U.S. ARMY WHITE SANDS MISSILE RANGE,
NEW MEXICO,
DRAFT FINDING OF NO SIGNIFICANT IMPACT

NAME OF THE PROPOSED ACTION:
Supplemental Environmental Assessment for Expanded Test Activities at Lee and Yucca Impact Areas at White Sands Missile Range, New Mexico

DESCRIPTION OF THE PROPOSED ACTION:
This supplemental environmental assessment (SEA) is prompted by a need for expanding the size of Lee and Yucca Impact Areas and increasing the amount of missile testing activities into them. Lee Impact Area is located in the Northern Call-up Area (NCUA) and Yucca Impact Area is located on the southeast corner of WSMR. Lee and Yucca Impact areas were established through the analysis of previous environmental assessments (EA). Test activities have been analyzed and are covered under existing NEPA documentation. Environmental analysis of this SEA focused on impacts resulting from the enlargement of the impact areas and increased number of test missions.

PURPOSE AND NEED:
The purpose of the proposed action is to increase the number of extended range test missions into Lee and Yucca Impact Areas. Extended range testing is essential for the development of effective weapon systems with the capability for precision engagement beyond the range of current systems. Proposed testing includes continued development of STORM family of missiles and similar systems to assure combat readiness of the United States armed services and protect national security.

ALTERNATIVES CONSISDERED: Two alternatives to the proposed action were considered, including use of test ranges other than WSMR and the no action alternative. Other military installations have launch facilities and missile impact capabilities located within desirable test distances of each other; however, WSMR, Ft. Wingate Launch Complex, Ft. Bliss McGregor Range and the NCUA have co-developed over time to accommodate missile flight testing and Lee and Yucca Impact Areas were established for extended range testing. WSMR is the largest overland test range in the United States, and the skilled personnel, unique facilities, and instrumentation required are already in place, thus enhancing both test execution and safety. Duplication of this infrastructure and test capabilities at other test facilities is not feasible. The need to recover and analyze post-test debris eliminated consideration of ocean based test ranges. No other nearby test sites can support the desired distances.

The No-Action Alternative would not increase the size of Lee and Yucca Impact Areas as well as not increase the number of test missions into these areas. If this alternative is selected, the purpose and need of the proposed test and evaluation program will not be met. Not increasing the site sizes or increasing the number of tests prevents the on time accomplishment of seriously needed test events.

ENVIRONMENTAL CONSEQUENCES: Potential consequences to the natural and human environments because of the proposed testing and construction activities were evaluated in this EA to provide a basis for assessing their significance. No significant impacts on the environment have been identified.

Construction and test activities will disturb soils and vegetation leading to temporary increases in fugitive dust and vehicle emissions. Water trucks will be used for dust control, if necessary. Ground disturbance will be recontoured after testing. To minimize impacts, Yucca impact area

will be expanded in smaller increments of 10 to 20 acres. When feasible mowing instead of blading will be used to maintain vegetation cover in the impact areas.

Archaeologists surveyed a 361-acre parcel encompassing the existing Yucca Impact Area. Five archaeological sites were identified and recommended as eligible for inclusion in the National Register of Historic Places. The proposed Yucca Impact Area boundary was revised to a 282-acre parcel that avoids all cultural sites identified.

Traffic volume will increase on Highway 380, county and private roads to Lee Impact Area due to increased test missions. Traffic volume at roadblocks will be minimal and will be publicly announced prior to tests activities to reduce traffic issues.

CONCLUSIONS: Based on analysis present in this EA no significant impacts on the environment were found. Applicable federal, state, and local laws and regulations would be followed. Accordingly, the U.S. Army and WSMR have determined that an environmental impact statement (EIS) pursuant to the National Environmental Policy Act is not required, and this Finding of No Significant Impact is hereby submitted. To minimize potential impacts the following mitigations would be followed:

- Cultural sites have been excluded and are outside of the Yucca Impact Area and will be marked with Seibert stakes to ensure no activities take place within them.
- If ground disturbing activities occur during the active nesting season, then a migratory bird survey for nesting birds will take place before any ground preparation activities begin to avoid disturbing active bird nests.
- If active bird nests (with eggs or nestlings) are found during surveys the following mitigations may be applied
    - Delay of ground-clearing activities until nestlings have fledged.
    - Some ground-clearing occurs, but with buffers placed around active nests.
    - As a last resort relocation of active nests by installation biologists under a federal relocation permit.
    - Installation biologists would be consulted to determine how to best address the situation.

POINT OF CONTACT: The environmental assessment which supports this Finding of No Significant Impact is available for public reading at the following locations: WSMR Library, 465 Rock Island, WSMR, NM; Public Affairs Office, Building 1782, WSMR, NM; Octavia Fellin Public Library, Gallup, NM, Thomas Branigan Memorial Library, Las Cruces, NM; the Alamogordo Public Library, Alamogordo, NM; and the Socorro Public Library, Socorro, NM or viewed online at https://www.wsmr.army.mil/gar/GarrisonPublications/Pages/default.aspx.
All members of the public are invited to submit written comments within 30 days of this notice. Address all correspondence to:

Department of the Army
White Sands Missile Range
100 Headquarters Avenue
ATTN: MT-R Range Support
White Sands Missile Range,
NM 88002-5000
Phone: (575) 678-1941
Comments can also be emailed to james.j.thompson120.civ@army.mil

DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT FOR EXPANDED TEST ACTIVITIES AT LEE AND YUCCA IMPACT AREAS, WHITE SANDS MISSILE RANGE, NEW MEXICO

April 2024

Submitted by:

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13. SUPPLEMENTARY NOTES

14. ABSTRACT
This supplemental environmental assessment (EA) analyzes the effects of expanding the size of two existing impact areas (Lee Impact Area and Yucca Impact Area) and increasing the amount of missile testing activities into them. The proposed action has been analyzed to determine environmental impacts that will occur due to these activities. Mitigations and Best Management Practices (BMPs) are specified to diminish or eliminate impacts associated with this project. Provided that the proposed activities and the environments in which they occur do not change, these activities will not have a significant impact on the environment. Therefore, a Finding of No Significant Impact (FNSI) on the environment has been concluded. Accordingly, the U.S. Army and WSMR have determined that an environmental impact statement pursuant to the National Environmental Policy Act (NEPA) is not required for the proposed actions described in this EA.

15. SUBJECT TERMS
Environmental Assessment (EA), National Environmental Policy Act (NEPA), Finding of No Significant Impact (FNSI), White Sands Missile Range (WSMR), Precision Fires Rocket and Missile Systems (PFRMS), Fort Wingate Launch Complex (FWLC), Strategic and Operational Rockets and Missiles (STORM).

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LIST OF ACRONYMS

AEC	Aerostar Environmental and Construction
AR	Army Regulation
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CRM	Cultural Resources Manager
DPW-E	Department pf Public Works Environmental Division
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FWLC	Fort Wingate Launch Complex
FNSI	Finding of No Significant Impact
FTS	Flight Termination System
GPS	Global Positioning System
HBCT	Heavy Brigade Combat Team
LC	Launch Complex
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NCUA	Northern Call-up Area
NMCRIS	New Mexico Cultural Resource Information System
NRHP	National Register of Historic Places
PAC-3	Patriot Advanced Capability-3
PFRMS	Precision Fires Rocket and Missile Systems
SEA	Supplemental Environmental Assessment
STORM	Strategic and Operational Rockets and Missiles
STS	Surface-to-Surface
THAAD	Theater High Altitude Air Defense
VEC	Valued Environmental Components
WITS	Warhead Impact Targets
WSMR	White Sands Missile Range

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1.0 INTRODUCTION

This supplemental environmental assessment (EA) analyzes the effects of expanding the size of two existing impact areas (Lee Impact Area and Yucca Impact Area) and increasing the amount of missile testing activities into them. Lee Impact Area is located in the Northern Call-up Area (NCUA) (Figure 1) and Yucca Impact Area is located on the southeast corner of WSMR near Oro Grande Base Camp (Figure 2). WSMR proposes to test the Strategic and Operational Rockets and Missiles (STORM) Program and similar surface to surface systems with live or inert unitary warheads in these impact areas. Proposed missile systems include single staged missiles propelled by solid rocket fuel and carrying a unitary warhead.

