

FINAL

**ENVIRONMENTAL ASSESSMENT
FOR THE
ARMED FORCES RESERVE CENTER CONSTRUCTION,
DEFENSE REUTILIZATION AND MARKETING SERVICE CONSTRUCTION,
DEMILITARIZATION AND STORAGE RELOCATION, AND
SENSOR FUZED WEAPON RELOCATION
TO
McALESTER ARMY AMMUNITION PLANT**

Prepared by:

AGEISS Environmental, Inc.

and

J.M. Waller Associates, Inc.

for

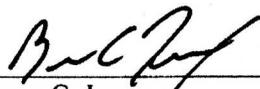
the U.S. Army Corps of Engineers, Mobile District

October 3, 2007

This page intentionally left blank.

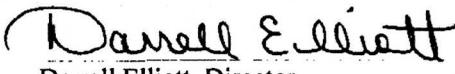
**ENVIRONMENTAL ASSESSMENT
FOR THE
ARMED FORCES RESERVE CENTER CONSTRUCTION,
DEFENSE REUTILIZATION AND MARKETING SERVICE CONSTRUCTION,
DEMILITARIZATION AND STORAGE RELOCATION, AND
SENSOR FUZED WEAPON RELOCATION
TO
McALESTER ARMY AMMUNITION PLANT**

Prepared by:



Byron G. Jorns
Colonel, Corps of Engineers
Commanding

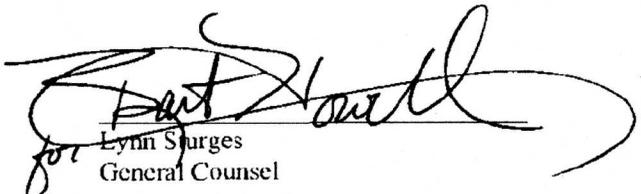
Reviewed by:



Darrell Elliott, Director,
Environmental Management Office

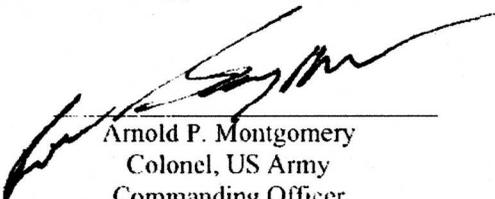


Terry Wafford
Director of Engineering



for Lynn Sturges
General Counsel

Approved by:



Arnold P. Montgomery
Colonel, US Army
Commanding Officer

October 17, 2007

Date

This page intentionally left blank.

EXECUTIVE SUMMARY

ES.1 Introduction

This environmental assessment (EA) analyzes and documents environmental effects associated with the Army's Proposed Action at McAlester Army Ammunition Plant (MCAAP). To enable implementation of Base Realignment and Closure (BRAC) recommendations, the Army proposes to provide necessary facilities to support the changes in force structure.

This EA was developed in accordance with the National Environmental Policy Act (NEPA) (42 U.S.C. § 4321 et seq.), Army Regulation 200-2/Chapter 5 (32 CFR Part 651), and implementing regulations issued by the President's Council on Environmental Quality (CEQ) (40 C.F.R. Parts 1500-1508) as well as guidance provided by the 2005 Army BRAC NEPA Manual.

ES.2 Background/Setting

MCAAP is located in Pittsburg County, OK, approximately 9 miles southwest of the City of McAlester. It is approximately 100 miles south of Tulsa and 130 miles southeast of Oklahoma City. McAlester is the largest city in Pittsburg County, and nearby smaller towns include Savanna, on U.S. Highway 69 to the east of the installation, and Haywood, on State Route 31 to the north. The region is characterized by relatively flat terrain with some areas of rolling hills. Development in the area is generally concentrated in small towns surrounded by farmland.

ES.3 Proposed Action

The Proposed Action includes the construction of a new 400-person Armed Forces Reserve Center (AFRC) and consolidated Organizational Maintenance Shop (OMS). The new AFRC would have the capability to accommodate (a) Oklahoma Army National Guard (ARNG) units from the Field Maintenance Shop (FMS) in Durant, OK; (b) Oklahoma ARNG Readiness Centers in Atoka, Allen, Hartshorne, Madill, McAlester, and Tishomingo, OK; and (c) Oklahoma ARNG Readiness Center and FMS in Edmond, OK. The OMS would be a vehicle maintenance facility, and the AFRC would be used for training purposes by up to 400 Army Reserve and National Guard personnel from incoming units. These additional personnel would be present on weekends when the plant is typically not operating. Between 15 and 50 new permanent personnel would also be stationed at these facilities. The Proposed Action reduces costs for maintaining existing Oklahoma ARNG facilities by consolidating other units in the area into a single facility on an existing U.S. Department of Defense (DoD) installation.

The Proposed Action also calls for construction of a new Defense Reutilization and Marketing Service (DRMS) facility including a new Centralized DEMIL Processing Center (CDC). This facility would process, recycle, and dispose of excess DoD non-munitions property, and would not require any additional personnel for operations. This facility would receive between two and five property deliveries per day via tractor-trailer.

The Proposed Action includes relocation of the Sensor Fuzed Weapon (SFW)/Cluster Bomb function and missile warhead production and field testing range from Kansas Army Ammunition Plant to MCAAP. This action would entail renovation of an existing building at MCAAP, and would not require any additional personnel for operations. The facility would have the capacity to produce from 250 to 609 SFW/Cluster bomb units per year.

Lastly, the Proposed Action includes relocation of existing DEMIL and storage functions from Red River Army Depot, Sierra Army Depot, and Lone Star Army Ammunition Plant to MCAAP. This action would require converting existing facilities from other uses, particularly for the testing and certification of missiles. Up to ten storage sheds would be erected to house missiles. There would be no substantial changes to existing functions at MCAAP, or any additional personnel at MCAAP. The new functions would allow for effective and efficient utilization of resources and personnel in support of the Army's mission.

Although additional Reserve and National Guard personnel would be temporarily present when those organizations are using facilities at MCAAP, only 15 to 50 new full-time personnel at the AFRC would be permanent from implementation of the BRAC Commission's realignment recommendations. Labor at the DRMS facility and for the SFW/Cluster Bomb function and missile warhead production and relocation of DEMIL and storage functions would be provided by MCAAP's existing permanent-on-call personnel.

ES.4 Alternatives

Potential site locations for the AFRC and OMS and the DRMS facility were screened for inclusion in this EA. Screening criteria consisted of operational constraints, safety constraints, geographic constraints, and existing facility and mission constraints. Based on the selection criteria, three alternatives, including the No Action Alternative, were developed for evaluation in the EA.

Under Alternatives 1 and 2, the AFRC and OMS would be northeast of the Main Gate. The alternatives differ in that under Alternative 1, the AFRC and OMS would be built overtop of the existing Mature Theater of Operation Advanced Logistics Base Camp Force Provider Unit Training Center ("Base Camp"), which would be relocated east of Building 28 and just to the west of the proposed DRMS facility. Within the Base Camp footprint, tent pads and a consolidated mess hall and latrine facility would be constructed. Under Alternative 2, the AFRC and OMS may be located anywhere within the 75-acre proposed AFRC/OMS area, and Base Camp would either be left in place or moved elsewhere within the 75-acre proposed AFRC/OMS area. Alternative 3 is the No Action Alternative and is required to be carried forward by CEQ. Since the Proposed Action is being driven by Congress, the No Action Alternative is carried forward solely to serve as a benchmark against which to evaluate the Proposed Action.

Alternative 1 is the Preferred Alternative because it best maintains the integrity of Base Camp, in that it provides separation between Base Camp and the AFRC/OMS complex, which would be used by different commands.

ES.5 Environmental Consequences

Thirteen environmental and human resource areas were characterized and evaluated for potential impacts from the two Proposed Action alternatives and the No Action Alternative. Significance criteria were developed for the affected resource categories, and for many resource categories, are necessarily qualitative in nature. No potential impacts were classified as significant. Potential impacts of the Proposed Action identified for each resource area are summarized below.

Land Use. Both Alternatives 1 and 2 would be contained within MCAAP, which sets its own land use and zoning designations, and would not present conflicts or nonconformance with current local or state land use or zoning designations. Existing land uses external to the installation would not be affected by on-post land-use decisions related to Alternatives 1 and 2; thus, there would be no discernible impact to these land uses.

Although Alternative 1 would not significantly conflict with currently planned land uses on-post, it would cause the loss of approximately 1 percent of land designated as training area due to conversion to other land uses. Implementation of Alternative 1 would also cause the closure of approximately 64 acres of land currently designated as hunting areas, but would not significantly conflict with MCAAP's land management plans. Overall, potential impacts to land use from Alternative 1 would not be significant.

Potential land use impacts from Alternative 2 would be similar to those for Alternative 1 except that Alternative 2 would result in the closure of up to 79 acres of land currently designated as hunting areas. Overall, potential impacts to land use from Alternative 2 would not be significant.

Aesthetics and Visual Resources. Alternative 1 would cause short-term visual impacts on MCAAP resulting from ground disturbance associated with demolition of the existing Base Camp and construction of the proposed facilities. However, the reclamation of disturbed areas would remove these visual impacts.

Long-term visual impacts at the site of the existing Base Camp would be beneficial, as older, utilitarian, and temporary structures would be demolished, allowing for a cohesive, modern, and well-landscaped complex of buildings to be one of the first and last sights seen by visitors as they enter and exit the installation. Construction of the DRMS facility in the Dahlstrom area would eliminate approximately 39 acres of open shrubland and trees and replace this vegetation with an industrial facility. Coupled with the proximity of nine aged Quonset warehouses, this action would have minor adverse impacts to aesthetic resources. Operations at the DRMS facility would result in minor aesthetic impacts from increased truck traffic on the installation and from increased nighttime light. Overall, potential impacts to aesthetics and visual resources from Alternative 1 would not be significant.

As under Alternative 1, visual impacts from Alternative 2 would be beneficial in that modern and well-landscaped buildings would be one of the first and last sights seen by visitors as they enter and exit the installation, especially if the AFRC and OMS are built south of the existing Base Camp. However, the juxtaposition of two modern facilities adjacent to the existing Base Camp would result in minor adverse impacts, as the continuity of design of the new facilities would highlight the older, unmatched assortment of buildings that comprise Base Camp. These adverse impacts could be avoided if Base Camp were rebuilt with new buildings within this 75-acre area; however, rebuilding Base Camp could result in the additional elimination of open shrubland and trees in the northern portion of this 75-acre area.

Air Quality. Short-term air quality impacts from Alternative 1 would occur from temporary and localized construction and demolition activities. Contaminants generated from construction would include particulate matter, vehicle emissions, and increased wind-borne dust (i.e. fugitive dust). Long-term impacts associated with the AFRC Complex and OMS facility and DRMS

facility are not likely to occur. No fueling facilities, underground storage tanks, or paint booths would be required for these facilities. The additional vehicles associated with the AFRC and OMS, including 15 vehicles for the Army Reserve unit and an unknown number of vehicles for National Guard units, would not be expected to result in significant impacts to air quality. Two to five tractor trailers would arrive at and depart from the DRMS facility each operating day, but the emissions from these vehicles would not represent a significant impact. Long-term impacts associated with the SFW/Cluster bomb and missile warhead production functions may result from the operation of a 10-square-foot paint booth. No thermal paint or arc spray (TAS) or grit blasting would be required. Proper ventilation systems would be in place and air quality regulations would be followed. Long-term impacts associated with the DEMIL and storage relocation are not likely to occur. Currently, only storage is anticipated as funding has not been appropriated for DEMIL actions. Overall, potential impacts to air quality from Alternative 1 would not be significant.

Emissions and impacts associated with Alternative 2 are expected to be similar to those described for Alternative 1. However, under Alternative 2, Base Camp (consisting of 50 concrete pads and associated facilities) may not need to be relocated and demolition borne emissions may be somewhat less. Overall, potential impacts to air quality from Alternative 2 would not be significant.

Noise. Short-term noise associated with Alternative 1 would be generated by standard construction equipment. Only a minor increase in ambient noise levels is expected to occur. Noise would also be generated by increased construction traffic on area roadways, but would be limited to certain times of the day.

Long-term noise impacts associated with the proposed AFRC and OMS include grounds maintenance activities, vehicular traffic, noises associated with vehicle maintenance, and noises associated with training efforts. Noise resulting from maintenance activities, vehicular traffic, and training efforts would be limited to certain times of the day and are anticipated only on weekends. Long-term noise impacts associated with the DRMS facility include equipment operations. These effects could cause damage to personnel not using hearing protection. However, these noise impacts are not to the level that would affect the local community outside of 200 yards of the operation. Some additional noise would be generated by the two to five tractor-trailers arriving at and departing from the DRMS facility each day, although this noise would be episodic and temporary and would not be a significant impact. Overall, potential noise impacts from Alternative 1 would not be significant.

Potential noise impacts from Alternative 2 would be similar as for Alternative 1. However, short-term impacts to noise may be somewhat less as this alternative may not require the demolition of Base Camp. Overall, potential noise impacts from Alternative 2 would not be significant.

Geology and Soils. The proposed facilities would reduce water infiltration by capping the subsoil with impervious surfaces. Alternative 1 would result in the addition of approximately 24 acres of impervious surfaces to MCAAP, an installation-wide increase in impervious surfaces of approximately 4 percent. This increase represents approximately 0.05 percent of the land area of

MCAAP. Overall, potential impacts to geology and soils from Alternative 1 would not be significant.

Potential impacts from Alternative 2 would be the same as for Alternative 1 except that, if Base Camp would not be relocated, ground disturbance would not occur for demolition and reconstruction of Base Camp. Overall, potential impacts to geologic and soil resources from Alternative 2 would not be significant.

Water Resources. By capping the subsoil with impervious surfaces, Alternative 1 would reduce groundwater recharge locally by reducing the infiltration of precipitation. Alternative 1 would result in the addition of approximately 24 acres of impervious surfaces to MCAAP, an installation-wide increase in impervious surfaces of approximately 4 percent. This increase represents approximately 0.05 percent of the land area of MCAAP. Under either alternative, adherence to MCAAP's storm water management plan would limit the impacts of runoff on surface water resources.

Demolition of the existing Base Camp and construction of facilities would disturb existing ground cover and increase the potential for soil erosion. An unnamed intermittent channel bisects the proposed relocation site of Base Camp; this channel is presumably a tributary of Bull Creek. Special consideration would be made during the design, construction, and operational phases of Base Camp to account for the presence of this channel. Disruption of water drainage patterns could result in flooding and/or property damage, and removal of vegetation from in or around the channel could result in erosion with soil being carried by stormwater to Bull Creek. Construction and operation of facilities could increase the potential for impacts to surface water or groundwater quality from point or nonpoint discharges, although erosion control measures around construction sites would minimize this potential. Overall, potential impacts to water resources from Alternative 1 would not be significant.

Potential impacts from Alternative 2 would be less than for Alternative 1 if the AFRC and OMS are built south of the existing Base Camp, and Base Camp is not relocated, because there would be fewer opportunities for soil erosion and subsequent siltation or pollution to Bull Creek. In this case, Base Camp would not be relocated to a site bisected by an intermittent stream channel, and it would have no noticeable impacts on Bull Creek because the existing Base Camp location is over 0.25 mile from Bull Creek or any of its tributaries. Impacts could be greater than this, and perhaps equal to those resulting from Alternative 1, if Base Camp is relocated or the AFRC/OMS complex is located elsewhere within the 75-acre proposed AFRC/OMS area, because other intermittent drainages that flow to Bull Creek occur within this area. Overall, potential impacts to water resources from Alternative 2 would not be significant.

Biological Resources. Because all of the areas proposed for construction are either previously disturbed or infested with invasive species, these areas have relatively low productivity for native plants and animals. Alternative 1 would have no overall effect on biodiversity or regional plant and animal populations. Demolition of the existing Base Camp and construction of the AFRC and OMS would cause short-term impacts on the vegetation surrounding construction sites, but over the long term, existing vegetation around the sites would be expected to remain the same. Construction of the AFRC and OMS may affect on-site wildlife through the long-term direct loss

of a relatively small amount of habitat and direct mortality of individuals occurring in construction zones.

Construction of the relocated Base Camp and DRMS facility would cause most of the same impacts as construction of the AFRC and OMS. A larger amount of native vegetation would be removed at these sites, although some of this vegetation consists of eastern red cedar (*Juniperus virginiana*), which is an invasive species at MCAAP. Removal of this species would have a beneficial impact on the installation's vegetation management program. Impacts to wildlife would be similar to the impacts at the AFRC/OMS site. Alternative 1 would result in the closure of 54 acres, or approximately 1.5 percent, of the Gobbler spring turkey hunting area and 59 acres, or 0.5 percent, of the Deer Creek deer and fall turkey hunting area.

An unnamed intermittent channel bisects the proposed relocation site of Base Camp; this channel is presumably a tributary of Bull Creek. The National Wetlands Inventory database shows this channel to be a shrubland intermittent stream course. Prior to construction it would be necessary to obtain concurrence from the U.S. Army Corps of Engineers (USACE) that this feature is not considered to be a jurisdictional wetland. If the USACE rules that this drainage feature constitutes a jurisdictional wetland then the potential for another relocation site would be examined, and if the final construction footprint cannot be changed to avoid the wetland, appropriate mitigation would be coordinated and developed through USACE. If USACE concurs that it is not a regulatory wetland, special consideration would still have to be made during the design, construction, and operational phases of Base Camp to account for the presence of this channel. Implementation of mitigation, coordinated through USACE if required, or special consideration of the channel during design, would ensure that impacts to wetlands would not be significant. Overall, potential impacts to biological resources from Alternative 1 would not be significant.

Potential impacts from Alternative 2 would be similar to those for Alternative 1. However, construction of the AFRC and OMS in the 75-acre proposed AFRC/OMS area would have no significant impacts to vegetation, although impacts would vary according to where in this 75-acre area the facilities are built, and whether Base Camp is relocated within the area. The northern third of the area is covered with open shrubland and trees, whereas the southern two thirds are open and either previously developed or covered with lawn-type grasses. Impacts to wildlife would be similar as under Alternative 1, except that under Alternative 2 there would be no closure of land in the Gobbler spring turkey hunting area due to the AFRC, OMS, or Base Camp, and these facilities together would result in the closure of up to 40 acres, or 0.4 percent, of the Deer Creek deer and fall turkey hunting area. The DRMS facility would still result in the closure of 39 acres in both of these hunting areas. As with vegetation, impacts to wildlife would not be significant, but would vary according to where in this 75-acre area the facilities are built, and whether Base Camp is relocated within the area. The northern third of the 75-acre area is more productive wildlife habitat than the southern two thirds of the area. Overall, potential impacts to biological resources from Alternative 2 would not be significant.

The U.S. Fish and Wildlife Service and the Oklahoma Department of Wildlife Conservation concur that the endangered American burying beetle is the only threatened or endangered species known to occur at MCAAP. As described in MCAAP's Endangered Species Management Plan,

preconstruction surveys for the American burying beetle would be performed and any captured individuals would be relocated to other suitable sites on the installation.

Cultural Resources. Alternative 1 would not affect any known National Register of Historic Places-eligible archaeological sites. Most proposed new construction and other ground-disturbing activities would occur within areas that have previously been heavily disturbed or surveyed for archeological resources. A Phase I survey, totaling 129 acres, was conducted within the three areas where new facilities may be constructed under the Proposed Action. No cultural resources were found, and no evidence of buried cultural deposits was identified in the three areas.

MCAAP has determined that no historic properties will be affected by the Proposed Action. In accordance with Section 106, this determination is currently being coordinated with the Oklahoma State Historic Preservation Officer as well as the Oklahoma Archaeological Survey and the following federally recognized Native American Tribes with ties to the region: Caddo Indian Tribe; Chickasaw Nation of Oklahoma; Choctaw Nation of Oklahoma; Quapaw Tribe of Indians of Oklahoma; and Wichita and Affiliated Tribes of Oklahoma. Section 106 coordination will be completed prior to any ground breaking activities on the property.

All structures expected to be affected by implementation of Alternative 1 are covered by either the Program Comment Regarding World War II and Cold War Era Army Ammunition Production Facilities and Plants or the Program Comment Regarding World War II and Cold War Era Ammunition Storage Facilities. MCAAP would comply with the provisions of the applicable Program Comments, so no impacts are anticipated to historic structures. Although there could be minor short-term impacts during construction, overall potential impacts to cultural resources from Alternative 1 would not be significant.

Overall, potential impacts from Alternative 2 would be similar to those for Alternative 1, and these impacts would not be significant. However, under Alternative 2, the Base Camp could potentially remain at its current location, and therefore the potential to affect archaeological sites could be somewhat lower than for Alternative 1.

Socioeconomics. Alternative 1 would create a short-term increase of personnel on and around MCAAP during construction due to the creation of construction jobs. This would be a minor beneficial increase in local socioeconomic resources as there would be creation of jobs and increased use of hotels and businesses surrounding MCAAP. Long-term impacts associated with the AFRC/OMS would occur due to the 15 to 50 permanent personnel stationed at this facility and the Reserve and National Guard personnel who would use this facility for training purposes. On average, it is expected that the AFRC/OMS would bring 400 temporary personnel on weekends, when the plant is not typically operating. Other personnel that may be expected would be seasonal (permanent on-call) personnel that are existing MCAAP employees. The increase of permanent personnel and those due to training missions would provide a minor beneficial increase in the local economy. There would be no impacts to environmental justice at MCAAP or the surrounding area, as impacts from the Proposed Action identified in this EA would not be localized or placed primarily on minority and/or low-income populations. Overall, potential socioeconomic impacts from Alternative 1 would include beneficial short-term impacts during construction and beneficial long-term impacts upon completion.

Potential socioeconomic impacts from Alternative 2 are similar to those for Alternative 1; however, if the relocation of Base Camp does not occur, fewer beneficial short-term impacts would occur because there would be less construction and no demolition. Overall, potential socioeconomic impacts would be beneficial over the short-term during construction and beneficial over the long-term upon completion.

Transportation. A small increase in vehicular traffic is expected during the construction of the new facilities. Long-term impacts associated with the construction of the AFRC and consolidated OMS would include an increase in vehicular traffic on and around MCAAP associated with training activities. Golden Kastle training activities have historically had as many as 1,500 personnel at the peak of special training activities. The increased traffic on roadways could be offset by having the training operations on the weekends when normal business traffic is at a minimum. The increased traffic is not expected to cause a significant disruption to current transportation patterns on MCAAP. Existing roadways and railways are expected to be used for the new DRMS facility. Two to five tractor trailers would arrive at and depart from the facility each operational day. Rail traffic would be increased; however, the rail lines are located in an isolated area away from residential areas and are expected to have minimal disruptive effects on and surrounding MCAAP. Overall, potential transportation impacts from Alternative 1 would not be significant.

Potential transportation impacts associated with Alternative 2 are the same as for Alternative 1, with construction traffic being slightly less if Base Camp is not relocated. Overall, transportation impacts would not be significant.

Utilities. New electrical easements would be joined with existing electrical lines already in place on MCAAP and may require the construction of new transformers. However, the existing electrical distribution system would be sufficient to accommodate the new facilities. A new water tower would need to be constructed in the area of the new AFRC and OMS to handle the low water pressure present in the area. New utility usage from the proposed AFRC and OMS would be offset by being used primarily on weekends when normal installation usage of utilities is low. Overall, potential impacts to utilities from Alternative 1 would not be significant.

Under Alternative 2, impacts specific to potable water supply, wastewater system, storm water system, energy sources, and communications would be the same as for Alternative 1. Impacts to solid waste may be somewhat less if this alternative does not require the demolition and subsequent disposal of six trailers, a dining hall, a laundry facility, two shower facilities, and a freezer as well as the relocation of 50 concrete pads (Base Camp). Overall, potential impacts to utilities from Alternative 2 would not be significant.

Safety and Occupational Health. Implementation of Alternative 1 would create working conditions in and around the construction activities that would require proper safety precautions. The AFRC and OMS and DRMS facility would not overlay onto existing explosive safety arcs and therefore, no impacts related to safety arcs are expected to occur from construction and operation of these facilities. The relocation of SFW/Cluster Bomb, missile warhead production, and field testing range and relocation of DEMIL and storage functions would occur in existing facilities at MCAAP. The SFW/Cluster Bomb and missile warhead production facility may have a new explosive safety arc associated with the function, however at this time no explosive safety

arcs have been identified with the function. Implementation of applicable standard operating procedures (SOPs) and safety regulations would ensure that impacts to safety and occupational health from long-term activities at the Proposed Action facilities would not be significant.

DEMIL and storage and testing of oncoming ordnance would not exceed current safety parameters already in effect on MCAAP, and the DEMIL capacity and rate of demilitarization per explosive net weight would not change. DEMIL of ordnance would continue as funding is appropriated, but is not expected to exceed the maximum handling capacity of MCAAP. Currently MCAAP is operating at 85 percent of its maximum storage capacity. The planned storage sheds would provide additional needed storage capacity. Oncoming ordnance would be shipped and received in phases until 2011. Storage of oncoming ordnance would not exceed MCAAP's maximum storage capacity. Overall, potential impacts to safety and occupational health from Alternative 1 would not be significant.

Potential impacts to safety and occupational health from Alternative 2 would be similar to those from Alternative 1, and these impacts would not be significant. Under Alternative 2, no explosive safety arcs would overlay onto the 75-acre proposed AFRC/OMS area. Impacts from the day-to-day operations of the AFRC/OMS, the DRMS facility, and the DEMIL and storage functions would be the same as for Alternative 1.

Hazardous and Toxic Substances. During construction, the use and transportation of hazardous materials that are regulated by OSHA and DOT, as well as the creation of hazardous wastes regulated by EPA, may occur. Long-term impacts of the DRMS facility may include processing of hazardous wastes such as paint, de-greasing chemicals, metal grindings, DEMIL projects waste, waste from machine shops, rotating bands from ammunition rounds, copper wire from electric shops, and construction and demolition waste. The amount of hazardous wastes produced would fall under the maximum handling limit for MCAAP. Long-term impacts could also result from operation of a 10-square foot paint booth that would be associated with the SFW/Cluster Bomb and missile warhead production facility. Storage capacity with the planned storage sheds would be adequate for incoming munitions because implementation of munitions DEMIL would be phased through 2011 as funding is available. Overall, impacts regarding hazardous and toxic substances from Alternative 1 would not be significant.

Impacts regarding hazardous and toxic substances from Alternative 2 would be the same as for Alternative 1, and these impacts would not be significant.

Cumulative Impacts. Cumulative impacts were also addressed by considering the impacts of the Proposed Action in combination with impacts from other past, present, and reasonably foreseeable projects. Four current and seven reasonably foreseeable future construction and maintenance projects were identified on MCAAP (Table ES-1). The scope of the cumulative effect analysis involved evaluating impacts to the 13 environmental and human resource areas cumulatively by geographic and temporal extent in which the effects would be expected to occur. Cumulative impacts would not be significant.

Table ES-1. Current and reasonably foreseeable future construction and maintenance projects on MCAAP.

Project Name	Project Description	Present or Future
Pre-Mix Building	Construct new building that allows for small quantity flexible bomb loads	Present
Front Gate Renovation	Remodeling of the front gate, a historical landmark. Allows for increased compliance with security requirements.	Present
Magazines Pads - magazine groups 2AT-9AT	Construct concrete pad extensions for each magazine entrance	Present
Brigade Combat Team Strategic Configured Loading (BCT/SCL) Facility	Construct new facility that allows for strategically configuring ammunition shipments	Present
New Magazine Storage Facilities Construction	Construct four proposed magazine storage facilities to be located in the current storage area on MCAAP. Land for magazines has already been cleared.	Future
Military Family Housing Demolition	Sixteen housing units have been scheduled for demolition on MCAAP. Two of the houses have possible asbestos contamination.	Future
Wood Fabrication Facility	Construct a Depot Level fabrication facility to provide wood product support	Future
Magazines Covers - magazine groups 10AT-20AT	Install weather proof covers over existing earth covered magazines	Future
Magazine Pads - magazine groups 21AT-35AT	Construct concrete pad extensions for each magazine entrance	Future
Railroad Track Renovation	Repair by replacing existing railroad tracks, ties, and ballast as necessary to maintain full serviceability of the rail line. Repair by replacing turnouts, signals, drainage ditches or other rail support systems as required.	Future
Vehicle Bridge Replacement	Replace existing concrete bridge over Brown Lake dam spillway with an all-weather paved roadway	Future

ES.6 Mitigation Responsibility

No mitigation measures are required for the Proposed Action discussed in this EA, because resulting impacts are not significant.

ES.7 Findings and Conclusions

As analyzed and discussed in this EA, direct, indirect, and cumulative impacts of the Proposed Action alternatives and the No Action Alternative have been considered, and no significant impacts have been identified. Therefore, issuance of a Finding of No Significant Impact is warranted, and preparation of an environmental impact statement is not required. Alternative 1 is the Army's Preferred Alternative because it best maintains the integrity of Base Camp, in that it provides separation between Base Camp and the AFRC/OMS complex, which would be used by different commands.

TABLE OF CONTENTS

Section	Page
1.0 PURPOSE, NEED AND SCOPE	1
1.1 Introduction.....	1
1.2 Purpose and Need	1
1.3 Scope.....	5
1.4 Public Involvement	6
1.5 Regulatory Framework	6
2.0 PROPOSED ACTION	8
2.1 Introduction.....	8
2.2 Implementation Proposed	8
2.2.1 AFRC and OMS.....	8
2.2.2 DRMS Facility	9
2.2.3 Relocation of SFW/Cluster Bomb Function and Missile Warhead Production.....	10
2.2.4 Relocation of Munitions Storage and DEMIL Functions	10
3.0 ALTERNATIVES.....	12
3.1 Introduction.....	12
3.2 Proposed Alternatives Screened for Evaluation	12
3.2.1 Alternative 1 – Preferred Alternative.....	16
3.2.2 Alternative 2.....	16
3.2.3 Alternative 3 – No Action Alternative.....	17
3.3 Alternatives Carried Forward	17
3.4 Alternatives Considered and Not Carried Forward	18
4.0 AFFECTED ENVIRONMENT AND CONSEQUENCES	19
4.1 Introduction.....	19
4.2 Land Use	19
4.2.1 Affected Environment.....	19
4.2.2 Consequences.....	24
4.3 Aesthetics and Visual Resources	25
4.3.1 Affected Environment.....	25
4.3.2 Consequences.....	26
4.4 Air Quality	28
4.4.1 Affected Environment.....	28
4.4.2 Consequences.....	31
4.5 Noise	32
4.5.1 Affected Environment.....	32
4.5.2 Consequences.....	34
4.6 Geology and Soils.....	37
4.6.1 Affected Environment.....	37
4.6.2 Consequences.....	38
4.7 Water Resources	39

TABLE OF CONTENTS (Continued)

Section	Page
4.7.1 Affected Environment.....	39
4.7.2 Consequences.....	43
4.8 Biological Resources	46
4.8.1 Affected Environment.....	46
4.8.2 Consequences.....	49
4.9 Cultural Resources	52
4.9.1 Affected Environment.....	52
4.9.2 Consequences.....	57
4.10 Socioeconomics	58
4.10.1 Affected Environment.....	58
4.10.2 Consequences.....	60
4.11 Transportation	61
4.11.1 Affected Environment.....	61
4.11.2 Consequences.....	62
4.12 Utilities.....	64
4.12.1 Affected Environment.....	64
4.12.2 Consequences.....	68
4.13 Safety and Occupational Health.....	72
4.13.1 Affected Environment.....	72
4.13.2 Consequences.....	73
4.14 Hazardous and Toxic Substances.....	78
4.14.1 Affected Environment.....	78
4.14.2 Consequences.....	79
4.15 Cumulative Effects.....	84
4.15.1 Past, Present, and Reasonably Foreseeable Actions	84
4.15.2 Cumulative Effects Summary	86
4.15.3 Irreversible and Irrecoverable Commitment of Resources.....	90
4.16 Mitigation Summary	90
 5.0 FINDINGS AND CONCLUSIONS	 91
6.0 LIST OF PREPARERS.....	92
7.0 DISTRIBUTION LIST	93
8.0 REFERENCES	97
9.0 PERSONS CONSULTED	99
 APPENDIX A CONSULTATION AND COORDINATION	

LIST OF TABLES

Table	Page
2.1-1. Estimated Timeframes for Proposed Action Construction/Renovation Projects.....	8
3.2-1. Selection Criteria for Each Site.....	15
4.4-1. National Ambient Air Quality Standards.....	28
4.4-2. 2005 Air Emissions Inventory Summary of Air Emissions at MCAAP.	30
4.5-1. Typical Decibel Levels of Noise Encountered in Daily Life and Industry.....	33
4.8-1. Federal and State-listed Faunal Species in Pittsburg and Surrounding Counties.	48
4.9-1. Archaeological Framework of MCAAP.	52
4.10-1. Demographics of McAlester and Pittsburg County, Oklahoma (2000).....	59
4.15-1. Present and Future Projects on MCAAP.	85

LIST OF FIGURES

Figure	Page
1.1-1. McAlester Army Ammunition Plant Location Map	3
3.1-1. All Proposed Locations (AFRC/OMS & DRMS Facility) McAlester Army Ammunition Plant.....	13
4.2-1. Existing Land Use on and around McAlester Army Ammunition Plant.	21
4.5-1. Noise Contours Associated with Demolition & Training Ranges on McAlester Army Ammunition Plant.	35
4.7-1. Hydrologic Features near Proposed Facility Locations McAlester Army Ammunition Plant.....	41
4.9-1. Proposed Cultural Resources Survey Areas at McAlester Army Ammunition Plant.....	55
4.12-1. Utility System on McAlester Army Ammunition Plant.	65
4.13-1. Explosive Safety Arcs on McAlester Army Ammunition Plant.	75
4.14-1. Solid Waste Management Units on McAlester Army Ammunition Plant.....	81

LIST OF ACRONYMS AND ABBREVIATIONS

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
AAP	Army Ammunition Plant
ACHP	Advisory Council on Historic Preservation
AEDBR	Army Environmental Database Restoration
AFB	Air Force Base
AFRC	Armed Forces Reserve Center
ANSI	American National Standards Institute
ARNG	Army National Guard
ARPA	Archaeological Resources Protection Act
Base Camp	Mature Theater of Operation Advanced Logistics Base Camp Force Provider Unit Training Center
BCT/SCL	Brigade Combat Team Strategic Configured Loading
BRAC	Base Realignment and Closure
CAA	Clean Air Act
CDC	Centralized DEMIL Processing Center
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
CWA	Clean Water Act
DAC	Defense Ammunition Center
dBA	A-weighted decibel
dBC	C-weighted decibel
DDESB	U.S. Department of Defense Explosives Safety Board
DEMIL	demilitarization
DERP	Defense Environmental Restoration Program
DoD	U.S. Department of Defense
DOT	Department of Transportation
DRMS	Defense Reutilization and Marketing Service
EA	environmental assessment
ECM	erosion control measure
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FMS	Field Maintenance Shop
FNSI	Finding of No Significant Impact
FY	Fiscal Year
HAP	hazardous air pollutant
HVAC	heating, ventilation, and air conditioning
ICRMP	Integrated Cultural Resources Management Plan
IRP	Installation Restoration Program
Ldn	day-night average sound level
Leq	equivalent sound level
MCAAP	McAlester Army Ammunition Plant
Mcf	1,000 cubic feet

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

MGD	million gallons per day
mg/m ³	milligrams per cubic meter
MHE	Material Handling Exchange
mm	millimeter
MSL	mean sea level
MW	megawatt
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NEW	Net Explosive Weight
NHPA	National Historic Preservation Act
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O ₃	ozone
OAC	Oklahoma Administrative Code
OB/OD	open burn/open detonation
ODEQ	Oklahoma Department of Environmental Quality
OMS	Organizational Maintenance Shop
OPDES	Oklahoma Pollutant Discharge Elimination System
OSHA	Occupational Safety and Health Administration
Pb	lead
PM ₁₀	particulate matter with an aerodynamic size less than or equal to 10 microns
PM _{2.5}	particulate matter with an aerodynamic size less than or equal to 2.5 microns
ppm	parts per million
PSD	Prevention of Significant Deterioration
PSO	Public Service Company of Oklahoma
PVC	polyvinyl chloride
Q/D	explosive safety quantity-distance
RCRA	Resource Conservation and Recovery Act of 1976
ROI	region of influence
SARA	Superfund Amendments Reauthorization Act of 1986
SFW	Sensor Fuzed Weapon
SHPO	State Historic Preservation Officer
SO ₂	sulfur dioxide
SOP	standing operating procedures
SO _x	sulfur oxides
SPCC	Spill Prevention, Control and Countermeasures
SWMU	Solid Waste Management Unit
SWPPP	Storm Water Pollution Prevention Plan
TAS	thermal paint or arc spray
tpy	tons per year
TSCA	Toxic Substance Control Act
USACE	U.S. Army Corps of Engineers
VOC	volatile organic compounds

This page intentionally left blank.

