eliminated from detailed analysis because the facility is geographically separated by approximately 10 miles from Building 595, and its mission is not related to the new research and development missions. Integration of this program staff into other base facilities would provide a split arrangement for the researchers and would limit access to the VSE research labs and deny the scientists and engineers convenient interaction with the remaining members of the program office performing the research. Presenting obstacles to the research could mean that AFRL/VSE would face difficulty managing several multi-million dollar satellite integration programs.

#### **2.4.4 Install a Modular Building**

Installing a modular building west of Building 591 was rejected because it would only provide a temporary solution for office space, and it was determined that it would be more cost-effective to put in a new administrative building to supplement the construction (MILCON) programmed for FY11 for the replacement of the 1950's buildings (Buildings 591, 592 and 593) in this area.

### **3 Existing Environment**

Unless otherwise noted, the background information in this section is from Kirtland Air Force Base's 2002 *General Plan* and the *Integrated Natural Resources Management Plan*, which have been incorporated by reference. Because the proposed action and the no-action alternative sites are contiguous, the description of the existing environment applies to both locations.

#### **3.1 Land Use/Air Installation Compatible Use Zone (AICUZ)**

The site proposed for construction of the AFRL/VSE office building is on the west side of the cantonment area on an open area next to administration and research facilities. No visually sensitive areas are located in or adjacent to the site. Primary access to the AFRL/VSE compound is through the Truman Gate to Aberdeen Boulevard. Housing areas are currently to the north and west of the AFRL/VSE compound, athletic fields are east of the administration and research facilities, and airfield-associated facilities are to the south. The Proposed Action is outside the airfield Accident Potential Zone, as well as outside the runway clear zones and safety zones. There are no restrictions within this area governing the location or height of structures that could obstruct flight operations. There are no explosive clear zones or other operational constraints on construction at the proposed site. The proposed site is outside the average day-night noise level (Ldn) 65 line of the AICUZ.<sup>1</sup> Because the average day-night noise level is below 65 decibels, all land uses are considered compatible.

#### **3.2 Air Quality**

Ambient air quality is regulated by the joint Albuquerque-Bernalillo County Air Quality Control Board (ABC/AQCB). The ABC/AQCB also monitors compliance with federal, state, and local air quality regulations. The New Mexico Administrative Code, Title 20, Chapter 11, Part 04 (20.11.04 NMAC), entitled "General Conformity," implements Section 176(c) of the Clean Air Act, as amended (42 U.S.C. 7401 et seq.), and regulations under 40 CFR 51, Subpart W, with respect to conformity of general federal actions in Bernalillo County.

Bernalillo County has been designated a maintenance area for carbon monoxide under the National Ambient Air Quality Standards (NAAQS) and is in attainment for other federally regulated pollutants. 20.11.04 NMAC Section 12, paragraph B, establishes an emission threshold of 100 tons per year for carbon monoxide, over which a conformity determination must be made. Albuquerque/Bernalillo County has an approved State Implementation Plan (SIP) to reduce carbon monoxide emissions.

#### **3.3 Water Resources**

Water resources at Kirtland AFB reflect its dry climate. There are no natural lakes or rivers on Kirtland AFB. During rainfall, surface water on Kirtland AFB flows into small gullies. Most of

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<sup>1</sup> Ldn 65 refers to an average day-night noise level of 65 decibels (dB). The relation between community annoyance and time-average sound level has been confirmed. Sound levels below 65 dB are considered compatible with all land uses. Offices are a compatible land use where the Ldn is below 70 dB.

these gullies are dry most of the year and feed into the larger arroyos. The Tijeras Arroyo and the Arroyo del Coyote, the only natural drainage areas with a floodplain, are over two miles from the proposed site, as are the naturally occurring springs and wetlands on the installation. The average depth to groundwater beneath Kirtland AFB is 450 to 550 feet.