This EA was prepared in order to fulfill the requirements of the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA 40 CFR 1500 to 1508 and 32 CFR Part 651, (Army Regulation [AR] 200-2) Environmental Analysis of Army Actions (2002).

1.1 Related Environmental Documentation

To keep environmental documents brief, Army policy allows the tiering or incorporation of existing EAs or completed analyses into other NEPA documents. Under 32 CFR 651 ‘‘tiering’’ of NEPA, allows the proponent to minimize effort spent on individual projects, and ‘‘incorporating by reference’’ the broader level environmental considerations. This tiering allows the development of program level (programmatic) EAs which can introduce greater economies of scale. Existing documents that have been reviewed and incorporated by references include:

- Final Environmental Assessment for Precision Fires Rocket and Missile Systems Flight Testing from Fort Wingate Launch Complex and Construction Activities at White Sands Missile Range, New Mexico. (U.S. Army 2020)
- Environmental Assessment Solid-fueled Rocket Motor Launches from Ft. Wingate Launch Complex New Mexico. (U.S. Army 2019)
- Environmental Assessment for Extended Range Capability, White Sands Missile Range, New Mexico. (U.S. Army 2018).
- Final Supplemental Environmental Assessment for Lee Impact Area, New Mexico. (U.S. Army 2016)
- Environmental Impact Statement for Development and Implementation of Range-Wide Mission and Major Capabilities at White Sands Missile Range, New Mexico (U.S. Army 2010).
- Programmatic Environmental Assessment for Surface-to-Surface Testing on White Sands Missile Range, New Mexico (U.S. Army 2004).
- Supplemental Environmental Assessment for Impact Areas on White Sands Missile Range, New Mexico (U.S. Army 2003).
- Environmental Assessment for Lee Impact Area, White Sands Missile Range, New Mexico (U.S. Army 2002)
- Ballistic Missile Defense Organization Fort Wingate Launch Complex EA (U.S. Army 1999)
- Patriot Advanced Capability-3 (PAC-3) Life Cycle Environmental Assessment, (U.S. Army 1997).
- Theater Missile Defense Extended Test Range Final Environmental Impact Statement (U.S. Army Space and Strategic Defense Command 1994).

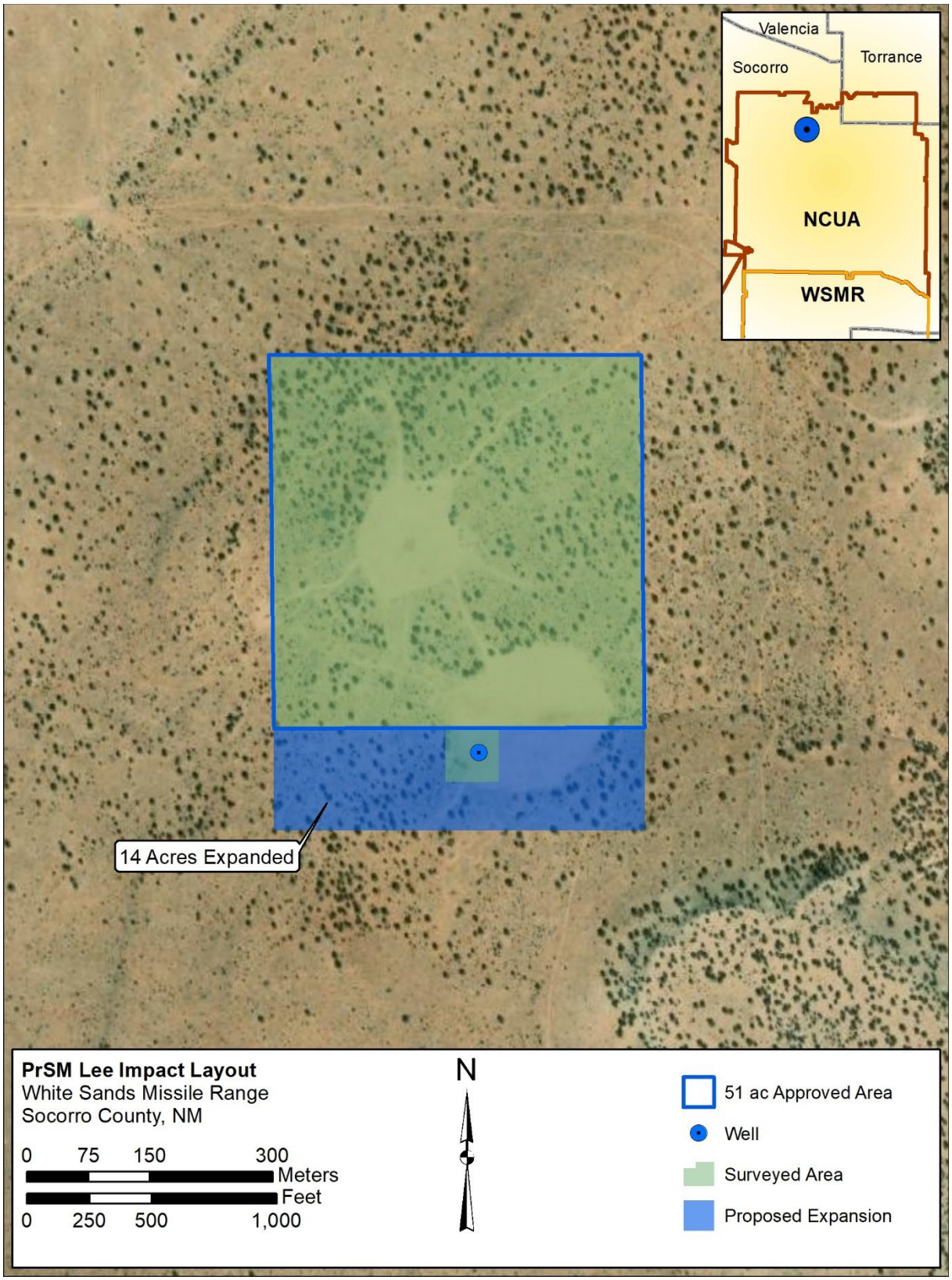

Figure 1. Lee Impact Area

1.2 Purpose and Need

The purpose of the proposed action is to expand the size of Lee and Yucca Impact Areas as well as increase the number of test missions. There is a need to effectively evaluate the long-range test flight performance of variants from the STORM family of missiles and other similar systems.

Extended range testing into these expanded impact areas is essential for the development of an effective weapon system with the capability for precision engagement of the enemy beyond the range of other weapon systems. Expanded range testing includes continued development of STORM and similar systems with increased accuracy at extended range to assure combat readiness of the United States armed services and protect national security.

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2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 Preferred Alternative (Proposed Action)

The proposed action is to increase the size of Lee and Yucca Impact Areas as well as to increase the number of test missions into these areas. Test activities are the same as described and analyzed in the Supplemental Environmental Assessment for Lee Impact Area, New Mexico (U.S. Army 2016) and Final Environmental Assessment for Precision Fires Rocket and Missile Systems Flight Testing from Fort Wingate Launch Complex and Construction Activities at White Sands Missile Range, New Mexico (U.S. Army 2020). Environmental analysis of the proposed action will focus on the proposed increase of the size of Lee and Yucca Impact Areas as well as the increase in the number of test missions into these areas.

2.1.1 Impact Area Expansion

Both Lee and Yucca Impact Areas will be expanded to accommodate increased number and frequency of long-range missile test activities. The Lee Impact Area is a 51-acre parcel of private land in the NCUA located in Socorro County, New Mexico. Ten acres within the 51-acre parcel was cleared for missile impact testing under previous NEPA documentation (U.S. Army 2016). The 11-acre Yucca Impact Area was established in the southeast corner of WSMR to facilitate long range missile testing from FWLC (U.S. Army 2020).

