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ENVIRONMENTAL ASSESSMENT

Explosive Ordnance Disposal
Proficiency Range
and
Multi-Purpose Contingency Training Area

Prepared for:

DEPARTMENT OF THE AIR FORCE
Andrews Air Force Base
Air Force Center for Environmental Excellence

April 2007

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FINDING OF NO SIGNIFICANT IMPACT

ENVIRONMENTAL ASSESSMENT FOR THE EXPLOSIVE ORDNANCE DISPOSAL PROFICIENCY RANGE AND MULTI-PURPOSE CONTINGENCY TRAINING AREA

INTRODUCTION

The U.S. Air Force District of Washington (AFDW) proposes to construct and operate a functional Explosive Ordnance Disposal (EOD) Proficiency Training Range and Multi-Purpose Contingency Training Area at Andrews Air Force Base (AFB), Maryland. The purpose of the proposed action is two fold: (1) to provide an approved site for EOD Flight personnel to conduct EOD proficiency training and, as coordinated through the State of Maryland, approved emergency response actions; and (2) to provide an exercise/training area for the 316th Wing and other unit training managers to complete full spectrum threat responses and other required functional exercises and readiness training. At present, there is no designated approved range for the EOD Flight to conduct EOD proficiency training at Andrews AFB. The Proposed Action (Alternatives 1, 2, and 3) and the No Action Alternative were analyzed in the attached Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). The decision in this FONSI is based upon information contained in the EA, which is hereby incorporated by reference.

PURPOSE OF AND NEED FOR THE PROPOSED ACTION

The mission of the EOD Flight at Andrews AFB is to provide support to base operations by protecting base resources and operational assets from explosive hazards. Currently, there is no designated approved and barricaded range at Andrews AFB that can be used for EOD proficiency training exercises. In addition, the 316th Wing has also been assigned the task of establishing a new permanent exercise and training area at Andrews AFB for the following functions/areas; Operations Flight, Medical Unit Readiness Training (MURT), Security Force Squadron (SFS) field exercises, Wing Ability to Survive and Operate (ATSO) exercises, Full Spectrum Threat Responses (FSTR), as well as other training units that may require the site. The site previously used for ATSO exercises was demolished in July 2005. Currently, the only hands-on expeditionary training is conducted once a year at Silver Flag at Tyndall AFB, Florida. A permanent site for conducting this training is needed at Andrews AFB to ensure public safety and to support these teams in developing and sustaining their competency to meet mission requirements at Andrews AFB and during real-world contingency situations upon deployment.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Alternative 1 is to construct and operate an EOD Proficiency Training Range and a Multi-Purpose Contingency Training Area off Nevada and Alaska Avenues. This site is of an adequate size to allow construction and operation in compliance of all applicable requirements and is surrounded by a wooded area, which could provide a buffer for noise from the training events. Elements of the proposed training areas would include the following:

- **EOD Proficiency Training Range** - The EOD Proficiency Training Range would be constructed within a circular area, approximately 1,000 feet in diameter. Detonations would occur at the center of the circle, which would be situated below grade. A six-foot high barricade of sand bags, with two entrances, would ring the destruction point. All combustible materials would be cleared from a 200-foot radius inner circle surrounding the destruction point.

- **Multi-Purpose Contingency Training Area -** The site is physically separated from the primary work and living area at Andrews AFB and comprises approximately 6.3 acres of land.

The site also has natural or artificial cover so that personnel training on the site can be screened from view and has an access road for vehicles. This area would have all the facilities needed to accommodate all 316th Wing and tenant unit exercises and training requirements

Alternative 2 would only involve the construction and operation of the EOD Proficiency Training Range. Alternative 3 would only involve the construction and operation of the Multi-Purpose Contingency Training Area.

NO ACTION ALTERNATIVE

The no action alternative is defined as not constructing either the EOD Proficiency Training Range or the Multi-Purpose Contingency Training Area. Implementation of this alternative would negatively affect the ability of EOD Flight and medical, construction and other the personnel to acquire and maintain the skills and techniques needed to safely and efficiently conduct their respective missions during Air and Space Expeditionary Force rotations and in real-world contingency situations upon deployment.

ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

Analysis performed addressed potential environmental effects on land use, vehicular transportation, noise, air quality, water quality, hazardous materials and waste management, socioeconomics, topography and geology, and cultural resources. The analysis indicates that implementing the Preferred Alternative (Alternative 1) would have no significant direct, indirect, or cumulative impacts on the quality of the human or natural environment.

FINDING OF NO SIGNIFICANT IMPACT

After review of the EA prepared in accordance with the requirements of NEPA, the Council on Environmental Quality regulations, and the Environmental Impact Analysis Process, 32 Code of Federal Regulations Part 989, as amended, I have determined that the Preferred Alternative (Alternative 1), which involves the construction of the EOD Proficiency Training Range or the Multi-Purpose Contingency Training Area, would not have a significant impact on the quality of the human or natural environment and, therefore, the preparation of an Environmental Impact Statement is not required. This decision has been made after taking into account all submitted information, and considering a full range of practical alternatives that would meet project requirements and are within the legal authority of the U.S. Air Force.

ERIC A. SNADECKI, Colonel, USAF
Vice Commander, 316th Wing

6 Jun 2007
Date

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List of Acronyms and Abbreviations

Acronym/Abbreviation	*Definition*
AFB	Air Force Base
AFDW	Air Force District of Washington
AFI	Air Force Instruction
AFMAN	Air Force Manual
AFPAM	Air Force Pamphlet
AFPD	Air Force Policy Directive
AFTO	Air Force Technical Order
AICUZ	Air Installation Compatible Use Zones
AMC	Air Mobility Command
AMCI	Air Mobility Command Instruction
amsl	above mean sea level
ANG	Air National Guard
AOC	Areas of Concern
ATSO	Ability to Survive and Operate
BMP	Best Management Practice
CAA	Clean Air Act
CAP	Civil Air Patrol
CBRNE	Chemical, Biological, Radiological, Nuclear, and High-Yield Explosive
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CMSA	Consolidated Metropolitan Statistical Area
CO	carbon monoxide
CSEL	C-weighted sound exposure level
dB	decibel
DCANG	District of Columbia Air National Guard
DCC	Damage Control Center
DNL	Day-night average sound level
DOD	Department of Defense
EA	Environmental Assessment
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency
ERP	Environmental Restoration Program
FEMA	Federal Emergency Management Agency
FSTR	Full Spectrum Threat Responses
FWS	U.S. Fish and Wildlife Service
HAZMAT	Hazardous Materials
JIT	just-in-time
LOS	Level of Service

MDE	Maryland Department of the Environment
MFH	Military Family Housing
MGD	million gallons per day
MSA	Metropolitan Statistical Area
MURT	Medical Unit Readiness Training
NAAQS	National Ambient Air Quality Standards
NAF	Naval Air Facility
NBCC	Nuclear, Biological, Chemical and Conventional
NCP	National Oil and Hazardous Substances Contingency Plan
NEPA	National Environmental Policy Act
NEW	Net Explosive Weight
NO_2	nitrogen dioxide
NPL	National Priorities List
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
PAHs	polyaromatic hydrocarbons
PAT	US Army Priority Air Transport
Pb	lead
PCB	Polychlorinated Biphenyls
PM	particulate matter
RCRA	Resource Conservation and Recovery Act
RRRP	Resources Recovery and Recycling Program
SEL	Sound Exposure Level
SFS	Security Field Squadron
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO_2	sulfur dioxide
SRC	Survival Recovery Center
SVOC	semi-volatile organic compound
SWPPP	Stormwater Pollution Prevention Plan
TSCA	Toxic Substances Control Act
USAFRC	U.S. Air Force Reserve Command
USC	United States Code
VOC	volatile organic compound
WMD	Weapons of Mass Destruction
WSSC	Washington Suburban Sanitary Commission

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1 Purpose and Need for Action

1.1 Introduction

The U.S. Air Force District of Washington (AFDW) proposes to construct and operate a functional range for Explosive Ordnance Disposal (EOD) Proficiency Training and a permanent Multi-Purpose Contingency Training Area at Andrews Air Force Base (AFB), Maryland. The purpose of the proposed action is two fold: (1) to provide an approved site for EOD Flight personnel to conduct EOD proficiency training and, as coordinated through the State of Maryland, approved emergency response actions; and (2) to provide an exercise/training area for the 316th Wing and other unit training managers to complete full spectrum threat responses and other required functional exercises and readiness training. At present, there is no designated approved range for the EOD Flight to conduct EOD proficiency training at Andrews AFB. The proposed action is needed to ensure public safety and to develop and sustain the qualifications, competencies, and readiness of EOD and other training units to meet mission requirements at Andrews AFB and during real-world contingency situations upon deployment.

This Environmental Assessment (EA) has been prepared to analyze the potential impacts associated with the proposed action in accordance with the:

- National Environmental Policy Act (NEPA) of 1969, 42 United States Code (USC) 4231 *et seq*., as amended in 1975;
- Council on Environmental Quality (CEQ), 40 Code of Federal Regulations (CFR) §§ 1500-1508; and
- U.S. Air Force Environmental Impact Analysis Process, 32 CFR § 989.

Andrews AFB is a 4,346-acre installation located approximately 10 miles southeast of Washington, D.C. in Prince George's County, Maryland (Figure 1-1). Established in 1947, the base serves as a travel and support center for the President of the United States and other distinguished Federal and foreign civilian and military dignitaries. The 316th Wing (316 WG), part of Air Force District of Washington, is responsible for host base functions at Andrews AFB. There are more than 60 tenant units are at Andrews AFB, including (among others): Air Force Reserve Command 459th Air Refueling Wing (USAFRC 459 ARW), Air National Guard (ANG) Readiness Center, District of Columbia Air National Guard (DCANG) 113th Wing, U.S. Army Priority Air Transport (PAT), the Civil Air Patrol (CAP), the Maryland State Police, and Naval Air Facility (NAF) Washington.

1.2 Need for Action

1.2.1 Need for a EOD Proficiency Training Range

The mission of the EOD Flight at Andrews AFB is to provide emergency support to base operations by protecting base resources and operational assets from explosive hazards. The EOD Flight mobilizes qualified personnel with technical information and highly specialized equipment that are capable of effectively locating, identifying, disarming, neutralizing, removing, recovering, or disposing of explosive hazards. The EOD Flight also provides support to the National Capitol Region in handling strictly military operational items under an interagency Memorandum of Understanding.

At Andrews ABF, the EOD Flight has no approved range for conducting EOD proficiency training exercises. EOD proficiency training enables EOD teams to achieve and maintain a level of competency to safely and effectively deal with explosive hazards. Off-base locations currently used, including Marine Corps Base (MCB) Quantico, Virginia and Naval Surface Warfare Center Indian Head, Maryland must be scheduled well in advance and Air Force EOD Flights do not have priority of use of these ranges. As a result, the EOD Flight at Andrews AFB has limited flexibility in scheduling the use of off-base EOD ranges. Also, the EOD Flight would have to use host explosives in their training exercises given the coordination, as mentioned above, when transporting potential explosive hazards on public roadways.

In addition, there is no designated approved location for conducting EOD emergency response detonations. To maintain public safety, during an emergency situation munitions in a hazardous state are best detonated on-base at an approved site rather than being moved to an off-base site. Off-base detonation of munitions must be planned in advance with designated and approved transportation routes and in coordination with local public safety authorities. Given the time constraints under which the EOD Flight must operate during an emergency situation, and the extent of public safety and environmental considerations, it is difficult to quickly arrange for off-base movement and detonation of such hazardous munitions. As a result, the need for an approved on-base EOD emergency response range is critical.

As a workaround for EOD proficiency training, the EOD Flight has been using, with prior approval, temporary locations on Andrews AFB. These temporary sites are only used in emergency response situations provided such use can be coordinated with state agencies and other tenant commands to ensure the safety of personnel and visitors to Andrews AFB. However, ensuring the safe use of these temporary sites can result in the disruption of tenant commands activities and other users of base resources. For example, one site used for EOD emergency response situations requires evacuation of the golf course at Andrews AFB. In addition, these temporary sites must be thoroughly restored to their original environmental condition. Consequently, such sites cannot be used on a regular basis for emergency response and they are unsuitable for conducting routine and comprehensive training exercises.

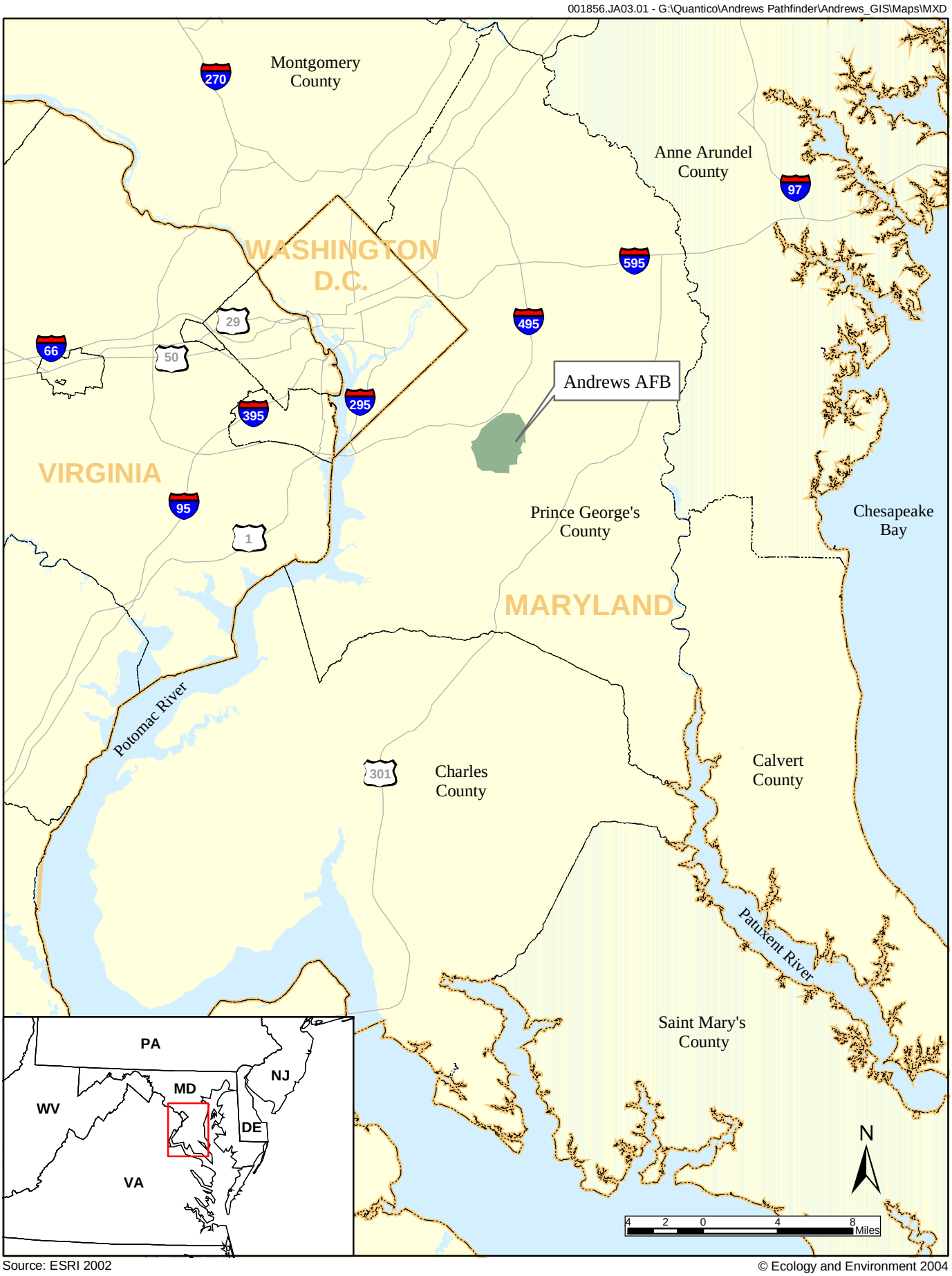

Figure 1-1: Regional Location, Andrews AFB

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An approved EOD Proficiency Training Range at Andrews AFB would provide a safe and permanent location to maintain readiness in current EOD techniques. It would also allow EOD Flight personnel with a safe location to conduct approved emergency response detonations.

1.2.2 Need for a Multi-Purpose Contingency Training Area

The 316th Wing has also been assigned the task of establishing a new permanent exercise and training area at Andrew's AFB for the following functions/areas; Operations Flight, Medical Unit Readiness Training (MURT), Security Force Squadron (SFS) field exercises, Wing Ability to Survive and Operate (ATSO) exercises, Full Spectrum Threat Responses (FSTR), as well as other training units that may require the site. The site previously used for ATSO exercises was demolished in July 2005. Currently, the only hands-on expeditionary training is done once a year at Silver Flag at Tyndall AFB, Florida. A permanent site for conducting this training is needed at Andrews AFB. The following is a description of the functional areas that require use of a multi-purpose exercise and training area:

- **316 CES/CEO (Operations Flight) -** The Operations Flight is responsible for all activities required to operate, maintain, repair, and construct installation real property. The Flight is composed of five elements: Maintenance Engineering, Facility Maintenance, Material Acquisition, Infrastructure Support, and Heavy Repair. The flight is also composed of sections to process requirements in an efficient and timely manner. They include Electrical, Mechanical, Pavements/Equipment, Structural, Utilities, Operations Support, and Maintenance Engineering.

  The Heavy Repair Element of the Operations Flight includes the Vertical and Horizontal Construction Flights. Their mission is to accomplish large and multi-craft work orders and all pavements and equipment work, including facility renovation, alteration projects, all pavements, airfields, roads and sidewalks, sweeping, pest management, and equipment operations and repair. These Flights also provide heavy construction and repair support at damaged airfields to make them safe and usable for aircraft and troops. This mission is mostly conducted in contingency situations in remote and austere operating environments (e.g., Afghanistan or Iraq). Activities conducted include preparing and filling/paving over craters on airfields, filling in pot holes, clearing/repairing drainage, lifting debris, loading aggregate required for construction or repair, digging trenches for culverts, rapid repair/paving of existing roads, and other earthmoving work.

  The Operations Flight at Andrews AFB does not have a designed area to use for predeployment training. The flight requires a multi-use area with paved (asphalt and concrete) surfaces and open earth where earthmoving and repair skills can be developed and sustained. No approved site currently exists at the base for this purpose. A training range for developing and honing horizontal construction skills is needed so that personnel assigned to this flight would be capable of meeting mission requirements upon deployment.