1.0 PURPOSE, NEED AND SCOPE

1.1 Introduction

On September 8, 2005, the Defense Base Realignment and Closure Commission (BRAC Commission) recommended certain realignment actions at McAlester Army Ammunition Plant, Oklahoma (MCAAP). These recommendations were approved by the President on September 23, 2005, and forwarded to Congress. The Congress did not alter any of the BRAC Commission's recommendations, and on November 9, 2005, the recommendations became law. The BRAC Commission recommendations must now be implemented as provided for in the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended.

The BRAC Commission has recommended the relocation of the following functions to MCAAP:

- Storage and demilitarization (DEMIL) functions from Red River Army Depot, TX
- Munitions maintenance functions from Red River Army Depot, TX
- DEMIL functions from Sierra Army Depot, CA
- Sensor Fuzed Weapon (SFW)/Cluster Bomb function and missile warhead production and field testing range from Kansas Army Ammunition Plant (Kansas AAP)
- Storage and DEMIL functions from Lone Star AAP, TX
- Defense Reutilization and Marketing Service (DRMS) functions from Lone Star AAP, TX

The BRAC Commission has also recommended closure of the Floyd Parker United States Army Reserve Center in McAlester, OK, and re-location of units into a new Armed Forces Reserve Center (AFRC) and Consolidated Field Maintenance Shop (FMS) on MCAAP. The new AFRC would have the capability to accommodate Oklahoma Army National Guard (ARNG) units from the following Oklahoma ARNG Readiness Centers: (a) the FMS in Durant, OK; (b) the Oklahoma ARNG Readiness Centers in Atoka, Allen, Hartshorne, Madill, McAlester, and Tishomingo, OK; and (c) the Oklahoma ARNG Readiness Center and FMS in Edmond, OK, if the State of Oklahoma decides to relocate those National Guard units.

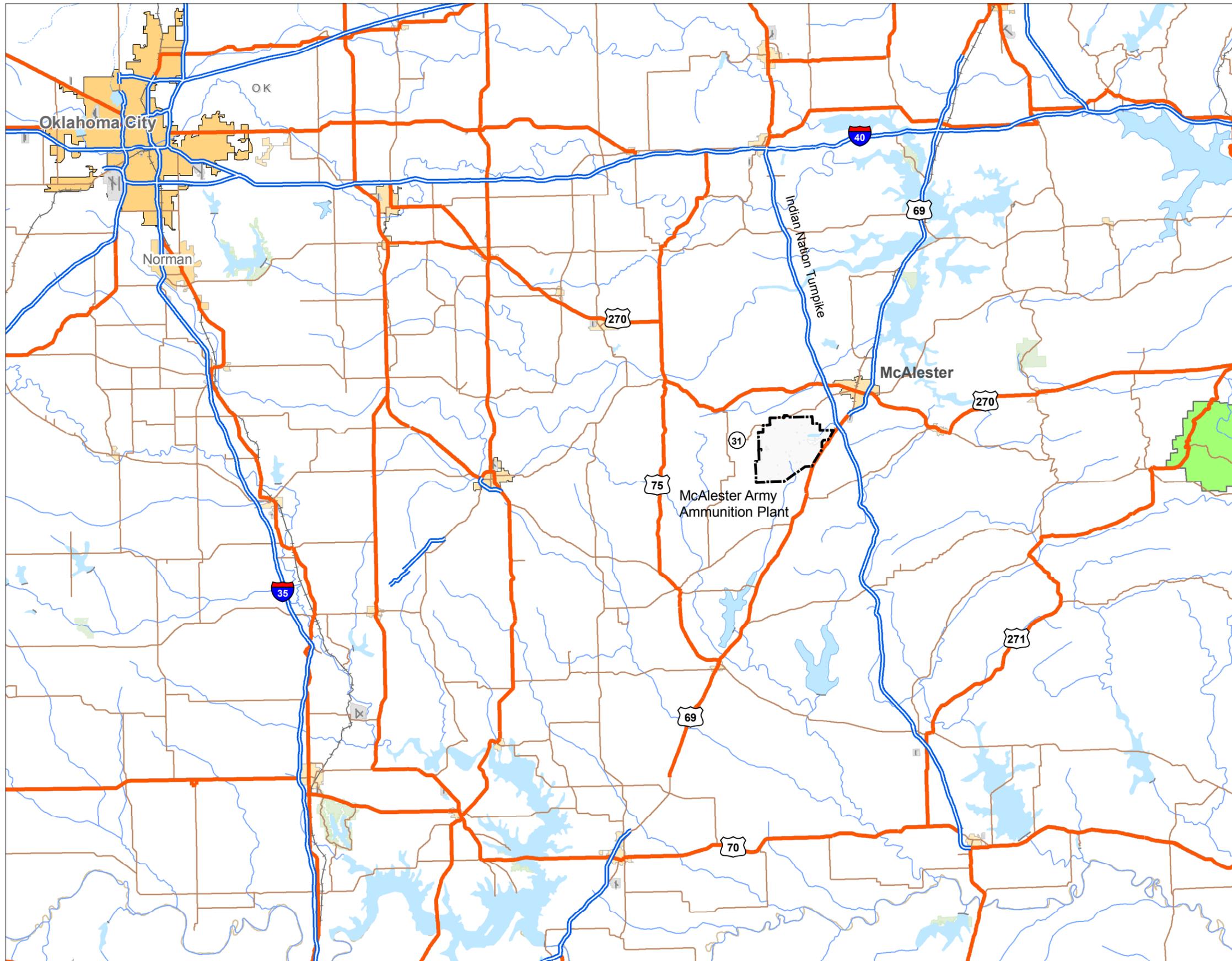
To enable implementation of these recommendations, the Army proposes to provide necessary facilities to support the changes in force structure. This environmental assessment (EA) analyzes and documents environmental effects associated with the Army's Proposed Action at MCAAP. Figure 1.1-1 shows the location of MCAAP. Details of the Proposed Action are described in Section 2.2.

1.2 Purpose and Need

The purpose of the Proposed Action is to implement the BRAC Commission's recommendations pertaining to MCAAP.

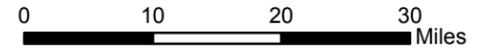
The need for the Proposed Action is to improve the ability of the Nation to respond rapidly to challenges of the 21st century. The Army's mission is to defend the United States and its territories, support national policies and objectives, and defeat nations responsible for aggression that endanger the peace and security of the United States.

This page intentionally left blank.



LEGEND

-  Installation Boundary
-  Limited Access Highway
-  Highway
-  Major Road
-  Local Road
-  National Forest
-  Lake
-  Reservoir
-  Urban Area



Prepared for: U.S. Army Corps of Engineers,
Mobile District

Realignment Environmental Assessment for
McAlester Army Ammunition Plant
McAlester, OK

Date Revised: 11/14/06

Figure 1.1-1

McAlester Army Ammunition Plant
Location Map



This page intentionally left blank.

To carry out these tasks, the Army must adapt to changing world conditions and must improve its capabilities to respond to a variety of circumstances across the full spectrum of military operations. The following discusses the major initiatives that contribute to the Army's need for the Proposed Action at MCAAP.

Base Realignment and Closure. In previous rounds of BRAC, the explicit goal was to save money and downsize the military to reap a "peace dividend." In the 2005 BRAC round, the U.S. Department of Defense (DoD) sought to reorganize its installation infrastructure to most efficiently support its forces, increase operational readiness, and facilitate new ways of doing business. Thus, BRAC represents more than cost savings. It supports advancing the goals of transformation, improving military capabilities, and enhancing military value. The Army needs to carry out the BRAC recommendations at MCAAP to achieve the objectives for which Congress established the BRAC process.

Installation Sustainability. On October 1, 2004, the Secretary of the Army and the Chief of Staff issued *The Army Strategy for the Environment* (Department of the Army 2004). The strategy focuses on the interrelationships of mission, environment, and community. A sustainable installation simultaneously meets current and future mission requirements, safeguards human health, improves quality of life, and enhances the natural environment. A sustained natural environment is necessary to allow the Army to train and maintain military readiness.

1.3 Scope

This EA was developed in accordance with the National Environmental Policy Act (NEPA) (42 U.S.C. § 4321 et seq.); implementing regulations issued by the President's Council on Environmental Quality (CEQ) (40 C.F.R. Parts 1500-1508); and Army Regulation 200-2, Environmental Effects of Army Actions (32 C.F.R. Part 651). Its purpose is to inform decision makers and the public of the likely environmental consequences of the Proposed Action and alternatives.

This EA identifies, documents, and evaluates environmental effects of the proposed realignments at MCAAP. An interdisciplinary team of environmental scientists, biologists, planners, economists, engineers, archaeologists, historians, and military technicians analyzed the Proposed Action and alternatives in light of existing conditions and identified relevant beneficial and adverse effects associated with the actions. The Proposed Action is described in Section 2.0 and the alternatives are described in Section 3.0.

The Defense Base Closure and Realignment Act of 1990 specifies that NEPA does not apply to actions of the President, the BRAC Commission, or the DoD, except "(i) during the process of property disposal, and (ii) during the process of relocating functions from a military installation being closed or realigned to another military installation after the receiving installation has been selected but before the functions are relocated (Sec. 2905(c)(2)(A), Public Law 101-510, as amended)." The law further specifies that in applying the provisions of NEPA to the process, the Secretary of Defense and the secretaries of the military departments concerned do not have to consider "(i) the need for closing or realigning the military installation which has been recommended for closure or realignment by the Commission, (ii) the need for transferring functions to any military installation which has been selected as the receiving installation, or (iii)

military installations alternative to those recommended or selected (Sec. 2905(c)(2)(B)).” The Commission’s deliberation and decision, as well as the need for closing or realigning a military installation, are exempt from NEPA. Accordingly, this EA does not address the need for realignment.

The decision to be made is how the Army will implement the BRAC recommendations at MCAAP and, as appropriate, carry out mitigation measures that would reduce effects on resources. The decision to implement realignment will be based on strategic, operational, environmental, and other considerations, including the results of this analysis.

1.4 Public Involvement

The Army invites public participation in the NEPA process. Consideration of the views and information of all interested persons promotes open communication and enables better decision-making. All agencies, organizations, and members of the public having a potential interest in the Proposed Action, including minority, low-income, disadvantaged, and Native American groups, are urged to participate in the decision-making process.

Public participation opportunities with respect to this EA and decision-making on the Proposed Action are guided by 32 Code of Federal Regulations (CFR) Part 651. Upon completion, the EA will be made available to the public for 30 days, along with a draft Finding of No Significant Impact (FNSI). At the end of the 30-day public review period, the Army will consider all comments submitted by individuals, agencies, or organizations on the Proposed Action, the EA, and draft FNSI. As appropriate, the Army may then execute the FNSI and proceed with implementation of the Proposed Action. If it is determined prior to issuance of a final FNSI that implementation of the Proposed Action would result in significant impacts, the Army will publish in the *Federal Register* a notice of intent to prepare an environmental impact statement, commit to mitigation actions sufficient to reduce impacts below significance levels, or not take the action.

1.5 Regulatory Framework

A decision on whether to proceed with the Proposed Action rests on numerous factors such as mission requirements, schedule, availability of funding, and environmental considerations. In addressing environmental considerations, MCAAP is guided by relevant statutes (and their implementing regulations) and Executive Orders (EOs) that establish standards and provide guidance on environmental and natural resources management and planning. These include the Clean Air Act (CAA), Clean Water Act (CWA), Noise Control Act, Endangered Species Act (ESA), National Historic Preservation Act (NHPA), Archaeological Resources Protection Act (ARPA), Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and Toxic Substance Control Act (TSCA). EOs bearing on the Proposed Action include EO 11988 (*Floodplain Management*), EO 11990 (*Protection of Wetlands*), EO 12088 (*Federal Compliance with Pollution Control Standards*), EO 12580 (*Superfund Implementation*), EO 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*), EO 13045 (*Protection of Children from Environmental Health Risks and Safety Risks*), EO 13101 (*Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition*), EO 13123 (*Greening the Government Through Efficient Energy Management*), EO 13148 (*Greening*

the Government Through Leadership in Environmental Management), EO 13175 (*Consultation and Coordination with Indian Tribal Governments*), and EO 13186 (*Responsibilities of Federal Agencies to Protect Migratory Birds*). The full text of the laws, regulations, and EOs is available on the Defense Environmental Network & Information Exchange web site at <http://www.denix.osd.mil>.

Management plans specifically applicable to MCAAP include the Installation Noise Management Plan; Hazardous Waste Minimization Plan; Hazardous Waste Management Plan, Spill Prevention Control and Countermeasures Plan, Integrated Natural Resources Management Plan, Integrated Solid Waste Management Plan, Pollution Prevention Plan, Stormwater Pollution Prevention Plan, Ozone Depleting Chemical Elimination Plan, Integrated Pest Management Plan, and the Integrated Cultural Resources Management Plan. These plans are addressed in various sections throughout this EA when relevant to particular environmental resources and conditions.

2.0 PROPOSED ACTION

2.1 Introduction

To support the BRAC recommendations, the Proposed Action includes the construction of a new 400-person AFRC and consolidated Organizational Maintenance Shop (OMS). The new AFRC would have the capability to accommodate Oklahoma ARNG units from the FMS in Durant, OK; the Oklahoma ARNG Readiness Centers in Atoka, Allen, Hartshorne, Madill, McAlester, and Tishomingo, OK; and the Oklahoma ARNG Readiness Center and FMS in Edmond, OK. The Proposed Action reduces costs for maintaining existing Oklahoma National Guard facilities by consolidating other units in the area into a single facility on an existing DoD installation. The Proposed Action also calls for construction of a new DRMS facility including a new Centralized DEMIL Processing Center (CDC).

The Proposed Action also includes relocation of the SFW/Cluster Bomb function and missile warhead production and field testing range to MCAAP from Kansas AAP and relocation of existing DEMIL and storage functions from Red River Army Depot, Sierra Army Depot, and Lone Star AAP to MCAAP. The new functions would allow for effective and efficient utilization of resources and personnel in support of the Army's mission.

Although additional Reserve and National Guard personnel would be temporarily present when those organizations are using facilities at MCAAP, only 15 to 50 new full-time personnel at the AFRC would be permanent from implementation of the BRAC Commission's realignment recommendations. Labor at the DRMS facility and for the SFW/Cluster Bomb function and missile warhead production and relocation of DEMIL and storage functions would be provided by MCAAP's existing permanent-on-call personnel.

Table 2.1-1 lists the estimated timeframes for the proposed construction/renovation projects. The relocation of DEMIL and storage functions would require no construction or renovation and would commence by 2011.

Table 2.1-1. Estimated Timeframes for Proposed Action Construction/Renovation Projects.

Facility Name	Estimated Construction Start	Estimated Construction End
AFRC and OMS	3/2008	3/2009
DRMS Facility	3/2010	2/2011
SFW/Cluster Bomb Facility renovation	2007	12/2008

2.2 Implementation Proposed

2.2.1 AFRC and OMS

The proposed AFRC and OMS would consist of permanent construction with reinforced concrete foundations, concrete floor slabs, structural steel frames, masonry veneer walls, standing seam metal roofs, heating, ventilation, and air conditioning (HVAC) systems, plumbing, mechanical systems, security systems, and electrical systems. This project would support 400 people and would permit all personnel to perform the necessary tasks that would improve the unit's readiness posture. Between 15 and 50 new full-time personnel would be stationed at the AFRC Complex. Use of the facilities by Reserve and National Guard units would be limited to weekends, when MCAAP is typically not operating.

The AFRC Complex would consist of the following:

- 98,746 square foot training facility
- 24,205 square yards of paved roads
- 4,747 square foot organizational maintenance building
- 7,300 square foot multi-use classroom barracks
- 155 square foot unheated storage facility

Supporting actions would include land clearing, paving, fencing, general site improvements, restoration of disturbed vegetation, and extension of utilities to serve the project. Force protection measures would be incorporated into the design including maximum standoff distance from roads, parking areas, and vehicle unloading areas. Standoff distances would be maintained wherever possible using active and passive vehicle restraining barriers. Passive barriers would include berms, boulders, trees, and other landscaping, as well as fencing, plant pots, bollards, and other obvious vehicle restraints. An approximate total of 328,793 square feet of facilities and roadways would be constructed within a 25-acre area.

It is probable that at least 15 vehicles would be associated with the AFRC Complex. Although specific functions have not been identified for the AFRC and OMS, standard activities at OMS facilities include all ranges of vehicle maintenance. Maintenance activities would be performed in enclosed buildings only. Used products, including brake shoes, petroleum, oil, lubricants, and anti-freeze, would be collected and disposed of by DRMS. Paint activities would be limited to touch up work only by spray can; there would be no paint booths at these facilities. There would be no fueling facilities or underground storage tanks.

2.2.2 DRMS FACILITY

The DRMS facility would consist of the following:

- 70,000 square foot warehouse facility for covered storage
- 18,773 square yards of paved roadway
- 16,000 square foot CDC, a single-story structure with mechanical and electrical equipment
- 35,000 square yard paved open storage space
- 4,000 square foot warehouse administrative space
- 3,000 square foot vehicle/Material Handling Exchange (MHE) storage facility with battery charging stations
- 2,000 square foot DEMIL administrative space
- 400 square foot scale house with restroom

The DRMS facility would also include an 80 foot by 12 foot above ground vehicle truck scale, gate radiation monitor, loading/unloading ramp, 10,000 square yards of open storage yard (HARDSTAND) for scrap processing, two underground oil/water separators for storm water drainage treatment, 6,400 square yards of ancillary parking, a new/extended asphalt access roadway, security fencing, and security lights. Site utilities would include electrical, water, natural gas, sanitary sewer, and communications. Fire protection and fire alarms; life safety and code compliance; handicap accessibility; facility HVAC and mechanical systems; and all other incidental related work to support the DRMS facility and mission would also be included. An

approximate total of 726,957 square feet of facilities and roadways would be constructed within a 39-acre area.

Operation of the DRMS facility would entail two to five non-munitions property deliveries per day by truck. Equipment used would include shredders for metallic and non-metallic materials and plasma torches for cutting. No hazardous materials would be processed or stored at the facility, although hazardous material could inadvertently be shipped to the facility. Some activities at the facility may involve draining fluids from equipment; these fluids would be stored and processed according to established procedures. Operation of the facility would result in an increase in scrap and solid waste generation at MCAAP.

2.2.3 RELOCATION OF SFW/CLUSTER BOMB FUNCTION AND MISSILE WARHEAD PRODUCTION

The SFW/Cluster Bomb functions and missile warhead production would be relocated from Kansas AAP to MCAAP into the following existing production facilities already in place:

- 19,000 square foot brick structure with 20 explosive bays including blast walls
- 3,400 square foot administrative space
- 10 square foot paint booth

Climate control for the submunition assembly areas and fire protection for the entire facility with high speed deluge in the powder pressing area would also be included. Some renovation of the existing building would be necessary, including the addition of approximately 11,000 square feet of static-free flooring and new fiber optics. The facility would have the capacity to produce from 250 to 609 SFW/cluster bomb units per year. Once assembled, each unit is striped and stenciled in a paint booth.

In support of production, a periodic live firing of a warhead is required (approximately once per 300 units produced). The test range at Kansas AAP would be duplicated at MCAAP, potentially at the existing Defense Ammunition Center's Demolition Range or at the new burning grounds. Although the final location for the test range has not yet been determined, it would likely be located on an existing range with similar function. Follow-on analysis may be required for this new test range.

2.2.4 RELOCATION OF MUNITIONS STORAGE AND DEMIL FUNCTIONS

Munitions storage and DEMIL functions would be relocated from Red River Army Depot, Sierra Army Depot, and Lone Star AAP to MCAAP. Red River, Sierra, and Lone Star would be relocating current stocks to existing storage and DEMIL facilities already located on MCAAP. MCAAP would accommodate the shipping, receiving, and storage of these new munitions primarily using existing facilities. In addition, up to ten storage sheds of approximately 5,000 square feet apiece would be erected to house missiles and some existing facilities would be converted from other uses, particularly for the testing and certification of munitions. Testing and certification would involve testing the accuracy of the internal parts of the missiles, especially the transport missile components, to certify the munition for further storage or shipment and use. The facilities to be converted would be located in an area known as the Rocket Area west of Brown Lake, which was so named because the area has been used over the years for assembly

and testing of rockets (now called missiles because they have guidance systems), and the sheds would be located on previously disturbed sites in the ammunition supply/storage area, which is roughly the western half of the plant.

No additional DEMIL is currently scheduled unless future funding is appropriated for such actions. MCAAP has a maximum DEMIL capacity of 62,000 short tons per year (short ton = U.S. ton = 2,000 pounds), but since FY 2000 MCAAP has never exceeded 12,000 short tons per year.

The relocation of DEMIL functions would use existing facilities and would not exceed existing capacity. There would be no substantial change in operations at MCAAP for these storage and DEMIL functions.

3.0 ALTERNATIVES

This section discusses all alternatives considered feasible, including all site locations, facilities, and the No Action Alternative.

3.1 Introduction

To support and sustain its current and future mission, MCAAP has programmed the construction of new or use of existing facilities, including structures, roads, and parking lots. Details for each of the proposed alternatives are described below in Section 3.2. Section 3.3 discusses the alternatives carried forward in this EA and Section 3.4 discusses the alternatives eliminated from detailed evaluation. Figure 3.1-1 highlights all proposed site locations considered for AFRC/OMS and DRMS facility construction.

3.2 Proposed Alternatives Screened for Evaluation

Potential site locations for the AFRC and OMS and the DRMS facility were screened for inclusion in this EA. Screening criteria consists of operational constraints, safety constraints, geographic constraints, and existing facility and mission constraints. Reuse of existing facilities was not considered, because there are no existing facilities available that could adequately house or support the mission of the proposed AFRC and OMS and DRMS facility. The following describes the constraints considered in the evaluation process. Table 3.2-1 summarizes the selection criteria as applied to each proposed site.

Safety Constraints

- Engineering (Explosive Arcs)
- Operational safety

Geographic Constraints

- Availability of sufficient land area
- Access and security availability
- Proximity to operationally related facilities and utilities

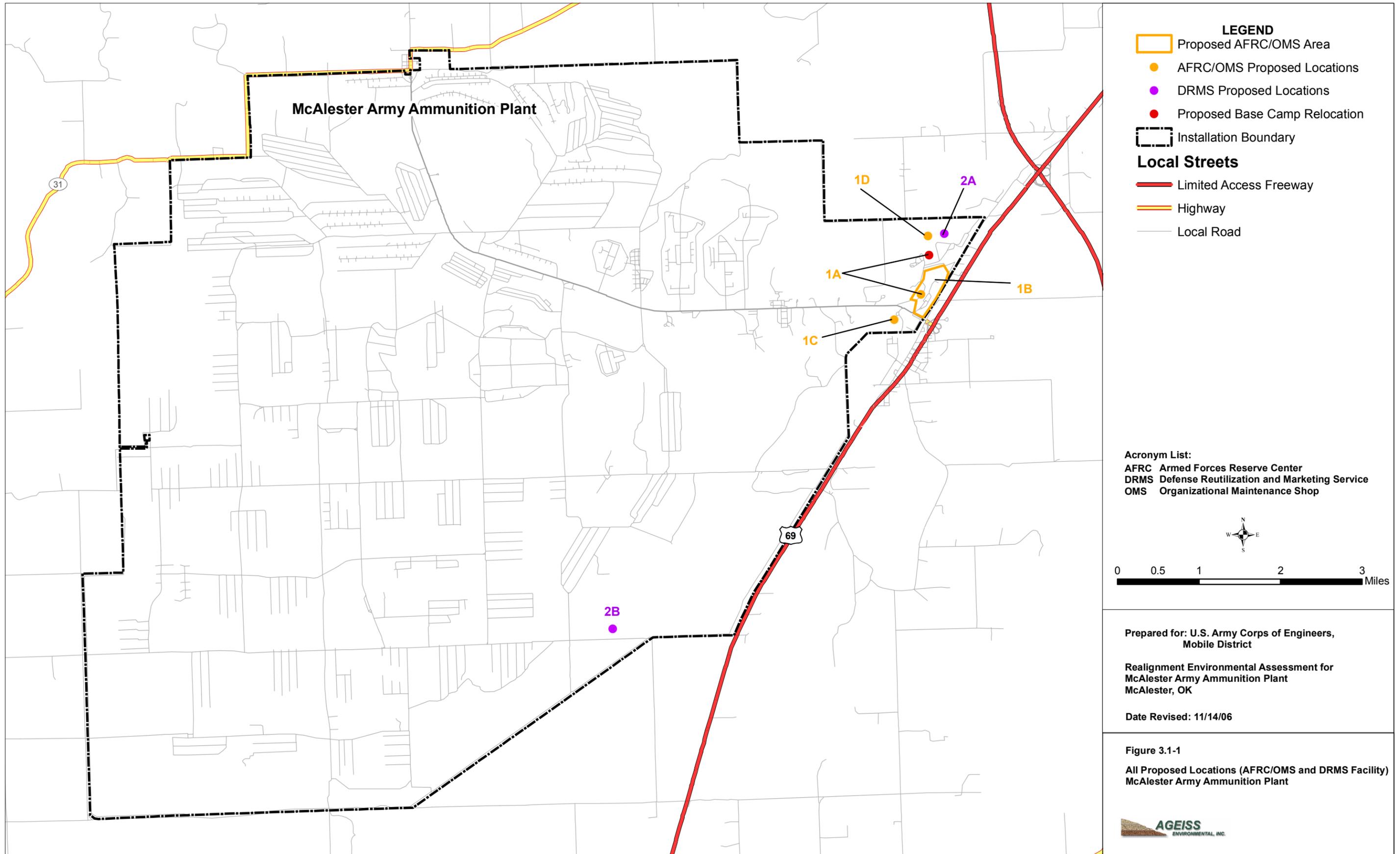
Existing Facility and Mission Constraints

- Interference with existing missions and training
- Infrastructure demand (increase in water, electricity, and other needs)
- Limited future expansion possibilities

Operational Constraints

- Relocation of existing facilities
- Construction of new infrastructure
- Possible elevated noise levels

Based on the selection criteria, three alternatives, including the No Action Alternative, were developed for evaluation in the EA. Details of the three alternatives are described below.



This page intentionally left blank.

Table 3.2-1. Selection Criteria for Each Site.

Map ID	Location Description	Operational Constraints	Safety Constraints	Geographic Constraints	Existing Facility and Mission Constraints	Carried Forward to EA or Not Carried Forward?
1A	AFRC and OMS located in area northeast of Main Gate at current location of Base Camp Base Camp relocated to a new area outside of the proposed AFRC/OMS area	Need for water tower, burden on existing roads	None	None	Need to relocate Base Camp	Considered in EA
1B	AFRC and OMS located in area northeast of Main Gate, buildings co-located or located separately Base Camp would remain in the proposed AFRC/OMS area, either at current location or moved to a new location	Need for water tower, burden on existing roads	None	Overlapping inconsistent uses	None	Considered in EA
1C	AFRC and OMS in area south of Main Gate	Need for water tower, burden on existing roads	None	Not enough land	None	Not carried forward
1D	AFRC and OMS located near Quonset huts (Dahlstrom area)	None	None	None	Site considered more ideal for DRMS facility	Not carried forward
2A	DRMS facility located in northeast corner of plant (Dahlstrom area)	Possible elevated noise levels	None	None	None	Considered in EA
2B	DRMS facility located in southeast corner of the plant (Ashland Road area)	Utility infrastructure needed (long water line), long emergency response times	None	None	Daily short noise from demo pits	Not carried forward

AFRC Armed Forces Reserve Center
Base Camp Mature Theater of Operation Advanced Logistics Base Camp Force Provider Unit Training Center
DRMS Defense Reutilization and Marketing Service
EA environmental assessment
OMS Organizational Maintenance Shop

3.2.1 ALTERNATIVE 1 – PREFERRED ALTERNATIVE

Under Alternative 1, the AFRC would be constructed in the Mature Theater of Operation Advanced Logistics Base Camp Force Provider Unit Training Center (“Base Camp”) area on top of the hill just northeast of the Main Gate (Figure 3.1-1, location 1A). The OMS facility would be constructed adjacent to the AFRC in the same location. The proposed buildings and supporting facilities are discussed in Section 2.0. Under this alternative, Base Camp (consisting of 50 concrete pads and associated facilities, comprising 156,550 square feet of facilities within a 15-acre area) would be relocated east of Building 28 and just to the west of the proposed DRMS facility (see Figure 3.1-1). The new Base Camp would meet the newest design requirements from Army Materiel Command and Army Training and Doctrine Command. Within the Base Camp footprint a consolidated mess hall and latrine facility would also be constructed. Demolition of six trailers, a dining hall, a laundry facility, two shower facilities, and a freezer would also take place under this alternative. Existing access roads, utility, and sewer easements would be used at this location. A new water tower would be constructed to address low water pressure in the area. New fencing would also be constructed to enclose the new AFRC and OMS facilities.

The DRMS facility would be located in the northeast corner of the plant, in the Dahlstrom area, west of the Quonset huts (Figure 3.1-1, location 2A). The proposed buildings and supporting facilities are discussed in Section 2.0. Advantages to this site location include ample expansion room, minimal impact on the ammunition plant, and existing warehouses on site could be used with the existing vehicle rail loading dock.

The relocation of SFW/Cluster Bomb functions and missile warhead production would be placed into existing facilities on MCAAP. The relocation of munitions storage and DEMIL functions would also be relocated from Red River Army Depot, Sierra Army Depot, and Lone Star AAP into existing facilities on MCAAP. MCAAP would accommodate the shipping, receiving, and storage of these new munitions primarily using existing facilities. In addition, up to ten storage sheds would be erected to house missiles and some existing facilities would be converted from other uses, particularly for the testing and certification of munitions. The facilities to be converted would be located in an area known as the Rocket Area west of Brown Lake, which was so named because the area has been used over the years for assembly and testing of rockets (now called missiles because they have guidance systems), and the sheds would be located on previously disturbed sites in the ammunition supply/storage area, which is roughly the western half of the plant.

Based on the results of the screening described in Section 3.2, Alternative 1 is the Preferred Alternative.

3.2.2 ALTERNATIVE 2

Under Alternative 2, the AFRC and the OMS would be located within the area northeast of the Main Gate (Figure 3.1-1, location 1B). The buildings, comprising approximately 7.5 acres on a total of about 25 acres of land, could either be co-located within the 75-acre proposed AFRC/OMS area or located individually within the area. Under this alternative, Base Camp would remain at its current location or be moved to a new location within the proposed AFRC/OMS area. In a likely scenario under Alternative 2, the AFRC and OMS would be

located together south of Base Camp, and Base Camp would not be moved. Existing access roads, utility, and sewer easements would be used at this location. A new water tower would be constructed to address low water pressure in the area. New fencing would also be constructed to enclose the AFRC and OMS facilities.

The DRMS facility would be located as described under Alternative 1. The relocation of SFW/Cluster Bomb functions and missile warhead production and the relocation of munitions storage and DEMIL functions would be as described under Alternative 1.

3.2.3 ALTERNATIVE 3 – NO ACTION ALTERNATIVE

The No Action Alternative is included as required by the CEQ regulations to identify the existing baseline conditions against which potential impacts are evaluated. The No Action Alternative must be described because it is the baseline condition or the current status of the environment if the Proposed Action is not implemented. For realignment actions directed by the BRAC Commission, it is noted that the No Action Alternative is not feasible.

Under the No Action Alternative, the proposed facilities would not be constructed or renovated to accommodate the BRAC actions as described in Section 2.0. Under the No Action Alternative, the relocation of the SFW/Cluster Bomb function and missile warhead production from Kansas AAP to MCAAP would not be implemented. Under the No Action Alternative, the relocation of munitions storage and DEMIL functions from Lone Star, Red River, and Sierra to MCAAP would not be implemented.

3.3 Alternatives Carried Forward

Alternatives 1, 2, and 3 are carried forward and evaluated in this EA. Under Alternatives 1 and 2, the AFRC and OMS would be northeast of the Main Gate. The alternatives differ in that under Alternative 1 (Figure 3.1-1, location 1A), the AFRC and OMS would be built overtop of the existing Base Camp, which would be relocated east of Building 28 and just to the west of the proposed DRMS facility. Within the Base Camp footprint, tent pads and a consolidated mess hall and latrine facility would be constructed. Under Alternative 2, the AFRC and OMS may be located anywhere within the 75-acre proposed AFRC/OMS area (Figure 3.1-1, location 1B), and Base Camp would either be left in place or moved elsewhere within the 75-acre proposed AFRC/OMS area. Alternative 1 is the Preferred Alternative because it best maintains the integrity of Base Camp, in that it provides separation between Base Camp and the AFRC/OMS complex, which would be used by different commands. Alternative 3 is the No Action Alternative and is required to be carried forward by CEQ. Since the Proposed Action is being driven by Congress, the No Action Alternative is carried forward solely to serve as a benchmark against which to evaluate the Proposed Action.

3.4 Alternatives Considered and Not Carried Forward

The following site locations were considered and not carried forward for further evaluation based upon the criteria discussed in Section 3.2, and are not carried forward for environmental analysis and design/construct practicability.

- AFRC and OMS in an area south of the Main Gate (Figure 3.1-1, location 1C). This area is not feasible because it does not have the required amount of land for the AFRC and OMS. The proposed construction requires 40 acres and the proposed site has a maximum area of only 12 acres available. Therefore, this location was dismissed and is not carried forward.
- AFRC and OMS located in the northeast corner of the plant near the Quonset huts (the Dahlstrom area) (Figure 3.1-1, location 1D). The following factors prevent this location from being carried forward:
 - This area is not feasible due to its location being judged to be more suitable for the DRMS facility.
 - Old Dahlstrom warehouses would need to be replaced, causing a significant increase in cost to the project.
 - New entrance would have to be constructed with a bridge over the Union Pacific Railroad main line and an interchange with heavily-traveled State Route 69.
- DRMS facility located in southeast corner of the plant (Ashland Road area) (Figure 3.1-1, location 2B). The following factors prevent this location from being carried forward:
 - Utility infrastructure needed (long water line)
 - Long fire and emergency response distances
 - Rail access may need to be constructed
 - Daily short noise from demo pits

4.0 AFFECTED ENVIRONMENT AND CONSEQUENCES

4.1 Introduction

This chapter describes the existing environmental and human resources that could potentially be affected by the Proposed Action and alternatives. The environment described in this chapter is the baseline for the consequences that are presented for each resource and each alternative. The region of influence (ROI), or study area for each resource category is MCAAP and its surroundings, unless stated otherwise in the individual resource category discussion. Most of the baseline information was taken from existing MCAAP documentation.

This chapter also describes potential impacts for each environmental and human resource. An impact is defined as a consequence from modification to the existing environment due to a proposed action or alternative. Impacts can be beneficial or adverse, can be a primary result of an action (direct) or a secondary result (indirect), and can be permanent or long lasting (long term) or temporary and of short duration (short term). Impacts can vary in degree from a slightly noticeable change to a total change in the environment.

For this EA, short-term impacts are defined as those impacts resulting from construction, renovation, or demolition activities (e.g., those that are of temporary duration), whereas long-term impacts are those resulting from the presence of new facilities and operation of the proposed new facilities once they are constructed and commissioned for operation.

Significance criteria were developed for the affected resource categories, and for many resource categories, are necessarily qualitative in nature. Quantitative criteria can be established when there are specific numerical limits established by regulation or industry standard. These criteria are based on existing regulatory standards, scientific and environmental documentation, and/or professional judgment. Impacts are classified as significant or not significant based on the significance criteria. Significant impacts are those which would exceed the quantitative or qualitative limits of the established criteria, such as actions that would threaten a violation of Federal, state or local law or requirements imposed for the protection of the environment, or that would have adverse effects upon public health or safety. Impacts do not necessarily mean negative changes, and any detectable change is not, in and of itself, considered to be negative. In the following discussions, to highlight adverse impacts for the decision maker, the impacts are considered adverse unless identified as beneficial.

The affected environment and baseline conditions are described for each resource in general terms for MCAAP or the resource-specific ROI. The affected environment description for each resource is followed by the potential impacts to the resource from Alternative 1 (the Preferred Alternative), Alternative 2, and the No Action Alternative.

4.2 Land Use

4.2.1 AFFECTED ENVIRONMENT

This section describes existing land use conditions on and surrounding MCAAP. It considers natural land uses and land uses that reflect human modification. Natural land use classifications include wildlife areas, forests, and other open or undeveloped areas. Human land uses include residential, commercial, industrial, utilities, agricultural, recreational, and other developed uses.