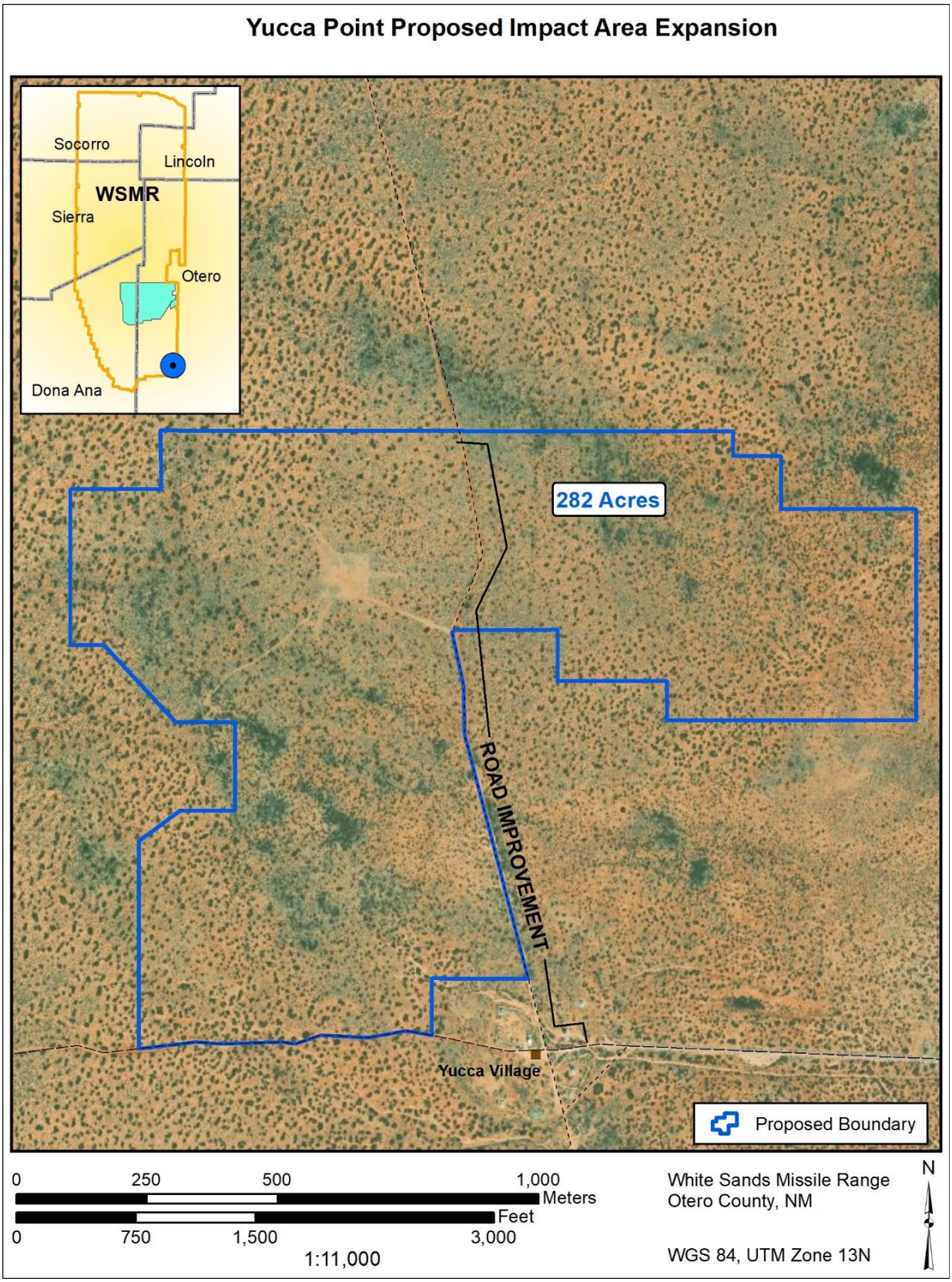

Figure 2. Yucca Impact Area

Lee Impact Area Expansion
The preferred alternative would expand the Lee Impact Area by 14 acres, from 51 acres to 65 acres. Twenty acres can be cleared for additional impact points bringing the total disturbance within Lee Impact Area to 30 acres. A maximum total of 30 acres can be disturbed within the proposed 65-acre impact area. This land is located on private property being used intermittently under agreement with the landowner for military testing.

Yucca Impact Area Expansion
The preferred alternative would expand the Yucca Impact Area boundaries by an additional 271 acres, increasing the size of Yucca Impact Area to 282 acres. This land is located within the WSMR installation boundaries.

2.1.2 Increased Missile Testing Activities Within Lee and Yucca Impact Areas
The number of missile testing events will increase with the expansion of Lee and Yucca Impact Areas. This is necessary to accommodate long range missile test activities.

Lee Impact Area
- Increase the number of long range missile launch events from Ft. Bliss or WSMR into Lee Impact Area, from three (3) per year to 25 per year.
- One test event may consist of up to four missiles fired in short secession of each other. Short secession launch events will generally occur within one hour but will not exceed two hours per requirements stated in the1972 State Highway Commission Resolution (NMSHD, 1972).

Yucca Impact Area
- Increase the number of long range missile launch events from FWLC into Yucca Impact Area from three (3) per year to 10 per year.
- One test event may consist of up to four missiles fired in short secession of each other.

Site preparation and pre-launch target setup will occur at both Lee and Yucca Impact Areas. Targets planned for use include real and surrogate vehicles, mannequins, witness panels, berms, trenches, and temporary structures such as in ground and above ground bunkers composed of earth, metal, wood or concrete. After test activities are complete, contractor or government personnel supporting White Sands Test Center will remove test debris and smooth the ground back to the original contours.

The number of missile firing events into Lee Impact Area in combination with other test missions will not exceed the number of firings described in the Evacuation Agreement between rancher/landowners located in the NCUA and the U.S. Government. The agreement states that there shall be no more than twenty-five (25) firing periods during any calendar year and no more than six (6) firing periods in any month. Roadblocks shall conform to notification and time constraints outlined in the 1972 State Highway Commission Resolution (NMSHD, 1972). WSMR is required to provide notice to the DOT district engineer at least 48 hours prior to setting up roadblocks. Safety roadblocks can cause delays of up to two hours on US 380 per requirements stated in the agreement.

2.1.3 Launch
Lee Impact Area
All launches will occur from existing locations. Existing NEPA documentation covers the use and modifications of those sites. (U.S. Army 2010 and 2004).

Yucca Impact Area
All launches will occur from existing locations. Existing NEPA documentation covers the use and modifications of those sites. (U.S. Army 2010 and 2004).

2.1.4 Impact and Recovery
Test missiles from FWLC LC-96 will fly over remote areas of New Mexico and primarily impact within Yucca Impact Area and established impact areas within WSMR boundaries. Prior to launch the Army would

coordinate with the FAA for the use of established restricted airspace areas. These restricted airspace areas provide airspace to contain launch, ascent, reentry, and impact of missiles. These restricted airspace areas would be activated for the minimum time needed to safely accomplish the flight test activity and at the conclusion of the test event the using agency, WSMR, would release the restricted area to the FAA controlling agency in accordance with joint-use procedures.

Established impact areas were analyzed under existing NEPA documentation for missile impacts. Missiles impacting into Lee Impact Area will launch from existing facilities on Ft. Bliss McGregor Range or WSMR. Use of existing launch sites have been analyzed and are covered under existing NEPA documentation (U.S. Army 2010 and 2004). Missile impacts and recovery on WSMR are covered in previous NEPA analyses (See Section 1.2).

2.1.5 System Description

The proposed test missiles will use inertial guidance systems and Global Positioning Satellite (GPS) systems. All missile tests will require a Flight Termination System (FTS) to incapacitate the missile if abnormal flight behavior is detected during the launch or flight trajectory phase. The missiles are propelled by a single-stage solid propellant rocket motor. No liquid-fueled missiles are proposed under this EA.

2.1.6 Unitary Warheads

For purposes of this environmental analysis, a unitary warhead is defined as a single warhead from a guided missile which is inert or filled with a single explosive charge. Three types of unitary warhead assemblies are proposed for testing. The blast/fragmentation warhead, filled with high explosive, an inert unitary warhead, containing only inert material, and a penetrator warhead capable of penetrating the ground.