- **Medical Unit Readiness Training (MURT) -** MURT includes triage, self aid and buddy care, wound care, disease prevention, combat stress, field hygiene, threat and future battlefield environment, radio etiquette, communications, treatment of nuclear, biological, chemical casualties and integrated base defense. Field training and night operation exercises include chemical, biological, radiological, nuclear and high yield explosives, task qualification training, shelter assembly, litter and manual carries. Medical personnel are required to complete a certain number of training topics to be deployment eligible. MURT provides the ability to protect casualties, the medical supplies and the medical facility threatened. This training also provides specific skills for personnel to maintain and/or restore the health of Nuclear, Biological Chemical and Conventional (NBCC) contaminated personnel.

- **Security Forces Squadron (SFS)** – All SFS members are required to have 123 hours of training in ground combat skills. This training includes general security force duties, communication, navigation, weapons employment, Survive to Operate, and contingency operations

- **Full Spectrum Threat Responses (FSTR) –** The FSTR program brings together unit operations that interact during contingencies so installations can continue their missions. FSTR addresses the full spectrum of physical risks, threats, and passive defense measures. Physical threats include the following: major accidents, hazardous materials, terrorist use of Weapons of Mass Destruction (WMD) involving the use of Chemical, Biological, Radiological, Nuclear, and High-yield Explosive (CBRNE) material, natural disasters, humanitarian actions, and contingency/wartime enemy attack with NBCC weapons. A training range for developing skills and practicing response procedures is needed so that personnel assigned to FSTR duties would be capable of meeting mission requirements upon deployment.

- **Ability to Survive and Operate (ATSO) —** ATSO training exercises evaluate a unit's ability to meet Air Force standards for mission sustainment and mission capability restoration in mature theaters or austere regions following a chemical, biological, or conventional attack. Physical threats also include major accidents, natural disasters, Hazardous Materials (HAZMAT), terrorist use of CBRNE, enemy attack and a broad spectrum of planning, response and recovery actions. Training required for ATSO exercises includes demonstrating the tasks and/or technical operations required to accomplish a mission in the expected threat environment at each level of responsibility.

1.2.3 Summary

In summary, the proposed action would provide the EOD, Operational Flights, Medical Units, and other identified units with a designated and approved response and training range at Andrews AFB. This range is needed to ensure public safety and to support these teams in developing and sustaining their competency to meet mission requirements at Andrews AFB and during real-world contingency situations upon deployment.

1.3 Objectives for the Action

The primary objective of the proposed action is to provide a functional multi-use training range on Andrews AFB that would allow Air Force units to conduct effective training exercises in EOD, vertical and horizontal construction, MURT, SFS, FSTR, and ATSO on base. Two separate areas would be established for these purposes.

1.3.1 EOD Proficiency Training Range

For the EOD Flight, the availability and exclusive use of a training range for a minimum of once a month would provide EOD technicians with the hands-on practical training that is necessary become proficient in safely and effectively performing EOD procedures without committing errors that degrade safety and risk injury. EOD Flight personnel would also use the range for emergency situations involving hazardous munitions upon coordination with state agencies. The proposed action would comply with the requirements of:

- Air Mobility Command Instruction (AMCI) 32-3001, *Air Mobility Command Explosive Ordnance Disposal Program* - Section 2.2.2.1 of this instruction mandates that the command EOD program is to provide an EOD training range sited for a minimum of 2.5 pounds net explosive weight.

- Air Force Manual (AFMAN) 91-201, *Explosives Safety Standards* - Section 3.28 of this manual delineates requirements for Explosive Ordnance Disposal Training Proficiency Ranges.

- Air Force Technical Order (AFTO) 11A-142, *General Instruction for Disposal of Conventional Munitions* - Section 1-18 of this instruction defines ordnance disposal Range Requirements and explosive safety standards.

These instructions identify site design and training specifications for conducting EOD proficiency training.

1.3.2 Multi-Purpose Contingency Training Area

The Multi-Purpose Contingency Training Area would provide a location where a variety of units can get hands-on experience in their specialties. Instructions applicable to the Operations Flight, Wing ATSO exercises, MURT, SFS, and FSTR include:

- Air Force Instruction (AFI) 32-1001, *Civil Engineering: Operations Management* - This instruction provides the directive requirements for the operations management of civil engineering.

- Air Force Pamphlet (AFPAM) 32-1004, Volume 6, *Civil Engineering: Working in the Operations Flight Heavy Repair* – Chapters 2 and 3 of this pamphlet define guidance for the Vertical and Horizontal Section.

- AFI 41-106, *Medical Readiness Planning and Training, Chapter 5: Initial and Sustainment Training* – This instruction defines medical readiness training requirements including core, field, deployment, and just-in-time (JIT) requirements

- Air Force Policy Directive (AFPD) 10-25, *Full-Spectrum Threat Response* - This policy ensures that the Air Force prepares, plans, trains, and equips personnel to respond to, maintain mission capability, and recover from a full spectrum of physical threat events

- AFI 10-2501, *Full Spectrum Threat Response (FSTR) Planning and Operatio*ns – This manual implements AFPD 10-25 - Defines the FSTR program as a cross-functional program that integrates procedures and standards for planning, logistical requirements, emergency response actions, exercises and evaluation, training of personnel, detection, identification and warning; notification, and enemy attack actions. It establishes responsibilities, procedures and standards for Air Force mitigation and emergency response to major accidents, natural disasters, terrorist use of WMD, and NBCC warfare.

- AFMAN 10-2602, *Nuclear, Biological Chemical and Conventional Defense Operations and Standards* – This manual provides units with guidance on developing, training and exercising in an NBCC location. It provides NBCC defense tasks at the installation, unit, supervisor and airman level.

- AFI 36-2225, *Security Forces Training and Standardization Evaluation Programs, Chapter 2: Security Forces Training* – This program defines security forces sustainment training subjects, including tasks and frequency. All SFS members are required to have 123 hours of training in ground combat skills.

1.4 Scope of EA

This EA evaluates the potential impacts of activities involved in construction and operations of an EOD Proficiency Training Range and a Multi-Purpose Contingency Training Area at Andrews AFB. Potential impacts to the human and natural environment could be short-term, long-term, or cumulative. Consistent with the local interest of this EA and homeland security, Andrews AFB would provide an appropriate review and comment period before finalizing the decision on the action.

Relevant resources evaluated in this EA include land use; vehicular transportation; hazardous materials and waste management; air quality; noise; socioeconomics; topography, geology, and soils; water resources; biological resources; and cultural resources. The principal socioeconomic effects of the action would be those associated with environmental justice. The principal potential environmental effects of the action would be those associated with noise.

1.5 Decision to be Made

The Chairman of the Environmental Safety and Occupational Health Committee at Andrews AFB is responsible for deciding which alternative to adopt. The decision would be to either implement the proposed action or select a reasonable alternative, including No Action. If the No Action alternative is selected, neither the EOD Proficiency Training Range nor the Multi-Purpose Contingency Training Area would be constructed. The decision would be based on the findings contained in this EA.

1.6 Applicable Regulatory Requirements and Required Coordination

Table 1-1 lists each environmental permit, regulatory compliance requirement, and regulatory agency consultation requirement for each of the three alternatives evaluated in the EA. For each requirement, the table provides the regulatory citations, administering agency, and a brief description. The table also indicates which sections of the EA contain technical information relevant to each of the requirements.

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Table 1-1
Environmental Permitting, Regulatory Compliance, and Coordination Requirements

Statute	Requirement	Agency	Description	Applicability				Section
				Alt. 1	Alt. 2	Alt. 3	No-Action	
Clean Air Act (42 USC 7401 *et seq*.)	Air Conformity Determination (40 CFR 93)	Maryland Department of the Environment (MDE)	Federal agencies must demonstrate that actions in nonattainment areas conform to the applicable State Implementation Plan.	X	X	X		4.4
Clean Water Act (33 USC 1251 et *seq*.)	National Pollutant Discharge Elimination System (NPDES) Permit (40 CFR 122 et *seq*.; COMAR 26.08.01 et *seq*.)	MDE (Delegated from the U.S. Environmental Protection Agency [EPA])	Approval under a General NPDES Permit for Construction Activity is required for stormwater discharges from new construction activities disturbing 1 acre or more.	X	X	X		4.8
Endangered Species Act (16 USC 688 et seq.)	Section 7 Consultation (50 CFR 17)	U.S. Fish and Wildlife Service (FWS)	Actions sponsored, funded, or permitted by Federal agencies must be reviewed by the FWS for possible impacts to threatened or endangered species.	X	X	X		4.9
Article - Environment Title 4, Subtitle 1, ACM	Soil Erosion and Sediment Control Plan Approval (COMAR 26.17.01)	MDE	Required for actions that disturb greater than 5,000 square feet of land.	X	X	X		4.7 and 4.8
Article - Environment Title 4, Subtitle 2, ACM	Stormwater Management Plan Approval (COMAR 26.17.02)	MDE	Required for actions that disturb greater than 5,000 square feet of land.	X	X	X		4.8
Article - Environment Title 3, ACM	Noise Control Program (COMAR 26.02.03)	MDE	EOD emergency response detonation approvals	X	X			4.5

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2 Description of Alternatives Including the Proposed Action

2.1 Introduction

This Chapter describes the alternatives the Air Force has considered to accomplish the proposed action. Alternative 1 (preferred alternative), Alternative 2, and Alternative 3, as well as the No Action Alternative, are discussed here; there is also a discussion of the alternatives that the Air Force has eliminated from further evaluation, because they were not considered to be reasonable. Reasonable alternatives were identified as those alternatives meeting the underlying purpose and need for action; highly speculative or remote alternatives were not considered further. The No Action Alternative is carried forward for analysis in accordance with NEPA and 32 CFR § 989.8.

2.2 Evaluation of Reasonable Alternatives

The factors considered when developing the alternatives described in this section were based on the mission operational support requirements of the EOD Flight and units requiring use of the proposed EOD Proficiency Training Range and the Multi-Purpose Contingency Training Area at Andrews AFB. These considerations included the following:

- Ensure the safety of personnel on Andrews AFB and the public.
- Site size should be at least 18-20 acres to accommodate the EOD mission and approximately 6.3 acres to accommodate the Wing ATSO exercises, MURT, SFS field exercises, FSTR, and the Operational Flight, whose mission involves the operation of heavy equipment.
- The Multi-Purpose Contingency Training Area must be physically separated from the main living and work area at Andrews AFB and have natural and/or artificial cover.
- Be readily available for scheduled use by the Andrews AFB EOD Flight, Operations Flight, MURT exercises, SFS field exercises, Wing ATSO exercises, FSTR, as well as other training units that may require the site.
- Minimize noise impacts on residential areas.
- For EOD proficiency training, meet the requirements for training and training areas detailed in AMCI 32-3001 § 2.2.2.1, AFMAN 91-201 § 3.28, and AFTO 11A-142 § 1-18. For the Multi-Purpose Contingency Training Area, meet AFI

32-1001, AFPAM 32-1004, AFI 41-106, AFI 10-2501 and AFI 36-2225 and contain areas of open earth and paving.

- Cause minimal disruption to activities of other commands and facility users at Andrews AFB.

- Be consistent with the General Plan for Andrews AFB.

Using these factors, the following alternatives were identified as reasonable for evaluation in this EA:

- Construct and Operate an EOD Proficiency Training Range and a Multi-Purpose Contingency Training Area off Nevada-Alaska Avenues.

- Construct and Operate Only One of the Facilities off Nevada-Alaska Avenues.

- Use Existing Locations on Andrews AFB.

- Use Existing Locations at other Department of Defense Facilities.

- No Action.

2.3 Description of Alternatives

2.3.1 Alternative 1: Construct and Operate an EOD Proficiency Training Range and a Multi-Purpose Contingency Training Area off Nevada-Alaska Avenues

Under Alternative 1, the proposed training range would be sited on the northeast corner of Andrews AFB within an area to the east of Patrick Avenue off Nevada and Alaska Avenues and bounded by four lane Maryland State Route 4 (Pennsylvania Avenue) to the northeast (Figure 2-1). This alternative would satisfy all of the identified criteria in Section 2.2.1. The site is of an adequate size to allow construction and operation in compliance of all applicable requirements. In addition, the site is internal to Andrews AFB, adjacent to Pennsylvania Avenue, and sufficiently distant from any residential areas to minimize the potential for significant noise impacts. It is also surrounded by a wooded area, which could provide a buffer for noise from the training events. Each of the proposed facilities is described in detail below.

Proposed EOD Proficiency Training Range

The EOD Proficiency Training Range would be constructed within a circular area (approximately 1,000 feet in diameter), hereinafter referred to as the "1,000-foot circle". Detonations would occur at the center of the circle (also known as the destruction point), which would be situated below grade. A six-foot high barricade of sand bags, with two

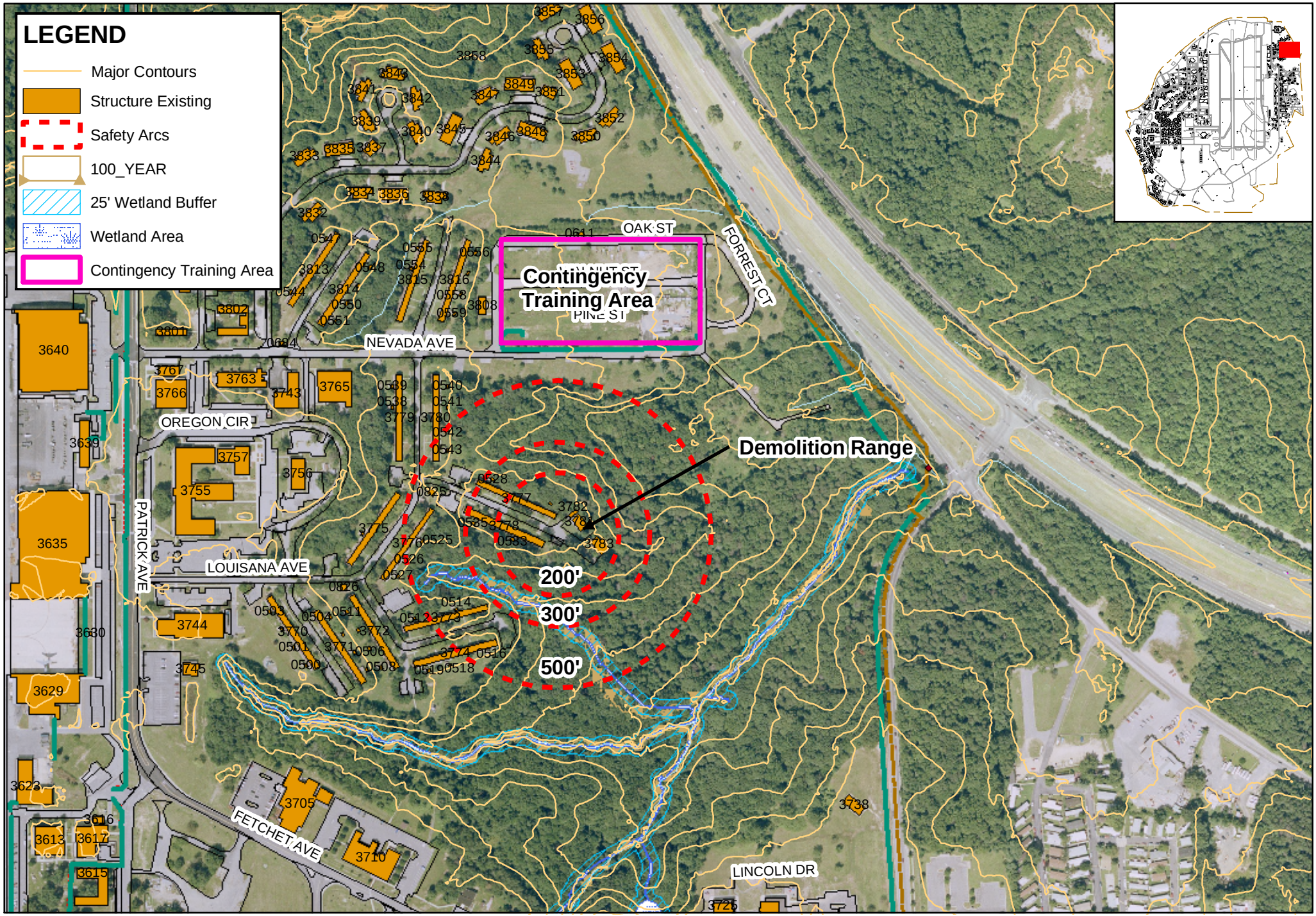

Figure 2-1: Andrews AFB, Contingency Training Areas

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entrances, would ring the destruction point. All combustible materials would be cleared from a 200-foot radius inner circle surrounding the detonation point. The 1,000-foot circular area surrounding the detonation point would be of sufficient size to contain all fragmentation products resulting from explosive detonations initiated at the detonation point. Non-explosive training would also occur within the 1,000 foot circle outside the detonation point. Other features of the training range would include:

- A **storage structure,** which would be placed no closer than 500 feet from the detonation point but within the 1,000-foot circle. This storage structure would be used on an as-needed basis to temporarily secure explosives until they are needed. Explosives would not be stored in this storage structure on a continuous basis.

- A concrete **personnel shelter,** which would be constructed about 300 feet from the detonation point.

- A flag pole that would be erected in full view of persons approaching the range. A 3-foot by 5-foot red flag would be flown as an alert to passersby when a training event is in progress.

- The range would be surrounded by a fence to deter trespassers.

The range would be used to conduct EOD proficiency training and approved emergency detonation of hazardous munitions. Hazardous munitions will not be detonated of on a non-emergency basis within the proposed training area, therefore a hazardous waste treatment permit is not required (See Appendix A). A maximum individual charge of 5 pounds net explosive weight (NEW) would be allowed. Typical explosives used for training would be uncased blocks of C-4 (four blocks for 5 pound NEW limit). EOD training exercises would occur at the range a minimum of once per month. The detonation of munitions at the EOD training site for approved emergency responses will not occur in amounts in excess of those required for EOD proficiency training purposes.

A minimum of two personnel would be involved in each EOD proficiency training event, although some training events could involve 18 or more personnel. All training would be conducted during daylight hours, in the morning or in the afternoon. Approved emergency EOD detonation, however, could occasionally occur at night. All such detonations must be coordinated with on-base tenants and state agencies.