Management plans, policies, ordinances, and regulations determine the types of uses that are allowable, or protect specially designated or environmentally sensitive uses.

The following sections discuss the regional geographic setting, location, and climate, installation land use, and current and future development. The ROI for land use is the land within and adjacent to the limits of the Proposed Action project areas.

4.2.1.1 Regional Geographic Setting, Location, and Climate

MCAAP is located in Pittsburg County, OK, approximately 9 miles southwest of the City of McAlester (see Figure 1.1-1). It is approximately 100 miles south of Tulsa and 130 miles southeast of Oklahoma City. McAlester is the largest city in Pittsburg County, and nearby smaller towns include Savanna, on U.S. Highway 69 to the east of the installation, and Haywood, on State Route 31 to the north. The region is characterized by relatively flat terrain with some areas of rolling hills. Development in the area is generally concentrated in small towns surrounded by farmland.

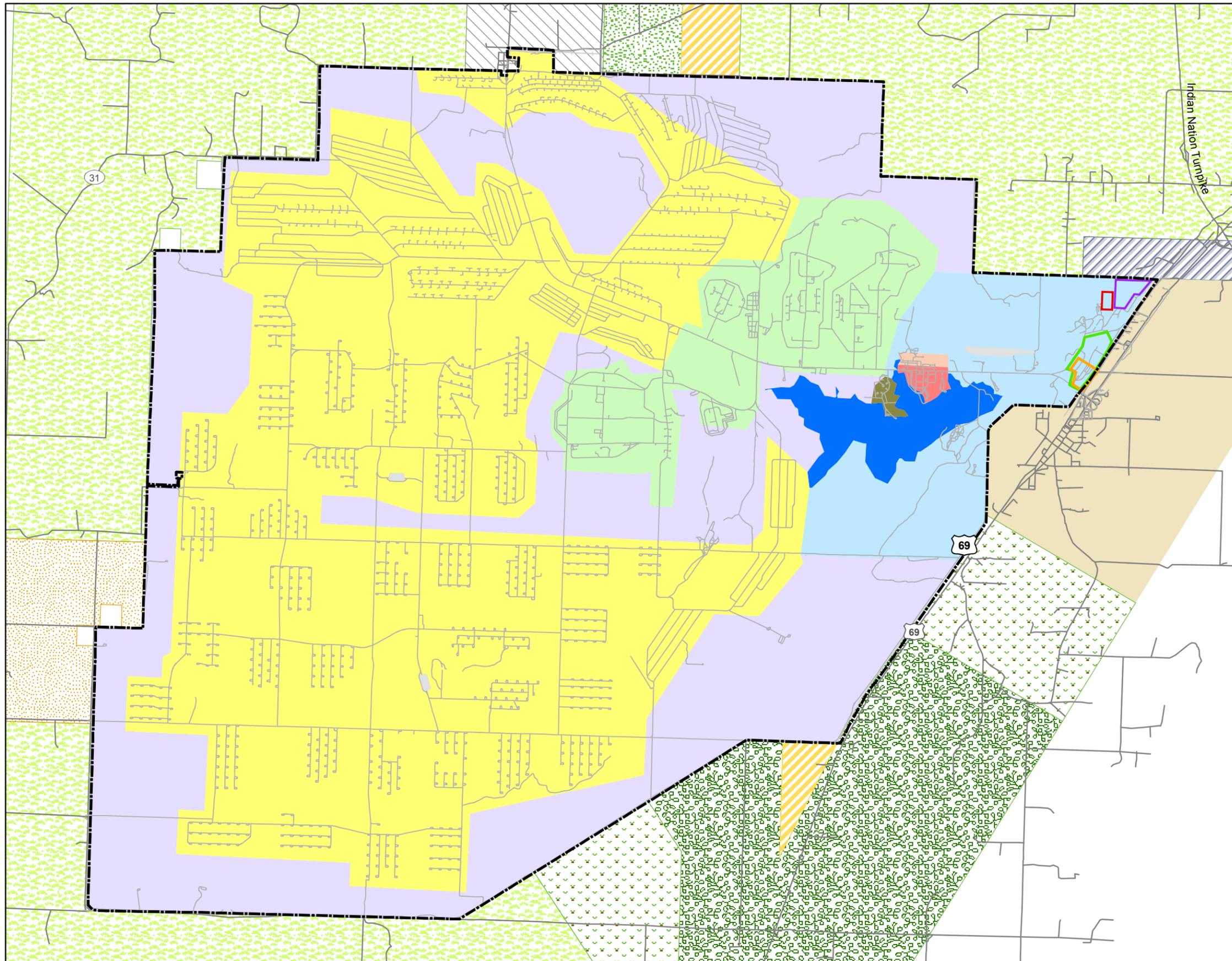
Climate of the MCAAP area is characterized as warm, moist, and temperate to subtropical. A continental pattern of warm, moist air from the Gulf of Mexico frequently colliding with cooler air masses from the west and north results in wide temperature ranges. Monthly mean temperatures range from a high of 82° F in July and August and a low of 39° F in January. The average annual temperature is about 62° F, and an average frost-free season is 210 days. Precipitation is well distributed throughout the year with peak rainfall occurring in May. Average annual rainfall is about 45 inches. Snowfall accounts for only about 5 percent of total annual precipitation, and mean annual snowfall is about 4 inches. Tornadoes occasionally occur in March, April, and May, but most affect small areas and cause limited damage. Large hail and/or destructive winds occasionally accompany thunderstorms in late spring and early summer (MCAAP 2005).

4.2.1.2 Installation Land Use

A land use plan was developed for MCAAP in 1995. This plan assists in planning for future growth and development, and promotes compatible and coordinated uses of land. The land on the installation is divided into the following seven major land use zones (MCAAP 2005; MCAAP 1995):

- Administration
- Ammunition Supply/Storage
- Buffer
- Family Housing
- Industrial
- Production
- Training

Figure 4.2-1 shows these existing land uses. Other land uses, including Community and Outdoor Recreation Facilities, are integrated into the Administration, Buffer, and Family Housing land use zones.



LEGEND

- Installation Boundary
- Proposed Base Camp Relocation (Preferred Alternative)
- Railroad Station
- Proposed AFRC/OMS Location (Preferred Alternative)
- Proposed AFRC/OMS Area (Alternative 2)
- Proposed DRMS Facility Location
- Roads

On-Plant Land Uses

- Administrative Area
- Ammunition Storage
- Brown Lake
- Buffer Zones
- Family Housing
- Industrial Area
- Production Area
- Training Area

Off-Plant Land Uses

- Bulk Oil Storage
- Haywood Townsite
- Homestead
- Pasture
- Pasture and Woodland
- Pasture, Mixed Open & Wooded
- Row Crops
- Row Crops & Open Pasture
- Savanna Townsite

Acronym List:

- AFRC** Armed Forces Reserve Center
- DRMS** Defense Reutilization and Marketing Service
- OMS** Organizational Maintenance Shop

0 0.5 1 2 Miles

Prepared for: U.S. Army Corps of Engineers,
Mobile District

Realignment Environmental Assessment for
McAlester Army Ammunition Plant
McAlester, OK

Date Revised: 11/14/06

Figure 4.2-1
Existing Land Use on and around
McAlester Army Ammunition Plant



This page intentionally left blank.

MCAAP is irregularly shaped and includes approximately 44,965 acres, or approximately 70 square miles of land and water. Of this area, the largest land area at MCAAP is used for ammunition supply/storage (52 percent), followed by the buffer zones (32 percent), production areas (7 percent), and training areas (7 percent). The remaining land use zones each comprise 1 percent or less of the installation's land area.

The environment potentially affected by construction of either Proposed Action alternative includes portions of the Training land use zone. Training areas are primarily used by Army reserve units for land navigation training and other basic training, and to house these reserve units while at MCAAP.

MCAAP has completed an Integrated Natural Resources Management Plan 2005 - 2009 (and incorporated EA) to guide implementation of the installation's natural resources program. The program conserves MCAAP's land and natural resources and helps ensure compliance with environmental laws and regulations. The management plan is designed to provide an inventory of natural resources and outlines objectives for managing soil, forest, agriculture, and habitat resources in a manner consistent with and in support of the overall military mission on the installation (MCAAP 2005).

The bulk of the land on MCAAP is comprised of unimproved grounds including wildlife areas, hay meadow production areas, lakes, ponds, streams, and buffers between ammunition magazines (40,426 acres). Semi-improved grounds, such as utility rights-of-way, ammunition magazines, wildlife food plots, road shoulders, fire breaks, fence lines, small arms ranges, and picnic areas, comprise 2,974 acres of land. Other grounds, including improved grounds which are maintained for aesthetic purposes as well as buildings, roads, and other paved areas, comprise the remaining 1,565 acres of the installation's land (MCAAP 2005).

MCAAP provides hunting and fishing opportunities to installation personnel and the general public. The installation is divided into four areas for deer and fall turkey hunting, and 12 areas for spring turkey hunting. The environment potentially affected by construction of either Proposed Action alternative includes portions of the Deer Creek deer and fall turkey hunting area and the Gobbler spring turkey hunting area.

4.2.1.3 Current and Future Development in the Region of Influence

Most of the land surrounding MCAAP is undeveloped land used for agriculture or maintained as open space. The Savanna town site is adjacent to the central eastern edge of the installation and the Haywood town site is adjacent to the central northern boundary of the installation. The remainder of the surrounding land is mostly woodland and pasture as shown in Figure 4.2-1.

Developable land on MCAAP is constrained by explosive safety arcs, range safety fans, and natural features, such as floodplains, wetlands, and bottomland forest. There are no planned future reclassifications of land use zoning on the installation. Although there is unconstrained developable land within each land use area, the acreage of this developable land is unavailable.

Construction areas for the Proposed Action are located in the vicinity of existing Reserve Components facilities, in the case of the AFRC and OMS, and in currently undeveloped land

near warehouses in the case of the DRMS facility and the proposed relocation site of Base Camp. No other future development has been planned for these areas.

4.2.2 CONSEQUENCES

Considerations for impacts to land use include the land on and adjacent to each Proposed Action project area, the physical features that influence current or proposed uses, pertinent land use plans and regulations, and land availability. Conformity with existing land use is of utmost importance.

Potential impacts to land use are considered significant if the Proposed Action would:

- Conflict with applicable ordinances and/or permit requirements;
- Cause nonconformance with the current general plans and land use plans, or preclude adjacent or nearby properties from being used for existing activities; or
- Conflict with established uses of an area requiring mitigation.

4.2.2.1 Alternative 1 – Preferred Alternative

Overall, potential impacts to land use from Alternative 1 would not be significant. Alternative 1 would be contained within MCAAP, which sets its own land use and zoning designations, and would not present conflicts or nonconformance with current local or state land use or zoning designations. Existing land uses external to the installation would not be affected by on-post land-use decisions related to Alternative 1; thus, there would be no discernible impact to these land uses. Impacts to land use are the same for both construction and operation of the proposed facilities.

Although Alternative 1 would not significantly conflict with currently planned land uses on-post, it would cause the loss of approximately 1 percent of land designated as training area due to conversion to other land uses. Implementation of Alternative 1 would also cause the closure of approximately 64 acres of land currently designated as hunting areas, but would not significantly conflict with MCAAP's land management plans. Hunting area closures would include 54 acres, or 1.5 percent, of the Gobbler spring turkey hunting area due to construction of the DRMS facility and relocated Mature Theater of Operation Advanced Logistics Base Camp Force Provider Unit Training Center ("Base Camp"), and 59 acres, or 0.5 percent, of the Deer Creek deer and fall turkey hunting area due to construction of the AFRC/OMS complex, DRMS facility, and relocated Base Camp. The Gobbler and Deer Creek hunting areas overlay each other for the most part. Impacts from Alternative 1 are discussed below separately for the AFRC and OMS, DRMS facility, relocation of SFW/Cluster Bomb and missile warhead production, and relocation of DEMIL and storage and testing functions.

AFRC and OMS. Construction of the AFRC and OMS on the site of the existing Base Camp would require the relocation of Base Camp and its associated facilities to an area east of Building 28 and just to the west of the proposed DRMS facility. The relocated Base Camp would meet the newest design requirements from Army Materiel Command and Army Training and Doctrine Command garnered from the Global War on Terrorism, updating the current Base Camp layout, which was designed under the Force Provider standards from 1997. The areas proposed for construction of the AFRC/OMS complex and relocated Base Camp are already classified as

“training areas”, and the creation of a new reserve center at MCAAP is considered a desirable objective in MCAAP’s master planning program (MCAAP 1995).

DRMS facility. Construction of the DRMS facility in the Dahlstrom area would necessitate the on-post land use designation to change from “training area” to “industrial area” subsequent to construction of the proposed facilities. The Army is being forced to make do with less in terms of both quality and quantity of training lands (MCAAP 2005), and this particular action would result in a loss of approximately 1 percent of the training areas currently at MCAAP.

SFW/Cluster Bomb and missile warhead production. No adverse impacts would result from the relocation of SFW/Cluster Bomb and missile warhead production, including the associated field testing range, to MCAAP. Because these new functions would be integrated into existing facilities on MCAAP, the achievement of existing land use objectives would be furthered.

DEMIL and storage relocation. No adverse impacts would result from the relocation of DEMIL and storage and testing functions. Because these new functions would be integrated into existing facilities on MCAAP and storage sheds would be erected on land previously used for similar purposes, the achievement of existing land use objectives would be furthered.

4.2.2.2 Alternative 2

Overall, potential impacts to land use from Alternative 2 would not be significant. Potential land use impacts from Alternative 2 would be the same as for Alternative 1 for all of the Proposed Action facilities, although there are differences in impacts to designated hunting areas. Construction of facilities under Alternative 2 would result in the closure of 39 acres, or 1 percent, of the Gobbler spring turkey hunting area due to construction of the DRMS facility, and up to 79 acres, or 0.7 percent, of the Deer Creek deer and fall turkey hunting area due to construction of the AFRC/OMS complex, DRMS facility, and potentially relocated Base Camp, depending on where the AFRC, OMS, and Base Camp are located within the 75-acre proposed AFRC/OMS area.

4.2.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to land use.

4.3 Aesthetics and Visual Resources

4.3.1 AFFECTED ENVIRONMENT

This section describes the existing aesthetic and visual resource conditions at MCAAP. The visual resources of MCAAP include natural and manmade physical features that provide the landscape its character and value as an environmental resource. Landscape features that form a viewer’s overall impression about an area include landform, vegetation, water, color, adjacent scenery, scarcity, and constructed modifications to the natural setting. The ROI for aesthetics includes the areas visible from the Proposed Action construction locations and areas from which the Proposed Action construction locations are visible.

MCAAP and the surrounding area are characterized by a mixture of gently rolling hills and grassy plains typical of the Midwestern United States. A mix of architectural styles is present on the installation: formal, informal, and purely functional examples of architecture are all present.

In general, World War II era buildings on the installation reflect a utilitarian sense of purpose but are well maintained, whereas newer buildings have a more contemporary aesthetic.

Views in the existing Base Camp area are dominated by a broad grassy hill, traversed by several paved roads and surrounded on all sides but the south by forestlands or buffer strips of trees. The existing Base Camp sits atop this hill and consists of 50 concrete tent pads, six trailer-type temporary facilities, one frame house-type structure dating from the 1940s, and four utilitarian one-story brick buildings. U.S. Highway 69 and the railroad tracks that run parallel to it are shielded from this location by a strip of trees. The main gate area is visible from this location, and consists of one-story brick structures dating from the 1940s and stark, utilitarian security barriers.

The Dahlstrom area consists of a mixture of 1940s-era Quonset style warehouses and newer single-story industrial and recreational facilities, and also includes views of forestland and grassy areas as well as shrub-dominated open space. This area is traversed by paved roads and railroad tracks.

There is limited public access to MCAAP. Safety and functionality are the primary considerations for use of installation land to support military mission-related and support activities, although multiple uses, including outdoor recreation opportunities for the public, are also supported by MCAAP's mission. The exterior appearance of structures and landscaping are considered only when all other functional needs are fulfilled; however, because visually appealing and calming surroundings have a positive impact on worker productivity and morale as well as visitor impressions, aesthetics on MCAAP are approached with due consideration by planners and facility managers.

MCAAP is tailoring an Installation Design Guide to meet the specific needs of the installation. By identifying ideal design characteristics for functionality and aesthetics, and then identifying the strengths and weaknesses of the current installation, this effort is meant to help formulate objectives that will lead to design consistency, a sense of place, and continuity with the natural landscape.

4.3.2 CONSEQUENCES

Potential impacts to aesthetic and visual resources are considered significant if the Proposed Action would substantially degrade the natural or constructed physical features at MCAAP that provide the installation its character and value as an environmental resource. The magnitude of any impact would be primarily determined by the number of viewers affected, viewer sensitivity to changes, distance of viewing, and compatibility with existing land use.

4.3.2.1 Alternative 1 – Preferred Alternative

Overall, potential impacts to aesthetics and visual resources from Alternative 1 would not be significant. Alternative 1 would cause short-term visual impacts on MCAAP resulting from ground disturbance associated with demolition of the existing Base Camp and construction or renovation of the proposed facilities. However, the reclamation of disturbed areas would remove these visual impacts.

Long-term impacts from Alternative 1 are discussed below separately for the AFRC and OMS, DRMS facility, relocation of SFW/Cluster Bomb and missile warhead production, and relocation of DEMIL and storage and testing functions.

AFRC and OMS. Construction of the AFRC and OMS on the site of the existing Base Camp would result in beneficial visual impacts to the site, as older, utilitarian, and temporary structures would be demolished, allowing for a cohesive, modern, and well-landscaped complex of buildings to be one of the first and last sights seen by visitors as they enter and exit the installation. Additionally, force protection measures would be incorporated into the design of the facility, such that the makeshift, aesthetically-unappealing bollards in place at older buildings on the installation would be unnecessary. Relocation of Base Camp and its associated facilities to an area east of Building 28 and just to the west of the proposed DRMS facility would result in minor adverse aesthetic impacts by eliminating approximately 15 acres of open shrubland and trees and replacing this vegetation with a training camp facility, including 50 concrete tent pads, a mess hall, kitchen, and latrine. Operations at the AFRC and OMS and the relocated Base Camp would result in minor adverse aesthetic impacts, including increased traffic and nighttime light, resulting from increased use during weekends when the facilities are in use by tenant organizations.

DRMS facility. Construction of the DRMS facility in the Dahlstrom area would eliminate approximately 39 acres of open shrubland and trees and replace this vegetation with an industrial facility. Coupled with the proximity of nine aged Quonset warehouses, this action would have minor adverse impacts to aesthetic resources. Operations at the DRMS facility would result in minor aesthetic impacts from increased truck traffic on the installation and from increased nighttime light. The DRMS facility would be shielded from off-plant viewers during the day by a buffer of trees, but it is possible that nighttime light from the DRMS facility would attract the attention of nighttime observers; however, this light would be unlikely to dominate the view of a casual observer. Although Base Camp would be relocated near the DRMS facility under Alternative 1, on-plant viewers would be familiar with the purpose and process of military or defense-related activities, and would be more likely to accept them as a necessary part of the installation's mission and thus be less sensitive to the visual impacts.

SFW/Cluster Bomb and missile warhead production. No long-term impacts to aesthetic resources would result from the relocation of SFW/Cluster Bomb and missile warhead production, including the field testing range, to MCAAP.

DEMIL and storage relocation. No long-term impacts to aesthetic resources would result from the relocation of DEMIL and storage and testing functions.

4.3.2.2 Alternative 2

Overall, potential impacts to aesthetics from Alternative 2 would not be significant. Potential impacts to aesthetic and visual resources from Alternative 2 would be the same as for Alternative 1 for the relocation of SFW/Cluster Bomb and missile warhead production and relocation of DEMIL and storage functions.

AFRC and OMS. As under Alternative 1, visual impacts would be positive in that modern and well-landscaped buildings would be one of the first and last sights seen by visitors as they enter

and exit the installation, especially if the AFRC and OMS are built south of the existing Base Camp. However, the juxtaposition of two modern facilities adjacent to the existing Base Camp would result in minor adverse impacts, as the continuity of design of the new facilities would highlight the older, unmatched assortment of buildings that comprise Base Camp. These adverse impacts could be avoided if Base Camp were rebuilt with new buildings within this 75-acre area; however, rebuilding Base Camp would result in the additional elimination of open shrubland and trees in the northern portion of this 75-acre area.

DRMS facility. Construction of the DRMS facility in the Dahlstrom area would result in the same impacts as it would under Alternative 1 except that nighttime lights from the DRMS facility would not reach or have any impacts upon Base Camp.

4.3.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to aesthetics and visual resources.

4.4 Air Quality

4.4.1 AFFECTED ENVIRONMENT

This section describes the existing air quality conditions at and surrounding MCAAP. Ambient air quality conditions are discussed first followed by emission sources at MCAAP.

4.4.1.1 Ambient Air Quality Conditions

The ambient air quality in an area can be characterized in terms of whether it complies with the primary and secondary National Ambient Air Quality Standards (NAAQS). The CAA requires the U.S. Environmental Protection Agency (EPA) to set NAAQS for pollutants considered harmful to public health and the environment. NAAQS have been established for seven criteria pollutants: carbon monoxide (CO); lead (Pb); nitrogen dioxide (NO₂); ozone (O₃); particulate matter with an aerodynamic size less than or equal to 10 microns (PM₁₀); particulate matter with an aerodynamic size less than or equal to 2.5 microns (PM_{2.5}); and sulfur dioxide (SO₂). These pollutants are believed to be detrimental to public health and the environment, and are known to cause property damage. Table 4.4-1 lists the NAAQS values for each criteria pollutant.

Table 4.4-1. National Ambient Air Quality Standards.

Pollutant	Standard Value
Carbon monoxide (CO)	
8-hour average	9 ppm (10 mg/m ³)
1-hour average	35 ppm (40 mg/m ³)
Lead (Pb)	
Quarterly average	1.5 µg/m ³
Nitrogen dioxide (NO₂)	
Annual arithmetic mean	0.053 ppm (100 µg/m ³)
Ozone (O₃)	
1-hour average	0.12 ppm (235 µg/m ³)
8-hour average	0.08 ppm (157 µg/m ³)

Pollutant	Standard Value
Particulate matter less than 10 microns (PM₁₀)	
Annual arithmetic mean	50 µg/m ³
24-hour average	150 µg/m ³
Particulate matter less than 2.5 microns (PM_{2.5})	
Annual arithmetic mean	15 µg/m ³
24-hour average	65 µg/m ³
Sulfur dioxide (SO₂)	
Annual arithmetic mean	0.03 ppm (80 µg/m ³)
24-hour average	0.14 ppm (365 µg/m ³)

Source: EPA 2004

µg/m³ micrograms per cubic meter

mg/m³ milligrams per cubic meter

ppm parts per million

General air quality monitoring is conducted in areas of high population density and near major sources of air pollutant emissions. Rural areas are typically not considered in such monitoring. Regions that are in compliance with the NAAQS are designated as attainment areas. Areas for which no monitoring data is available are designated as unclassified and are by default considered to be in attainment of the NAAQS. In areas where the applicable NAAQS are not being met, a non-attainment status is designated (EPA 2004).

MCAAP is within EPA Region 6. There are no permanent ambient air quality monitoring stations located in Pittsburg County and only one special purpose monitor is located in McAlester. All counties in Oklahoma, including the Southeastern Oklahoma Air Quality Control Region that includes Pittsburg County, are designated as attainment or unclassifiable/attainment for all Federal ambient air quality standards (40 CFR 81.337).

All ozone monitoring sites that have been in operation for 3 years or more are in compliance with the 8-hour ozone NAAQS for the 2002 through 2005 period (ODEQ 2005). All sites have 3-year 8-hour averages of less than 0.080 parts per million (ppm). Averages equal to 0.085 ppm or greater indicate exceedance of NAAQS. No formal violations of the Federal standard have occurred in recent years. No portions of Oklahoma are currently designated as exceeding any Federal ambient air quality standards (ODEQ 2005).

4.4.1.2 Air Emission Sources at MCAAP

Air pollution sources located in attainment areas require a Title V operating permit if they have the potential to emit greater than 100 tons per year (tpy) of any criteria air pollutant, 10 tpy of any single hazardous air pollutant (HAP), or 25 tpy of all hazardous pollutants combined. MCAAP currently has no Title V operating permit. The application for a Title V permit was submitted in March of 1999 and is currently awaiting approval.

Information collected by MCAAP during the preparation of the facility's Title V Operating Permit Application indicated that the facility had maximum potential air emissions of almost 10,000 tpy of volatile organic compounds (VOCs) in addition to large quantities of other priority pollutants and HAPs.

These emissions are generated by the various ammunition production, renovation, and demilitarization operations conducted at the facility. To reduce its air emissions estimate, MCAAP is undertaking a broad spectrum of initiatives, including pollution prevention and waste minimization that will ultimately affect every sector of facility operations. The ultimate objective of these initiatives is to develop an approach that integrates environmental management activities, business development and project planning activities, and mission requirements. Such an approach will (1) reduce actual and potential air emissions, (2) comply with operating permit application requirements, (3) reduce overall costs for the facility, and (4) increase opportunity and operating flexibility for future ammunition production operations. Current initiatives include (1) a comprehensive review of the over 250 ammunition manufacturing standing operating procedures in use at the facility, and (2) a replacement/substitution evaluation of all materials, coatings, and solvents.

The goal is to eliminate materials that are obsolete or redundant, and materials that have a high VOC content. MCAAP is also reviewing the current system of purchasing, distributing, storing, and disposing of potentially hazardous materials. This effort is intended to identify steps that result in waste caused by an excess supply of materials, exceeded expiration dates, improperly stored or managed materials, or premature disposal. Other initiatives will include (1) evaluating various air pollution control equipment alternatives, (2) integrating equipment procurement and equipment transfer activities within the environmental management program, and (3) integrating the facility's air emissions inventory and toxic releases inventory tracking programs.

Emission sources at the facility include paint booths, boilers (natural gas and diesel), dunnage mill activities, pesticide applications, solvent wiping and cleaning, grit blasters, explosive powder sifting, asphalt coating, open burning/open detonation, battery charging, and gasoline and diesel storage tanks.

The actual emissions for MCAAP from the 2005 Air Emissions Inventory are shown below in Table 4.4-2. The large actual emission amounts indicate the loss of a significant amount of potentially recyclable or reducible product, thereby indicating the potential for significant cost savings.

Table 4.4-2. 2005 Air Emissions Inventory Summary of Air Emissions at MCAAP.

Pollutant	CY05 Actual emissions (tpy)
Particulate matter less than 2.5 microns (PM _{2.5})	1.4
Particulate matter less than 10 microns (PM ₁₀)	498.4
Carbon monoxide (CO)	45.2
Nitrogen oxides (NO _x)	20.3
Sulfur oxides (SO _x)	1.2
Volatile organic compounds (VOCs) – non HAP	64.4
Total hazardous air pollutants (HAPs)	*

Source: ODEQ 2005

tpy tons per year

*Pollutant not analyzed.

4.4.2 CONSEQUENCES

Potential impacts to air quality are considered significant if the Proposed Action would:

- Increase ambient air pollution above any NAAQS;
- Contribute to an existing violation of any NAAQS;
- Interfere with or delay timely attainment of NAAQS; or
- Impair visibility within any federally mandated Prevention of Significant Deterioration (PSD) Class I area.

4.4.2.1 Alternative 1 – Preferred Alternative

Overall, potential impacts to air quality from Alternative 1 would not be significant. Short-term air quality impacts from Alternative 1 would occur from construction and demolition activities associated with the movement of heavy equipment. Construction activities would be temporary and would occur in a localized area. Contaminants generated from construction would include particulate matter, vehicle emissions, and increased wind-borne dust (i.e. fugitive dust). Erosion control measures (ECMs) would be implemented to prevent generation of fugitive dust. Within the construction sites, appropriate ECMs would be identified that would provide optimum soil suppression. ECMs typically utilize (but are not limited to) water suppression strategies during demolition, construction, and renovation by wetting areas of soil disturbance and debris. In addition to identifying the type of surface treatment, an alternative ECM would be identified in case the original is found to be ineffective.

Vehicular and construction equipment exhaust would be a source of pollutant emissions, but would have a negligible impact on air quality. The emissions from these construction activities and workers traveling to and from the site would be minor compared to the total existing vehicular emissions in the area. Impacts would not be significant.

Long-term impacts associated with Alternative 1 are discussed below separately for the AFRC and OMS, DRMS facility, relocation of SFW/Cluster Bomb and missile warhead production, and relocation of DEMIL and storage and testing functions.

AFRC and OMS. Long-term impacts associated with the AFRC Complex and OMS facility are not likely to occur. No fueling facilities, underground storage tanks, or paint booths would be required for the AFRC Complex and OMS facility. The additional vehicles associated with these facilities, including 15 vehicles for the Army Reserve unit and an unknown number of vehicles for National Guard units, would not be expected to result in significant impacts to air quality.

DRMS facility. Long-term impacts associated with the DRMS facility are not likely to occur. No fueling facilities, underground storage tanks, or paint booths would be required for the DRMS facility. Two to five tractor trailers would arrive at and depart from the facility each operating day, but the emissions from these vehicles would not result in a significant impact.

SFW/Cluster Bomb and missile warhead production. Long-term impacts associated with this function may result from the operation of a 10-square-foot paint booth. The paint booth would serve to stripe and stencil approximately 250 to 609 SFW/cluster bomb units per year. No thermal paint or arc spray (TAS) would be required. Furthermore, there would be no grit

blasting. Proper ventilation systems would be in place and air quality regulations would be followed. Periodic testing of warheads would be minimal and would not create significant air quality impacts.

DEMIL and storage relocation. Long-term impacts associated with the DEMIL and storage and testing relocation are not likely to occur. Furthermore, no fueling facilities, underground storage tanks, or paint booths would be required for the DEMIL and storage relocation function.

4.4.2.2 Alternative 2

Overall, potential impacts to air quality from Alternative 2 would not be significant. Emissions and impacts associated with Alternative 2 are expected to be similar to those described for Alternative 1. However, under Alternative 2, Base Camp (consisting of 50 concrete pads and associated facilities) may not need to be relocated and in this case, demolition borne emissions would be somewhat less.

4.4.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to air quality.

4.5 Noise

4.5.1 AFFECTED ENVIRONMENT

This section describes the existing noise conditions at MCAAP. Noise measurement is discussed first, followed by noise sources at MCAAP.

4.5.1.1 Noise Measurement

Noise is considered to be unwanted sound that interferes with normal activities or otherwise diminishes the quality of the environment. It may be intermittent or continuous, steady or impulsive. It may be stationary or transient. Stationary sources are normally related to specific land uses, e.g., housing tracts or industrial plants. Transient noise sources move through the environment, either along established paths or randomly (FICUN 1980).

The Federal Noise Control Act of 1972 (Public Law 92-574) established a requirement that all Federal agencies must comply with applicable Federal, state, interstate, and local noise control regulations. Federal agencies also were directed to administer their programs to promote an environment free from noise that jeopardized public health or welfare. Each Federal agency establishes policies and regulations for its own programs and jurisdiction (USACE 1996).

A characteristic of environmental noise is that it is not steady, but varies in amplitude from one moment to the next. To account for these variations in the sound pressure level with time, and to assess environmental noise in a consistent and practical manner, a statistical approach has been used to reduce the time-varying levels to single numbers. The currently accepted single number evaluators are the equivalent sound level (Leq) and the day-night average sound level (Ldn).

The physical basis of the noise system is the noise source, path, and receiver relationship. Noise emanates from a source, travels along a path, and is perceived by the receiver. The effect of noise on the receiver can be considered the focal point of the entire system. Before a noise

problem can be resolved, however, the nature and intensity of the noise must be quantified. Because of the different types of noise a weighting system was developed to measure these various types of noise.

In environmental noise, the sound pressure level is usually measured using one of the frequency networks of the sound level meter. Since the human ear is more sensitive to sounds of 1,000 Hertz and above than sounds of 125 Hertz and below, it is appropriate to apply a weighting function to the noise spectrum, which will approximate the response of the human ear. The A-weighting frequency network of the sound level meter de-emphasizes the lower frequency portion of the noise spectrum to approximate the human response. Highlighting frequency response is specified by an American National Standards Institute (ANSI) standard (ANSI 1980). Thus, the A-weighting of the frequency content of the noise signal has been found to have an excellent correlation with the human subjective judgment of annoyance of the noise. The sound pressure levels measured using the A-weighting network are expressed as dBA. Table 4.5-1 depicts the typical A-weighted sound pressure levels for various sources.

Table 4.5-1. Typical Decibel Levels of Noise Encountered in Daily Life and Industry.

Noise	Level (dBAs)
Rustling leaves	20
Room in a quiet dwelling at midnight	32
Window air conditioner	55
Conversational speech	60
Busy restaurant	65
Loudly reproduced orchestral music in large room	82
Beginning of hearing damage (if prolonged exposure)	85
Heavy city traffic	92
Home lawn mower	98
150 cubic foot air compressor	100
Jet airliner (500 feet overhead)	115
F-15 aircraft (500 feet overhead, afterburner power)	123

Source: Newman and Beattie 1985, modified

Note: When distances are not specified, sound levels are the values at the typical location of the machine operators.

dBA A-weighted decibel

To assess the additional annoyance caused by low frequency vibration of structures, the C-weighting network is used to evaluate the impulsive noise from all weapons larger than small arms. This weighting is also specified by the ANSI standard. The sound pressure levels measured using the C-weighting network are expressed as C-weighted decibels (dBC).

4.5.1.2 Noise Sources at MCAAP

Vehicle traffic, railroad operations, demolition activities, and small arms activities are the dominant sources of noise on MCAAP.

Demolition activities are conducted on one newer and one older open burn/open detonation (OB/OD) range, and on the Defense Ammunition Center (DAC) Training Range. The OB/OD ranges have 26 pits that are each restricted by MCAAP to 300 pounds Net Explosive Weight (NEW). The DAC Range is an explosive operators training range that consists of 6 pits and is

limited to 8 pounds NEW. It is used approximately twice per year for training classes. Training on this range includes the demolition of 81 millimeter (mm) and 4.2 inch mortar shells.

Small arms activities are conducted separately approximately once a year at the small arms ranges. Small arms fired include the M-16 rifle, 0.38 cal., 0.45 cal., and 9 mm pistols, and M203 grenades. Figure 4.5-1 shows the noise contours associated with the demolition and training ranges on MCAAP.

4.5.2 CONSEQUENCES

Potential noise impacts resulting from the Proposed Action are evaluated with respect to the potential for:

- Annoyance – noise can impact the performance of various every day activities such as communication and watching television in residential areas.
- Hearing loss – the EPA recommends limiting daily equivalent energy to 70 dBA, approximately 75 Ldn, to protect against hearing impairment over a period of 40 years.
- Sleep interference, which is of great concern in residential areas.