2.2 Alternatives Considered

2.2.1 Use of a Test Range Other Than FWLC and WSMR

Other military installations have launch facilities and missile impact capabilities located within the desirable test distance of each other; however, FWLC, WSMR, have co-developed over time to accommodate missile flight testing and Lee Impact Area was established for extended range testing. Ft. Bliss McGregor Range and the NCUA have also co-developed over time for the same reason. WSMR is the largest overland test range in the United States, and the skilled personnel, unique facilities, and instrumentation required are already in place, thus enhancing both test execution and safety. Duplication of this infrastructure and test capabilities at other test facilities is not feasible nor financially practical. The need to recover and analyze post-test debris eliminated consideration of ocean-based test ranges. No other test sites are able to support the range. Using existing sites reduces impact from the mission and the environment.

2.2.2 No Action Alternative

The No-Action Alternative would not increase the size of Lee and Yucca Impact Areas as well as not increase the number of test missions into these areas. If this alternative is selected, the purpose and need of the proposed test and evaluation program will not be met. Not increasing the site sizes or increasing the number of tests prevents the on-time accomplishment of seriously needed test events.

3.0 VALUED ENVIRONMENTAL COMPONENT (VEC) ANALYSIS

During early initial scoping for the EA, a method described in the NEPA Analysis Guidance Manual was used to rate Valued Environmental Components (VECs) typically addressed in Army NEPA analyses (U.S. Army, 2007). This analytical process allows a level of consistency in evaluating impacts and comparing impacts across installations to help with Army-wide decision-making. It also advocates a process for focusing analysis on areas where impacts are most likely to occur, considering the type of actions involved in a geographic context. Participants included subject matter experts at WSMR who have extensive knowledge of the various resources on the installation. Table 1 summarizes the degree to which each VEC would be affected. Possible ratings for each VEC range from very low, low, moderate, to high. VECs rated very low and low have been adequately analyzed in the WSMR EIS (U.S. Army, 2010) and most will not be discussed further in Section 3.0. Remaining VECs rated moderate or higher regarding potential environmental effects are further analyzed in this document with appropriate mitigation measures included to reduce or eliminate possible impacts.

VEC	Rating	Notes
Air Quality	L/M	Construction and activities will lead to temporary increases in fugitive dust emissions and emissions from vehicles and small generators. Water trucks will be used for dust control, if necessary. Mowing instead of blading previously cleared areas recommended. No change to WSMR Title V Air permit is required.
Air Space	L	Test activities will occur within WSMR Restricted Airspace. Coordination between WSMR Range Operations and Federal Aviation Administration would occur to minimize conflicts with other users.
Biological Resources	M	Local vegetation at Lee Impact Area will be affected during clearing operations, and test activities. Trees and shrubs will be removed with grass species left in place. No more than 20 acres will have vegetation disturbance from pre-test and post-test activities. Clearing operations at Yucca Impact Area would result in a loss of up to 271 additional acres of vegetation. Clearing will occur in smaller increments of 10 to 20 acres, mowing when practical to maintain vegetation cover. During active nesting season a migratory bird survey for nesting birds will take place before any ground preparation activities to avoid disturbing active bird nests.
Cultural Resources	M	Archaeological surveys have been conducted at Lee Impact Area and verified that no prehistoric or historic cultural resources are present within the impact area for proposed test missions. Cultural sites were found during survey efforts but were outside the proposed Yucca Impact Area. Some cultural sites were determined eligible for inclusion in the NRHP. These sites will be marked with Seibert stakes and avoided and excluded from the impact area to avoid missile impacts.
Geology / Soils	M	Test activities will disturb soils in Lee Impact Area. Ground disturbance will be recontoured after testing. Test activities would increase soil disturbance in Yucca Impact Area. The area will be expanded incrementally (10 – 20 acres), when practical mowing instead of blading to maintain vegetation cover and leaving natural vegetation intact to stabilize soils.
Greenhouse Gas Emissions and Climate Change	L	Potential disturbance and emissions from vehicles and ground disturbance are not expected to contribute significant amounts of greenhouse gas emissions.
Land Use	L	The land within the proposed Lee Impact Area is currently used for livestock grazing. After each test event the land will be rendered safe of UXO and cleared of test debris and immediately returned to the owner for cattle grazing. The launch complex at FWLC and the established impact areas at WSMR are currently used for missile testing. There will be no change in land use.
Noise	L	Noise from site preparation and testing will be temporary. Proper hearing protection will be worn by test personnel and safety zones will be established.

VEC	Rating	Notes
		Annual ordnance expenditures on WSMR are not high enough to generate Noise Zones which extend beyond the installation boundary or impact sensitive land use on the Main Post cantonment (USAPHC, 2019).
Recreation	L	There is limited hunting specific to Lee and Yucca Impact Areas because one is private, and the other is on a military installation not open to the public. Other recreational activities are restricted as well.
Safety	L	The proposed action would follow all required WSMR and project safety SOPs. Emergency services such as the WSMR Fire Department will be on standby for any emergency or fire. Prior to testing, non-essential test personnel and residents will be evacuated from the NCUA. Missiles will have flight termination systems in the unlikely event that the missile does not perform as planned. Any unexploded ordnance will be removed from the impact areas after each testing event, rendering the areas completely safe. Prior to ground clearing operations at Yucca Impact Area, a UXO survey will be conducted by qualified WSMR UXO personnel. The proposed action will have no significant impact on public health and safety.
Solid Waste & Hazardous Materials	L	Solid waste to include missile debris generated during testing at Lee and Yucca Impact Areas will be collected and disposed or recycled after each test in accordance with WSMR operating procedures and regulations.
Facilities and Infrastructure	L	No facilities or infrastructure will be used or established at Lee Impact Area. There will be a slight increase in use of existing facilities at FWLC during missile testing events. The proposed action will use existing firm power at FWLC and WSMR during launch activities. The energy demand from the proposed activities will not have a significant demand on energy from the proposed action.
Traffic/ Transportation	M/L	Traffic volume to Lee Impact Area on county and private roads will slightly increase due to increased number of tests from 3 to up to 25 per year. Traffic volume at roadblocks will be minimal and test activities will be publicly announced prior to test activities.
Socioeconomics / Environmental Justice	L	During launch activities there will be a slight increase in use of local hotels, restaurants, and stores from mission support personnel near Ft. Wingate and Lee Impact Area. Residents living in the NCUA receive payments for inconvenience of evacuations, increased number of test events could be a minor increase in income for some residents. There will be a minimal positive affect to the local economy.
Water Resources and Floodplains	L	There are no surface or ground water sources near the proposed site. Based on previous ground water measurements, the depth of ground water at Lee Impact Area is approximately 400 feet below ground. Ground water will not be impacted. There are no perennial streams, water bodies or ground water wells close to Yucca Impact Area. There are no water utilities located near the Lee or Yucca Impact Areas. Yucca Impact area is located in an area of minimal flood hazard. Permanent structures will not be constructed or impacted by flood hazards. Test debris is picked up to prevent indirect run-off of any chemical residues into the soil.
Wildland Fire	L	Vegetation within Lee Impact Area is susceptible to wildland fire especially during dry periods in which there is a high fuel load. Management practices to minimize wildland fires include avoiding missile testing during high fire danger, creation of small fire breaks around the target area and the presence of standby fire crews during testing. FWLC launch activities will follow best management practices to minimize wildland fires that include avoiding missile testing during times of high fire danger and removal of ignitable vegetation and fuel load immediately adjacent to the Ft. Wingate Launch Complex. Emergency services will be on standby for any emergency or fire. The potential for wildfires within the WSMR impact areas is low due to minimal vegetation.

3.1 Air Quality

3.1.1 Affected Environment

The principal framework of national, state, and local efforts to protect air quality in the United States is the Clean Air Act (42 USC § 7401 et seq., [CAA]). Under the CAA, the U.S. Environmental Protection Agency (EPA) has set health-based standards known as National Ambient Air Quality Standards (NAAQS) for six criteria pollutants considered to be key indicators of air quality: carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3), sulfur dioxide (SO2), lead (Pb), and two categories of particulate matter—namely particulate matter with an aerodynamic diameter of 10 microns or less (PM10) and particulate matter with an aerodynamic diameter of 2.5 microns or less (PM2.5) (40 CFR Part 50). The lands within WSMR's boundaries and NCUA are in attainment for all criteria pollutants.