Multi-Purpose Contingency Training Area

The Multi-Purpose Contingency Training Area would be located in proximity to the EOD Proficiency Training Range. The site is physically separated from the primary work and living area at AAFB and comprises approximately 6.3 acres of land. The site also has natural or artificial cover so that personnel training on the site can be screened from view and has an access road for vehicles. See Figure 2-2 for the conceptual design of the site. The site would include the following features:

- A mock runway for readiness, response and recovery (approximately 2 acres) and a crater placed in the middle of a concrete slab (approximately 0.35 acres).

- Several Vertical Structures, including a **Survival Recovery Center** (SRC) (20 feet x 30 feet), a **Damage Control Center** (DCC), and a **storage building** (30 feet x 30 feet). All facilities would be hardback shelters except for the SRC and DCC. All other structures on site would be TEMPER tents, including 20 living facilities structures to house 250 personnel.

- **Utility Control Center Structures** (15 feet x 20 feet). These structures (14) would be tying in commercial power and use generators for training, water buffalos for the water requirement, radios and phone lines for communication, and porta-potties for restroom facilities

- **Morgue** (12 feet x 12 feet) with water supply, proper drainage, a power source, adequate lighting, good ventilation, and refrigerator storage.

- Heavy Equipment Parking areas

- **Medical Treatment Facility** with proper hand-washing facilities

This area would have all the facilities needed to accommodate all 316th Wing and tenant unit exercises and training requirements.

2.3.2 Alternative 2: Construct and Operate an EOD Proficiency Training Range Only off Alaska Avenue

Under Alternative 2, only the EOD Proficiency Training Range would be constructed and operated. While implementation of this alternative would meet some of the factors identified in Section 2.2 above, it would only partially satisfy the need to ensure the readiness of Air Force personnel to conduct their respective missions prior to deployment. The proposed facility to be constructed and operated would be the same as described in Alternative 1.

2.3.3 Alternative 3: Construct and Operate a Multi-Purpose Contingency Training Area Only off Nevada Avenue

Under Alternative 3, only the Multi-Purpose Exercise and Training Area would be constructed and operated. While implementation of this alternative would meet some of the factors identified in Section 2.2 above, it would only partially satisfy the need to ensure the readiness of Air Force personnel to conduct their respective missions prior to deployment. The proposed facility to be constructed and operated would be the same as described in Alternative 1.

2.3.4 No Action Alternative

Although the No Action Alternative would not fulfill the purpose and need for the action, it is carried forward as a baseline for comparison of the environmental effects of the proposed action. The No Action Alternative would be defined as not constructing either the Proposed EOD Proficiency Training Range or the Multi-Purpose Contingency Training Area. Implementation of this alternative would negatively affect the ability of EOD Flight and medical, construction and other the personnel to acquire and maintain the skills and techniques needed to safely and efficiently conduct their respective missions during Air and Space Expeditionary Force rotations, and in real-world contingency situations upon deployment. If the No Action Alternative is implemented these units will need to either continue training activities at currently used sites or find new areas to complete their training requirements. As discussed in Section 1.2, areas currently in use on base are inadequate for fulfilling training requirements. If no area is to be constructed on base for units to fulfill training requirements then they will need to be moved off-site, at considerable cost and effort, while other units will continue to complete their training requirements off-site, at continued cost to the Air Force. Other uses for the proposed training sites have not been planned at this time.

2.4 Alternatives Considered but Eliminated from Detailed Study

Alternatives considered but eliminated from detailed study because they did not meet the purpose and need are discussed below.

2.4.1 Use Existing Locations on Andrews AFB

Consideration was given to constructing and operating a range at several areas where the EOD Flight has previously conducted approved emergency EOD operations. These sites include the:

- **Former Skeet Range** near the south end of the eastern runway and north of the golf course at Andrews AFB. Selection of this alternative location for the proposed range facilities would cause disruptions in the operations of tenant commands and other activities at Andrews AFB. First, this location is in the clear zone of the runway and an EOD range at this location would be incompatible with airfield operations from a safety perspective. EOD range operations at this site would also require coordination with the golf course and could force the evacuation of the golf course during EOD training events. Also, siting the horizontal construction training area in the clear zone would result in unacceptable dust emissions that could disrupt airfield operations.

- **Andrews AFB Property in Brandywine, Maryland**, in the southeastern portion of Prince Georges County. This site would require the EOD Flight to transport explosives off the base and the Operations Flight to transport construction equipment off the base proper. This alternative would not meet the safety and

availability alternative selection factors identified in Section 2.2.1. In addition, use of this site would require extensive coordination with local public safety personnel for the transport of explosives and heavy construction equipment would be cost prohibitive.

- **Davidsonville Communications Site, Governors Bridge Global Communications Annex**. This site meets the basic requirements of the Multi-Purpose Exercise and Training Area and is currently owned and operated by the 89 CG. The Air Force has determined that use of this site would only be suitable for the Wing ATSO and MURT exercises, due to its offsite location. Design of a multi-purpose training and exercise area would need to be modified on this site because there are only four outside telephone lines available and the well on-site cannot support the requirements needed for training. Additional power lines would need to be constructed on site and it would require additional roadway surface be constructed. Therefore use of this site would require widespread renovations, extensive coordination with local public safety personnel for the transport of explosives and heavy construction equipment, and be cost prohibitive for the Air Force.

2.4.2 Use Existing Locations at other Department of Defense Facilities

Some EOD training is currently conducted at MCB Quantico and Naval Surface Warfare Center Indian Head. An alternative would be to continue use of these facilities in lieu of constructing the proposed facilities at Andrews AFB. As previously mentioned, use of these ranges must be scheduled well in advance and Air Force EOD Flights do not have priority of use of these ranges. As a result, the EOD Flight has limited flexibility in scheduling the use of off-base EOD ranges. In addition, because of the difficulties in transporting explosives off the base for training purposes, the EOD Flight would be required to obtain access to host explosives. When these factors are considered in concert with the costs of using host explosives plus the mission time lost due to transportation to and from the two off-base Department of Defense facilities, this alternative was eliminated from further consideration.

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

This EA identifies actions that have been conducted in the past, are ongoing or in the planning stages, and future actions that are related to the proposed action. These actions are included in this cumulative analysis to the extent that details regarding such actions exist and the actions have the potential to interact with the proposed action.

2.6 Comparison of Environmental Consequences

Table 2-1 below summarizes the potential impacts of implementing the proposed action and the No Action Alternative. The potential impacts to relevant resources are based on the information and analyses presented in Section 3.0 and Section 4.0. Potential short-term and long-term impacts were considered in the comparison of alternatives.

Table 2-1
Comparison of Alternatives

Resource/Issue	Alternative 1	Alternative 2	Alternative 3	No Action
Land Use	Training Areas to be added to site of demolished family housing development.	Training Area to be added to site of demolished family housing development.	Training Area to be added to site of demolished family housing development.	Demolished family housing development
Vehicular Transportation	No change	No change	No change	No change
Hazardous Materials and Wastes Management	Potential short-term negative effects should accidental release of hazardous waste (leaks and spillage of fuel or lubricants) occur during construction activities; implementation of standard operating procedures (i.e., best management practices [BMPs]) would reduce potential for release of hazardous materials. Potential effects with unused ordnance and explosives residue, however this is not expected to be a long-term impact.	Potential short-term negative effects should accidental release of hazardous waste (leaks and spillage of fuel or lubricants) occur during construction activities; implementation of standard operating procedures (i.e., best management practices [BMPs]) would reduce potential for release of hazardous materials. Potential effects with unused ordnance and explosives residue, however this is not expected to be a long-term impact.	Potential short-term negative effects should accidental release of hazardous waste (leaks and spillage of fuel or lubricants) occur during construction activities; implementation of standard operating procedures (i.e., best management practices [BMPs]) would reduce potential for release of hazardous materials. Excavation of asphalt not expected to generate hazardous waste.	No change. Would not disturb or interfere with any sites under investigation under the ERP or NPL at Andrews AFB. Would not impact any IRP sites on base.
Air Quality	Potential short-term effects due to emissions of particulate matter and combustion engine emissions during construction activities; long-term emissions during operation of the Multi-Purpose Training Area due to vehicular operations and other combustion equipment within the training area. Dust from exploded ordnance will be contained within the EOD Training Area. Emissions are less than de minimis for the area.	Potential short-term effects due to emissions of particulate matter and combustion engine emissions during construction activities; Emissions are less than de minimis for the area. Dust from exploded ordnance will be contained within the EOD Training Area.	Potential short-term effects due to emissions of particulate matter and combustion engine emissions during construction activities; long-term emissions during operation of the Multi-Purpose Training Area due to vehicular operations and other combustion equipment within the training area. Emissions are less than de minimis for the area.	No significant stationary, mobile source or regional air quality impacts. No exceedance of air quality standards.

Table 2-1
Comparison of Alternatives

Resource/Issue	Alternative 1	Alternative 2	Alternative 3	No Action
Noise	Minor increase in noise during construction activities. Long-term minor impacts in noise levels due to training operations. These sounds will be infrequent and are expected to have minor effects. Detonation of explosives and machine gun rounds are not expected to affect areas outside the training range.	Minor increase in noise during construction activities. Long-term minor impacts in noise levels due to training operations. These sounds will be infrequent and are not expected to have minor effects. Detonation of explosives and machine gun rounds are not expected to affect areas outside the training range.	Minor increase in noise during construction activities.	No increase to noise levels on base.
Socioeconomics	No change in population; short-term employment opportunities for local contractors.	No change in population; short-term employment opportunities for local contractors.	No change in population; short-term employment opportunities for local contractors.	No change in population
Topography, Geology, and Soils	Potential short-term effects to soils from construction activities; soil erosion control methods and BMPs reduce potential for effects; Additional impervious surfaces will be added.	Potential short-term effects to soils from construction activities; soil erosion control methods and BMPs reduce potential for effects;	Potential short-term effects to soils from construction activities; soil erosion control methods and BMPs reduce potential for effects; Additional impervious surfaces will be added.	No change. Sites are located in areas previously disturbed by demolished housing development
Water Resources	No effect to groundwater or wetlands. Increased stormwater runoff would be controlled as identified in the Stormwater Management Plan as approved by MDE.	No effect to groundwater or wetlands. Increased stormwater runoff would be controlled as identified in the Stormwater Management Plan as approved by MDE.	No effect to groundwater or wetlands. Increased stormwater runoff would be controlled as identified in the Stormwater Management Plan as approved by MDE.	No effect to groundwater , wetlands, floodplains, or drainage on base.
Biological Resources	Minor effects to vegetation and wildlife during construction activities. Minor effects from tree removal in the EOD Training Area. There would be no effect on threatened and endangered species.	Minor effects to vegetation and wildlife during construction activities. Minor effects from tree removal in the EOD Training Area. There would be no effect on threatened and endangered species.	Minor effects to vegetation and wildlife during construction activities. There would be no effect on threatened and endangered species.	No effects to vegetation or wildlife. Area already disturbed by demolished housing development .

Table 2-1
Comparison of Alternatives

Resource/Issue	Alternative 1	Alternative 2	Alternative 3	No Action
Cultural Resources	No effects expected based on information contained in Andrews AFB Cultural Resources Management Plan.	No effects expected based on information contained in Andrews AFB Cultural Resources Management Plan.	No effects expected based on information contained in Andrews AFB Cultural Resources Management Plan.	No changes based Andrews AFB Cultural Resources Plan

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3 Affected Environment

This section describes the existing physical, natural, and cultural environments of areas potentially affected by the construction of the EOD Proficiency Training Range and Multi-Purpose Contingency Training Area at Andrews AFB, Maryland.

3.1 Land Use

Andrews AFB encompasses 4,346 acres (excluding remote sites) in Prince George's County, Maryland. The base is adjacent to the community of Camp Springs. Andrews AFB provides worldwide airlift and logistical support for the President of the United States, the Vice President, cabinet members, and other high-ranking United States and foreign officials, as well as the flight operation of more than 100 aircraft. Land uses at the base have been designated into twelve categories: existing structures, wetlands, surface water bodies, the golf course, and facilities for administrative, community, dorm, flightline, industrial, medical, military family housing (MFH), and recreational use (Figure 3-1).

The base is divided into a western and eastern section, separated by the airfield that runs north-south. The western portion of the base contains the majority of the land area, including a large outdoor recreation/golf course facility, all community facilities, and Malcolm Grow Medical Center. Land uses in the eastern section include various airfield operations support facilities and administrative/industrial facilities.

The overall visual character of the base is industrial and urban in nature, with large expanses of paved or developed land. Improved grounds, consisting of administrative and athletic areas, all covered areas (under building and pavements), family housing areas, golf course fairways and greens, and the two runways encompass approximately 2,260 acres, or 52%, of the total land area. Semi-improved grounds encompass approximately 1,500 acres of open spaces in the runway area and clear zone. The remaining 586 acres of the installation consist primarily of undeveloped forestland.

In accordance with AFI 32-7062, *Air Force Comprehensive Planning*, Andrews AFB developed a *Base General Plan* in 1996 that outlines existing and anticipated future land use on the base (USAF 1996). The plan was most recently updated in 2003. According to the 2003 plan update, little undeveloped land suitable for future development remains (USAF 2003). The only land use changes presently anticipated for the base are the proposed conversion of family housing near the North Gate (now closed, located on the northeast perimeter) to administrative use and the proposed conversion of family housing near the Pearl Harbor Gate (now closed, located on the east perimeter) to industrial use. Most capital improvement projects proposed in the *Base General Plan* update involve renovations, demolitions, and construction of modest-sized buildings and other structures in the developed areas west and east of the airfield. The Base Strategic Plan provides for larger capital improvement projects. The construction of the EOD

and the Multi-Purpose Training Areas would be consistent with both the *Base General Plan* and the *Strategic Plan.*

The site designated for the development of the EOD and Multi-Purpose Training Areas is located in the northeast corner of Andrews AFB, off of Nevada and Louisiana Avenues. The site proposed for the EOD Training Area has been cleared of all housing units and is currently composed of a network of interconnecting streets covered with large piles of construction debris (i.e., cement and concrete slabs). A site visit in November 2006 revealed a number of empty basements from the recently-demolished houses; these formed a 10-foot deep depression on either side of the residential street. This site is surrounded by medium density forest growth and undeveloped land with varied topography; the center of the site rests on the top of a hill that slopes downward to the north, south, and east. There was no vegetation remaining on the disturbed portion of the site.

The Multi-Purpose Training Area is also the site of a demolished family housing development. The majority of debris has been cleared from this site, leaving ornamental trees, former early manicured lawns, and rogue shrubs. A service road surrounds the property, remaining from the demolished housing development. During a site visit in November 2006 several pieces of heavy construction machinery were seen on the site, including three Caterpillars, one dump truck, and a trailer. There were also small piles of rocks and construction debris remaining along with a wood mulching pile.

3.2 Socioeconomics

Prince George's County, Maryland and the entire Washington-Baltimore, DC-MD-VA-WV Consolidated Metropolitan Statistical Area (CMSA) was examined to determine the socioeconomic implications resulting from potential activities at Andrews AFB. The study area includes areas surrounding Andrews AFB because it is not possible to distinguish between impacts that would be experienced in the immediate vicinity of Andrews AFB and those that would be experienced on a regional scale. This will be explained in further detail in Chapter 4 (Environmental Consequences and Mitigation Measures).

3.2.1 Population and Housing

The study area populations presented in Table 3-1 include both 1990 and 2000 census data. Race and ethnicity statistics are included to provide a sense of the demographic composition of the community surrounding Andrews AFB. According to the U.S. Census Bureau's 2005 Population Estimates, the total population of Prince George's County was 846,123 persons. Between 1990 and 2005, the population of the county increased by 16%. By 2025, the county is projected to grow by an additional 18% to approximately 945,600 (Maryland Department of Planning, Planning Data Services 2005). The demographic composition of the regional population has also changed during the 1990s; the percent of White residents has dropped, while the percentage of minority populations has maintained or increased, as in the case of Black/African-Americans. These percentages can also be compared to the larger Washington-Baltimore CMSA, to which Prince George's County is a component.

Approximately 7,000 military personnel and their dependents reside at Andrews AFB (89 AW, 1998). Housing at Andrews AFB and the region is not discussed further in this EA as the EOD and Multi-Purpose Training Areas will be constructed entirely within the boundaries of Andrews AFB and will have no off-base impacts on housing.

3.2.2 Economy, Employment, and Income

Prince George's County is part of a large metropolitan area surrounding the cities of Washington, DC and to a lesser extent, Baltimore, Maryland. As such, many of its employment and economic indicators are closely interrelated with its surrounding counties. This is due primarily to the fact that many individuals commute to or from the county for daily employment. Table 3-2 depicts the type, size, and proportion of the major industry sectors present within the study area. Wholesale trade represented the highest employment and annual business volume both in Prince George's County and the Washington-Baltimore CMSA; however, the retail trade sector had the most establishments, and professional, scientific and technical services had the highest annual payroll.

Table 3-1 Local Population and Demographic Statistics, 1990 and 2000

Socioeconomic Parameter	Prince George's County, MD				Washington-Baltimore CMSA			
	1990		2000		1990[1]		2000	
Population								
Total Population	729,268	-	801,515	-	NA	-	7,608,070	-
% Change from 1990 to 2000	-	-	9.9%	-	-	-	-	-
Race[2]								
White	314,559	43%	216,774	27%	NA	-	4,791,400	63%
Black/African American alone	369,622	51%	501,431	63%	NA	-	1,980,986	26%
American Indian/Alaska Native alone	2,808	<1%	2,643	<1%	NA	-	23,529	<1%
Asian alone	27,437	4%	30,390	4%	NA	-	393,957	5%
Native Hawaiian/Pacific Islander alone	485	<1%	380	<1%	NA	-	3,900	<1%
Other (alone and two or more)	14,357	2%	49,897	6%	NA	-	414,298	5%
Ethnicity								
Hispanic	28,927	4%	56,813	7%	NA	-	483,549	6%
Non-Hispanic	700,341	96%	744,702	93%	NA	-	7,124,521	94%

[1] The Washington-Baltimore CMSA was not a geographic area that the U.S, Census Bureau gathered data for in 1990.
[2] Race categories were changed between 1990 and 2000 census, but these represents the best comparison.

Source: U.S. Department of Commerce, Census Bureau 2005.

