FINDING OF NO SIGNIFICANT IMPACT FOR PROPOSED REPLACEMENT OF SENIOR OFFICERS QUARTERS PROJECT, MCCONNELL AIR FORCE BASE, KANSAS

Agency: United States Air Force (USAF), Headquarters, Air Mobility Command

BACKGROUND

Pursuant to the National Environmental Policy Act (NEPA) of 1969, 42 US C 4321, *et seq.*, the President's Council on Environmental Quality (CEQ) regulations, 40 CFR 1500-1508 and Air Force Instruction (AFI) 32-7061, *The Environmental Impact Analysis Process*, as promulgated at 32 CFR Part 989, the US Air Force performed an assessment of the potential environmental consequences resulting from the proposed Replacement of Senior Officers' Quarters Project at McConnell AFB (MAFB), Kansas. The environmental assessment (EA) considers all potential impacts of the preferred action and the alternatives, both as solitary actions and in conjunction with other activities.

This finding of no significant impact (FONSI) summarizes the results of the evaluation of the proposed project. The discussion focuses on activities that have the potential to change both the natural and human environments. This document summarizes the options considered and states why the proposed project was designed and sited.

2.0 PREFERRED ACTION

The preferred action would be the eventual demolition of the four existing senior officers' quarters (SOQs) and the reconstruction of six new SOQs. The advantage of the preferred action includes the removal of outdated high maintenance facilities, reducing future extensive maintenance costs, adding much needed housing space in a more cost effective manner than revitalization of existing facilities.

The four existing SOQs were constructed in 1956 and are located on the north east corner of MAFB proper.

A cost benefit analysis was prepared evaluating the preferred action to the renovation alternative. It was determined the renovation cost would be more than 70 percent of the reconstruction costs, with the 70 percent cost differential being the breakpoint for renovation or new construction.

Review of the McConnell wetlands map indicated there are potential wetlands along two north-south drainage ditches. One is located approximately 0.25 miles to the west and the other 0.25 miles to the east of the proposed site that convey storm water runoff to McConnell Creek. These areas would not be disturbed during the proposed action.

This project meets the criteria/scope specified in Part II of the Military Handbook 1190, "Facilities Planning and Design Guide."

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3.0 ALTERNATIVES

The alternatives considered were the preferred action, renovation and no action alternatives.

Preferred Action: See Section 2.0.

Renovation Alternative:

Under the renovation alternative, MAFB would renovate the existing housing units to include major structural, electrical, abatement, general repairs and replacements to bring the units into alignment with standard construction, electrical and safety codes. The cost for renovating and abatement of asbestos and lead-based paint hazards prior to renovation from the four existing units would nearly equal the cost of reconstructing new units.

No Action Alternative:

Under the no action alternative, MAFB would not implement corrective actions and the units will continue to be outdated, inefficient and in disrepair. This results in increased operations costs, frequent maintenance and repair and inconvenience to the residents. Without the project, repair of the units will continue to be piecemeal and inefficient with numerous interruptions of the occupants for access to the interiors of the houses and no major improvement in living quality. The housing neighborhoods will continue to have a stark appearance, insufficient crosswalks, electrical safety issues and significant storm sewer deficiencies.

4.0 SUMMARY OF FINDINGS

This environmental assessment evaluated the impact of the proposed project to the environment. Issues eliminated from detailed study included air quality, airspace/airfield operations, floodplains and coastal estuaries, transportation and related noise, cultural resources, environmental justice, economic and social impact, and unavoidable adverse impacts. These issues were eliminated from the detailed study because preliminary analysis indicated that the proposed project would have no impact in these areas.

The EA performed for the proposed project evaluated the potential impacts to: (1) wastes, hazardous materials and stored fuels, (2) water resources, (3) biological resources, (4) environmental management, (5) socioeconomic, (6) land use, (7) safety and occupational health, (8) indirect and cumulative impacts, (9) irreversible and irretrievable commitment of resources, that may result from the Preferred Action, Renovation and No Action Alternatives. A summary of findings is presented below:

4.1 WASTE, HAZARDOUS MATERIALS AND STORED FUELS

Preferred Action:

Non-Hazardous Waste: If the preferred action were implemented, non-hazardous materials (construction and demolition debris) would be generated by the project. It is estimated that the

project would result in approximately 4,356 tons of non-hazardous waste resulting mostly from demolition debris. However, it is also assumed that the project contractor would be responsible for disposing of all non-hazardous waste that would be generated, if the preferred action were implemented. Consequently the tonnage of non-hazardous waste generated by the project would not be included in the annual amount of non-hazardous waste generated by MAFB.

Hazardous Waste: Implementation of the preferred action could result in a minor increase in the production of hazardous waste. Any short-term increase in waste would be temporary and MAFB's 90-day storage facility and disposal contractor would be able to easily accommodate the temporary increase in both types of waste. McConnell AFB's aggressive application of hazardous material reduction, reuse and recycling should result in no significant difficulties dealing with any additional hazardous waste that may be generated during demolition activities.

Hazardous Materials: Under the preferred action, no change in the amount of hazardous materials handled by MAFB is expected. However, if the proposed project were implemented, hazardous materials handled by the contractor would include diesel fuel, gasoline, lubricants, paints and adhesives. As part of the project, the contractor would be required to store and handle all hazardous materials in accordance with Kansas Department of Health and Environment (KDHE), United States Environmental Protection Agency (USEPA) and Air Force regulations.

Stored Fuels: Under the preferred action, there would be no increase in the number of MAFB fuel storage tanks; however, it is possible the contractor would require the use of mobile fuel storage tanks to fuel heavy equipment used during the project. The contractor would be required to comply with KDHE and USEPA environmental storage tank regulations and would be responsible for any releases of fuel to the environment resulting from use of the storage tanks.

Renovation Alternative:

Non-Hazardous Waste: If the renovation alternative were implemented, non-hazardous materials (construction and demolition debris) would be generated by the project. It is estimated that the project would result in approximately 115 tons of non-hazardous waste resulting mostly from demolition debris. However, it is also assumed that the project contractor would be responsible for disposing of all non-hazardous waste that would be generated, if the renovation alternative were implemented. Consequently, the tonnage of non-hazardous waste generated by the project would not be included in the annual amount of non-hazardous waste generated by MAFB.

Hazardous Waste: Implementation of the renovation alternative could result in a minor increase in the production of hazardous waste. Any short-term increase in waste would be temporary and MAFB's 90-day storage facility and disposal contractor would be able to easily accommodate the temporary increase in both types of waste. McConnell AFB's aggressive application of hazardous material reduction, reuse and recycling should result in no significant difficulties dealing with any additional hazardous waste that may be generated during demolition activities.

Hazardous Materials: Under the renovation alternative, no change in the amount of hazardous materials handled by MAFB is expected. However, if the proposed project were implemented, hazardous materials handled by the contractor would include diesel fuel, gasoline, lubricants,

paints and adhesives. As part of the project, the contractor would be required to store and handle all hazardous materials in accordance with KDHE, USEPA and Air Force regulations.

Stored Fuels: Under the renovation alternative, there would be no increase in the number of MAFB fuel storage tanks; however, it is possible the contract would require the use of mobile fuel storage tanks to fuel heavy equipment used during the project. The contractor would be required to comply with KDHE and USEPA environmental storage tank regulations and would be responsible for any release of fuel to the environment resulting from use of the storage tanks.