3.1.2 Impacts of the Proposed Action

Lee Impact Area

Up to twenty additional acres are proposed to be cleared within the Lee Impact Area, bringing the total ground disturbance within Lee Impact Area to 30 acres. These activities are expected to increase particulate matter in Lee Impact Area from ground clearing and increased vehicle traffic on unpaved roads, and emissions from vehicles and small generators. These activities would be short-term and localized occurring only during the preparation of impact areas and subsequent test actives that follow. If needed, water trucks will be used for dust control. Proposed missile testing will increase from 3 to up to 25 tests per year. Due to the limited number of tests up to 25 and the rapid dispersion of the exhaust from a mobile source, emissions of applicable criteria pollutants will be considered minimal.

Ground cover from regrowth of perennial grasses and annual forbs has been estimated at 40-50% from within existing cleared areas. These revegetated areas are helping to stabilize the soils and are expected to minimize fugitive dust generation. It is recommended that when practical mowing instead of blading be used to maintain this impact area to enhance ground cover and to minimize fugitive dust generation.

Yucca Impact Area

Up to 271 additional acres are proposed to be cleared for test activities within the Yucca Impact Area, bringing the total ground disturbance within Yucca Impact Area to 282 acres. Clearing activities are expected to increase particulate matter in Yucca Impact Area and the unpaved roads from increased vehicle traffic. These activities will lead to temporary increases in particulate matter and emissions from vehicles and small generators. These activities would be short-term and localized occurring only during the preparation of the impact area and subsequent test actives that follow. If needed, water trucks will be used for dust control. Due to the small number of missile tests (≤10) and rapid dispersion of the exhaust from a mobile source, emission of applicable criteria pollutants will be considered minimal.

It is not expected that the entire proposed 271 acres would be cleared at the same time. Expansion of Yucca Impact Area is expected to be incremental, occurring as test needs are identified. As test needs arise specific areas within the 271-acre area will be selected for clearing. It is expected that approximately 10 to 20 acres will be cleared during each incremental expansion. This approach will minimize the amount of fugitive dust generation that would result from clearing the entire area at one time. The WSMR environmental review process (WSMRR 200-2) will be used to account for incremental disturbance rates and ensure actions are within the boundaries of the impact area. The rate of vegetative recovery will be dependent on climate factors and repeated disturbance in the same area. To the greatest extent practical, the project will allow rotation between impact points to aid in vegetative recovery of disturbed areas.

Ground cover from regrowth of perennial grasses and annual forbs has been estimated at 60-70% from within existing cleared areas. It is anticipated that cleared areas will naturally revegetate and provide additional soil stabilization which would help minimize fugitive dust generation.

The following best management practices are recommended when practical to enhance ground cover and minimize fugitive dust generation.

- Mowing instead of blading to maintain cleared areas and enhance ground cover.

- Mechanical grubbing instead of blading to manage regrowth of individual problem mesquite bushes.
- Natural vegetation be left intact to help stabilize the site.
- Water hauled by trucks and distributed on the soil would be used for dust control.

The impact to air quality from the proposed action will be insignificant. If actions are followed, there will be minimal fugitive dust, and greenhouse gas emissions. No change to WSMR TV Air permit is required.

3.1.3 Impacts of the No Action Alternative
Selection of the no action alternative would result in no additional impact to air quality.

3.2 Cultural Resources

3.2.1 Affected Environment
Lee Impact Area
The proposed expansion of 14 acres to the south of the current 51-acre box has been surveyed for cultural resources under NMCRIS project number 151820 (Figure 1).

Yucca Impact Area
The initial proposed boundary for the expanded impact area at Yucca Point encompassed 361 acres (Figure 2). This served as the cultural survey boundary under NMCRIS project number 151819. The area had been previously surveyed by University of New Mexico (UNM) archaeologists in 1985 as part of the Borderstar Survey, Phase 1 (Seaman et al 1988). At that time, UNM identified numerous sites around the perimeter of the 361-acre survey boundary. Because of the age of the 1985 survey, Test Center Archaeologist Charles Norred, in consultation with DPW-E Cultural Resources Manager (CRM) James Bowman, determined that an updated survey must be completed for this environmental assessment.

3.2.2 Impacts of the Proposed Action
Lee Impact Area
The results of the survey revealed no cultural resources. Therefore, the management recommendation for this parcel is a finding of no historic properties affected.

Yucca Impact Area
In September and October 2022, Aerostar Environmental and Construction (AEC) archaeologists surveyed the 361-acre parcel. During the 2022 survey, AEC identified four new archaeological sites that intersect the parcel. In addition, a previously documented site boundary was updated, and it also expands into the survey parcel for a total of five archaeological sites within the 361-acre area. The five sites are located near the margins of the 361-acre parcel. AEC evaluated the significance of the five sites and recommended that each site is eligible for inclusion in the National Register of Historic Places (NRHP).

AEC archaeologists consulted with the Test Center Archaeologist and DPW-E CRM to determine the best management recommendation to mitigate any adverse effects to the five sites by the proposed expansion of the Yucca Point Impact Area. It was determined that the best course of action be to avoid all sites. Therefore, the proposed impact area boundary was revised to a 271-acre parcel that avoids all cultural sites identified during the 2022 survey (Figure 2). Additionally, each of the five site boundaries will be marked with Seibert stakes to ensure no activities take place within them.

The current 271-acre proposed impact area expansion contains no archaeological sites. The management recommendation of avoidance and marking site boundaries results in a finding of no adverse effects to historic properties by the proposed undertaking in this environmental assessment. The New Mexico State Historic Preservation Office concurred with the eligibility recommendation for each site, as noted in a concurrence letter signed and dated 25 September 2023 (Appendix C).

3.2.3 Impacts of the No Action Alternative
If the proposed action does not occur, no adverse effects will impact any cultural resources.

3.3 Geology and Soils

3.3.1 Affected Environment

Lee Impact Area

On a regional scale, Lee Impact Area is located on the western edge of the Chupadera Platform between the southeastern flanks of the Los Pinos Mountains and the western edge of the Chupadera Arroyo. A shallow inland sea covered this region of New Mexico during much of Paleozoic and Mesozoic time, and then uplift and mountain building began toward the end of Cretaceous time (Hook, 1983). The Los Pinos Mountains are the result of high-angle thrust faulting and uplift. The Chupadera Arroyo is the northern-most extension of the Jornada del Muerto Basin, a major structural depression formed by a down-warped fold (U.S. Army, 2016).

Locally, Lee Impact Area is situated atop of a thick sequence approximately 457 meters deep of Paleozoic sedimentary rocks that unconformably overlie Precambrian granite and reflect changing depositional environments (Birch, 1980). Permian age rocks of the Yeso and Abo Formations are exposed at the surface in places. The Abo Formation is the oldest and consists of very dark reddish-brown fine-grained sandstones with interbedded mudstone, siltstone, and minor coarse-grained sandstone. The younger Yeso Formation consists mostly of red-brown sandstone interbedded with shale, gypsum, limestone, and siltstone (Roybal, 1991). (U.S. Army, 2016).

Lee Impact Area is represented by the Creel-Musofare-Clovis complex (Map unit 716). The Creel-Musofare-Clovis complex have slopes of 1 to 15 percent. All three soils in this complex are moderately deep and well drained, and derived from alluvium that was primarily sandstone or siltstone. These soil components are found on escarpments, uplands and fan remnants (USDA 2018).

Yucca Impact Area

The proposed Yucca Impact Area is located within the southeastern-most portion of the Basin and Range Province, a regional area typified by uplifted fault blocks forming mountains and downthrown blocks forming basins. Erosion of the uplifted fault blocks and deposition of the eroded sediments have resulted in thick sequences of alluvial materials accumulating within the basins (U.S. Army, 2010).