Andrews AFB is a major employer in Prince George's County. The total workforce at Andrews AFB is approximately 17,000 persons, including 13,500 appropriated fund military personnel, 2,200 appropriated fund civilian personnel, and 1,300 non-appropriated fund contract civilians and employees of on-base private businesses. Combined military and civilian salaries at the base exceed $400 million annually. Camp Springs, west of Andrews AFB, provides employees and visitors to Andrews AFB lodging and dining opportunities. Approximately 9,500 Camp Spring residents, 68% of the population, are employed in the labor force. Service occupations employ

roughly 40% of Camp Springs residents while the industries of retail trade and accommodation and food services employ approximately 9% and 5% of Camp Spring residents, respectively.

Table 3-2 Statistics for Major Industry in the Vicinity of Andrews AFB, 1997

NAICS Industries	Prince George's County, MD				Washington-Baltimore CMSA			
	No. Est.	Value ($1,000)	Annual Payroll ($1,000)	No. Empl.	No. Est.	Value ($1,000)	Annual Payroll ($1,000)	No. Empl.
Manufacturing	382	2,056,917	506,866	11,952	4,826	38,222,265	7,234,668	164,337
Wholesale trade	--	---	--	--	7,998	84,309,372	6,067,567	122,347
Retail trade	2,295	7,665,151	836,051	38,602	26,632	86,657,017	8,992,585	401,804
Finance and insurance	--	---	--	--	10,912	---	--	100,000+
Real estate, rental and leasing	648	859,202	163,493	5,659	8,667	---	--	50,000-99,000
Professional, scientific and technical services	1,624	3,611,821	1,415,985	26,996	33,735	76,043,615	30,545,767	478,963
Administrative, support, waste management and remedial services	793	1,281,801	574,288	20,883	7,285	8,826,774	3,954,770	159,951
Health care and social assistance	--	---	--	--	19,860	37,266,237	14,309,293	397,779
Accommodation and food services	1,027	881,472	241,801	21,037	14,165	14,201,217	4,037,237	283,469
Other services	1,222	946,465	275,084	10,271	17,211	24,061,438	5,990,686	161,990

Source: 2002 U.S. Economic Census.

Note: The US Economic Census profiles the U.S. economy every five years from the national to the local level. The most recent Economic Census for the Washington-Baltimore CMSA and Prince George's County was prepared in 2002.

Based upon Bureau of Economic Analysis estimates for 2002, in that year there were over 400,000 and 5 million individuals employed in Prince George's County and the Washington-Baltimore CMSA, respectively. The primary employment industries were construction, retail trade, professional and technical services, health care, and the government (Table 3-3).

Table 3-3 Local Employment and Income, 2002

Sector	Prince George's County, MD		Washington-Baltimore CMSA	
	2002	%	2002	%[1]
Total employment	402,719	100%	5,187,017	100%
Farm employment	756	<1%	18,146	<1%
Non-Farm employment	401,963	-	5,168,871	-
Private employment	316,497	-	4,186,062	-
Construction	36,466	9%	(D)	NA
Retail trade	48,427	12%	487,576	9%
Professional and technical services	30,616	8%	630,818	12%
Health care and social assistance	32,666	8%	455,382	9%
Other (sum of numerous minor categories)	168,322	42%	1,930,284	37%
Non-Private employment (government)	85,466	-	982,809	-
Federal	25,493	6%	424,514	8%
Military	8,190	2%	103,694	2%
State and Local	51,783	13%	454,601	9%

[1] Percentages for the Washington-Baltimore CMSA do not total to 100% due to some industry categories not reporting for disclosure purposes.
(D) – Information is not reported for reasons of disclosure.

Unlike the previously presented information, unemployment data tracked by the Bureau of Labor and Statistics does not combine the Metropolitan Statistical Areas (MSAs) of Baltimore and Washington, DC. Table 3-4 presents the annual historical unemployment rates for 2003 and 2004 for the geographic areas surrounding Andrews AFB. The unemployment rate for each geographic area dropped from 2003 to 2004, and would be considered low when compared with U.S. unemployment rates for the same period.

Table 3-4 Unemployment Rates, 2003 and 2004

Geographic Area	2003	2004
Prince George's County, MD	4.7	4.4
Washington-Arlington-Alexandria MSA	3.5	3.3
Baltimore-Towson, MD MSA	5.0	4.8
United States	6.0	5.5

Source: Bureau of Labor Statistics

3.2.3 Environmental Justice

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, mandates that Federal agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs on minority and low-income populations. Disproportionate environmental impact occurs when the risk or rate for a minority population or low-income population from exposure to an environmental hazard exceeds the risk or rate of the general population and, where available, to another appropriate comparison group (DOD 1995; EPA 1998).

Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, mandates that Federal agencies identify and assess environmental health and safety risks that may disproportionately affect children as a result of the implementation of Federal policies, programs, activities, and standards (62 *Federal Register* 19883-19888).

In order to comply with Executive Orders 12989 and 13045, ethnicity, poverty status, and age of the populations in the census tracts bordering Andrews AFB were examined and compared to regional, state, and national data (Table 3-5). The potential effects of the proposed action on minority and low-income populations and children have been evaluated in accordance with the requirements of the Executive Orders and are documented in Chapter 4.

Table 3-5 Environmental Justice Data

Location	Percent Minority[a]	Percent Below Poverty Level[b]	Percent Aged 17 Years or Younger
United States	22.4	12.4	25.7
Maryland	34.0	8.5	25.6
Prince George's County	**70.4**	**7.7**	**26.8**
Tract 8011.04 (Andrews AFB)	32.0	2.4	35.0
Tract 8007.01	81.0	3.6	27.0
Tract 8007.02	57.0	3.7	26.0
Tract 8012.03	77.0	3.1	27.0

Table 3-5 Environmental Justice Data

Location	Percent Minority[a]	Percent Below Poverty Level[b]	Percent Aged 17 Years or Younger
Tract 8012.04	78.0	1.8	26.0
Tract 8012.05	64.0	6.3	25.0
Tract 8019.06	70.0	6.6	29.0
Tract 8022.01	70.0	5.7	25.0

Source: US Department of Commerce, Census Bureau 2000.

[a] To calculate the Total Percent Minority, the numbers for only individuals in the "one race" category were included. The "one race" individuals represented 95-99% of the population and allows for an accurate portrayal of the entire population.

[b] The most recent data for % below poverty level available was used in the table. The national, state, county, and the census tract data are year 1999 information.

As shown in Table 3-5, the percent minority of the populations residing in three of the seven census tracts surrounding Andrews AFB is higher than the county level. (Note: the minority percentage in the county is significantly higher than that of Maryland as a whole). With a 7.7% county figure for those living below the poverty level in the county, none of the seven census tracts surrounding Andrews AFB exceeds this percent. In addition, three of the seven census tracts surrounding Andrews AFB have a percentage of children aged 17 or younger that exceeds the county figure of 26.8%.

3.2.4 Community Services and Facilities

The proposed action will occur entirely on Andrews AFB and will not require significant use of the local community's infrastructure. Potential noise impacts from the proposed action on the surrounding community are discussed in Section 4.5. There would be no changes to existing community services, including education, police and fire protection, and medical services, are not anticipated under any of the alternatives associated with the proposed action.

3.3 Transportation

Andrews AFB is located 5 miles southeast of Washington, D.C. The primary artery serving the base and the surrounding communities is Interstate 95/495 (I-95/495), known as the Capital Beltway, running along the west side of the base, and providing direct access to Allentown Road (MD 337), Suitland Parkway, and Marlboro Pike. Other routes, including Maryland Routes 4, Pennsylvania Avenue, and MD 5 are other arterials that feed traffic off I-95/495 onto other local roadways. Vehicular entry to Andrews AFB is controlled at three access gates. Visitors lacking passes must report to the visitor's center at the Main Gate to obtain a pass.

The roadway system at Andrews AFB forms a loose grid pattern. Perimeter Road follows the entire perimeter of Andrews and is divided into North, East, South, and West segments. North Perimeter Road and South Perimeter Road are two-lane paved roads that cross the northern part and southern part of the airfield, respectively. These two segments of Perimeter Road allow vehicles to cross from the western to the eastern part of the base. Roadways at Andrews AFB can be classified into arterial highways, collector roadways, and local roadways.

Patrick Avenue leads to New Hampshire Avenue, near where the proposed action would take place, and forms a link between North perimeter road and East perimeter Road. It is a two lane road that is an important roadway between various locations within the perimeter of Andrews AFB. The proposed action involves the construction of facilities on Louisiana Avenue, which leads off of Patrick Avenue.

Access to the proposed training areas would be provided via Louisiana Avenue and Nevada Ave. Review of the *Andrews Air Force Base Comprehensive Transportation Study* indicates that overall, existing transportation conditions at Andrews AFB are acceptable, with each of the access routes having a level of service (LOS) of C or better.

3.4 Infrastructure/Utilities

3.4.1 Wastewater Collection and Disposal

Wastewater collected by Andrews AFB's sanitary sewer system is treated at wastewater treatment facilities owned and operated by Washington Suburban Sanitary Commission (WSSC). Two on-base collection systems convey wastewater by both gravity sewer and force mains. Many of the lift stations have been upgraded in recent years, and they system was privatized in February 2006, which has led to improvements in the system's physical condition and efficiency.

The West Branch wastewater treatment plant has a capacity of 30 MGD. The main trunk lines on the west side follow West Perimeter Road, Menoher Drive, San Antonio Boulevard, and Colorado Avenue. A 21-inch sewer trunk line exits the west side under Branch Avenue, approximately 1,500 feet south of Georgia Avenue.

3.4.2 Potable Water Supply

The potable water supply at Andrews AFB is supplied by WSSC. The Potomac River supplies two storage reservoirs, which have a combined capacity of 43 billion gallons. Andrews AFB's potable water is treated by the Potomac River Water Filtration Plant. The Potomac Water Filtration Plant has a capacity of 285 MGD. Andrews AFB receives its water supply through three connections of 8-, 12- and 14- inches. Typically, only two of the three connections are open at one time. The smallest connection is typically closed due to lower water pressure. The two service connections improve flow and water quality throughout the system. The required storage capacity at Andrews AFB is 825,000 gallons of potable water, given the average daily demand of 1.65 MGD.

3.4.3 Solid Waste Management

The Civil Engineering Operations Flight manages the program for collecting, handling, and disposing of solid waste generated on the base. The Resources, Recovery and Recycling Program (RRRP) office and the Maintenance and Engineering office are responsible for the collection, segregation, accumulation and disposition of domestic waste recyclables from numerous industrial and domestic collection sites. Solid waste generated on the base that cannot

be recycled is collected and disposed of by a contractor to at a licensed landfill in Prince George's County. In addition, construction debris is disposed of at an off-site landfill by the contractor responsible for any renovation or demolition activities.

3.5 Topography, Geology, and Soils

3.5.1 Topography

Andrews AFB is located near the western margin of the Coastal Plain physiographic province. This province is characterized by gently rolling hills and valleys (USGS 1988). Elevations at the base range from approximately 220 feet above mean sea level (amsl) in the southeast corner of the base to approximately 280 feet amsl in the northern section. Areas of moderately sloping topography are limited to stream banks.

3.5.2 Geology

The Coastal Plain Province is underlain by a wedge of unconsolidated sediments, including gravel, sand, silt, and clay. The thickness of these sedimentary layers is approximately 1,300 feet in the vicinity of Andrews AFB. The sediments dip eastward at a low angle, generally less than one degree, and thicken seaward. Surface materials are comprised mainly of sand and gravel with minor amounts of silt and clay.

3.5.3 Soils

The Soil Conservation Service completed a detailed soil survey of Andrews AFB in 1974 (SCS 1974). Approximately 85% of Andrews AFB has been disturbed by cut and fill or other construction activities since 1942. Soils on most of the airfield and base lands north and south of the airfield are mapped as Udorthents, defined as soils that have been altered by cutting, filling, or urban development. Soils throughout the sites proposed for the EOD and Multi-Purpose Training Area were graded during construction of the housing developments.

3.6 Water Resources

3.6.1 Groundwater

Shallow groundwater occurs beneath Andrews AFB within the Brandywine Formation and the underlying Calvert Formation. These formations range in thickness from 65 to 150 feet. Groundwater is generally encountered at the base from approximately 4 to 9 feet below the ground surface. In general, the direction of groundwater flow at the base is toward the south to Piscataway Creek (NOAA 2004).

Deep aquifers beneath Andrews AFB occur in the Magothy, Patapsco, and Patuxent Formations. Each of these aquifers has the potential to yield significant quantities of water. The estimated depths to the tops of the aquifers range from 300 to 900 feet (Air Force 2001).

3.6.2 Surface Water

Andrews AFB is located on a drainage divide that separates the watersheds of the Potomac River to the west from the Patuxent River to the east. The majority of the base drains to the south and west and is within the Potomac River watershed. Headwater tributaries to the Potomac River originating on the base include Piscataway Creek, Meetinghouse Branch, Paynes Branch, and Henson Creek. The northeast section of the base is within the Patuxent River watershed. Two headwater tributaries to the Patuxent River, Cabin Branch and Charles Branch, originate in this section of the base. In addition to these watercourses, nine small ponds and Base Lake are located within the installation. Base Lake covers approximately 14 acres in the southern section of the base. There are no natural surface waters in the proposed project area, but a small stream does flow within the 300 foot and 500 foot safety zones of the EOD Training Area. This stream is part of a network of streams that extends south of the project area and between Louisiana and Fetchet Drive.

3.6.3 Wetlands

A wetland survey was conducted in 2004 at Andrews AFB. No wetlands are located within the proposed project area, however the 25 foot wetland buffer does fall within the 300 foot and 500 foot safety buffer surrounding the EOD Training Area. This buffer surrounds a stream, discussed in Section 3.6.2, and follows it south of the project area, continuing on between Louisiana and Fetchet Drive. A site visit in November of 2006 revealed no wetlands present on either of the proposed training sites.

3.6.4 Floodplains

Prince George's County has performed flood modeling as part of a comprehensive watershed management plan for Piscataway Creek (Prince George's County 1986b). The modeling showed the proposed project site is not located within the 100-year floodplain. This is further confirmed by a study of flood plains conducted by Andrews AFB (SAIC 2005).

3.6.5 Drainage

Andrews AFB's stormwater system of catch basins and culverts guide water through a series of natural drainages, underground storm sewer pipes and man-made ditches. There are approximately eight stormwater outfall basins. The majority of stormwater leaving the base drains into the Piscataway Creek watershed and eventually into the Potomac River. The west side of the base has a storm drainage channel flowing in a southwesterly direction from Freedom Hall to a discharge point south of Georgia Avenue. This channel collects all storm drainage in the housing and administrative areas. Stormwater drainage for the sites is provided by the system of streams on the southern side of the project area, within the Piscataway Creek watershed.

3.7 Biological Resources

3.7.1 Vegetation

Andrews AFB is located in the Oak-Pine Forest Region, Atlantic Slope Section (Braun 1950). In the original forest, deciduous trees (predominantly oaks and hickories) were the most abundant. A significant portion of Prince George's County has been deforested for urban and suburban development.

Vegetation communities at Andrews AFB consist of extensively managed landscape areas (improved areas) and other unmanaged patches of natural plant communities. Nearly 80% of the base is developed or intensely managed (improved or semi-improved). The intensely managed improved areas include lawns, gardens, golf course fairways, ponds, bare ground, and recreational fields. Semi-improved areas include runway borders, the infield, and approach clear zones, where vegetation is permanently maintained in an herbaceous condition. The remaining unimproved areas at the base primarily comprise late successional ecological communities, including mixed hardwood forests, mixed hardwood/pine forests, oak forests, oak/hickory forests, oak/pine forests, pine forests, and red maple swamp. These communities cover approximately 600 acres and are concentrated in the southern section of the base and around the base perimeter. Some scattered areas on the base also contain early successional herbaceous communities dominated by nonindigenous, invasive plants, such as Japanese honeysuckle (*Lonicera japonica*), English ivy (*Hedera helix*), wintercreeper (*Euonymus fortunei*), privet (*Ligustrum* spp.), periwinkle (*Vinca minor*), wineberry (*Rubus phoenicolasius*), tree-of-heaven (*Ailanthus altissima*), oriental bittersweet (*Celastrus orbiculatus*), autumn olive (*Elaeagnus umbellata),* Russian olive (*Elaeagnus angustifolia*), beggar-ticks (*Bidens polylepis*), tall fescue (*Festuca elatior),* purple loosestrife (*Lythrum salicaria*), Korean lespedeza (*Lespedeza cuneata*), common reed (*Phragmites australis*), and multiflora rose (*Rosa multiflora*).

The center of the proposed EOD Training Area is the former location of a family housing cluster. Demolition debris and paved areas remain. Surrounding this area is forested land, comprised of deciduous trees, including oaks (*Quercus* sp.), pines (*Pinus* sp.), sweet gum (*Liquidambar styraciflua),* maples (*Acer* sp.), and elms (*Ulmus* sp.). These trees are located on a gentle incline that slopes away from the proposed demolition area. The site proposed for the Multi-Purpose Training Area has a few old ornamental trees, rogue shrubs, and former early manicured lawns remaining from the demolished housing development. There is a line of Bradford pear trees (*Pyrus Calleryana 'Bradford'*) along the northern edge of the site, another remnant of the demolished former military housing.

3.7.2 Wildlife

Wildlife diversity at Andrews AFB is limited due to the relatively minimal coverage and fragmented nature of natural habitats occurring at the installation. The maintained grassy areas associated with the airfield provide habitat for a variety of bird species that utilize open field habitats such as raptors, blackbirds, starlings, crows, and various species of songbirds. Small mammals utilizing this habitat would likely include the eastern cottontail rabbit, skunk, and various rodent species. Relatively greater species diversity would be expected in the upland and

wetland forested habitats around the perimeter of the base. Larger mammal species such as gray fox, Virginia opossum, beaver, white-tailed deer, and raccoon as well as various species of reptiles and amphibians would likely be present in these areas. Base Lake, and to a lesser extent the other open water areas present on the base, provide habitat for various species of migratory waterfowl.

The proposed project area includes remnants of former military family housing clusters and a forested area. Wildlife diversity at the subdivision is extremely limited, but the forested area may contain native species such as small birds and mammals, including crows, blackbirds, squirrels, rabbits, and mice.