No Action Alternative:

No change in hazardous or solid waste, hazardous waste, hazardous materials generation or stored fuels would be realized from selection of this alternative.

4.2 WATER RESOURCES

Preferred Action:

Storm Water Runoff: If the preferred action alternative were implemented, the flooding analysis indicates surface water runoff into McConnell Creek could increase. Preventive measures would need to be initiated as part of the project. The proposed project would require a National Pollutant Discharge Elimination System (NPDES) permit that would require that best management practices (BMP) be implemented. BMP's would significantly reduce the amount of storm-water runoff into McConnell Creek that would result from site clearing and preparation. BMPs would be applied during the project to control surface water runoff to minimize the environmental impact to McConnell Creek. BMPs may include installation of a silt fence around the perimeter of the construction area, applying a layer of mulch to cover bare surface soils, reseeding with native grasses, covering equipment and hazardous materials and other site engineering practices.

Wetlands, Runoff and Groundwater: There are two north-south drainage ditches that convey storm water runoff from MAFB to McConnell Creek. The proposed project is expected to have minimal impact to the areas, storm water runoff and groundwater quality. The project will result in minimal damage to the identified drainage ditches.

Renovation Alternative:

Storm Water Runoff: If the renovation alternative were implemented, the flooding analysis indicates surface water runoff into McConnell Creek could increase. Preventive measures would need to be initiated as part of the project. The proposed project would require an NPDES permit that would require that BMPs be implemented. BMPs would significantly reduce the amount of storm water runoff into McConnell Creek that would result from site clearing and preparation. BMPs would be applied during the project to control surface water runoff to minimize the environmental impact to McConnell Creek. BMPs may include installation of a silt fence around the perimeter of the construction area, applying a layer of mulch to cover bare surface soils,

reseeding with native grasses, covering equipment and hazardous materials, and other site engineering practices.

Wetlands, Runoff and Groundwater: There are two north-south drainage ditches that convey storm water runoff from MAFB to McConnell Creek. To protect these wetlands from possible damage, no heavy equipment would be allowed to operate within identified wetland areas. Under these conditions, the proposed project is expected to have minimal impact on wetland areas, storm water runoff and groundwater quality. In addition, because the project will result in minimal damage to identified wetlands and no taking of wetlands, a wetlands permit from the USACE will not be required.

No Action Alternative:

There would be no impact on MAFB water resources.

4.3 FLOODPLAINS AND COASTAL ESTUARIES

Preferred Action:

There are no coastal estuaries located at MAFB and there are no floodplains located near the project area.

Renovation Alternative:

There are no coastal estuaries located at MAFB and there are no floodplains located near the project area.

No Action Alternative:

Under the No Action Alternative there would be no impact to floodplains or coastal estuaries.

4.4 BIOLOGICAL RESOURCES

Preferred Action:

Implementation of the preferred action alternative would have minimal impact on biological resources located within the construction area.

- Stormwater runoff could potentially impact biological resources (wetlands, fish, amphibians, birds, insects and small mammals) and two north-south drainage ditches are adjacent to the east and west of the site.
- The impacts to biological resources would be minimized by the following:
- Any ruts, holes and indentations in surface soils resulting from heavy equipment use would be filled and graded after operations were completed.
- The project area would be reseeded to reestablish native grasses or appropriate landscaping within the entire disturbed construction area.

- To minimize impact to biological resources, BMPs outlined in the project NPDES permit would be implemented to control soil erosion and storm water runoff.

Renovation Alternative:

Implementation of the renovation alternative would have minimal impact on biological resources located within the construction area.

- Stormwater runoff could potentially impact biological resources (wetlands, fish, amphibians, birds, insects and small mammals) and two north-south drainage ditches are adjacent to the east and west of the site.
- The impacts to biological resources would be minimized by the following:
- Any ruts, holes and indentations in surface soils resulting from heavy equipment use would be filled and graded after operations were completed.
- The project area would be reseeded to reestablish native grasses or appropriate landscaping within the entire disturbed construction area.
- To minimize impact to biological resources, BMPs outlined in the project NPDES permit would be implemented to control soil erosion and storm water runoff.

No Action Alternative:

There would be no impact on MAFB biological resources.

4.5 ENVIRONMENTAL MANGAGEMENT (Pollution Prevention, Geology and Soils)

Preferred Action:

The proposed project would impact surface soils. To minimize storm water runoff and soil erosion, engineering controls specified in the BMPs of the project NPDES permit would be implemented.

Renovation Alternative:

The proposed project would impact surface soils. To minimize storm water runoff and soil erosion, engineering controls specified in the BMPs of the project NPDES permit would be implemented.

No Action Alternative:

There would be no impact on MAFB surface soils.

4.6 SOCIOECONOMIC

Preferred Action:

Implementation of the preferred action would cost approximately $1.5 million to implement the first phase of the project. Sales of equipment, employment opportunity and secondary retail purchase on the local community will add to the annual $350 to $400 million contribution McConnell currently makes to Wichita and Derby economies. Therefore, implementation of the preferred action alternative would provide a short-term beneficial impact to local contractors and retailers.

The preferred action would have no long-term socioeconomic benefit.

Renovation Alternative:

Implementation of the renovation alternative would cost approximately $1.3 million to implement. Sales of equipment, employment opportunity and secondary retail purchase on the local community will add to the annual $350 to $400 million contribution McConnell currently makes to Wichita and Derby economies. Therefore, implementation of the Renovation Alternative would provide a short-term beneficial impact to local contractors and retailers.

No Action Alternative:

Under the no action alternative, there would be a negative socioeconomic impact. Units will continue to be outdated, inefficient and in disrepair resulting in increased operations costs, frequent maintenance and repair, and inconvenience to the residents. Without the project, repair of the units will continue to be piecemeal and inefficient with numerous interruptions of the occupants for access to the interiors of the houses and no major improvement in living quality. The housing neighborhoods will continue to have a stark appearance, insufficient crosswalks, electrical safety issues and significant storm sewer deficiencies.

4.7 LAND USE

Preferred Action:

The preferred action alternative would require clearing approximately 2-5 acres of pre-disturbed and housing occupied land.

Renovation Alternative:

The renovation alternative would require clearing approximately 2-5 acres of pre-disturbed and housing occupied land.

No Action Alternative:

Under the no action alternative, no impacts to land use will be realized.

4.8 SAFETY AND OCCUPATIONAL HEALTH

Preferred Action:

The six new housing units would meet current life safety codes and provide a comfortable and appealing living environment comparable to housing in the off-base civilian community.

Renovation Alternative:

The four housing units would be renovated to meet current life safety codes.

No Action Alternative:

Under the no action alternative there would be short-term and long-term impacts to safety and occupational health.

4.9 INDIRECT AND CUMULATIVE IMPACTS

Preferred Action:

There would be minor indirect and cumulative impacts associated with the preferred action alternative that would be confined to MAFB property. Negative impacts are expected to be minor air and noise involved with general construction projects and would be more than offset by short-term and long-term positive impacts.

Renovation Alternative:

There would be minor indirect and cumulative impacts associated with the preferred action alternative that would be confined to MAFB property. Negative impacts are expected to be minor and would be more than offset by short-term and long-term positive impacts.

No Action Alternative:

Under the no action alternative, there would be both short-term and long-term negative impacts on "indirect and cumulative impacts."