The proposed Yucca Impact Area is located on the western margins of the Tularosa Basin with no bedrock outcrops in the vicinity. The proposed impact area is situated atop Quaternary alluvium and active eolian deposits (sand dunes).

Yucca Impact Area is represented by the Mcnew-Copia soil complex (Map unit 54) and Pajarito-Mcnew (Map unit 61) soil complex. The Pajarito-Mcnew soil complex occupies 79.4% and the Mcnew-Copia occupies 20.6% of the proposed expanded Yucca Impact Area. The Mcnew-Copia complex have slopes of 1 to 15 percent. The Mcnew component parent material consists of eolian sands over alluvium and occurs on basin floors. The natural drainage class is well drained. The Copia component parent material consists of eolian sands occurring on dunes in basins. The natural drainage class is excessively drained. The Pajarito component of the Pajarito-Mcnew complex parent material consists of coarse-loamy alluvium. This component is on fan piedmonts. The natural drainage class is well drained (USDA 2018).

3.3.2 Impacts of the Proposed Action

Lee Impact Area

Setup, recovery, and cleanup operations will cause ground disturbance. Foot traffic and off-road vehicle traffic under the weight of an F-150 (less than 10,000 pounds) would be limited to setting up optic and other monitoring equipment. Vehicles used for off road setup will primarily be pickup trucks with weights ranging from 6,000 – 10,000 pounds. Missile impacts (≤25) and setup and recovery activities will cause potential for increased soil erosion. The impact from testing and recovery activities will cover a small area of less than approximately 20 additional acres. Impact craters from missile test activities will be re-contoured to original configuration. Soils within the Lee Impact Area are represented by the Creel-Musofare-Clovis complex which occurs regionally in the New Mexico, Arizona and Utah areas and consists of 987,670 acres. The disturbance of 20 areas of this soil type in Lee Impact Area would represent 0.002% of this soil type which would not be significant.

Yucca Impact Area

The proposed action alternative would disturb soils at Yucca Impact Area. Testing activities such as ground clearing, target setup involving construction of trenches, berms and earth bunkers, equipment setup and the increase in missile impacts (≤10) may cause medium soil erosion. Vehicles used for off road setup will primarily be pickup trucks with weights ranging from 6,000 – 10,000 pounds. It is estimated that these vehicles will drive to and from setup locations approximately ten times. The greatest disturbance would be ground clearing and leveling for site preparation. Soils in the area are readily eroded. Impacts from ground clearing and leveling would disrupt surface soils and promote accelerated erosion from surface water flow and wind action (U.S. Army, 2010).

Up to 271 additional acres are proposed to be cleared for test activities within the Yucca Impact Area, bringing the total ground disturbance within Yucca Impact Area to 282 acres. It is not expected that the whole 271 additional acres will be bladed in one occurrence, but disturbance will occur in small increments as needed. It is expected that approximately 10 to 20 acres will be expanded as needed. Efforts will also be made when practical to use existing cleared areas within Yucca Impact Area, prior to clearing new area. This approach will minimize the amount of erosion that would result from clearing the entire area at one time. The WSMR environmental review process (WSMRR 200-2) will be used to account for incremental disturbance rates and ensure actions are within the boundaries of the impact area.

Ground cover from regrowth of perennial grasses and annual forbs has been estimated at 60-70% from within existing cleared areas. It is anticipated that cleared areas will naturally revegetate and provide additional soil stabilization which would help minimize soil erosion issues.

The following best management practices are recommended when practical to enhance ground cover and minimize soil erosion:

- Mowing instead of blading to maintain cleared areas and enhance ground cover.
- Mechanical grubbing instead of blading to manage regrowth of individual problem mesquite bushes.
- Natural vegetation be left intact to help stabilize the site.
- Water trucks may be used for dust control.

The impact to the affected geology and soils from the proposed action will be insignificant.

3.3.3 Impacts of the No Action Alternative

Selection of the no action alternative would result in no impact to geology and soils.

3.4 Greenhouse Gas Emissions and Climate Change

3.4.1 Affected Environment

Gases that trap heat in the atmosphere are greenhouse gases (GHG), known as pollutants of concern. GHGs include carbon dioxide (CO2), methane (CH4), N2O, 03, and several chlorofluorocarbons (EPA). CO2 is the primary GHG and is typically produced from human-related activities. It is naturally abundant in the atmosphere; however, humans are altering natural processes leading to more CO2 being released and altering the naturally occurring content in the atmosphere. The largest source of CO2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources (EPA). While the effects of climate change can include rising sea levels, melting ice, ocean warming and acidification, changing rainfall patterns, and shifts in timing of seasonal events (USGCRP, 2023), climate change processes are understood only at a general level. While there is no formally adopted EPA threshold for greenhouse gas emissions, guidance issued by the Council on Environmental Quality states that direct emission of 25,000 metric tons or more of CO2-equivalent greenhouse gas emissions on an annual basis is a threshold for detailed analysis of effects on climate change (CEQ, 2010). Activities at Lee Impact Area are minimal and would not be expected to have more than a negligible effect to climate change.

3.4.2 Impacts of the Proposed Action

Lee Impact Area

The Proposed Action would increase greenhouse gas emissions from vehicles and heavy equipment during testing. Testing will increase from 3 to up to 25 tests per year which will raise annual vehicle use. An additional 20 acres have been proposed to be cleared within Lee Impact Area. Specific contributions from Lee Impact Area and testing activities to global or regional climate change cannot be specifically identified based on existing scientific knowledge. However, according to the EPA greenhouse gas equivalency calculator, if 20 cars are used for this project throughout the entire year, then 89.9 metric tons of CO2 would be emitted, which is well below the significant impact threshold of 25,000 metric tons per year. Potential disturbance and emissions from vehicles and heavy equipment would not have a significant impact on the area.

Yucca Impact Area

The Proposed Action would increase greenhouse gas emissions from vehicles and heavy equipment during testing. During testing, onsite staff could increase which could cause a very slight increase in commuter traffic from surrounding communities to WSMR. Testing will be increased from 3 to up to 10 tests per year which will increase annual vehicle use. Testing area will increase by 271 acres which can affect emissions during testing. Yucca Impact Area and testing activities to global or regional climate change cannot be specifically identified based on existing scientific knowledge. Potential disturbance and emissions from vehicles and heavy disturbance are expected to have a minimal impact on the area of concern.

It is not expected that the entire proposed 271 acres would be cleared at the same time. Expansion of Yucca Impact Area is expected to be incremental, occurring as test needs are identified. As test needs arise specific areas within the 271-acre area will be selected for clearing. It is expected that approximately 10 to 20 acres will be cleared during each incremental expansion. This approach will minimize the amount of fugitive dust generation that would result from clearing the entire area at one time. The WSMR environmental review process (WSMRR 200-2) will be used to account for incremental disturbance rates and ensure actions are within the boundaries of the impact area.

3.4.3 Impacts of the No Action Alternative

There will be emissions associated with existing test activities within the impact areas.

3.5 Flora

3.5.1 Affected Environment

Lee Impact Area

The vegetation community occurring in the Lee Impact Area is a savanna-like woodland with an open to very open canopy composed of oneseed juniper (*Juniperus monosperma*) with an understory of various shrubs and grasses.

Yucca Impact Area

Vegetation types found within Yucca Impact Area consisted of shrub-coppice dune vegetation community dominated by honey mesquite and fourwing saltbush, with sparsely vegetated interdunal areas containing snakeweed, mesa dropseed, spike dropseed, and tumbleweed. Soaptree yucca and sand sagebrush are also scattered throughout the area.

3.5.2 Impacts of the Proposed Action

Lee Impact Area

Vegetation clearing operations at Lee Impact Area would mainly remove woody species such as oneseed juniper and tree cholla to facilitate target setup and to provide clear view ways for cameras. Grasses and forb species would mainly be left intact during clearing operations. Clearing operations at Lee Impact Area would result in a loss of up to 20 additional acres of mainly woody vegetation. The increase in missile testing from 3 to 25 tests per year would only occur within the cleared areas, thus not adding more disturbed area. The loss of vegetation from these activities will not be significant because these vegetation communities are well represented and extensively distributed throughout the NCUA. The NCUA has a total area of

867,330 acres, the loss of 20 acres of similar vegetation would represent 0.002% of the vegetation type available within the NCA which would not be significant.