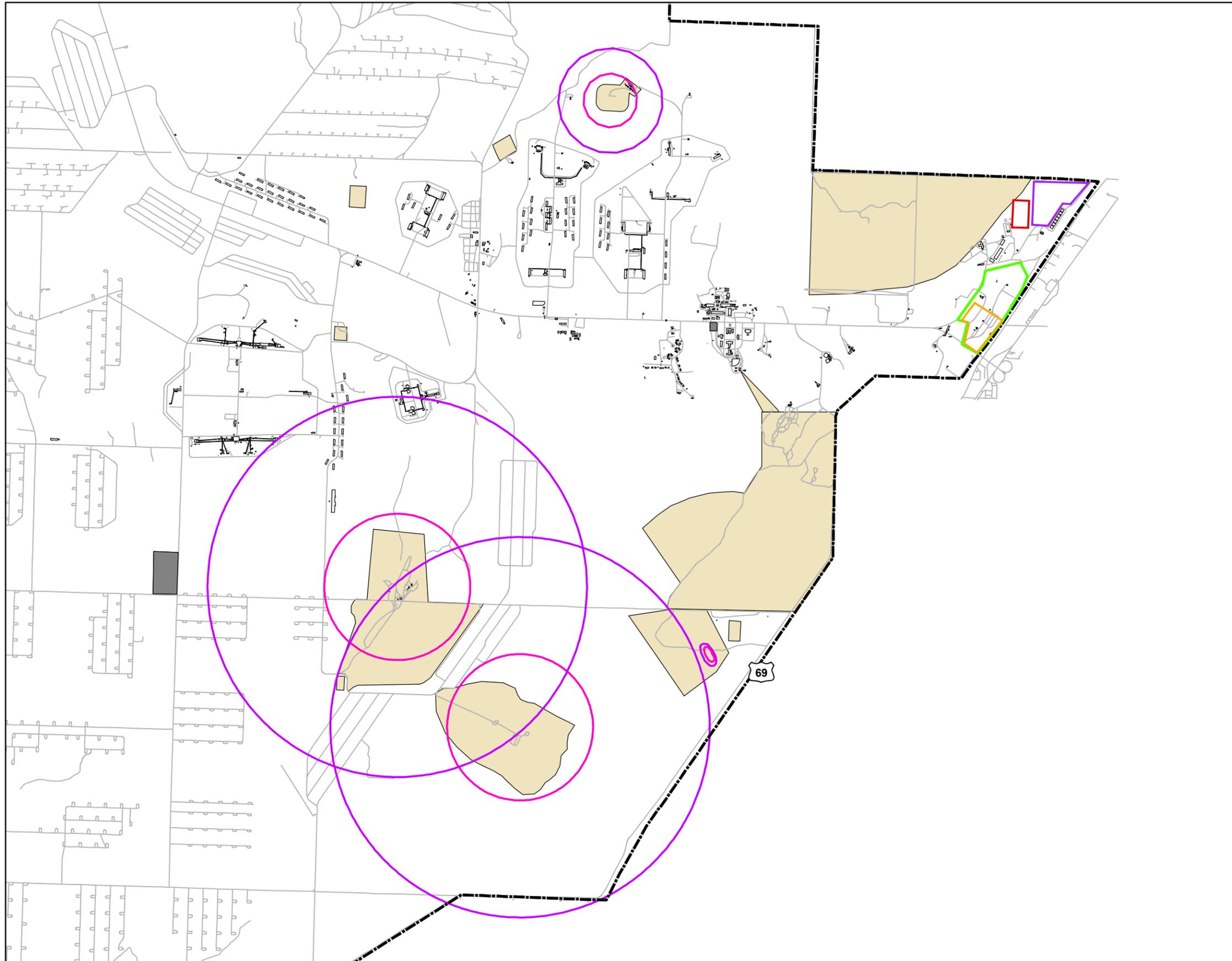
The standard threshold for determining at what point noise impacts become a nuisance is 65 Ldn.

4.5.2.1 Alternative 1 – Preferred Alternative

Overall, potential noise impacts from Alternative 1 would not be significant. Noise associated with Alternative 1 would be generated by standard construction equipment such as excavators, graders, backhoes, and dump trucks. This type of equipment may generate noise levels up to 80 dBA. Construction equipment generally operates about 40 percent of the time when it is being used at a construction site (ANSI 1980). Only a minor increase in ambient noise levels is expected to occur. Noise would also be generated by increased construction traffic on area roadways, but would be limited to certain times of the day. To minimize noise impacts, construction activities would be scheduled on normal workdays during normal working hours. Impacts would be temporary, minor in magnitude, and would not be significant.

Long-term noise impacts from Alternative 1 are discussed below separately for the AFRC and OMS, DRMS facility, relocation of the SFW/Cluster Bomb and missile warhead production, and relocation of DEMIL and storage and testing functions.

AFRC and OMS. Long-term noise impacts associated with the proposed AFRC and OMS include grounds maintenance activities, vehicular traffic, noises associated with vehicle maintenance, and noises associated with training efforts. Training efforts would consist of small arms activities, such as M-16 rifle, 0.38 cal., 0.45 cal., and 9 mm pistols. Noise resulting from maintenance activities, vehicular traffic, and training efforts would be limited to certain times of the day and are anticipated only one weekend per month. Anticipated noise from the AFRC and OMS would be similar to comparable noise sources already present at MCAAP. Furthermore, the nearest family housing is located approximately 2 miles from the proposed AFRC and OMS location and should not be affected by noise disturbance. Therefore, noise impacts from the AFRC and OMS would not be significant.



LEGEND

- Installation Boundary
- Buildings/Structures
- Airfield
- Military Range Area
- Roads

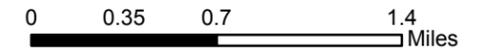
Noise Contour Line

Maximum Level Decibel Quantity

- 62
- 70
- Proposed Base Camp Relocation (Preferred Alternative)
- Proposed DRMS Facility Location
- Proposed AFRC/OMS Location (Preferred Alternative)
- Proposed AFRC/OMS Area (Alternative 2)

Acronym List:

- AFRC** Armed Forces Reserve Center
- DRMS** Defense Reutilization and Marketing Service
- OMS** Organizational Maintenance Shop



Prepared for: U.S. Army Corps of Engineers,
Mobile District

Realignment Environmental Assessment for
McAlester Army Ammunition Plant
McAlester, OK

Date Revised: 11/14/06

Figure 4.5-1

Noise Contours Associated with Demolition & Training
Ranges on McAlester Army Ammunition Plant



This page intentionally left blank.

DRMS facility. Long-term noise impacts associated with the DRMS facility would include equipment operations. These effects could cause damage to personnel not using hearing protection. However, these noise impacts are not to the level that would affect the local community outside of 200 yards of the operation. Some additional noise would be generated by the two to five tractor-trailers arriving at and departing from the facility each day, although this noise would be episodic and temporary, and would not be a significant impact.

SFW/Cluster Bomb and missile warhead production. No long-term sources of noise would accompany the relocation of the SFW/Cluster Bomb and missile warhead production from Kansas AAP to MCAAP. New functions would occur in existing facilities already present on MCAAP. Periodic testing of warheads would be minimal and would not create significant noise impacts.

DEMIL and storage relocation. No long-term sources of noise would accompany the relocation of DEMIL and storage and testing functions from Lone Star AAP, Kansas AAP, and Sierra Army Depot.

4.5.2.2 Alternative 2

Potential noise impacts from Alternative 2 would be similar to those from Alternative 1. However, short-term impacts to noise may be somewhat less as this alternative may not require the demolition of Base Camp. Overall, noise impacts would not be significant.

4.5.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to noise levels on or surrounding MCAAP.

4.6 Geology and Soils

4.6.1 AFFECTED ENVIRONMENT

This section describes the existing geology and soil conditions at MCAAP. Geologic and topographic conditions are discussed first, followed by soils, and prime farmland. The ROI for geology and soils is the land within the Proposed Action project areas.

4.6.1.1 Geologic and Topographic Conditions

The majority of the land on MCAAP is level to gently sloping, although approximately one quarter of the installation consists of rolling hills and sandstone ridges that have an approximate northeast-southwest trend. Mean elevation of the installation is 717 feet above mean sea level (MSL), ranging between 700 and 900 feet above MSL.

MCAAP is underlain by Pennsylvanian-age shale and sandstone formations, which are folded in the region in broad synclines and relatively acute anticlines. Portions of MCAAP are underlain by a much younger, unconsolidated alluvial formation called the Gertie Sand, which consists of gravels, sands, and silts deposited by an ancient meander of the Canadian River. The locations selected for Proposed Action construction are underlain by the Gertie Sand, which in turn rests on the Boggy Formation shale (USACE 1996).

MCAAP is located in an area rich in coal-bearing rock, and the installation has had an active mineral lease program since 1965. Nine producing natural gas wells operate along the western edge of the installation (MCAAP 2005).

4.6.1.2 Soils

The Natural Resources Conservation Service has identified 22 different soil series on MCAAP (Natural Resources Conservation Service 2001). Soils on the installation are predominantly sandy and contain varying amounts of silt, clay, and rock fragments, reflecting their origins in the weathering of the shale and sandstone bedrock as well as the Gertie Sand. Soil depths range from a few inches to several feet (USACE 1996). The dominant soils at the proposed construction sites are the extra stony Endsaw-Hector-Clearview Complex, Eram Clay Loam, and the rocky Bates-Coweta Complex (Natural Resources Conservation Service 2001).

Throughout MCAAP, pavement and other infrastructure reduce precipitation infiltration into the soil. The subsoil is capped with approximately 224 acres of paved roadways and approximately 376 acres of buildings, parking, and other structures, representing in total approximately 1.3 percent of the installation's area (Hovell 2006a).

4.6.1.3 Prime Farmland

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. Prime farmland is protected by the Farmland Protection Policy Act; however, lands that are used for national defense purposes are exempt [7 CFR 658.3(b)] from the provisions of the Farmland Protection Policy Act (7 CFR Parts 657 and 658).

4.6.2 CONSEQUENCES

Potential impacts to geology or soils are considered significant if the Proposed Action would:

- Expose people or structures to major geologic hazards;
- Cause substantial erosion or siltation;
- Cause substantial land sliding; or
- Cause substantial damage to project structures/facilities.

4.6.2.1 Alternative 1 – Preferred Alternative

Overall, potential impacts to geology and soils from Alternative 1 would not be significant. The proposed facilities would reduce water infiltration by capping the subsoil with impervious surfaces. Because the AFRC and OMS would be built on the site of the existing Base Camp, and the relocated Base Camp would be approximately the same size as the existing one, Alternative 1 would result in the long-term addition of approximately 24 acres of impervious surfaces to MCAAP, an installation-wide increase in impervious surfaces of approximately 4 percent. This increase represents approximately 0.05 percent of the land area of MCAAP. Long-term erosion control during operation of the proposed facilities would be achieved through adherence to MCAAP's storm water management plan. Impacts from Alternative 1 are discussed below separately for the AFRC and OMS, DRMS facility, relocation of SFW/Cluster Bomb and missile warhead production, and relocation of DEMIL and storage and testing functions.

AFRC and OMS. Demolition and relocation of the existing Base Camp and construction of the AFRC and OMS would disturb existing ground cover and increase the potential for soil erosion during the site preparation and construction phases. Best management practices for erosion control, topsoil management, and revegetation would be required and stated in the construction contract, and would reduce the potential effects to insignificant levels. Erosion control during construction activities would be undertaken with the use of hay bales and silt fencing to prevent the movement of soils into drainage ditches or low-lying areas, and could also include scheduling construction activities for periods of lowest rainfall.

DRMS facility. Construction of the DRMS facility would disturb existing ground cover and increase the potential for soil erosion during the site preparation and construction phases, but through the use of practices described for construction of the AFRC and OMS, the potential effects would not be significant.

SFW/Cluster Bomb and missile warhead production. Periodic testing of warheads may contribute to minimal soil disturbance; however, there would be no significant impacts to geologic or soil resources from the relocation of the SFW/Cluster Bomb and missile warhead production to MCAAP.

DEMIL and storage relocation. No impacts to geologic or soil resources would result from the relocation of DEMIL and storage and testing functions to MCAAP. Because these new functions would be integrated into existing facilities on MCAAP and storage sheds would be erected on land previously disturbed, additional ground disturbance would not occur.

4.6.2.2 Alternative 2

Overall, potential impacts to geologic and soil resources from Alternative 2 would not be significant. Potential impacts from Alternative 2 would be the same as for Alternative 1 except that, Base Camp may not need to be relocated and in this case, ground disturbance would not occur for demolition and reconstruction of Base Camp.

4.6.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to geologic or soil resources.

4.7 Water Resources

4.7.1 AFFECTED ENVIRONMENT

This section describes existing water resources on MCAAP, including surface and groundwater resources. Surface water includes lakes, rivers, and streams and is important for a variety of reasons, including economic, ecological, recreational, and human health. Groundwater comprises the subsurface hydrogeologic resources of the installation's physical environment. This section also discusses floodplains. Wetlands are discussed in Section 4.8.1.4. The ROI for water resources is MCAAP and areas downstream from the Proposed Action project areas.

4.7.1.1 Surface Water

Five major watersheds occur on MCAAP: Hominy Creek, draining western and northern sections; Bull Creek, draining central and northeastern sections; Deer Creek, draining northern sections; Chun Creek, draining southeastern sections; and North Boggy Creek, draining southern sections of the installation. Sassafras Creek drains the very southern edge, and Caney Boggy Creek drains a small section of southwestern MCAAP. Surface runoff from Deer, Bull, Hominy, and Chun creeks ultimately drains into Lake Eufaula to the northeast, and Sassafras and North Boggy creeks drain into the Red River to the south.

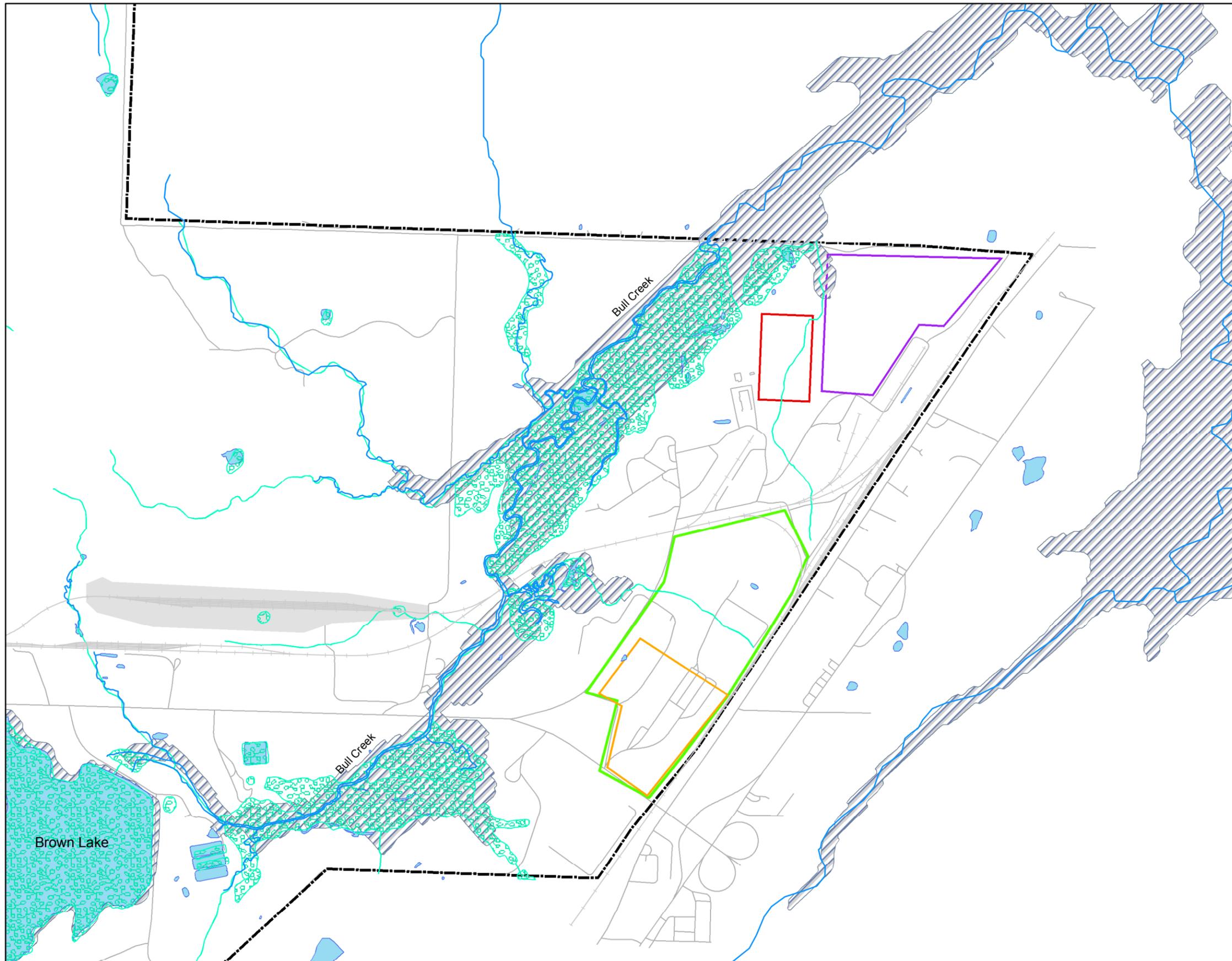
There are 125 to 150 lakes and ponds on MCAAP, many of which were constructed in the early to mid-1960s as water sources for livestock and wildlife (USACE 2002a). Brown Lake is the largest of these lakes, with a surface area of approximately 580 acres, and was originally constructed as a water supply source. Brown Lake is now managed as a sensitive water supply and is the principle potable water source for MCAAP and the adjacent towns of Haywood and Savanna. Brown Lake is fed by Bull Creek from the west and is drained by Bull Creek to the northeast. Proposed construction locations for both of the alternatives are within the Bull Creek watershed downstream from Brown Lake, and are within 0.25 mile of the stream course. Additionally, there is an unnamed intermittent channel that bisects the proposed construction sites, as shown in Figure 4.7-1; although not shown in the figure, this channel is presumably a tributary of Bull Creek.

Besides serving as a warm water aquatic community, the portion of Bull Creek downstream from Brown Lake is used as a source of manufacturing and industrial process and cooling water. Portions of the watershed above Brown Lake and the Bull Creek watershed downstream from Brown Lake are monitored semi-annually under the Storm Water Individual Permit held by MCAAP. Industrial and domestic wastewater discharges into these waters are monitored monthly, as required by the Joint National and Oklahoma Pollutant Discharge Elimination System Permit. MCAAP is in compliance with regard to surface water resources (MCAAP 2005).

4.7.1.2 Hydrogeology/Groundwater

Groundwater is not present in great quantities at MCAAP, and the water table is generally at depths of 500 to 1,000 feet in the vicinity. Perched aquifers exist in area gravel deposits and within bedrock fractures atop less permeable layers, but groundwater yields are very low and the quality is typically unsatisfactory due to the presence of excess dissolved solids as the result of interaction with the regional Paleozoic bedrock (USACE 2002a).

There are no registered aquifers at MCAAP, and all drinking water is supplied by surface water. Therefore, the Oklahoma Department of Environmental Quality (ODEQ) only requires MCAAP to have groundwater monitoring wells in place at the Fuel Farm and the new landfill and to monitor them routinely. Parameters monitored at the Fuel Farm on a quarterly basis are pH, conductivity, temperature, turbidity, total petroleum hydrocarbons, benzene, toluene, ethylbenzene, xylene, and chemical oxygen demand. Parameters monitored at the new landfill on a quarterly basis are pH, conductivity, and chemical oxygen demand. Parameters monitored at the new landfill on a semi-annual basis are metals, organics, volatile organics, semi-volatile organics, and explosives (MCAAP 2005).

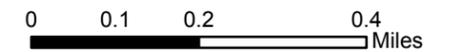


LEGEND

- Installation Boundary
- Proposed Base Camp Relocation (Preferred Alternative)
- Proposed AFRC/OMS Location (Preferred Alternative)
- Proposed AFRC/OMS Area (Alternative 2)
- Proposed DRMS Facility Location
- Railroad Station
- Roads
- Railroad Tracks
- Streams
- NWI Wetlands
- Surface Water
- 100 Year Flood Zone

Acronym List:

- AFRC** Armed Forces Reserve Center
- DRMS** Defense Reutilization and Marketing Service
- NWI** National Wetlands Inventory
- OMS** Organizational Maintenance Shop



Prepared for: U.S. Army Corps of Engineers,
Mobile District

Realignment Environmental Assessment for
McAlester Army Ammunition Plant
McAlester, OK

Date Revised: 11/14/06

Figure 4.7-1

Hydrologic Features near Proposed Facility Locations
McAlester Army Ammunition Plant



This page intentionally left blank.

Forty-three groundwater monitoring wells are located at two closed solid waste landfills, one active solid waste industrial landfill, the open burning grounds, the old and new open demolition grounds, the Bomb and Mine Production area, the Medium Production area, the Railroad Engine Maintenance Facility, the vehicle fueling station, and the Water Treatment Plant (MCAAP 2005).

Monitoring of groundwater wells is performed as required in operating permits and closure plans for landfills and as required by the ODEQ for permitted hazardous waste treatment, storage, and disposal facilities on the plant. Other wells are monitored as necessary for the construction and operation of wastewater surface impoundments and site investigation (MCAAP 2005).

Any contamination discovered that might affect groundwater has been remediated or is in the process of remediation. MCAAP is in compliance with regard to groundwater resources (MCAAP 2005).

4.7.1.3 Floodplains

The portions of MCAAP that are located within the 100-year floodplain generally follow the same boundaries that encompass wetlands (see Figure 4.7-1 and Section 4.8.1.4). Floodplains on MCAAP consist primarily of riparian areas associated with the installation's streams and occupy about 2,300 acres, or approximately 5 percent of the installation's area. Periodic flooding is a major consideration for proposed development and environmental management activities that may occur in the floodplain. EO 11988, *Flood Plain Management*, requires that development in floodplains be avoided if practicable.

4.7.2 CONSEQUENCES

Potential impacts to water resources, including surface water and groundwater are considered significant if the Proposed Action would:

- Irreversibly diminish water resource availability, quality, and beneficial uses;
- Reduce water availability or interfere with a potable supply or water habitat;
- Create or contribute to overdraft of groundwater or exceed a safe annual yield of water supply sources;
- Result in an adverse effect on water quality or an endangerment to public health by creating or worsening adverse health hazard conditions;
- Result in a threat or damage to unique hydrological characteristics; or
- Violate an established law or regulation that has been adopted to protect or manage water resources of an area.

Potential impacts that would be considered significant related to floodplain management include:

- Potential damage to structures located in the floodplain; and
- Changes to the extent, elevation, or other features of the floodplain as a result of flood protection measures or other structures being silted in or removed from the floodplain.

4.7.2.1 Alternative 1 – Preferred Alternative

Overall, potential impacts to water resources from Alternative 1 would not be significant. There would be no measurable reduction in surface water quality or availability. By capping the subsoil with impervious surfaces, Alternative 1 would reduce groundwater recharge locally over the long term by reducing the infiltration of precipitation (see Section 4.6.2.1). Alternative 1 would result in the addition of approximately 24 acres of impervious surfaces to MCAAP, an installation-wide increase in impervious surfaces of approximately 4 percent. This increase represents approximately 0.05 percent of the land area of MCAAP. This reduction of groundwater recharge would not have a significant impact on regional groundwater supplies, and adherence to MCAAP's storm water management plan would limit the impacts of runoff on surface water resources. Impacts from Alternative 1 are discussed below separately for the AFRC and OMS, DRMS facility, relocation of SFW/Cluster Bomb and missile warhead production, and relocation of DEMIL and storage and testing functions.

AFRC and OMS. Demolition of the existing Base Camp and construction of the AFRC and OMS would disturb existing ground cover and increase the potential for soil erosion during the site preparation and construction phases. Best management practices for erosion control, topsoil management, and revegetation would be required and stated in the construction contract, and therefore potential effects would not be significant. Erosion control during construction activities would be undertaken with the use of hay bales and silt fencing to prevent the movement of soils into drainage ditches or low-lying areas, and could also include scheduling construction activities for periods of lowest rainfall.

Figure 4.7-1 shows that an unnamed intermittent channel bisects the proposed relocation site of Base Camp; although not shown in the figure, this channel is presumably a tributary of Bull Creek. Special consideration would have to be made during the design, construction, and operational phases of Base Camp to account for the presence of this channel. Disruption of water drainage patterns could result in flooding and/or property damage, and removal of vegetation from in or around the channel could result in erosion with soil being carried by storm water to Bull Creek. During construction, site preparation activities may expose soil to storm water runoff. Brown Lake would not be affected, as it is upstream from the proposed construction site. However, soil could be carried by runoff via the intermittent channel to Bull Creek, which is less than 0.5 mile downstream from the proposed construction site. Best management practices, including the prompt revegetation of exposed soil and the use of hay bales and sediment fences, would be required and potential impacts would not be significant.

Operation of Base Camp facilities could generate spills of pollutants, such as cleaning supplies or wastewater, that may be carried overland or down the intermittent channel by storm water into Bull Creek. Potential nonpoint storm water impacts would not be significant with implementation of best management practices similar to those at neighboring facilities, as described in the Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would be modified, as needed, to address site specific requirements and monitoring. Point discharges of wastewater are prohibited by existing National Pollutant Discharge Elimination System (NPDES) requirements under the CWA. Spills would be mitigated using procedures identified in the existing Spill Prevention Control and Countermeasures (SPCC) plan to reduce potential

impacts to surface water or groundwater. For other concerns regarding the intermittent channel, see Section 4.8.2.1.

DRMS facility. Construction and operation of the DRMS facility could increase the potential for impacts to surface water or groundwater quality from point or nonpoint discharges. During construction, site preparation activities may expose soil to storm water runoff. Soil could be carried by runoff via the unnamed intermittent channel to Bull Creek, which is less than 0.25 mile downstream from the proposed construction site. Best management practices, including the prompt revegetation of exposed soil and the use of hay bales and sediment fences, would be required and potential impacts would not be significant. Operation of the DRMS facility could generate wastes or spills of hazardous chemicals that may be carried overland or down the unnamed intermittent channel by storm water into Bull Creek. Potential nonpoint storm water impacts would not be significant with the measures described above for the relocated Base Camp in place.

Approximately 2 acres of the DRMS facility's 39-acre footprint would be within the 100-year flood zone. All permanent structures, with the exception of fencing and possibly pavement, would be located outside the flood zone. Impacts due to flood hazards would not be significant.

SFW/Cluster Bomb and missile warhead production. The relocation of SFW/Cluster Bomb and missile warhead production, including the field testing range, to MCAAP could increase the potential for impacts to surface water or groundwater quality from point or nonpoint discharges. Production activities could generate wastes or spills of hazardous chemicals that may be discharged to storm drains or could be carried overland by storm water into Brown Lake. Potential nonpoint storm water impacts would not be significant with best management practices in place similar to those being implemented at neighboring facilities, as described in the SWPPP. The SWPPP would be modified, as needed, to address site specific requirements and monitoring. Point discharges of wastewater are prohibited by existing NPDES requirements. Spills would be mitigated using procedures identified in the existing SPCC plan to reduce potential impacts to surface water or groundwater. Impacts from periodic firing of warheads would be addressed under the installation's current Range Management Program.

DEMIL and storage relocation. No impacts to surface water or groundwater resources would result from the relocation of munitions storage and testing functions to MCAAP. If DEMIL activities commence for these stored munitions in the future, these activities could increase the potential for impacts to surface water or groundwater quality from point or nonpoint discharges. These potential impacts would not be significant with the measures described above in place.

4.7.2.2 Alternative 2

Overall, potential impacts to water resources from Alternative 2 would not be significant. Potential impacts from Alternative 2 would be less than for Alternative 1 if the AFRC and OMS are built south of the existing Base Camp, and Base Camp is not relocated, because there would be fewer opportunities for soil erosion and subsequent siltation or pollution to Bull Creek. In this case, Base Camp would not be relocated to a site bisected by an intermittent stream channel, and it would have no noticeable impacts on Bull Creek because the existing Base Camp location is over 0.25 mile from Bull Creek or any of its tributaries. Impacts could be greater than this, and perhaps equal to those resulting from Alternative 1, if Base Camp is relocated or the

AFRC/OMS complex is located elsewhere within the 75-acre proposed AFRC/OMS area, because other intermittent drainages that flow to Bull Creek occur within this area (see Figure 4.7-1).

4.7.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to water resources.

4.8 Biological Resources

4.8.1 AFFECTED ENVIRONMENT

This section describes existing biological resources at MCAAP. It focuses on plant and animal species or habitat types that are typical or are an important element of the ecosystem, are of special category importance (of special interest due to societal concerns), or are protected under state or Federal law or statute regulatory requirement. Vegetation is discussed first, followed by wildlife, sensitive species, and wetlands. The ROI for biological resources is the land within the Proposed Action project areas.

4.8.1.1 Vegetation

Habitat types on MCAAP include timber, brushland, grassland, agricultural, and mesic areas. Grasslands comprise the largest habitat type on the installation, covering 14,437 acres. The forested area of MCAAP includes approximately 10,400 acres of upland timber, including oaks (*Quercus* spp.) and hickory (*Carya* spp.), and 6,423 acres of bottomland timber, including oak, pecan (*Carya illinoensis*), ash (*Fraxinus* spp.), hackberry (*Celtis occidentalis*), elm (*Ulmus* spp.), and sycamore (*Platanus occidentalis*). MCAAP does not operate a commercial forestry program.

Brushland covers about 10,731 acres and is considered some of the best wildlife habitat on the installation. Important brushland species include sumac (*Rhus glabra*), hawthorn (*Crataegus* spp.), persimmon (*Diospyros virginiana*), elm, and Osage orange (*Maclura pomifera*). Agricultural lands on MCAAP are limited to approximately 275 acres of food plots of 1-10 acres each. These are plowed, disked, fertilized, and planted to clover and winter rye grass for wildlife. Mesic habitat types of MCAAP include approximately 1,030 acres of wetlands, lakes, streams, and ponds.

Despite surveys (e.g., USACE 2002b; Lomolino and Leimgruber 1994), no rare plants have been documented at MCAAP. Nonetheless, the installation contains some outstanding examples of native vegetation, including native bluestem (*Andropogon* spp.) prairies, virgin pecan timber creek bottoms, virgin post oak (*Q. stellata*) and blackjack oak (*Q. marilandica*) cross-timber types, and eastern gamagrass (*Tripsacum dactyloides*) grasslands.

A comprehensive listing of common and scientific names of native vegetation occurring within the installation's boundaries is on file at the MCAAP Land Management Office.

4.8.1.2 Wildlife

Twenty-five species of mammals, 163 birds, 20 fish, 12 reptiles, and 9 amphibians are known to occur on MCAAP. Common mammals on the installation include white-tailed deer (*Odocoileus*

virginianus), eastern cottontail (*Sylvilagus floridanus*), raccoon (*Procyon lotor*), squirrel (*Sciurus* spp.), gray fox (*Urocyon cinereoargenteus*), red fox (*Vulpes vulpes*), bobcat (*Lynx rufus*), and beaver (*Castor canadensis*). Bird species commonly encountered at MCAAP include wild turkey, northern bobwhite, red-winged blackbird, great blue heron, common grackle, Canada goose, wood duck, mallard, blue-winged teal, and mourning dove.

A comprehensive listing of fish and wildlife species potentially occurring within MCAAP's boundaries may be found in Appendix 3.3.2 of the Installation Natural Resources Management Plan (MCAAP 2005).

MCAAP has allowed deer hunts within its boundaries since 1963. Hunting permits are awarded by lottery, which is open to the general public. The quality of deer habitat on MCAAP has produced a high-quality deer herd, for which MCAAP has gained popularity as one of the premier deer hunting areas in the nation (USACE 2002a). Since 1981, MCAAP has offered a fall turkey hunt, and a spring turkey hunt was added in 1984. Turkey hunts have also proved very popular, with far more people interested than there are available permits. Hunters are also allowed to kill feral hogs, which are a serious pest on the installation, although hunters do take enough of the animals to alleviate the pressure on MCAAP land managers to control the hogs and the damage they cause to the grounds and other assets.

4.8.1.3 Sensitive Species

In compliance with the ESA, consultation and coordination has been initiated with the U.S. Fish and Wildlife Service. Under Section 7 of the ESA, the Army is mandated to use their authority to ensure actions are approved, funded, or carried out to protect both flora and fauna that are considered threatened and endangered species or proposed for listing as threatened or endangered species on the installation. A letter describing the Proposed Action has also be sent to the Oklahoma Department of Wildlife Conservation to solicit that agency's opinion on whether the Proposed Action would have any adverse impacts upon state-protected species of plants and wildlife. Copies of these letters may be found in Appendix A.

Table 4.8-1 shows species that have special Federal or State of Oklahoma status that have been documented in Pittsburg and surrounding counties and for which there is believed to be suitable habitat on MCAAP. Only one of these species is a known resident of MCAAP, the American burying beetle. Listed as endangered in 1989 by the U.S. Fish and Wildlife Service, little is known about the beetle's habitat needs other than that it requires a substrate that is conducive to burying carrion (i.e., dry, sandy soil is probably unsuitable habitat). Whereas anecdotal information placed the beetle in riparian habitats, the species has been detected in pastures, and on MCAAP, individuals have been documented in upland oak forest and in sumac shrubland (Starry 2002). The species' rareness renders habitat studies all but useless. American burying beetles have been detected in the Dahlstrom area, near the sites of Proposed Action construction (USACE 1996).

Project sites, if required by the U.S. Fish and Wildlife Service, would be surveyed for the presence of the American burying beetle prior to ground disturbance. Live-trapping would be performed in these areas and any captured individuals would be relocated to an area within MCAAP that is capable of supporting the beetle and where there is not likely to be any ground disturbance in the near future (Starry 2002).

Table 4.8-1. Federal and State-listed Faunal Species in Pittsburg and Surrounding Counties.

Common Name	Scientific Name	Federal Status*	State Status**	Habitat
American burying beetle	<i>Nicrophorus americanus</i>	E	E	Generalist, MCAAP resident
Prairie mole cricket	<i>Gryllotalpa major</i>		SC2	Prairie, grassland, high diversity hay meadows
Alligator snapping turtle	<i>Macrolemys temminckii</i>		SC2	Ponds, lakes, rivers
Texas horned lizard	<i>Phrynosoma cornutum</i>		SC2	Open areas with sandy, loose soil
Bald eagle	<i>Haliaeetus leucocephalus</i>	T	E	Large lakes and reservoirs, winter visitor at MCAAP
Bachman's sparrow	<i>Aimophila aestivalis</i>		SC2	Broom sedge grassland with scattered young pines, blackberry thickets
Desert shrew	<i>Notiosorex crawfordii</i>		SC2	Post oak-blackjack forest, grasslands
Indiana bat	<i>Myotis sodalis</i>	E	E	Caves, buildings, hollow trees
Southeastern myotis	<i>Myotis austroriparius</i>		SC2	Caves, hollow trees, culverts
Mexican free-tailed bat	<i>Tadarida brasiliensis</i>		SC2	Migratory, in southern Oklahoma in early spring
Eastern harvest mouse	<i>Rheitrodontomys humulis</i>		SC2	Old fields, oak forest edge
Marsh rice rat	<i>Oryzomys palustris</i>		SC2	Boggy areas dominated by vines, tall grasses
Woodchuck	<i>Marmota monax</i>		SC2	Open woods, brushy and rocky ravines
River otter	<i>Lutra canadensis</i>		SC2	Riparian areas
Long-tailed weasel	<i>Mustella frenata</i>		SC2	Terrestrial habitat near water

Source: MCAAP 2005

* Federal Status: E – Endangered; T – Threatened.

** State Status: E – Endangered; SC2 – Species of Special Concern, Category 2: identified by technical experts as possibly threatened or vulnerable to extirpation but for which additional information is needed.

4.8.1.4 Wetlands

Wetlands are defined by the U.S. Army Corps of Engineers (USACE) and the EPA based on the presence of wetland vegetation, wetland hydrology, and hydric soils with certain land area considerations. Wetlands and other surface water features, which may include intermittent and perennial streams, are generally considered “waters of the United States” by the USACE, and under their definition of “jurisdictional waters/features,” are protected under Section 404 of the CWA.

The U.S. Fish and Wildlife Service conducted a wetlands inventory of MCAAP during 1999-2000, which included a ground survey for verification of the National Wetlands Inventory database. MCAAP was provided a set of aerial photographs, photograph interpretation, and field investigation results. Wetlands included in the National Wetlands Inventory database that are near the Proposed Action construction locations are depicted in Figure 4.7-1 in the Water Resources section. However, no jurisdictional mapping of wetlands has taken place at Proposed Action construction locations.

4.8.2 CONSEQUENCES

Potential impacts to biological resources are considered significant if the Proposed Action would:

- Affect a threatened or endangered species;
- Substantially diminish habitat for a plant or animal species;
- Substantially diminish a regionally or locally important plant or animal species;
- Interfere substantially with wildlife movement or reproductive behavior;
- Result in a substantial infusion of exotic plant or animal species; or
- Destroy, lose, or degrade jurisdictional wetlands (as defined by Section 404 of the CWA).

EO 11990, *Protection of Wetlands*, requires Federal agencies to avoid actions, to the extent practicable, which would result in the location of facilities in wetlands.

4.8.2.1 Alternative 1 – Preferred Alternative

Overall, potential impacts to biological resources from Alternative 1 would not be significant. Impacts from Alternative 1 are discussed below separately for the AFRC and OMS, DRMS facility, relocation of SFW/Cluster Bomb and missile warhead production, and relocation of DEMIL and storage functions. The total acreage of hunting area closures that would result from both alternatives of the Proposed Action is presented in Section 4.2.2. Because all of the areas proposed for construction are either previously disturbed or infested with invasive species, these areas have relatively low productivity for native plants and animals. Alternative 1 would have no overall effect on biodiversity or regional plant and animal populations.

The U.S. Fish and Wildlife Service and the Oklahoma Department of Wildlife Conservation concur that the endangered American burying beetle is the only threatened or endangered species known to occur at MCAAP. As described in MCAAP's Endangered Species Management Plan, preconstruction surveys for the American burying beetle would be performed and any captured individuals would be relocated to other suitable sites on the installation. Copies of responses from these agencies are included in Appendix A.