4.10 RELATIONSHIP BETWEEN-TERM USES AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Preferred Action:

Implementation of the preferred action alternative would have a positive effect on long-term facility sustainability by bringing MAFB into compliance with the requirements Part II of Military Handbook 1190, "Facilities Planning and Design Guide" and all life safety and construction codes.

Renovation Alternative:

Implementation of the renovation alternative would repair the safety deficiencies.

No Action Alternative:

Under the no action alternative there would be short-term and long-term impacts to safety and occupational health. With the aging housing unit's continual required repairs, more and more hazardous construction materials would be encountered and disturbed placing occupants and maintenance workers at risk.

4.11 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Preferred Action:

Implementation of the preferred action alternative would result in the loss of man-hours and materials.

Renovation Alternative:

Implementation of the preferred action alternative would result in the loss of man-hours and materials.

No Action Alternative:

Under the no action alternative there would be no irreversible and irretrievable commitment of resources.

FINDING OF NO SIGNIFICANT IMPACT: Based on the environmental assessment conducted in accordance with the requirements of NEPA, CEQ regulations and AFI 32-7061, I conclude the preferred alternative, "Replacement of Senior Officers Quarters" at McConnell AFB, will have no significant individual or cumulative impact upon the environment. An environmental impact statement is not warranted and one will not be prepared. The Wichita Eagle published a notice of availability on 26 June 2006. The public comment period ended on 25 July 2006. The signing of this Finding of No Significant Impact (FONSI) completes the environmental impact analysis under Air Force regulations.

APPROVED:

DONALD J. HALPIN, Colonel, USAF
Commander, 22d Air Refueling Wing (AMC)

8 Aug 2006
DATE

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ACCRONYMS, ABBREVIATIONS, AND TERMS

ACM	Asbestos Containing Materials
AEF	Aerospace Expeditionary Force
AF	Air Force
AFB	Air Force Base
AFI	Air Force Instruction
AFM	Air Force Manual
AFRC	Air Force Reserve Command
AICUZ	Air Installation Compatible Use Zone
AMC	Air Mobility Command
AQCR	Air Quality Control Region
ARG	Air Refueling Group
ARS	Air Refueling Squadron
ARW	Air Refueling Wing
BASH	Bird Aircraft Strike Hazard
BCE	Base Civil Engineer
BMP's	Best Management Practices
CE	Civil Engineering
CEQ	Council on Environmental Quality
CES	Civil Engineer Squadron
CDC	Child Development Center
DAT	Damage Assessment Team
DCE	Dichloroethylene
DNL	Day/Night Average-Weighted Sound Level
DOD	Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FONSI	Finding Of No Significant Impact

FTAC	First Term Airmen's Center
HAP	Hazardous Air Pollutant
HQ	Headquarters
HVAC	Heating, Ventilation, and Air Conditioning
KDHE	Kansas Department of Health & Environment
Kg	Kilogram
LAN	Local Area Network
LFM	Linear Feet per Minute
MAFB	McConnell Air Force Base
MFH	Military Family Housing
MSF	Mission Support Flight
MW	Monitoring Well
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NPV	Net Present Value
NOV	Notice of Violation
OSHA	Occupational Safety and Health Act
PGL	Program Guidance Letter
PM	Particulate Matter
PPE	Personal Protection Equipment
POTW	Publicly Owned Treatment Works
EQD	Explosive Quantity Distance Siting and Safety Clearance Criteria
RCRA	Resource Conservation and Recovery Act
SAF/MIQ	Deputy Assistant Secretary of the Air Force
SCZ	South Clear Zone
TSCA	Toxic Substance Control Act
TSI	Thermal System Insulation
SAP	Satellite Accumulation Point
sf	Square Feet
SF	Security Force
SFS	Security Forces Squadron

SHPO	State Historic Preservation Office
SOQ	Senior Officers Quarters
TCE	Trichloroethylene
ug/l	Micrograms Per Liter
USDA	United States Department of Agriculture
UTC	Unit Type Code
VOC	Volatile Organic Compound
WSA	Weapons Storage Area

EXECUTIVE SUMMARY

Pursuant to the National Environmental Policy Act (NEPA) of 1969, 42 U.S.C. 4321, et seq., the President's Council on Environmental Quality (CEQ) regulations, 40 CFR 1500-1508, and Air Force Instruction (AFI) 32-7061, *The Environmental Impact Analysis Process*, as promulgated as 32 CFR Part 989, the U.S. Air Force performed an assessment of the potential environmental consequences from the proposed demolition of three and reconstruction of six senior military officers family housing units located at McConnell AFB (MAFB), Kansas.

The location of the proposed project (Preferred Alternative) would be at McConnell AFB (MAFB), in the preexisting location of four military family housing units (see Figure 1, Appendix A). Currently MAFB utilizes four housing units for senior officers quarters constructed in 1956. The units have significant structural problems with their basement walls which require extensive repair. The existing electrical system is unsafe and consists of inadequate electrical panels and wiring that do not meet modern grounding standards. Asbestos and lead-based paint materials are also generally associated with buildings constructed in this timeframe.

The proposed construction is in partially developed property that encompasses approximately 5 acres in size located towards the north-east corner of the base just east of Rock Road (see Figure 1, Appendix A).

The environmental assessment (EA) considers all potential impacts of the Preferred Action and the alternatives, both as solitary actions and in conjunction with other activities. This EA considered three alternatives: 1) Preferred Action: "Replace Family Housing Units", 2) "Renovate Family Housing Units", and 3) "No Action".

Preferred Action Alternative: The Preferred Action Alternative would be the removal of the four existing housing units and construction of six new units meeting all modern building codes. The project would be accomplished by initially demolishing the units

and existing paved areas as well as grading the new location of the units and access pavements (approximately 5 acres in size). The contractor would be required to submit for government review and approval an erosion control plan, processing plan, and phasing plan. The advantage of the Preferred Alternative includes the removal of outdated high maintenance facilities, reducing future extensive maintenance costs, adding much needed housing space in a more cost effective manner than revitalization of existing facilities.

Alternative 1: Under the Renovation Alternative, MAFB would renovate the existing housing units to include major structural, electrical, and general repairs and replacements to bring the units into alignment with standard construction and electrical safety codes. The cost for renovating and abatement of asbestos and lead based paint hazards prior to renovation from the four existing units would nearly equal that of reconstructing six new units.

Alternative 2: Under the No Action Alternative, MAFB would not implement corrective actions and the units will continue to be outdated, inefficient and in disrepair resulting in increased operations costs, frequent maintenance and repair, and inconvenience to the residents. Without the project, repair of the units will continue to be piecemeal and inefficient with numerous interruptions of the occupants for access to the interiors of the houses and no major improvement in living quality. The housing neighborhoods will continue to have a stark appearance, insufficient crosswalks, electrical safety issues and significant storm sewer deficiencies.

Results of the EA analysis indicate that implementation of the Preferred Action Alternative would have minimal impact on the environment.

SECTION 1.0: PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 Introduction

This Environmental Assessment (EA) examines the potential for impacts to the environment that would result from the proposed action and alternatives at McConnell Air Force Base (MAFB), Kansas.

McConnell AFB (MAFB) is home to the 22^{d} Air Refueling Wing (ARW), with 39 KC-135R aircraft stationed at the base. Co-located with the 22^{d} ARW is the 931st Air Reserve Group, which also flies KC-135R aircraft. The Kansas Air National Guard (KANG) is a tenant at MAFB and operates 10 KC-135 R aircraft (see Maps 1 and 2, Appendix A).