3.7.3 Threatened and Endangered Species

Inventories of Federal and state threatened and endangered species have been conducted at Andrews AFB in 1993, 1996/1997, and 2004/2005 (Davis 1993; Parsons 1998; E&E 2005). Table 3-7 lists the threatened and endangered species that have been identified as occurring at Andrews AFB, as well as the species protection status and habitat requirements.

Table 3-6 Federal Threatened and Endangered Species and State-Listed Threatened and Endangered and Rare Species at or in the Vicinity of Andrews AFB

Species	Scientific Name	Federal Status	State Status	Habitat
Sandplain gerardia	*Agalinis acuta*	E	E	South of the flightline near the 13th tee of The Course at Andrews Air Force Base
Ten-lobed agalinis	*Agalinis obtusifolia*	NS	E	South of the flightline and east of the old landfill site
Curtis' three-awn	*Aristida curtissii*	NS	R	Southeastern portion of airfield near the fire training facility
Spiral pondweed	*Potamogeton spirillus*	NS	R	East shore of the west pond southeast of the Base Lake
Tall nut-rush	*Scleria triglomerata*	NS	R	Southern perimeter fence of the base below the south clear zone of the east runway
Carolina foxtail	*Alopecurus carolinianus*	NS	R	Southern end of the wetland located southeast of the intersection of North Perimeter Road and Patrick Avenue
Swollen bladderwort	*Utricularia gibba*	NS	WL	Western branch of the Bell Chance Pond

Sources: Davis 1994; Andrews 1998, E&E 2005.
Status Codes: E – Endangered
R – Rare
NS – No Status
WL – Watchlist Species

The only Federally-listed threatened or endangered species potentially occurring within or in proximity to Andrews AFB is the sandplain gerardia. The ten-lobed agalinis is state-listed

endangered. There are also five plants considered rare by the state of Maryland, including Carolina foxtail, Curtis' three-awn, spiral pondweed, swollen bladderwort, and tall nut-rush. None of these species have been documented in or near the proposed project area. The closest documented location of a rare species, swollen bladderwort, is approximately 5,000 feet west of the proposed project site in the western branch of Belle Chance pond.

3.8 Air Quality

The Clean Air Act (CAA) of 1970, 42 U.S.C. 7401 *et seq.*, amended in 1977 and 1990, is the primary Federal statute governing air pollution. The CAA designates six pollutants as criteria pollutants for which National Ambient Air Quality Standards (NAAQS) have been promulgated to protect public health and welfare. The six criteria pollutants are particulate matter (PM_{10} and $PM_{2.5}$), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), lead (Pb), and ozone (O_3). The State of Maryland has adopted these Federal standards.

Federal law requires states or local air quality control agencies to have a State Implementation Plan (SIP) that prescribes measures to eliminate or reduce the severity and number of violations of NAAQS and to achieve expeditious attainment of these standards. Areas that do not meet the NAAQS are designated as "nonattainment" for those criteria pollutants. Nonattainment status is further defined by the extent the standard is exceeded.

Andrews AFB is located in Prince George's County within the Washington Metropolitan Area Air Quality Control Region. Prince George's County is currently in attainment for NO_2, CO, SO_2 and PM_{10} and lead. New standards for 8-hour ozone and $PM_{2.5}$ concentrations were promulgated in 1997, and on April 15, 2004 the U.S. Environmental Protection Agency (EPA) designated attainment and non-attainment areas for the 8-hour ozone standard. At that time, Prince George's County was classified as a moderate non-attainment area for the 8-hour ozone standard.

The designation of the Washington Metropolitan Area Air Quality Control Region as a moderate nonattainment area for ozone is mainly attributed to nitrous oxides (NO_x) and volatile organic compounds (VOCs) emissions from automobiles in the metropolitan area on warm days with low wind speeds. Maryland must submit a revised SIP to address the 8-hour ozone standard nonattainment designation by June 2007. The NAAQS are not to be exceeded more than once per year, except for O_3 and particulate matter less than 10 micrometers in diameter (PM_{10}), which are not to be exceeded more than an average of one day per year for a 3-year period.

On December 17, 2004, the U.S. Environmental Protection Agency (EPA) designated areas for the Fine Particle ($PM_{2.5}$) NAAQS. As a part of the Washington Metropolitan Area Air Quality Control Region, Prince George's County was designated as non-attainment for $PM_{2.5}$ and is still designated as such at this time. As required by this regulation, the State of Maryland must detail control requirements in plans demonstrating how they will meet the $PM_{2.5}$ national air quality standard. States must submit their plans to EPA within three years after the Agency's final designations become effective. EPA has developed a $PM_{2.5}$ implementation rule to provide further guidance on what should be included in $PM_{2.5}$ plans. As part of this rule the EPA is

revising the tables in sub-paragraphs (b)(1) and (b)(2) of 40 CFR 51.853 and 40 CFR 93.153 by adding the *de minimis* levels for $PM_{2.5}$ (See Appendix A). The EPA will be establishing the proposed 100 tons per year as the *de minimis* level for direct $PM_{2.5}$ and each of its precursors as defined in revised section 91.152. The rule was finalized in 2006, and Maryland is working to develop an effective plan for meeting the $PM_{2.5}$ national air quality standard. Requirements for attainment of the Baltimore-Washington Metropolitan Area will be submitted to the EPA by the State of Maryland by April 15, 2008.

3.8.1 The General Conformity Rule

The General Conformity Rule has been promulgated by EPA to ensure that the actions of Federal departments or agencies conform to the applicable SIP. The General Conformity Rule covers direct and indirect emissions of criteria pollutants or their precursors that are caused by a Federal action, are reasonably foreseeable, and can practically be controlled by the Federal agency through its continuing program responsibility. Conformity is demonstrated if the total net emissions expected to result from a Federal action in a nonattainment or maintenance area will not:

- Cause or contribute to any new violation of any NAAQS;
- Interfere with provisions in the applicable SIP for maintenance of any standard;
- Increase the frequency or severity of any existing violation; or;
- Delay the timely attainment of a standard, interim emission reduction or milestone including, where applicable, emission levels specified in the applicable SIP for purposes of demonstrating reasonable further progress, attainment, or a maintenance plan.

A Federal action is exempt from applicability of the General Conformity Rule requirements if the action's total net emissions are below the *de minimis* levels specified in the rule and are not regionally significant (i.e., the emissions represent 10% or less of nonattainment or maintenance area's total emission inventory of that pollutant) or are otherwise exempt per 40 CFR 93.153. Total net emissions include direct and indirect emissions from all stationary point and area sources, construction sources, and mobile sources caused by the Federal action. However, there are special considerations regarding mobile-source emissions. If the action or a portion of the action is subject to the transportation conformity rule, that portion of the action is not subject to the General Conformity Rule. According to MDE, the *de minimis* thresholds for projects in Prince Georges County are 50 tons per year of VOC, 100 tons per year of nitrous oxides, 100 tons per year of SO_2, and 100 tons per year of direct $PM_{2.5}$.

3.8.2 Air Quality Operating Permit

Andrews AFB is divided into several organizational elements for purposes of air quality permitting. Air Force operations under the 316th Airlift Wing used to operate under a Title V Operating Permit issued by the MDE. The Title V Operating Permit included various emission

source types including boilers, paint booths, fuel tanks, and generators. Because actual facility-wide emissions were significantly below the threshold for Title V applicability, Andrews AFB applied for and received a State Permit to Operate that also designated Andrews AFB as a non-Title V synthetic minor source. There were 60 emission units in 2002 covered by the permit. There are partner units on the base (Air Force Reserve, Air National Guard, the Navy, and Army/Air Force Exchange) that are not included in the Title V Operations Permit, but operate emission units under separate statue construction permits issued by MDE. The calendar year 2006 total emissions for registered sources at Andrews AFB are provided in the emissions certification report (Andrews AFB 2007).

3.9 Noise

The primary source of noise at Andrews AFB is associated with aircraft operations and maintenance. These noise sources impact land uses on the station as well as in the surrounding developed areas. The noise environment around an air station typically is described using a measure of the cumulative noise exposure (i.e., day-night average sound level [DNL]) that results from aircraft operations. DNL takes into consideration the time of day that aircraft events occur. Noise that occurs between 10:00 p.m. and 7:00 a.m. is weighted more heavily than noise during the day to account for the difference in human noise perception during the nighttime hours. Within the 65 DNL contour, noise levels are similar to an urban environment. Noise levels in the 75 DNL contour would be similar to the downtown area of a major city.

Noise zones associated with Andrews AFB are generally asymmetrical, reflecting higher noise levels east of the runways because of the greater number of closed pattern flight operations conducted over the more rural landscape east of the base (89 AW, 1998). Most of the central part of the base, including the airfield, flight lines, Base Lake Recreation Area, eastern extension of the golf course, and some of the administrative areas in the eastern part of the base, are located within the 80+ decibel (dB) DNL or the 75-80 dB DNL noise zones. The remainder of the eastern part of the base and areas close to the western flight line are within the 65-75 dB DNL noise zone.

The proposed EOD Proficiency Training Range and the Multi-Purpose Contingency Training Area would be constructed in an area of Andrews AFB that is subject to noise levels of less than 66 db DNL.

The Department of Defense uses Air Installation Compatible Use Zones (AICUZ) to protect aircraft operational capabilities at its installations and to assist local government officials in protecting and promoting the public's health, safety, and quality of life. The AICUZ program reports describe base types of land use and facility constraints which affect, or result from, flight operations. The clear zones at AAFB are located at the end of each runway to protect the approach-departure flight pattern. These areas have graduated land use restrictions, with the clear zone incurring strict land use guidelines. Land use compatibility guidelines for these imaginary zones coincide with the accident potential of each area and seek to eliminate uses that concentrate people in small areas. These surfaces and their respective land use guidelines are outlined in detail in the Andrews AFB AICUZ study which is reviewed every two years. The

area proposed for the EOD Proficiency Training Range and Multi-Purpose Contingency Training Areas is not within zones regulated by the AICUZ program.

3.10 Hazardous Materials and Waste Management

On February 12, 1997, the EPA published its *Final Military Munitions Rule* at 40 CFR Parts 260-266, 270 in the *Federal Register*. These rules were developed as required by Section 107 of the Federal Facility Compliance Act of 1992, which added subsection 3004(y) to the RCRA (42 USC Section 6924[y]). The rules identify when conventional and chemical military munitions become a hazardous waste under RCRA and provide for the safe storage and transport of such waste. As stated in 40 CFR 266.202, when military munitions are used for their intended purpose, they are not considered a solid waste for regulatory purposes, even if the intended purpose results in the deposit of munitions on land. Furthermore, 40 CFR 266.202(a)(1)(I) clarifies that military munitions used in the training of military personnel constitutes normal use of the product, rather than waste disposal. However, DoD organizations must pursue aggressive range management policies that ensure compliance with existing regulations and promote environmental stewardship, per the Department of Defense Policy to Implement the EPA's Military Munitions Rule (DoD, July 1, 1998).

Andrews AFB is a large quantity generator of hazardous waste permitted under the Resource Conservation and Recovery Act (RCRA). The 316th Wing Civil Engineering Squadron Environmental Flight is responsible for compliance with RCRC requirements. Primary types of hazardous wastes generated at Andrews AFB include batteries, used fuel and oil, solvents, fluorescent bulbs, contaminated rags and fuel filters, and solvent-contaminated solids. The majority of hazardous waste is generated from aircraft operations. The proposed action will generate hazardous waste in the form of contaminated shrapnel, and other contaminants associated with exploded ordnance. There are on-base facilities currently in place that have the ability to properly handle this material.

Historic fuel supply activities, landfills, and other support and training operations impacted portions of the ground and surface waters at Andrews AFB with metals, VOCs, semi-volatile organic compounds (SVOCs), polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and pesticides. Andrews AFB was formally added to the National Priorities List (NPL) in June 1999.

The Environmental Restoration Program (ERP), formally known as the Installation Restoration Program (IRP), was established by the DoD to protect human health and the environment by addressing sites where past activities led to releases of hazardous substances to the environment. These sites are addressed based on the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as well as the National Oil and Hazardous Substances Contingency Plan (NCP). Andrews AFB is responsible for 28 ERP Sites and 5 Areas of Concern (AOCs) on the base and on remote sites located in Brandywine and Davidsonville, Maryland.

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4 Environmental Consequences and Mitigation Measures

This section presents the potential environmental consequences of implementing Alternative 1, Alternative 2, Alternative 3, or the No Action Alternative. The potential impacts to the human and natural environment were evaluated relative to the existing environment described in Chapter 3. For each environmental resource or issue, anticipated direct and indirect effects were assessed, considering both short- and long-term project effects.

4.1 Land Use

The significance of potential land use impacts is based upon the degree of sensitivity to land use changes affected by a proposed action. Typically, land use impacts are considered significant if they would: (1) violate or otherwise be inconsistent with adopted land use plans or policies; (2) undermine the viability of a preferred existing land use activity; (3) create threats to public health, safety, and welfare of adjacent or nearby land users; or (4) conflict with the fundamental mission of an installation.

4.1.1 Alternative 1

Alternative 1 would have no significant impact on existing land use – either on or off of the base – because constructing and operating the EOD Proficiency Training Range and the Multi-Purpose Contingency Training Area and relocating existing training operations to these training areas would be consistent with general land uses and patterns at and the military use of Andrews AFB.

As described in Section 3.1, the site proposed for the EOD Proficiency Training Range and the Multi-Purpose Contingency Training Area is highly disturbed. The site proposed for the Multi-Purpose Contingency Training Area was previously a military family housing site that has been demolished and cleared. The site proposed for the EOD Proficiency Training Range was also the site of a military family housing development, which has been demolished, however, large amounts of debris (cement slabs, concrete blocks, etc.) remain onsite. These sites are also adjacent to undeveloped, wooded areas on-base and are near buildings currently being used by Air Force Personnel. Pennsylvania Avenue, a major four-lane highway that abuts the property boundary of Andrews AFB and the proposed sites will not be affected by this Alternative. Land use on the east side of Pennsylvania Avenue is largely undeveloped. Implementation of Alternative 1 would not require Prince George's County to alter its planning assumptions and recommended land uses; therefore, no change to the local planning document would be required. There would be no significant impacts to on- or off-site land use.

4.1.2 Alternative 2

Alternative 2 land use effects similar to those described for Alternative 1. The site for the EOD Proficiency Training Area is covered with piles of debris. This area still has paved roads and

open areas where basements were once located. It is also surrounded by undeveloped, wooded areas. Pennsylvania Avenue abuts the Andrews AFB property boundary and the site. Therefore this area will need to be cleared of paved area and debris for the addition of the EOD Proficiency Training Range. Implementation of Alternative 2 would not require Prince George's County to alter its planning assumptions and recommended land uses; therefore, no change to the local planning document would be required. There would be no significant impacts to on- or off-site land use.

4.1.3 Alternative 3

Implementation of Alternative 3 would have the same effects on land use as those described for Alternative 1. The area for the Multi-Purpose Contingency Training Area has already been cleared of most of the debris remaining from a demolished family housing cluster. This will provide training materials for the proposed training operations. This alternative would not require Prince George's County to alter its planning assumptions and recommended land uses; therefore, no change to the local planning document would be required. There would be no significant impacts to on- or off-site land use.

4.1.4 No Action

Under the No Action Alternative, the USAF would make no changes to the current land use at Andrews AFB or the surrounding area. As a result, there would be no land use impacts associated with this alternative.

4.2 Vehicular Transportation

None of the alternatives would result in significant changes to the traffic flow or transportation system at Andrews AFB.

4.2.1 Alternative 1

Under Alternative 1, generally small units of 5 to 20 individuals, would travel to the training areas and conduct training on an intermittent basis. This new trip generation rate would involve far fewer trips than were previously generated by the military family housing. Therefore, the number of trips generated would not disrupt current traffic flow on base. There would be no off-base transportation effects. The Multi-Purpose Contingency Training Area will require a parking space for heavy equipment and a mobile maintenance truck. The equipment is not expected to interfere with traffic flow on Nevada or Louisiana Avenues. Consequently, there would be no significant transportation impacts with implementation of Alternative 1.

4.2.2 Alternative 2

Alternative 2 would have similar, but even less effects on vehicular transportation as those described for Alternative 1. Training events involving up to 20 individuals once per month, and

intermittent approved emergency response detonations involving about 2 individuals would occur at the training site. This new trip generation rate would involve far fewer trips than were previously generated by the military family housing. Therefore, the number of trips generated from this small number of training events and activities would not affect traffic flow in the surrounding area. As a result, there would be no significant transportation impacts with implementation of Alternative 2.

4.2.3 Alternative 3

Alternative 3 would have similar, but even less effects on vehicular transportation as those described for Alternative 1. Intermittent training events, involving from 5 to 20 individuals, approximately two to three times per month, would occur at the training site. This new trip generation rate would involve far fewer trips than were previously generated by the military family housing. Therefore, the number of trips generated from this small number of training events and activities would not affect traffic flow in the surrounding area. The Multi-Purpose Contingency Training Area will require a parking space for heavy equipment and a mobile maintenance truck. The equipment is not expected to interfere with traffic flow on Nevada or Louisiana Avenues. As a result, there would be no significant transportation impacts with implementation of Alternative 3.

4.2.4 No Action

Under the No Action Alternative, training areas would not be established for EOD proficiency training and contingency training purposes. Therefore, no additional traffic would be added to the project site area. As a result, there would be no impacts transportation associated with this alternative.

4.3 Hazardous Materials and Waste Management

No alternative would disturb any sites under investigation or remediation as part of the Andrews AFB ERP, any sites on the NPL, nor interfere in any way with the investigation or remediation of sites under the ERP or on the NPL. This project does not impact any IRP sites on base

4.3.1 Alternative 1

Hazardous materials would be used as part of Alternative 1. No ordnance would be permanently stored at the EOD Proficiency Training Range. Required ordnance would be brought to the training area for each event. Ordnance not being used during training activities would be stored in accordance with Air Force and Department of Defense requirements. Typical explosives used would include uncased C-4 (with a maximum individual charge of 5 pounds net explosive weight). The detonation of munitions at the EOD Proficiency Training Range will not occur in amounts in excess of those required for EOD proficiency training purposes. Detonations would occur at the center of the circle (also known as the destruction point), which would be situated below grade. A six-foot high barricade of sand bags, with two entrances, would ring the

destruction point. All combustible materials would be cleared from a 200-foot radius inner circle surrounding the detonation point.