AFRC and OMS. Demolition of the existing Base Camp and construction of the AFRC and OMS would cause short-term impacts on the vegetation surrounding construction sites, but over the long term, existing vegetation around the sites would be expected to remain the same. Any exposed soil resulting from the construction activities would be quickly stabilized with sod. Best management practices for erosion control, topsoil management, and revegetation would be required and stated in the construction contract, and therefore potential effects would not be

significant levels. The AFRC and OMS would be built on land that has already been partially developed, so there would not be any significant loss of native vegetation. Potential impacts to vegetation would not be significant.

Generally, projects located in previously disturbed or industrial land use areas have little or no effect on migratory bird species. However, all projects and their site locations should plan for and identify the possible presence of migratory bird species. If migratory bird species are encountered, protection from either disturbance or removal of their habitat should be evaluated and measures taken to mitigate any habitat loss or to protect the species. Consultation with the MCAAP Land Management Office would determine possible affected species types and would help resolve or direct actions for possible disturbance issues.

Construction of the AFRC and OMS may affect on-site wildlife through the long-term direct loss of a relatively small amount of habitat and direct mortality of individuals occurring in construction zones. These facilities would result in the direct long-term loss of approximately 4 acres of low productivity habitat for ground-dwelling or nesting species. Road and facility construction would result in loss of foraging and breeding habitat for some species, although construction would be timed to minimize any possible impacts to potential habitat for migratory/seasonal birds and their nesting sites.

Post-construction impacts to wildlife from operation of the AFRC and OMS would not be significant. Construction and operation of these facilities would result in the closure of 5 acres, or less than 0.05 percent, of the Deer Creek deer and fall turkey hunting area. If required by the U.S. Fish and Wildlife Service, surveys would be performed to ensure that no American burying beetles are within the area to be disturbed. There are no wetlands present at this site.

Construction of the relocated Base Camp would cause most of the same impacts as construction of the AFRC and OMS. A larger amount of native vegetation would be removed at this site, although some of this vegetation consists of eastern red cedar (*Juniperus virginiana*), which is an invasive species at MCAAP. Removal of this species would have a beneficial impact on the installation's vegetation management program. Impacts to wildlife would be similar to the impacts at the AFRC/OMS site, except that construction of Base Camp would result in the direct long-term loss of approximately 4 acres of habitat for ground-dwelling or nesting species, and would also result in the closure of 15 acres, or less than 0.5 percent, of the Gobbler spring turkey hunting area, and approximately 0.15 percent of the Deer Creek deer and fall turkey hunting area. If required by the U.S. Fish and Wildlife Service, surveys would be performed to ensure that no American burying beetles are within the area to be disturbed.

Figure 4.7-1 shows that an unnamed intermittent channel bisects the proposed relocation site of Base Camp; although not shown in the figure, this channel is presumably a tributary of Bull Creek. The National Wetlands Inventory database shows this channel to be a shrubland intermittent stream course. Prior to construction it would be necessary to obtain concurrence from the USACE that this feature is not considered to be a jurisdictional wetland. If the USACE rules that this drainage feature constitutes a jurisdictional wetland then the potential for another relocation site would be examined, and if the final construction footprint cannot be changed to avoid the wetland, appropriate mitigation would be coordinated and developed through USACE. If USACE concurs that it is not a regulatory wetland, special consideration would still have to be

made during the design, construction, and operational phases of Base Camp to account for the presence of this channel. Disruption of water drainage patterns could result in flooding and/or property damage, and removal of vegetation from in or around the channel could result in erosion with soil being carried by stormwater to Bull Creek. Other concerns regarding this drainage feature are discussed in Section 4.7.2.1. Implementation of mitigation, coordinated through USACE if required, or special consideration of the channel during design, would ensure that impacts to wetlands would not be significant.

DRMS facility. Construction of the DRMS facility would cause similar impacts to vegetation as described for construction of Base Camp. Because much of this site consists of eastern red cedar, removal of this vegetation would have beneficial impacts. Impacts to wildlife would be as described above, except that construction of the DRMS facility would result in the closure of 39 acres, or approximately 1 percent, of the Gobbler spring turkey hunting area and less than 0.4 percent of the Deer Creek deer and fall turkey hunting area. If required by the U.S. Fish and Wildlife Service, surveys would be performed to ensure that no American burying beetles are within the area to be disturbed. A small portion of the drainage feature described for the Base Camp site intersects with the northwest corner of the DRMS facility footprint. If USACE determines that this feature is jurisdictional, it would be relatively easy to avoid the feature in designing the facility's final layout. Therefore, construction and operation of the DRMS facility would not cause significant impacts to biological resources.

SFW/Cluster Bomb and missile warhead production. No adverse impacts would result from the relocation of SFW/Cluster Bomb and missile warhead production, including the field testing range, to MCAAP, because these new functions would be integrated into existing facilities on MCAAP.

DEMIL and storage relocation. No adverse impacts would result from the relocation of DEMIL and storage and testing functions to MCAAP. Because these new functions would be integrated into existing facilities on MCAAP and storage sheds would be erected on previously disturbed land, there would be no additional habitat loss.

4.8.2.2 Alternative 2

Overall, potential impacts to biological resources from Alternative 2 would not be significant. Potential impacts from Alternative 2 would be the same as for Alternative 1 for the DRMS facility, relocation of SFW/Cluster Bomb and missile warhead production to MCAAP, and relocation of DEMIL and storage functions to MCAAP.

Construction of the AFRC and OMS in the 75-acre area proposed AFRC/OMS area would have no significant impacts to vegetation, although impacts would vary according to where in this 75-acre area the facilities are built, and whether Base Camp is relocated within the area. The northern third of the area is covered with open shrubland and trees, whereas the southern two thirds are open and either previously developed or covered with lawn-type grasses. Impacts to wildlife would be similar as under Alternative 1, except that under Alternative 2 there would be no closure of land in the Gobbler spring turkey hunting area due to the AFRC, OMS, or Base Camp, and these facilities together would result in the closure of up to 40 acres, or 0.4 percent, of the Deer Creek deer and fall turkey hunting area. As with vegetation, impacts to wildlife would not be significant, but would vary according to where in this 75-acre area the facilities are built,

and whether Base Camp is relocated within the area. The northern third of the 75-acre area is more productive wildlife habitat than the southern two thirds of the area.

4.8.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to biological resources.

4.9 Cultural Resources

4.9.1 AFFECTED ENVIRONMENT

This section describes the existing cultural resource conditions at MCAAP. MCAAP was established in 1942, and was originally a Naval facility designated the McAlester Navy Ammunition Depot. The prehistoric and historic background of the area is summarized first, followed by the status of cultural resource inventories and Section 106 consultations, and Native American resources.

4.9.1.1 Prehistoric and Historic Background

The archaeological framework for the region of Pittsburg County, OK, where MCAAP now lies, includes four major prehistoric stages (Paleoindian, Archaic, Woodland, and Late Prehistoric/Mississippian periods), as well as the Proto-Historic and Historic stages. Table 4.9-1 summarizes the archaeological framework and associated regional cultures.

Table 4.9-1. Archaeological Framework of MCAAP.

Chronology	Period	Regional Cultural Association	Number of Sites Found at MCAAP
10,000 B.C.	Paleoindian	Clovis, Folsom, Plano	4
4,000 B.C.	Early Archaic	Packard, Pumpkin Creek, Tom's Brook Complex	
	Middle Archaic	Caudill Complex	
2,000 B.C.	Late Archaic	Lawrence Phase, Wister Phase	
A.D. 1	Woodland	Fourche Maline Phase	
A.D. 1,000	Arkansas Valley Caddoan (Late Prehistoric)	Harlan Phase, Spiro Phase	
A.D. 1,600	Proto-Historic	Fort Coffee Phase	
A.D. 1,829	Historic	Caddoan, Creek, Choctaw, Chickasaw, Seminole, Cherokee, Euro-American	2

Source: U.S. Army 2006

Prior to acquisition by the government, the area including MCAAP was rather intensively settled. Most recently, late 19th and early 20th century sources indicate settlement by Choctaw Indians, and an increasing number of Euroamericans. The 1936 Pittsburg County General Highway and Transportation Map depicts 257 structures in the area now comprising MCAAP (U.S. Army 2006).

MCAAP was established in 1942, bringing to an end an extended period of economic depression for the region. Over 2,000 buildings were constructed at the plant (mostly for ammunition

storage), and during World War II, the depot employed over 8,000 people. Many of the buildings still exist and are being used today.

4.9.1.2 Status of Cultural Resource Inventories and Section 106 Consultations

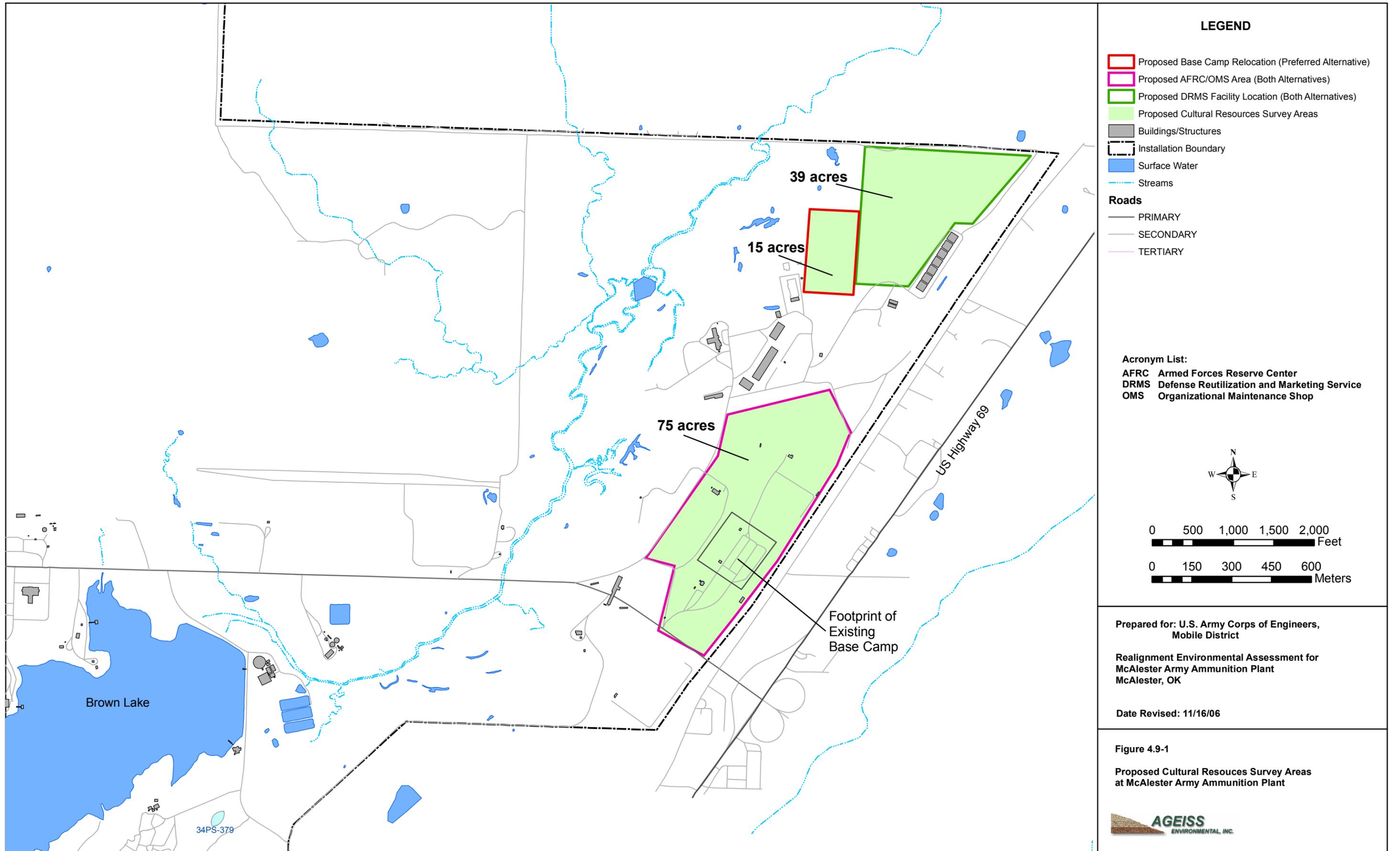
Section 106 of the NHPA requires Federal agencies to take into account the effects of their undertakings on historic properties. On August 18, 2006, the Advisory Council on Historic Preservation's (ACHP's) Program Comment Regarding World War II and Cold War Era Army Ammunition Production Facilities and Plants (71 FR 18706, April 12, 2006) and Program Comment Regarding World War II and Cold War Era Ammunition Storage Facilities (71 FR 18708, April 12, 2006) were issued. The ACHP Program Comments alter the classification and treatment of buildings within Army Ammunition Plant boundaries and ammunition storage facilities wherever located; both are applicable at MCAAP. The Program Comments provide that case-by-case Section 106 consultation is not required so long as installations meet the Program Comment requirements. For the Program Comments specifically applicable to Army Ammunition Plants, Historic American Buildings Survey/Historic American Engineering Record documentation of a representative sample of structures/facilities will be performed at two installations. For the Program Comments applicable to all cold war era ammunition storage facilities, Historic American Buildings Survey/Historic American Engineering Record documentation of specifically designated facilities will be performed; one of the structures selected for documentation, the Corbetta Beehive Storage Magazine, is located at MCAAP. No further Section 106 action is required unless previously nominated National Register of Historic Places (NRHP) structures or structures not covered by the Program Comments (e.g., structures that pre-date the establishment of the installation) would be affected by proposed actions or activities.

About 2,000 acres of the 44,964-acre MCAAP site have been surveyed for archaeological sites/remains (U.S. Army 2006). Six archaeological sites have been catalogued within the boundaries of MCAAP; two are historic and four are prehistoric. Three of the sites have been determined to be not eligible for nomination to the NRHP, and the eligibility of the other three sites is undetermined (U.S. Army 2006). None of the previously surveyed areas or identified sites are located near the Proposed Action. A Phase I survey, totaling 129 acres, was conducted within the three areas where new facilities may be constructed under the Proposed Action as shown in Figure 4.9-1. No cultural resources were found, and no evidence of buried cultural deposits were identified in the three areas.

MCAAP has determined that no historic properties would be affected by the Proposed Action. In accordance with Section 106, this determination is currently being coordinated with the Oklahoma State Historic Preservation Officer (SHPO) as well as the Oklahoma Archaeological Survey and the following federally recognized Native American Tribes with ties to the region: Caddo Indian Tribe; Chickasaw Nation of Oklahoma; Choctaw Nation of Oklahoma; Quapaw Tribe of Indians of Oklahoma; and Wichita and Affiliated Tribes of Oklahoma. Section 106 coordination will be completed prior to any ground breaking activities on the property.

Appendix A contains letters to the Oklahoma SHPO, the Oklahoma Archaeological Survey, and the Native American Tribes.

This page intentionally left blank.



This page intentionally left blank.

4.9.1.3 Native American Graves Protection and Repatriation Act (NAGPRA)

MCAAP has complied with the summary and inventory requirements of the Native American Graves Protection and Repatriation Act (NAGPRA). No human remains, associated grave goods, unassociated grave goods, sacred objects, or objects of cultural patrimony have been recovered on the installation or during installation-associated undertakings. There are no such items in collections curated on installation or in installation-owned materials in care of other curation facilities (U.S. Army 2006).

4.9.2 CONSEQUENCES

Potential impacts to historic properties and/or archaeological resources are considered significant if the Proposed Action would:

- Physically destroy, damage, or alter all or part of the property;
- Physically destroy, damage, alter or remove items from archaeological contexts without a proper mitigation plan;
- Isolate the property from or alter the character of the property's setting when that character contributes to the property's qualification for the NRHP;
- Introduce visual, audible, or atmospheric elements that are out of character with the property or alter its setting;
- Neglect a property resulting in its deterioration or destruction; or
- Transfer, lease, or sell the property (36 CFR 800.9[b]) without a proper preservation plan.

4.9.2.1 Alternative 1 – Preferred Alternative

Although there could be minor short-term impacts during construction, overall potential impacts to cultural resources from Alternative 1 would not be significant. Alternative 1 would not affect any known NRHP-eligible archaeological sites. The proposed new construction and other ground-disturbing activities would occur within areas that have previously been heavily disturbed or surveyed for archeological resources.

All structures expected to be affected by implementation of Alternative 1 are covered by either the Program Comment Regarding World War II and Cold War Era Army Ammunition Production Facilities and Plants or the Program Comment Regarding World War II and Cold War Era Ammunition Storage Facilities. MCAAP will comply with the provisions of the applicable Program Comments, so no impacts are anticipated to historic structures. Accordingly, formal consultation/coordination with the Oklahoma SHPO and the Advisory Council is not anticipated at this time.

If any potential historic or archaeological resource is uncovered during construction, the Cultural Resources Manager for MCAAP will be contacted, in accordance with the Integrated Cultural Resources Management Plan (ICRMP) and MCAAP's Standard Operating Procedure 6.5 – Accidental Discovery of Archaeological Resources.

If the federally recognized tribes contacted in connection with this undertaking respond and raise concerns regarding issues of importance to the respective tribes, MCAAP will address these concerns during the construction and operations phase of this alternative.

4.9.2.2 Alternative 2

Overall, potential impacts from Alternative 2 would be similar to those for Alternative 1, and these impacts would not be significant. However, under Alternative 2, the Base Camp could potentially remain at its current location, and therefore the potential to affect archaeological sites would be somewhat lower than for Alternative 1.

4.9.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to cultural and archaeological resources.

4.10 Socioeconomics

4.10.1 AFFECTED ENVIRONMENT

The city of McAlester, located in Pittsburg County, OK, provides most of the necessary goods and services for installation employees, including housing, public services, and transportation. This section describes the existing socioeconomic conditions for the city of McAlester and Pittsburg County, OK. Socioeconomic factors include economic development, demographics, housing, environmental justice, and protection of children.

4.10.1.1 Economic Development

The city of McAlester is the trade center for Southeastern Oklahoma as well as the county seat of Pittsburg County. McAlester is served by a rural population base of more than 130,000. McAlester is linked north to south by U.S. 69 and the Indian Nation Turnpike, and linked east to west by U.S. 270 and Oklahoma State Highway 31. MCAAP is the largest single employer in the area employing approximately 1,300 people. Industry is wide ranging for the McAlester area, from agriculture to professional industries. In the year 2000, the top five industries in McAlester were educational, health, and social services (27.2 percent), retail trade (13.0 percent), and public administration (11.8 percent) (U.S. Census Bureau 2000).

In 2000, the median income for a household in McAlester was \$28,631 and the median income for a family was \$36,480. When comparing the city of McAlester's values with the values for Pittsburg County of \$28,679 for median income for a household and \$35,190 for median income for a family, the values are relatively close. Males had a median income of \$29,502 versus \$19,455 for females. The per capita income for McAlester was \$16,694 (U.S. Census Bureau 2000).

4.10.1.2 Demographics

The estimated population for McAlester in the year 2000 was 17,783, increasing 1,413 people since 1990 (an 8.6 percent increase). The U.S. Census Bureau reported that the population of Pittsburg County in 2000 was 43,953, an increase of 3,372 people since 1990 (an 8.3 percent increase). The demographics of McAlester and Pittsburg County for the year 2000 are listed below in Table 4.10-1.

Table 4.10-1. Demographics of McAlester and Pittsburg County, Oklahoma (2000).

Race	McAlester Urbanized Area (percent of total)	Pittsburg County (percent of total)
White Non-Hispanic	74.7	77.2
American Indian and Alaska Native	10.5	12.5
Black	8.7	4.0
Two or More Races	4.4	5.2
Some Other Race	1.3	0.8
Asian	0.4	0.3
Native Hawaiian/Other Pacific Islander	0.1	0

Source: U.S. Census Bureau 2000

4.10.1.3 Housing

The U.S. Census for the year 2000 defines McAlester as having a total of 6,588 housing units. This number is calculated by adding renter-occupied housing units (2,222) to the number of owner-occupied housing units (4,366). The median value of houses in McAlester was \$54,100. Comparatively, the U.S. Census shows housing units for Pittsburg County being comprised of 22,100 total units. The median value of homes for Pittsburg County was \$53,400 (U.S. Census Bureau 2000).

4.10.1.4 Environmental Justice

Environmental justice is the fair treatment for people of all races, cultures, and incomes, regarding the development and implementation (or lack thereof) of environmental laws, regulations, and policies. EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, directs Federal agencies to address environmental and human health conditions in minority and low-income communities. A memorandum from President Clinton concerning EO 12898 stated that Federal agencies would collect and analyze information concerning a project's effects on minorities or low-income groups when required by NEPA. If such investigations find that minority or low-income groups experience a disproportionate adverse effect, then avoidance or mitigation measures are necessary.

As noted above, McAlester, OK had a median household income of \$28,631 in the year 2000. About 16.1 percent of families and 19.4 percent of the population were below the poverty line; 26.8 percent of those were under age 18 and 11.6 percent of those were aged 65 or over. In 2000, the poverty guideline for a family of four was an annual income of \$17,603. For a family of three, it was \$13,738. The national rate for people living in poverty was 11.3 percent in 2000 (U.S. Census Bureau News 2001).

4.10.1.5 Protection of Children

Executive Order 13045, *Protection of Children from Environmental Health and Safety Risks*, requires Federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks that might disproportionately affect children (USACE 2002a).

In the three U.S. Census blocks surrounding MCAAP, children under the age of 18 account for 25 percent of the population (USACE 2002a). Children occupying MCAAP are residents or visitors. Special precautions are taken at MCAAP for their safety including the use of fencing, limitations on access to certain areas, and adult supervision.

4.10.2 CONSEQUENCES

Potential socioeconomic impacts are considered significant if the Proposed Action would cause:

- Substantial gains or losses in population and/or employment; or
- Disequilibrium in the housing market, such as severe housing shortages or surpluses, resulting in substantial property value changes.

Potential environmental justice impacts are considered significant if the Proposed Action would cause disproportionate effects on low-income and/or minority populations. Potential impacts to protection of children are considered significant if the Proposed Action would cause disproportionate effects on children.

4.10.2.1 Alternative 1 – Preferred Alternative

Overall, potential socioeconomic impacts from Alternative 1 would include beneficial short-term impacts during construction and beneficial long-term impacts upon completion. Impacts from Alternative 1 are discussed below separately for the AFRC and OMS, DRMS facility, relocation of SFW/Cluster Bomb and missile warhead production, and relocation of DEMIL and storage and testing functions.

AFRC and OMS. The Proposed Action would create a short-term increase of personnel on and around MCAAP during construction due to the creation of construction jobs. This would be a minor beneficial increase in local socioeconomic resources as there would be creation of jobs and increased use of hotels and businesses surrounding MCAAP.

Long-term impacts associated with the AFRC/OMS would occur due to the 15 to 50 permanent personnel stationed at this facility and the Reserve and National Guard personnel who would use this facility for training purposes. On average, it is expected that the AFRC/OMS would bring 400 temporary personnel on weekends, when the plant is not typically operating (Hughes 2006). Historically as many as 1,500 reserve troops have been assigned to MCAAP during training missions, although, it is not expected that this would occur often. Other personnel that may be expected would be seasonal (permanent on-call) personnel that are existing MCAAP employees. The increase of permanent personnel and those due to training missions would provide a minor beneficial increase in the local economy.

DRMS facility. The Proposed Action would create a short-term increase of personnel on and around MCAAP during construction due to the creation of jobs. This would be a minor beneficial increase in the local socioeconomic resources as there would be creation of jobs and increased use of hotels and businesses surrounding MCAAP.

There would be no long-term impacts to socioeconomics associated with the DRMS facility as labor at the facility would be existing MCAAP personnel.

SFW/Cluster Bomb and missile warhead production. Construction impacts associated with this function would be minimal as only some renovation and addition to existing MCAAP production facilities already in place would be required. Therefore, no short-term socioeconomic effects would likely occur from the relocation of the SFW/Cluster Bomb and missile warhead production function.

There would be no long-term impacts to socioeconomics associated with the SFW/Cluster Bomb and missile warhead production function as labor at the facility would be existing MCAAP personnel.

DEMIL and storage relocation. No short-term socioeconomic effects would occur from the relocation of the DEMIL and munitions storage and testing functions from Lone Star AAP, Kansas AAP, and Sierra Army Depot. New functions would occur in existing facilities on MCAAP.

There would be no long-term impacts associated with the DEMIL and storage relocation function as labor for these functions would be existing MCAAP personnel.

Environmental Justice. There would be no impacts to environmental justice at MCAAP or the surrounding area, as impacts from the Proposed Action identified in this EA would not be localized or placed primarily on minority and/or low-income populations.

Protection of Children. The Proposed Action would create short-term adverse effects on the protection of children as a result of construction activity. Because construction sites can be enticing to children, construction activity could be an increased safety risk. To avoid safety concerns, safety measures would need to be followed to protect the health and safety of children. This may include but is not limited to barriers, “no trespassing” signs, and construction vehicles and equipment secured when not in use.

No long-term effects on children would occur as a result of the Proposed Action.

4.10.2.2 Alternative 2

Potential socioeconomic impacts from Alternative 2 are similar to those for Alternative 1; however, if the relocation of Base Camp does not occur, fewer beneficial short-term impacts would occur because there would be less construction and no demolition. Overall, potential socioeconomic impacts would be beneficial over the short-term during construction and beneficial over the long-term upon completion.

4.10.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to socioeconomics.

4.11 Transportation

4.11.1 AFFECTED ENVIRONMENT

This section describes the existing transportation conditions at and surrounding MCAAP. Roadways and traffic are discussed first, followed by public transportation.

4.11.1.1 Roadways and Traffic

Transportation and circulation refer to the movement of vehicles throughout a road and highway network. Primary roads are principal arterials, such as major interstates, designed to move traffic and not necessarily to provide access to all adjacent areas. Secondary roads are arterials such as rural routes and major surface streets that provide access to residential and commercial areas.

Traffic enters MCAAP through one primary entrance, the Main Entrance Gate, and two secondary gates, the Haywood Gate and the Truck Gate. The Main Entrance Gate is used for DoD vehicles, privately owned vehicles, and visitors only. The Main Entrance Gate is located on the east side of the installation and is primarily accessible from U.S. Highway 69. There are two entry lanes and two exit lanes at the Main Entrance Gate, although one lane is currently closed in both directions due to force protection concerns. Peak hours of operation are from 6:30 a.m. to 7:30 a.m., with a volume of 523 vehicles. Peak 15 minute volume occurs from 6:45 a.m. to 7:00 a.m., with a volume of 113 vehicles (USACE 2004). The Haywood Gate is used for installation personnel and contractors during rush hours. During non-rush hours, the gate is open only upon request. The Haywood Gate's hours of operation are from 5:30 a.m. to 8:00 a.m. and 3:00 p.m. to 7:30 p.m. on Monday through Friday. The peak hourly volume for this gate occurs from 6:15 a.m. to 7:15 a.m. and the peak 15 minute volume occurs from 6:30 a.m. to 6:45 a.m. (USACE 2004). The Haywood Gate is located on the north side of the installation and is not accessible from a major highway. There is one entrance and one exit lane associated with this gate. The Truck Gate is open from 5:30 a.m. to 9:30 p.m. on Monday through Friday. This gate is used for DoD vehicles and commercial traffic only. No peaks in traffic are recorded because only about 60 vehicles enter the installation through this gate per day (USACE 2004). There is one entrance lane and one exit lane associated with the Truck Gate.

4.11.1.2 Public Transportation

The primary transportation system providing access to MCAAP is the regional highway network, although there are major airports at Tulsa and Oklahoma City and a small airport in the city of McAlester (USACE 1996). Railway service for MCAAP is provided by Union Pacific Railroad. The railway serves the manufacturing and production facilities and the ammunition storage igloos/magazines on the north side of the installation and a few locations near the open burn pits.

4.11.2 CONSEQUENCES

Potential impacts to transportation are evaluated with respect to the potential for the Proposed Action to:

- Disrupt or improve current transportation patterns and systems;
- Deteriorate or improve existing levels of service;
- Change existing levels of safety; and
- Disrupt and deteriorate current installation activities.

4.11.2.1 Alternative 1 – Preferred Alternative

Overall, potential transportation impacts from Alternative 1 would not be significant. A small increase in vehicular traffic is expected during the construction of the new facilities. The increase in vehicular traffic would be caused by an increase in workers coming onto the

installation in the morning and leaving in the evening. Construction traffic would be routed through existing gates that would be used during normal business hours. This impact would be temporary and would not exceed the capacity of the existing roadways. Impacts would not be significant. Long-term impacts from Alternative 1 are discussed below separately for the AFRC and OMS, DRMS facility, relocation of SFW/Cluster Bomb and missile warhead production, and relocation of DEMIL and storage and testing functions.

AFRC and OMS. Based on the current volume of traffic, the 15 to 50 new personnel that would be permanently stationed at the AFRC would not cause a significant increase in traffic. Long-term impacts associated with the construction of the AFRC and consolidated OMS would include an increase in vehicular traffic on and around MCAAP associated with training activities. Golden Kastle training activities have historically had as many as 1,500 personnel at the peak of special training activities. The increased traffic on roadways would be offset by having the training operations on the weekends when normal business traffic is at a minimum. The increased traffic is not expected to cause a significant disruption to current transportation patterns on MCAAP.

DRMS facility. Long-term impacts associated with the construction of a new DRMS facility would include an increase in vehicular and rail traffic associated with the increase in activity at the DRMS facility. Two to five tractor trailers would arrive at and depart from the facility each operational day. Existing roadways and railways are expected to be used for the new DRMS facility. No new incoming personnel are expected to be assigned to the DRMS facility. Rail traffic would be increased; however, the rail lines are located in an isolated area away from residential areas and are expected to have minimal disruptive effects on and surrounding MCAAP.

SFW/Cluster Bomb and missile warhead production. No long-term transportation impacts would occur from the relocation of the SFW/Cluster Bomb and missile warhead production from Kansas AAP to MCAAP. New functions would occur in existing facilities already present on MCAAP. No new incoming personnel are expected to be assigned to the SFW/Cluster Bomb and missile warhead production function.

DEMIL and storage relocation. No long-term transportation impacts would occur from the relocation of the DEMIL and munitions storage and testing functions from Lone Star AAP, Kansas AAP, and Sierra Army Depot. New functions would occur in existing facilities already present on MCAAP. No new incoming personnel are expected to be assigned to the storage and testing facilities that would be used for oncoming DEMIL and storage.

4.11.2.2 Alternative 2

Potential transportation impacts associated with Alternative 2 are the same as for Alternative 1, with construction traffic being slightly less if Base Camp is not relocated. Overall, transportation impacts would not be significant.

4.11.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to transportation.

4.12 Utilities

4.12.1 AFFECTED ENVIRONMENT

This section describes existing utilities at MCAAP. In general, the utility systems on MCAAP are classified as distribution and collection systems including water, sanitary sewer, storm drainage, electrical, natural gas, and industrial wastewater. Communication systems and solid waste disposal are also discussed in this section. Figure 4.12-1 illustrates utility systems present on MCAAP in the area of Proposed Action construction projects.

4.12.1.1 Potable Water Supply

Potable water can be defined as water fit for drinking, being free from contamination and not containing a sufficient quantity of saline material to be regarded as a mineral water. MCAAP owns and operates a potable water processing plant and distribution system at the eastern edge of Brown Lake, which is the primary source of potable water for the installation.

Brown Lake is classified as a Sensitive Water Supply under Oklahoma Administrative Code (OAC) 252:630 (USACE 2002a). Water from the lake is treated, routed into storage tanks, then sold and pumped to various users in the surrounding area. MCAAP (1,300 users), the cities of Savanna (approximately 500 people) and Haywood (approximately 27 people), as well as the Haywood School district, receive water from this system. The water treatment facility has a maximum handling capacity of 1.0 million gallons per day (MGD) with seasonal averages from 50-85 percent of capacity. The city of McAlester operates its own water treatment and distribution system, which has a maximum capacity of 12 MGD.

The water distribution system on MCAAP was constructed in 1943 and has undergone periodic upgrading. The system consists of one low pressure zone and four high pressure zones. The distribution piping is predominantly polyvinyl chloride (PVC), which replaced the older cast iron and asbestos cement (transite) sections (USACE 1996).

4.12.1.2 Wastewater System

MCAAP owns and operates a sanitary wastewater treatment plant east of Brown Lake, near the water treatment plant. Collection pipes route wastewater to the treatment plant via gravity feed and a series of lift stations. The wastewater treatment plant has a maximum loading capacity of 0.75 MGD. Currently the wastewater treatment plant is operating between 0.2 and 0.7 MGD. Two flow management lagoons are designed to capture and store the wastewater when the plant's capacity is exceeded. The lagoons have capacities of 2.3 and 1.7 million gallons.

The wastewater treatment plant has a joint National NPDES/Oklahoma Pollutant Discharge Elimination System (OPDES) permit for its single outfall. The city of McAlester operates its own wastewater treatment system, consisting of two separate treatment facilities with a total capacity of 3.6 MGD (USACE 1996).

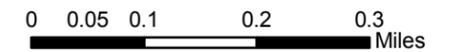


LEGEND

-  Installation Boundary
-  Buildings/Structures
-  Roads
-  Proposed Base Camp Relocation (Preferred Alternative)
-  Proposed AFRC/OMS Location (Preferred Alternative)
-  Proposed AFRC/OMS Area (Alternative 2)
-  Proposed DRMS Facility Location
-  Water Line
-  Wastewater Line
-  Natural Gas Line
-  Electrical Line

Acronym List:

- AFRC** Armed Forces Reserve Center
- DRMS** Defense Reutilization and Marketing Service
- OMS** Organizational Maintenance Shop



Prepared for: U.S. Army Corps of Engineers,
Mobile District

Realignment Environmental Assessment for
McAlester Army Ammunition Plant
McAlester, OK

Date Revised: 11/14/06

Figure 4.12-1

Utility System on
McAlester Army Ammunition Plant



This page intentionally left blank.

4.12.1.3 Storm Water System

Surface runoff on MCAAP drains into seven creeks. Storm water runoff in the Administrative/Industrial area is collected through piping and transported to Brown Lake. The Administrative/Industrial area is located on the north shore of Brown Lake, within the Bull Creek watershed. Nearly all of the runoff within the watershed of Bull Creek, which lies within MCAAP, drains to Brown Lake. No other area on MCAAP contains a storm water collection system. No retention ponds or storm water plans are anticipated in the near future.

4.12.1.4 Energy Sources

Electricity, natural gas, steam, and a liquid fuels system are the available energy sources at MCAAP.

Electricity. The Public Service Company of Oklahoma (PSO) supplies electricity to MCAAP through an installation substation. Approximately 19,000 residents in and around the city of McAlester are serviced by PSO. PSO serves approximately 230 cities and towns and approximately 1.1 million people across Oklahoma. MCAAP currently uses 5 megawatts (MW) of electrical power, but has the capacity to consume up to 14 MW of electricity if needed.

Natural Gas. Mountain Iron and Supply Company supplies natural gas to MCAAP. MCAAP currently consumes 2,400 Mcf (1 Mcf equals 1,000 cubic feet) per year of natural gas. The installation has the capacity to increase to 4,800 Mcf per year if necessary. Records show approximately 152,000 linear feet of pipe servicing 150 buildings on MCAAP. The lines are primarily cathodically protected steel, although approximately 8,000 linear feet of gas distribution lines are plastic (USACE 2002a). MCAAP uses natural gas for space heating, hot water, burning methane gas at the sewer plant, incinerating paint fumes, cooling several buildings with gas driven chillers, heating oil for the tar kettles, and process steam. The greatest consumption of natural gas is for space heating.

Steam System. Steam at MCAAP is used as a process power source for both the production of ammunition and space heating. Because MCAAP production buildings contain explosive materials, all heating along with some process work is done by steam in these building (USACE 2002a). There are 35 operational boilers at MCAAP; 9 are in the Administrative/Industrial area and the remaining 26 are in the Production area. The boilers used for production are operated year round, while the remaining space heating boilers are only operated during winter months (October – March). Most of the boilers use natural gas as a fuel source with diesel fuel being used as a secondary source.

Liquid Fuels System. MCAAP has two refueling pads located at the motor pool, in the Dahlstrom Area. The refueling pads are the main fueling point for Reserve training units. Commercial vehicles such as 18-wheelers fuel at commercial gas stations located off the installation.

4.12.1.5 Communication

Southwestern Bell provides telephone service to a central location at MCAAP from which Army-owned lines supply telephone service to the installation. The telephone system consists of

both copper and fiber optic cable. The Communications Department maintains and operates the telephone system.

4.12.1.6 Solid Waste

MCAAP operates one permitted landfill on the installation that covers 49.28 acres and has a capacity of 10,000 pounds. Materials accepted at the landfill include empty cardboard boxes, plastic bottles, empty crushed paint and thinner cans, metal turnings coated with oil, inert plastic material, minor volumes of sandwich wrappers and soda bottles, containerized asbestos, and sludge from the water and wastewater treatment plants (USACE 2002a). No municipal waste from the city of McAlester is collected on MCAAP.