The KC-135R is a wide-bodied plane specially designed to carry and dispense jet fuel for airborne fueling operations. The 22^{d} ARW serves as one of the "core tanker wings" assigned under Air Mobility Command (AMC) within the United States. The mission of the base is to support Air Force operations anytime and anywhere in the world.

1.2 Objectives for the Proposed Action

The objective of the proposed action is to provide modern and efficient housing for senior officers and their dependents at McConnell Air Force Base. The current Senior Officers Housing quarters (SOQ) were constructed in 1956. The houses have significant structural problems with their basement walls that require extensive repair. Existing air conditioning and heating systems are not energy efficient and do not adequately heat and cool some living areas within the houses. The existing electrical system is unsafe and consists of inadequate electrical panels and wiring that does not meet modern grounding standards. The bathrooms, kitchens and living areas contain fixtures, door trim, and other accouterments that are mismatched or out of date. Carports are currently available to the residents in lieu of modern two vehicle garages, which is the minimum standard for all new housing construction in the local off-base area. There are no areas for off-street

visitor parking in the SOQ area. The neighborhood area is stark and dreary because it is not appropriately landscaped. There is no aesthetic screening of transformers, tree lined streets or safe cross walks.

1.3 Scope of the EA

This EA identifies, describes, and evaluates the potential environmental impacts associated with the proposed project. The EA evaluates the impact of the project on air quality, noise, cultural resources, hazardous materials, solid waste, water resources, biological resources, land use, socioeconomic, safety and occupational health, and geological resources.

1.3.1 Issues Eliminated from Detailed Study

The following issues were considered as required by NEPA. However, based on analyses of the preferred action or the alternative actions, impacts are not anticipated. Therefore, the following issues were eliminated from further consideration.

1.3.1.1 Air Quality

The Proposed Action (Preferred Alternative) and alternatives would occur in Air Quality Control Region (AQCR) #99, which has been designated as in attainment for all criteria pollutants. Due to the fact that AQCR #99 is in attainment, a conformity determination is not required in this case. Construction equipment air and dust emissions calculations were performed to determine if the proposed project would have a significant impact on MAFB air quality (see Appendix F). Results of the air emission calculations indicated that the proposed project would have a minor short termed impact (construction equipment emissions) and no long termed impact on MAFB air emissions.

1.3.1.2 Airspace/Airfield Operations

Both the construction and demolition site would be located approximately one half mile from the airfield. Review of the proposed project indicated that if the new buildings were constructed, the height of the buildings would not exceed the height of the existing facility. Taking into account the height of the proposed addition and its distance from the airfield, the new addition would not intrude into MAFB airspace or impede airfield operations.

1.3.1.3 Floodplains and Coastal Estuaries

Review of the United Stated Department of Agriculture (USDA) Soil Conservation Service Soil Survey Map for Sedgwick County, Kansas, indicates a narrow flood plain adjacent to McConnell Creek. This floodplain is located at the far south end of the base approximately 4 miles from the construction site. No expected environmental impact to the floodplain is anticipated.

1.3.1.4 Transportation and Related Noise

1.3.1.4.1 Transportation

If the Preferred Action were selected, surface (ground) transportation through the base is not expected to increase; however, construction equipment would be located in the existing SOQ's. The location of this equipment is not expected to impact the flow of traffic (an estimated 13,000 vehicles per day) onto and off MAFB property.

1.3.1.4.2 Noise

For purposes of this analysis, noise is defined as undesirable sound, which interferes with speech, communication, and hearing, or is otherwise annoying (unwanted sound). Under certain conditions, noise may cause hearing loss, interference with human activities at home and work, and may affect people's health and well being in various ways. Community noise levels usually change continuously during daily, weekly, and yearly patterns. The day-night average sound level (DNL) developed to evaluate the total daily community noise environment applies here. In June 1980, the Federal Interagency Committee on Urban Noise published guidelines relating DNL values to compatible land uses. This committee was composed of representatives from the U.S. Departments of Defense, Transportation, and Housing and Urban Development along with the EPA and the Veterans Administration. Since their issuance, Federal agencies have generally adopted these guidelines for noise analysis. They have identified 65 DNL as a criterion that protects those receptors most affected by noise, and because it may be achieved on a practical basis. Air Force activities, which have the highest potential source of noise impacts, are the airfield operations.

Heavy equipment (graders, pay loaders, backhoes, trucks, etc.) may temporarily increase noise levels to 80 DNL during peak construction activities. The nearest residential housing is located approximately 0.25 miles east of the SOQ and the nearest office buildings are located approximately 0.25 miles south east of the SOQ.

1.3.1.5 Cultural Resources

According to a Cultural Resource Reconnaissance Survey conducted by the U.S. Department of the Interior, National Park Service in 1995, McConnell AFB and the surrounding area of Sedgwick County does not contain potentially significant archaeological remains and the site building is not of historical significance (Appendix C). However, if subsurface features are uncovered during the project, the Base Historic Preservation Officer, the State Historic Preservation Office, and other appropriate authorities would be notified immediately and action would be taken in accordance with procedures of the Advisory Council on Historic Preservation. A copy of the complete Cultural Resources Reconnaissance Survey is available at the Environmental Flight for review upon request.

1.3.1.6 Environmental Justice, Economic, and Social Impact

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,* encourages federal facilities to achieve "environmental justice" by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.

Stephen Banks of the Metropolitan Area Planning Department (Banks, 2000) has provided U.S. Census Bureau population estimates. The Sedgwick County population in 1990 was 403,662, and in January 2000 it was 458,216. The projected population for 2010 is 500,900. The racial percentage, calculated by Wichita State University, is 79% white, 12% black, 3% Asian, and 5% other.

There are no low income or minority communities located adjacent to the SOQ. Base housing, located approximately 0.25 miles east of the SOQ, is the nearest community. Properties located directly adjacent to the north, south, and east of MAFB boundaries are

undeveloped, and properties located adjacent to McConnell's west side are occupied by industrial businesses. Based on this information, MAFB concludes that the proposed project would not disproportionately affect minority or low-income populations. No environmental justice issues, adverse economic or social impacts are expected (see Map 4, Appendix A).

1.3.1.7 Unavoidable Adverse Impacts

If the proposed project is implemented, there will be minimal short-term unavoidable adverse impacts such as increased air and dust emissions and waste resulting from demolition and construction activities. However, no long term unavoidable adverse impacts are expected from implementation of the proposed project.

1.3.2 Issues Studied in Detail

Environmental issues considered relevant to this environmental assessment include the following:

- Waste and Hazardous Materials
- Water Resources
- Biological Resources
- Environmental Management (Pollution Prevention, Geology, and Soils)
- Socioeconomic
- Land Use
- Safety and Occupational Health
- Indirect and Cumulative Impacts
- Irreversible and Irretrievable Commitment of Resources

1.4 Decision(s) that must be made

The decision that must be made is whether or not to implement the Preferred Action Alternative and demolish four existing senior officer housing units and construct six new housing units.