Water on the installation is supplied by up to eight installation water wells and distributed through a network of underground and facility piping networks throughout the developed area of base. Most of the water at the installation is considered potable, though non-potable water pipelines serve the golf course and fire-fighting supply.

### **3.4 Biological Resources**

The native vegetation in the western portion of the installation is grassland vegetation. The proposed site has opportunistic vegetation which has grown on the site following demolition of the previous structure. Wildlife species in the area of the proposed action include species adapted to human disturbance, such as starlings, robins, grackles, sparrows, rabbits and prairie dogs.

Eight federal or state-listed threatened or endangered species could potentially occur at Kirtland AFB, plus seven federal species of concern and one state sensitive plant species. No federally listed species have been found on the base. The gray vireo, a state-listed threatened species, has been found in juniper woodland at the easternmost portion of the base, more than five miles from the Proposed Action site. There is no potential habitat for the gray vireo near the proposed site. The western burrowing owl, a federal species of concern, has been observed on the base. This species uses in prairie dog towns for nest sites. Prairie dogs are in the vicinity of the proposed site but no western burrowing owls have been observed at this location (Finley, 2 May 2005).

### **3.5 Cultural Resources**

Kirtland AFB has identified over 80 historic buildings that have been determined to be eligible for the National Register of Historic Places. Over 600 archaeological sites have been located within Kirtland AFB boundaries, but only some sites are known to be eligible for the National Register; the eligibility of the other sites remains unknown. The proposed location, previously disturbed by construction and demolition, has no significant cultural resources (Renner, 2 May 05).

### **3.6 Geology and Soils**

Kirtland AFB is located on a high, arid mesa about five miles east of the Rio Grande. There are no significant geological formations at Kirtland AFB. Three major faults traverse the base and converge near Tijeras Arroyo beneath the installation. Albuquerque and Kirtland AFB lie within Seismic Risk Zone 2 as defined by the International Conference of Building Officials (ICBO) Uniform Building Code. Seismic Risk Zone 2 is a classification of moderate potential for damage to structures from seismic (earthquake) activity.

The soils at Kirtland AFB are generally excellent for construction. Soils at the proposed site are mapped as Latene, 1-5% slope (LtB). Latene soil is a deep, well-drained sandy loam with gravel in lower layers. Runoff is medium and the soil type is subject to moderate water erosion and wind blowing. Building limitations are slight (USDA, 1977).

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

Hazardous materials are materials which, because of quantity, concentration, or physical, chemical or infectious characteristics, may pose a substantial hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. AFRL/VSE office activities keep standard industrial chemical products in small amounts for general cleaning, office use, sanitation and other purposes. No chemicals are kept on site in amounts exceeding the Threshold Planning Quantities (TPQs) which require notification reporting or emergency management/risk planning under the Code of Federal Regulations.

The installation has a comprehensive Hazardous Waste Management Plan covering all activities on the base, and an environmental restoration/remediation program (ERP). There are no identified ERP sites on or near the site of the Proposed Action.

Solid municipal waste generated on the installation is sent to a regional landfill off base. Certain materials are recycled. Wastes generated by construction and demolition activities are taken to the Kirtland AFB landfill. All solid wastes are disposed of in accordance with Kirtland AFB, USAF, and applicable federal, state, and local regulations.

### **3.8 Safety and Occupational Health**

Construction on Kirtland AFB is required to adhere to all Air Force and federal safety regulations, building codes, and fire codes. Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, requires consideration of actions to ensure that any disproportionate environmental health risks or safety risks to children are addressed.

### **3.9 Socioeconomics**

The Albuquerque area has cultural and economic diversity. Large concentrations of Hispanic and Native American populations reside to the north and south of the City of Albuquerque, including the residents of 10 Indian pueblos or reservations in the immediate region. Approximately 4.2% of the county population is American Indian and about 30 percent of residents speak a language other than English at home (primarily Spanish).