Paper and cardboard from the Industrial and Administrative areas are collected by a contractor and recycled. Household wastes are transported to the city of McAlester Landfill. Recycled materials include aluminum cans, paper, railroad ties, batteries, used oil, copper wire, all mixed steels, and lumber. Lumber goes for public sale, while steels are auctioned for smelting or to private individuals. MCAAP oversees the contractor who is responsible for moving the material from the recycling yard within a certain time limit.

4.12.2 CONSEQUENCES

Effects on infrastructure are considered in terms of increases in demands on systems and the ability of existing systems to meet those demands. Potential effects to the environment could occur if the existing systems are insufficient to handle the increased demands requiring construction and operation of a new system. Utility demands include both construction and operations usage. Utility demands during the operations of the Proposed Action are based on the additional facility square footage and personnel requirements. Individual segments that comprise the totality of the infrastructure are discussed below.

Potential impacts to the potable water system are considered significant if the Proposed Action would:

- Reduce potable water availability;
- Disrupt potable water distribution systems;
- Change water demands that affect regional potable supplies; or
- Generate contaminants that cause negative effects on water quality.

Potential impacts to the wastewater system are considered significant if the Proposed Action would:

- Cause additional inflow and infiltration and increased loads on the wastewater treatment that cannot be adequately treated; or
- Change wastewater composition that would alter wastewater treatment processes or consistently cause upsets of the wastewater treatment system.

Potential impacts to storm water conveyance systems are considered significant if the Proposed Action would:

- Cause flow obstructions and increases to the storm water drainage system;
- Accelerate deterioration of the storm water drainage system; or
- Cause long-term interruptions of storm water drainage system components.

Potential impacts to the electrical systems are considered significant if the Proposed Action would:

- Change regional electricity demands requiring major new components such as transmission lines, transformers, and substations; or
- Cause long-term disruptions in available electrical services.

Potential impacts to liquid fuel systems are considered significant if the Proposed Action would:

- Cause unsafe, inadequate, or noncompliant temporary or long-term storage or distribution systems; or
- Cause unreliable distribution of liquid fuels that cannot meet the mission and support requirements.

Potential impacts to solid waste are considered significant if the Proposed Action would increase solid waste such that it overwhelms local landfills.

4.12.2.1 Alternative 1 – Preferred Alternative

Overall, potential impacts to utilities from Alternative 1 would not be significant. The following provides an evaluation of the environmental impacts to potable water supply, wastewater system, storm water system, energy sources, communications, and solid waste that may result from implementation of the Proposed Action. Specific design parameters for utilities have not been completed for Alternative 1 at the time of this EA.

Potable Water Supply. Construction of a new AFRC with consolidated OMS building and new DRMS facility would involve tapping into existing lines that are owned and operated by MCAAP. Water usage would be supplied from Brown Lake, which MCAAP also owns and operates.

Additional water use for personnel would only occur from operation of the AFRC/OMS complex, as all other facilities would use existing MCAAP personnel. Additional water use from the AFRC/OMS would occur from the 15 to 50 personnel who would be permanently stationed at this facility and the 400 Reserve and National Guard personnel who would temporarily use this facility for training purposes on weekends. Overall demand on the water system would be offset by having training activities on weekends, when demand is low. Increased usage would not compete with regular installation personnel usage. Low water pressure in the area of the AFRC and OMS would require the construction of a new water tower to address the issue.

SFW/Cluster Bomb and missile warhead production as well as DEMIL and storage functions would occur in existing facilities with utility easements already in place. New functions are not expected to exceed existing handling capacities.

Wastewater System. Wastewater associated with the construction of a new AFRC and OMS and DRMS facility under Alternative 1 would be captured by the existing wastewater system in place on MCAAP.

Additional wastewater would only occur from the AFRC/OMS as all other facilities would use existing MCAAP personnel. Additional wastewater from the AFRC/OMS would occur from the 15 to 50 personnel who would be permanently stationed at this facility and the 400 Reserve and National Guard personnel who would temporarily use this facility for training purposes on weekends. The handling capacities would be offset by having training activities on weekends, when effluent is low.

SFW/Cluster Bomb and missile warhead production as well as DEMIL and storage functions would occur in existing facilities with wastewater easements already in place. New functions are not expected to exceed existing handling capacities.

Storm Water System. Storm water runoff associated with the construction of a new AFRC and OMS and DRMS facility under Alternative 1 would adhere to the SWPPP for construction activities (EM-PLAN-52). If more than 5 acres of land are disturbed, the SWPPP for construction activities for Large Projects would be followed. The General Multi-Sector permit would also be followed if long-term industrial operations take place at any of these facilities. New construction of storm water systems associated with these facilities would be in compliance with these plans.

SFW/Cluster Bomb and missile warhead production as well as DEMIL and storage functions would occur in existing facilities with storm water collection systems already in place. New functions are not expected to exceed existing handling capacities.

Energy Sources. The following energy sources are evaluated for impacts: electricity, natural gas, steam, and liquid fuels system.

Electricity

Electricity for the proposed AFRC and OMS and DRMS facility would be provided by PSO. New electrical easements would be joined with existing electrical lines already in place on MCAAP and may require the construction of new transformers. However, the existing electrical distribution system will be sufficient to accommodate the new facilities (Crabtree 2006). Furthermore, new electrical usage at the AFRC/OMS complex would be offset by being used primarily on weekends when normal installation usage is low.

SFW/Cluster Bomb and missile warhead production as well as DEMIL and storage functions would occur in existing facilities with utility easements already in place. New functions are not expected to exceed existing handling capacities.

Natural Gas

Mountain Iron and Supply Company provides MCAAP with natural gas. Natural gas utility easements for the proposed AFRC and OMS and DRMS facility would be joined with existing natural gas lines already in place on MCAAP. New natural gas usage would be offset by being used primarily on weekends when normal installation usage is low.

SFW/Cluster Bomb and missile warhead production as well as DEMIL and storage functions would occur in existing facilities with natural gas utility easements already in place. New functions are not expected to exceed existing handling capacities.

Steam

The SFW/Cluster Bomb and missile warhead production function may place additional demands on the current steam system on MCAAP. Demand increases would be minimal since the SFW/Cluster Bomb and missile warhead production would be placed in an existing building with minimal demand occurring from the low production of SFW/Cluster Bombs. A maximum of approximately 600 weapons would be produced each year.

The AFRC/OMS complex, DRMS facility, and the DEMIL and storage functions would place little if any demand on the existing steam system. Most likely the AFRC/OMS complex and DRMS facility would be heated by furnaces. The DEMIL and storage functions would be placed into an existing facility already on MCAAP.

Liquid Fuels System

The increase in personnel and training efforts due to the proposed AFRC and OMS may place additional demands on the two refueling pads currently present at the motor pool. The additional demands placed on the current refueling pads are not likely to exceed the current fueling capacity of the motor pool. The motor pool would only be used to fuel DoD vehicles. All commercial motor vehicles would fuel off installation at commercial gas stations.

Communications. The proposed AFRC and OMS and DRMS facility would most likely require new communication lines to be tied into the existing communications system on MCAAP. The new system would most likely involve ground cable and fiber optic cable placed near the proposed locations. Southwestern Bell would most likely provide the service and no impacts are anticipated to occur.

SFW/Cluster Bomb and missile warhead production as well as DEMIL and storage functions would occur in existing facilities with communication system easements already in place. New functions are not expected to exceed existing handling capacities.

Solid Waste. The construction of the proposed AFRC and OMS would require the demolition of six trailers, a dining hall, a laundry facility, two shower facilities, and a freezer as well as the relocation of 50 concrete pads (Base Camp). Construction waste would be transported to the McAlester City Landfill, while all other waste would be contracted out to the Pittsburg County Landfill at Alderson. Any materials found containing asbestos would be handled by MCAAP. All other hazardous waste would be contracted through the DRMS at Tinker Air Force Base

(AFB), OK for disposal. Operation of the DRMS facility would result in a long-term increase in scrap and solid waste generation at MCAAP. However, substantial increases to MCAAP landfills as well as municipal landfills are not expected to occur.

SFW/Cluster Bomb and missile warhead production as well as DEMIL and storage and testing functions would occur in existing facilities. New functions are not expected to cause a significant increase in solid waste generation.

Overall, potential impacts to utilities from Alternative 1 would not be significant. However, a new water tower would need to be constructed in the area of the new AFRC and OMS to handle the low water pressure present in the area. New utility usage from the proposed AFRC and OMS would be offset by being used primarily on weekends when normal installation usage of utilities is low.

4.12.2.2 Alternative 2

Overall, potential impacts to utilities from Alternative 2 would be very similar to those from Alternative 1 and would not be significant. Specific design parameters for utilities have not been completed for Alternative 2 at the time of this EA.

Impacts specific to potable water supply, wastewater system, storm water system, energy sources, and communications would be the same as for Alternative 1. Impacts to solid waste may be somewhat less if this alternative does not require the demolition and subsequent disposal of six trailers, a dining hall, a laundry facility, two shower facilities, and a freezer as well as the relocation of 50 concrete pads (Base Camp).

4.12.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to utility systems.

4.13 Safety and Occupational Health

4.13.1 AFFECTED ENVIRONMENT

This section describes the existing safety and occupational health conditions at MCAAP. The U.S. government has conducted military operations within the boundaries of MCAAP for over 60 years. Some of these operations have caused various safety concerns, primarily explosives safety.

Operations on MCAAP involve the storage and DEMIL of high explosives. MCAAP operates two OB/OD ranges for ordnance and hazardous waste disposal. These operations have been conducted since 1942. Demolition activities are conducted on one newer and one older OB/OD range, and on the DAC Training Range. The OB/OD ranges have 26 pits that are each restricted by MCAAP to 300 pounds NEW. The DAC Range is an explosive operators training range that consists of 6 pits and is limited to 8 pounds NEW. It is used approximately twice per year for training classes. Training on this range includes the demolition of 81-mm and 4.2-inch mortar shells. Small arms activities are conducted separately once a year at the small arms ranges. Small arms fired include the M-16 rifle, 0.38 cal., 0.45 cal., and 9 mm pistols, and M203 grenades.

The storage and handling of high explosives creates unique safety hazards. To address these hazards, facilities that are designated to handle or store explosives are set apart from other installation facilities and must comply with DoD Directive 6055.9, DoD Explosives Safety Board (DDESB) and DoD Component Explosives Safety Responsibilities (DoD 1997). Furthermore, the development of an Explosives Site Plan with approval from the DDESB may be required.

Facilities storing or handling high explosives are separated from other installation facilities by a designated area classified as an explosive safety quantity-distance (Q/D) arc, designed to safeguard the base population and civilian community from potential explosions. All development impacted by an explosive safety arc must comply with DoD ammunition and explosives safety standards. Within these arcs, certain separation distances are mandated to minimize explosive hazards. Safety Q/D arcs on MCAAP are shown on Figure 4.13-1.

4.13.2 CONSEQUENCES

Potential impacts to health and safety are considered significant if the Proposed Action would expose workers, residents, or visitors to hazardous substances or environments.

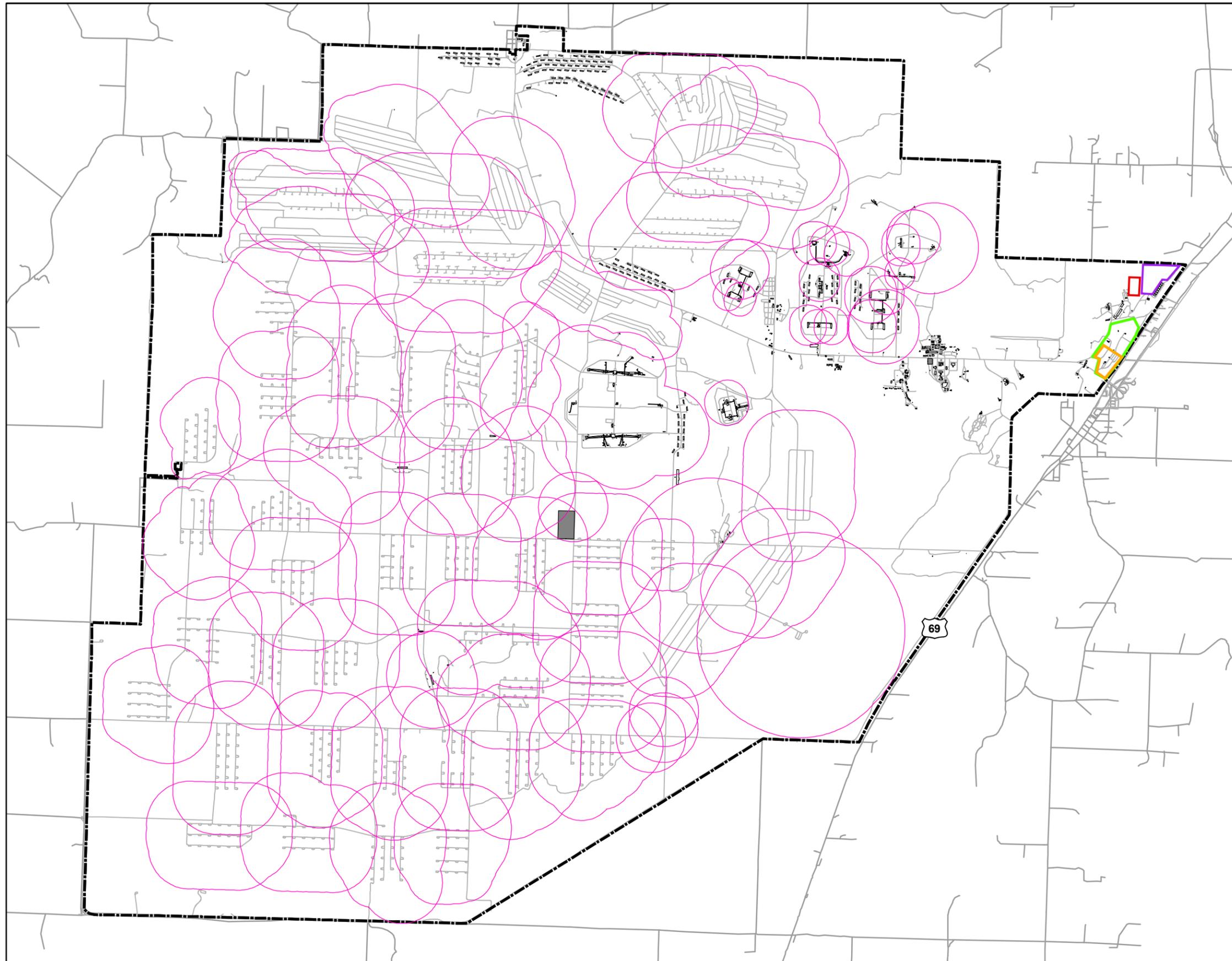
4.13.2.1 Alternative 1 – Preferred Alternative

Overall, potential impacts to safety and occupational health would not be significant. Implementation of Alternative 1 would create working conditions in and around the construction activities that would require proper safety precautions. Operation of machinery, handling hazardous materials, and numerous other actions would require proper steps to protect oneself and the surrounding people from unsafe conditions. Personnel conducting construction would be subject to Occupational Safety and Health Administration's (OSHA's) safety and health regulations which include, but are not limited to, 29 CFR 1910.132 General Requirements for Personal Protective Equipment, 29 CFR 1900.1200 and 29 CFR 1926.59 Hazard Communication, 29 CFR 1926 Safety and Health Regulations for Construction, and any other applicable safety regulation.

Potential long-term impacts from Alternative 1 are discussed below separately for the AFRC and OMS, DRMS facility, relocation of SFW/Cluster Bomb and missile warhead production, and relocation of DEMIL and storage and testing functions.

AFRC and OMS. The AFRC and OMS would not overlay onto existing explosive safety arcs as shown on Figure 4.13-1. Therefore, no impacts are expected to occur from safety arcs for the new AFRC and OMS. Reserve training and vehicle maintenance would create day-to-day hazards that would require proper safety precautions. Operation of machinery, handling hazardous materials, and numerous other actions would require proper steps be taken to protect oneself and the surrounding people from unsafe conditions. Reserve personnel would be subject to Army training and safety procedures.

This page intentionally left blank.

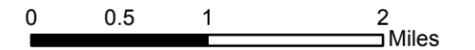


LEGEND

-  Installation Boundary
-  Buildings/Structures
-  Roads
-  Explosive Safety Arcs
-  Proposed AFRC/OMS Location (Preferred Alternative)
-  Proposed AFRC/OMS Area (Alternative 2)
-  Proposed Base Camp Relocation (Preferred Alternative)
-  Proposed DRMS Facility Location

Acronym List:

- AFRC** Armed Forces Reserve Center
- DRMS** Defense Reutilization and Marketing Service
- OMS** Organizational Maintenance Shop



Prepared for: U.S. Army Corps of Engineers,
Mobile District

Realignment Environmental Assessment for
McAlester Army Ammunition Plant
McAlester, OK

Date Revised: 11/14/06

Figure 4.13-1

Explosive Safety Arcs on
McAlester Army Ammunition Plant



This page intentionally left blank.

Personnel conducting vehicle maintenance would be subject to OSHA regulations which include, but are not limited to, 29 CFR 1910.132 General Requirements for Personal Protective Equipment, 29 CFR 1900.1200 and 29 CFR 1926.59 Hazard Communication, 29 CFR 1926 Safety and Health Regulations for Construction, and any other applicable safety regulation. Implementation of applicable standard operating procedures (SOPs) and safety regulations would ensure that impacts to safety and occupational health from long-term activities at the AFRC and OMS would not be significant.

DRMS facility. The DRMS facility would not overlay onto existing explosive safety arcs as shown on Figure 4.13-1. Therefore, no impacts are expected to occur from safety arcs for the new DRMS facility. Activities at the DRMS facility, such as shredding metal and using cutting torches, would create day-to-day hazards that would require proper safety precautions. Personnel working at the DRMS would be subject to OSHA regulations which include, but are not limited to, those listed above for the AFRC and OMS. Implementation of applicable safety regulations would ensure that impacts to safety and occupational health from long-term activities at the DRMS facility would not be significant.

SFW/Cluster Bomb and missile warhead production. The relocation of SFW/Cluster Bomb and missile warhead production, including the field testing range, would occur in existing facilities at MCAAP. The SFW/Cluster Bomb and missile warhead production facility may have a new explosive safety arc associated with the function; however, at this time no explosive safety arcs have been identified with the function. Operational safety hazards at this facility would include the assembly of bombs and warheads and periodic live firing of a warhead. These functions would create day-to-day hazards that would require proper safety precautions. To address these hazards, the SFW/Cluster Bomb and missile warhead production facility would comply with DoD ammunition and explosives safety standards. Furthermore, the development of an Explosives Site Plan with approval from the DDESB may be required. Personnel working at the SFW/Cluster Bomb and missile warhead production facility would be subject to OSHA regulations which include, but are not limited to, those listed above for the AFRC/OMS and DRMS facilities. Periodic firing of warheads would be conducted in accordance with the installation's Range Management Program. Implementation of applicable SOPs and safety regulations would ensure that impacts to safety and occupational health from long-term activities at the SFW/Cluster Bomb and missile warhead production facility would not be significant.

DEMIL and storage relocation. MCAAP would provide only shipping, receiving, storage, and testing. No treatment is currently scheduled unless future funding is appropriated for such actions. Storage and testing of oncoming ordnance would not exceed current safety standards already in effect on MCAAP and would occur in existing facilities, and the DEMIL capacity and rate of demilitarization per explosive net weight would not change. Currently MCAAP is operating at 85 percent of its maximum storage capacity. Thus, the planned storage sheds would provide additional needed storage. Oncoming ordnance would be shipped and received in phases until 2011. Storage of oncoming ordnance would not exceed MCAAP's maximum storage capacity. Personnel working with oncoming ordnance would be subject to OSHA regulations which include, but are not limited to those discussed above. Implementation of applicable SOPs and safety regulations would ensure that impacts to safety and occupational health from long-

term activities from the DEMIL and storage and testing relocation function would not be significant.

4.13.2.2 Alternative 2

Potential impacts to safety and occupational health from Alternative 2 would be similar to those from Alternative 1, and these impacts would not be significant. Under Alternative 2, no explosive safety arcs would overlay onto the 75-acre proposed AFRC/OMS area as shown on Figure 4.13-1. Therefore, no impacts are expected to occur from safety arcs for the new AFRC and OMS. Impacts from the day-to-day operations of the AFRC/OMS, the DRMS facility, and the DEMIL and storage functions would be the same as for Alternative 1.

4.13.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts to safety and occupational health would occur.

4.14 Hazardous and Toxic Substances

4.14.1 AFFECTED ENVIRONMENT

This section describes the existing conditions of hazardous and toxic substances at MCAAP. Management of hazardous materials and hazardous wastes are discussed as well as environmental restoration sites.

4.14.1.1 Hazardous Materials

For purposes of this EA, hazardous materials are those regulated under Federal, state, DoD, and Army regulations. Hazardous materials are required to be handled, managed, treated, or stored properly by trained personnel under the following regulations: OSHA Hazardous Communication, 29 CFR 1900.1200 and 29 CFR 1926.59; Department of Transportation (DOT) Hazardous Materials, 49 CFR 172.101; EPA, 40 CFR 260 et seq (OSHA 2006), and under the installation Hazardous Materials Program.

4.14.1.2 Hazardous Waste Disposal

MCAAP is a large quantity generator under RCRA. Hazardous waste disposal is contracted through the DRMS who executes the contract. The DRMS at Tinker AFB, OK is responsible for the waste pickup and transportation. Waste is transported to several local permitted facilities with all proper hazardous waste manifests. MCAAP has a permitted hazardous waste storage area that is limited to 10,000 pounds. However, most storage of hazardous waste occurs at the 90-day storage facility. Approximately 100,000 pounds of hazardous waste is turned in per month, although MCAAP has the capacity to turn in approximately ten times more if necessary. Hazardous waste generated usually consists of paint, de-greasing chemicals, metal grindings, DEMIL projects waste, waste from machine shops, rotating bands from ammunition rounds, copper wire from electric shops, and construction and demolition waste.

Recycled explosive ordnance is classified as 1X (high residual explosive), 3X, or 5X (low residual explosive). Explosives are handled by the DRMS. Projectiles that are 1X or 3X can not be handled and are taken off installation to a smelting facility. Radioactive material from

explosives has historically never met the 0.05 ppm limit. Any radioactive material that is found is recycled for precious metals.

4.14.1.3 Environmental Restoration Sites

CERCLA and the Superfund Amendments Reauthorization Act of 1986 (SARA) established the nationwide process to clean up hazardous waste disposal and waste sites. The Installation Restoration Program (IRP) is a subcomponent of the DoD-wide Defense Environmental Restoration Program (DERP) that addresses the identification, investigation, and cleanup of contamination from hazardous substances and pollutants associated with past practices. None of the MCAAP restoration sites are on the National Priorities List.

MCAAP has 48 Solid Waste Management Units (SWMUs) in the Army Environmental Database Restoration (AEDBR) Module (Figure 4.14-1); however, there are no SWMUs within the boundaries of the proposed construction locations. MCAAP is performing corrective actions as required by their RCRA, Part B Permit issued by EPA (1992), and modified December 15, 1998, and is currently under the primacy of the ODEQ (1994) (MCAAP 2006).

4.14.2 CONSEQUENCES

Potential impacts to hazardous materials management are considered significant if the Proposed Action would:

- Result in noncompliance with applicable Federal and state regulations; or
- Increase the amounts generated or procured hazardous materials beyond current permitted capacities or management capabilities.

Potential impacts to the IRP are considered significant if the Proposed Action would:

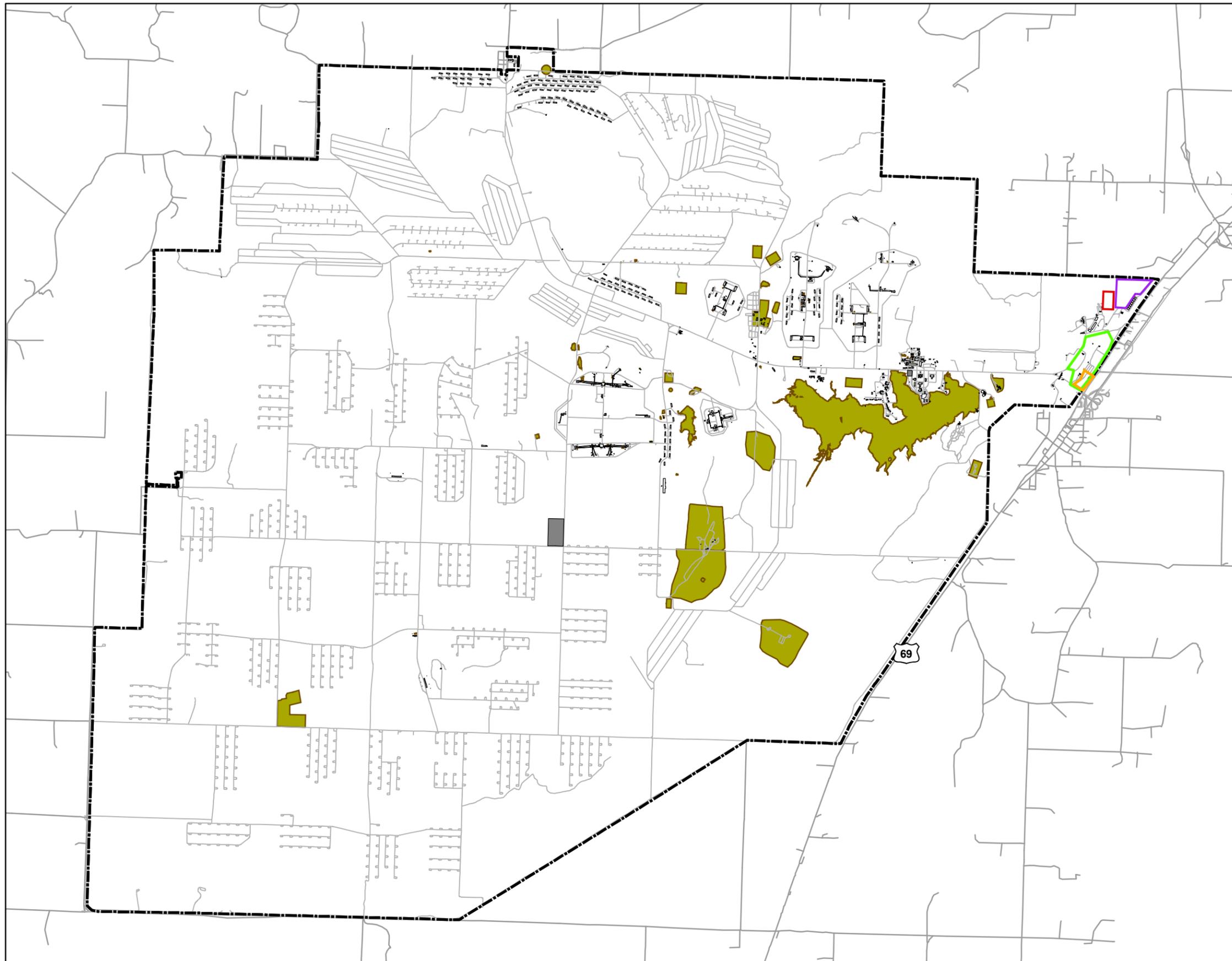
- Disturb, create, or contribute to contamination at a site resulting in potential adverse effects to human health or the environment; or
- Cause regulatory noncompliance.

4.14.2.1 Alternative 1 – Preferred Alternative

Overall, impacts regarding hazardous and toxic substances from Alternative 1 would not be significant. Impacts from Alternative 1 are discussed below separately for the AFRC and OMS, DRMS facility, relocation of SFW/Cluster Bomb and missile warhead production, and relocation of DEMIL and storage and testing functions.

AFRC and OMS. During construction, the use and transportation of hazardous materials that are regulated by OSHA and DOT may occur. The hazardous materials would be handled in accordance with applicable regulations and as specified under MCAAP's Hazardous Material/Waste Management Program: Hazardous Material/Waste Management Plan. Neither construction nor operations activities would substantially increase the volume of hazardous materials used at MCAAP.

This page intentionally left blank.



LEGEND

-  Installation Boundary
-  Buildings/Structures
-  Airfield
-  Roads
-  Solid Waste Management Units
-  Proposed AFRC/OMS Location (Preferred Alternative)
-  Proposed AFRC/OMS (Alternative 2)
-  Proposed Base Camp Relocation (Preferred Alternative)
-  Proposed DRMS Facility Location

Acronym List:

- AFRC** Armed Forces Reserve Center
- DRMS** Defense Reutilization and Marketing Service
- OMS** Organizational Maintenance Shop



Prepared for: U.S. Army Corps of Engineers,
Mobile District

Realignment Environmental Assessment for
McAlester Army Ammunition Plant
McAlester, OK

Date Revised: 11/14/06

Figure 4.14-1

Solid Waste Management Units on
McAlester Army Ammunition Plant



This page intentionally left blank.

During construction of the AFRC and OMS, maintenance of construction equipment would result in hazardous wastes regulated by EPA. The construction contractor generating the waste would coordinate the removal of waste and manifests with MCAAP as well as any other appropriate entities. The avoidance of spills and their treatment in the event of an accident are addressed through existing pollution prevention, spill response, and hazardous waste management plans. These plans address and specify procedures to be followed. Equipment and vehicles parked overnight, or left for lengthy periods on-site, would be fitted with drip pans.

Long-term impacts associated with the OMS include hazardous waste generated by day-to-day operations. Brake shoes, petroleum, oil, lubricants, and anti-freeze would be expected from vehicle maintenance activities. The amount of hazardous waste generated from the OMS is expected to be small in relation to MCAAP's current inventory of hazardous waste. Hazardous wastes that are generated from the new facility would be categorized and shipped according to MCAAP's Hazardous Material/Waste Management Program: Hazardous Material/Waste Management Plan. All waste generated from the OMS is expected to be managed under the existing MCAAP RCRA permit. However, a permit modification would be pursued if required.

DRMS facility. During construction, impacts as described for the AFRC and OMS would occur. Long-term impacts associated with the DRMS function may involve the inadvertent shipment of hazardous material to the facility; however, no hazardous materials would be processed or stored at the facility. Some activities of the DRMS facility may involve draining fluids from equipment, which would be stored and processed according to established procedures. Other operations may include the generation of metal grindings, DEMIL projects waste, waste from machine shops, rotating bands from ammunition rounds, copper wire from electric shops, and construction and demolition waste. The amount of scrap and solid wastes produced would fall under the maximum handling limit for MCAAP.

All waste generated or handled from the DRMS facility is expected to be managed under the existing MCAAP RCRA permit. However, a permit modification would be pursued, if required.

SFW/Cluster Bomb and missile warhead production. Construction impacts associated with this function would be minimal as only some renovation and addition to existing MCAAP production facilities already in place would be required.

Long-term impacts associated with this function may result from the operation of a 10-square-foot paint booth. The paint booth would serve to stripe and stencil approximately 250 to 609 SFW/cluster bomb units per year. Proper ventilation systems would be in place and the avoidance of spills and their treatment in the event of an accident are addressed through existing pollution prevention, spill response, and hazardous waste management plans. All waste generated is expected to be managed under the existing MCAAP RCRA permit. However, a permit modification would be pursued, if required. Periodic testing of warheads would be accomplished on land already used for similar purpose and managed under the installation's Range Management Plan.

No other long-term hazardous waste generation impacts would occur with the relocation of the SFW/Cluster Bomb and missile warhead production from Kansas AAP to MCAAP.

DEMIL and storage relocation. Construction impacts associated with this function would be minimal as only some renovation to existing MCAAP facilities already in place would be required as well as the erection of up to ten storage sheds.

Storage capacity with the new sheds would be adequate for incoming munitions, because implementation of munitions DEMIL would be phased through 2011 as funding is available. Storage would not exceed MCAAP's maximum DEMIL capacity of 62,000 short tons per year. No treatment is currently scheduled unless funding is appropriated for such actions. Therefore, no long-term hazardous waste generation impacts would occur with the relocation of the DEMIL and munitions storage functions from Lone Star AAP, Kansas AAP, and Sierra Army Depot.

4.14.2.2 Alternative 2

Impacts regarding hazardous and toxic substances from Alternative 2 would be the same as for Alternative 1, and these impacts would not be significant.

4.14.2.3 No Action Alternative

Under the No Action Alternative, no impacts would occur to hazardous and toxic substances.

4.15 Cumulative Effects

Cumulative effects are those environmental impacts that result from the incremental effects of other past, present, or reasonably foreseeable future actions when combined with the Proposed Action. CEQ regulations stipulate that the cumulative effects analysis within an EA consider the potential environmental impacts resulting from the "incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions" (40 CFR 1508.7). Cumulative impacts can result from individually minor, but collectively substantial, actions undertaken over a period of time by various agencies (Federal, state, and local) or individuals.

The scope of the cumulative effect analysis involves evaluating impacts to environmental resources by geographic extent of the effects and the time frame in which the effects are expected to occur. Past, present, and reasonably foreseeable actions are identified first, followed by the cumulative effects that could result from these actions when combined with the Proposed Action. Irreversible and irretrievable commitments of resources are also discussed in this section.

4.15.1 PAST, PRESENT, AND REASONABLY FORESEEABLE ACTIONS

The geographic area analyzed for cumulative impacts includes both MCAAP and approximately 1 mile surrounding the installation. Four present projects and seven reasonably foreseeable future projects were identified on MCAAP. No past, present, or reasonably foreseeable actions were identified in the 1-mile area surrounding the installation. The identified projects are summarized below. The AFRC/OMS complex is near the Front Gate (Table 4.15-1, Project 2), and if the SFW and munitions DEMIL and storage functions use new rail lines, Project 10 would be geographically close to these functions. All other projects shown in Table 4.15-1 are geographically remote from the Proposed Action projects (Hovell 2006b). Projects 1, 2, and 4 in

Table 4.15-1 should be complete before the first Proposed Action construction project would begin in 2007.

Table 4.15-1. Present and Future Projects on MCAAP.

Project Number	Project Name	Project Description	Present or Future	Timeframe	Footprint Size
1	Pre-Mix Building	Construct new building that allows for small quantity flexible bomb loads	Present	FY05 Scheduled for completion April 2007	7,000 square feet
2	Front Gate Renovation	Remodeling of the front gate, a historical landmark. Allows for increased compliance with security requirements.	Present	FY06 Scheduled for completion June 2007	3,000 square feet
3	Magazines Pads - magazine groups 2AT-9AT	Construct concrete pad extensions for each magazine entrance	Present	FY06	101,760 square feet
4	Brigade Combat Team Strategic Configured Loading (BCT/SCL) Facility	Construct new facility that allows for strategically configuring ammunition shipments	Present	FY06 Scheduled for completion June 2007	17,000 square feet
5	New Magazine Storage Facilities Construction	Construct four proposed magazine storage facilities to be located in the current storage area on MCAAP. Land for magazines has already been cleared.	Future	FY07	Not available
6	Military Family Housing Demolition	Sixteen housing units have been scheduled for demolition on MCAAP. Two of the houses have possible asbestos contamination.	Future	Unknown	Not available
7	Wood Fabrication Facility	Construct a Depot Level fabrication facility to provide wood product support	Future	FY07	25,050 square feet
8	Magazines Covers - magazine groups 10AT-20AT	Install weather proof covers over existing earth covered magazines	Future	FY10	280,000 square feet
9	Magazine Pads - magazine groups 21AT-35AT	Construct concrete pad extensions for each magazine entrance	Future	FY11	192,000 square feet

Project Number	Project Name	Project Description	Present or Future	Timeframe	Footprint Size
10	Railroad Track Renovation	Repair by replacing existing railroad tracks, ties, and ballast as necessary to maintain full serviceability of the rail line. Repair by replacing turnouts, signals, drainage ditches or other rail support systems as required.	Future	FY11	29,646 linear feet
11	Vehicle Bridge Replacement	Replace existing concrete bridge over Brown Lake dam spillway with an all-weather paved roadway	Future	FY11	125 square feet

Source: MCAAP 2006
FY Fiscal Year
MCAAP McAlester Army Ammunition Plant

4.15.2 CUMULATIVE EFFECTS SUMMARY

Environmental effects for all resources potentially affected by the Proposed Action when combined with the present and reasonably foreseeable projects on the installation are discussed below.

4.15.2.1 Land Use

The Proposed Action would not cause any incremental impacts to land use when combined with the present and future projects on MCAAP (Table 4.15-1), because these projects would occur on land geographically separated from land under consideration for the Proposed Action construction, with the exception of Projects 2 and 10, and would have no bearing on current land use classifications. Cumulative land use impacts from the Proposed Action would not occur in relation to Projects 2 and 10, because the Proposed Action's land use is compatible with these projects.