1.5 Applicable Regulatory Requirements and Required Coordination

This EA has been conducted in accordance with the President's Council on Environmental Quality (CEQ) regulations, Title 40 of the Code of Federal Regulations, as they implement the requirements of the National Environmental Policy Act (NEPA) of 1969, and Air Force Instruction (AFI) 32-7061 Environmental Impact Analysis Process as promulgated in 32 CFR Part 989. These regulations require federal agencies to analyze potential environmental impacts of proposed actions and alternatives and to use these analyses in making decisions on a proposed action. All cumulative effects and irretrievable commitment of resources must also be assessed during this process. The CEQ regulations declare that an EA is required to accomplish the following objectives:

- Briefly provide sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).
- Aid in an agency's compliance with NEPA when an EIS is not necessary, and facilitate preparation of an EIS when necessary.

AFI 32-7061 as promulgated in 32 CFR 989, specifies the procedural requirements for the implementation of NEPA and the preparation of an EA. Other environmental regulatory requirements relevant to the Preferred Action and alternatives are also in this EA. Regulatory requirements including, but not restricted to the following programs will be assessed:

- Noise Control Act of 1972
- Clean Air Act
- Clean Water Act
- National Historic Preservation Act
- Endangered Species Act
- Resource Conservation and Recovery Act (RCRA)
- Toxic Substance Control Act (TSCA) of 1970
- Occupational Safety and Health Act (OSHA)

Requirements also include compliance with Executive Order (EO) 11988, Floodplain Management; EO 11990, Protection of Wetlands; and EO 12898, Environmental Justice.

SECTION 2.0: DESCRIPTION OF ALTERNATIVES

2.1 Introduction

This section provides a description of the Preferred Action, alternatives to the Preferred Action, alternatives considered but eliminated from detailed study, and criteria used to evaluate the different alternatives.

2.2 Selection Criteria for Alternatives

The following criteria are the selection criteria for the Preferred Action and Alternatives.

- Ability of MAFB to perform its mission.
- Compliance with State, Federal, and Air Force regulations.
- Health and safety of MAFB personnel.
- Expected impacts on adjacent properties.
- Cumulative environmental impacts.
- Cost Benefit Analysis

2.3 Description of Proposed Alternatives

2.3.1 Preferred Action Alternative

The Preferred Action Alternative would be the removal of the four existing senior officer housing units and constructing six new units meeting all modern building codes. The project would be accomplished by initially demolishing the units, existing paved areas as well as grading the new location of the units (approximately 5 acres in size).

The advantage of the Preferred Alternative includes the removal of outdated, high maintenance facilities, adding additional, safer, and more cost effective maintenance and operationally designed quarters.

Disadvantages to the preferred alternative are temporary displacement of existing occupants.

2.3.2 Alternative 1, Renovation Alternative

Under the renovation alternative the four housing units would be mitigated of hazardous building materials, brought back in to code structurally and electrically, have all interior surfacing replaced to include cabinetry and updated appliances.

The advantage of the renovation alternative would be to use the existing structures minimizing excavation impact.

The disadvantages of the renovation alternative would be in the cost analysis of reconstruction versus renovation to include the loss of two additional much needed housing units.

2.3.3 Alternative 2, No Action Alternative

Under the No Action Alternative MAFB would not implement corrective actions to bring the SOQ housing units back into compliance with Part II of Military Handbook 1190, "Facilities Planning and Design Guide" as well as local, state, and federal electrical, construction, and safety codes.

2.4 Description of Past and Reasonably Foreseeable Future Actions Relevant to Cumulative Impacts

No past or reasonably foreseeable future actions relevant to the cumulative impacts of the proposed project are anticipated.

2.5 Identification of Preferred Action Alternative

The Preferred Action Alternative would be to demolish the four existing SOQ family housing units and reconstruct six new housing units.

SECTION 3.0: AFFECTED ENVIRONMENT

3.1 Introduction

This section describes the characteristics of the existing natural and man-made environment that could be affected by Alternative 1) the Preferred Action, Alternative 2) Renovation and Alternative 3) the No Action Alternative. This establishes the basis for assessing the different impacts of the three alternatives. The respective impacts of the alternatives are more fully discussed in Section 4.0.

3.2 Wastes, Hazardous Materials, and Stored Fuels

3.2.1 Wastes

McConnell AFB annually generates approximately 2,786 tons of non-hazardous waste from industrial and administrative activities. Of this amount, approximately 35 to 40 percent of the non-hazardous waste is recycled annually. Consequently, the proposed project would not be expected to significantly increase the amount of non-hazardous waste generated by MAFB.

Hazardous waste generation at MAFB is about 30 tons annually, mainly from aircraft maintenance and fueling operations. MAFB has already met the Air Force goal of 50 percent hazardous waste reduction from the baseline measurement. It is possible that a small amount of hazardous waste may be generated by the contractor from heavy equipment operations (filters, used oils and lubricants, etc.) and that a temporary satellite accumulation point (SAP) may have to be placed within the project area. However, the aggressive application of hazardous material reduction, reuse, and recycling at MAFB should result in no significant difficulties dealing with any additional hazardous waste that may be generated during the proposed project.

3.2.2 Hazardous Materials

If the proposed project were implemented, hazardous materials handled by the contractor would include diesel fuel, gasoline, lubricants, paints, and adhesives. As part of the project, the contractor would be required to store and handle all hazardous materials in accordance with KDHE, EPA, and Air Force regulations.

3.2.3 Stored Fuels

Review of MAFB storage tank records indicate there are no aboveground or underground storage tanks located within the proposed project area. Review of storage tank records maintained by the MAFB Environmental Flight (22 CES/CEV) indicate there are no known problems associated with any of the existing tanks.

If the proposed project were implemented, it is possible the contractor would use a trailer-mounted fuel tank to fuel heavy equipment used during the project. As part of the project, the contractor would be expected to comply with KDHE, EPA, and Air Force storage tank regulations and would be liable for the cleanup of any releases of fuel to the environment from contractor operated fuel storage tanks and equipment.

3.3 Water Resources

3.3.1 Groundwater

Groundwater at McConnell is not used as a potable source, due to its limited availability in shallow unconfined zones, and again in the deeper Wellington shale. Groundwater occurs in two water-bearing units at McConnell AFB. The shallow unconfined water-bearing unit produces water from unconsolidated Pleistocene deposits and weathered Wellington Formation bedrock. Unconsolidated Pleistocene deposits and weathered bedrock, such as those present at McConnell AFB, are generally fine-grained with low permeability. These deposits yield small quantities (generally less than 2 gallons per minute) of hard, mineralized water to base monitoring wells. Water level data indicates that depth to groundwater in the shallow unit ranges up to 16 feet below land surface (BLS). The direction of groundwater flow in this unit is generally toward local surface water drainage features such as McConnell Creek, which flows south-southwest and eventually drains into the Arkansas River.

3.3.2 Surface Water

Surface water generally runs to the south in ephemeral streams, which dry up during dry periods. Most surface water traveling through the base collects into an unnamed tributary of the Arkansas River (commonly referred to as McConnell Creek), which exits the south end of McConnell over an outfall weir. McConnell has received water rights through the U.S. Department of Agriculture for the purpose of utilizing surface water runoff to supplement irrigation of the golf course.

Because of the size of the project area, a National Pollution Discharge Elimination System (NPDES) permit would be required for the project. In order to minimize the expected environmental impact within the project area, Best Management Practices (BMP's) would be applied during the project to control surface water runoff. BMP's could include installation of a silt fence around the perimeter of the site, hay bales to control surface water flow around culverts and into McConnell Creek, covering equipment and materials, reseeding after site activities are complete, applying mulch to disturbed areas to stabilize surface soils to minimize wind and water erosion, and other site engineering practices.