The in-place detonation of ordnance at the detonation point typically generates fragments and residues of explosives and other ordnance constituents (e.g., 2,4,6-trinitrotoluene (TNT) and its breakdown products, cyclo-1,3,5-trimethylene-2,4,6-trinitramine (RDX), cyclo-1,3,5,7-tetramethylene-2,4,6,8-tetra-nitramine [HMX], tetryl, and picric acid; inorganic compounds such as perchlorates, metals including lead, mercury, chromium, copper, and nickel from primers, wires, and casings). Some explosive residues primarily found at the destruction point would degrade over time while others would persist. These constituents would be contained within the barricaded detonation point and would not readily migrate from the site.

Based on an analysis of military blow-in-place operations, ordnance debris, remnants, and residues that would be found within the EOD pit may account for up to 40% of the weight of small ordnance items (the remaining 60% residue being dispersed in the atmosphere as gases or particulates). Fine particulates or very small fragments may settle up to 200 feet from the point of detonation. Large remnants may be collected during periodic EOD sweeps, while small fragments may remain and would remain within the 1,000-foot circle of the EOD Training Site.

The EOD detonation point and surrounding 1,000 foot area would be cleared and all materials collected would be properly disposed of in accordance with Air Force regulations.

In summary, all ordnance and materials at the EOD Proficiency Training Range would be contained within the training area as required by the EPA's *Final Military Munitions Rule.* There would be no significant on- or off-site impacts.

The excavation of asphalt would not generate hazardous waste, and off-site disposal of any construction waste would be at approved landfills. However, hazardous materials would be used and hazardous wastes would be generated as part of the maintenance and fueling of vehicles and equipment that would be utilized during these activities at the Multi-Purpose Contingency Training Area. There is the potential for short-term negative effects should accidental release of hazardous waste (leaks and spillage of fuel or lubricants) occur during training activities. Implementation of standard operating procedures (i.e., best management practices [BMPs]) would reduce potential for release of hazardous materials. In addition, the Air Force would develop and implement a Spill Prevention, Control, and Countermeasures Plan with Andrews AFB 316th CES/CEVP, or adopt the base's existing plan as part of addressing the potential hazardous waste issue. The existing procedures outlined in AFOSH would be followed for handling and storage of hazardous materials. No significant impacts would result from implementation of Alternative 1.

4.3.2 Alternative 2

Implementation of Alternative 2 would have the same impacts as those discussed for Alternative 1 with regards to the EOD Proficiency Training Range. No significant impacts would result from implementation of Alternative 2.

4.3.3 Alternative 3

Implementation of Alternative 3 would have the same impacts as those discussed for Alternative 1 with regards to the Multi-Purpose Contingency Training Area. The existing procedures outlined in AFOSH would be followed for handling and storage of hazardous materials. The excavation of asphalt would not generate hazardous waste, and off-site disposal of any construction waste would be at approved landfills. No significant impacts would result from implementation of Alternative 3.

4.3.4 No Action

Under the No Action Alternative, there would be no change to hazardous materials and wastes management at Andrews AFB.

4.4 Air Quality

None of the alternatives would result in exceedances of air quality standards or expose sensitive receptors to increased pollutant concentrations. Alternatives 1, 2, or 3 would not result in significant stationary or mobile source, or regional air quality impacts.

4.4.1 Alternative 1

Implementation of Alternative 1 would have temporary impacts on local air quality during training events; however, these impacts would be minor. There would be no stationary air emission sources (e.g., heating boilers) from the unoccupied temporary structures. The primary impacts would be directly related to the generation of particulate matter during EOD events and from combustion engine emissions during the construction-related training conducted at the Multi-Purpose Contingency Training Area. In addition, during preparation of the EOD Proficiency Training Range, there would be clearance of vegetation clearance requiring the use of equipment containing internal combustion engines (e.g., trucks, chain saws, etc.). Minor amounts of particulate matter will be generated since most of the project components would be installed in developed areas of the base that are screened by trees and other vegetation. Fugitive dust generated by construction operations would be prevented from becoming airborne by the use of water compression.

The detonation of explosive ordnance has a potential to generate airborne dust. However, the proposed 1,000 clearance zone surrounding the detonation point, combined with the existing vegetation surrounding the clearance zone, would prevent substantial dust emissions from dispersing off site on the EOD Proficiency Training Range. Therefore, no significant stationary source air quality impact would occur as a result of exercises at the Andrews AFB EOD Proficiency Training Range.

Because of the small area of disturbance and the brief and intermittent periods when heavy equipment will be operated at the Multi-Purpose Contingency Training Area, potential mobile

source emissions are clearly *de minimis*. An air conformity determination in accordance with 40 CFR 93.153 would be performed as necessary before Alternative 1 is implemented. Emissions from exploded ordnance or mobile sources from construction training may need to be included in Andrews AFB Annual Emissions Inventory.

4.4.2 Alternative 2

Alternative 2 would have similar impacts on air quality as Alternative 1 with respect to the EOD Proficiency Training Range. Therefore, no significant mobile or stationary source air quality impacts would occur as a result of exercises at the Andrews AFB EOD Proficiency Training Range.

4.4.3 Alternative 3

Alternative 3 would have similar impacts on air quality as Alternative 1 with respect to the Multi-Purpose Contingency Training Area. Operations of on-site mobile sources, such as vehicles to support the Multi-Purpose Contingency Training Area, may result in an increase in air emissions on the installation. However, emissions from these mobile sources are considered minor given their limited use during testing and evaluation events. Therefore, no significant mobile source air quality impacts are expected as part of Alternative 3.

4.4.4 No Action

Under the No Action Alternative, there would be no change to air quality at Andrews AFB.

4.5 Noise

Impacts from noise from implementation of any of the alternatives would be limited to short-term and minimal increases in noise levels during construction of the EOD Proficiency Training Range and during construction related training activities at the Multi-Purpose Contingency Training Area. In addition, there would be intermittent and sudden increases in noise levels during EOD proficiency training operations. No long term or major changes to the noise environment would occur.

4.5.1 Alternative 1

EOD Proficiency Training Range

Implementation of Alternative 1 during construction of the EOD Proficiency Training Range would not permanently alter the noise environment in and around Andrews AFB. During the construction activities, noise would be generated for brief and temporary periods due to the operation of equipment used in trimming and cutting trees (such as chain saws and chippers), as well as operation of trenchers and other equipment used to install the fence and flag pole. These

activities would take place only during the daytime and would be within background noise levels resulting from operation of military aircraft and from urban traffic. Upon completion of the project, the noise exposure would return to existing levels, which are dominated by aircraft overflights.

A noise modeling assessment was performed for the detonation of 5 pounds of uncased C4 explosive and 0.50 caliber rounds. The impulsive sound from these sources is of short duration (typically less than one second) and high intensity. It has abrupt onset, rapid decay, and often a rapidly changing spectral composition. This noise assessment should be considered preliminary to assess the relative magnitude of noise impacts that would be associated with EOD training activities at Andrews AFB. The EOD Training Unit will further assess noise modeling factors once the EOD Proficiency Training Range is ready for conducting training activities.

The spectra of military explosives usually contain more low frequency sound than from the confined explosions of guns. A typical spectrum from a 5 pound charge of plastic explosive (C4) has the most energy at 31 Hz. This is significant because there are three important characteristics about signals at 31 Hz:

- They are so low that humans do not perceive that the sound level is relatively high.
- Wood frame residential construction and double-hung windows respond with rattles and vibration.
- The signals propagate over much longer distances than signals of higher frequency.

To evaluate the noise impact of EOD training activities, Ecology and Environment, Inc. (E&E) employed the Large Arms – Noise Assessment Model, BNOISE 2, developed by the U.S. Army Construction Engineering Research Laboratories (2005). The single event assessment (One Shot) module was used to model impulse noise effects at various distances using C4 explosives. The weather case was set as Day Base (which would be when all training events would occur) and 5.5 pounds of C4 explosive was selected as the noise source. 5.5 pounds was chosen because the BNOISE 2 software did not have the option to analyze a 5 pound explosive. Contours for the 5 pound explosive will be larger than for a 5.5 pound explosive used in this screening analysis. The screening model does not account for the muffling of the noise as a result of topography or vegetation. The modeling results are included in Table 4-1.

Table 4-1 Single Event Assessment for 5.5 pound Explosive

Distance From Blast (feet)	Sound Level	
	dBA	dBC
200	132	142
300	128	138
400	126	136
500	124	134
1000	119	129
5000	96	109
10000	81	97

Table 4-1 Single Event Assessment for 5.5 pound Explosive

Distance From Blast (feet)	Sound Level	
	dBA	dBC
20000	71	89
25000	68	87
30000	65	85

Legend:
dBA = A-weighted sound levels
dBC = C-weighted sound levels

Source: Ecology and Environment 2007

In order to correlate the frequency characteristics from typical noise sources to the perception of human ears, several frequency networks have been developed. The most common noise frequency weighting networks include the following, with examples relevant to this EA:

- **A-weighted scale** - Since the human ear cannot perceive all pitches or frequencies equally well, these measures are adjusted or weighted to compensate for the human lack of sensitivity to low-pitched and high-pitched sounds. This adjusted unit is known as the A-weighted decibel, or dBA. The dBA is used to evaluate noise sources related to transportation (e.g., traffic and aircraft) and to small arms. It is also expressed as an A-weighted sound exposure level (SEL).

- **C-weighted scale** - The C-weighted scale measures more of the low-frequency components of noise than does the A-weighted scale. It is used for evaluating impulsive noise and vibrations generated by large weapons such as artillery, mortars, armor (20 millimeters (mm) or greater) and explosive charges. The C-weighted noise levels are often represented as dBC and expressed as a C-weighted SEL (CSEL).

This screening analysis shows that the noise levels at or greater than 142 dBC would occur at or near the detonation point for a single charge of C4. Individuals exposed to noises greater than 140 dBC would be in danger of experiencing hearing loss. However, personnel would wear hearing protection when conducting training activities. It is also possible that 70 dBC from a 5.5 pound explosive single event may extend beyond the training area. The 70 dBC is the level at which sensitive land uses, such as residential receptors, are not recommended. Noise levels above or at this threshold may extend beyond the 1,000-foot circle at the EOD Proficiency Training Range. According to the screening analysis, the 70 dBC level will extend beyond the boundaries of Andrews AFB to the northeast and southeast of the site, approximately 500 ft. However, this does not take into account topography or vegetation surrounding the site or the 5 pound limit on the explosives. This type of explosive will have a rapid decay of sound which will continue to decrease beyond the 1,000-foot circle.

Other important considerations that would serve to reduce the potential off-site effects of training detonations with C4 are:

- A thick forest buffer surrounding the 1,000-foot clearance area at EOD Proficiency Training Range. This buffer would begin at the edge of the 1,000-foot clearance area and stretch 500 feet to the boundary of Andrews AFB.

- Four-lane Pennsylvania Avenue, which abuts the boundary of the Andrews AFB in the vicinity of the EOD Proficiency Training Range. The presence of this highway would separate EOD training activities from land uses to the north and east of the training range. In addition, traffic on the highway would serve to mask noise effects.

- There are no residential uses within 1,000 feet of the 1,000-foot boundary of the EOD Proficiency Training Range clearance zone either on Andrews AFB or off-base.

- EOD training activities would only occur during daytime hours (although some emergency EOD actions may occasionally occur during nighttime hours).

Detonation of 0.50 caliber rounds would be at levels of less than 70 dBC within the 1,000-foot clearance zone.

The EOD Flight would adhere to Air Force guidelines when conducting training activities. AFTO 11A-142 § 1-29 states that the following minimum requirements are to be employed during a detonation operation:

- Red range flag to be flown during detonation operations and removed only after the range has been declared safe. The flag will be a minimum of 0.91 meters (3 ft.) wide by 1.52 meters (5 ft.) long. The flag must be displayed at a height to where it will be visible warning from a safe distance at all points of access to explosive operation.

- AFTO Forms 61, with legend "***Danger – Explosive Training Range – Keep Out***" imprinted in them may be ordered in amounts needed through proper channels. AFTO Form 61 is listed in AFR 0-9. These forms will be posted at entrances and at 91 meter (300 ft.) intervals around the perimeter of the range. Any additional required multilingual information will be posted below forms in black letters 5.08 cm (2 in.) on a white background.

- Barricades, gates or guards at all entrances

Andrews AFB would provide advance notification to state agencies and the local community when major EOD training events are scheduled to occur. The Maryland Department of Environment must be notified prior to any detonations, however, notification of the public may not always be possible for emergency EOD actions, but these would occur only infrequently. When notification is considered in combination with location of the training site and house of operations, there would be no significant on- or off-base effects associated with EOD training activities under Alternative 1.

Multi-Purpose Contingency Training Area

Noise generated by construction equipment during horizontal construction training at the Multi-Purpose Contingency Training Area would be typical of that of a civilian construction site. However, there are no sensitive noise receptors in proximity to the training site that would be affected by the noise generated. In addition, traffic traveling on nearby four-lane Pennsylvania

Avenue would mask any noise generated during training activities. Therefore, no long-term or major impact to the noise environment would occur from training activities conducted at the Multi-Purpose Contingency Training Area under Alternative 1.

4.5.2 Alternative 2

Noise impacts for Alternative 2 would be the same as those discussed for Alternative 1 with respect to the EOD Proficiency Training Range.

4.5.3 Alternative 3

The noise impacts resulting from Alternative 3 include those associated with general construction of the site and the movement of heavy machinery during training exercises. No long term or major changes to the noise environment would occur as part of Alternative 3.

4.5.4 No Action

The No Action Alternative would not cause any changes to the noise environment on the base or in surrounding communities.

4.6 Socioeconomic Resources

4.6.1 Population

None of the alternatives would change the number of personnel permanently stationed or temporarily employed at Andrews AFB. Therefore, implementation of any of the alternatives would have no effect on the base, local, or regional population.

4.6.2 Employment

None of the alternatives would result in significant changes in employment at the base or in the local community.

4.6.3 Environmental Justice

All of the proposed activities would be confined within the boundaries of Andrews AFB. All identified environmental impacts would be temporary or not significant. Therefore, implementation of any of the alternatives would not result in disproportionately high or adverse human health or environmental effects on minority or low-income populations pursuant to Executive Order 12898, or pose disproportionate environmental health or safety risks to children pursuant to Executive Order 13045.

4.7 Topography, Geology, and Soils

4.7.1 Alternative 1

The proposed construction projects at Andrews AFB would require soil disturbances, typical of these activities. All of the activities proposed under Alternative 1 would be located in previously disturbed areas, as described in Section 3.1. However, grass and forested buffers will exist between the EOD Proficiency Training Range and Multi-Purpose Contingency Training Area to further reduce the potential for erosion impacts.

An Erosion Control Plan would be prepared for the project in accordance with *Maryland Sediment Control Guidelines for State and Federal Projects* (MDE 2004). If necessary, Andrews AFB would implement soil erosion control measures, including but not limited to installation of safety fencing, straw bales, silt fence, seeding (temporary and permanent), planting native grasses, protecting exposed roots, mulching, etc. Andrews ABF would use these efforts to control soil erosion and generation/dispersal of sediment as a result of its actions associated with the Proficiency Training Range and Multi-Purpose Contingency Training Area. No significant adverse impacts on these resources would result from construction and operation of Alternative 1.

4.7.2 Alternative 2

Impacts of implementing Alternative 2 on topography, geology, and soils are the same as those discussed for Alternative 1. No significant adverse impacts on these resources would result from construction and operation of Alternative 2.

4.7.3 Alternative 3

Impacts of implementing Alternative 3 on topography, geology, and soils are the same as those discussed for Alternative 1. No significant adverse impacts on these resources would result from construction and operation of Alternative 3.

4.7.4 No Action

The No Action Alternative would have no impact on geology, soils, or topography.

4.8 Water Resources

Implementation of any of the alternatives would have only minor, short-term impacts on water resources at Andrews AFB.

4.8.1 Groundwater

Excavation depths at the proposed Proficiency Training Range and Multi-Purpose Contingency Training Area would not intersect the shallow groundwater table or require any withdrawal of groundwater. Therefore, implementation of any of the alternatives would not result in significant impacts to groundwater resources.

4.8.2 Surface Water

4.8.2.1 Alternative 1

No components of the Proficiency Training Range and Multi-Purpose Contingency Training Area would occur within surface waters.

During clearing operations and while construction activities are going on at the EOD Proficiency Training Range, the potential exists for runoff of soil from tree clearance and the construction of ancillary supporting facilities into the nearby streams. Once construction is completed, no further activities would directly affect surface water resources. All contaminants would be contained within the barricaded detonation point.

Training activities at the Multi-Purpose Contingency Training Area would involve the use of heavy equipment and other machinery that could release oily wastes. If unchecked, stormwater flows leaving the training areas after construction training activities could contain contaminants. The most likely sources of contaminants would be oil leached from asphalt surfaces, oils, solvents, and gasoline leaking from vehicles, and chemical constituents from ordnance. While this is not a major source of pollution, small increases in petroleum products flowing off site along natural drainage courses could degrade water quality. However, the Multi-Purpose Contingency Training Area is separated from natural drainage courses by an extensive grassy buffer, which would significant reduce the potential for impacts to surface water resources.

During both construction and the long-term operation of the Proficiency Training Range and Multi-Purpose Contingency Training Area, appropriate BMPs would be used to ensure removal of suspended particulates from surface runoff and to ensure compliance with Maryland soil erosion and sediment control regulations, prescribed by the MDE in the *Maryland Standards and Specifications for Soil Erosion and Sediment Control* (MDE 1994). Short-term BMPs would be used during construction to control erosion and subsequent downstream sedimentation. Such BMPs could include silt fences and temporary sedimentation basins. Post-construction, long-term BMPs could include extended detention ponds, wet ponds, infiltration trenches, infiltration basins, porous pavement, filter strips, or grassed swales. Andrews AFB would select specific BMPs applicable to operations at Proficiency Training Range and Multi-Purpose Contingency Training Area for implementation.

Therefore, there would be no significant impacts to surface water resources with implementation of Alternative 1.

4.8.2.2 Alternative 2

Surface water impacts resulting from implementation of Alternative 2 would be similar as those described for Alternative 1. Therefore, there would be no significant impacts to surface water resources with implementation of Alternative 2.