4.15.2.2 Aesthetics and Visual Resources

Construction of the AFRC and OMS under either alternative for the Proposed Action would cause incremental impacts to aesthetics and visual resources when combined with the future Renovation of MCAAP's Front Gate (Table 4.15-1, Project 2). Both the AFRC/OMS and Front Gate sites are within visual range of each other, and long-term effects would be beneficial. New or renovated facilities at MCAAP's main access point will enhance the first impression of the installation upon visitors. Short-term impacts of each of these projects would not be additive because the construction and renovation projects would not overlap.

The Proposed Action would not cause any incremental impacts to aesthetics and visual resources when combined with the other projects listed in Table 4.15-1.

4.15.2.3 Air Quality

The Proposed Action would cause short-term incremental impacts to air quality when combined with the construction, demolition, or renovation aspects of the present and future projects listed in Table 4.15-1. Construction, renovation, or demolition may cause increased short-term external combustion in air emissions from heavy equipment usage.

The Proposed Action would also cause long-term incremental impacts to air quality when combined with the operational aspects of certain projects listed in Table 4.15-1 (Projects 1, 4, and 7). Incremental air emissions may include criteria pollutants and particulate matter listed in Table 4.4-1.

Both the short-term and long-term incremental impacts listed above may require coordination between MCAAP and ODEQ to ensure that the installation remains in attainment with the NAAQS set forth by U.S. EPA Region 6. Cumulative impacts to air quality would not be significant.

4.15.2.4 Noise

The Proposed Action would cause short-term incremental impacts to noise when combined with the construction, demolition, or renovation aspects of the present and future projects listed in Table 4.15-1. Construction, renovation, or demolition may cause increased short-term noise; however, most projects listed in Table 4.15-1 would not likely occur within the auditory range of the Proposed Action locations.

The Proposed Action would not likely cause long-term incremental impacts to noise when combined with the operational aspects of present and future projects listed in Table 4.15-1. Most of these projects are not likely to occur within the auditory range of the Proposed Action locations. Overall, cumulative impacts to noise would not be significant.

4.15.2.5 Geology and Soils

The Proposed Action would cause long-term incremental impacts to geology and soil when combined with the present and future projects listed in Table 4.15-1 through the addition of impervious surfaces to the installation. Incremental impacts would result in the reduction of infiltration of precipitation into the soil; however, the cumulative effects to geology and soils would not be significant.

4.15.2.6 Water Resources

The Proposed Action would cause long-term incremental impacts to water resources when combined with the present and future projects listed in Table 4.15-1 through the addition of impervious surfaces to the installation. Incremental impacts would result in the reduction of groundwater recharge via soil infiltration; however the cumulative effect would not be significant.

4.15.2.7 Biological Resources

The Proposed Action would cause long-term incremental impacts to biological resources when combined with the present and future projects listed in Table 4.15-1 by removing native

vegetation and causing the direct loss of plant and wildlife habitats. However, these projects together would not substantially diminish the quality or quantity of habitat for plants or animals, nor would they substantially diminish regional or local populations of plant or animal species. All projects would be conducted in accordance with MCAAP's Endangered Species Management Plan so that there would be no adverse impacts to threatened or endangered species. Cumulative effects to biological resources would therefore not be significant.

4.15.2.8 Cultural Resources

The Proposed Action may cause long-term incremental impacts to cultural resources when combined with the present and future projects listed in Table 4.15-1. Ground disturbance due to the Proposed Action and present/future projects would involve the potential for discovery of or impact to previously unrecorded cultural artifacts. Strict adherence to the SOPs addressed in Section 4.9.2.1 and MCAAP's ICRMP would minimize the possibility of adverse impacts. Cumulative effects to cultural resources would therefore not be significant.

4.15.2.9 Socioeconomics

The Proposed Action may cause short-term incremental impacts to socioeconomics when combined with most of the future projects listed in Table 4.15-1. Beneficial short-term impacts would result from construction, renovation, and demolition activities from an increase in employment and economic development.

Under the Proposed Action, there would be no substantial changes in personnel or to socioeconomic factors. Therefore, the Proposed Action when combined with projects listed in Table 4.15-1 would not result in long-term cumulative impacts to socioeconomics.

4.15.2.10 Transportation

The Proposed Action may cause short-term incremental impacts to transportation when combined with the present and future projects listed in Table 4.15-1. Incremental impacts would result from construction, renovation, and demolition activities from short-term increases in vehicular traffic. The increase in vehicular traffic would be caused by an increase in workers coming onto the installation in the morning and leaving in the evening. Construction traffic would be routed through existing gates during normal business hours. Project 2 in Table 4.15-1 would involve realigning traffic flow and access through the front gate, possibly resulting in the temporary redirection of traffic to Haywood Gate; however, this project should be complete before construction of the first Proposed Action project begins in 2007.

The Proposed Action may also cause incremental short-term impacts to transportation when added to the future Project 10 in Table 4.15-1. Incremental impacts may result if the proposed SFW/Cluster Bomb and missile warhead production and DEMIL and storage relocation would use the MCAAP railroad track in their operations, because Project 10 would result in renovation to this railroad track, and this would cause temporary disruptions to track availability. However, proper planning and scheduling would reduce the possibility of adverse impacts.

The Proposed Action would not likely cause long-term incremental impacts to transportation when combined with the present and future projects listed in Table 4.15-1, because the

substantial traffic resulting from the Proposed Action would occur on the weekends, while traffic from most of the present and future projects would be occurring during the work week.

Overall, cumulative impacts to transportation would not be significant.

4.15.2.11 Utilities

The Proposed Action may cause short-term incremental impacts to utilities when combined with the present and future projects listed in Table 4.15-1. Incremental impacts would result from construction, renovation, and demolition solid waste. Solid waste produced by these projects would be shipped to the City of McAlester Landfill and would not be expected to cause adverse impacts to the landfill.

The DRMS facility, SFW/Cluster bomb production, and munitions DEMIL and storage would cause long-term incremental impacts to utilities when combined with Projects 1, 4, and 7 (Table 4.15-1), because these Proposed Action facilities would use MCAAP's utilities simultaneously with the present and future projects. These usages should not exceed the capacity of any MCAAP utility, so cumulative effects to utilities would not be significant. The AFRC/OMS would be in operation on weekends, when the rest of the plant is typically not in operation.

Overall, cumulative impacts to utilities are not considered significant.

4.15.2.12 Safety and Occupational Health

The Proposed Action may cause short-term incremental impacts to safety and occupational health when combined with the present and future projects listed in Table 4.15-1. Incremental impacts would result from construction, renovation, and demolition activities that would cause possible unsafe working conditions. Operation of machinery, handling hazardous materials, and numerous other actions would require proper steps to protect workers and other people from unsafe conditions. Therefore, workers and construction sites would be subject to OSHA's safety and health regulations to minimize the possibility of adverse impacts.

The Proposed Action would include facilities for vehicle maintenance, bomb and warhead production, and munitions DEMIL and storage, and would include equipment such as metal shredders and cutting torches, all of which have inherent safety risks. The Proposed Action would therefore cause long-term incremental effects when combined with present and future Projects 1, 4, and 7 (Table 4.15-1) because more activities with potential safety risks would be taking place on MCAAP. These cumulative effects would not be significant, however, because worker training and safety plans and procedures would minimize the potential for accidents.

Overall, cumulative impacts to safety and occupational health would not be significant.

4.15.2.13 Hazardous and Toxic Substances

The Proposed Action may cause short-term incremental impacts to hazardous and toxic substances when combined with the present and future projects listed in Table 4.15-1. Incremental impacts would result from increased construction, renovation, and demolition waste.

The Proposed Action may also cause long-term incremental impacts from increased hazardous and toxic waste when combined with the operational aspects of certain projects listed in Table 4.15-1 (Projects 1, 4, and 7).

Both the short-term and long-term incremental impacts listed above may require coordination between MCAAP and ODEQ to ensure that the installation remains a large quantity generator under RCRA for purposes of the operating permit. However, overall cumulative impacts to hazardous and toxic substances would not be significant.

4.15.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Under NEPA, a review of significant irreversible and irretrievable effects that result from development of the Proposed Action is required (40 CFR 1502.16). Irreversible commitments of resources are those resulting from impacts to resources so they cannot be completely restored to their original condition. Irretrievable commitments of resources are those that occur when a resource is removed or consumed and will therefore never be available to future generations for their use.

Under Alternatives 1 and 2, irretrievable commitments of resources would occur from the consumptive use of electrical energy and fuel during the construction and operations phases. There would be a relatively long-term commitment of the land resources required for construction and operation of new facilities; this commitment of land resources is irreversible because the land likely cannot be completely restored to its original condition and other uses will be precluded during the time the land is being used for the proposed use, but it does not constitute an irretrievable commitment of resources because the use is not consumptive and the land would remain available to future generations. Other irreversible or irretrievable commitments of resources would include a minimal amount of soil loss through either wind or water erosion during construction activities and a small loss of native vegetation.

Under the No Action Alternative, no irreversible or irretrievable commitments of resources would occur.

4.16 Mitigation Summary

Mitigation measures are actions required for the specific purpose of reducing the significant environmental impacts of implementing a proposed or alternative action. An EA may specify mitigation measures that, if implemented, would prevent significant impacts that would otherwise require an environmental impact statement. No mitigation measures are required for the Proposed Action discussed in this EA because resulting impacts would not meet the significance criteria described in Section 4.1; that is, the impacts would not be significant.

5.0 FINDINGS AND CONCLUSIONS

Direct, indirect, and cumulative impacts of Alternative 1, Alternative 2, and the No Action Alternative have been considered. Alternative 1 is the Army's Preferred Alternative because it best maintains the integrity of Base Camp, and provides separation between Base Camp and the AFRC/OMS complex, which would be used by different commands. No significant adverse impacts were identified. Impacts resulting from Alternatives 1 and 2 would be very similar, and where these impacts differ, they are potentially slightly smaller under Alternative 2 due to the relocation of Base Camp proposed under Alternative 1. If Base Camp is moved under Alternative 2, which includes such an option, impacts would be essentially the same for Alternatives 1 and 2. If Base Camp is not moved under Alternative 2, short-term impacts would be slightly reduced for air quality and noise from less demolition and construction activity, for geology and soils and cultural resources from less ground disturbance, and for utilities from less demolition waste. In the case of aesthetics and visual resources and socioeconomics, beneficial impacts were identified under both Alternatives 1 and 2. For land use and biological resources, Alternative 2 has the potential for closing 15 more acres of hunting areas than Alternative 1. As previously stated, none of these impacts are significant based on the criteria developed for this EA.

Therefore, the issuance of a FNSI is warranted, and preparation of an environmental impact statement is not required. Implementation of the No Action Alternative is not feasible because the BRAC actions are required by law to be implemented.

6.0 LIST OF PREPARERS

AGEISS Environmental, Inc.

Melissa Russ, Project Manager
Toni Ristau, Environmental Engineer
Rich Huenefeld, Wildlife Biologist
Tonya Bartels, Technical Editor

J.M. Waller Associates

Terry Scott, Environmental Scientist
David Seyfarth, Senior Environmental Engineer
Mike Schneider, Senior GIS Analyst

7.0 DISTRIBUTION LIST

Dr. David Lawson
Oklahoma Department of Environmental Quality
P. O. Box 1677
Oklahoma City, OK 73101

Oklahoma Corporation Commission
Jim Thorpe Bldg
2100 N Lincoln Blvd
Oklahoma City, OK 73105

Oklahoma Water Resources Board
3800 N Classen Blvd
Oklahoma City, OK 73118

Director
US Geological Survey
202 NW 66th St, Ste 7
Oklahoma City, OK 73118

Mr. Bob Sturdivant
US EPA Region VI
1445 Ross Avenue
Dallas, TX 75202-2733

Robert Walker
Oklahoma Sierra Club
3401 Eric Lane
Edmond, OK 73034

Linda M Walker
6213 King Drive
Bartlesville, OK 74006

Raymond Shen
Mobile Chemical
555 Wolverine Rd
Shawnee, OK 74801

Oklahoma Geological Survey
Energy Center
100 E. Boyd, Rm N-131
Norman, OK 73019-0628

Oklahoma Department of Wildlife Conservation
1801 N Lincoln Blvd
Oklahoma City, OK 73105

Oklahoma Conservation Commission
2899 Lincoln Blvd, Ste 160
Oklahoma City, OK 73105-4210

Robert E. Hanneschlager, Act. Div.
Dir. Multimedia Pln. & Per. Div. (6H)
US EPA Region VI
1445 Ross Avenue
Dallas, TX 75202-2733

Bureau of Land Management
7906 E. 33rd St, Ste 101
Tulsa, OK 74145

Oklahoma Archeological Society
111 East Chesapeake, Rm 102
Norman, OK 73019-5111

B J Medley
111 W 5th St, Ste 600
Tulsa, OK 74103

State Historic Preservation Office
Oklahoma Historical Society
2401 N. Laird Ave 1
Oklahoma City, OK 73107

Oklahoma Wildlife Federation
P. O. Box 60126
Oklahoma City, OK 73146-0126

Earl Hatley
19257 S 4403 Dr
Vinita, OK 74301-7701

Field Supervisor
US Fish & Wildlife Service
222 S Houston, Ste A
Tulsa, OK 74127

US Department of Agriculture
Natural Resources Conservation Service
Agri-Center Building
Stillwater, OK 74074

Advisory Council
Historic Preservation
12136 W Bayaud Ave. # 330
Lakewood, CO 80228-2115

Diana Shockey
Ind Material Ex Service
2200 Churchill Road
P. O. Box 19276
Springfield, IL 62794

Steve Mason
Cardinal Environmental, Inc.
6520 N Western, Ste 206
Oklahoma City, OK 73116

County Commissioner
115 E. Carl Albert Pkwy, Rm 1B
McAlester, OK 74501

City Manager
P. O. Box 578
McAlester, OK 74502

Mr. Emily Hoskin
Environmental Complaints and Local Services
Oklahoma Department of Environmental Quality
321 S. 3rd Street, Ste 5
McAlester, OK 74501

CHOCTAW NATION OF OKLAHOMA
Gregory E. Pyle, Chief
Terry D. Cole, THPO
P.O. Box 1210
Durant, OK 74702-1210

CHICKASAW NATION
Bill Anoatubby, Governor
Virginia Nail & Eddy Postoak THPO
P.O. Box 1548
520 E. Arlington Blvd.
Ada, OK 74821

CADDO INDIAN TRIBE
Cultural Preservation Office
ATTN: LaRue Parker, Chairperson
P.O. Box 487
Binger, OK 73009

CADDO INDIAN TRIBE
Tribal Historic Preservation Office
ATTN: Robert Cast
P.O. Box 487
Binger, OK 73009

QUAPAW TRIBE OF INDIANS OF OKLAHOMA
Attn: John Berrey, Chairperson
P.O. Box 765
Quapaw, OK 74363

WICHITA & AFFILIATED TRIBES
Gary McAdams, President
P.O. Box 729
Anadarko, OK 73005

8.0 REFERENCES

- ANSI (American National Standards Institute). 1980. Sound Level Descriptors for Determination of Compatible Land Use – ANSI S3.23-1980.
- Crabtree, R. (MCAAP). 2006, November 13. Personal communication with S. Courage (J.M. Waller Associates).
- Department of the Army. 2004, October 1. The Army Strategy for the Environment, “Sustain the Mission – Secure the Future.”
- DoD (U.S. Department of Defense). 1997, August 8. “DoD Ammunition and Explosives Safety Standards” – Secretary of Defense for Acquisition and Technology. (DoD Directive 6055.9)
- EPA (U.S. Environmental Protection Agency). 2004. NAAQS standards.
- FICUN (Federal Interagency Committee on Urban Noise). 1980, June. Guidelines for Considering Noise in Land-Use Planning and Control.
- Hovell, W. (MCAAP). 2006a, August 31. Personal communication with R. Huenefeld (AGEISS Environmental, Inc.).
- Hovell, W. (MCAAP). 2006b, October 31. Personal communication with R. Huenefeld (AGEISS Environmental, Inc.).
- Hughes, J. (90th Regional Readiness Command, Perez USARC). 2006, November 9. Personal communication with S. Courage (J.M. Waller Associates).
- Lomolino, M.V. and P. Leimgruber. 1994. Survey for Rare Species at the McAlester Army Ammunition Depot. Oklahoma Natural Heritage Inventory, Oklahoma Biological Survey, and Department of Zoology, University of Oklahoma, Norman, OK.
- MCAAP (McAlester Army Ammunition Plant). 1995, February. Master Plan: Narrative Document.
- MCAAP (McAlester Army Ammunition Plant). 2005. Integrated Natural Resources Management Plan and Environmental Assessment.
- MCAAP (McAlester Army Ammunition Plant). 2006. Installation Action Plan FY2006.
- Natural Resources Conservation Service. 2001. Soil Survey of McAlester Army Ammunition Plant, Oklahoma.
- Newman and Beattie. 1985, March. Aviation Noise Effects, Federal Aviation Administration, Report FAA-EE-85-2.

ODEQ (Oklahoma Department of Environmental Quality). 2005. Oklahoma Department of Environmental Quality website.

<http://www.deq.state.ok.us/AQDnew/newsletters/Dec05/Dec05.html>

OSHA (Occupational Safety and Health Administration). 2006, April 14. Hazardous Waste, <http://www.osha.gov/SLTC/hazardouswaste/index.html>.

Starry, W.R. 2002. Endangered Species Management Plan, McAlester Army Ammunition Plant, McAlester, Oklahoma. McAlester Army Ammunition Plant, McAlester, OK.

USACE (U.S. Army Corps of Engineers). 1996. Environmental Assessment for BRAC USDACS Relocation, McAlester Army Ammunition Plant, Oklahoma. U.S. Army Corps of Engineers, Mobile District, AL.

USACE (U.S. Army Corps of Engineers). 2002a. Environmental Assessment for Privatization of Natural Gas Distribution System at McAlester Army Ammunition Plant. U.S. Army Corps of Engineers, Tulsa District, OK.

USACE (U.S. Army Corps of Engineers). 2002b. Planning Level Survey Report for Fauna and Flora, McAlester Army Ammunition Plant, McAlester, Oklahoma. U.S. Army Corps of Engineers, Mobile District.

USACE (U.S. Army Corps of Engineers). 2004. Access Control Point Survey Report. Access Control Point Equipment Program. McAlester Army Ammunition Plant, McAlester Oklahoma.

U.S. Army. 2006. Integrated Cultural Resources Management Plan, 2001-2005. Engineer Resources Management Division, Engineering and Public Works Directorate.

U.S. Census Bureau. 2000. U.S. Census Bureau website. <http://quickfacts.census.gov/qfd/states/40/40121.html> and <http://censtats.census.gov/data/OK/1604044800.pdf>

U.S. Census Bureau News. 2001, September 25. "Nation's Household Income Stable in 2000, Poverty Rate Virtually Equals Record Low, Census Bureau Reports."

http://www.census.gov/Press-Release/www/releases/archives/income_wealth/000393.html

9.0 PERSONS CONSULTED

Lawrence White
Property Disposal Specialist
Lone Star AAP
Highway 82 W, Bldg H2
Texarkana, TX 75505-9101

Jerry Hughes
Environmental Scientist
90th Regional Readiness Command
Perez USARC
3021 W. Reno Ave
Oklahoma City, OK 73207

Donald Black
DRMS Service Manager
Defense Reutilization and Marketing Office
6150 Air Depot
Suite 15
Tinker AFB, OK 73145

Don Dailey
Public Affairs Officer
Kansas Army Ammunition Plant
23018 Rooks Road
Parsons, KS 67357

This page intentionally left blank.

*Environmental Assessment for the Armed Forces Reserve
Center Construction, Defense Reutilization and Marketing
Service Construction, Demilitarization and Storage Relocation,
and Sensor Fuzed Weapon Relocation to McAlester Army
Ammunition Plant*

APPENDIX A

CONSULTATION AND COORDINATION

This page intentionally left blank.

APPENDIX A. CONSULTATION AND COORDINATION

This appendix contains the following consultation and coordination letters and enclosures:

- Letters sent to the Caddo Indian Tribe of Oklahoma dated December 4 and 6, 2006 and January 30, 2007
- Letters sent to the Chickasaw Nation of Oklahoma dated December 4 and 6, 2006 and January 30, 2007
- Letters sent to the Choctaw Nation of Oklahoma dated December 4 and 6, 2006 and January 30, 2007
- Letters sent to the Quapaw Tribe of Indians of Oklahoma dated December 4 and 6, 2006 and January 30, 2007
- Letters sent to the Wichita and Affiliated Tribes of Oklahoma dated December 4 and 6, 2006 and January 30, 2007
- Letter sent to the Oklahoma Historical Society, State Historic Preservation Office dated December 4, 2006
- Letter sent to the Oklahoma Department of Wildlife Conservation dated December 4, 2006
- Letter sent to the U.S. Fish and Wildlife Service dated December 4, 2006
- Enclosures sent with the letters to the tribes dated December 4, 2006 and the letters to the Oklahoma Historical Society, State Historic Preservation Office, the Oklahoma Department of Wildlife Conservation, and the U.S. Fish and Wildlife Service
- Letter received from the State of Oklahoma Department of Wildlife Conservation dated January 16, 2007
- Letter received from the U.S. Fish and Wildlife Service dated February 8, 2007
- Letter received from the Oklahoma Historical Society, State Historic Preservation Office dated March 26, 2007



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
MCALESTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-9002

December 4, 2006

Office of the Commander

SUBJECT: National Historic Preservation Act Consultation for the Environmental Assessment of BRAC 2005 Actions

Ms. LaRue Parker, Chairperson
Caddo Indian Tribe of Oklahoma
PO Box 487
Binger, Oklahoma 73009

Dear Ms. LaRue:

This letter is to initiate consultation under Section 106 of the National Historic Preservation Act of 1966 (as amended) (NHPA) for the BRAC 2005 actions at the McAlester Army Ammunition Plant (MCAAP) in McAlester, Oklahoma.

The Defense Base Realignment and Closure Commission recommended the BRAC 2005 actions on September 8, 2005, which were approved by the President and forwarded to Congress on September 23, 2005, and formalized into law on November 9, 2005. The Army is preparing an Environmental Assessment under the National Environmental Policy Act, to analyze and document the environmental effects of the BRAC 2005 actions at MCAAP. We are conducting a NHPA Section 106 compliance analysis relative to the cultural resources at MCAAP as part of the Environmental Assessment.

Enclosure (1) Description of the Proposed Actions, describes the BRAC 2005 actions, including construction of new facilities and renovation and reuse of existing facilities. Enclosure (2) Map of Proposed Actions, illustrates the three separate areas, totaling 129 acres, where the BRAC 2005 new construction will occur, and another area, where the renovation of an existing building will occur.

None of the archeological sites currently identified at MCAAP are within or in close proximity to the areas that have been identified as potential locations for BRAC 2005 actions. A Phase I cultural resources survey will be conducted for the three separate new construction areas (129 acres total). Eligibility issues regarding potentially eligible buildings and structures at MCAAP will be covered by the Program Comment for World War II and Cold War Era (1939 - 1974) Army Ammunition Production Facilities dated August 18, 2006 from the Advisory Council on Historic Preservation, rather than under a case-by-case Section 106 review process. MCAAP will also be complying with the Program Comments on WWII and Cold War Era Ammunition Storage Facilities (1939-1974) which specifically made preservation of the Corbetta Beehive

Magazines a part of the mitigation plan. There will be no effect on those magazines, which are not within the area of influence of this project.

Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources.

We will keep you informed about this process and anticipate providing you with a draft report of the forthcoming survey for your review and concurrence as well as with a copy of the draft Environmental Assessment when it is available. We are open to discussing the Environmental Assessment at the meeting we are scheduling to discuss the Integrated Cultural Resources Management Plan.

Copies of this letter are being furnished to Mr. Robert Cast, Tribal Historic Preservation Office, PO Box 487, Binger, Oklahoma 73009; Mr. Ken Shingleton, US Army Corps of Engineers, 1645 S. 101st E. Avenue, Tulsa, Oklahoma 74128; Mr. Ernie Seckinger & Mr. Jonathon Bowman, BRAC NST, US Army Engineer District, Mobile, PO Box 2288, Mobile, Alabama 36628-0001; and, Ms. Melissa Russ, Project Manager, AGEISS Environmental Inc., 5662 S. Park Avenue, Tacoma, Washington 98408.

Should you have further questions or comments at this time, please do not hesitate to contact Mr. Bill Hovell, Cultural Resource Manager, 918-420-6811 or William.hovell@us.army.mil. We look forward to hearing from you.

Sincerely,


Gary B. Carney
Colonel, US Army
Commanding Officer

Enclosures



DEPARTMENT OF THE ARMY
MCALISTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-9002

REPLY TO
ATTENTION OF:

December 6, 2006

Engineering Resources Management Division

SUBJECT: Update to Integrated Cultural Resources Management Plan for 2006-2010

Caddo Indian Tribe of Oklahoma
Attn: LaRue Parker, Chairperson
P.O. Box 487
Binger, OK 73009

Dear Ms. Parker:

Thank you for responding regarding the update to our Integrated Cultural Resources Management Plan (ICRMP). We will be meeting with the Representatives of Native American tribes on December 19 beginning at 10:00 a.m., and anticipate continuing to 3:00 p.m. that afternoon. In addition to discussing ICRMP, we will also discuss the Base Realignment and Closure (BRAC) 2005 actions, including the effects on 129 acres of potential building and renovation projects.

A staff member will be posted outside the front gate at 9:45 a.m. to assist you in obtaining a visitor badge and vehicle pass. Inside the Pass & Tag Office, you will be required to provide personal identification and proof of vehicle insurance, in order to allow entrance of your vehicle into the installation.

Please contact our Cultural Resources Manager, Bill Hovell, by Phone: 918-420-6811, or E-mail: william.hovell@us.army.mil, regarding any questions or concerns you may have about the ICRMP or the BRAC 2005 actions.

Sincerely,


Terrell F. Wafford
Director of Engineering
and Public Works



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
MCALESTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-9002

January 30, 2007

Engineering Resources Management Division

SUBJECT: Update to Integrated Cultural Resources Management Plan for 2006-2010

Caddo Indian Tribe of Oklahoma
Tribal Historic Preservation Office
ATTN: Mr. Bobby Gonzales
PO Box 487
Binger, OK 73009

Dear Mr. Gonzales:

Thank you for responding regarding the update to our Integrated Cultural Resources Management Plan (ICRMP). We will be meeting with the representatives of Native American tribes on March 6 beginning at 10:00 a.m., and anticipate continuing to 3:00 p.m. that afternoon. In addition to discussing ICRMP, we will also discuss the Base Realignment and Closure (BRAC) 2005 actions, including the effects on 129 acres of potential building and renovation projects.

A staff member will be posted outside the front gate at 9:45 a.m. to assist you in obtaining a visitor badge and vehicle pass. Inside the Pass & Tag Office, you will be required to provide personal identification and proof of vehicle insurance, in order to allow entrance of your vehicle into the installation.

Please contact our Cultural Resources Manager, Bill Hovell, by Phone: 918-420-6811, or E-mail: william.hovell@us.army.mil, regarding any questions or concerns you may have about the ICRMP or BRAC 2005 actions.

Sincerely,

Terrell F. Wafford
Director of Engineering
and Public Works



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
MCALESTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-9002

December 4, 2006

Office of the Commander

SUBJECT: National Historic Preservation Act Consultation for the Environmental Assessment of BRAC 2005 Actions

Mr. Bill Anoatubby, Governor
Chickasaw Nation of Oklahoma
PO Box 1548
Ada, Oklahoma 74821

Dear Mr. Anoatubby:

This letter is to initiate consultation under Section 106 of the National Historic Preservation Act of 1966 (as amended) (NHPA) for the BRAC 2005 actions at the McAlester Army Ammunition Plant (MCAAP) in McAlester, Oklahoma.

The Defense Base Realignment and Closure Commission recommended the BRAC 2005 actions on September 8, 2005, which were approved by the President and forwarded to Congress on September 23, 2005, and formalized into law on November 9, 2005. The Army is preparing an Environmental Assessment under the National Environmental Policy Act, to analyze and document the environmental effects of the BRAC 2005 actions at MCAAP. We are conducting a NHPA Section 106 compliance analysis relative to the cultural resources at MCAAP as part of the Environmental Assessment.

Enclosure (1) Description of the Proposed Actions, describes the BRAC 2005 actions, including construction of new facilities and renovation and reuse of existing facilities. Enclosure (2) Map of Proposed Actions, illustrates the three separate areas, totaling 129 acres, where the BRAC 2005 new construction will occur, and another area, where the renovation of an existing building will occur.

None of the archeological sites currently identified at MCAAP are within or in close proximity to the areas that have been identified as potential locations for BRAC 2005 actions. A Phase I cultural resources survey will be conducted for the three separate new construction areas (129 acres total). Eligibility issues regarding potentially eligible buildings and structures at MCAAP will be covered by the Program Comment for World War II and Cold War Era (1939 – 1974) Army Ammunition Production Facilities dated August 18, 2006 from the Advisory Council on Historic Preservation, rather than under a case-by-case Section 106 review process. MCAAP will also be complying with the Program Comments on WWII and Cold War Era Ammunition Storage Facilities (1939-1974) which specifically made preservation of the Corbetta Beehive

Magazines a part of the mitigation plan. There will be no effect on those magazines, which are not within the area of influence of this project.

Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources.

We will keep you informed about this process and anticipate providing you with a draft report of the forthcoming survey for your review and concurrence as well as with a copy of the draft Environmental Assessment when it is available. We are open to discussing the Environmental Assessment at the meeting we are scheduling to discuss the Integrated Cultural Resources Management Plan.

Copies of this letter are being furnished to Mr. Ken Shingleton, US Army Corps of Engineers, 1645 S. 101st E. Avenue, Tulsa, Oklahoma 74128; Mr. Ernie Seckinger & Mr. Jonathon Bowman, BRAC NST, US Army Engineer District, Mobile, PO Box 2288, Mobile, Alabama 36628-0001; and, Ms. Melissa Russ, Project Manager, AGEISS Environmental Inc., 5662 S. Park Avenue, Tacoma, Washington 98408.

Should you have further questions or comments at this time, please do not hesitate to contact Mr. Bill Hovell, Cultural Resource Manager, 918-420-6811 or William.hovell@us.army.mil. We look forward to hearing from you.

Sincerely,



Gary B. Carney
Colonel, US Army
Commanding Officer

Enclosures



DEPARTMENT OF THE ARMY
MCALISTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-9002

REPLY TO
ATTENTION OF:

December 6, 2006

Engineering Resources Management Division

SUBJECT: Update to Integrated Cultural Resources Management Plan for 2006-2010

Chickasaw Nation of Oklahoma
Attn: Bill Anoatubby, Governor
P.O. Box 1548
Ada, OK 74821

Dear Mr. Anoatubby:

Thank you for responding regarding the update to our Integrated Cultural Resources Management Plan (ICRMP). We will be meeting with the Representatives of Native American tribes on December 19 beginning at 10:00 a.m., and anticipate continuing to 3:00 p.m. that afternoon. In addition to discussing ICRMP, we will also discuss the Base Realignment and Closure (BRAC) 2005 actions, including the effects on 129 acres of potential building and renovation projects.

A staff member will be posted outside the front gate at 9:45 a.m. to assist you in obtaining a visitor badge and vehicle pass. Inside the Pass & Tag Office, you will be required to provide personal identification and proof of vehicle insurance, in order to allow entrance of your vehicle into the installation.

Please contact our Cultural Resources Manager, Bill Hovell, by Phone: 918-420-6811, or E-mail: william.hovell@us.army.mil, regarding any questions or concerns you may have about the ICRMP or the BRAC 2005 actions.

Sincerely,

Terrell F. Wafford
Director of Engineering
and Public Works



DEPARTMENT OF THE ARMY
MCALESTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-8002

REPLY TO
ATTENTION OF:

January 30, 2007

Engineering Resources Management Division

SUBJECT: Update to Integrated Cultural Resources Management Plan for 2006-2010

Chickasaw Nation of Oklahoma
ATTN: Ms. Virginia Nail
PO Box 1548
Ada, OK 74821

Dear Ms. Nail:

Thank you for responding regarding the update to our Integrated Cultural Resources Management Plan (ICRMP). We will be meeting with the representatives of Native American tribes on March 6 beginning at 10:00 a.m., and anticipate continuing to 3:00 p.m. that afternoon. In addition to discussing ICRMP, we will also discuss the Base Realignment and Closure (BRAC) 2005 actions, including the effects on 129 acres of potential building and renovation projects.

A staff member will be posted outside the front gate at 9:45 a.m. to assist you in obtaining a visitor badge and vehicle pass. Inside the Pass & Tag Office, you will be required to provide personal identification and proof of vehicle insurance, in order to allow entrance of your vehicle into the installation.

Please contact our Cultural Resources Manager, Bill Hovell, by Phone: 918-420-6811, or E-mail: william.hovell@us.army.mil, regarding any questions or concerns you may have about the ICRMP or BRAC 2005 actions.

Sincerely,

Terrell F. Wafford
Director of Engineering
and Public Works



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
MCALESTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-9002

December 4, 2006

Office of the Commander

SUBJECT: National Historic Preservation Act Consultation for the Environmental Assessment of BRAC 2005 Actions

Mr. Gregory E. Pyle, Chief
Choctaw Nation of Oklahoma
PO Drawer 1210, 16th & Locust Street
Durant, Oklahoma 74702

Dear Mr. Pyle:

This letter is to initiate consultation under Section 106 of the National Historic Preservation Act of 1966 (as amended) (NHPA) for the BRAC 2005 actions at the McAlester Army Ammunition Plant (MCAAP) in McAlester, Oklahoma.

The Defense Base Realignment and Closure Commission recommended the BRAC 2005 actions on September 8, 2005, which were approved by the President and forwarded to Congress on September 23, 2005, and formalized into law on November 9, 2005. The Army is preparing an Environmental Assessment under the National Environmental Policy Act, to analyze and document the environmental effects of the BRAC 2005 actions at MCAAP. We are conducting a NHPA Section 106 compliance analysis relative to the cultural resources at MCAAP as part of the Environmental Assessment.

Enclosure (1) Description of the Proposed Actions, describes the BRAC 2005 actions, including construction of new facilities and renovation and reuse of existing facilities. Enclosure (2) Map of Proposed Actions, illustrates the three separate areas, totaling 129 acres, where the BRAC 2005 new construction will occur, and another area, where the renovation of an existing building will occur.

None of the archeological sites currently identified at MCAAP are within or in close proximity to the areas that have been identified as potential locations for BRAC 2005 actions. A Phase I cultural resources survey will be conducted for the three separate new construction areas (129 acres total). Eligibility issues regarding potentially eligible buildings and structures at MCAAP will be covered by the Program Comment for World War II and Cold War Era (1939 - 1974) Army Ammunition Production Facilities dated August 18, 2006 from the Advisory Council on Historic Preservation, rather than under a case-by-case Section 106 review process. MCAAP will also be complying with the Program Comments on WWII and Cold War Era Ammunition Storage Facilities (1939-1974) which specifically made preservation of the Corbetta Beehive

Magazines a part of the mitigation plan. There will be no effect on those magazines, which are not within the area of influence of this project.

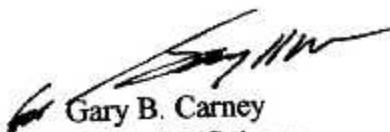
Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources.

We will keep you informed about this process and anticipate providing you with a draft report of the forthcoming survey for your review and concurrence as well as with a copy of the draft Environmental Assessment when it is available. We are open to discussing the Environmental Assessment at the meeting we are scheduling to discuss the Integrated Cultural Resources Management Plan.

Copies of this letter are being furnished to Mr. Ken Shingleton, US Army Corps of Engineers, 1645 S. 101st E. Avenue, Tulsa, Oklahoma 74128; Mr. Ernie Seckinger & Mr. Jonathon Bowman, BRAC NST, US Army Engineer District, Mobile, PO Box 2288, Mobile, Alabama 36628-0001; and, Ms. Melissa Russ, Project Manager, AGEISS Environmental Inc., 5662 S. Park Avenue, Tacoma, Washington 98408.

Should you have further questions or comments at this time, please do not hesitate to contact Mr. Bill Hovell, Cultural Resource Manager, 918-420-6811 or William.hovell@us.army.mil. We look forward to hearing from you.