3.3.3 Wetlands

The Department of Defense Instruction Number 4715.3, paragraph 4.2.10 states, "DOD operations would be managed for the goal of no net loss of wetlands." This position is restated in AFI 32-7064, paragraph 3.1. McConnell has a limited number of wetland areas, consisting mostly of man-made ponds located on the golf course. A small area of riparian habitat also exists around McConnell Creek.

Review of the McConnell wetlands map indicated that there are potential wetlands along two north-south drainage ditches that convey storm water runoff to McConnell Creek and along the banks of McConnell Creek. To minimize potential environmental impact to identified wetlands, no heavy equipment will be used within 10 feet of identified wetlands and BMP's would be implemented as part of the NPDES permit for the project. Since the project will result in no loss of wetlands, no determination or wetlands permit is required from the United States Army Corps of Engineers (USACE).

3.4 Biological Resources

Federal-listed Threatened or Endangered Species and State-Listed Threatened or Endangered Species

The 1999 Kansas Biological Survey completed a survey for protected and rare species and exemplary natural areas at McConnell. The final report concluded that no federally listed threatened or endangered species or species habitat are located on McConnell Air Force Base. During the course of this environmental analysis, McConnell contacted the U.S. Fish and Wildlife Service to verify the absence of threatened or endangered species or species habitat at the proposed project location. The U.S. Fish and Wildlife Service verified that there are no federally listed threatened or endangered species or species habitat located at the proposed action site (see Appendix D). A copy of the Kansas Biological Survey report is maintained by the Environmental Flight and is available for review upon request.

Although the loggerhead shrike is not a listed species, the survey recommended that there be no loss of habitat. If the "Preferred Action Alternative" were implemented, BMP's specified in the project NPDES permit and project specifications would be implemented so that the loggerhead shrike would not experience any loss of habitat.

3.5 Environmental Management (Pollution Prevention, Geology, and Soils)

Two geological units are present at McConnell AFB, the Wellington formation and young unconsolidated sediments. On the east side of the base, the Wellington formation, Permian, silty shale, is highly weathered at the surface to a depth of about 40 feet. The Wellington Formation reaches a maximum thickness of 550 feet in Sedgwick County and dips gently (approximately 10 feet per mile) to the west and southwest. Brown, yellow, and maroon clays characterize this material. On the west side of the base, younger unconsolidated sediments of the Pleistocene Series overlie the Wellington shale. These sediments comprise a maximum thickness of 25 feet of reddish-brown silty clay with calcareous lenses. Soils derived from these two units at MAFB are moderately plastic and exhibit low permeability (see Maps 7 and 8, Appendix A).

If the proposed project were implemented, surface soils within the project area would be disturbed and significant erosion of surface soils could result. In order to minimize surface soil erosion within the project area, BMP's outlined in the project NPDES permit and project specifications would be implemented by the contractor.

3.6 Socioeconomic

US Census Bureau statistics for the year 2000 for Sedgwick County show total population estimates are at 458,216 people. The racial percentage, calculated by Wichita State University, is 79 percent white, 12 percent black, 3 percent Asian, and 5 percent other.

Implementation of the "Preferred Action Alternative" would cost approximately $1.5 million to implement. Sales of equipment, employment opportunity, and secondary retail purchases on the local community will add to the annual $350 to $400 million contribution McConnell currently makes to Wichita and Derby.

3.7 Land Use

McConnell AFB is an industrial facility, with a Standard Industrial Classification (SIC) code of 9711. All facilities at McConnell directly or indirectly support airfield activities. Land uses at McConnell AFB are divided into nine functional classes, of which airfield land use accounts for 41 percent of total land area (1,043 acres) and open space accounts for 30 percent of total land area (752 acres). The other seven categories include housing, outdoor recreation, industrial, aircraft maintenance, community, administrative, and medical. Construction of the preferred alternative would convert approximately 3 to 5 acres of present residential housing and landscaped grass into residential housing.

3.8 Safety and Occupational Health

The Preferred Action Alternative would have a positive impact on safety and occupational health of base personnel as well as bring the SOQ housing units back into compliance with Part II of Military Handbook 1190, "Facilities Planning and Design Guide" and any local, state, and federal electrical, construction, and safety codes.

3.9 Indirect and Cumulative Impacts

"Indirect and Cumulative Impacts" is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Cumulative impact analysis requires an analysis of the geographical area of the potential impacts and what actions in the past, present, and future are relevant to an analysis of cumulative impacts.

Review of Alternative 1) the Preferred Action Alternative, Alternative 2) the Renovation Alternative and Alternative 3) the No Action Alternative, indicates that the geographical area of the potential impacts and past, present, and future cumulative impacts are expected to be limited to MAFB property. Table 3.8.1 summarizes the expected short-term and long-term environmental impacts for each of the evaluation criteria for each of the alternative actions considered.

Table 3.8-1: Comparison of Environmental Effects of the Preferred Action and Alternatives

Evaluation Criteria	**Preferred Action**	**Alternative 1: Renovation**	**Alternative 2: No Action**
Air Quality	Short-Term: Minimal Long-Term: No Impact	Short-Term: Minimal Long-Term: No Impact	Short-Term: No Impact Long-Term: No Impact
Noise	Short –Term: Minimal Long –Term: No Impact	Short –Term: Minimal Long –Term: No Impact	Short-Term: No Impact Long-Term: No Impact
Waste, Hazardous Materials, and Stored Fuels	Short–Term: Minimal Long–Term: Positive Impact	Short–Term: Minimal Long–Term: Positive Impact	Short-Term: No Impact Long-Term: No Impact
Water Resources	Short–Term: No Impact Long–Term: No Impact	Short–Term: No Impact Long–Term: No Impact	Short-Term: No Impact Long-Term: No Impact
Floodplains and Coastal Estuaries	Short-Term: No Impact Long-Term: No Impact	Short-Term: No Impact Long–Term: No Impact	Short–Term: No Impact Long–Term: No Impact
Land Use	Short–Term: Minimal Long–Term: No Impact	Short–Term: Minimal Long–Term: No Impact	Short-Term: No Impact Long-Term: No Impact
Biological Resources	Short–Term: Minimal	Short–Term: Minimal	Short-Term: No Impact