In 2004, almost six hundred thousand people were estimated to reside in Bernalillo County (US Census Bureau, 2005). Bernalillo County, the smallest county in the state contains the largest city, Albuquerque, which dominates the economic climate of the central part of the state. An estimated 22 to 25 percent of all workers in the region are employed by the public sector. In 2000 the per capita income in Bernalillo County was \$20,790, placing 13.7% of individuals below the poverty level. Average weekly wages in Bernalillo County in third quarter 2004 were

\$813 (\$42,276/yr) for government sector, and \$632 (\$32,864/yr) for private sector. The unemployment rate in April 2005 was 6.0% (New Mexico Department of Labor).

## **4 Environmental and Socioeconomic Consequences**

### **4.1 Land Use/Air Installation Compatible Use Zone (Noise, accident potential, encroachment, etc.)**

The Proposed Action for an office building would be compatible with surrounding facilities. The new facility is in an area where the present and future land use is designated as administrative and/or research. Traffic will not be altered as AFRL/VSE personnel associated with the Proposed Action are already working in adjacent buildings.

There would be a slight, temporary increase in the noise level during the construction. Construction sounds would be temporary and localized. Construction sound would be limited to daylight hours and would not be expected to generate noise levels in excess of those safe for human health; all Occupational Safety and Health Administration (OSHA) requirements would be met. Sound levels would be expected to dissipate to background levels with increasing distance from the immediate construction site. Standard sound levels resulting from an office building and occasional start-up of vehicles would be expected from use of the building following construction.

There would be no change in present activities under the No-Action Alternative; therefore there would be no change the current land use or conditions.

### **4.2 Air Quality (Emission, attainment status, state implementation plan, etc.)**

Construction and operation of the new facility would be expected to produce only temporary (i.e., less than 30 days), minimal, and localized emissions. The effects on air quality would also be temporary, minimal and localized. Construction of the proposed facility would require operation of diesel-driven heavy equipment (trucks, dozers, backhoes, graders, dump trucks) as well as light gasoline vehicles.

The amount of carbon monoxide emissions expected to be generated from the Proposed Action is substantially below the 100 tons per year threshold required for a conformity determination and, therefore, a conformity determination is not required. The emissions from natural gas heating and cooling systems would be minimal for this small building. There would be a very minor increase in vehicle traffic and emissions from employees' driving to and from work as only 3-4 new employees are associated with this Proposed Action. No ozone-depleting substances would be used in association with the Proposed Action. Regulated pollutant emissions are not expected to contribute to or affect local or regional attainment status with NAAQs.

A small amount of dust or particulate matter would be generated during the construction of the building and parking lot. Water would be used for dust suppression during construction. Any operations that disturb  $\frac{3}{4}$  acre (32,670 square feet) or more require a submittal of a Fugitive Dust

Control Permit application and Fugitive Dust Control Plan to the City of Albuquerque Environmental Health Department Air Quality Division. The application and plan must be submitted at least 10 working days before the start of construction in accordance with New Mexico Administrative Code (NMAC) Title 20, Chapter 11, Part 20. After landscaping, less dust would be generated than under the No-Action alternative.

Under the No-Action alternative, there would be continued dust from the site due to the semi-barren conditions. No major additional air emissions are expected to occur if the activities continue at their present location.

#### **4.3 Water Resources (Quality, quantity, source, etc), Including Wetlands and Floodplains**

No perennial, surface-water resources exist on Kirtland AFB. There are no floodplains or wetlands associated with this proposed location. Best management practices would be implemented to prevent erosion and migration of soils caused by storm water or wind during construction activities. If the proposed construction would result in the disturbance of one acre or more, the project would require a permit under the National Pollutant Discharge Elimination System General Permit for Storm Water Discharges from Construction Activities. The minor amounts of impervious surfaces proposed for the project site would not affect groundwater recharge rates of aquifers underlying the installation. Water quality and usage is not expected to change as a result of the operations at the proposed office building. The No-Action Alternative has no current impact on water resources and would not change.