Sincerely,



Gary B. Carney
Colonel, US Army
Commanding Officer

Enclosures



DEPARTMENT OF THE ARMY
MCALISTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-9002

REPLY TO
ATTENTION OF:

December 6, 2006

Engineering Resources Management Division

SUBJECT: Update to Integrated Cultural Resources Management Plan for 2006-2010

Choctaw Nation of Oklahoma
Attn: Gregory E. Pyle, Chief
P.O. Drawer 1210, 16th & Locust St.
Durant, OK 74702-1210

Dear Mr. Pyle:

Thank you for responding regarding the update to our Integrated Cultural Resources Management Plan (ICRMP). We will be meeting with the Representatives of Native American tribes on December 19 beginning at 10:00 a.m., and anticipate continuing to 3:00 p.m. that afternoon. In addition to discussing ICRMP, we will also discuss the Base Realignment and Closure (BRAC) 2005 actions, including the effects on 129 acres of potential building and renovation projects.

A staff member will be posted outside the front gate at 9:45 a.m. to assist you in obtaining a visitor badge and vehicle pass. Inside the Pass & Tag Office, you will be required to provide personal identification and proof of vehicle insurance, in order to allow entrance of your vehicle into the installation.

Please contact our Cultural Resources Manager, Bill Hovell, by Phone: 918-420-6811, or E-mail: william.hovell@us.army.mil, regarding any questions or concerns you may have about the ICRMP or the BRAC 2005 actions.

Sincerely,

Terrell F. Wafford
Director of Engineering
and Public Works



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
MCALISTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-8002

January 30, 2007

Engineering Resources Management Division

SUBJECT: Update to Integrated Cultural Resources Management Plan for 2006-2010

Choctaw Nation of Oklahoma
ATTN: Mr. Terry Cole
PO Drawer 1210, 16th & Locust St.
Durant, OK 74702-1210

Dear Mr. Cole:

Thank you for responding regarding the update to our Integrated Cultural Resources Management Plan (ICRMP). We will be meeting with the representatives of Native American tribes on March 6 beginning at 10:00 a.m., and anticipate continuing to 3:00 p.m. that afternoon. In addition to discussing ICRMP, we will also discuss the Base Realignment and Closure (BRAC) 2005 actions, including the effects on 129 acres of potential building and renovation projects.

A staff member will be posted outside the front gate at 9:45 a.m. to assist you in obtaining a visitor badge and vehicle pass. Inside the Pass & Tag Office, you will be required to provide personal identification and proof of vehicle insurance, in order to allow entrance of your vehicle into the installation.

Please contact our Cultural Resources Manager, Bill Hovell, by Phone: 918-420-6811, or E-mail: william.hovell@us.army.mil, regarding any questions or concerns you may have about the ICRMP or BRAC 2005 actions.

Sincerely,

Terrell F. Wafford
Director of Engineering
and Public Works



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
MCALESTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-9002

December 4, 2006

Office of the Commander

SUBJECT: National Historic Preservation Act Consultation for the Environmental Assessment of BRAC 2005 Actions

Mr. John Berrey, Chairperson
Quapaw Tribe of Indians of Oklahoma
PO Box 765
Quapaw, Oklahoma 74363

Dear Mr. Berrey:

This letter is to initiate consultation under Section 106 of the National Historic Preservation Act of 1966 (as amended) (NHPA) for the BRAC 2005 actions at the McAlester Army Ammunition Plant (MCAAP) in McAlester, Oklahoma.

The Defense Base Realignment and Closure Commission recommended the BRAC 2005 actions on September 8, 2005, which were approved by the President and forwarded to Congress on September 23, 2005, and formalized into law on November 9, 2005. The Army is preparing an Environmental Assessment under the National Environmental Policy Act, to analyze and document the environmental effects of the BRAC 2005 actions at MCAAP. We are conducting a NHPA Section 106 compliance analysis relative to the cultural resources at MCAAP as part of the Environmental Assessment.

Enclosure (1) Description of the Proposed Actions, describes the BRAC 2005 actions, including construction of new facilities and renovation and reuse of existing facilities. Enclosure (2) Map of Proposed Actions, illustrates the three separate areas, totaling 129 acres, where the BRAC 2005 new construction will occur, and another area, where the renovation of an existing building will occur.

None of the archeological sites currently identified at MCAAP are within or in close proximity to the areas that have been identified as potential locations for BRAC 2005 actions. A Phase I cultural resources survey will be conducted for the three separate new construction areas (129 acres total). Eligibility issues regarding potentially eligible buildings and structures at MCAAP will be covered by the Program Comment for World War II and Cold War Era (1939 – 1974) Army Ammunition Production Facilities dated August 18, 2006 from the Advisory Council on Historic Preservation, rather than under a case-by-case Section 106 review process. MCAAP will also be complying with the Program Comments on WWII and Cold War Era Ammunition Storage Facilities (1939-1974) which specifically made preservation of the Corbetta Beehive

Magazines a part of the mitigation plan. There will be no effect on those magazines, which are not within the area of influence of this project.

Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources.

We will keep you informed about this process and anticipate providing you with a draft report of the forthcoming survey for your review and concurrence as well as with a copy of the draft Environmental Assessment when it is available. We are open to discussing the Environmental Assessment at the meeting we are scheduling to discuss the Integrated Cultural Resources Management Plan.

Copies of this letter are being furnished to Mr. Ken Shingleton, US Army Corps of Engineers, 1645 S. 101st E. Avenue, Tulsa, Oklahoma 74128; Mr. Ernie Seckinger & Mr. Jonathon Bowman, BRAC NST, US Army Engineer District, Mobile, PO Box 2288, Mobile, Alabama 36628-0001; and, Ms. Melissa Russ, Project Manager, AGEISS Environmental Inc., 5662 S. Park Avenue, Tacoma, Washington 98408.

Should you have further questions or comments at this time, please do not hesitate to contact Mr. Bill Hovell, Cultural Resource Manager, 918-420-6811 or William.hovell@us.army.mil. We look forward to hearing from you.

Sincerely,



Gary B. Carney
Colonel, US Army
Commanding Officer

Enclosures



DEPARTMENT OF THE ARMY
MCALISTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-9002

REPLY TO
ATTENTION OF:

December 6, 2006

Engineering Resources Management Division

SUBJECT: Update to Integrated Cultural Resources Management Plan for 2006-2010

Quapaw Tribe of Indians of Oklahoma
Attn: John Berrey, Chairperson
P.O. Box 765
Quapaw, OK 74363

Dear Mr. Berrey:

Thank you for responding regarding the update to our Integrated Cultural Resources Management Plan (ICRMP). We will be meeting with the Representatives of Native American tribes on December 19 beginning at 10:00 a.m., and anticipate continuing to 3:00 p.m. that afternoon. In addition to discussing ICRMP, we will also discuss the Base Realignment and Closure (BRAC) 2005 actions, including the effects on 129 acres of potential building and renovation projects.

A staff member will be posted outside the front gate at 9:45 a.m. to assist you in obtaining a visitor badge and vehicle pass. Inside the Pass & Tag Office, you will be required to provide personal identification and proof of vehicle insurance, in order to allow entrance of your vehicle into the installation.

Please contact our Cultural Resources Manager, Bill Hovell, by Phone: 918-420-6811, or E-mail: william.hovell@us.army.mil, regarding any questions or concerns you may have about the ICRMP or the BRAC 2005 actions.

Sincerely,

Terrell F. Wafford
Director of Engineering
and Public Works



REPLY TO
ATTENTION OF:

**DEPARTMENT OF THE ARMY
MCALISTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-9002**

January 30, 2007

Engineering Resources Management Division

SUBJECT: Update to Integrated Cultural Resources Management Plan for 2006-2010

Quapaw Tribe of Indians of Oklahoma
Mr. Ranny Mcwatters
58100 East 66 Road
PO Box 1529
Miami Oklahoma 74354

Dear Mr. Mcwatters:

Thank you for responding regarding the update to our Integrated Cultural Resources Management Plan (ICRMP). We will be meeting with the representatives of Native American tribes on March 6 beginning at 10:00 a.m., and anticipate continuing to 3:00 p.m. that afternoon. In addition to discussing ICRMP, we will also discuss the Base Realignment and Closure (BRAC) 2005 actions, including the effects on 129 acres of potential building and renovation projects.

A staff member will be posted outside the front gate at 9:45 a.m. to assist you in obtaining a visitor badge and vehicle pass. Inside the Pass & Tag Office, you will be required to provide personal identification and proof of vehicle insurance, in order to allow entrance of your vehicle into the installation.

Please contact our Cultural Resources Manager, Bill Hovell, by Phone: 918-420-6811, or E-mail: william.hovell@us.army.mil, regarding any questions or concerns you may have about the ICRMP or BRAC 2005 actions.

Sincerely,

Terrell F. Wafford
Director of Engineering
and Public Works



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
MCALESTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-9002

December 4, 2006

Office of the Commander

SUBJECT: National Historic Preservation Act Consultation for the Environmental Assessment of BRAC 2005 Actions

Mr. Gary McAdams, President
Wichita and Affiliated Tribes of Oklahoma
PO Box 729
Anadarko, Oklahoma 73005

Dear Mr. McAdams:

This letter is to initiate consultation under Section 106 of the National Historic Preservation Act of 1966 (as amended) (NHPA) for the BRAC 2005 actions at the McAlester Army Ammunition Plant (MCAAP) in McAlester, Oklahoma.

The Defense Base Realignment and Closure Commission recommended the BRAC 2005 actions on September 8, 2005, which were approved by the President and forwarded to Congress on September 23, 2005, and formalized into law on November 9, 2005. The Army is preparing an Environmental Assessment under the National Environmental Policy Act, to analyze and document the environmental effects of the BRAC 2005 actions at MCAAP. We are conducting a NHPA Section 106 compliance analysis relative to the cultural resources at MCAAP as part of the Environmental Assessment.

Enclosure (1) Description of the Proposed Actions, describes the BRAC 2005 actions, including construction of new facilities and renovation and reuse of existing facilities. Enclosure (2) Map of Proposed Actions, illustrates the three separate areas, totaling 129 acres, where the BRAC 2005 new construction will occur, and another area, where the renovation of an existing building will occur.

None of the archeological sites currently identified at MCAAP are within or in close proximity to the areas that have been identified as potential locations for BRAC 2005 actions. A Phase I cultural resources survey will be conducted for the three separate new construction areas (129 acres total). Eligibility issues regarding potentially eligible buildings and structures at MCAAP will be covered by the Program Comment for World War II and Cold War Era (1939 – 1974) Army Ammunition Production Facilities dated August 18, 2006 from the Advisory Council on Historic Preservation, rather than under a case-by-case Section 106 review process. MCAAP will also be complying with the Program Comments on WWII and Cold War Era Ammunition Storage Facilities (1939-1974) which specifically made preservation of the Corbetta Beehive

Magazines a part of the mitigation plan. There will be no effect on those magazines, which are not within the area of influence of this project.

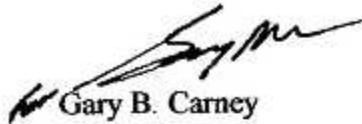
Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources.

We will keep you informed about this process and anticipate providing you with a draft report of the forthcoming survey for your review and concurrence as well as with a copy of the draft Environmental Assessment when it is available. We are open to discussing the Environmental Assessment at the meeting we are scheduling to discuss the Integrated Cultural Resources Management Plan.

Copies of this letter are being furnished to Mr. Ken Shingleton, US Army Corps of Engineers, 1645 S. 101st E. Avenue, Tulsa, Oklahoma 74128; Mr. Ernie Seckinger & Mr. Jonathon Bowman, BRAC NST, US Army Engineer District, Mobile, PO Box 2288, Mobile, Alabama 36628-0001; and, Ms. Melissa Russ, Project Manager, AGEISS Environmental Inc., 5662 S. Park Avenue, Tacoma, Washington 98408.

Should you have further questions or comments at this time, please do not hesitate to contact Mr. Bill Hovell, Cultural Resource Manager, 918-420-6811 or William.hovell@us.army.mil. We look forward to hearing from you.

Sincerely,



Gary B. Carney
Colonel, US Army
Commanding Officer

Enclosures



REPLY TO
ATTENTION OF:

**DEPARTMENT OF THE ARMY
MCALESTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-8002**

December 6, 2006

Engineering Resources Management Division

SUBJECT: Update to Integrated Cultural Resources Management Plan for 2006-2010

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

Dear Mr. McAdams:

Thank you for responding regarding the update to our Integrated Cultural Resources Management Plan (ICRMP). We will be meeting with the Representatives of Native American tribes on December 19 beginning at 10:00 a.m., and anticipate continuing to 3:00 p.m. that afternoon. In addition to discussing ICRMP, we will also discuss the Base Realignment and Closure (BRAC) 2005 actions, including the effects on 129 acres of potential building and renovation projects.

A staff member will be posted outside the front gate at 9:45 a.m. to assist you in obtaining a visitor badge and vehicle pass. Inside the Pass & Tag Office, you will be required to provide personal identification and proof of vehicle insurance, in order to allow entrance of your vehicle into the installation.

Please contact our Cultural Resources Manager, Bill Hovell, by Phone: 918-420-6811, or E-mail: william.hovell@us.army.mil, regarding any questions or concerns you may have about the ICRMP or the BRAC 2005 actions.

Sincerely,

Terrell F. Watford
Director of Engineering
and Public Works



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
MCALESTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-0002

January 30, 2007

Engineering Resources Management Division

SUBJECT: Update to Integrated Cultural Resources Management Plan for 2006-2010

Wichita and Affiliated Tribes of Oklahoma
Mr. Stratford Williams
PO Box 729
Anadarko, OK 73005

Dear Mr. Williams:

Thank you for responding regarding the update to our Integrated Cultural Resources Management Plan (ICRMP). We will be meeting with the representatives of Native American tribes on March 6 beginning at 10:00 a.m., and anticipate continuing to 3:00 p.m. that afternoon. In addition to discussing ICRMP, we will also discuss the Base Realignment and Closure (BRAC) 2005 actions, including the effects on 129 acres of potential building and renovation projects.

A staff member will be posted outside the front gate at 9:45 a.m. to assist you in obtaining a visitor badge and vehicle pass. Inside the Pass & Tag Office, you will be required to provide personal identification and proof of vehicle insurance, in order to allow entrance of your vehicle into the installation.

Please contact our Cultural Resources Manager, Bill Hovell, by Phone: 918-420-6811, or E-mail: william.hovell@us.army.mil, regarding any questions or concerns you may have about the ICRMP or BRAC 2005 actions.

Sincerely,

Terrell F. Wafford
Director of Engineering
and Public Works



DEPARTMENT OF THE ARMY
MCALESTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-9002

REPLY TO
ATTENTION OF:

December 4, 2006

Office of the Commander

SUBJECT: National Historic Preservation Act Consultation for the Environmental Assessment of
BRAC 2005 Actions

Mr. Bob Blackburn, PH.D.
State Historic Preservation Officer
Oklahoma Historical Society
2401 N. Laird Avenue
Oklahoma City, Oklahoma 73105-7914

Dear Mr. Blackburn:

This letter is to initiate consultation under Section 106 of the National Historic Preservation Act of 1966 (as amended) (NHPA) for the BRAC 2005 actions at the McAlester Army Ammunition Plant (MCAAP) in McAlester, Oklahoma.

The Defense Base Realignment and Closure Commission recommended the BRAC 2005 actions on September 8, 2005, which were approved by the President and forwarded to Congress on September 23, 2005, and formalized into law on November 9, 2005. The Army is preparing an Environmental Assessment under the National Environmental Policy Act, to analyze and document the environmental effects of the BRAC 2005 actions at MCAAP. We are conducting a NHPA Section 106 compliance analysis relative to the cultural resources at MCAAP as part of the Environmental Assessment.

Enclosure (1) Description of the Proposed Actions, describes the BRAC 2005 actions, including construction of new facilities and renovation and reuse of existing facilities. Enclosure (2) Map of Proposed Actions, illustrates the three separate areas, totaling 129 acres, where the BRAC 2005 new construction will occur, and another area, where the renovation of an existing building will occur.

None of the archeological sites currently identified at MCAAP are within or in close proximity to the areas that have been identified as potential locations for BRAC 2005 actions. A Phase I cultural resources survey will be conducted for the three separate new construction areas (129 acres total). Eligibility issues regarding potentially eligible buildings and structures at MCAAP will be covered by the Program Comment for World War II and Cold War Era (1939 - 1974) Army Ammunition Production Facilities dated August 18, 2006 from the Advisory Council on Historic Preservation, rather than under a case-by-case Section 106 review process. MCAAP will also be complying with the Program Comments on WWII and Cold War Era Ammunition Storage Facilities (1939-1974) which specifically made preservation of the Corbetta Beehive

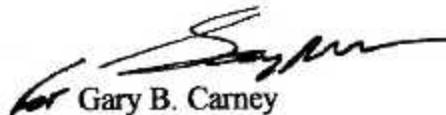
Magazines a part of the mitigation plan. There will be no effect on those magazines, which are not within the area of influence of this project.

We will keep you informed about this process and anticipate providing you with a draft report of the forthcoming survey for your review and concurrence as well as with a copy of the draft Environmental Assessment when it is available.

Copies of this letter are being furnished to Mr. Robert L. Brooks, Oklahoma Archeological Survey, University of Oklahoma, 111 E. Chesapeake, Norman, Oklahoma 73019-0575; Mr. Ken Shingleton, US Army Corps of Engineers, 1645 S. 101st E. Avenue, Tulsa, Oklahoma 74128; Mr. Ernie Seckinger & Mr. Jonathon Bowman, BRAC NST, US Army Engineer District, Mobile, PO Box 2288, Mobile, Alabama 36628-0001; and, Ms. Melissa Russ, Project Manager, AGEISS Environmental Inc., 5662 S. Park Avenue, Tacoma, Washington 98408.

Should you have further questions or comments at this time, please do not hesitate to contact Mr. Bill Hovell, Cultural Resource Manager, 918-420-6811 or William.hovell@us.army.mil. We look forward to hearing from you.

Sincerely,



Gary B. Carney
Colonel, US Army
Commanding Officer

Enclosures



DEPARTMENT OF THE ARMY
MCALESTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-9002

REPLY TO
ATTENTION OF:

December 4, 2006

Office of the Commander

SUBJECT: Endangered Species Consultation for the Environmental Assessment of Base
Realignment and Closure (BRAC) 2005 Actions

Mr. Greg Duffy, Director
Oklahoma Department of Wildlife Conservation
PO Box 53465
Oklahoma City, Oklahoma 73152-3465

Dear Mr. Duffy:

This letter is an informal consultation under Section 7 of the Endangered Species Act of 1973, as amended, 16 U.S.C. 1536, for the BRAC 2005 actions at the McAlester Army Ammunition Plant (MCAAP) in McAlester, Oklahoma.

The Defense Base Realignment and Closure Commission recommended the BRAC 2005 actions on September 8, 2005, which were approved by the President and forwarded to Congress on September 23, 2005, and formalized into law on November 9, 2005. The Army is preparing an Environmental Assessment under the National Environmental Policy Act, to analyze and document the environmental effects of the BRAC 2005 actions at MCAAP. We are conducting this Endangered Species Informal Consultation as part of that EA.

Enclosure (1) Description of the Proposed Actions, describes the BRAC 2005 actions, including construction of new facilities and renovation and reuse of existing facilities. Enclosure (2) Map of Proposed Actions, illustrates the three separate areas, totaling 129 acres, where the BRAC 2005 new construction will occur, and another area, where the renovation of an existing building will occur.

MCAAP is aware of only one resident protected species, the Federally-endangered American Burying Beetle (*Nicrophorus americanus*). The construction activities will be carried out in accordance with MCAAP's Endangered Species Management Plan (2002) and USFWS guidance. No impacts to the American Burying Beetle or any other Federal or State protected species are expected to occur as a result of the Proposed Actions.

No impacts to wetlands are expected to occur as a result of the proposed actions. MCAAP has a planning-level wetland survey based upon National Wetlands Inventory data. The construction and renovation sites are not located within any wetlands. In addition, the US Army Corps of Engineers (USACE) will review the construction sites to confirm that they are not in regulatory wetlands.

Please review this information for adverse effects on the American Burying Beetle or its habitat. Let us know if your agency has any concerns regarding potential impacts to our biological resources from the construction of the BRAC 2005 Actions.

Copies are being furnished to Mr. Ernie Seckinger & Mr. Jonathon Bowman, BRAC NST, at the US Army Engineer District, Mobile, PO Box 2288, Mobile, Alabama 36628-0001 and Ms. Melissa Russ, Project Manager & Toni Ristau, Cultural Resources Specialist, at AGEISS Environmental Inc., 5662 S. Park Avenue, Tacoma, Washington 98408.

If you have any questions, please contact Mr. Bill Starry, Natural Resource Manager, at 918-420-6611 or bill.starry@us.army.mil, regarding such consultation. We look forward to hearing from you.

Sincerely,



Gary B. Carney
Colonel, US Army
Commanding Officer

Enclosures



DEPARTMENT OF THE ARMY
MCALESTER ARMY AMMUNITION PLANT
1 C-TREE ROAD
McAlester, Oklahoma 74501-9002

REPLY TO
ATTENTION OF:

December 4, 2006

Office of the Commander

SUBJECT: Endangered Species Consultation for the Environmental Assessment of Base
Realignment and Closure (BRAC) 2005 Actions

Mr. Ken Frazier
Field Supervisor
US Fish and Wildlife Service
222 S. Houston Street, Suite A
Tulsa, Oklahoma 74127

Dear Mr. Frazier:

This letter is an informal consultation under Section 7 of the Endangered Species Act of 1973, as amended, 16 U.S.C. 1536, for the BRAC 2005 actions at the McAlester Army Ammunition Plant (MCAAP) in McAlester, Oklahoma.

The Defense Base Realignment and Closure Commission recommended the BRAC 2005 actions on September 8, 2005, which were approved by the President and forwarded to Congress on September 23, 2005, and formalized into law on November 9, 2005. The Army is preparing an Environmental Assessment under the National Environmental Policy Act, to analyze and document the environmental effects of the BRAC 2005 actions at MCAAP. We are conducting this Endangered Species Informal Consultation as part of that EA.

Enclosure (1) Description of the Proposed Actions, describes the BRAC 2005 actions, including construction of new facilities and renovation and reuse of existing facilities. Enclosure (2) Map of Proposed Actions, illustrates the three separate areas, totaling 129 acres, where the BRAC 2005 new construction will occur, and another area, where the renovation of an existing building will occur.

MCAAP is aware of only one resident protected species, the Federally-endangered American Burying Beetle (*Nicrophorus americanus*). The construction activities will be carried out in accordance with MCAAP's Endangered Species Management Plan (2002) and USFWS guidance. No impacts to the American Burying Beetle or any other Federal or State protected species are expected to occur as a result of the Proposed Actions.

No impacts to wetlands are expected to occur as a result of the proposed actions. MCAAP has a planning-level wetland survey based upon National Wetlands Inventory data. The construction and renovation sites are not located within any wetlands. In addition, the US Army Corps of Engineers (USACE) will review the construction sites to confirm that they are not in regulatory wetlands.

Please review this information for adverse effects on the American Burying Beetle or its habitat. Let us know if your agency has any concerns regarding potential impacts to our biological resources from the construction of the BRAC 2005 Actions.

Copies are being furnished to Mr. Ernie Seckinger & Mr. Jonathon Bowman, BRAC NST, at the US Army Engineer District, Mobile, PO Box 2288, Mobile, Alabama 36628-0001 and Ms. Melissa Russ, Project Manager & Toni Ristau, Cultural Resources Specialist, at AGEISS Environmental Inc., 5662 S. Park Avenue, Tacoma, Washington 98408.

If you have any questions, please contact Mr. Bill Starry, Natural Resource Manager, at 918-420-6611 or bill.starry@us.army.mil, regarding such consultation. We look forward to hearing from you.

Sincerely,



Gary B. Carney
Colonel, US Army
Commanding Officer

Enclosures

Description of the Proposed Actions at McAlester Army Ammunition Plant (MCAAP)

To support the BRAC recommendations, the Proposed Actions include the construction of a new 400-person Armed Forces Reserve Center (AFRC) and consolidated Organizational Maintenance Shop (OMS). The new AFRC would have the capability to accommodate Oklahoma Army National Guard units from the Field Maintenance Shop (FMS) in Durant, OK; the Oklahoma Army National Guard Readiness Centers in Atoka, Allen, Hartshorne, Madill, McAlester, and Tishomingo, OK; and the Oklahoma Army National Guard Readiness Center and Field Maintenance Shop in Edmond, OK. The Proposed Actions also include construction of a new Defense Reutilization and Marketing Services (DRMS) facility, including a Centralized Demilitarization (DEMIL) Processing Center (CDC).

The Proposed Actions include relocation of the Sensor Fuzed Weapon (SFW)/Cluster Bomb function and missile warhead production to MCAAP and relocation of existing DEMIL and storage functions from Red River Army Depot, Sierra Army Depot, and Lone Star AAP to MCAAP. The Proposed Actions reduce costs for maintaining existing Oklahoma National Guard facilities by consolidating other units in the area into a single facility on an existing DoD installation. The new functions would allow for effective and efficient utilization of resources and personnel in support of the Army's mission.

Description of the AFRC and OMS

The proposed AFRC and OMS would consist of permanent construction with reinforced concrete foundations, concrete floor slabs, structural steel frames, masonry veneer walls, standing seam metal roofs, heating, ventilation, and air conditioning (HVAC) systems, plumbing, mechanical systems, security systems, and electrical systems. This project would support 400 people and would permit all personnel to perform the necessary tasks that would improve the unit's readiness posture.

The AFRC Complex would consist of the following buildings:

- 98,746 square foot training facility
- 24,205 square yard paved roads
- 4,747 square foot organizational maintenance building
- 7,300 square foot multi-use classroom barracks
- 155 square foot unheated storage facility

Supporting actions would include land clearing, paving, fencing, general site improvements, and extension of utilities to serve the project. Force protection measures incorporated into the design include maximum standoff distance from roads, parking areas, and vehicles unloading areas. Standoff distances will be maintained wherever possible using active and passive vehicle restraining barriers. Passive barriers would include berms, boulders trees, and other landscaping, as well as fencing, plant pots, bollards, and other obvious vehicle restraints. An approximate total of 328,793 square feet of facilities and roadways would be constructed at this location.

DRMS Facility

The DRMS Facility would be a single-story structure with mechanical and electrical equipment and would consist of the following facilities:

- 70,000 square foot warehouse facility for covered storage
- 18,773 square yard paved roadway
- 16,000 square foot CDC
- 35,000 square yard paved open storage space
- 4,000 square foot warehouse administrative space
- 3,000 square foot vehicle/Material Handling Exchange (MHE) storage facility with battery charging stations
- 2,000 square foot DEMIL administrative space
- 400 square foot scale house with restroom

The DRMS facility would also include an 80 foot by 12 foot above ground vehicle truck scale, gate radiation monitor, loading/unloading ramp, 10,000 square yards of open storage yard (HARDSTAND) for scrap processing, two underground oil/water separators for stormwater drainage treatment, and 6,400 square yards of ancillary parking, a new/extended asphalt access roadway, security fencing, and security lights. Site utilities would include electrical, water, natural gas, sanitary sewer, and communications. Fire protection and fire alarms; life safety and code compliance; handicap accessibility; facility HVAC and mechanical systems; and all other incidental related work to support the DEMIL facility and mission would also be included. An approximate total of 726,957 square feet of facilities and roadways would be constructed at this location.

Relocation Of SFW/Cluster Bomb Function And Missile Warhead Production

The proposed SFW/Cluster Bomb functions and missile warhead production would be relocated from Kansas AAP to MCAAP. No new construction will be required. The SFW/Cluster Bomb and missile warhead production functions would be relocated into the following existing production facilities already in place on MCAAP:

- 19,000 square foot brick structure with 20 explosive bays including blast walls
- 3,400 square foot administrative space
- 10 square foot paint booth

Climate control for the submunition assemble areas and fire protection for the entire facility with high speed deluge in the powder pressing area would also be included. Additionally, the facility would require installation of approximately 11,000 square feet of new flooring and fiber optics.

Relocation Of Munitions Storage And Demil Functions

Storage and DEMIL functions would be relocated from Red River Army Depot, Sierra Army Depot, and Lone Star AAP to MCAAP. Red River, Sierra, and Lone Star would be relocating current stocks to existing storage and DEMIL facilities already located on MCAAP. MCAAP would provide only shipping, receiving, and storage. No new construction would be required since the relocation of these functions is into existing facilities.

♥

Summary of Facility Locations (see Figure)

Alternatives	Location Description	Operational Constraints	Safety Constraints	Geographic Constraints	Existing Facility, Mission Constraints
Preferred Alternative 1A	- AFRC and OMS located in area north of Main Gate at current location of Base Camp - Base Camp relocated to a new area outside of the proposed AFRC/OMS area	Need for water tower, burden on existing roads	None	None	None
1B	- AFRC and OMS located in area north of Main Gate, buildings co-located or located separately - Base Camp would remain in the proposed AFRC/OMS area, either at current location or moved to a new location.	Need for water tower, burden on existing roads	None	Overlapping inconsistent uses	None
Preferred Alternative 2A	- DRMS facility located in northeast corner of plant (Dahlstrom area)	Possible elevated noise levels	None	None	None

Discussion Of The Alternatives

Under the Preferred Alternative, the AFRC would be constructed on the site of the current Mature Theater of Operation Advanced Logistics Base Camp Force Provider Unit Training Center ("Base Camp") on top of the hill north of the Main Gate, and the OMS facility would be constructed adjacent to the AFRC in the same location (see figure). Under this alternative, the Base Camp (consisting of 50 concrete pads and associated facilities and utilities such as latrines and dining facilities) would be relocated outside of the proposed AFRC/OMS area to a new area near the motor pool. Demolition of six trailers, a dining hall, a laundry facility, two shower facilities, and a freezer would also occur under this alternative. Existing access roads, utility, and sewer easements would be used at this location. A new water tower would be constructed to address low water pressure in the area. New fencing would also be constructed to enclose the new AFRC and OMS facilities.

The DRMS facility would be located in the northeast corner of the plant, in the Dahlstrom area, west of the Quonset huts (see figure). Advantages to this site location include ample expansion room, minimal impact on the ammunition plant, and existing warehouses on site could be used with the existing vehicle rail loading dock.

The relocation of SFW/Cluster Bomb functions and missile warhead production would be into existing facilities on MCAAP. The munitions storage and DEMIL functions would be relocated from Red River Army Depot, Sierra Army Depot, and Lone Star AAP into existing facilities on MCAAP.

Other Alternative Considered

Under an alternative scenario that will be analyzed in the Environmental Assessment, the AFRC and the OMS would be located within the area north of the Main Gate (see figure). The buildings, comprising a total of about 24 acres, could either be co-located within the 75-acre proposed AFRC/OMS area or located individually within the area. Under this alternative, the Base Camp would remain within the proposed AFRC/OMS area either at its current location or moved to a new location. Existing access roads, utility, and sewer easements would be used at this location. A new water tower would be constructed to address low water pressure in the area. New fencing would also be constructed to enclose the AFRC and OMS facilities.

The DRMS facility would be located as described under the Preferred Alternative. The relocation of SFW/Cluster Bomb functions and missile warhead production and the relocation of munitions storage and DEMIL functions would be as described under the Preferred Alternative.

The "No Action" Alternative will also be discussed in the Environmental Assessment to establish a baseline against which the other alternatives can be compared.

COPY

WILDLIFE CONSERVATION COMMISSION

- | | |
|---------------------------------|-------------------------------|
| Bill Phelps
CHAIRMAN | Bruce Mabrey
MEMBER |
| M. David Riggs
VICE CHAIRMAN | Mac Maguire
MEMBER |
| Wade Brinkman
SECRETARY | Lewis Stiles
MEMBER |
| John D. Groendyke
MEMBER | Harland Stonecipher
MEMBER |



BRAD HENRY, GOVERNOR
GREG D. DUFFY, DIRECTOR

DEPARTMENT OF WILDLIFE CONSERVATION

1801 N. LINCOLN P.O. BOX 53465 OKLAHOMA CITY, OK 73106 PH. 521-3851

January 16, 2007

Colonel Gary Carney
Commanding Officer
McAlester Army Ammunition Plant
1 C-Tree Road
McAlester, OK 74501-9002

Dear Colonel Carney:

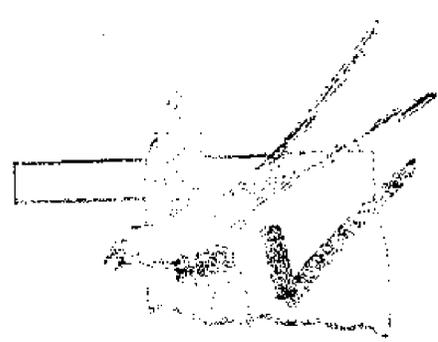
This letter is in response to the Endangered Species Consultation for the Environmental Assessment of Base Realignment and Closure (BRAC) 2005 actions for the McAlester Army Ammunition Plant.

My staff has reviewed the information that has been sent with regards to these proposed actions and we do not anticipate that they will have a substantial effect on any State listed endangered or threatened species. Additionally, we concur that these actions should have no substantial effect on the Federally endangered American Burying Beetle. However, we do recommend that you consult directly with the U.S. Fish and Wildlife Service for their determination.

We appreciate the opportunity to review and provide input on this matter. If you have any questions or need additional information, please contact Mark Howery, in our Wildlife Division, at (405) 424-2728.

Sincerely,

Greg Duffy
Director



Search for the Service on Your State Tax Form



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Division of Ecological Services

9014 East 21st Street

Tulsa, Oklahoma 74129

918/581-7458 / (FAX) 918/581-7467



In Reply Refer To:
FWS/R2/OKES/
2007-I-0151

February 8, 2007

Department of the Army
McAlester Army Ammunition Plant
1 C-Tree Road
McAlester, Oklahoma 74501-9002

Dear Mr. Starry:

Thank you for your December 4, 2006, letter submitted to the U.S. Fish and Wildlife Service (Service) requesting section 7 consultation regarding the Base Realignment and Closure Commissions (BRAC) actions for the McAlester Army Ammunition Plant (McAAP) in Pittsburg County, Oklahoma. Our comments are submitted in accordance with section 7 of the Endangered Species Act (ESA) and the Migratory Bird Treaty Act (MBTA).

The Service concurs that the American burying beetle (ABB) is the only federally-listed species known to occur on McAAP. On August 4, 2005, 18 ABBs were captured on McAAP. Based on the McAAP's 2002 Endangered Species Management Plan, activities with significant ground disturbance will need to implement specific conservation measures for the ABB. The Service considers the proposed action to qualify as significant ground disturbance.

Consequently, ABB surveys will need to be conducted prior to project implementation and any captured ABBs will need to be relocated to suitable sites on the installation. This ABB relocation effort should occur no more than 5 days prior to ground disturbance to ensure that ABBs do not return to the project site before construction commences. Based on the above information, the Service concurs with your determination that the proposed project will not likely adversely affect the ABB.

We appreciate the opportunity to review your proposed project and provide comments. This correspondence is valid for one year from the date above. Please include the project number at the top, left of the front page in any future reference to this action. If you have any questions, please contact Hayley Dikeman at 918-382-4519.

Sincerely,

Jerry J. Brabander
Field Supervisor

APR 05 2007



Oklahoma Historical Society

CD —
CO —
DE —
Founded May 27, 1893

State Historic Preservation Office

Oklahoma History Center • 2401 North Laird Ave. • Oklahoma City, OK 73105-7914
(405) 521-6249 • Fax (405) 522-0816 • www.okhistory.org/shpo/shpom.htm

March 26, 2007

Colonel Gary Carney
Commanding Officer
McAlester Army Ammunition Plant
1 C-Tree Road
McAlester, OK 74501

RE: File #0460-07; Dept. of the Army, MCAAP Applicability of
Program Comments & Alternate Compliance Process

Dear Colonel Carney:

Thank you for your letter of March 19, 2007. We understand that future undertakings at McAlester Army Ammunition Plant (MCAAP) will be conducted in accordance with the Advisory Council on Historic Preservation's Program Comments issued on August 18, 2006, for the U.S. Department of the Army's programs identified in your correspondence. We are fully aware of the purpose of the Program Comments and how they streamline the Section 106 review process for your installation.

Please remember that the Oklahoma Archeological Survey (OAS) reviews federal undertakings under the terms of a cooperative agreement with our agency. The State Historic Preservation Office retains the responsibility for concluding consultations with federal agencies. Any correspondence or materials provided to the OAS must also be addressed to our office.

Thank you for the opportunity to review this project. If you have any questions, please call Charles Wallis, RPA, Historical Archeologist, at 405/521-6381. Please reference the above underlined file number when responding. Thank you.

Sincerely,

Melvena Heisch
Deputy State Historic
Preservation Officer

MH:pm