4.8.2.3 Alternative 3

Surface water impacts resulting from implementation of Alternative 3 would be the similar as those described for Alternative 1. Heavy equipment and other machinery could release oily wastes, which could increase pollutant loading in the surface waters temporarily. If unchecked, stormwater flows leaving the Multi-Purpose Contingency Training Area after construction could contain contaminants. The most likely sources of contaminants would be oil leached from asphalt surfaces, oils, solvents, and gasoline leaking from vehicles. However, the Multi-Purpose Contingency Training Area is separated from natural drainage courses by an extensive grassy buffer, which would significant reduce the potential for impacts to surface water resources. In addition, appropriate BMPs would be used to ensure removal of suspended particulates from surface runoff and to ensure compliance with Maryland soil erosion and sediment control regulations. Therefore, there would be no significant impacts to surface water resources with implementation of Alternative 3.

4.8.2.4 No Action

Under the No Action Alternative, there would be no impacts to water resources at Andrews AFB.

4.8.3 Wetlands

No components of the Proficiency Training Range and Multi-Purpose Contingency Training Area under Alternative 1, Alternative 2, or Alternative 3 would be installed within jurisdictional wetlands. The EOD Proficiency Training Range will be constructed near a wetlands buffer (See Figure 2-1), however, the 300 ft clear mark is expected to be outside of the wetlands area. Appropriate BMPs will be implemented to ensure potential runoff and erosion resulting from construction of the EOD Proficiency Training Range is controlled. There would be no impacts to wetlands at Andrews AFB under the no action alternative.

4.9 Biological Resources

Implementation of any of the alternatives would have only minor but no significant impacts on biological resources at Andrews AFB.

4.9.1 Vegetation

4.9.1.1 Alternative 1

Approximately 0.3-acres of vegetation would be cleared within the 1000-ft radius of the EOD Proficiency Training Range. Clearing of the vegetation on the EOD Proficiency Training Range would include areas of light to moderate density stands of trees. The ground clearance for the EOD Proficiency Training Range would represent a small percentage of the forest on Andrews AFB. Considering the approximately 600 acres of forestland is present on the base, removal of this forestland for the project is considered minor (0.05%). Clearing of forest on the EOD Proficiency Training Range would marginally increase the openings in the forest canopy in this sector of Andrews AFB. However, this fragmentation would be considered minor and not be expected to adversely affect the vitality or structure of the existing vegetation regime; this is because open developed areas currently surround the property to the west, north and south (See Figure 2-1). These existing buildings, roads, and parking lots have already fragmented the forested lands in this sector of Andrews AFB. Therefore, no significant adverse vegetation impacts would occur as a result of Alternative 1.

Construction of the Multi-Purpose Contingency Training Area may involve the removal of ornamental trees (i.e., Bradford Pear, Sycamore) and rogue shrubs remaining from the previous family housing development. This removal will not result in significant impacts to the forested lands of Andrews AFB.

4.9.1.2 Alternative 2

Impacts to vegetation resulting from Alternative 2 would be the same as those discussed for Alternative 1. On the EOD Proficiency Training Range, approximately 0.3-acres of vegetation would be cleared within the 1000-ft radius of the training area. Clearing of the vegetation on the EOD Proficiency Training Range would include areas of light to moderate density stands of trees. The ground clearance for the EOD Proficiency Training Range would represent a small percentage of the forest on Andrews AFB (0.05%). Considering the approximately 600 acres of forestland is present on the base, removal of this forestland for the project is considered minor.

4.9.1.3 Alternative 3

Impacts to vegetation resulting from Alternative 3 would have less of an impact as those discussed for Alternative 1 because the construction of the Multi-Purpose Contingency Training Area would not involve the removal of light to moderate density stands of trees as in the EOD Proficiency Training Range. Vegetation removal in the Multi-Purpose Contingency Training Area would only include the removal of ornamental trees (i.e., Bradford Pear, Sycamore) and rogue shrubs remaining from the previous family housing development. This removal will not result in significant impacts to the forested lands of Andrews AFB.

4.9.1.4 No Action

There would be no impacts to vegetation at Andrews AFB under the No Action Alternative.

4.9.2 Wildlife

4.9.2.1 Alternative 1

Since most of the construction activities proposed under Alternative 1 would occur in developed portions of the base where wildlife habitat is largely absent because of previous development (military family housing), wildlife impacts would be minor. Where construction activities occur in proximity to natural habitat, some minimal disturbance to resident wildlife may occur. Mobile animals might relocate to nearby areas with similar habitat, while slow or sedentary animals (amphibians, lizards, and small mammals) may be taken during construction activities.

The amount of habitat available on Andrews AFB for all wildlife species to find shelter and browse for food would be slightly diminished under Alternative 1. Although the loss of forest would only be a small percentage of the total on the installation (0.05%), the reduction in forested land would reduce the amount of habitat available, diminishing the wildlife value of the tract. For some species, available habitat would be further reduced by disturbance resulting from frequent testing and evaluation activities on the EOD Proficiency Training Range and Multi-Purpose Contingency Training Area. The permanent reduction in wildlife habitat could expose small prey species to increased predation by larger predator species because of the decrease in available cover. No significant adverse effects on terrestrial wildlife would result from construction or operation of the EOD Proficiency Training Range and Multi-Purpose Contingency Training Area.

4.9.2.2 Alternative 2

Implementation of Alternative 2 would result in similar wildlife impacts as those discussed for Alternative 1. Implementation of Alternative 2 would result in the loss of approximately 2 acres of forested land. The reduction in forested land would reduce the amount of habitat available and diminishing the wildlife value of the tract in this section of Andrew's AFB. No significant adverse effects on terrestrial wildlife would result from construction or operation of the EOD Proficiency Training Range and Multi-Purpose Contingency Training Area.

4.9.2.3 Alternative 3

Implementation of Alternative 3 would result in similar wildlife impacts as those discussed for Alternative 1. Alternative 3 does not involve the removal of approximately 2 acres of forestland and would occur in an area already disturbed by construction. Therefore impacts to wildlife resulting from Alternative 3 are minimal.

4.9.2.4 No Action

Implementation of the No Action Alternative would have no effect on wildlife at the base.

4.9.3 Threatened and Endangered Species

None of the alternatives are likely to affect federally designated or state designated threatened or endangered species or critical habitats.

4.9.3.1 Alternative 1

The federally threatened and state endangered bald eagle was previously observed near Base Lake. However, as discussed in Section 3.7.3, no bald eagle nest sites were identified in proximity to the lake during field surveys and it was determined that the species is likely an occasional transient visitor from the Chesapeake Bay or Potomac River. No bald eagle habitat will be disturbed or removed as part of the construction. Implementation of Alternative 1 would have no effect on the bald eagle.

Two protected plant species, *sandplain gerardia* and blunt-leaved *gerardia*, have previously been observed or are known to occur at separate sites in the southeast portion of the base. However, based on the distance from known locations where these species may occur and the minimal area that will be disturbed during construction, and implementation of Alternative 1 would have no effect on any of the protected plant species.

4.9.3.2 Alternative 2

Alternative 2 would involve the same construction activities in the vicinity of potential threatened and endangered species habitats as described for Alternative 1. Therefore, implementation of Alternative 2 would have no effect on any threatened or endangered species.

4.9.3.3 Alternative 3

Alternative 3 would involve the same construction activities in the vicinity of potential threatened and endangered species habitats as described for Alternative 1. Therefore, implementation of Alternative 3 would have no effect on any threatened or endangered species.

4.9.3.4 No Action

The No Action Alternative would have no effect on threatened and endangered species.

4.10 Cultural Resources

The only archeological resource considered eligible for the NRHP is the Belle Chance Plantation site (18PR447). Belle Chance is outside the area of impact for the EOD Proficiency Training Range and Multi-Purpose Contingency Training Area. Consequently, implementation of Alternative 1, Alternative 2, or Alternative 3 would have no effect on any historic or cultural resources.

Due to the fact that both of the proposed training areas have been previously disturbed, there is little to no possibility that during ground-disturbing activities a currently buried and unknown archeological resource (historic and/or prehistoric) may be uncovered. In accordance with the Programmatic Agreement among Andrews AFB, the Advisory Council on Historic Preservation, and the Maryland Historical Trust (MHT) should any archeological resources be encountered during the proposed construction activities, the Andrews AFB cultural resources manager and the MHT would be notified. This would ensure compliance with 36 CFR, Part 800.11. Suspension of construction work until a qualified archeologist can determine the significance of the encountered resource(s) would be required.

The no action alternative would result in no change to historic or cultural resources, known and unknown, at Andrews AFB.

4.11 Cumulative Impacts

The CEQ regulations for implementing NEPA define cumulative impacts as "the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what other agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7).

This project is expected to take place over an approximate 12-month period. During this same period Andrews AFB will be adding additional F-16s to the base, however, there will not be additional flying missions. Andrews AFB has also planned to construct an administrative site off of Tyler Road, in the northeastern corner of the base. The buildings on the site will be managed by Enhanced Use Leasing, which will improve utilization of the property. The proposed EOD Proficiency Training Range and Multi-Purpose Contingency Training Area would be located approximately 1,000 feet to the southeast from these facilities and would be separated by a wooded area. The area affected by the EOD Proficiency Training Range noise would be primarily within the training area on Andrews AFB and would not significantly affect any aggregation of on or off-installation permanent housing. Therefore there would not be potential cumulative short-term construction impacts due to the geographic distance between these projects. Off-base, a Presidential Office Park has been proposed to be constructed on the east side of Pennsylvania Avenue, directly northeast of the proposed training sites, off of Presidential Avenue. This park is still in the planning stages and has not been developed.

Overall, the analysis for this EA indicates that the proposed EOD Proficiency Training Range and Multi-Purpose Contingency Training Area, described in Alternatives 1, 2, and 3 would not result in, or contribute to, significant cumulative impacts to the environment. The scope of the

cumulative impacts would not be limited to the perimeter of the airfield at Andrews Air Force Base. Noise impacts resulting from training exercises at the EOD Proficiency Training Range will need to be coordinated with the local officials and community. While there are a few minor effects that would be associated with the proposed action, the implementation of the identified environmental controls would reduce their level of impact and, thus, reduce any contribution those effects may have made to a cumulative impact. The activities proposed in Alternatives 1, 2, and 3 would provide new training facilities at Andrews AFB and would fulfill the need of establishing permanent facilities on base for training requirements.

4.12 Unavoidable Adverse Impacts

Unavoidable short-term adverse impacts associated with implementation of Alternatives 1, 2, or 3 would include: temporary disturbance to soils from erosion and sedimentation, temporary increase in fugitive dust and air emissions during construction and training, and intermittent noise resulting from EOD training exercises. However, these effects are considered minor and would be confined to the immediate area. The environmental controls and coordination with local communities would be implemented as part of the Alternatives 1, 2, and 3 and would minimize these potential impacts.

4.13 Relationship Between Short-Term Uses and Enhancement of Long-Term Productivity

The relationship between short-term uses and enhancement of long-term productivity from implementation of the proposed action is evaluated from the standpoint of short-term effects and long-term effects. Short-term effects would be those associated with the construction operations stormwater runoff, and the removal of vegetation. The proposed action represents an enhancement of long-term productivity and national security by providing adequate areas for readiness and training operations at Andrews AFB.

4.14 Irreversible and Irretrievable Commitment of Resources

This EA identifies any irreversible and irretrievable commitments of resources that would be involved in the proposed action if implemented. An irreversible effect results from the use or destruction of resources (e.g., energy) that cannot be replaced within a reasonable time. An irretrievable effect results from loss of resources (e.g., endangered species) that cannot be restored as a result of the proposed action.

The short-term irreversible commitments of resources that would occur when implementing Alternative 1, 2, or 3 would include planning and engineering costs, building materials and supplies and their cost, use of energy resources during construction, labor, generation of fugitive dust emissions, and creation of temporary construction noise. Irretrievable commitments of resources are those resources that would be lost for the life of the system. These resources are limited to the minor loss of forested area to be cleared in Alternatives 1 and 2.

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6 List of Preparers

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Appendix A: Maryland State Clearinghouse Correspondence

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Maryland Department of Planning

Robert L. Ehrlich, Jr.
Governor
Michael S. Steele
Lt. Governor

Audrey E. Scott
Secretary
Florence E. Burian
Deputy Secretary

April 2, 2007

FAX TRANSMITTAL DOCUMENT

To: Ms. Jennifer Harris, Ecology and Environment, Inc. 703-558-7950 (fax)

From: Bob Rosenbush, Maryland Department of Planning, State Clearinghouse
410-767-4487 (telephone) 410-767-4480 (fax)

Re: **State Application Identifier # MD20070301-0156**: Environmental Assessment and Draft FONSI: Multi-Purpose Contingency Training Area and Explosive Ordinance Disposal Emergency Response and Proficiency Range at Andrews Air Force Base

Here are the comments received to date concerning this project.

The Maryland Department of Transportation stated that "a far as can be determined at this time, the subject has no unacceptable impacts on the plans or programs of the Department of Transportation."

The Maryland Department of the Environment found this project to be inconsistent with their plans, programs, and objectives. They requested a meeting with the Air Force. Your contact person in the Hazardous Waste Program of the Maryland Department of the Environment is Mr. Harold Dye or Mr. Ed Hammerberg (telephone 410-537-3343). Thank you for contacting the Maryland Department of Planning.

Mr. Bob Rosenbush, Planner
Maryland Department of Planning
Room 1104
301 West Preston Street
Baltimore, MD 21201-2305
telephone: 410-767-4487
fax: 410-767-4480
e-mail address is
BRosenbush@MDP.state.md.us

Total Fax Submittal 7 pages (including this page)

cc: Linda Janey - MDP

Please Complete Your Review & Recommendation Before March 25, 2007

Return Completed Form To: Linda C. Janey, J.D., Director, Maryland State Clearinghouse for Intergovernmental Assistance, Maryland Department of Planning, 301 West Preston Street, Room1104, Baltimore, MD 21201-2305
Phone: 410-767-4490 Fax: 410-767-4480

State Application Identifier: MD20070301-0156	**Clearinghouse Contact:** Bob Rosenbush, 410-767-4490 brosenbush@mdp.state.md.us
Location: PGEO	
Applicant: Ecology and Environment, Inc.	
Description: Environmental Assessment and Draft FONSI: Multi-Purpose Contingency Training Area and Explosive Ordinance Disposal Emergency Response and Proficiency Range at Andrews Air Force Base	

Based on a Review of the Information Provided, We Have Checked (✓) the Appropriate Determination Below

	C1	It is **Consistent** with our plans, programs, and objectives
	C2	It is **Consistent** with the policies contained in **Executive Order 01.01.1992.27** (Maryland Economic Growth, Resource Protection, and Planning Act of 1992), **Executive Order 01.01.1998.04** (Smart Growth and Neighborhood Conservation Policy), **and** our plans, programs, and objectives.
	C3	**(MHT ONLY)** It has been determined that the project will have "no effect" on historic properties and that the federal and/or State historic preservation requirements have been met.
	C4	**(DNR ONLY)** It has been determined that this project is in the Coastal Zone and is not inconsistent with the Maryland Coastal Zone Management Program
	C7	**(MDP ONLY)** It is consistent with the requirements of State Finance and Procurement Article 5-7B-02; 03; 04 and 05 Smart Growth and Neighborhood Conservation (Priority Funding Areas).
	C5	It is **Consistent** with our plans, programs, and objectives.
	C6	It is **Consistent** with the Economic Growth, Resource Protection, and Planning Visions (Planning Act of 1992), State Finance and Procurement Article 5-7B — Smart Growth and Neighborhood Conservation (Priority Funding Areas), **and** our plans, programs, and objectives.
	R1	**GENERALLY CONSISTENT WITH QUALIFYING COMMENTS:** It is generally **Consistent** with our plans, programs and objectives, but the attached qualifying comment is submitted for consideration.
	R2	**CONTINGENT UPON CERTAIN ACTIONS:** It is generally **Consistent** with our plans, programs and objectives contingent upon certain actions being taken as noted in the attached comment(s).
✓	R3	**NOT CONSISTENT:** It raises problems concerning compatibility with our plans, programs, objectives, or Planning Act visions/policies; or it may duplicate existing program activities, as indicated in the attached comment(s). If a meeting with the applicant is requested, please check here: ☐
	R4	**ADDITIONAL INFORMATION REQUESTED:** Additional information is required to complete the review. The information needed is identified below. If an extension of the review period is requested, please check here: ☐
	R5	**FURTHER INTEREST:** Due to further interest/questions concerning this project, we request that the Clearinghouse set up a conference with the applicant.
	R6	**SUPPORTS:** Supports "Smart Growth" and Federal Executive Order 12072 (Federal Space Management), which directs federal agencies to locate facilities in urban areas.

Attach additional comments if necessary OR use theses spaces: _____

Name: Joane D. Mueller
Organization: TARSA/MDE, Suite 540
Address: 1800 Washington Boulevard
Baltimore, MD 21230-1718
(410) 537-4120

Signature: J D Mueller
Phone: ( )
Date Completed: 03/20/07

✓ **Check here if comments are attached.**

RECEIVED
MAR 23 RECD

MDPCH-1A

ENTERED

State Application Identifier: MD20070301-0156

Comments from the Maryland Department of the Environment's Water Management Administration:

This project is consistent with our plans, programs, and objectives.

Comments from the Maryland Department of the Environment's Air and Radiation Management Administration:

1. Construction, renovation and/or demolition of buildings and roadways must be performed in conformance with State regulations pertaining to "Particulate Matter from Materials Handling and Construction" (COMAR 26.11.06.03D), requiring that during any construction and/or demolition work, reasonable precaution must be taken to prevent particulate matter, such as fugitive dust, from becoming airborne.

2. If boilers or other equipment capable of producing emissions are installed as a result of this project, the applicant is requested to obtain a permit to construct from MDE's Air and Radiation Management Administration for this equipment, unless the applicant determines that a permit for this equipment is not required under State regulations pertaining to "Permits, Approvals, and Registration" (COMAR 26.11.02.). A review for toxic air pollutants should be performed. Please contact Dr. Justin Hsu, Ph.D., P.E., New Source Permits Division, Air and Radiation Management Administration at (410) 537-3230 to learn about the State's requirements and the permitting processes for such devices.

3. The applicant is encouraged to plan for the maximum utilization of carpools and public transit by employees providing preferential carpool/vanpool parking and bus shelters for commuters that use these methods of transportation. This will minimize the adverse impact of additional traffic generated by the proposed project. Please contact the Mobile Sources Program, Air and Radiation Management Administration at (410) 537-3270 for additional information.