Potential exists for the establishment of invasive and noxious weed species within newly cleared areas. Appropriate steps would be taken to prevent the introduction or spread of noxious or invasive plants during blading, such as washing or removing vegetative debris from vehicles and equipment prior to use in new areas. These impact areas should be monitored for the presence of these species. If detected, action should be taken to contain further spread by implementing control and removal methods provided in the WSMR Integrated Pest Management Plan (WSMR 2021).
A positive impact from clearing woody species in Lee Impact Area is that perennial grasses such as Blue grama (*Bouteloua gracilis*) tend to increase due to the removal of competition from the one seed juniper. Observations from previous site visits have noted an increase of this grass species in Lee Impact Area. No significant impact would result through the implementation of the proposed action. These actions would also be consistent with those analyzed in the Lee EAs (2002, 2016).

Yucca Impact Area
Clearing operations at Yucca Impact Area would result in a loss of up to 271 additional acres of vegetation bringing the total ground disturbance within Yucca Impact Area to 282 acres. It is not expected that all 271 additional acres will be bladed at once, but clearing will occur in smaller increments of approximately 10 to 20 acres as needed. This approach will allow some recovery of previously bladed areas given sufficient time and precipitation. The WSMR environmental review process (WSMRR 200-2) will be used to account for incremental disturbance rates and ensure actions are within the boundaries of the impact area.

Missile test activities will also increase from 3 to 10 per year but would only occur within previously cleared areas and not disturb additional area. The loss of vegetation from these activities will not be significant because these vegetation communities are well represented and extensively distributed within WSMR and elsewhere throughout the region.

The potential also exists for the establishment of invasive and noxious weed species within newly cleared areas. Appropriate steps would be taken to prevent the introduction or spread of noxious or invasive plants during blading, such as washing or removing vegetative debris from vehicles and equipment prior to use in new areas. These impact areas should be monitored for the presence of these species. If detected, action should be taken to contain further spread by implementing control and removal methods provided in the WSMR Integrated Pest Management Plan (WSMR 2021).

A positive impact from clearing woody species in Yucca Impact Area is that perennial grasses such as Sand dropseed (*Sporobolus cryptandrus*) tend to increase due to the removal of competition from mesquite and creosote bush. Observations from previous site visits have noted an increase of grass and forb species within the existing cleared area. It is anticipated that cleared areas will naturally revegetate and provide additional soil stabilization.

The following best management practices are recommended when practical to minimize soil erosion:

- Mowing instead of blading to maintain cleared areas and enhance ground cover.
- Mechanical grubbing instead of blading to manage regrowth of individual problem mesquite bushes.
- Natural vegetation be left intact to help stabilize the site.
- Steps should be taken to prevent the introduction or spread of noxious or invasive plants such as washing or removing vegetative debris from vehicles and equipment prior to use in new areas.
- Impact areas should be monitored for the presence of noxious or invasive plant species. If detected, action should be taken to contain further spread by implementing control and removal methods provided in the WSMR Integrated Pest Management Plan.

The impact to the affected vegetation from the proposed action will be insignificant.

3.5.3 Impacts of the No Action Alternative
Selection of the no action alternative would result in no impact to flora.

3.6 Migratory Birds

3.6.1 Affected Environment
Lee and Yucca Impact Areas
The Migratory Bird Treaty Act of 1918 (MBTA), as amended, protects migratory birds (including eggs, nests, and feathers) restricting their take or possession under United States Code (USC) Title 16, chapter 7. A "Take" is defined as the pursuit, hunting, shooting, wounding, killing, trapping, capturing, or collecting of a migratory bird species without a permit. The Migratory Bird Treaty Act is an international agreement among the United States, Canada, and Mexico that protects designated species of birds. Most birds are protected under the Migratory Bird Treaty Act, with only a few exceptions. Birds classified as migratory also include species that occupy WSMR and the NCUA throughout the year and occur as either breeders or migrants (U.S. Army 2015b, U.S. Army, 2010, U.S. Army, 2020) The gray vireo, and pinyon jay are associated with juniper or pinyon-juniper woodland and may occur within the project area. If migratory birds including the gray vireo, and pinyon jay are found, then mitigations will be performed.

3.6.2 Impacts of the Proposed Action
Lee and Yucca Impact Areas
Potential effects to migratory birds would mainly occur during the active nesting season (March-August) during site preparation and construction activities for both Lee and Yucca Impact Areas. Efforts will be made to conduct clearing and vegetation removal during the non-nesting season (September–February). If ground disturbing activities occur during the active nesting season, then a migratory bird survey for nesting birds will take place before any ground preparation activities begin to avoid disturbing active bird nests. The surveys would be conducted by a qualified biologist, and use methods accepted by DPW – Environmental Conservation Branch. If active bird nests (with eggs or nestlings) are found during surveys, several mitigations may be applied including a) delay of ground-clearing activities until nestlings have fledged, or b) some ground-clearing occurs, but with buffers placed around active nests. DPW – Environmental Conservation wildlife biologists would be consulted to determine how to best address the situation.

The mitigation measures described in this section will result in the minimization of potential adverse effects to migratory birds. The proposed action is not expected to have significant adverse effects to migratory bird populations. (U.S. Army, 2020)

3.6.3 Impacts of the No Action Alternative
Selection of the no action alternative would result in no impact to migratory birds.

3.7 Traffic

3.7.1 Affected Environment
Lee Impact Area
Throughout the NCUA is a network of unimproved dirt roads maintained by the county, which can be accessed from Highway 380 at the southern end and Highway 60 from the north. Private roads branch off the county roads to provide access to other remote locations. A two-track road leading to the proposed impact location branches off the Lee Ranch access road.

Yucca Impact Area
Yucca Impact Area is accessed by a network of paved and unpaved WSMR Installation roads. RR 2 and RR 252 are the main paved roads leading to Yucca Impact Area. A graveled road off RR 252 leads to Yucca Impact Area.

3.7.2 Impacts of the Proposed Action
Lee Impact Area

Traffic volume will increase by approximately 20 vehicles during each testing event. The frequency of test events could go from 3 to up to 25 events per year. Over a year's time, the increase in traffic from support vehicles will be infrequent. It is not expected that the increase in traffic volume during test activities will cause excessive road congestion on the existing road network.

Highway 380 will be blocked more frequently during test events. This is a common practice at WSMR and agreements are in place with the New Mexico Department of Transportation. Traffic volume at roadblocks will be minimal and will be publicly announced prior to tests activities to reduce traffic issues. Traffic increases and evacuations will be infrequent and will be negligible. The WSMR EIS estimated that there would be an overall increase in test-related ground and airspace operations which would result in an estimated 44 roadblocks per year on US 70 and US 25, and US 380 (U.S. Army, 2010). Roadblocks resulting from proposed test activities in combination with other test activities are not expected to exceed this amount. Therefore, the proposed action will not significantly affect transportation.

Yucca Impact Area

Traffic will increase on nearby roads primarily as a result of the increase in testing activities. The amount of test events will increase from three to ten test events per year. The existing road network for this area should be adequate to handle the intermittent increase in traffic and will not significantly impact traffic flow on WSMR.

3.7.3 Impacts of the No Action Alternative

Selection of the no action alternative would result in no impact to traffic.

4.0 CUMULATIVE IMPACTS

Cumulative impacts are those impacts on the environment that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions regardless of what agency, entity (Federal or non-Federal), or person undertakes such other actions (40 CFR 1508.7).

4.1 Impacts of Proposed Action

Lee Impact Area

Cumulative impacts from testing activities at Lee Impact Area would primarily affect natural resources such as soils and vegetation. The proposed action would add an additional 20 acres of disturbance to Lee Impact Area for a total of 30 acres of disturbance within the impact area. This additional impact may further promote wind and water erosion as well. The soil disturbance caused by each test event would increase the tendency for airborne dust. Currently the additional 20 acres proposed for clearing are used for livestock grazing. Livestock grazing occurs throughout the NCUA which has a total area of 867,330 acres. The short-term loss of 20 acres of grazing land would represent 0.002% of the potentially available grazing land within the NCUA which would not be significant. The clearing of woody species may have a positive long-term effect on grazing by eliminating woody species competition and increasing desirable perennial grasses species.