#### **4.4 Biological Resources (Flora, fauna)**

Construction activities would take place in the cantonment on previously disturbed lands with minimal vegetation. As such, it is not likely there would be much contact with wildlife or related habitat. There are no federal or State of New Mexico threatened or endangered species at or near the project area. There are prairie dog towns near the site, which will be surveyed prior to construction for the western burrowing owl, a federal species of concern. If needed, Kirtland AFB will implement existing procedures to relocate any owls. Following these approved procedures will avoid any impacts to the local burrowing owl population from the proposed action. There will be no change in conditions under the No-Action Alternative.

#### **4.5 Cultural Resources (Historical, archaeological, Native American burial sites, etc.)**

No significant cultural resources (historic or archaeological) have been found at the proposed project area. The developed portion of the installation has been subjected to repeated surface modifications. If any objects greater than 50 years old or human remains are uncovered during excavations, work must stop and the Kirtland AFB Cultural Resources Program Manager (846-8840) must be contacted immediately. There will be no changes to historic structures or landscapes under the No-Action alternative.



#### **4.6 Geology and Soils (Topography, minerals, seismicity, etc.)**

No significant geological formations or soils are found in the area of the Proposed Action. Existing soils are suitable for construction. The area is level, and use of standard Best Management Practices will minimize wind and water erosion at the site. Although Kirtland is in Seismic Risk Zone 2, all Kirtland AFB facilities are designed and constructed in compliance with building codes which are current during the design process. Neither the proposed action nor the no-action alternative would adversely affect geology or soils.

#### **4.7 Hazardous Materials, Hazardous Waste and Solid Waste**

No hazardous material, asbestos-containing material or lead-based paint would be used during the proposed construction or operations. No hazardous substances would be stored at or transported to the site. Should any hazardous waste be generated, it would be removed from the work site and disposed of in accordance with site policies or the Kirtland Hazardous Waste Management Plan. The construction contractor would remove and properly dispose of any construction debris and trash.

During operations, no standard industrial chemical products, such as those noted in section 3.7, would be used in a manner that generates a regulated hazardous waste stream. Standard office-type wastes would be generated during operations and disposed of in accordance with applicable solid waste requirements. These operational effects are the same under the No-Action alternative.

#### **4.8 Safety and Occupational Health**

All construction activities would be performed in accordance with all OSHA requirements. Potentially, exposure to various hazards or injuries is possible during the construction. To prevent serious injuries, construction contractors are required to submit and adhere to a contractor safety plan.

Operations within the proposed building would be those typical of an office setting with minimal risks to safety and health, as under current conditions.

The potential for the proposed construction and operations to have an impact on children has been considered. Children are not allowed in the area during construction or operation of the proposed facility, and no environmental impacts are anticipated as a result of the Proposed Action. Therefore, there will be no disproportionate environmental health risks or safety risks to children.

#### **4.9 Socioeconomics**

Construction of the facility would require the services of architectural, engineering, and construction firms; however such support would be temporary. The Proposed Action would not result in any increase in site population. Operations would continue to provide an economic benefit to the local community through routine maintenance of the building and potential

expenditures by the employees and their families, but the overall benefit would be minor. Any economic effect from the No-Action Alternative would be from contracted maintenance and repair of the existing facility.

#### **4.10 Environmental Justice**

The potential for the Proposed Action to have an adverse impact on low-income and minority populations must be considered in accordance with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. No adverse environmental impacts are anticipated as a result of the Proposed Action. The project would result in ground disturbance of less than 1 acre of land, located entirely within the boundaries of Kirtland AFB. The ground disturbance is small because the site is served by a paved road and utility mains. Surveys have documented that there are no wetlands, threatened or endangered species, or cultural resources present in the project area. There are no surface water bodies near the site. Noise and air emissions (primarily particulate matter as fugitive dust) would have only short-term, temporary impacts to workers and near-by residents. Standard construction practices would be implemented to minimize dust. No hazardous substances would be stored at or transported to the site. Because there would be no significant adverse environmental impacts, an environmental justice analysis is not required.