Evaluation Criteria	**Preferred Action**	**Alternative 1: Renovation**	**Alternative 2: No Action**
	Long–Term: No Impact	Long–Term: No Impact	Long-Term: No Impact
Environmental Management	Short-Term: Minimal Long-Term: No Impact	Short-Term: Minimal Long-Term: No Impact	Short-Term: No Impact Long-Term: No Impact
Socioeconomic	Short –Term: Positive Long –Term: Positive	Short –Term: Positive Long –Term: Positive	Short-Term: No Impact Long-Term: Negative
Cultural Impact	Short–Term: No Impact Long–Term: No Impact	Short–Term: No Impact Long–Term: No Impact	Short-Term: No Impact Long-Term: No Impact
Transportation	Short–Term: Minimal Long–Term: No Impact	Short–Term: Minimal Long–Term: No Impact	Short-Term: No Impact Long-Term: No Impact
Safety and Occupational Health	Short–Term: Positive Long–Term: Positive	Short–Term: Positive Long–Term: Positive	Short-Term: Negative Long-Term: Negative
Environmental Management	Short–Term: Minimal Long–Term: No Impact	Short–Term: Minimal Long–Term: No Impact	Short-Term: No Impact Long-Term: No Impact
Environmental Justice	Short –Term: No Impact Long –Term: No Impact	Short –Term: No Impact Long –Term: No Impact	Short-Term: No Impact Long-Term: No Impact
Indirect and Cumulative Impacts	Short –Term: Minimal Long –Term: Positive	Short –Term: Minimal Long –Term: Positive	Short-Term: No Impact Long-Term: No Impact
Unavoidable Adverse Impacts	Short –Term: Minimal Long –Term: No Impact	Short –Term: Minimal Long –Term: No Impact	Short-Term: No Impact Long-Term: No Impact
Relationship Between Short-Term Uses and Enhancement of Long-Term Productivity	Short –Term: Positive Long –Term: Positive	Short –Term: Positive Long –Term: Positive	Short-Term: Negative Long-Term: Negative
Irreversible And Irretrievable Commitment Of Resources	Short –Term: Minimal Long –Term: Minimal	Short –Term: Minimal Long –Term: Minimal	Short-Term: No Impact Long-Term: No Impact

3.10 Relationship between Short-Term Uses and Enhancement of Long-Term Productivity

In the short-term the Preferred Action Alternative would better enable MAFB to meet its mission requirements by bringing the base into compliance with life safety, construction and electrical codes and regulations. Long-term the newer facilities will reduce the maintenance and operation costs associated with older structures as well as enhance the quality of life for military personnel and their dependents.

3.11 Irreversible and Irretrievable Commitment of Resources

If the Preferred Action Alternative were implemented, there would be an irreversible and irretrievable commitment of money, man-hours, and equipment and materials to the project.

SECTION 4.0: ENVIRONMENTAL CONSEQUENCES

4.1 Introduction

The effects of the preferred action and alternatives on the affected environment are discussed in this section.

4.2 Wastes, Hazardous Materials and Special Waste, and Stored Fuels

4.2.1 Wastes

4.2.1.1 Preferred Action Alternative

Non-Hazardous Waste: If the Preferred Action Alternative were implemented, non-hazardous materials (construction and demolition debris) would be generated by the project. It is estimated that the project would result in approximately 4,356 tons of non-hazardous waste resulting mostly from demolition debris. However, it is also assumed that the project contractor would be responsible for disposing of all non-hazardous waste that would be generated if the Preferred Action Alternative were implemented. Consequently the tonnage of non-hazardous waste generated by the project would not be included in the annual amount of non-hazardous waste generated by MAFB.

Hazardous Waste: Implementation of the Preferred Action Alternative could result in a minor increase in the production of hazardous waste. Any short-term increase in waste would be temporary, and McConnell's 90-day storage facility and disposal contractor would be able to easily accommodate the temporary increase in both types of waste. McConnell AFB's aggressive application of hazardous material reduction, reuse, and recycling should result in no significant difficulties dealing with any additional hazardous waste that may be generated during demolition activities.

4.2.1.2 Alternative 1), Renovation Alternative

Non-Hazardous Waste: If the Renovation Alternative were implemented, non-hazardous materials (construction and demolition debris) would be generated by the project. It is estimated that the project would result in approximately 4,356 tons of non-hazardous waste resulting mostly from demolition debris. However, it is also assumed that the

project contractor would be responsible for disposing of all non-hazardous waste that would be generated if the Preferred Action Alternative were implemented. Consequently the tonnage of non-hazardous waste generated by the project would not be included in the annual amount of non-hazardous waste generated by MAFB.

Hazardous Waste: Implementation of the Renovation Alternative could result in a minor increase in the production of hazardous waste. Any short-term increase in waste would be temporary, and McConnell's 90-day storage facility and disposal contractor would be able to easily accommodate the temporary increase in both types of waste. McConnell AFB's aggressive application of hazardous material reduction, reuse, and recycling should result in no significant difficulties dealing with any additional hazardous waste that may be generated during demolition activities.

4.2.1.3 Alternative 2), No Action Alternative

Under the No Action Alternative, there would be no impact on the amount of waste generated at MAFB.

4.2.2 Hazardous Materials

4.2.2.1 Preferred Action Alternative

Under the Preferred Action Alternative, a minimal change in the amount of hazardous materials handled by MAFB is expected.

4.2.2.2 Alternative 1), Renovation Alternative

Under the Renovation Alternative, a minimal change in the amount of hazardous materials handled by MAFB is expected.

4.2.2.3 Alternative 2), No Action Alternative

Under the No Action Alternative, there would be no impact on hazardous materials used at MAFB.

4.2.3 Stored Fuels

4.2.3.1 Preferred Action Alternative

Under the Preferred Action Alternative there would be no increase in the number of MAFB fuel storage tanks; however, it is possible the contract would require the use of

mobile fuel storage tanks to fuel heavy equipment used during the project. The contractor would be required to comply with KDHE and EPA environmental storage tank regulations and would be responsible for any releases of fuel to the environment resulting from use of the storage tanks.

4.2.3.2 Alternative 1), Renovation Alternative

Under the Preferred Action Alternative there would be no increase in the number of MAFB fuel storage tanks; however, it is possible the contract would require the use of mobile fuel storage tanks to fuel heavy equipment used during the project. The contractor would be required to comply with KDHE and EPA environmental storage tank regulations and would be responsible for any releases of fuel to the environment resulting from use of the storage tanks.

4.2.3.3 Alternative 2), No Action Alternative

Under the No Action Alternative, there would be no impact on MAFB storage tanks.

4.3 Water Resources

4.3.1 Preferred Action Alternative

4.3.1.1 Stormwater Runoff

The Preferred Action Alternative Flooding analysis indicates that the Preferred Action Alternative could increase surface water runoff into McConnell Creek if preventive measures were not initiated as part of the project. The proposed project would require an NPDES permit that would require that BMP's be implemented. BMP's would significantly reduce the amount of storm water runoff into McConnell Creek that would result from site clearing and preparation. Best Management Practices (BMP's) would be applied during the project to control surface water runoff to minimize the environmental impact to McConnell Creek. BMP's may include installation of a silt fence around the perimeter of the construction area, applying a layer of mulch to cover bare surface soils, reseeding with native grasses, covering equipment and hazardous materials, and other site engineering practices.

4.3.1.2 Wetlands, Stormwater Runoff and Groundwater Quality

There are identified north-south drainage ditches adjacent to the east and to the west of the proposed site (see Map 6, Appendix A). Under these conditions the proposed project is expected to have minimal impact on storm water runoff, and groundwater quality with no impact to wetlands.

4.3.2 Alternative 1), Renovation Alternative

4.3.2.1 Stormwater Runoff

The Renovation Alternative Flooding analysis indicates that the Renovation Alternative could increase surface water runoff if preventive measures were not initiated as part of the project. The proposed project would require an NPDES permit that would require that BMP's be implemented. BMP's would significantly reduce the amount of storm water runoff that would result from site clearing and preparation. Best Management Practices (BMP's) would be applied during the project to control surface water runoff to minimize the environmental impact. BMP's may include installation of a silt fence around the perimeter of the construction area, applying a layer of mulch to cover bare surface soils, reseeding with native grasses, covering equipment and hazardous materials, and other site engineering practices.