Traffic volume will increase by approximately 20 vehicles during each testing event. The frequency of test events could go from 3 to up to 25 events per year, the rate of testing would be spread throughout the year. Over a year's time, the increase in traffic from support vehicles will be infrequent. It is not expected that the increase in traffic volume during test activities will cause excessive road congestion on the existing road network. Internal and external roadblocks would be required during testing at the proposed impact area. Cumulative effects to range scheduling and traffic patterns may result. The increase in traffic and frequency of internal and external roadblocks will be intermittent and will not significantly impact traffic flow on WSMR and New Mexico roads. By using the various best management practices and other outlined mitigations from the previous sections there would be no significant cumulative impacts because of the proposed action.

Other past, present and foreseeable activities occurring within the NCUA include the Naval launch test article testing. The Naval launch test article testing propose to establish a 1,000 acre debris impact area of which 40 acres could be cleared for target placement. These activities combined will add more impact to soils and vegetation within the NCUA. Potential disturbance of up to 20 acres within the Lee Impact Area is not expected to have significant cumulative impact to soils and vegetation within the NCUA.

Yucca Impact Area

Cumulative impacts from clearing and test activities at Yucca Impact Area would primarily affect natural resources such as soils and vegetation. The proposed action alternative would further disturb up to 271 acres of soil and vegetation in the area. This additional impact may further promote wind and water erosion. The soil disturbance caused by each test event would increase the tendency for airborne dust. The disturbance of up to 271 acres within WSMR would add to the overall amount of disturbance to these resources; however, the overall land area of WSMR containing similar vegetation types is 1,926,300 acres. The loss of 271 acres of vegetation would represent 0.014% disturbance of the overall area within WSMR, which would not be significant. It is anticipated that cleared areas will naturally revegetate and provide additional soil stabilization.

The implementation of best management practices such as dust suppression, expanding the impact area in small increments (10 to 20 acres), mowing and mechanical grubbing instead of blading to maintain previously cleared areas and when practical leave natural vegetation intact would reduce the effects to soils and vegetation from clearing and testing activities. The WSMR environmental review process (WSMRR 200-2) will be used to account for incremental disturbance rates and ensure actions are within the boundaries of the impact area.

The proposed action to launch up to 10 missiles per year from FWLC will add to the overall number of launches at FWLC. Other programs also conduct launches from FWLC into WSMR, but the number of launches has been low, less than 6 per year and the addition of 10 additional launches from long range

missile testing will not significantly increase noise and emissions in the area and will have no long-term environmental consequences.

4.2 Impact of the No Action Alternative

Selection of the no action alternative would avoid the cumulative impacts identified for the proposed action. Soil, biological, visual, and other resources would remain essentially in their present conditions, without the additional burden of the proposed test areas. The no action alternative would result in the least overall cumulative environmental impact on a regional basis.

5.0 IRRETRIEVABLE AND IRREVERSIBLE COMMITMENT OF RESOURCES

The proposed action associated with construction activities at WSMR and missile flights from WSMR would result in damage to some habitat for plants and animals, but no loss or significant impact on habitat. No historic properties will be impacted.

The amount of materials and energy required to support the proposed action, although relatively limited, is unavoidable. The activities described in this EA would result in the irreversible and irretrievable commitment of resources, such as various natural materials, synthetic materials, fuel, and labor.

6.0 SUMMARY OF MITIGATIONS AND BEST MANAGEMENT PRACTICES

As specified in 32 CFR 651 (2002), the project proponent has the responsibility of ensuring that all best management practices (BMPs) and mitigation measures are implemented. BMPs are practices taken by an agency to prevent disturbance. Mitigations are measures implemented to reduce the impact of an action to insignificant and would be included in a FNSI. The following BMPs and mitigations would be applied to reduce impacts.

Lee Impact Area

BMP's

- If needed, water trucks will be used for dust control.
- When practical mowing instead of blading will be used to enhance ground cover and to minimize fugitive dust generation.
- Impact craters from missile test activities will be re-contoured to original configuration.
- Steps should be taken to prevent the introduction or spread of noxious or invasive plants such as washing or removing vegetative debris from vehicles and equipment prior to use in new areas.
- Impact areas should be monitored for the presence of noxious or invasive plant species. If detected, action should be taken to contain further spread by implementing control and removal methods provided in the WSMR Integrated Pest Management Plan.

Mitigations

- Efforts will be made to conduct clearing and vegetation removal during the non-nesting season (September–February).
- If ground disturbing activities occur during the active nesting season, then a migratory bird survey for nesting birds will take place before any ground preparation activities begin to avoid disturbing active bird nests. Migratory birds may include the gray vireo and pinyon jay.
- If active bird nests (with eggs or nestlings) are found during surveys the following mitigations may be applied
    - Delay of ground-clearing activities until nestlings have fledged.
    - Some ground-clearing occurs, but with buffers placed around active nests. Buffer distances are determined with input from NMDGF and USFWS.
    - Environmental Division Conservation Branch wildlife biologists would be consulted to determine how to best address the situation.

Yucca Impact Area

BMP's

- Area will be expanded incrementally, about 10 to 20 acres per year, to minimize fugitive dust generation.
- Actions will be described and submitted to the Environmental Division for review to ensure effort is consistent with the scope of this environmental assessment. The WSMR environmental review process (WSMRR 200-2) will be used to account for incremental disturbance rates and ensure actions are within the boundaries of the impact area.
- When practical mowing instead of blading be used to maintain cleared areas to enhance ground cover and to minimize fugitive dust generation.
- When practical use mechanical grubbing instead of blading to manage regrowth of individual problem mesquite bushes.
- When practical leave natural vegetation intact to help stabilize the site.

- Steps should be taken to prevent the introduction or spread of noxious or invasive plants such as washing or removing vegetative debris from vehicles and equipment prior to use in new areas.
- Impact areas should be monitored for the presence of noxious or invasive plant species. If detected, action should be taken to contain further spread by implementing control and removal methods provided in the WSMR Integrated Pest Management Plan.
- Water will be used for dust control.
- Cultural sites located near Yucca Impact Area will be avoided, each of the five site boundaries will be marked with Seibert stakes to ensure no activities take place within them.

Mitigations

- Efforts will be made to conduct clearing and vegetation removal during the non-nesting season (September–February).
- If ground disturbing activities occur during the active nesting season, then a migratory bird survey for nesting birds will take place before any ground preparation activities begin to avoid disturbing active bird nests.
- If active bird nests (with eggs or nestlings) are found during surveys the following mitigations may be applied
    - Delay of ground-clearing activities until nestlings have fledged.
    - Some ground-clearing occurs, but with buffers placed around active nests.
    - As a last resort relocation of active nests by installation biologists under a federal relocation permit.
    - DPW – Environmental Conservation wildlife biologists would be consulted to determine how to best address the situation.

7.0 CONCLUSION

This supplemental EA evaluates the impacts of expanding the size of two existing impact areas (Lee Impact Area and Yucca Impact Area) and increasing the amount of missile testing activities into them at WSMR. The proposed action has been analyzed to determine environmental impacts that will occur due to these activities. Mitigations and BMPs are proposed to reduce or eliminate impacts associated with the preferred alternative. Provided that the proposed activities and the environments in which they occur do not change, these activities will not have a significant impact on the environment. If the proposed actions and environmental conditions described in the EA do not change, and the mitigation measures are followed, then these activities will not have a significant impact on the environment.

Therefore, a Finding of No Significant Impact (FNSI) on the environment has been concluded. The FNSI is included at the front of this EA. Accordingly, the U.S. Army and WSMR have determined that an Environmental Impact Statement (EIS) pursuant to the NEPA is not required for the proposed actions described in this EA.

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Army Test and Evaluation Command (ATEC)
White Sands Missile Range (WSMR)

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10.0 LIST OF PEOPLE CONTACTED

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11.0 AGENCY DISTRIBUTION LIST

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