4. All x-ray machines in the State of Maryland must be registered. Please contact the X-Ray Section, Air and Radiation Management Administration at (410) 537-3300 for additional information. Any person or institution that wants to acquire radioactive materials is required to possess a license. Please contact the Radioactive Materials Licensing Section, Air and Radiation Management Administration at (410) 537-3300 for additional information.

5. If a project receives federal funding, approvals and/or permits, and will be located in a nonattainment area or maintenance area for ozone or carbon monoxide, the applicant should determine whether emissions from the project will exceed the thresholds identified in the federal rule on general conformity. If the project emissions will be greater than 25 tons per year, contact the Planning Division of the Planning and Monitoring Program, Air and Radiation Management Administration, at (410) 537-3240 for further information regarding threshold limits.

State Application Identifier: MD20070301-0156 (continued)

6. Fossil fuel fired power plants emit large quantities of sulfur oxide and nitrogen oxides, which cause acid rain. In addition, nitrogen oxide emissions contribute to the problem of global warming and also combine with volatile organic compounds to form smog. The MDE supports energy conservation, which reduces the demand for electricity and therefore, reduces overall emissions of harmful air pollutants. For these reasons, MDE recommends that the builders use energy efficient lighting, computers, insulation and any other energy efficient equipment. Contact the U.S. EPA at (202) 233-9120 to learn more about the voluntary Green Lights Program which encourages businesses to install energy-efficient lighting systems.

7. The applicant should be advised that no cutback asphalt should be used during the months of June, July and August.

* *Additional comments from the Air and Radiation Management Administration are attached.*

Comments from the Maryland Department of the Environment's Waste Management Administration:

This project is not consistent, as it raises problems concerning compatibility with our plans, programs, or objectives. A meeting is requested. Please contact the Hazardous Waste Program at (410) 537-3343.

Comments from the Maryland Department of the Environment's Science Services Administration:

This project is consistent with our plans, programs, and objectives.

ARMA comments to MD2007 0301-0156

Comments refer to pages 3-13 and 3-14 of the Environmental Assessment

General conformity- applicant should be aware of the following Federal Register notice establishing de minimus levels for PM2.5:

Federal Register: July 17, 2006 (Volume 71, Number 136)

Page 40420-40421

PM2.5 De Minimis Emission Levels for General Conformity Applicability

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

IV. Summary of the Action

The EPA is revising the tables in sub-paragraphs (b)(1) and (b)(2) of 40 CFR 51.853 and 40 CFR 93.153 by adding the de minimis emission levels for PM2.5. The EPA is establishing the proposed 100 tons per year as the de minimis emission level for direct PM2.5 and each of its precursors as defined in revised section 91.152.

Air Quality Operating Permit- sentence about permit expiration on lines 21 and 22 should be changed to read:

"Because actual facility-wide emissions were significantly below the threshold for Title V applicability, Andrews AFB applied for and received a State Permit to Operate that also designated Andrews AFB as a non-Title V synthetic minor source."

Please Complete Your Review & Recommendation Before March 25, 2007

Return Completed Form To: Linda C. Janey, J.D., Director, Maryland State Clearinghouse for Intergovernmental Assistance, Maryland Department of Planning, 301 West Preston Street, Room1104, Baltimore, MD 21201-2305
Phone: 410-767-4490 Fax: 410-767-4480

State Application Identifier: MD20070301-0156	**Clearinghouse Contact:** Bob Rosenbush, 410-767-4490 brosenbush@mdp.state.md.us
Location:	PGEO
Applicant:	Ecology and Environment, Inc.
Description:	Environmental Assessment and Draft FONSI: Multi-Purpose Contingency Training Area and Explosive Ordinance Disposal Emergency Response and Proficiency Range at Andrews Air Force Base

Based on a Review of the Information Provided, We Have Checked (➧) the Appropriate Determination Below

		CONSISTENT RESPONSES – (For Use By STATE AGENCIES Only)
	C1	It is **Consistent** with our plans, programs, and objectives.
	C2	It is **Consistent** with the policies contained in **Executive Order 01.01.1992.27** (Maryland Economic Growth, Resource Protection, and Planning Act of 1992), **Executive Order 01.01.1998.04** (Smart Growth and Neighborhood Conservation Policy), **and** our plans, programs, and objectives.
	C3	**(MHT ONLY)** It has been determined that the project will have "no effect" on historic properties and that the federal and/or State historic preservation requirements have been met.
	C4	**(DNR ONLY)** It has been determined that this project is in the Coastal Zone and is not inconsistent with the Maryland Coastal Zone Management Program.
	C7	**(MDP ONLY)** It is consistent with the requirements of State Finance and Procurement Article 5-7B-02; 03; 04 and 05 Smart Growth and Neighborhood Conservation (Priority Funding Areas).
		CONSISTENT RESPONSES – (For Use By COUNTY & LOCAL AGENCIES Only)
X	**C5**	It is **Consistent** with our plans, programs, and objectives.
	C6	It is **Consistent** with the Economic Growth, Resource Protection, and Planning Visions (Planning Act of 1992), State Finance and Procurement Article 5-7B – Smart Growth and Neighborhood Conservation (Priority Funding Areas), **and** our plans, programs, and objectives.
		OTHER RESPONSES – (For Use By ALL)
	R1	**GENERALLY CONSISTENT WITH QUALIFYING COMMENTS:** It is generally **Consistent** with our plans, programs and objectives; but the attached qualifying comment is submitted for consideration.
	R2	**CONTINGENT UPON CERTAIN ACTIONS:** It is generally **Consistent** with our plans, programs and objectives contingent upon certain actions being taken as noted in the attached comment(s).
	R3	**NOT CONSISTENT:** It raises problems concerning compatibility with our plans, programs, objectives, or Planning Act visions/policies; or it may duplicate existing program activities, as indicated in the attached comment(s). If a meeting with the applicant is requested, please check here: ☐
	R4	**ADDITIONAL INFORMATION REQUESTED:** Additional information is required to complete the review. The information needed is identified below. If an extension of the review period is requested, please check here: ☐
	R5	**FURTHER INTEREST:** Due to further interest/questions concerning this project, we request that the Clearinghouse set up a conference with the applicant.
	R6	**SUPPORTS:** Supports "Smart Growth" and Federal Executive Order 12072 (Federal Space Management), which directs federal agencies to locate facilities in urban areas.

Attach additional comments if necessary OR use theses spaces:

Name: Cheryl D. Farmer, PGEO
Organization: Prince George County, DER
Address: 9400 Peppercorn Place, Suite 610
Largo, MD 20774

Signature: Cheryl D. Farmer
Phone: (301) 883-5808
Date Completed:

_ **Check here if comments are attached.**

RECEIVED
MAR 16 RECD

MDPCH-1A

FORWARDED

Please Complete Your Review & Recommendation Before March 25, 2007

Return Completed Form To: Linda C. Janey, J.D., Director, Maryland State Clearinghouse for Intergovernmental Assistance, Maryland Department of Planning, 301 West Preston Street, Room1104, Baltimore, MD 21201-2305
Phone: 410-767-4490 Fax: 410-767-4480

State Application Identifier: MD20070301-0156	**Clearinghouse Contact:** Bob Rosenbush, 410-767-4490 brosenbush@mdp.state.md.us
Location: PGEO	
Applicant: Ecology and Environment, Inc.	
Description: Environmental Assessment and Draft FONSI: Multi-Purpose Contingency Training Area and Explosive Ordinance Disposal Emergency Response and Proficiency Range at Andrews Air Force Base	

Based on a Review of the Information Provided, We Have Checked (✓) the Appropriate Determination Below

✓	**C1**	It is **Consistent** with our plans, programs, and objectives
	C2	It is **Consistent** with the policies contained in **Executive Order 01.01.1992.27** (Maryland Economic Growth, Resource Protection, and Planning Act of 1992), **Executive Order 01.01.1998.04** (Smart Growth and Neighborhood Conservation Policy), **and** our plans, programs, and objectives.
	C3	**(MHT ONLY)** It has been determined that the project will have "no effect" on historic properties and that the federal and/or State historic preservation requirements have been met.
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	R6	**SUPPORTS:** Supports "Smart Growth" and Federal Executive Order 12072 (Federal Space Management), which directs federal agencies to locate facilities in urban areas.

Attach additional comments if necessary OR use theses spaces: _____

Name: Ray Intaman
Organization: DNR
Address: Maryland Department of Natural Resources

Signature: Ray C. Intaman
Phone: (410) 260-8231
Date Completed: 3-7-07

☐ Check here if comments are attached.

RECEIVED
MAR 09 REC'D

MDPCH-1A

Maryland Department of Planning

Martin O'Malley
Governor
Anthony G. Brown
Lt. Governor

Richard Eberhart Hall
Secretary
Matthew J. Power
Deputy Secretary

April 6, 2007

Ms. Dawn S. Roderique
Project Manager
Ecology and Environment, Inc.
Rosslyn Center
1700 North Moore Street
Arlington, VA 22209

Post-it® Fax Note 7671	Date 4-6-07	# of pages ▶ 7
To Ms. Jennifer Herr	From Bob Rosenbush	
Co./Dept. Ecology & Environment	Co. MDP	
Phone # 703-522-6065 x 3805	Phone # 410-767-4487	
Fax # 703-558-7950	Fax #	

STATE CLEARINGHOUSE RECOMMENDATION

State Application Identifier: MD20070301-0156
Applicant: Ecology and Environment, Inc.
Project Description: Environmental Assessment and Draft FONSI: Multi-Purpose Contingency Training Area and Explosive Ordinance Disposal Emergency Response and Proficiency Range at Andrews Air Force Base
Project Location: Prince George's County
Approving Authority: U.S. Department of Defense

Recommendation: Consistent with Qualifying Comments and Contingent Upon Certain Actions

Dear Ms. Roderique:

In accordance with Presidential Executive Order 12372 and Code of Maryland Regulation 14.24.04, the State Clearinghouse has coordinated the intergovernmental review of the referenced project. This letter, with attachments, constitutes the State process review and recommendation. This recommendation is valid for a period of three years from the date of this letter.

Review comments were requested from the Maryland Departments of State Police, Natural Resources, the Environment, Transportation, the Maryland Military Department, Prince George's County, and the Maryland Department of Planning, including the Maryland Historical Trust. The Maryland Department of State Police had no comments.

The Maryland Department of the Environment stated that their findings of consistency are contingent upon the applicant taking the actions summarized below. The Maryland Department of the Environment submitted suggested revisions to the Environmental Assessment in the attached memorandum and comments.

The Maryland Department of Transportation found this project to be generally consistent with their plans, programs, and objectives, but included these qualifying comments. The Maryland Department of Transportation stated that "as far as can be determined at this time, the subject has no unacceptable impacts on plans or programs."

301 West Preston Street • Suite 1101 • Baltimore, Maryland 21201-2305
Telephone: 410.767.4500 • Fax: 410.767.4480 • Toll Free: 1.877.767.6272 • TTY Users: Maryland Relay
Internet: www.MDP.state.md.us

The remaining review agencies found this project to be consistent with their plans, programs, and objectives.

The Maryland Historical Trust has determined that the project will have "no effect" on historic properties.

Any statement of consideration given to the comments should be submitted to the approving authority, with a copy to the State Clearinghouse. The State Application Identifier Number must be placed on any correspondence pertaining to this project. The State Clearinghouse must be kept informed if the approving authority cannot accommodate the recommendation.

Please remember, you must comply with all applicable state and local laws and regulations. If you need assistance or have questions, contact the State Clearinghouse staff person noted above at 410-767-4490 or through e-mail at brosenbush@mdpstate.md.us. **Also please complete the attached form and return it to the State Clearinghouse as soon as the status of the project is known.** ***Any substitutions of this form must include the State Application Identifier Number.*** **This will ensure that our files are complete.**

Thank you for your cooperation with the MIRC process.

Sincerely,

Linda C. Janey

Linda C. Janey, J.D., Director
Maryland State Clearinghouse
for Intergovernmental Assistance

LCJ:BR
Enclosures
cc: Beth Cole - MHT
William Ebare - MDSP
Ray Dintaman - DNR
Joane Mueller - MDE
Cindy Johnson - MDOT
Bill Riley - MILT
Beverly Warfield - PGEO

07-0156_CRR.CLS.doc

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101

MD20070301-0156

Martin O'Malley
Governor

Anthony G. Brown
Lt. Governor

Shari T. Wilson
Secretary

Robert M. Summers, Ph.D.
Deputy Secretary

MEMORANDUM

TO: Bob Rosenbush, Maryland Department of Planning

FROM: Butch Dye, Administrator, Hazardous Waste Program

SUBJECT: Clarification of Clearinghouse Review for Andrews AFB Contingent Training Area

DATE: April 6, 2007

The review of the Clearinghouse Document, "Environmental Assessment for the Multi-Purpose Contingency Training Area and Explosive Ordinance Disposal Emergency Response and Proficiency Range", has raised questions with respect to characterization of munitions that will be "disposed". The Hazardous Waste Program had previously indicated on the response form for this Clearinghouse Review that the project was "not consistent, as it raises problems concerning compatibility with our plans, programs or objectives". Andrews Air Force Base must either modify the document to clarify that the proposed facility will not be used for the routine destruction/treatment of stable, excess munitions, or assure that the facility will be operated in compliance with State and federal regulations concerning hazardous waste treatment. The purpose of this memo is to identify the specific concerns identified in reviewing the document.

The introductory page (p. iii) of the Environmental Assessment document for Andrews AFB indicates, under **PURPOSE OF AND NEED FOR THE PROPOSED ACTION**, that there is no "emergency response range at Andrews AFB that can be used for the safe disposal of munitions that are in a hazardous state nor is there a range for conducting EOD emergency response actions or EOD proficiency training exercises." The Hazardous Waste Program has, as policy, taken the position that non-chemical munitions that are unstable can be "rendered safe" by emergency response personnel without obtaining any hazardous waste permit from the agency. This applies only to those conventional (i.e., high explosive) munitions that are designed to detonate, conflagrate, etc. The policy further applies to any "improvised explosive devices" (IED's) whether or not they were discovered by accident, or in any "dumped" situation. Note: This same policy does NOT apply to chemical munitions.

However, on page 4-5, the sentence at line 19 indicates, "The range would be used to conduct emergency and **non-emergency disposal** (emphasis added) of hazardous munitions." It is not clear what is meant by "non-emergency disposal of hazardous munitions". If, in fact, the munitions that are destined to be disposed in this manner are **waste** munitions that have been collected for routine destruction, such destruction must be conducted under a hazardous waste treatment permit. Performing such non-emergency destruction of waste munitions without a permit would be a violation of Maryland and federal laws on hazardous waste management.

We have discussed this matter with Ms. Jennifer Harris, one of the contacts you gave us for questions concerning the document. Ms. Harris stated that the intended uses of the facility are the emergency destruction of munitions, and the training of explosives ordnance disposal personnel in the destruction of munitions. She stated that any destruction of stable munitions at the facility would be done strictly for the purposes of training explosives response specialists.

The Hazardous Waste Program's concerns will be alleviated if the document is revised to explicitly state that the use of the facility will be as described by Ms. Harris. The document should also be revised to make clear that the destruction of stable munitions will not occur in quantities in excess of legitimate training needs.

If you have any questions concerning this matter, please contact me at (410) 537-3343, or you may contact Mr. Edward Hammerberg of my staff at (410) 537-3345.

State Application Identifier: MD20070301-0156

Comments from the Maryland Department of the Environment's Water Management Administration:

This project is consistent with our plans, programs, and objectives.

Comments from the Maryland Department of the Environment's Air and Radiation Management Administration:

1. Construction, renovation and/or demolition of buildings and roadways must be performed in conformance with State regulations pertaining to "Particulate Matter from Materials Handling and Construction" (COMAR 26.11.06.03D), requiring that during any construction and/or demolition work, reasonable precaution must be taken to prevent particulate matter, such as fugitive dust, from becoming airborne.

2. If boilers or other equipment capable of producing emissions are installed as a result of this project, the applicant is requested to obtain a permit to construct from MDE's Air and Radiation Management Administration for this equipment, unless the applicant determines that a permit for this equipment is not required under State regulations pertaining to "Permits, Approvals, and Registration" (COMAR 26.11.02.). A review for toxic air pollutants should be performed. Please contact Dr. Justin Hsu, Ph.D., P.E., New Source Permits Division, Air and Radiation Management Administration at (410) 537-3230 to learn about the State's requirements and the permitting processes for such devices.

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State Application Identifier: MD20070301-0156 (continued)

6. Fossil fuel fired power plants emit large quantities of sulfur oxide and nitrogen oxides, which cause acid rain. In addition, nitrogen oxide emissions contribute to the problem of global warming and also combine with volatile organic compounds to form smog. The MDE supports energy conservation, which reduces the demand for electricity and therefore, reduces overall emissions of harmful air pollutants. For these reasons, MDE recommends that the builders use energy efficient lighting, computers, insulation and any other energy efficient equipment. Contact the U.S. EPA at (202) 233-9120 to learn more about the voluntary Green Lights Program which encourages businesses to install energy-efficient lighting systems.

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* *Additional comments from the Air and Radiation Management Administration are attached.*

Comments from the Maryland Department of the Environment's Waste Management Administration:

This project is not consistent, as it raises problems concerning compatibility with our plans, programs, or objectives. A meeting is requested. Please contact the Hazardous Waste Program at (410) 537-3343.

Comments from the Maryland Department of the Environment's Science Services Administration:

This project is consistent with our plans, programs, and objectives.

ARMA comments to MD2007 0301-0156

Comments refer to pages 3-13 and 3-14 of the Environmental Assessment

General conformity- applicant should be aware of the following Federal Register notice establishing de minimus levels for PM2.5:

Federal Register: July 17, 2006 (Volume 71, Number 136)

Page 40420-40427

PM2.5 De Minimis Emission Levels for General Conformity Applicability

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

IV. Summary of the Action

The EPA is revising the tables in sub-paragraphs (b)(1) and (b)(2) of 40 CFR 51.853 and 40 CFR 93.153 by adding the de minimis emission levels for PM2.5. The EPA is establishing the proposed 100 tons per year as the de minimis emission level for direct PM2.5 and each of its precursors as defined in revised section 91.152.

Air Quality Operating Permit- sentence about permit expiration on lines 21 and 22 should be changed to read:

"Because actual facility-wide emissions were significantly below the threshold for Title V applicability, Andrews AFB applied for and received a State Permit to Operate that also designated Andrews AFB as a non-Title V synthetic minor source."