### **5 Cumulative Effects**

The effects of individual minor disturbances and other changes to the environment by humans will accumulate when the frequency of disturbances is so high that the ecosystem has not fully rebounded before another stressful event is introduced. The spatial and temporal crowding of such disturbances can result in cumulative effects.

The factors used in this document to determine which resources are cumulatively affected considered:

- Whether the proposed action is one of several similar actions in the same geographic area;
- Whether other activities in the area have similar effects on the resource;
- Whether the resource is especially vulnerable to incremental effects;
- Whether these effects have been historically significant for this resource; and
- Whether other analyses in the area have identified a cumulative effects concern.

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

Facilities on Kirtland AFB range from those built in the 1940s to the present. As a result, demolition of old facilities, new construction, facility improvements, and infrastructure upgrades occur regularly. In addition, changes to the military mission and training requirements have necessitated changes in facilities and operations. Because the past actions have led to the present state, no specific analysis of those past actions was undertaken, unless the actions would continue to have effects which, in concert with the proposed and reasonably foreseeable actions, may effect cumulative impacts.

Present and reasonably foreseeable similar or related actions for Kirtland Air Force Base and the surrounding area include the following:

- Replacement of aging installation housing. Aging base housing is being demolished over the next several years until all the old housing has been removed. Some of the housing proposed for demolition (West Capehart Military Housing) is immediately north and west of the location for this proposed project. New housing construction is occurring several miles east of this location.
- Construction of Kirtland Technology Park. Kirtland Technology Park is an AFRL-proposed four-phased development to provide a physical environment for co-locating military, academic, and defense industry professional operations to research and develop space and directed energy technologies vital to future warfighter requirements. Phase I, to be started in approximately 3-5 years, would result in the construction of three new facilities containing laboratory, educational, and administrative space on approximately 36 acres on Kirtland AFB. The proposed Phase II would start during the following 5 years; additional development (Phases III and IV) is anticipated to start approximately 15-25 years after Phase I approval. The Phase I location is west of this Proposed Action.
- Proposed construction of a campus for Pararescue/Combat Rescue Officer (PJ/CRO) training. This construction is proposed in an area approximately 2 miles east of the Proposed Action in an area currently occupied by aging military housing on Kirtland AFB. The existing housing is scheduled to be demolished between 2006 and 2009.
- Proposed construction of HC-130 Flight Simulator and Corrosion Control Facilities. Construction on these facilities, approximately 1/4 mile southeast of the Proposed Action, is expected to begin in 2005.
- Beddown of a training wing of CV-22 Osprey tilt-rotor aircraft. The beddown and plus-up of the 58<sup>th</sup> Special Operations Wing at Kirtland AFB would replace 11 aging H-53 helicopters with 7 CV-22 aircraft. In addition, the action includes an increase of 4 other helicopters and 3 HC-130P fixed wing aircraft and renovation of existing facilities. The first 4 of the CV-22s are to arrive at Kirtland AFB in early 2006. The CV-22 beddown will be approximately ½ mile south of the Proposed Action.
- Proposed construction of an automatic car wash and drive-through coffee kiosk. The proposed AAFES car wash facility and drive-through coffee kiosk are approximately 3 miles southeast of the Proposed Action on Kirtland AFB.
- Proposed renovation or replacement of the Kirtland AFB bulk fuel facility. Due to aging effects, this facility needs major repair or replacement to meet compliance requirements. It also is the site of environmental restoration efforts. The bulk fuel facility is over one mile southeast of the Proposed Action.

- Construction of housing in Albuquerque and Bernalillo County. There is extensive new home construction west and northwest of Albuquerque. To a great extent, these activities were the impetus for Fugitive Dust permit requirements (Dann, 5/6/05).