4.3.2.2 Wetlands, Stormwater Runoff and Groundwater Quality

There are identified north-south drainage ditches adjacent to the east and to the west of the proposed site (see Map 6, Appendix A). Under these conditions the proposed project is expected to have minimal impact on storm water runoff, and groundwater quality with no impact to wetlands.

4.3.3 Alternative 2), No Action Alternative

There would be no impact on MAFB water resources.

4.4 Floodplains and Coastal Estuaries

4.4.1 Preferred Action Alternative

There are no coastal estuaries located at MAFB; and no floodplains located at the proposed site.

4.4.2 Alternative 1), Renovation Alternative

There are no coastal estuaries located at MAFB; and no floodplains located at the proposed site.

4.4.3 Alternative 2), No Action Alternative

Under the No Action Alternative there would be no impact on the McConnell Creek floodplain.

4.5 Biological Resources

4.5.1 Preferred Action Alternative

Implementation of the Preferred Action Alternative would have minimal impact on biological resources located within the construction area.

- Stormwater runoff could potentially impact biological resources (wetlands, fish, amphibians, birds, insects, and small mammals) and two north-south drainage ditches are adjacent to the east and west of the site.

The impacts to biological resources would be minimized by the following:

- Any ruts, holes, and indentations in surface soils resulting from heavy equipment use would be filled and graded after operations were completed.
- The project area would be reseeded to reestablish native grasses or appropriate landscaping within the entire disturbed construction area.
- To minimize impact to biological resources, BMP's outlined in the project NPDES permit would be implemented to control soil erosion and storm water runoff.

4.5.2 Alternative 1), Renovation Alternative

Implementation of the Renovation Alternative would have minimal impact on biological resources located within the construction area.

- Stormwater runoff could potentially impact biological resources (wetlands, fish, amphibians, birds, insects, and small mammals) and two north-south drainage ditches are adjacent to the east and west of the site.

The impacts to biological resources would be minimized by the following:

- Any ruts, holes, and indentations in surface soils resulting from heavy equipment use would be filled and graded after operations were completed.
- The project area would be reseeded to reestablish native grasses or appropriate landscaping within the entire disturbed construction area.
- To minimize impact to biological resources, BMP's outlined in the project NPDES permit would be implemented to control soil erosion and storm water runoff.

4.5.3 Alternative 2), No Action Alternative

There would be no impact on MAFB biological resources.

4.6 Environmental Management (Pollution Prevention, Geology, and Soils)

4.6.1 Preferred Action Alternative

The proposed project would impact surface soils. To minimize storm water runoff and soil erosion, engineering controls specified in the BMP's of the project NPDES permit would be implemented.

4.6.2 Alternative 1), Renovation Alternative

The proposed project would impact surface soils. To minimize storm water runoff and soil erosion, engineering controls specified in the BMP's of the project NPDES permit would be implemented.

4.6.3 Alternative 2), No Action Alternative

There would be no impact on MAFB surface soils.

4.7 Socioeconomic

4.7.1 Preferred Action Alternative

Implementation of the Preferred Action Alternative would cost approximately $1.5 million to implement the first phase of the project. Sales of equipment, employment

opportunity, and secondary retail purchase on the local community will add to the annual $350 to $400 million contribution McConnell currently makes to Wichita and Derby economies. Therefore, implementation of the Preferred Action Alternative would provide a short-term beneficial impact to local contractors and retailers.

The Preferred Action Alternative would have no long-term socioeconomic benefit.

4.7.2 Alternative 1), Renovation Alternative

Implementation of the Renovation Alternative would cost approximately $1.3 million to implement. Sales of equipment, employment opportunity, and secondary retail purchase on the local community will add to the annual $350 to $400 million contribution McConnell currently makes to Wichita and Derby economies. Therefore, implementation of the Renovation Alternative would provide a short-term beneficial impact to local contractors and retailers.

4.7.3 Alternative 2), No Action Alternative

Under the No Action Alternative, there would be a negative socioeconomic impact. Units will continue to be outdated, inefficient and in disrepair resulting in increased operations costs, frequent maintenance and repair, and inconvenience to the residents. Without the project, repair of the units will continue to be piecemeal and inefficient with numerous interruptions of the occupants for access to the interiors of the houses and no major improvement in living quality. The housing neighborhoods will continue to have a stark appearance, insufficient crosswalks, electrical safety issues and significant storm sewer deficiencies.

4.9 Land Use

4.9.1 Preferred Action Alternative

The Preferred Action Alternative would require clearing approximately 2-5 acres of pre-disturbed and housing occupied land.

4.9.2 Alternative 1), Renovation Alternative

The Renovation Alternative would require clearing approximately 2-5 acres of pre-disturbed and housing occupied land.

4.9.3 Alternative 2), No Action Alternative

Under the No Action Alternative, no impacts to land use will be realized.

4.10 Safety and Occupational Health

4.10.1 Preferred Action Alternative

The six new housing units would meet current life safety codes and provide a comfortable and appealing living environment comparable to housing in the off-base civilian community.

4.10.2 Alternative 1), Renovation Alternative

The four housing units would be renovated to meet current life safety codes.

4.10.3 Alternative 2), No Action Alternative

Under the No Action Alternative there would be short-term and long-term impacts to safety and occupational health. With the aging housing units continual required repairs, more and more hazardous construction materials would be encountered and disturbed placing occupants and maintenance workers at risk.

4.11 Indirect and Cumulative Impacts

4.11.1 Preferred Action Alternative

There would be minor indirect and cumulative impacts associated with the Preferred Action Alternative that would be confined to MAFB property. Negative impacts are expected to be minor air and noise involved with general construction projects and would be more than offset by short-term and long-term positive impacts.

4.11.2 Alternative 1), Renovation Alternative

There would be minor indirect and cumulative impacts associated with the Preferred Action Alternative that would be confined to MAFB property. Negative impacts are expected to be minor and would be more than offset by short-term and long-term positive impacts.

4.11.3 Alternative 2), No Action Alternative

Under the No Action Alternative, there would be both short-term and long-term negative impacts on “Indirect and Cumulative Impacts.”

4.12 Relationship between Short-Term Uses and Enhancement of Long-Term Productivity

4.12.1 Alternative 1), Preferred Action Alternative

Implementation of the Preferred Action Alternative would have a positive effect on long-term facility sustainability by bringing MAFB into compliance with the requirements Part II of Military Handbook1190, "Facilities Planning and Design Guide" and all life safety and construction codes.

4.12.2 Alternative 2), Renovation Alternative

Implementation of the Renovation Alternative would repair the safety deficiencies.

4.12.3 Alternative 3), No Action Alternative

Under the No Action Alternative there would be short-term and long-term impacts to safety and occupational health. With the aging housing unit’s continual required repairs, more and more hazardous construction materials would be encountered and disturbed placing occupants and maintenance workers at risk.

4.13 Irreversible and Irretrievable Commitment of Resources

4.13.1 Preferred Action Alternative

Implementation of the Preferred Action Alternative would result in the loss of man-hours and materials.

4.13.2 Alternative 1), Renovation Alternative

Implementation of the Preferred Action Alternative would result in the loss of man-hours and materials.

4.13.3 Alternative 2), No Action Alternative

Under the No Action Alternative there would be no irreversible and irretrievable commitment of resources.

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7. McConnell AFB Wetland Evaluation, 2001

APPENDICES

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