## **5.2 Potential Cumulative Effects**

The Environmental Assessments of the federal activities listed above in Section 5.1 identified no significant impacts from each of the activities individually. No significant adverse or beneficial cumulative effects have been identified in any of these recent or ongoing NEPA analyses.

The scope of this cumulative effects analysis was limited to the resources analyzed in Section 4 where the Proposed Action had some apparent impact, even if slight. This Environmental Assessment determined that the Proposed Action would have negligible impacts on the following resources: land use, water resources, biological resources, cultural resources, geological resources, hazardous materials, hazardous waste and solid waste, and health and safety. Since the Proposed Action would have negligible impacts on these resources, they were not examined in this analysis.

The major issues associated with these past, present, and future construction activities are the potential cumulative effects on air quality and socioeconomics.

### **5.2.1 Air Quality.**

Construction activities that would use large equipment or large vehicles produce carbon monoxide, pollutant for which the Albuquerque-Bernalillo County area has been designated as a maintenance area. In addition, fugitive dust is created from the soil disturbance during construction. Permits are required by the City of Albuquerque-Bernalillo County for construction operations which disturb  $\frac{3}{4}$  acre or more. The fugitive dust at these sites is monitored by the Albuquerque-Bernalillo County Air Quality Control Board and activities are restricted if air quality is being degraded, thus no cumulative fugitive dust effects are anticipated.

Although Albuquerque-Bernalillo County is under a 20-year State Implementation Plan (SIP) to reduce carbon monoxide emissions, the air quality in Bernalillo County has improved to the extent that, as a result of the 10-year review, the AQCB has submitted a Limited Maintenance Plan, which would eliminate the requirement for General Conformity analyses. The combined emissions from the Proposed Action, when considered with potential emissions from the other actions considered, are not expected to have any significant cumulative impacts on air quality, especially in view of the improvements in county air quality.

### **5.2.2 Socioeconomics**

The total value of Kirtland AFB's economic impact to the local community was over \$3.3 billion in fiscal year 2004 (FY04). Military construction on Kirtland accounted for over \$17.5 million and other construction for over \$15.3 million during that time (KAFB, 2005). The Proposed Action, when considered with all other construction occurring at Kirtland AFB, is expected to add slightly to the overall economy of the community. Most of the foreseeable past, present and

future actions are not extensive and do not have any additional impact on the community following construction, other than the economic benefit through any repair and maintenance that would be contracted. As a result, the cumulative effects of the Proposed Action when considered with all the present and foreseeable actions will continue the current economic benefit to the area but with no significant change expected.

## **6 Conclusions**

### **6.1 Findings and Mitigation**

All practicable measures have been taken to avoid or minimize environmental impacts from the Proposed Action. Actions that would be taken include using standard Best Management Practices to control fugitive dust and water erosion at the proposed site. It is anticipated that significant impacts to air, land, water, aesthetic, socioeconomic, natural and cultural resources will be avoided. Both the Proposed Action and the No Action alternative will maintain compliance with pertinent laws and regulations.

This Proposed Action is environmentally acceptable and would not constitute a major federal action significantly affecting the quality of the human environment within the meaning of Section 102(2)(c) of the National Environmental Policy Act (NEPA). Therefore, preparation of an Environmental Impact Statement is not required.

### **6.2 Recommendation**

Pursuant to the Council on Environmental Quality regulations (40 CFR 1500-1508) implementing procedural provisions of the National Environmental Policy Act, a Finding of No Significant Impact (FONSI) is deemed appropriate. Recommend that a notice of availability of a draft FONSI be released to announce this conclusion to the public, and afford them an opportunity to comment on the Proposed Action before rendering a final decision.

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## 8 References

Air Force Instruction 32-7061, *The Environmental Impact Analysis Process*, 12 Mar 03, adopting Title 32, Code of Federal Regulations, Part 989 (32 CFR Part 989), *Environmental Impact Analysis Process (EIAP)*, available at <http://www.access.gpo.gov/>.

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## **9 Persons and Agencies Contacted**

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